# SHARP



# Environmental and Social Report 2007



#### About the Cover

The roof of a winery in California is lined with 2,000 photovoltaic modules generating 411 kW. The electricity generated is enough to power the entire winemaking process, from pressing grapes and bottling the wine to cooling the tanks. Grapes nourished with the bounty of the sun are then made into wine with the energy of that same sun. Photovoltaic modules harvest the vast power of the sun to create clean energy.

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#### **Compiling This Report**

#### Organization

This Environmental and Social Report consists of four sections.

The Special Feature section introduces Sharp's efforts to carry out sustainable manufacturing from three angles: expanding the use of solar energy, environmentally conscious product design, and reducing negative environmental impacts in production facilities.

The Special Focus section looks at some particularly interesting examples from Sharp's continuing environmental and social contribution efforts.

The Sharp and the Environment section covers the policies, objectives, and achievements of Sharp's environmental efforts.

In Sharp and Society, Sharp reports on the goals it has set and the progress it is making in the social dimension of CSR activities for various stakeholders.

#### Links to the Sharp Website

This report focuses on the main points of the Sharp Group's environmental and social activities. Actual examples and detailed data can be found on Sharp's website (http://sharp-world.com/ corporate/eco/report2007/). Items that are covered on the website are listed at the bottom of the pages in this report. The last page also lists the items covered on the website.

#### Period and Items Covered

Period covered: Fiscal 2006 (April 2006 to March 2007) However, some actual facts prior to this period, as well as subsequent policies, objectives, and plans will also be included. Coverage: Environmental and social aspects of Sharp Corporation along with its domestic and overseas subsidiaries and affiliates.

Organizations covered: Sharp Corporation along with its domestic and overseas subsidiaries and affiliates. Note that the scope of environmental performance data contained in this report is as follows:

Sites (companies) covered by environmental performance data: Sharp Corporation and consolidated subsidiaries. Note that the category "production sites (companies)" includes non-consolidated subsidiaries and affiliated companies.

Production sites (companies) 39 (17 domestic, 22 overseas) Non-production sites (companies) 34 (11 domestic, 23 overseas)

#### Referenced Guidelines

- Environmental Reporting Guidelines (Fiscal 2003 Version), Ministry of the Environment, Japan
- Sustainability Reporting Guidelines Version 3.0 (Japanese), Global Reporting Initiative (GRI)
- Environmental Accounting Guidelines 2005, Ministry of the Environment, Japan
- Environmental Performance Indicators for Organizations (Fiscal 2002 Version), Ministry of the Environment, Japan

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#### Inquiries

 Environmental Protection Group

 Tel: +81-6-6625-0438
 Fax: +81-6-6625-0153

 CSR Promotion Department
 Fax: +81-6-6625-1274

 Tel: +81-6-6625-1167
 Fax: +81-6-6625-1274

 22-22 Nagaike-cho, Abeno-ku, Osaka 545-8522, Japan
 E-mail: eco-info@sharp.co.jp

Information on website GRI content index Sites (companies) covered by environmental performance data Calculation standards for environmental performance indices

# Sharp Contributes to Society Through Its Manufacturing and Technology-Oriented Business

"Make products that others want to imitate." These words, spoken by Sharp founder Tokuji Hayakawa, embody Sharp's management concept. As a manufacturer, Sharp contributes to society by being the first to make products that meet the needs of a new era. Successive generations of Sharp leaders have, in their own way, pursued this concept by making products that contribute to society and in the process created a corporation that is known and trusted by society.

In 1973, Sharp clarified the unchanging spirit of its founder in the company's business philosophy and business creed. The business philosophy states that Sharp aims for mutual prosperity with stakeholders—the foundation of CSR today—by contributing to the culture, benefits, and welfare of people throughout the world. The business creed calls for "Sincerity and Creativity" and all employees must hold to it and follow it in order to realize the business philosophy.

This report details the many ways that Sharp is fulfilling its CSR. Each of these efforts is an index for gauging how well Sharp conducts business according to its core belief of "Sincerity and Creativity."

The goal that Sharp aims at through its CSR efforts is nothing less than realizing the business philosophy through business activities. Having a "gene of creativity" since its foundation, Sharp will continue to propose one-of-a-kind products and new lifestyles, as a corporation that is trusted by all.

#### **Business Philosophy**

We do not seek merely to expand our business volume. Rather, we are dedicated to the use of our unique, innovative technology to contribute to the culture, benefits, and welfare of people throughout the world. It is the intention of our corporation to grow hand-in-hand with our employees, encouraging and aiding them to reach their full potential and improve their standard of living. Our future prosperity is directly linked to the prosperity of our customers, dealers, and shareholders... indeed, the entire Sharp family.

#### Business Creed Sharp Corporation is dedicated to two principal ideals:

# "Sincerity and Creativity"

By committing ourselves to these ideals, we can derive genuine satisfaction from our work, while making a meaningful contribution to society. Sincerity is a virtue fundamental to humanity... always be sincere. Harmony brings strength... trust each other and work together. Politeness is a merit... always be courteous and respectful. Creativity promotes progress... remain constantly aware of the need to innovate and improve. Courage is the basis of a rewarding life.... accept every challenge with a positive attitude.

Achieve the tenets of the business philosophy by promoting "Sincerity and Creativity" in all business practices



#### **Realization of Business Philosophy**

- Perspective of social contribution through business activities
   "Contribute to the culture, benefits, and welfare of people throughout the world"
- Perspective concerning employees
   "Our corporation to grow hand-in-hand with our employees"
- Perspective concerning stakeholders "Prosperity is directly linked to the prosperity of the entire Sharp family"

- The business creed is the central axis of all business activitie
- "Sincerity" means a working attitude mindful of what will offer genuinely useful solutions and happiness to everyone
- "Creativity" means a working attitude not content with the way things are. An attitude which always seeks to add value, and to make efforts to innovate

#### A Message to People and the Earth

# Contributing to Building a Sustainable Society Through a Forward-Looking Approach to the Environment



Chairman Machida (left) and President Katayama

1. Mailes

Katsuhiko Machida Chairman & CEO, Sharp Corporation

Mikio Katayama President & COO, Sharp Corporation

# The Starting Point Was "Make Products that Others Want to Imitate..."

This year, Sharp will celebrate the 95th anniversary of its founding. Ever since founder Tokuji Hayakawa established his own metalworking business at age 19, Sharp has carved out a history of originality and creativity—from the Ever-Sharp Pencil to crystal radios, CRT TVs, microwave ovens, solar cells, electronic calculators, the LCD Viewcam, and the LCD TV.

Mr. Hayakawa had a habit of saying, "Make products that others want to imitate." In other words, focus on applying one's creativity and ingenuity to nimbly make products that will become the mainstream for the next generation. This fundamental notion was the starting point for Sharp. In addition, what nurtured Mr. Hayakawa's creativity and originality was an intense curiosity about the future and a sense of gratitude toward those who had shown him kindness and toward everyone with whom he dealt. These ideas later became Sharp's business creed of "Sincerity and Creativity" and have been passed down even to this day.

What underlies Sharp's goal of making products that will become the mainstream of the next generation is nothing less than concern for the environment. Sustainable manufacturing means, by extension, building a sustainable society, and indeed, doing so can

be said to be the greatest challenge of our time. Sharp regards its mission to be accomplishing this goal.

# Working to Protect the Environment for Half a Century

Sharp has long been in the forefront of working to protect the global environment. Solar cells are now attracting attention as a source of clean energy. Sharp initiated R&D in this field in 1959, nearly half a century ago, and in 1963, successfully launched mass production of these devices. Sharp continued steady, incremental development of this technology, and today, Sharp has significantly broadened this business area to cover residential and industrial uses. In terms of production volume, as of last year, Sharp has been the world's leading producer of solar cells for the past seven years in a row. Solar cells are now poised to enter widespread use, and given the tremendous potential for further technological development, Sharp's desire is to contribute to protecting the environment by broadening their use in the future.

Sharp has also worked to take the lead in energy and resource conservation. For example, Sharp led the world in R&D on LCDs that are now known as thin, energy-efficient, resource-saving devices. In 1973, Sharp successfully developed a practical use for LCDs

as displays in electronic calculators. This allowed Sharp to greatly reduce the size of calculators, making them small enough to fit in a shirt pocket and, since they could be powered by a single dry-cell battery, enabling long-term use. Sharp never ceased R&D in this area, and as a result, today, LCDs are widely used as high-resolution displays for both consumer and industrial use, and are finding application in high-quality displays for mobile phones and in big-screen, thin-profile, high-definition AQUOS LCD TVs.

The AQUOS incorporates state-of-the-art environmental technologies from top to bottom. Its finely honed features deliver performance befitting this era of the environment, including energy efficiency, low resource utilization, long service life, use of green materials, and design for recycling.

Sharp has also installed the latest in environmental protection systems at the Kameyama Plant where the AQUOS is produced, and has set a goal to bring environmental consciousness at the world's highest level to every activity in which the plant engages.

# Aiming to Become an Environmentally Advanced Company

Since fiscal 2004, Sharp has made strengthening its environmental efforts a company-wide management policy.

Sharp set a medium-term corporate objective of becoming an environmentally advanced company, and defined its corporate vision as: Sharp's energy-creating and energy-saving products equalize Sharp's greenhouse gas emissions. To work toward making these a reality, Sharp implemented the Super Green Strategy that strives to imbue all corporate activities with a forward-looking approach toward the environment.

The details of these efforts are presented in this Environmental and Social Report. Included among them is Sharp's response to global warming, an especially pressing issue today. Sharp's goal is to have its energy-creating and energy-saving products equalize its greenhouse gas emissions so that the company causes no increase in the level of these gases. Sharp will accomplish this goal by significantly expanding its solar energy business, and by implementing energy-efficient product designs and energy-saving measures throughout its production facilities, offices, and the distribution chain.

Furthermore, by providing photovoltaic power systems and energy-efficient consumer electronics, Sharp is encouraging ordinary people to adopt lifestyles that will not contribute to global warming. In addition to these, Sharp is aiming to achieve sustainable manufacturing by developing technologies to reduce consumption of fossil resources, including closed-loop material recycling of plastics\* and using plant-based resin materials, as well as expanding its recycling business for products that have reached the end of their useful service life.

Sharp is also contributing to building a sustainable society through environmental education programs in elementary schools and through Sharp Green Club activities.

#### With "Sincerity and Creativity"—Toward Becoming a More Trusted Company

Sharp will continue its ongoing efforts to be a company worthy of the trust of society. To this end, Sharp is practicing fair and open management based on "Sincerity and Creativity" and will strive to fulfill its social role and responsibilities toward achieving a sustainable society.

In particular, regarding product-making, the starting point for any manufacturer, Sharp has further reinforced its system that places the highest priority on product safety and ensuring product quality based on the Sharp Voluntary Product Safety Action Policy which was formulated in May of this year.

In addition, Sharp is committed to compliance with relevant laws and regulations based on adherence to the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct, and will foster the development of human resources, the most important management asset, as well as boost efforts on the CSR front throughout the supply chain.

During the 95 years since its founding, Sharp has enjoyed the patronage of customers around the world. In the future, with the utmost in "Sincerity and Creativity," Sharp will concentrate its energies on making products that will become the mainstream of the next generation and work to contribute to society through offering new lifestyles.

We look forward to hearing your frank comments and opinions.

June 2007

<sup>\*</sup> Recovery of plastic materials from used appliances covered by the Japanese Home Appliance Recycling Law and repeatedly using them as raw material for plastic components in new products.

# Corporate Governance

Sharp will enhance the governance system of the entire group with the goals of ensuring stable, transparent management and maintaining proper work processes while strengthening the Director/Corporate Auditor system.

Efforts (Achievements) for Fiscal 2006		Efforts for Fiscal 2007
Improve the internal control system	<ul> <li>Formulated a basic policy for internal control</li> <li>Established the Internal Control Committee</li> <li>Implemented various measures for improving the internal control system</li> <li>Provided internal control e-learning</li> </ul>	<ul> <li>Have the internal control system in place and operating</li> <li>Analyze operation and implement problem-solving measures for the internal control system</li> <li>Conduct internal control audits</li> <li>Build internal control IT system</li> </ul>

#### **Basic Concept of Corporate Governance**

In an effort to further strengthen manufacturing and technological competency, Sharp is committed to making speedy managerial decisions and to enhancing management quality.

Business activities of Sharp are clearly bounded by the development, manufacture, and sales of products as well as devices. Each area is highly specialized yet there is strong interrelation between them. Sharp believes that when all directors with operational responsibilities at the division level make decisions after consulting with one another, they can clarify their individual managerial responsibilities and execute business responsively and effectively. Sharp also believes that this enhances reciprocal management functions.

Sharp increased the number of auditors from four to five in June 2007. The fact that three of Sharp's five corporate auditors are from outside the company ensures that company operation is sound.

Sharp intends to further strengthen its current Director/Corporate Auditor system, which allows management and R&D and manufacturing divisions to work closely on expanding business, to enhance corporate governance.

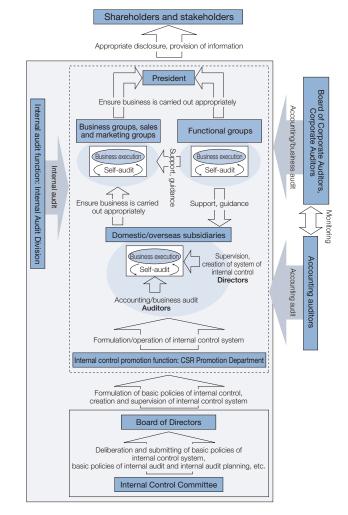
#### Enhancement of Corporate Governance System

To ensure transparency and soundness in management through an enhanced corporate governance system, Sharp has taken the following actions. In particular, regarding the increasingly important matter of internal control, with consideration of Japan's Corporate Law, which went into effect in May 2006, Sharp has established the Internal Control Committee, an advisory panel to the Board of Directors.

In July 2006, Sharp established the Advisory Board to obtain a wide range of opinions and proposals from well-informed outside experts from various fields in order to assist in management decisions.

- Established the Internal Audit Division that unifies internal audit departments and is independent from business execution departments (April 2006)
- Established the Internal Control Committee (May 2006)
- Established the Advisory Board (July 2006)
- Appointed a director in charge of legal affairs and placed the Legal Affairs Division and the Intellectual Property Group under the supervision of the director (April 2007)
- Approved the adoption of a plan regarding large-scale purchases of Sharp Corporation shares (Takeover Defense Plan) at the general meeting of shareholders (June 2007)

#### Diagram of corporate governance/ internal control system



#### Group Management

The Sharp Group has created a global internal control system to ensure effective governance of the entire group, including Sharp subsidiaries in Japan and overseas.

Subsidiaries in Japan and overseas conduct self-audits to show Sharp business groups and sales & marketing groups that business is being conducted properly. And with the goal of continuous improvement, the company is planning to conduct internal control audits for the entire Sharp Group.

# Compliance and Risk Management

Business ethics and legal compliance are the minimum social responsibilities for any corporation. Under a system that closely coordinates CSR with risk management, Sharp is strongly committed to adhering to business ethics and ensuring legal compliance.

Efforts (Achievements) for Fiscal 2006		Efforts for Fiscal 2007
Improve the compliance training system	<ul> <li>Provided legal affairs/compliance e-learning</li> <li>Conducted a mandatory compliance seminar for directors and management in business groups</li> <li>Revised job-level-specific compliance training curriculum</li> </ul>	<ul> <li>Improve compliance enlightenment tools</li> <li>Create a compliance guidebook</li> </ul>
<ul> <li>Review management methods for important risks</li> </ul>	<ul> <li>Revised the risk assessment standards to identify important risks ("level of impact" x "probability of occurrence)</li> </ul>	Create a BCM (business continuity management) system     Create a PDCA cycle-based management system to improve     BCP (business continuity plan) of all domestic production sites

#### Raising Awareness of the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct

In 1998, Sharp established standards of conduct to guide all employees to fulfill Sharp's business philosophy and business creed. In May 2005, to make legal compliance and business ethics top priorities and to boost Sharp's CSR performance, the standards of conduct were revised and divided into two documents: the Sharp Group Charter of Corporate Behavior, the principles of Sharp's corporate behavior; and the Sharp Code of Conduct, the standards of conduct for all directors and employees. These two documents apply to group companies around the world as the common standards of the Sharp Group.

#### Promoting CSR and BRM Activities

Sharp believes BRM (business risk management), like CSR, is indispensable in business management because it prevents violations of laws and lowers the risk of loss while at the same time helping the company quickly adapt to changing business environments. That is why the company pursues both CSR and BRM activities.

Sharp holds meetings of the CSR/BRM Committee to discuss and check progress, policies, and action plans for the entire company. These meetings are attended by a Corporate Senior Executive Vice President (Chief General Administration Officer), all group general managers, and all general managers of the functional groups. Sharp has also established the CSR Promotion Department under the supervision of the Corporate Senior Executive Vice President (Chief General Administration Officer) in order to plan and implement CSR/BRM measures for the entire Sharp Group.

R-CATS\* are small-group activities in which all employees address and solve common issues in their everyday work from the viewpoint of CSR. R-CATS activities are conducted in all Sharp departments, from production and quality to product planning and technical, right down to sales, procurement, and administration.

\* R-CATS: Revolution Creative Action Teams. See also page 43.

#### Preventing Unlawful Grants and Expenditures

The Group Charter of Corporate Behavior and the Code of Conduct contain the provisions to strictly prohibit any form of corrupt behavior such as money extortion and bribery, and require that donations are handled in a proper manner.

Sharp prevents illegal payoffs and expenditures through a system of compulsory examinations by the Donation Examination Committee in Japan on the adequacy of monetary donations and support and other cases of expenditure.

#### Strict Business Ethics and Legal Compliance

In Japan, Sharp Corporation and its domestic subsidiaries have appointed a Chief of Legal Affairs at each business group and company to prevent violations of laws or regulations in the course of business. To raise legal awareness and ensure compliance with the law, Sharp and its subsidiaries have continued to carry out wide-ranging educational programs in Japan.

In fiscal 2006, Sharp expanded the scope of job-level-specific training, and newly provided training to directors and management of business groups in addition to managers and new employees. In fiscal 2007, Sharp will also provide training to mid-career employees, and will continue to promote activities to ensure strict legal compliance at both domestic and overseas bases.

- Manager meetings and employee training sessions at all departments on the Group Charter of Corporate Behavior and the Code of Conduct (fiscal 2005 and 2006)
- Job-level-specific training (directors, management of each business group, managers, and new employees) (fiscal 2006)
- Training and online lectures in specialized fields (on the Japanese Electrical Appliance and Material Safety Law, safety standards in each country, and laws related to antimonopoly, subcontracting, unjustifiable premiums and misleading representations, intellectual property rights, export control, labor, etc.) (held when necessary)
- e-learning for all employees:
- Environmental awareness, personal information protection (fiscal 2004)
- CSR, information security/personal information protection (fiscal 2005)
- Legal affairs and compliance, internal control, information security/personal information protection (fiscal 2006)

#### **Consultation Hotline for Compliance Issues**

Sharp Corporation and its domestic subsidiaries have established a hotline for reporting compliance problems and receiving consultation. The hotline is open to employees, temporary staff, and employees of business partners who work at Sharp business sites. However, in line with the spirit of the Japanese law to protect those who disclose information for public interest, since April 2006, Sharp has opened this hotline to employees of business partners who work outside Sharp sites.

Sharp clearly stipulates that there will be no unfavorable treatment or penalties against people who report compliance violations or seek consultation.

 Information on website
 Sharp Group Charter of Corporate Behavior (full text)
 Sharp Code of Conduct (full text)

 Sharp Group's efforts to firmly establish CSR and BRM
 Disaster risk management
 Respect for intellectual property rights

# A Fusion of Products and Electronic Components

Sharp's business activities comprise "Consumer/ Information Products" that are actual consumer electronics and information products, and "Electronic Components" that provide the key components of electronic products.

By undertaking the development of both key devices based on proprietary technologies and their application products, Sharp aims to inspire and impress customers by bringing forth never-before-seen, one-of-a-kind products and devices, and by pioneering new markets.

#### Main Products

Audio-visual and communication equipment



LCD color TVs, color TVs, TV/VCR combos, projectors, digital broadcast receivers, DVD recorders, DVD players, VCRs, 1-Bit digital audio products, MD players, CD component systems, facsimiles, telephones, mobile phones, PHS terminals



Refrigerators, superheated steam ovens, microwave ovens, air conditioners, washing machines, vacuum cleaners, air purifiers, dehumidifiers, humidifiers, electric heaters, small cooking appliances

# Information equipment

PCs, personal mobile tools, mobile communications handsets, electronic dictionaries, calculators, POS systems, handy data terminals, electronic cash registers, LCD color monitors, information displays, digital copier/printers, electrostatic copiers, supplies for copiers and printers, software, FA equipment, ultrasonic cleaners

#### **Corporate Profile**

Name	Sharp Corporation
Head Office	22-22, Nagaike-cho, Abeno-ku, Osaka, Japan
Representatives	Katsuhiko Machida, Chairman & CEO
	Mikio Katayama, President & COO
Founded	September 15, 1912
Operations	Manufacture and sales of audio-visual,
	communication and information equipment,
	home appliances, LSIs, LCDs, other
	electronic components
Capital Stock*	204,675 million yen (rounded down to the
	nearest million)
Number of Employees**	48,927 (29,798 in Japan; 19,129 overseas)

\* As of March 31, 2007

\*\* Sharp Corporation and its consolidated subsidiaries

#### LSIs





CCD/CMOS imagers, LSIs for LCDs, microcomputers, flash memory, combination memory



 Demonstrated using mirrors with an image of a dog in the center, Mt. Fuji to

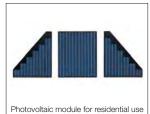
Triple Directional Viewing LCD

the left, and a map to the right



TFT LCD modules, Duty LCD modules, System LCD modules

#### Other electronic components





Solar cells, components for satellite broadcasting, digital terrestrial tuners, RF modules, network components, laser diodes, LEDs, optical pickups, optical sensors, components for optical communication, regulators, switching power supplies, analog ICs

## Increasing Corporate Value by Strengthening One-of-a-Kind Strategy

#### **Fiscal 2006 Financial Results**

Sharp took assertive initiatives through the introduction of one-of-a-kind products and the development of proprietary devices that support the creation of these products. The company consistently focused on making highly distinctive products and devices and thus realized higher profitability.

In the Consumer/Information Products business, Sharp worked to further expand sales of LCD TVs. With increasing global demand for LCD TVs, Sharp expanded its lineup of large-screen TVs with a focus on full high-definition models and worked toward increasing sales worldwide. Other efforts included the release of more unique products, such as mobile phones with original technology capable of receiving "one segment broadcasting" or "One Seg," a new type of terrestrial digital broadcasting for mobile equipment.

In the Electronic Components area, Sharp strived to further expand its LCD business. For large-size LCDs, Sharp began operations at the Kameyama No. 2 Plant. This is the world's first LCD production facility to adopt 8th generation glass substrates, which enable highly efficient production of 40- and 50-inch-class LCD panels. Sharp also started the second phase at the plant to increase LCD production capacity. For small- and medium-size LCDs, Sharp increased sales of System LCDs for mobile equipment, including mobile phones.

Additionally, Sharp has taken various other actions, such as capacity enhancement for solar cells and creation of distinctive devices intended for its uniquely featured products.

These efforts resulted in record-high net sales, operating income, and net income in fiscal 2006 on a consolidated basis.

#### **Outlook for Fiscal 2007**

Sharp will achieve further growth by strengthening its one-of-a-kind strategy and working to improve brand value and secure competitive advantage in the global market.

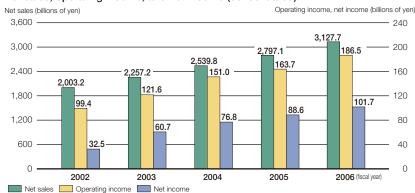
In the Consumer/Information Products business, Sharp will further boost its competitiveness in LCD TVs through the worldwide introduction of large-size full high-definition models featuring even better picture quality, performance, and design. Sharp will also pursue high-efficiency production systems in major global consumer markets and thorough cost reduction. One-of-a-kind products in other business areas will be also upgraded. These include mobile phones and wireless PDAs incorporating the company's original technologies.

Sharp will expand its Electronic Components business through the following measures. To further expand the LCD business, Sharp aims to increase sales of large panels for LCD TVs with the start of the third phase at the Kameyama No. 2 Plant. Other measures include strengthening sales of System LCDs for mobile equipment. In the area of solar cells and other major devices, Sharp will work to further boost competitiveness through innovative production technologies and further cost reduction.

In addition to these efforts, Sharp will continuously promote R&D for future technologies and promote low-cost operation in order to achieve further growth. Lastly, Sharp will continue to take initiatives proactively to enhance its CSR efforts, which include contributing to environmental preservation and complying with laws and statutes in conducting business.

(%)

10



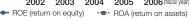
#### Net sales, operating income, and net income (consolidated)

#### 

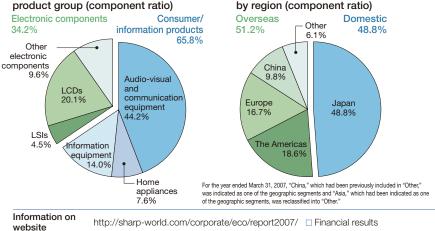
8.9

8.4

Principal financial performance indicators (consolidated)

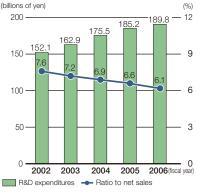


Fiscal 2006 consolidated net sales by product group (component ratio)



Fiscal 2006 consolidated net sales





# Sharp's Goal: Sustainable Manufacturing

Sharp's goal of making products that will become the mainstream of the next generation is nothing less than to evolve environmentally sustainable manufacturing that also protects the environment.

Sharp pioneered the era of broadcast information with Japan's first domestically produced crystal radio set and black & white TVs, opened up the era of electronics with the development of the world's first desktop electronic calculator, and broke new ground in information and telecommunications with LCDs and their application products.

Today, Sharp is working to achieve sustainable manufacturing befitting this age of the environment.

This report presents an overview of Sharp's activities seen from three perspectives: Expanding the Use of Solar Energy, Environmentally Conscious Product Design, and Reducing Negative Environmental Impacts in Production Facilities.

- 1 Expanding the Use of Solar Energy
- 2 Environmentally Conscious Product Design
- 3 Reducing Negative Environmental Impacts in Production Facilities

Photovoltaic power facility in Sonnen, Bavaria, Germany



On lighthouses as well as space satellites, solar cells are indispensable as a valuable source of energy in harsh environments. In outer space, repairs cannot be easily made and this demands high reliability. Sharp is the only Japanese solar cell manufacturer certified by the Japan Aerospace Exploration Agency. Sharp solar cells first provided power to Japan's Ume satellite in 1976, and by April 2006, had been installed on more than 150 satellites.

## 1 Expanding the Use of Solar Energy

# Sharp's Challenge as No. 1 Maker: Lead the Way into the Era of Clean Energy with Solar Power

# R&D Began During a Home Appliance Boom in Japan

Sharp began research on solar cells in 1959, almost exactly 48 years ago. The television set, the washing machine, and the refrigerator had captured the spotlight as the "three sacred treasures" every Japanese household desired. 1959 was the height of a tremendous boom in home appliances. Needless to say, global environmental issues had not yet become a topic of conversation for the general public.

Research on solar cells was low profile and unspectacular compared to the development of home appliances that dominated the market at that time. Sharp researchers, however, diligently pursued this clean energy conversion technology. They were convinced that utilizing the inexhaustible and cheap energy of the sun to create electricity—with no toxic substances or  $CO_2$  and without causing noise or vibration—would enable society to continue living in peace and abundance well into the future.

After four years of trial and error, Sharp established the technology to mass produce solar cells in 1963. But costs were still high at that time, and the main use for solar cells was as a source of power in areas without access to electricity, such as remote lighthouses. Solar cells installed on lighthouses demand a guarantee of reliable operation under harsh conditions, notably exposure to salty air, to say nothing of the powerful rainstorms generated by typhoons. In addition, since the conditions affecting installation at each lighthouse differ, the technicians involved must travel to each site, even remote uninhabited islands, to evaluate the local environment on the spot. Sharp photovoltaic power systems, which have been installed on lighthouses in 1,810 locations as of April 2006, are custom-designed using the data gathered by those technicians to match local circumstances. That same design technology is being used to full advantage in present-day photovoltaic power systems for residential and industrial use.

#### Sales of Residential Systems Lead to Dramatically Expanded Production

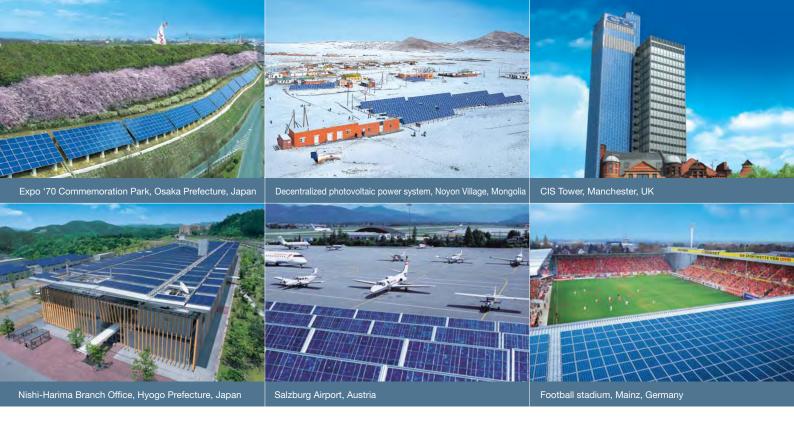
The scale of the solar energy business would be small if it depended only on demand from lighthouses and space satellites, and profitability would be next to non-existent. These past 48 years have also seen many difficult times, including business recessions. But Sharp kept faith in the potential of solar power for the future. The company quietly and unpretentiously persevered in keeping the business alive and developing the technology. The turning point came in 1994. Japan's Ministry of International Trade and Industry (now the Ministry of Economy, Trade and Industry) launched a monitoring program for residential PV systems that subsidized costs for homes with photovoltaic power systems. A grid-intertie mechanism was also established that enabled electric utilities to purchase any surplus electricity generated by individual residences. As a result, the use of photovoltaic power systems spread to ordinary homes, manufacturing economies of scale also brought costs down, and demand began to grow steadily. Sharp launched sales of residential systems in conjunction with this program, and augmented its production capacity to satisfy the resulting growth in demand. Sharp also concentrated on technological development, broadened its product lineup, as well as improved and expanded its sales and installation network.

As a result, Sharp has now been the world leader\* in solar cell production for the past seven years in a row, since 2000.

\* According to the March 2007 issue of PV News, a US publication.



Residential photovoltaic power system



#### Corporate Vision:

#### Sharp's Energy-Creating and Energy-Saving Products Equalize Sharp's Greenhouse Gas Emissions

Sharp aims to reduce greenhouse gas emissions from its worldwide business activities to such an extent that, by fiscal 2010, the quantity of greenhouse gases emitted that year will equal the quantity of greenhouse gases avoided that same year through customer use of both Sharp solar cells sold during the preceding 20 years and of Sharp energy-saving products.

Greenhouse gas emissions from Sharp's worldwide business activities CO<sub>2</sub> emission reductions through customer use of Sharp solar cells and energy-saving products

By reducing as much as possible the amount of greenhouse gases emitted as a result of Sharp's worldwide business activities, while at the same time, significantly increasing the magnitude of reductions in greenhouse gas emissions through customer use of Sharp energy-creating solar cells and energy-saving products, the net reduction in greenhouse gases will more than balance out the level of emissions by fiscal 2010. For fiscal 2006, greenhouse gas emissions were approximately 1.73 million t- $CO_2^{*1}$ . In contrast, the estimated amount of electrical power generated in fiscal 2006 by solar cells manufactured by Sharp during the 20-year period from 1986 to 2005 was approximately 1,322 GWh<sup>\*2</sup>. This is equivalent to a reduction in greenhouse gas emissions of 560,000 t- $CO_2^{*3}$ .

\*1 See page 36 for details.

- \*2 Calculation based on a total of 1,272 MW of solar cells produced by Sharp in the 20 years from 1986 to 2005. (For details on how this figure was calculated, please see the Sharp website.)
- \*3 Calculated using the figure of 0.425 kg/kWh for CO<sub>2</sub> emissions intensity (emissions per kWh of electricity consumed), announced by the Federation of Electric Power Companies of Japan (for fiscal 2005).

# Aiming to Have Energy-Creating and Energy-Saving Products Equalize Greenhouse Gas Emissions

In August 2004, six months before the Kyoto Protocol went into effect, Sharp set a target in its efforts to prevent global warming and defined its corporate vision that the quantity of greenhouse gases emitted in fiscal 2010 will equal the quantity of greenhouse gases avoided that same year through customer use of both Sharp solar cells sold during the preceding 20 years and of Sharp energy-saving products. As the world's leading manufacturer of solar cells, Sharp is focusing its efforts on the further development and diffusion of photovoltaic power generation to reduce greenhouse gases.

Recently, the movement to introduce and expand renewable energy is gaining momentum, particularly in Europe, but also in the US, China, and the rest of Asia. As a result, demand for photovoltaic power systems is skyrocketing. However, costs associated with photovoltaic power generation are fairly high compared to thermal or nuclear power generation, and solar energy accounts for a tiny percentage of the total amount of power generated worldwide. Further reductions in costs will be needed to stimulate widespread use on a global scale.

With the know-how and technologies gained from long years of experience in this field, Sharp is furthering R&D on a wide variety of solar cells and pursuing the potential for still wider use of solar energy. These new solar cells include silicon (single-crystal, polycrystalline, thin-film), as well as compound and dye-sensitized types that are expected to satisfy the requirements for lower costs and to meet burgeoning demand.



#### Developing Proprietary Technologies with the Goal of Full-Fledged Widespread Use

Sharp is currently developing thin-film silicon solar cells and concentrator photovoltaic power systems as new technologies that will expand the potential of solar energy.

Compared to crystalline silicon solar cells, which currently represent the dominant technology, thin-film silicon solar cells use significantly less silicon, about one one-hundredth the thickness of the normal silicon layer. Crystalline thin-film "see-through" solar cells in which laser light is used to make slits across the cell surface are being used in windows and skylights on buildings. In addition, Sharp's Lumiwall illuminating solar panels, which combine crystalline thin-film see-through solar cells and white LEDs, integrate power generation, daylight transmission, and self-illumination functions into a single module. During the day, solar cells generate power while allowing natural sunlight to pass through. At night, LEDs embedded in the same panel provide illumination.

Concentrator photovoltaic power systems generate electricity with high efficiency by tracking the sun and by using a Fresnel lens\* to concentrate sunlight onto a single point to irradiate the cell with strong light. The cell is the same compound cell used in space satellites, offering high power generating efficiency with a mere seven mm square surface. Such systems minimize the amount of raw materials used and thus reduce power generation costs. Proof-of-concept experiments are now underway along the Mediterranean Sea coast and in desert areas in the southwestern United States, working toward putting these systems into practical use in the near future.

Information on website

Photovoltaic power systems
 Corporate vision

Sharp is making an all-out effort to develop new technologies with the knowledge and experience accumulated over the past half century to achieve sustainable manufacturing and enhance the prevention of global warming through the full-scale diffusion of solar energy.

\* A Fresnel lens is a type of lens that has a surface consisting of a concentric series of simple sections, creating a thinner, lighter weight lens. The cross section has a sawtooth-like appearance. Originally invented for use in lighthouses.

# Make Solar Power the Basic Energy Source of a Sustainable Society



Looking at the rapid increase in solar cell production in recent years, I think Sharp, having consistently pioneered new frontiers in solar power technology, has arrived at a crucial moment. To promote solar power as a basic energy source for the future, I would like to see Sharp take full advantage of its technological capabilities gained so far and pursue the planning and construction of new energy network systems incorporating solar power.

Dr. Takashi Fuyuki Professor, Graduate School of Materials Science Nara Institute of Science and Technology

#### Building a Large-Scale Concentrator Solar Power Plant in the Desert

Solar cells used in concentrator systems are the same compound cells that Sharp developed for use in outer space. They have a high conversion efficiency of 37%, but are also expensive. That's why we are using lenses to concentrate sunlight and generate as much electricity as possible. Currently, proof-ofconcept experiments are underway on the coast of the Mediterranean Sea and in the southwestern United States. We are working hard to solve a mountain of problems one by one, such as heat dissipation and preventing damage from earthquakes, so to bring them into practical use as soon as possible.



Masao Tanaka General Manager Project Planning Concentrator Systems Center Solar Systems Group Sharp Corporation



In Europe, in 2005, the AQUOS was the first TV in the industry to acquire the European Union (EU) Eco-label\*<sup>1</sup>. By the end of February 2007, a total of 36 models had been awarded this designation. In the United States, the main models of AQUOS have qualified for the Energy Star\*<sup>2</sup> program. And in Japan, the AQUOS LC-52GX1W won the Eco Products Awards Council chairman's prize (Award of Excellence) at the 3rd Annual Eco Products Awards.

1 The Eco-label is a logo applied to products that meet environmental standards set by the European Commission, such as low power consumption, design for recycling, use of materials with low environmental impact, etc. Also known as the EU Eco Flower.
 2 Energy Star is a logo applied to products that meet environmental standards, such as low power consumption, set by the US Environmental Protection Agency (EPA), the Japanese Ministry of Economy, Trade and Industry, and others.

2 Environmentally Conscious Product Design

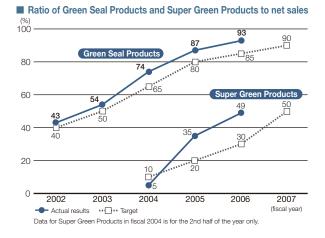
# Energy & Resource Savings, Green Materials, and Recyclability—The Concepts Behind Environmentally Conscious Product Design Epitomized by the AQUOS

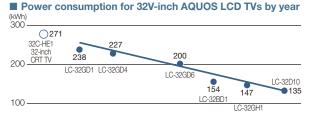
# Green Product & Green Device Development

Sharp formulated its Green Product Guidelines in fiscal 1998 with its 3G-1R\*1 environmental strategy developed in the same year, and established a systematic set of policies, standards, and processes for environmentally conscious product design. Sharp then set objectives and began to promote them across the entire company. As a result, environmentally conscious design permeated every aspect of new products, and all new products met Green Product standards. At the same time, Sharp introduced a system for certifying Green Products with particularly high levels of environmental performance as Green Seal Products. Sharp set annual sales targets for them, and the percentage of such products sold has gradually increased each year.

Beginning in fiscal 2004, Sharp established standards for Super Green Products that offer the ultimate level of environmental performance based on a newly established Super Green Strategy<sup>2</sup>. Meanwhile, Sharp rigorously revises the standards each year for Super Green Products and Green Seal Products, while setting ever higher sales percentage targets and working to expand sales (see graph at right).

Sharp also established standards for Green Devices and Super Green Devices in fiscal 2004 and fiscal 2005, respectively, to totally integrate environmentally conscious design into electronic devices. It is setting annual sales percentage targets for devices in a manner similar to those for products.



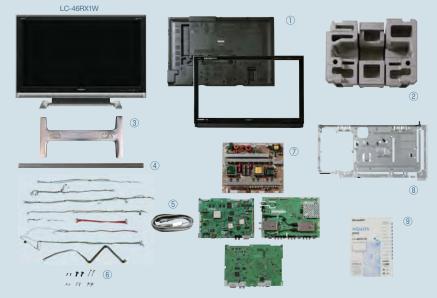


U 1st half 2000 2nd half 2003 1st half 2004 1st half 2005 2nd half 2005 1st half 2006 2nd half 2006 (fiscal year; term)

\*1 3G-1R strategy: Sharp's company-wide environmental strategy formulated by the Environmental Protection Group established in 1997. A variety of company-wide policies and measures were focused in four action themes: Green Products, Green Factories, Green Mind, and Recycling.
\*2 For details on the Super Green Strategy, see page 26.

Information on website AQUOS Green Products

13 Environmental and Social Report 2007



#### The AQUOS LC-46RX1W uses green materials exclusively

- ① Cabinet uses halogen-free resins and can be
- closed-loop material recycled
- 2 Packaging buffer made of recycled polystyrene foam 3 Stand uses plant-based resin paint and resins blended
- with recycled materials
- ④ Speaker grill uses readily recyclable metal materials
   ⑤ Halogen-free power cords and wiring
- 6 Screws and nuts contain no hexavalent chromium, a toxic heavy meta ⑦ Printed circuit boards use lead-free solder
- <sup>®</sup> Chassis uses chrome-free sheet steel containing no
- toxic hexavalent chromium (9) Instruction manuals are printed on 100% recycled
- paper using soy ink



packing box used for AQUOS models 20V inches and smaller\*1 developed in collaboration with Oji Chiyoda Container Co., Ltd. This box can be folded square without the need of tools such as box cutters,



and can easily be disposed of from the home as recyclable material together with other recyclable waste such as old

Received the Minister of Economy, Trade and Industry Prize, the top award, in the 2006 Japan Packaging Contest\*<sup>2</sup> and also received awards in worldwide packaging contests.<sup>3</sup>

- Used for models LC-20D10-B/W/R, LC-16E1-B/W/R, LC-20GH1, LC-15SX7, and LC-13SX7. Sponsored by the Japan Packaging Institute. Asia Star 2006 Awards sponsored by the Asian Packaging Federation, and the 2006 World Star Competition sponsore the World Packaging Organisation. ed by

#### **AQUOS' Environmentally Conscious Design**

The product that epitomizes Sharp's Super Green Products is the AQUOS LCD TV, a product that can be regarded as the symbol of Sharp's attitude toward environmentally conscious design.

As a TV befitting the century of the environment, the AQUOS is imbued with environmentally conscious design throughout. Sharp has endowed the AQUOS with a refined level of performance that flows from LCD TV technology. Compared to CRT TVs, LCD TVs save energy with lower power consumption and save resources with a thinner profile and lighter weight. The AQUOS also boasts long service life with a backlight lasting approximately 60,000 hours.\* Plus, Sharp uses green materials wherever possible, as illustrated above.

Included among these are plant-based resin paint applied to the stand, a proprietary technology developed in collaboration with Kansai Paint Co., Ltd., and the closed-loop material recyclable rear cabinet. The cabinet incorporates a special technology that enables its plastic material to be recovered once the product's service life has ended and the material to be repeatedly used in new home appliances. Both of these are advanced environmental technologies that embody Sharp's basic policies intended to reduce the consumption of fossil-based resources to the greatest extent possible.

The environmental performance of the AQUOS has garnered high marks both in Japan and internationally, including being the first TV set to acquire the "Eco Flower" Eco-label from the EU, qualifying for the Energy Star in the US, and being the first audio-visual product to win a prize at the Eco Products Awards in Japan.

In the future, Sharp intends to incorporate a wealth of new advanced environmental technologies into the AQUOS, its flagship product built on the ideal of sustainable manufacturing that Sharp is striving to achieve.

\* A measure of the time until screen brightness declines by half under continuous viewing in a room at 25°C with screen brightness in Normal mode.

#### Assessing the Clear Focus on the Environment Throughout the Lifetime of the AQUOS



Executive Director and Chairman Environment Committee Nippon Association of Consumer Specialists Judge for the 3rd Eco Products Awards

The detailed, environmentally conscious design of the AQUOS is the reason it received the Award of Excellence at the Eco Products Awards. This design took into consideration the 3Rs: it reduces the amount of resources used with its thin-profile and lightweight design, uses recycled materials, and adopts components that can be dismantled without the need to manually undo fasteners at the time of disposal. Consideration for the environment is clear throughout the life of the product, including choosing integrated manufacturing to reduce transportation impacts, energy efficiency during use, and the long service life of its backlight. Above all, the advertising that publicized the AQUOS had an extremely large impact on the public. I give the Kameyama Plant ads high marks for informing the public of the importance of environmental awareness when manufacturing a product.

#### Keep Making TVs that Are No. 1 in Environmental Performance

I am constantly aware that the AQUOS, having the top market share among LCD TVs in Japan, should be the leader in terms of environmental performance. Clearly, AQUOS is the flagship of all Sharp's environmentally conscious products. We vitally need to stress quality, cost, and consistent availability as we fully incorporate the latest in environmental technologies.



Demand for flat-panel TVs is growing rapidly, and production of AQUOS is increasing. When you think ahead and realize that these products will be recycled when their service life is over, the recyclability of used parts and materials becomes an important issue that we must do something about now. The AQUOS cabinets are outstanding in that they can be recycled into cabinets for new AQUOS sets.



Hirokazu Matsumoto

Sharp Corporation

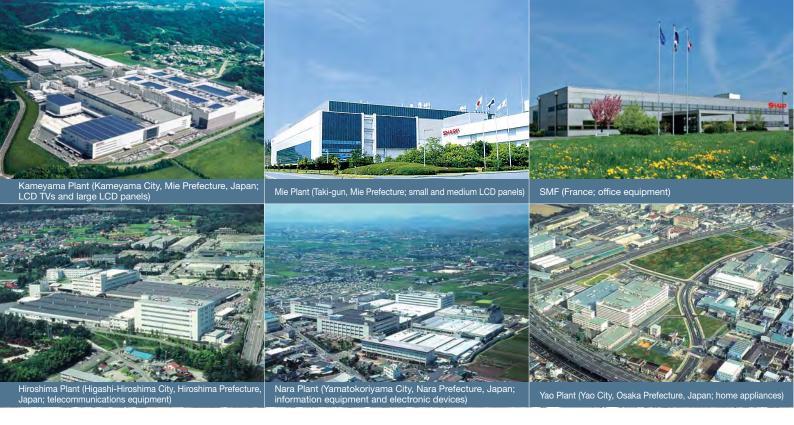
Engineering Department II

LCD Digital Systems Division I

Audio-Visual Systems Group

Manager

Yasuhiko Utsumi Assistant Manager Green Product Development and Promotion Department Environmental Protection Group Sharp Corporation



#### **3** Reducing Negative Environmental Impacts in Production Facilities

# Raising the Level of Environmental Consciousness at Plants Worldwide, Moving to Green Factories that Contribute to the Community

#### **Working Toward Green Factories**

In fiscal 1995, Sharp began the process of acquiring ISO 14001 environmental management system certification for its production facilities around the world. It also launched a campaign to systematically reduce negative environmental impacts at all plants in accordance with the PDCA (Plan, Do, Check, Act) quality control cycle. In September 1995, the Hiroshima Plant became the first to acquire certification, and by June 1997, all nine production facilities in Japan at that time had been certified. Internationally, SUKM\* in the UK led the way in November 1995, and certification was complete at all 22 overseas plants by fiscal 2004.

Beginning in fiscal 2002, the Sharp Environmental Management System (S-EMS) was formulated, adding 49 unique Sharp control points to supplement those specified by ISO standards. As of fiscal 2004, S-EMS had been introduced to all plants in Japan, and its introduction in overseas production facilities is now underway.

Meanwhile, in tandem with such actions, Sharp formulated its Green Factory Guidelines in fiscal 1999 following its 3G-1R strategy to provide guidance in turning production plants into Green Factories, and introduced those guidelines to all production facilities in Japan. In fiscal 2001, they were introduced simultaneously to all plants abroad, and Sharp began full-fledged efforts to reduce environmental impacts by setting a goal to upgrade all plants worldwide to Green Factories.

- \* SUKM: Sharp Manufacturing Company of U.K. Manufactures microwave ovens and photovoltaic modules.
- SMF: Sharp Manufacturing France S.A.
- SOCC: Sharp Office Equipments (Changshu) Co., Ltd.
- SRC: Sharp-Roxy Corporation (M) Sdn. Bhd.

#### The Birth of the Super Green Factory

Sharp jumped to the next stage in its efforts to push ahead with the conversion to Green Factories following the guidelines with the construction of the Kameyama Plant, a Super Green Factory that became operational in January 2004. Sharp established a policy at the time the Kameyama Plant was constructed that the environment was to be given priority consideration from the very earliest planning stages. The basic management policy announced in January 2004 defined "becoming an environmentally advanced company" as a medium-term corporate objective, and the Super Green Strategy intended to achieve this goal was launched. The Kameyama Plant and the AQUOS LCD TVs produced there are, along with solar power systems, the flagships of Sharp as an environmentally advanced company, and form the core of Sharp's Super Green Strategy. To clearly demonstrate corporate management's shift toward the environment, superior environmental performance was demanded of the Kameyama Plant and from the AQUOS.

Mie Prefecture, the location of the Kameyama Plant, is highly aware of environmental protection. Prior to the construction of the Mie Plant (in Taki-cho), which became operational in October 1995, an environmental assessment was conducted over a three-year period by academic experts and concerned parties from the area. The results led to the introduction of an advanced environmental protection system at the plant, including 100% recycling of process wastewater and zero discharge to landfill. The know-how and experience gained in this process were combined with knowledge gleaned from other production facilities and applied to the design of the Kameyama Plant.



#### Toward a Better Tomorrow...

To achieve SGF status, SOCC steadily implemented a series of environmental protection measures across the entire company. Specifically, SOCC placed priority on reducing the amount of waste it generated, introduced energy-efficient equipment, made effective use of water resources, and implemented safety measures inside the plant. These activities have been commended by government officials as well. SGF certification is serving as a source of encouragement for SOCC to keep up its environmental protection efforts.

SOCC Environmental Management Team (General Affairs Department) Front row, from left: Gu Jian, General Manager, Zhu Yan, Environment Synthesis Group; Qu Jian Ming, Manager, Environment Synthesis Group Back row, from left: Shao Li Jun, Assistant Manager, Equipment & Establishment Group; Pan Xue Jun, Equipment & Establishment Group; Wu Dean, Masser, Teament & Establishment

Establishment Group; Pan Xue Jun, Equipment & Establishment Group; Wu Dong, Manager, Equipment & Establishment Group; He Wei, Manager, General Affairs Group

#### Aiming to Become an Even More Advanced SGF

SRC has incorporated concern for the environment in its business culture that has evolved over the course of its 31-year history. To achieve SGF status, SRC returned to basics, and engaged in a variety of efforts to increase environmental awareness among all its employees. These approaches included not only reducing the environmental impact of the plant, but also volunteer activities in public spaces and environmental classes in schools. SRC will continue to work toward becoming an even more advanced SGF.

SRC Environmental Management Team Front row, from left: C.L. Lim, Manager, General Affairs; C.K. Choo Manager, Human Resources Development Center, Syed Sofi, Manager, Personnel; Mohd Ali Bakar, Assistant Manager, Occupational Safety & Health Administration Back row, from left: Johan B. Jamaludin, Senior Officer, General Affairs; Jolyn J.L. Tech, Officer, General Affairs; S.L. Teh, Senior Officer, Quality; Azhar B. Abas, Senior Officer, General Affairs; Suchard A.L. V. Lai. Senior Officer, General Affairs;

# All Plants to Be Green Factories by the End of Fiscal 2007

Assessment and certification criteria for Super Green Factories, which demand the greatest possible reduction in negative environmental impacts, were established in fiscal 2003 in conjunction with the construction of the Kameyama Plant, and certification criteria for Green Factories were established in fiscal 2004 based on them. At the same time, Sharp made it a priority in line with the Super Green Strategy to upgrade all ten plants under Sharp Corporation ownership to Super Green Factories by fiscal 2007, as well as to upgrade all domestic and overseas plants to at least the Green Factory level.

Following the Kameyama Plant in fiscal 2003 came the Mie Plant in fiscal 2004, and in the following year, fiscal 2005, SMF\* in France was certified as the third Super Green Factory and the first outside of Japan.

The Kameyama Plant and the Mie Plant are both the very latest type of LCD production facilities. They meet the certification criteria by taking full advantage of the latest environmental protection technologies provided by expert advice. In contrast, SMF, established 17 years ago, gained certification due to the strong determination of its top executives who supported employees' small-group activities to raise environmental consciousness, and who deployed detailed policy measures.

The results at SMF had a tremendous influence on other plants. In fiscal 2006, a total of five plants achieved Super Green Factory status: the Hiroshima, Nara, and Yao Plants in Japan, and SOCC\* (China) and SRC\* (Malaysia) abroad.

By fiscal 2006, 32 out of 39 production facilities worldwide had achieved Green Factory status, and five out of ten Sharp Corporation plants have gained Super Green Factory status.

Information on	🗆 Kameyama Plant
website	Green Factories

Sharp will continue to reduce the negative environmental impact of its plants and strive to achieve sustainable manufacturing. By enhancing interactions with the community and continuing to provide the region with new value, Sharp's intention is to transform its production sites into plants whose existence is indispensable to the community and whose presence is a source of local pride.

#### Protecting the Regional Environment Goes Hand-in-Hand with Corporate Site Development



Hiroshi Kinoshita Director Department of Environment and Forestry Kameyama City, Japan

Our city's environmental policies have made great strides thanks to the decision by Sharp to locate its Kameyama Plant here. The signing of a strict environmental protection agreement with the community and the foresight of Sharp's corporate philosophy regarding environmental protection throughout the entire plant has led to a new dimension in the environmental policies of the city administration. Good products are born out of the strong environmental consciousness of a company, and the trust of the people in their local government is earned through environmentally conscious policies. What I desire is to pass on an environment that the next generation can take pride in.



# Floating Photovoltaic Power System on a Reservoir Adjacent to the Kameyama Plant

Sharp constructed this project jointly with Cenergy Co. (Chubu Electric Power Group) and Kameyama City. This 200-kW photovoltaic power system floating on a reservoir generates electricity, and also by covering approximately 30% of the water's surface it blocks sunlight, thereby preventing degradation of the water quality by inhibiting the growth of algae. Rainwater that accumulates in the pond is effectively used as air-conditioning cooling water for the plant. (Joint research project with the New Energy and Industrial Technology Development Organization [NEDO], an independent administrative agency of the Japanese government)

# The Customer Assistance Center—Working for Greater Customer Satisfaction and Improved Product Quality

As products increasingly become digital and multifunctional, questions from customers are on the rise. These questions hold clues about how products can be improved and refined.

To make the best use of the valuable information gathered from customer inquiries, Sharp has revamped the organization and system at its Customer Assistance Center in Japan and changed the way it coordinates with business divisions.



# New Organization and Mechanisms to Accomplish Three CS Missions

The mission of Sharp's Customer Assistance Center is to provide customer satisfaction (CS) in the following three areas.

# 1) CS provided directly based on the quality of inquiry response

Each day, Sharp's Customer Assistance Center handles approximately 10,000 customer inquiries. Originally, Japan was divided into two geographic service areas, east and west, with the West Japan Center located in Yao (Osaka Prefecture) and the East Japan Center in Makuhari (Chiba Prefecture). However, individual employees of the Centers, called "agents,"\* needed to be well versed in all products, and problems arose in acquiring this broad-based knowledge.

Accordingly, beginning in April 2006, the system was gradually reorganized to eliminate the geographic areas and instead handle inquiries by product category. An automated voice menu system was used to direct customer inquiries, and the East Japan Center, which is located close to the business divisions responsible for audio-visual products such as LCD TVs, was assigned AV products. The West Japan Center, located close to the business divisions responsible for household appliances such as refrigerators, was assigned white goods, as well as personal computers and facsimiles which are produced in Yamatokoriyama (Nara Prefecture) nearby. Narrowing the distance between the Centers and the business divisions made it easier to develop in-depth product knowledge through study sessions that featured hands-on experience using actual products.

# 2) CS provided through quality service and prompt repairs

Sharp introduced Diagnostic Interview techniques as a support tool to enable agents to better manage how customers receive after-sales service. This system diagnoses problems by asking the customer a series of questions that gradually narrow in focus. Once the problem is clarified, employees of Sharp-Engineering Corporation, the service company for the Sharp Group, specify what to repair and identify needed parts in cooperation with Sharp Corporation parts centers, making repair possible on the same or next day.

# 3) CS provided by products that reflect customer comments

The Customer Assistance Center meets regularly with each business division to share information and ideas. These informal meetings allow the voice of customers to be reflected in products, and represent on-going efforts to improve products as well as their instruction manuals using information gathered by the Customer Assistance Center. Members of development teams from the business divisions, as well as agents from the Customer Assistance Center participate, and the persons in charge decide on strategies for improvement on the spot. There have been numerous cases where these sessions resulted in improvements, such as making the Superheated Steam Oven more compact to fit smaller spaces.

\* Agent: A staff member with the double role of representing Sharp, as well as the customer, by making known the latter's opinions to the company.





- are invaluable for product improvement. A large 65V-inch LCD monitor is used in the Customer Assistance Center to display
- the status of incoming calls on all lines and the disposition of calls handled in real time.
- 6 Customer Opinion Portal website. Customer comments are entered in a database the day after they are received. Data can be retrieved using a variety of search parameters, including model name and the nature of the customer contact.

In addition, all information received by the Customer Assistance Center (with the exception of personal information) is entered into a database, and a new Customer Opinion Portal website has been set up to enable searching or browsing over a corporate intranet. Information gathered from the approximately 10,000 customer inquiries each day can be accessed by individuals responsible for product planning and design as well as quality control. It is used to validate product improvements and verify that the product remains convenient and easy to use. The previous system was completely revamped, with the revised system going into operation in January 2007, and it is currently being continuously upgraded.

In May 2006, Sharp inaugurated a management system for analyzing customer inquiries as soon as a new product enters the market. At that time, an employee from a division responsible for technology, quality, and service is assigned to the Customer Assistance Center to analyze the data and implement quick response.

#### System Designed to Empower Agents to the Greatest Extent Possible

To compile all the information obtained from customers and use it effectively requires a wealth of product knowledge and information processing abilities on the part of the agents, who are the point of contact with customers. Sharp's policy is to ensure that a certain amount of time during the work hours of each agent is allocated for training, using an in-house qualification & certification system. In fiscal 2007 Sharp added senior-level tests to the entry-level tests already in use. The new tests are intended to boost the agents' skill levels and motivation, with the results being reflected in the agents' job evaluations and benefits.

To improve customer satisfaction in the future, Sharp will work to improve the quality of the response of the Customer Assistance Center and to manufacture products that make full use of customer comments.

#### Words from a Person in Charge

# Fostering a Genuine Sense of Concern and In-Depth Product Knowledge

For agents at the Customer Assistance Center, the most important things are being able to grasp what the customer is trying to say and understanding what the customer wants. A genuine sense of concern and thoughtful attention are needed here. In the agents' training, we endeavor to impart knowledge that will be of immediate use when the agent is handling an actual call, and we also incorporate hands-on learning using actual products.

Customers ask questions such as how to bake *matsutake* mushrooms in the Superheated Steam Oven. Agents write up their own manuals, incorporating such specific information to help them deal with a variety of inquiries.



Kazuko Inagawa Manager West Japan Center Customer Assistance Center CS Promotion Group Sharp Corporation

# Developing CSR Activities at All Sales Bases Throughout Japan with the Goal of Becoming Rooted in the Local Community

Sharp established the CSR Promotion Department within the Domestic Sales and Marketing Group to promote business activities that emphasize the basic principles of "customer first" and ethical and legal compliance. Sharp's sales bases are working to fulfill the company's promised role in society by spreading the CSR mindset to sales staff all over Japan and promoting activities that contribute to the community where each base is located.



#### Building a Mechanism to Spread the CSR Mindset to All Sales Bases

Sharp's sales and service bases throughout Japan have direct contact not only with customers, but also with business partners, and consequently, all bases put into practice business activities that emphasize the basic principles of "always put the customer first" and ethical and legal compliance. In April 2004, Sharp established the CSR Promotion Department under the Domestic Sales and Marketing Group that holds overall responsibility for product sales to promote CSR efforts within sales divisions.

Sharp regards spreading the CSR mindset to individual employees working at sales bases all over Japan to be an important issue. In addition to conventional instructor-led training, Sharp began broadcasting domestic sales CSR seminars in fiscal 2004 to all its sales and service bases in Japan via satellite. These seminars select themes related to compliance or conduct under CSR relevant to sales and service—for example, "Compliance Rules for Sales Under the Antimonopoly Act"—and deliver a visual presentation of about 15 minutes on the topic. Broadcasting to all sales bases in Japan and with all employees viewing at the same time ensures that awareness of pressing themes is shared by everyone. In fiscal 2006, Sharp held such CSR seminars six times, and since the program's inception, seminars have been given a total of more than 30 times.

At business locations shared by a number of affiliated sales and service companies, Sharp holds morning meetings in which managers from all companies gather at the beginning of each week to exchange information. Since fiscal 2006, the Head Office has provided training materials on CSR and compliance issues, and launched mini training sessions in which leaders of the morning meetings play the role of lecturer/teacher. The aim is to improve knowledge and insight into compliance and CSR.

In addition, Sharp has instituted an online self-auditing system. Sales and service managers assess how well the employees are putting the material learned in the seminars into practice in their sales activities. The results are analyzed quantitatively and qualitatively, and reflected in new policies and mechanisms to ensure compliance and CSR.

#### Thinking Hard About the Community—Expanding the Circle of CSR Activities Through Social Action Programs

As the entity closest to members of the community, Sharp's sales bases want to play a role in the community. That is why at least once every six months, each base undertakes some activity so as to become rooted in the community. The Domestic Sales and Marketing Group supports these activities by disseminating information and providing solutions to problems.

The community environment surrounding sales bases varies with each location, and so individual bases at their own initiative develop social action programs to match the character of the community. The size of the sales base also varies according to the region, but even bases with a small number of personnel where it is difficult to mount activities single-handedly can take a proactive approach by cooperating with community associations, inviting the families of employees to participate, and similar such actions.

In fiscal 2006, to expand the circle of CSR, Sharp asked sales personnel at dealers to participate in activities. The



Yamanashi Building began a joint program with dealers to visit welfare facilities for the aged and help elderly persons who were having trouble operating consumer electronics. The Sendai Building gained the cooperation of personnel from business partners, mainly staff from Sharp-affiliated dealers, and held a cleanup campaign for Tsutsuji-ga-oka Park. This activity sparked a great deal of interest in community action programs, as evidenced by comments from participants such as "It deepened my understanding of CSR," and "I would like to participate in more activities..."

By continuing such programs, Sharp is ensuring greater cooperation from members of the community. For example, a blood donation campaign held at the Koto Building (Tokyo) resulted in the participation of individuals from community associations and neighboring businesses with at least 50 volunteer donors for three years in a row, anchoring this blood drive as a CSR activity rooted in the community.

In fiscal 2006, community-based social action programs were held 636 times at sales bases throughout Japan, with a total of 14,078 participants. In the future, Sharp plans to strengthen its efforts along the entire supply chain, including business partners and subcontractor companies to further widen the circle of CSR activities.

#### Words from a Stakeholder

#### Looking Forward to More Social Contributions in the Future

Every year, over 100 members of our group, also known as Gomi-Gen ("reduce garbage"), participate in a cleanup campaign held on Momochi-hama Beach near Fukuoka City. Each year, I see many people from Sharp also participating, but I was surprised when I heard that they were coming from Hakata Ward which, even though it's inside the city limits of Fukuoka, is a long way away. I was certainly impressed at how Sharp truly is an environmentally advanced company. I look forward to their on-going community-based social contributions in the future.



Masahiro Shibasaki Chairman Momochi-hama School District Garbage Reduction/ Recycling Promotion Council

#### Words from a Person in Charge

# Fulfilling CSR in a Way Unique to Sales Bases

The basic role of sales and service departments is to fulfill their responsibility to society by offering products and service that satisfy customers. But in addition to these, Sharp is taking steps to make CSR a new role for each sales base. For example, each sales base establishes a theme unique to each area and carries out environmental and community action programs accordingly. Through these activities, Sharp is working to establish sales bases that exist in harmony with the local community and to strengthen CSR awareness at sales bases nationwide.



Yoshihide Sakai Department General Manager CSR Promotion Department Domestic Sales and Marketing Group Sharp Corporation

#### **Special Focus 3**

# Sharp and Weathercasters Launch Environmental Education for Elementary School Students in Japan

In cooperation with the Weathercaster Network (WCN), a nonprofit educational organization of weather forecasters in the Japanese media, Sharp has been holding environmental education classes for elementary school students since October 2006 to help them learn about global warming issues, as well as the importance of solar energy and recycling. Sharp solicited applications from schools around the country to participate, and provided a platform to encourage increasing numbers of children to think about the environment.



#### Fostering a Mindset to Do What One Can for the Environment in Everyday Life

Since 2004, the Weathercaster Network (WCN), a nonprofit educational organization of weather forecasters in Japanese TV and radio, has been providing educational programs on weather disaster prevention and global warming, targeting schools and civic groups across Japan. Meanwhile, Sharp began environmental education with recycling as its theme when it launched its home appliance recycling business in 2001. Sharp also developed its Solar Academy in 2004, a traveling program to teach the mechanisms and features of photovoltaic power generation.

The two parties met by chance in December 2005, at a symposium at the Eco Products 2005 trade fair held at the Tokyo Big Sight exhibition center and found many common

affinities. A shared sense of mission became the motivating force for their partnership. The two groups began collaborative activities in elementary school environmental education in October 2006.

In their presentations, Sharp and WCN explore two themes: "global warming and new energy (solar power)" as well as "global warming and recycling." A member of WCN who is a weather expert explains familiar changes in weather patterns, using experiments and fun talk. In the second half of the class, a presenter from Sharp introduces photovoltaic power generation and recycling through experiments. Lastly, eco-friendly lifestyles are reviewed, and the students are urged to adopt them in their own homes.

Both presentations push the three key elements that form the basic principles of environmental education: 1) teach in a scientific manner, 2) use experiments to give students a base for learning, and 3) foster the mindset to practice what they have learned.

#### Words from a Teacher

# An Opportunity to Think About the Global Environment

In the environmental education classes, children were able to learn in detail about the current state of the Earth. And by thinking about what they themselves could do, they were able to take up eco-friendly lifestyle habits, such as turning off unnecessary lighting and shutting off dripping faucets.



Tsuyoshi Ohga Teacher Tsukishima No. 1 Elementary School Chuo Ward, Tokyo

#### Words from a Weathercaster

#### Interesting Experiments that Exceed Our Expectations

What I felt was interesting about holding joint classes with the people from Sharp were their experiments. They far exceeded our expectations, and the children also found them extremely intriguing. I myself would like to adopt Sharp's teaching methods.



Nobuyuki Hirai Representative Weathercaster Network



The program schedule allowed for the participation of 50 schools throughout the year from October 2006 through March 2007, targeting fourth grade elementary students and older. When the two groups solicited schools wishing to participate, approximately 100 schools submitted applications. The schools' interest in classroom environmental education came through loud and clear.

Following the classes, Sharp and WCN received more than 400 letters from teachers and children during the six-month period. Both groups sensed a tremendous response in the straightforward tone of the letters: "Hearing how I might be making the environment worse made me think that I, too, have to do something," and "I'm going to talk to my mother about not throwing away so much garbage," and "I'm going to carry a wrapping cloth or a shopping bag when I run errands."

#### Increasing Opportunities for Environmental Education and Enhancing Educational Activities Abroad

Sharp wants to communicate to as many children as possible the urgency of environmental issues and would like them to adopt eco-friendly lifestyles. Accordingly, in fiscal 2007, Sharp will be significantly increasing the number of schools offering environmental education classes. Sharp will also be increasing the number of full-time lecturers from the Environmental Protection Group from four to eight, as well as increasing the number of Eco Navigator facilitators selected from employees at sales and service bases around the country from 50 to 110. Plans call for environmental education programs to be presented at 500 schools annually in cooperation with WCN.

#### Words from a Weathercaster

#### Striving to Be a Fun Instructor

To get the children to understand weather anomalies and global warming, you first have to become friendly with them. That's why I do things like play quiz games and call them by nicknames. There's a sense of fulfillment when the children are able to have fun. I'm aiming to be a quick, sharp presenter.



Ryoko Fujimori Deputy Representative Weathercaster Network

#### Words from a Weathercaster

# High Living Standards Need Not Harm Our Earth

The global warming of recent years increases abnormal weather events and is affecting the survival of living things. We can send the message that a life of abundance need not place a burden on the Earth. Together with the people from Sharp, I will do my utmost to build a recycling-oriented, sustainable society, and to spread the message of the global environment.



Tadayuki Iwaya Director Weathercaster Network

#### **Special Focus 3**



An Eco Navigator and children do experiments on recycling using magnetism to separate metals
 Presentation about recycling and resource issues
 SRC (Malaysia) has been holding classes for junior high school girls in cooperation with the Kedah State Branch of the Girl Guide Association of Malaysia\* since fiscal 2005

The Girl Guide Association of Malaysia, a member of the World Association of Girl Guides and Girl Scouts, was established in 1916 as an organization to provide educational activities and opportunities for girls outside the home and school.

Eco Navigators are involved in sales and service activities, but they are also the key persons in promoting CSR activities at each base or office. These committed individuals are taking on community-based social action programs as a new role, and are confronting this new challenge with a sense of mission. They also receive training to get a solid grounding on environmental issues and how to relate to children when conducting the classes.

In April 2007, Sharp set up an Internet bulletin board to support classroom instruction, as well as learning development and exchanges among schools, with follow-up exchanges of opinions, research announcements, and collaborative research. Participating schools were issued IDs and passwords to support environmental education on a continuing basis.

In the future, Sharp will focus on environmental education internationally. So far, environmental education programs have been conducted at overseas bases in the UK, Indonesia, and the Philippines. In fiscal 2005, SRC\*, Sharp's manufacturing subsidiary in Malaysia, also launched an environmental education program in junior high schools.

Sharp plans to expand and enhance education programs internationally, and envisions developing them in a cross-sectional manner at all bases.

The company is contributing to the building of a sustainable society through sustainable manufacturing while helping more children learn about environmentally conscious lifestyles.

\* SRC: Sharp-Roxy Corporation (M) Sdn. Bhd. Manufactures audio-visual equipment.

#### Words from an Eco Navigator

#### Making Promises with Children to Start with Things Near at Hand

In the class, the children promised to start with whatever they can in everyday life to protect the environment. As a manufacturing company, contributing to society through better lifestyle offerings and service activities is our mission, but I am proud to be able to contribute to the local community through such environmental education activities beyond just products.



Yasunori Suwa Manager Japan Sales Division IV Sharp Electronics Marketing Corporation

#### Words from Persons in Charge

#### I'm Known as Mr. Recycling



When a member of WCN introduces me as "Mr. Recycling," the students greet me with expectant looks. We have fun doing experiments and playing quiz games, and I think this can serve as a motivation to get the children to think about the environment.

Inito Manager Environmental Education and Outreach Department Environmental Protection Group Sharp Corporation

#### Surprised by the Children's Ideas

In the class on solar cells, students came up with ideas like, "If we stuck them on railroad tracks, we could run the trains ..." and "How about embedding them in the pavement?" Sometimes I think their ideas could be a possibility that we can study with our engineers. I hope these classes will provide hints to the children on future school and career options.



Chiaki Fukada Junior Manager Environmental Education and Outreach Department Environmental Protection Group, Sharp Corporation

# Sharp and the Environment In Pursuit of Becoming an Environmentally Advanced Corporate Group

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# Advanced Measures for Environmental Conservation as Management Policy

In accordance with environmental guidelines established in line with Sharp's Basic Environmental Philosophy, the Sharp Group Charter of Corporate Behavior, and the Sharp Code of Conduct, Sharp is pursuing environmental conservation in all aspects of its business activities. Since fiscal 2004, when the medium-term corporate objective of becoming an environmentally advanced company was first set, Sharp has been promoting the Super Green Strategy to achieve its corporate vision and to establish sustainable manufacturing systems.

#### Medium-Term Corporate Objective: Environmentally Advanced Company

Since fiscal 2004, the medium-term corporate objective of becoming an environmentally advanced company has been Sharp's basic management policy. At the same time, it set forth its corporate vision as "Sharp's energy-creating and energy-saving products equalize Sharp's greenhouse gas emissions" and is promoting its Super Green Strategy to accelerate the company's environmental performance.

# Main Objectives and Fiscal 2006 Achievements

In fiscal 2006, Sharp's third year of pursuing the medium-term corporate objective of becoming an environmentally advanced company, Sharp began harvesting the results of various measures taken.

In regard to environmental technologies, Sharp was able to smoothly expand its closed-loop plastic material recycling (CMR), and also started using CMR-ready material in AQUOS LCD TV cabinets as a strategic move for the future. Moreover, Sharp developed a new quick-drying, plant-based resin paint and expanded the range of its applications.

Sharp's products and devices exceeded all targets for the percentage of sales achieved by all four kinds of Green Products and Devices. While Sharp products and devices have already achieved a considerably high degree of environmental performance, in the future Sharp will study how to set targets following the assessment indices of the Comprehensive Product Environmental Evaluation System, which provides LCA (life cycle assessment) know-how.

Overseas production sites have dramatically reduced their impact on the environment. The goal to upgrade all group factories to Green Factories by the end of fiscal 2007 has accelerated efforts at overseas sites to reduce environmental impact. Sharp has already converted all domestic plants into Green Factories or higher.

Other significant results include the establishment of the Integrated Management System, the start-up of a second plant for Kansai Recycling Systems Co., Ltd., and the start of environmental education programs at elementary schools.

At Sharp, systems to support an environmentally advanced company—one that contributes to the creation of a sustainable society—are gradually being established around its manufacturing core.

#### - Basic Environmental Philosophy

Creating an Environmentally Conscious Company with Sincerity and Creativity

#### The Sharp Group Charter of Corporate Behavior Contribution to Conservation of the Global Environment

The Sharp Group will fulfill our responsibility for environmental conservation by promoting the creation of proprietary technologies that contribute to protection of the global environment, and by carrying out our product development and business activities in an environmentally conscious manner.

#### — The Sharp Code of Conduct —

# Contribution to Conservation of the Global Environment

- 1. To Conserve the Environment
- 2. To Develop Environmentally Conscious Products and Services, and Conduct Our Business Operations in an Environmentally Conscious Manner

Stages	Themes	Major Objectives
	Environmental management system	Implement Sharp Environmental Management System (S-EMS)
Environmental Sustainability		Acquire ISO 14001 certification
Management		Build Integrated Management System (IMS)*1
		Conduct cross audits
		Promote closed-loop plastic material recycling
	Establish 3R technologies	Establish LCD TV recycling technology
Planning and	Develop Green Products	Increase Green Seal Products' share of net sales in Japan*2
Design		Increase Super Green Products' share of net sales in Japan
		Increase Green Devices' share of net sales*3
	Develop Green Devices	Increase Super Green Devices' share of net sales
	Convert factories to Green Factories	Build Green Factories (GF) and Super Green Factories (SGF)
Manufacturing	Curb greenhouse gas emissions	Reduce $CO_2$ emissions (per production unit)
	Reduce and recycle waste	Reduce amount of waste discharged (per production unit)
	Reduce risk from harmful chemicals	Reduce discharge risk of chemicals under high-priority control
Logistics	Reduce distribution-related CO <sub>2</sub> emissions	Change modes of transport
Recycling	Recycle used products	Enhance and improve recycling systems

\*1 The Integrated Management System is a system that simultaneously reduces environmental impact and improves quality.

\*2 The sales ratio of Green Seal Products includes sales of Super Green Products

\*3 The sales ratio of Green Devices includes sales of Super Green Devices.
\*4 Amount of waste, etc. discharged = amount of waste discharged + amount of valuable resources

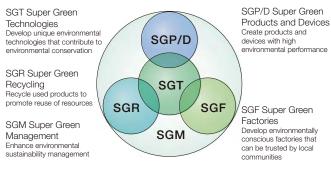
\*5 Per adjusted production unit (t-CO<sub>2</sub>/100 million yen) = CO<sub>2</sub> emission (t-CO<sub>2</sub>)  $\div$  (production output (100 million yen)  $\div$  domestic corporate price index (electrical equipment) determined by the Bank of Japan)

#### Corporate Vision: Sharp's Energy-Creating and Energy-Saving Products Equalize Sharp's Greenhouse Gas Emissions

Greenhouse gas emissions from Sharp's worldwide business activities CO<sub>2</sub> emission reductions through customer use of Sharp solar cells and energy-saving products

Sharp aims to reduce greenhouse gas emissions from its worldwide business activities to such an extent that, by fiscal 2010, the quantity of greenhouse gases emitted that year will equal the quantity of greenhouse gases avoided that same year through customer use of both Sharp solar cells sold during the preceding 20 years and of Sharp energy-saving products. For details, see page 11.

# Super Green Strategy: Aiming to Become an Environmentally Advanced Company



Self Evaluation 🔘 : Achieved more than targeted 🔿 : Achieved as targeted 🛆 : Achieved more than 80% of initial target 🛛 : Achieved less than 80% of initial target

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Fiscal 2006 Objectives	Fiscal 2006 Achievements	Self- Evaluation	Fiscal 2007 Objectives	Fiscal 2009 Objectives	
Introduce S-EMS at 10 overseas production sites	Introduced S-EMS at 12 overseas production sites	0	Introduce S-EMS at 22 overseas production sites	Complete introduction of S-EMS at all domestic and overseas production sites	
Complete certification at all overseas non-production consolidated subsidiaries (total 21)	Unattained at one subsidiary	×	Complete certification at all overseas non-production consolidated subsidiaries	_	
Build IMS at 2 domestic production sites	Built IMS at 2 domestic production sites	0	Build IMS at 6 domestic production sites in total	Build IMS at 6 domestic and 11 overseas production sites in total	
Conduct at 3 overseas production sites	Conducted at 3 overseas production sites	0	Conduct at 10 overseas production sites in total	Conduct among overseas production sites producing same items	
Use 600 tons of recycled plastic in new products	Used approx. 620 tons	0	Use 800 tons	Use 1,000 tons (fiscal 2008 objective)	
Conduct verification tests on technology to recover indium from LCD panels	Verified recovery of indium from LCD panels	0	Conduct experimental study of LCD TV recycling technology	Study application of LCD TV recycling technology	
Green Seal products account for 85% of net sales	Approx. 93%	0	90% or more	90% or more	
Super Green Products account for 30% of net sales	Approx. 49%	0	50%	60%	
Green Devices account for 65% of net sales	Approx. 73%	0	75%	85%	
Super Green Devices account for 10% of net sales	Approx. 12%	0	15%	20%	
Japan: Of 10 Sharp Corporation production sites, upgrade 5 to SGF and 5 to GF Of 7 subsidiaries/affiliates, upgrade 5 to GF	Japan: Upgraded 5 Sharp Corporation production sites to SGF and 5 to GF, and 7 subsidiaries/ affiliates to GF	0	Upgrade all Sharp Corporation production sites to SGF Upgrade all other domestic and overseas production sites (subsidiaries/affiliates) to GF	Promote new SGF measures	
Overseas: Of 22 production sites, upgrade 1 to SGF and 14 to GF	Overseas: Upgraded 3 production sites to SGF and 12 to GF	0	or higher		
Japan: Product sites: Reduce by 2% from previous fiscal year (every fiscal year) Device sites: Reduce by 5% from previous fiscal year (every fiscal year)	Japan: Product sites: Reduced by approx. 12% from previous fiscal year Device sites: Increased by approx. 1% from previous fiscal year	$\triangle$	Japan: Product sites: Reduce by 2% from previous fiscal year (every fiscal year) Device sites: Reduce by 5% from previous fiscal year (every fiscal year)	Japan: Reduce by 28% compared to fiscal 1990 per adjusted production unit*5 (fiscal 2010 objective)	
Overseas: Reduce by 2% from previous fiscal year at all production sites (every fiscal year)	Overseas: Reduced by approx. 14% from previous fiscal year at all production sites	0	Overseas: Reduce by 2% from previous fiscal year at all produ	iction sites (every fiscal year)	
Japan: Reduce amount of waste discharged by 3% from previous fiscal year (every fiscal year)	Japan: Increased by approx. 11% from previous fiscal year	×	Japan: Reduce amount of waste discharged by 3% from previous fiscal year (every fiscal		
Overseas: Reduce amount of waste, etc. discharged*4 by 2% from previous fiscal year (every fiscal year)	Overseas: Reduced by approx. 19% from previous fiscal year	0	Overseas: Reduce amount of waste, etc. discharged by 2% from previous fiscal year (every fis		
Reduce discharge risk of chemicals at Sharp Corporation production sites by 55% or more compared to fiscal 2003	Reduced by approx. 58% compared to fiscal 2003	0	Reduce by 60% compared to fiscal 2003	Reduce by 60% or more compared to fiscal 2003 (fiscal 2008 objective)	
Domestic railway cargo transport: 1,050 containers/month Reduce 4,400 t-CO $_2$ of CO $_2$ emissions in Japan	1,263 containers/month Approx. 5,327 t-CO <sub>2</sub>	0	1,300 containers/month	1,600 containers/month	
 Boost domestic recycling of used home appliances	Improved recycling rate (up 3 points over previous fiscal year in four home appliances in total)	0	Respond to increased number of items requiring rea	cycling	

http://sharp-world.com/corporate/eco/report2007/ 
Sharp Group Charter of Corporate Behavior (full text)
Sharp Code of Conduct (full text)

# Advancing Super Green Management

The Environmental Protection Group plays the key role in implementing Sharp's advanced environmental measures. Under a company-wide organization, the Group is continuously strengthening environmental sustainability management and raising employee environmental awareness with measures such as the creation of an Integrated Management System that is incorporated into a strategic management system, and the implementation of environmental education programs.

Objectives for Fiscal 2006	Achievements for Fiscal 2006	Objectives for Fiscal 2007	Objectives for Fiscal 2009	
Introduce S-EMS at 10 overseas production sites	<ul> <li>Introduced S-EMS at 12 overseas production sites</li> </ul>	<ul> <li>Introduce S-EMS at 22 overseas production sites</li> </ul>	Complete introduction of S-EMS at all domestic and overseas production sites	
Complete ISO 14001 certification at all overseas     non-production consolidated subsidiaries (total 21)	Unattained at one subsidiary	<ul> <li>Complete certification at all overseas non-production consolidated subsidiaries</li> </ul>		
Build Integrated Management System at 2 domestic production sites	Built Integrated Management System at 2 domestic production sites	<ul> <li>Build Integrated Management System at 6 domestic production sites in total</li> </ul>	<ul> <li>Build Integrated Management System at 6 domestic and 11 overseas production sites in total</li> </ul>	
Conduct cross audits at 3 overseas production sites	Conducted cross audits at 3     overseas production sites	<ul> <li>Conduct cross audits at 10 overseas production sites in total</li> </ul>	<ul> <li>Conduct cross audits among overseas production sites producing same items</li> </ul>	

#### Environmental Sustainability Management Centered on the Environmental Protection Group

The Environmental Protection Group, which plays the key role in Sharp's environmental sustainability management, holds General Global Environmental Conferences. Overseen by the director in charge of environmental affairs, the conferences set guidelines, strategies, and objectives for all Sharp Group companies. The Group also hosts Company-Wide GP (Green Product)/GF (Green Factory) Conferences for sites to discuss specific environmental measures concerning products and plants.

At the Group's regional environmental conferences held in four world regions, participants gain a deeper understanding of environmental guidelines, strategies and objectives, as well as discuss specific themes and case reports from each site.

The Environmental Protection Group and departments in charge of environmental matters at all sites work closely together to inaugurate committees and the like to identify problems and formulate solutions as special needs arise.

#### Building an Integrated Management System that Is Incorporated into the eS-SEM Strategic Management System

Sharp introduced its original strategic management system (eS-SEM\*1) using the balanced scorecard\*2 method in fiscal 2004. The eS-SEM system breaks down company-wide organizational goals to the level of the individual in order to clarify the objectives of individual employees and specify their levels of achievement. Thus individual employees are evaluated for how well they have contributed to corporate management. The system helps employees make their objectives more practical and to obtain results that are in line with company-wide strategies.

Separate from this, Sharp has for a number of years now had a proprietary environmental management system (S-EMS\*<sup>3</sup>) aimed at reinforcing environmental legal compliance and improving environmental activities. The S-EMS adds 49 original additional criteria to ISO 14001, with mandatory reports on progress to be submitted regularly to the Environmental Protection Group.

> Company-Wide Special Safety Management Committee

Previously, Sharp had three separate in-house systems—eS-SEM, S-EMS, and QMS (Quality Management System). But for increased accuracy and efficiency, the S-EMS and QMS were merged into the Integrated Management System, which was integrated into, and operated as part of, the eS-SEM. (See page 28 diagram, Structure of Integrated Management System.)

By incorporating the Integrated Management System into eS-SEM, Sharp expects to achieve two benefits. First, Sharp expects performance improvements and risk reductions in the form of reduced areenhouse gas emissions from business activities, as well as fewer defective goods, these being in line with Sharp's management objectives. Second, by refocusing separate S-EMS and QMS programs into activities aimed at achieving the same company-wide management objectives, Sharp is able to put its management resources where it needs them most.

In fiscal 2006, two production sites, the Hiroshima Plant and the Yao Plant, adopted the Integrated Management System. Sharp plans to introduce the Integrated Management System to more domestic production sites and bring the total to six sites in fiscal 2007.

\*1 eS-SEM: e-Sharp Strategic Enterprise Management \*2 Balanced scorecard: Management method developed by Drs. R. Kaplan and D. Norton of Harvard University in the early 1990s.

\*3 S-EMS: Sharp Environmental Management System



Management Strategy Conference

Overseen by the President

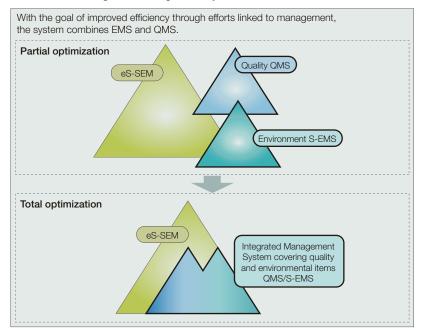
**General Global Environmental Conference** 



2007 Asia Environmental Conference in Thailand

## Sharp Group's environmental sustainability management

#### Structure of Integrated Management System



Objectives for S-EMS and QMS used to be separate (partial optimization); for example, reduction of waste was an objective for S-EMS while reduction of failure rates was an objective for QMS. The Integrated Management System, however, established objectives centered on business management plans for reducing environmental impact and for improving quality simultaneously (total optimization); for example, an objective to reduce defective products can solve two problems: excess waste and product failure. This means the Integrated Management System enables Sharp to achieve wide-ranging results. This system is also expected to bring other benefits such as reducing documentation, consolidating work, and shortening examination periods.

#### **Conducting Cross Audits**

Sharp's overseas production sites have conducted internal environmental audits that are limited to each base, although cross audits had already been carried out at sites in Japan. In fiscal 2006, with the aim of further improving the capability of internal auditors and the level of audits at overseas sites, Sharp introduced cross audits, in which internal auditors audit each other's bases.

In fiscal 2006, auditors at three sites in China with advanced knowledge of ISO 14001 and environment-related facilities conducted cross audits at each other's bases. The results of the audits were reported to the management of each site and a system has been created for taking improvement measures. The introduction of cross audits has thus enabled Chinese sites to strengthen their individual environmental efforts and to establish a system for conducting highly accurate, high-quality audits by improving the level of auditors and by sharing know-how.

In future, Sharp will conduct similar cross audits at the remaining three sites in China, as well as sites in Southeast Asia, North America, and Europe.

Information on website

#### Stepping Up Environmental Education and Training

Sharp offers systematic environmental education and training in three courses.

- Master course: Designed to foster leaders who serve as the pillars of environmental sustainability management owing to their acquisition of comprehensive knowledge in technology, products, and production.
- 2) Expert course: Designed to help employees learn more about environmental legislative control and special skills.
- General course: Designed to help employees acquire basic environmental knowledge and improve awareness of the environment.

In fiscal 2006, in order to foster leaders who have expertise and know-how in specific environmental fields, Sharp added a specialist class to the Master course. The specialist class deals with themes closely linked to work (environmental facilities, energy savings, waste disposal, management of chemical substances, and operational safety). The programs consist of lectures provided by in-house and outside lecturers, on-site practical training, and group discussion. The specialist classes were offered at six sites in fiscal 2006.

#### Environmental education and training system





Taking apart an air conditioner as part of recycling training

#### **Environmental Accounting**

Sharp introduced environmental accounting in fiscal 1999 to provide a quantitative assessment of the costs and benefit of its environmental conservation activities, and has applied the results to environmental sustainability management. Beginning in fiscal 2005, Sharp adopted a disclosure format that follows the Environmental Accounting Guidelines 2005 published by the Japanese Ministry of the Environment.

#### Environmental conservation costs

Investment in environmental conservation increased by 30% compared to the previous fiscal year to approximately 3.1 billion yen. Environmental conservation expenditures rose to approximately 15.3 billion yen, up 30% over the previous fiscal year, in conjunction with costs for nextgeneration fuel cells and R&D on environmentally conscious production technologies, as well as waste disposal fees and costs of pollution control measures associated with expanded production.

#### Economic benefit

Actual benefit was approximately 4.3 billion yen (up 70% compared to the previous fiscal year) reflecting energy-saving measures and the recovery and reuse of wastewater. Actual benefit exceeded the costs for energy-saving measures and costs to reduce greenhouse gas emissions necessary to install photovoltaic power and cogeneration systems at the Kameyama Plant.

Classification of Environmental Conservation Activities (): Category based on Environmental Accounting Guidelines 2005,			Conserva	Environmental         Economic           Conservation Costs         Benefit           (Unit: ¥ million)         (Unit: ¥ million)			Environmental Conservation Effects	See				
N	Ainistry of the Environment	Description of Major Activities	Investment	Expenses	Actual Benefit	Estimated Benefit	Physical Effects Estimated Benefit	page(s				
Environmental Sustainability Management (management activities)		<ul> <li>Operation of environmental management system</li> <li>Promote environmental sustainability management</li> <li>Environmental education activities</li> </ul>	10 (0.5)	1,509 (1,337)	_	_	Promote environmental sustainability management           Number of employees         Master         101         -           with environmental         Expert         430         -           education         General         440         -	27 • 28				
Planning and Design (R&D)		<ul> <li>R&amp;D on photovoltaic power systems</li> </ul>					Supply environmentally conscious products         (Unit: ¥ million)           Green Seal products' share of net sales         92.5%         -	9				
		<ul> <li>Promote closed-loop recycling of plastic materials</li> <li>R&amp;D on basic environmental</li> </ul>	-	2,005 (1,006)	-	35,129 (21,894)	Super Green products' share of net sales         48.6%         -           Total amount of power generated by photovoltaic power systems         1,322 GWh         30,411	{ 14				
		technologies • R&D on plant-based resin paint										
	Reduce greenhouse gas emissions (global environmental conservation)	Introduce scrubbers for PFCs     Install photovoltaic power     systems     Introduce energy-saving     eauipment	1,027 (391)	1,568 (1,610)	2,018 (1,340)	1,121 (2,852)	Observisions reduced by energy-saving         72,000 t-CO2         94           Greenhouse gas emissions reduced by controlling electricity and fuel consumption (Unit: Y million)         CO2 emissions reduced         89,000 t-CO2         116           PFC emissions reduced         773,000 GWPt         1,005	15				
Manufacturing	Minimize and recycle waste (recycle resources)	Reduce waste discharge and recycle waste into valuable resources     Recycle water	135 (263)	5,044 (3,435)	2,288 (1,096)	_	Waste recycled or sent for appropriate disposal       Waste recycled       153,000 tons       Recycled and reused water       16,983 km <sup>3</sup>	• 16 35				
Mar	Prevent pollution (prevent pollution)	<ul> <li>Install scrubbers</li> <li>Introduce exhaust gas treatment systems</li> </ul>	1,908 (1,719)	5,150 (4,289)	_	_	Observe environmental laws and regulations Prevent air/water pollution and noise/vibration Promote risk management Chemical substances properly managed and their discharge reduced Reduce risk of soil contamination	35 				
							Collection, recycling, and proper disposal of used products           Used PCs recycled         22 tons					
	cycling/Logistics stream/downstream)	<ul> <li>Promote collection, recycling, and proper disposal of used products</li> </ul>	0 (0)	12 (71)	24 (54)	7 (15)	Used copiers recycled         2,685 tons         _           Used home appliances (4 categories) recycled         37,967 tons         _	39				
		disposal of used products	of used products						Environmental burden during distribution reduced (Unit: ¥ million)           CO2 emissions reduced         5,327 t-CO2         7           Number of low-pollution vehicles introduced         312         –	40		
Soc	cial Responsibility	Expand social contribution activities	0 (0)	49 (60)	_	-	Environmental social contributions Number of employees who attended SGC activities – –	53 54				
Tota	al		3,080 (2,374)	15,337 (11,808)	4,330 (2,490)	36,257 (24,761)	Note: Figures in parentheses below entries represent actual values from the p fiscal year.	oreviou				

#### Explanation of terminology

#### Environmental conservation costs

Overhead costs, personnel expenses, and investment associated with environmental conservation activities, in addition to attendant depreciation.

#### Economic benefit

Contributions to society and to the company, which result from environmental conservation activities, expressed in monetary units. Economic effects that can be assessed directly in monetary terms, such as cost savings from energy-saving efforts Actual benefit: and use of recycled water, as well as profits from the sale of valuable resources.

Estimated benefit: Sharp Corporation uses the following terms to convert the economic effects of reduced greenhouse gas emissions and electricity savings from the use of photovoltaic power generation and energy-saving products into equivalent monetary amounts.

(1) Reduced greenhouse gas emissions converted into equivalent monetary amounts: 1,300 yen/t-CO2 (2) Electricity savings converted into equivalent monetary amounts: Unit cost of electricity: 23 yen/kWh.

#### Sites covered

A total of 14 sites (and companies) in Japan fall within the scope of environmental accounting: Sharp Corporation sites at Tochigi, Yao, Hiroshima, Nara, Katsuragi, Fukuyama, Mie, Tenri, Mihara and Kameyama, the business premises of Sharp's head office and Tanabe office, Sharp Manufacturing Systems Corporation and Sharp Niigata Electronics Corporation Period covered

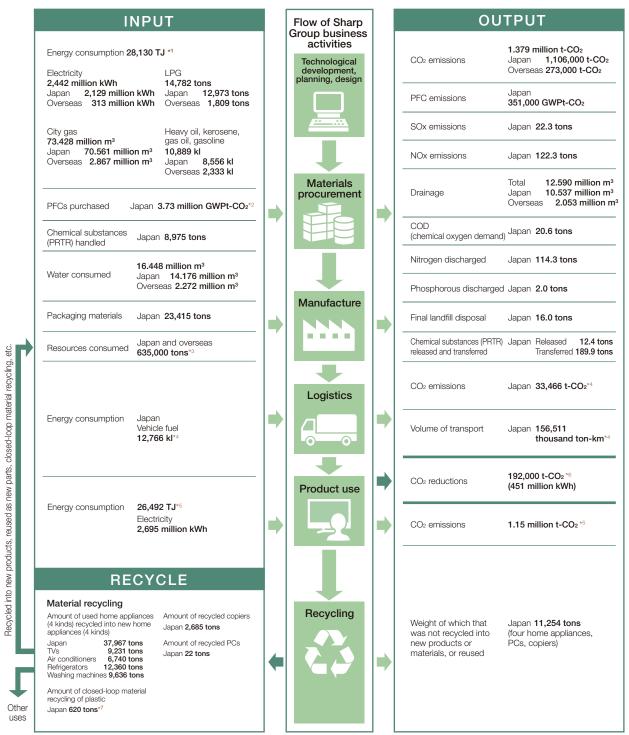
April 1, 2006 through March 31, 2007

Referenced guidelines

Environmental Accounting Guidelines 2005 published by the Ministry of the Environment, Japan

#### How Business Activities Relate to the Environment

Sharp uses numerical values to accurately assess the relationship between its business activities and the environment, and uses them to promote environmental sustainability management. By making use of these current values at all stages of business activities to create proposals for policy measures and to analyze and evaluate the results, Sharp is aiming to effectively reduce the impact it has on the environment.



\*1 TJ (terajoule) = 1012 Joules

\*2 GWP (global warming potential) is a measure of how much a given amount of greenhouse gas will contribute to global warming, expressed relative to an equivalent mass of CO<sub>2</sub>.
\*3 Total weight of products in the 15 major categories shipped in fiscal 2006 (estimate), plus

waste generated from production sites. \*4 Preliminary figures \*5 Estimate of annual energy used and amount of CO<sub>2</sub> emitted by products in the 14 major categories shipped in fiscal 2006. Calculation based on each product's energy consumption rate.

6 Amount of power generated (kWh) annually by Sharp solar cells shipped in fiscal 2006, plus CO<sub>2</sub> emissions reduction (t-CO<sub>2</sub>).

# Developing Super Green Technologies

To realize the corporate vision of "Sharp's energy-creating and energy-saving products equalize Sharp's greenhouse gas emissions," the development of superior environmental technologies is an essential factor in the performance of products and devices, together with the reduction of environmental impacts during production. That is why Sharp is developing critically important environmental technologies as "one-of-a-kind" environmental technologies in line with its strategy for company-wide technology development.

Objectives for Fiscal 2006	Achievements for Fiscal 2006	Objectives for Fiscal 2007	Objectives for Fiscal 2009	
Promote closed-loop plastic material recycling; use 600 tons of recycled plastic in new products	Approx. 620 tons of recycled plastic used in new products	Use 800 tons of recycled plastic in new products	Use 1,000 tons of recycled plastic in new products (fiscal 2008 objective)	
Conduct verification tests on technology to recover indium from LCD panels	Verified the recovery of indium from LCD panels	Conduct experimental study of LCD TV recycling technology	Study the application of LCD TV recycling technology	

#### Developing One-of-a-Kind Environmental Technologies

Sharp conducts research and development in four areas of environmental technology: reduction of CO<sub>2</sub> emissions, effective use of resources, elimination of harmful substances, and promotion of health and cleanliness.

Sharp recognizes the most important technologies in these areas as one-of-akind environmental technologies—key technologies for achieving global environmental conservation—and develops them in compliance with a company-wide development strategy. These technologies enhance environmental performance of products and devices, reduce environmental impact at plants, and facilitate recycling. Unique technologies, evolving from these developments, are what Sharp calls Super Green Technologies.

#### Closed-Loop Plastic Material Recycling Technology

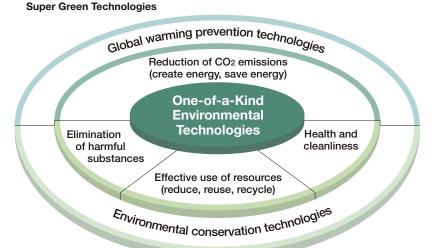
In fiscal 2001, Sharp and Kansai Recycling Systems Co., Ltd. jointly put into practical use a technology for the closed-loop recycling of plastic. Plastic recovered from four kinds of home appliances<sup>\*1</sup> is used to manufacture new units, and the recovered material can be recycled repeatedly. As of fiscal 2006, a total of 1,950 tons of recycled plastic had been reused.

In fiscal 2006, Sharp recycled approximately 620 tons of plastic, thanks in part to the development of equipment for recovering spin drivers from washing machines and technology for recycling polystyrene plastic. Sharp plans to use 1,000 tons of recycled plastic in fiscal 2008.

\*1 Four home appliances: Air conditioners, TVs, refrigerators, and washing machines.



Large-scale plastic sorting line at Kansai Recycling Systems



One-of-a-kind technological development fields that give birth to

#### Closed-loop plastic material recycling flow



#### Closed-loop plastic material recycling target and results in Japan

		Material		Recycled	Q	uantity o	f recycle	d materia	al used (t	on/year)	
U	sed parts	type	Technologies	as	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY 2007 (target)
Jine	Washing Polypro- tub pylene		<ul> <li>Adjust properties</li> <li>Improve lifetime</li> </ul>	Washing tubs	40	80	190	180	180	200	200
Washing machine		<ul> <li>Adjust moldability</li> <li>Adjust properties</li> <li>Improve lifetime</li> </ul>	Refrigerators parts	-	-	-	80	80	80	80	
Wash	Spin driver/ balancer	Polypro- pylene	Adjust moldability     Improve lifetime	Refrigerators parts	-	-	50	65	140	185	180
2	Rear Polypro- cabinet pylene		Sort nonincombustible PP     Improve lifetime	Air conditioner parts	-	-	10	20	10	10	-
-		Improve heat resistance	Refrigerators parts	-	-	15	40	20	15	-	
rator	Vegetable case	Polypro- pylene	<ul> <li>Adjust physical properties</li> <li>Improve lifetime</li> </ul>	Refrigerators parts	-	-	-	35	90	120	150
Refrigerator	Shelf plate	Poly- styrene	<ul> <li>Sort materials</li> <li>Adjust physical properties</li> <li>Improve lifetime</li> </ul>	Refrigerator and TV parts	-	-	5	-	-	10	100
Refrigerator, washing machine	Other parts	Polypro- pylene	Separate and recover highly pure PP     Adjust properties     Improve lifetime     Make foreign substances invisible	Refrigerator and washing machine parts	-	-	-	-	-	-	90
				Total	40	80	270	420	520	620	800

#### **Development and Application of Plant-Based Resin Paint**

Sharp and Kansai Paint Co., Ltd. jointly developed plant-based resin paint made from corn, and Sharp applied it first to the stands of AQUOS LCD TVs entering the market in March 2006. Sharp thus became the world's first company to use such paint for plastic parts of consumer electronics.

In fiscal 2006, Sharp and Kansai Paint further improved this paint, successfully developing one that dries in only half the time and simplifies the painting process.

AQUOS whose stand is painted with the new quick-drying plant-based resin paint (starch paint)

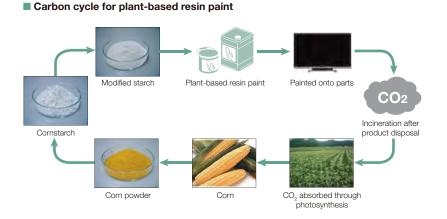


LC-65BX1W\_57BX1W 52RX1W, 46RX1W, 42RX1W, LC-52GX1W, 46GX1W, 52GX2W, 46GX2W

I C-65RX1W

It is used on the stands of AQUOS LCD

TVs\*2 released since October 2006.

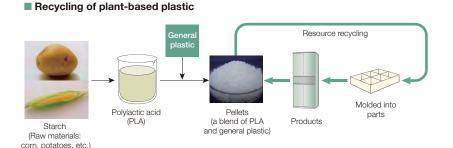


#### Technology for Using Plant-Based Plastic

With a technology for blending plant-based plastic made from corn and waste plastic (polypropylene) developed jointly with Starlite Co., Ltd., Sharp developed a technology for blending plant-based plastic (polylactic acid) and general plastic (polystyrene) in fiscal 2006. By adding durability to plant-based plastic, it can withstand

closed-loop material recycling, reducing the need for limited fossil-based resources.

Sharp will conduct tests to assess the commercial viability of using plastic blends in products at the earliest possible date.



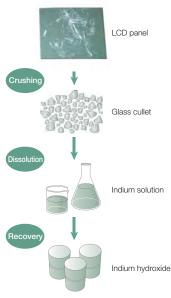
#### Technology to Recycle Indium from Used LCD Panels

In fiscal 2006, Sharp and Aqua Tech Co. Ltd. jointly developed a proprietary technique to recover and recycle the rare metal indium from the transparent electrodes\*3 in LCD panels.

This new technique takes advantage of the unique properties of this metal. LCD panels are first crushed into glass cullet (small chips). The indium on the surface of glass cullet is then dissolved in an acid solution. It is a simple process using common chemicals that eliminates the need for large energy expenditures to create high temperatures or high pressure. Moreover, the indium metal recovered is of high purity.

\*3 The transparent electrode in an LCD is formed from a conducting film deposited on one of the glass substrates of the LCD. An electric charge is applied at the required level to the liquid crystal material sealed between the two glass substrates. This causes the molecules of the liquid crystal to shift their orientation, thereby controlling the passage of light through the display. ITO (indium tin oxide) is widely used as the material for transparent electrodes because of its high conductive and light-transmitting properties.

#### How indium is recycled



Information on website http://sharp-world.com/corporate/eco/report2007/ 

Environmental technologies

# Creating Super Green Products and Devices

Sharp establishes increasingly higher objectives as it revises its guidelines every year in making ever more strict assessment standards, all with the goal of continuously improving the environmental performance of products and devices. As a result, in fiscal 2006 Sharp achieved its goals to increase the percentage of net sales accounted for by Green Seal Products, Super Green Products, Green Devices, and Super Green Devices.

Objectives for Fiscal 2006	Achievements for Fiscal 2006	Objectives for Fiscal 2007	Objectives for Fiscal 2009	
Green Seal Products account for 85% of net sales in Japan	Approx. 93%	90% or more	90% or more	
Super Green Products account for 30% of net sales in Japan	Approx. 49%	50%	60%	
Green Devices account for 65% of net sales	Approx. 73%	75%	85%	
Super Green Devices account for 10% of net sales	Approx. 12%	15%	20%	

Note: The sales ratios of Green Seal Products and Green Devices include both sales of Super Green Products and Super Green Devices.

#### Make All Products Green Products

Sharp calls its environmentally conscious products Green Products. It formulated the Green Product Guidelines in fiscal 1998, which define development and design guidelines in line with seven concepts, including those of low power consumption and safety. The guidelines are used at all design and production sites in Japan and overseas.

The first step in developing Green Products is product planning and designing. Sharp sets specific objectives according to the Green Product Standard Sheet, which is designed to assess all aspects of environmental consciousness. Secondly, in the trial manufacture and mass production stages, Sharp determines how well the actual product has met its objectives.

In fiscal 2006, Green Products had to satisfy at least 90% or more of 44 assessment criteria, a goal that was met by all of Sharp's new products.

Sharp Green Product concept



# Certification of Green Seal Products and Super Green Products in Japan

Since fiscal 1998, Sharp has been certifying products for Japan that offer a particularly high level of environmental performance as Green Seal Products. In fiscal 2004, it began certifying Green Seal Products with the highest possible levels of environmental performance as Super Green Products.

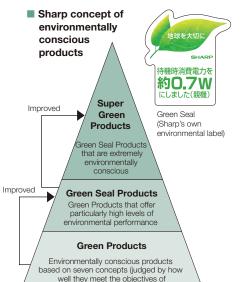
To receive Green Seal Product certification, a product must satisfy at least one item in the External Environmental Claim Standards and all four required items in the Environmental Performance Criteria, and must score 70 points or higher out of a total of 100 points in the Environmental Performance Criteria. To receive Super Green Product certification, products must score 90 points or higher in the Environmental Performance Criteria and they must acquire certification for Japanese environmental labels.

In fiscal 2006, Sharp surpassed its goals for both Green Seal Products and Super Green Products as a percentage of total sales. In the coming years, Sharp plans to raise these percentages even higher.

#### Assessment and certification standards for Green Seal Products and Super Green Products in Japan (fiscal 2006)

Category	Green Seal	Product	Super Green Product		
I Level of environmental consciousness	Satisfies at least one item Environmental Claim Sta		<ul> <li>Is significantly more environmentally conscious than the products of other companies</li> </ul>		
II Environmental	Satisfies four required ite Environmental Performant		<ul> <li>Satisfies four required items of the Environmental Performance Criteria</li> <li>Has environmental label status</li> </ul>		
Performance Criteria (total score: 100)	Prevents global warming Low power consumption, high energy efficiency, etc.	Makes effective use of resources Designed for recyclability, resource saving, etc.	Uses substitutes for toxic chemicals	Other Has environmental label status, uses minimum packaging materials, etc.	
	20 points	20 points	35 points	25 points	
	At least 70	points	At least	90 points	

All conditions under sections I and II must be satisfied.



the Green Product Standard Sheet)

#### Four required items in the Environmental Performance Criteria in Japan (fiscal 2006)

Items	Detail
Energy saving	<ul> <li>Lower power consumption and standby power consumption than previous models</li> </ul>
3R	<ul> <li>Easy separation and disassembly, or is upgradeable</li> </ul>
Safety	<ul> <li>Meets the RoHS directive</li> <li>Uses no substances prohibited under Sharp standards</li> <li>Uses no Ni-Cd batteries</li> </ul>
Packaging	<ul> <li>Abolishes the use of polystyrene foam (for products weighing less than 10 kg)</li> <li>Increases the ratio of recycled materials, or uses less packaging material than previous models (for products weighing 10 kg or more)</li> </ul>

#### Certification of Green Devices and Super Green Devices

Sharp calls its environmentally conscious devices Green Devices. To define guidelines for development and design based on seven concepts, such as low energy consumption and recyclability, Sharp established the Green Device Guidelines, which it began applying in fiscal 2004. In fiscal 2005, it began certifying Green Devices with the highest possible levels of environmental performance as Super Green Devices.

The development of Green Devices begins at the planning and designing stage, where every aspect of the product's environmental consciousness is discussed. Sharp then sets specific objectives based on the Green Device Standard Sheet. Finally, in the trial manufacture and mass production stages, Sharp determines how well the actual product has met its objectives.

Green Devices must satisfy at least 90% or more of all 20 assessment items (nine of which are compulsory) listed in the Environmental Performance Criteria. Super Green Devices must satisfy at least 95% or more of the 20 assessment items (10 of which are compulsory) listed in the Environmental Performance Criteria. They must also either be No. 1

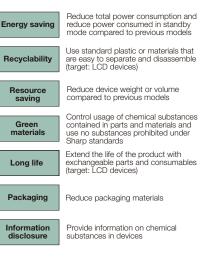
#### Green Seal Products External Environmental Claim Standards (fiscal 2006)

Items	Detail				
Energy saving, energy creating	Power consumption           Industry-leading model of each product category           Standby power consumption           Industry-leading model of each product category           0.1W or less (remote controlled products)           1.0W or less (phones, faxes, PCs)           Energy creating           Industry-leading conversion efficiency				
3R	Resource savings during use           Industry-leading model of each product category (saving water and detergent, etc.)           Compact/lightweight           Industry-leading model of each product category           Reduced by 30% or more compared to previous models           Recycled materials           Use of closed-loop recycled materials				
Safety	Green materials <ul> <li>Abolishing use of halogen-based flame</li> <li>retardants, substituting polyvinyl chloride</li> <li>Use of refrigerant with low global warming</li> <li>potential</li> </ul>				
Eco Mark	Acquired Eco Mark • Acquired Eco Mark authorized by the Japan Environment Association				
Others	Original technology • Environmentally conscious products using industry-first or original Sharp technology				

in the industry or the first in the industry in at least one item of the External Environmental Claim Standards.

In fiscal 2006, both Green Devices and Super Green Devices exceeded their sales ratio targets. In the coming years, Sharp plans to raise these figures still higher.

#### Green Device concept



#### Development of Worldwide Comprehensive Product Environmental Evaluation System

In April 2006, Sharp began using the Comprehensive Product Environmental Evaluation System in all domestic product and device groups. This system combines Sharp's accumulated experience in developing and assessing environmentally conscious products and devices with its know-how of LCA (life cycle assessment). It enables Sharp to make the product development process more efficient, place design knowledge and development data under centralized management, and standardize the LCA method.

Sharp's product development processes are now carried out worldwide. The company began introducing the Comprehensive Product Environmental Evaluation System to its overseas development bases in March 2007. With the system's introduction, Sharp is able to consolidate the management of product environmental data to ensure that all bases comply with environmental regulations, and it can also facilitate the spread of environmentally conscious design. Sharp plans to have the system in operation at all overseas development bases within fiscal 2007.

#### **Green Procurement**

In fiscal 2000, Sharp established the Green Procurement Guidelines and began joint efforts with suppliers to ensure that parts and materials are environmentally conscious.

In fiscal 2003, Sharp formulated the Survey Manual for Chemical Substances in Parts and Materials and investigated chemical substance content as stipulated by the Japan Green Procurement Survey Standardization Initiative (JGPSSI).<sup>11</sup> The company also took measures toward eliminating RoHS-designated<sup>12</sup> substances. It successfully eliminated them in all products for the European market by the end of 2005 and in all new products (except those for certain regions) by March 31, 2006. In fiscal 2006, in line with the Green Procurement Guidelines and the Survey Manual for Chemical Substances in Parts and Materials, Sharp started an online survey for Japan. For overseas suppliers, Sharp has been giving meetings to explain guidelines and plans to have a similar system completed before the end of fiscal 2007.

- \*1 A council comprising 5 organizations and 86 companies, mainly electronics manufacturers including Sharp Corporation, which works to standardize research on chemical substances in parts and materials.
- \*2 RoHS: An EU directive on the "Restriction on the use of certain Hazardous Substances." RoHS prohibits the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB), and polybrominated diphenyl ether (PBDE) in electrical and electronic equipment entering the EU market after July 1, 2006.

 Information on website
 © Green Products
 © Green Devices

 http://sharp-world.com/corporate/eco/report2007/
 © LCA data for major products
 © Green Procurement Guidelines

# **Building Super Green Factories**

Sharp is raising environmental awareness at its production sites all over the world. Using original standards to rank a factory with high environmental consciousness as a Green Factory (GF), and one with extremely high environmental consciousness as a Super Green Factory (SGF), Sharp plans to convert all domestic and overseas Sharp Group production sites into Green Factories or higher by the end of fiscal 2007.

Objectives for Fiscal 2006	Achievements for Fiscal 2006	Objectives for Fiscal 2007	Objectives for Fiscal 2009
Of 10 Sharp Corporation production sites in Japan, upgrade 5 to SGF and 5 to GF	SGF 5 GF 5	All SGF	
<ul> <li>Of 7 domestic production sites (subsidiaries/affiliates), upgrade 5 to GF</li> </ul>	GF 7	All GF or higher	Promote new SGF measures
<ul> <li>Of 22 overseas production sites (subsidiaries/affiliates), upgrade 1 to SGF and 14 to GF</li> </ul>	SGF 3 GF 12	All GF or higher	

#### Upgrading All Plants to **Green Factories**

At Sharp, a factory must achieve a high degree of environmental consciousness to earn the title of Green Factory. The basic policies and operational know-how for achieving Green Factory status have been formulated in line with 10 concepts in the Green Factory Guidelines. These guidelines were introduced at all domestic production sites from fiscal 1999 onward and at all overseas production sites from fiscal 2001 onward.

Starting in fiscal 2003, as part of the Green Factory effort, Sharp established a system for Super Green Factories, using an environmental impact assessment approach. Factories are assessed based on in-house standards in order to satisfy the requirements of third parties and earn the trust of local communities.

Minimize energy consumption

Minimize discharge of waste

Green Factory concept

Greenhouse

Energy

Waste

Resources

substances

water, soil

vith natu

the community

Information

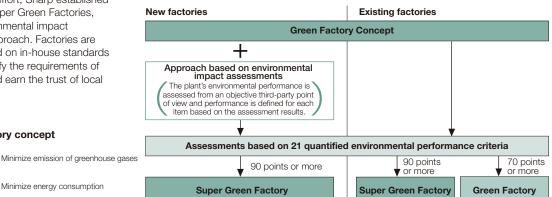
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#### Certification of Green Factories and Super Green Factories

Quantified environmental performance criteria are used to assess and approve a plant for certification. A plant must score 70 or more points out of a possible 100 in the assessment process to earn Green Factory certification, while scoring 90 or more points will result in Super Green Factory certification.

Plans call for upgrading all Sharp Corporation production sites in Japan to Super Green Factories and all production sites in the Sharp Group to Green Factories or higher by the end of fiscal 2007.

In fiscal 2006, three domestic bases and two overseas bases achieved Super Green Factory status, while a total of 10 bases in Japan and overseas earned Green Factory certification.



#### Process required to achieve Super Green Factories

#### Twenty-one quantified environmental performance criteria and assessment weighting

Minimize resource consumption Minimize risk of environmental pollution and accidents caused by chemical substances	criteria	Reductions in greenhouse gas emissions	Reductions in the release of chemical substances	Appropriate disposal of industrial waste	Reductions in the consumption of industrial water	Monitoring, safety, and information disclosure	
Minimize environmental burden on the atmosphere, water, and soil Endeavor to preserve nature both on and off site	performan	Reductions in PFC gases, etc.     Promotion of variable supply control systems     Recovery and recycling of waste heat     Introduction of a cogeneration system     Introduction of highly efficient	PRTR atmospheric emissions     PRTR water emissions     Sulfoxide produced by combustion     Eliminate all noxious odors	Zero discharge to landfill     Confirmation of     appropriate disposal     Recycle waste as     valuable resources	Use of rain condensation water     Recovery of production rinse water	<ul> <li>Disaster and fire prevention measures for hazardous materials</li> <li>Special safety measures</li> <li>Adoption of central monitoring measures</li> <li>Disclosure of environment-related</li> </ul>	
Encourage harmony with the local community Foster high environmental awareness among employees	onmer	Environmer	<ul> <li>Introduction of new energy sources</li> <li>Continued reductions in emissions per production unit</li> <li>Implementation of managerial decision making standards</li> </ul>				information
Disclose information on the environment	Assessment weighting	30 points	26 points	14 points	<b>9</b> points	21 points	
						(Total score: 100)	

Information on website

http://sharp-world.com/corporate/eco/report2007/ 
Green Factories 
Environmental data on Sharp production sites

# Curbing Greenhouse Gas Emissions

Sharp is taking active measures to restrict greenhouse gas emissions resulting from its business activities. Through the introduction of cogeneration systems and energy-saving equipment, the installation of photovoltaic power systems, and the meticulous carrying out of energy-saving activities at plants and offices, Sharp is reducing CO2 emissions. And by installing scrubbers and using replacement gases with less global warming potential, Sharp is also reducing greenhouse gas emissions such as PFCs.\*1

Objectives for Fiscal 2006	Achievements for Fiscal 2006	Objectives for Every Fiscal Year	Mid- to Long-Term Objectives
<ul> <li>CO<sub>2</sub> emissions per production unit<sup>2</sup></li> <li>Domestic product sites: Reduce by 2% from previous fiscal year</li> <li>Domestic device sites: Reduce by 5% from previous fiscal year</li> <li>All overseas production sites: Reduce by 2% from previous fiscal year</li> </ul>	<ul> <li>Reduced by approx. 12% from previous fiscal year</li> <li>Increased by approx. 1% from previous fiscal year</li> <li>Reduced by approx. 14% from previous fiscal year</li> </ul>	<ul> <li>Reduce by 2% from previous fiscal year</li> <li>Reduce by 5% from previous fiscal year</li> <li>Reduce by 2% from previous fiscal year</li> </ul>	Fiscal 2010 objectives CO <sub>2</sub> emissions per adjusted production unit <sup>+3</sup> • All domestic production sites: Reduce by 28% compared to fiscal 1990

Domestic sites include only the business sites of Sharp Corporation. Overseas sites include Sharp subsidiaries and affiliated companies.

To reasonably evaluate the effect of controlling greenhouse gas emissions, Sharp utilizes an index referred to as "per production unit.

\*1 A general term for perfluorocarbon gases such as CF<sub>4</sub> (carbon tetrafluoride), C<sub>2</sub>F<sub>8</sub> (carbon hexafluoride) and the like, which are greenhouse gases. \*2 Per production unit (t-CO<sub>2</sub>/100 million yen) = CO<sub>2</sub> emission (t-CO<sub>2</sub>) ÷ production output (100 million yen) \*3 Per adjusted production unit (t-CO<sub>2</sub>/100 million yen) = CO<sub>2</sub> emission (t-CO<sub>2</sub>) ÷ (production output (100 million yen) ÷ domestic corporate price index (electrical equipment) determined by the Bank of Japan}

### Sharp Group Activities

In fiscal 2006, the Sharp Group reduced its greenhouse gas emissions per production unit by 11% compared to the previous fiscal year. Activities to reduce overall emissions included the implementation of energy-saving measures, the recycling of PFC gas, and the installation of PFC scrubbers in Kameyama Plant No. 2 which started operation in August 2006. But with production volume increasing, the net result was a 12% total increase in greenhouse gases over the previous fiscal year. Sharp will continue to work to reduce emissions.

## Controlling CO, Emissions at Domestic Production Sites

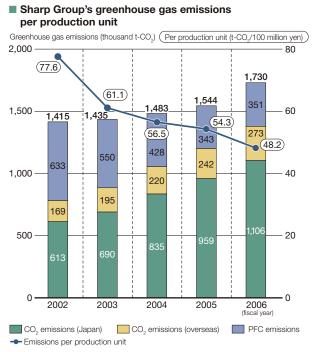
Sharp's company-wide efforts to save energy and improve production efficiency have produced results at domestic production sites. CO<sub>2</sub> emissions per production unit have been reduced by 3% over the previous fiscal year.

Product sites reduced their CO. emissions per production unit by 12%. At device sites, Sharp managed to keep CO<sub>2</sub> emissions per production unit to just a 1% rise, despite the large drop in LCD panel prices.

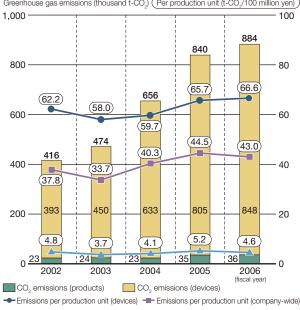
Sharp will continue working aggressively to reduce CO<sub>2</sub> emissions by introducing energy-saving equipment, fuel conversion systems, and photovoltaic power systems.

#### CO, emissions per production unit by business category for Sharp Corporation production sites in Japan

Greenhouse gas emissions (thousand t-CO<sub>2</sub>) (Per production unit (t-CO<sub>2</sub>/100 million yen)



Emissions per production unit is calculated from production-related emissions.



Emissions per production unit (products)

Starting in fiscal 2005, these figures are the total of CO2 emissions from all divisions of production sites, excluding basic research. Within the previously calculated range, fiscal 2005 CO2 emissions were 745 (thousand t-CO2) and emissions per production unit were 41.5 (t-CO<sub>2</sub>/100 million yen).

#### CO, emissions per adjusted production unit for Sharp Corporation production sites in Japan

Fiscal year	1990	2005	2006
Emissions per adjusted production unit (t-CO <sub>2</sub> /100 million yen)	32.2	22.1	21.6
Fiscal 1990 comparison	100	69	67

Information on website

http://sharp-world.com/corporate/eco/report2007/ 
Reductions in greenhouse gases 
Data on greenhouse gases

# Minimizing and Recycling Waste

Sharp has been working to bring down its total amount of waste discharged<sup>1</sup> and to recycle waste as much as possible. As a result, domestic production sites (including subsidiaries and affiliated companies) have achieved zero discharge to landfill<sup>2</sup> for six consecutive years. Sharp will keep up its efforts to continue zero discharge to landfill and reduce waste discharge. In addition, Sharp is focusing on recycling wastewater and restricting the amount of water utilized.

Objectives for Fiscal 2006	Achievements for Fiscal 2006	Objectives for Every Fiscal Year
Amount of waste discharged per production unit • Reduce by 3% from previous fiscal year Domestic production sites (including subsidiaries and affiliated companies): Recycle waste into valuable resources • Recycle 15% of waste into valuable resources <sup>3</sup>	Increased by approx. 11% from previous fiscal year Approx. 16%	Amount of waste discharged per production unit • Reduce by 3% from previous fiscal year
Overseas production sites (including subsidiaries and affiliated companies): Amount of waste, etc. discharged per production unit • Reduce by 2% from previous fiscal year	Reduced by approx. 19% from previous fiscal year	Amount of waste, etc. discharged per production unit • Reduce by 2% from previous fiscal year
<ol> <li>Amount of waste discharged = Amount of industrial waste discharged + amount of general waste discharged from business activities</li> <li>Sharp defines "zero discharge to landfill" as a final landfill disposal rate of less than 0.5%. Final landfill disposal rate (%) = Amount of landfill disposal / amount of waste, etc. discharged (amount of waste</li> </ol>	(amount of waste discharged + amount of va *3 Recycling rate of waste into valuable resourc	nerated" to the lower "amount of waste, etc. discharged aluable resources)". es (%) = Amount of valuable resources <sup>*4</sup> / amount of charged + amount of valuable resources) x 100

discharged + amount of valuable resources) x 100 In fiscal 2005, to make the definition of zero discharge to landfill more rigorous, Sharp changed the 4 In revising the definition of the "amount of valuable resources" in fiscal 2005, Sharp only considers

materials that report profits after deducting recovery and transportation costs

## Domestic Production Sites Achieve Zero Discharge to Landfill for Six Years in a Row, Overseas Sites Reduce Amount of Waste, etc. Discharged per Production Unit by Approx. 19%

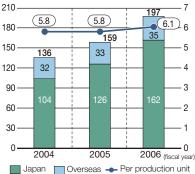
its waste reduction targets. However,

In fiscal 2006, the amount of waste, etc. discharged by the Sharp Group increased by approximately 24% over the previous fiscal year owing to increases in production volume.

At domestic production sites (including subsidiaries and affiliated companies), the amount of waste discharged per production unit increased by around 11%, preventing Sharp from achieving

#### Amount of waste, etc. discharged by the Sharp Group

(thousand tons) (Per production unit (ton/100 million yen))



Figures include non-production sites, Sharp Yonago Corporation as of June 2005, and the Toyama Plant as of April 2006.

# **Recycling Water**

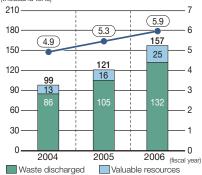
Sharp Corporation carried out thorough recovery and recycling of water, particularly at the Kameyama and Mie Plants. Water recovered and recycled at domestic production sites accounted for 55% of all water used. The result was that Sharp sites used about the same amount of water in fiscal 2006, despite a large increase in production volume. Sharp will continue to focus on making effective use of water.

thanks to all-out efforts to recycle this waste, the final landfill disposal rate was less than 0.01%, giving Sharp zero discharge to landfill for the sixth consecutive year and raising to 16% the amount recycled into valuable resources.

Sharp also stepped up efforts to upgrade more of its overseas production

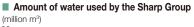
#### Amount of waste discharged (per production unit) and valuable resources at domestic production sites

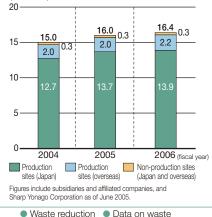
(Per production unit (ton/100 million yen)) (thousand tons)



Per production unit

Figures include subsidiaries and affiliated companies, Sharp Yonago Corporation as of June 2005, and the Toyama Plant as of April 2006.



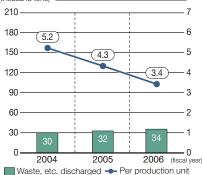


sites to Green Factories, achieving an approximately 19% reduction over the previous fiscal year in amount of waste, etc. discharged per production unit.

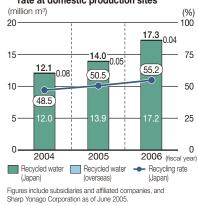
Fiscal 2007 and beyond will see Sharp continue its efforts to recycle waste and recover valuable resources from waste as the company cuts the amount it discharges.

#### Amount of waste, etc. discharged (per production unit) from overseas production sites (subsidiaries and affiliated companies)

(thousand tons) (Per production unit (ton/100 million yen))



#### Amount of water recycled at domestic and overseas production sites, and recycling rate at domestic production sites



Information on website Effective water usage
 Data on water usage

http://sharp-world.com/corporate/eco/report2007/

# Effectively Managing Chemical Substances, Conducting Risk Management

Sharp ensures the unified control and management of consumption and discharge of all chemical substances used through its chemical substance management system. Sharp reduces discharge of chemical substances placed under high-priority control and promotes a preferential reduction in chemical substances with greater impact on human health by conducting risk assessment. Sharp also discloses information on environmental risks and promotes good communication with local communities.

Objectives for Fiscal 2006	Achievements for Fiscal 2006	Objectives for Fiscal 2007	Objectives for Fiscal 2008
<ul> <li>Sharp Corporation production sites in Japan</li> <li>Reduce discharge risk<sup>1</sup> by 55% or</li></ul>	Reduced by approx. 58% compared to fiscal 2003	Reduce by 60% or more	Reduce by 60% or more
more compared to fiscal 2003		compared to fiscal 2003	compared to fiscal 2003

Discharge risk: Total of all numerical values assigned to each chemical substance released into the atmosphere. Values are calculated as per: Discharged amount (concentration at site boundary) X Risk to human health coefficient

### Effective Management of Chemical Substances

Based on the C-PA system<sup>\*2</sup> and the process assessment system<sup>\*3</sup>, Sharp conducts rigorous preliminary audits to determine the environmental, safety, and health effects of new chemical substances and handling equipment. In fiscal 2006, Sharp Corporation conducted operational safety audits at three sites to prevent accidents and reduce environmental impact.

Sharp has also introduced S-CMS<sup>\*4</sup> at domestic production sites in order to centrally manage the quantities of chemical substances consumed and discharged.

Sharp designates 460 chemical substance groups (354 substance groups covered by the PRTR\*5 Law plus 106 additional substance groups including hazardous air pollutants) as high-priority management substances. The company is working to reduce and properly manage these substances and VOCs.\*

- <sup>2</sup> C-PA system: A system to conduct assessments on the harmful effects of chemical substances to use.
   <sup>3</sup> Process assessment system: A system to conduct preliminary assessments on the safety of equipment handling chemical substances.
   <sup>4</sup> S-CMS: Sharp Chemical Management System
   <sup>5</sup> PRTR: Pollutant Release and Transfer Register. A extern to collect and fuel/bitize data, such as the
- system to collect and publicize data, such as the amount of harmful chemicals handled and discharged.
   VOC: Volatile organic compounds

Destinations of PRTR-listed

## chemical substances in Japan Transfer to \_\_\_\_\_ sewers (0.03%) Transfer to waste (2.08%) Discharge to wate areas (0.10%) Consumption (0.46%) Discharge into atmosphere Treatment (0.03%)(10.73%) Recycle (86.57%)

Information on website

http://sharp-world.com/corporate/eco/report2007/

#### Reducing Chemical Substance Emissions and **Discharge Risks**

Of the chemical substances covered by the PRTR Law, the number of chemicals handled in quantities greater than 500 kg in fiscal 2006 at all Sharp Corporation production sites in Japan amounted to 17 substances or 8.975 tons (up 41% over the previous fiscal year). Although the use of PRTR chemicals increased when production went up, emissions fell by 12% to 12.4 tons from the previous fiscal year by the introduction of scrubbers to reduce VOCs.

Since fiscal 2004, in addition to the reduction of chemical substance emissions, Sharp introduced the concept of risk assessment, and has promoted a preferential reduction in chemical substances with a greater impact on human health. In fiscal 2006, discharge risks were reduced around 58% over fiscal 2003.

In fiscal 2006, Sharp emitted 286 tons of VOCs, which is just 81% of the amount emitted in the base year of fiscal 2000.

#### Risk Communication and Information Disclosure

Sharp regularly discloses environmental risk information associated with business activities by means of Sharp Festivals and the publication of site reports at each site. Such disclosure is intended to promote mutual understanding and communication between Sharp, neighboring residents, and the local government. In fiscal 2006, 10 Sharp Corporation sites publicly released a total of 11 environmental information reports.

A survey conducted in 1998 on soil and aroundwater identified chlorine solvent pollution within Sharp Corporation's Nara, Yao, Tenri, and Katsuragi sites. With the exception of Nara, all sites have reduced contamination levels below those of the environmental standard via biotechnology. Sharp is continuing purification at the Nara site in order to reduce its contamination levels below those of the environmental standard as at the other three sites, and regularly notifies local municipalities and residents of the cleanup progress.

#### Chemical substances discharged in large amounts into the atmosphere and water areas in Japan

Main chemical substances	Destination	Fiscal 2006 discharge (kg)	Proportion (%)	Compared to last year (%)	Fiscal 2005 discharge (kg)
Hydrogen fluoride & its water-soluble salts	Water areas	9,175	73.9	94.4	9,722
2-Aminoethanol		1,743	14.1	88.3	1,975
Xylene		694	5.6	119.2	582
Phenol	The atmosphere	332	2.7	87.8	378
1,3,5-Trimethylbenzene		303	2.4	38.5	788
Others		156	1.3	23.9	652
Total		12,403	100.0	88.0	14,098

Data on chemical substance management
 Data on the atmosphere and water quality

# Environmentally Conscious Logistics and Packaging

With the enactment on April 1, 2006 of the Revised Law Concerning the Rational Use of Energy (Energy Conservation Law) in Japan, the distribution sector must take further energy-saving measures. In cooperation with shipping contractors, Sharp is working to reduce environmental impact by creating a system to accurately assess environmental impact in distribution and by taking as many measures as possible to optimize transport methods and load efficiency.

Objectives for Fiscal 2006	Achievements for Fiscal 2006	Objectives for Fiscal 2007	Objectives for Fiscal 2009
Change modes of transport Domestic railway cargo transport (container transport): 1,050 containers/month Reduce 4,400 t-CO <sub>2</sub> of CO <sub>2</sub> emissions in Japan	1,263 containers/month Reduced approx. 5,327 t-CO $_2$ of CO $_2$ emissions	1,300 containers/month	1,600 containers/month

#### Energy Conservation Law Committee for Promoting Energy Savings in Japan

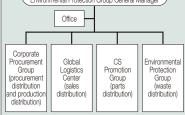
Sharp established the Committee for Compliance with the Energy Conservation Law as a Shipper in fiscal 2005. The committee assesses environmental impact in the areas of materials, production, sales, parts<sup>11</sup>, and waste disposal, and works to strengthen company-wide energy-saving measures in distribution. In addition to changing modes of transport and improving transport efficiency, the committee is expanding efforts in resource savings.

The amount of cargo transported by Sharp Corporation totaled approximately 157 million ton-kilometers (the total of weight by cargo category [t] x transport distance [km]) in fiscal 2006. This puts Sharp in the category of specific shippers (shippers with large transport volume) specified under the revised Energy Conservation Law. To achieve a 1% or greater reduction of energy consumption per production unit annually, which is the obligation for specific shippers under the law, Sharp Corporation will further promote energy-saving measures.

\*1 Distribution of parts used for after-sales service, such as repair and maintenance of products.

#### Energy-saving promotion system in distribution





#### Transport volume (shipper distribution) in response to the Energy Conservation Law

Range of distribution	Transport volume (1,000 ton-kilometers)	CO <sub>2</sub> emissions (t-CO <sub>2</sub> )
Sharp Corporation	156,511	33,466
		Preliminary figures

#### Environmentally Conscious Distribution Worldwide

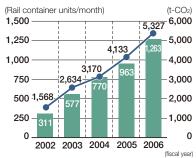
In Japan, Sharp is shifting from trucks to more environmentally friendly transportation, such as railway and ships. In fiscal 2006, Sharp reduced CO<sub>2</sub> emissions by approximately 5,327 t-CO<sub>2</sub> per year (29% more than the previous fiscal year's reduction) compared to transportation by truck.

In the US, Sharp sales subsidiary SEC participates in the SmartWay Transport Program<sup>2</sup>. In 2006, at its first awards ceremony, the Environmental Protection Agency honored SEC with the program's excellence award for superior achievements in 10 categories, including stopping engine idling and being strictly punctual for collection and delivery times.

In addition to changing modes of transport in Japan and overseas, Sharp will also change from air cargo to high-speed vessels in the future.

\*2 SmartWay Transport Program: A joint effort by the US Environmental Protection Agency and industry to promote environmentally conscious shipping and distribution.

#### Railway container shipments and CO<sub>2</sub> reduction in Japan



Rail container units -CO2 reduction volume



SEC won an excellence award in the SmartWay Transport Program

#### Information on website http://sharp-world.com/corporate/eco/report2007/ • Data on distribution

Measures for Improving Transport Efficiency

To prevent reduced load efficiency due to an increase in the size of products being shipped, Sharp has introduced trucks equipped with adjustable height shelves for two-stage loading. The trucks' shelves can be elevated according to the size of products to be transported, making for more efficient use of the space inside.

As a result, precision equipment, which is normally difficult to stack, can now be safely transported, thus contributing to the reduction of environmental impact in distribution.



Trucks with higher load efficiency

# Measures for Saving Resources

In addition to energy-saving measures, Sharp is promoting measures for resource savings in distribution.

In fiscal 2006, Sharp started to recycle cushioning materials used for protecting products and preventing load collapse when transporting products.

Cushioning materials are normally disposed of as industrial waste after use. With the introduction of reusable cushioning materials, however, Sharp greatly reduces waste.



Reusable cushioning materials

# Developing Super Green Recycling

Sharp is engaged in the recycling of various used products in line with three concepts: 1) improve the recycling rate and aim for zero landfill disposal, 2) improve the efficiency of the recycling system to reduce recycling costs, and 3) incorporate recycling technologies into the development and design of products.

Objectives for Fiscal 2006	Achievements for Fiscal 2006	Future Objectives
Boost domestic recycling of used home appliances	Improved recycling rate (up 3 points over the previous fiscal year in four home appliances in total)	Respond to the increased number of items requiring recycling

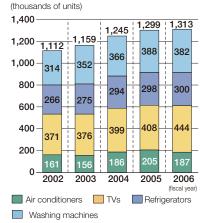
#### Recycling Four Kinds of Home Appliances in Japan (Air Conditioners, TVs, Refrigerators, and Washing Machines)

Sharp is constructing a highly efficient recycling system by collaborating with five other consumer electronics companies<sup>\*1</sup> to operate 190 designated sites for picking up old appliances and 18 sites for recycling in Japan.

In fiscal 2006, four types of home appliances designated under the Japanese Home Appliances Recycling Law-about 1.31 million units in total (up 1% over the previous fiscal year)were recovered and recycled. The processing rates in the recycling plants satisfied the legal standard for all four kinds of appliances.

In future. Sharp will improve its system in response to changes, such as an increase in the amount of products collected, and will work to further improve the recycling rate.

- \*1 Five collaborating companies: Fujitsu General Ltd., Hitachi Appliances, Inc., Mitsubishi Electric Corporation, Sanyo Electric Co., Ltd., Sony Corporation (in alphabetical order)
- Sharp Corporation's recycled units for the four home appliances



#### Sharp Corporation's recycling rates for the four home appliances (fiscal 2006)

for the four home appliances (fiscal 2006) (%				
	Air conditioners	TVs	Refrigerators	Washing machines
Recycling rate	87	74	72	80
Legal standard	60	55	50	50

## Second Plant of Kansai Recycling Systems Starts Operation

Kansai Recycling Systems Co., Ltd., a consumer electronics recycling company created with investment by seven companies including Sharp Corporation and Mitsubishi Materials Corporation, began operation of a second recycling plant in December 2006. Located in Iga City, Mie Prefecture, it recycles TV sets exclusively, with an annual capacity of about 500.000 units.

In the time leading up to the end of analog broadcasting in 2011 in Japan, there is expected to be a sharply increased demand for TV recycling. This plant has state-of-the-art automated facilities for integrated processing-everything from dismantling TVs to refining glass cullet<sup>\*2</sup>. The plant totally recycles materials contained in the TV sets, such as plastic, copper, iron, aluminum, and glass.

It is located not far from the Kameyama Plant and Mie Plant, both of which are Sharp's main manufacturing bases for

LCD panels and LCD TVs, as well as from the Tenri Plant, an R&D base for LCD technology. By strengthening the collaboration between the recycling plant and Sharp's manufacturing and research departments, Sharp hopes to develop new recycling technologies and easy-to-recycle environmentally conscious products.

\*2 Refining glass cullet: Remove foreign matter from the glass of used CRTs and refine the glass into a near-pure substance.



Second plant of Kansai Recycling Systems

### Reusing and Recycling Copiers in Japan

Collected used copiers with minor deterioration are remanufactured: after being tested, they are dismantled, and their parts are cleaned and tested before being returned to the production line. New parts are also added to guarantee performance and quality equal to new products.

In fiscal 2006, approximately 33,000 copiers (up 25% over the previous fiscal year) were recovered, and 179 units (down 62% over the previous fiscal year) were remanufactured and shipped. The decrease in the number of remanufactured copiers was due to model changes. Sharp will work to increase the number of remanufactured copiers by introducing more recyclable models.

Approximately 695,000 toner cartridges (up 38% over the previous fiscal year) were recovered, and about 250,000 remanufactured toner cartridges (up 2% over the previous fiscal year) were shipped.

Models and parts not targeted for reuse are sorted manually by type of component material to facilitate recycling.

## **Recycling PCs in Japan**

In compliance with the Japanese Law for Promotion of Effective Utilization of Resources, Sharp is recycling businessand home-use PCs.

For home-use PCs, the PC industry is working with Japan Post in a collection system in operation at more than 20,000 post offices around Japan.

In fiscal 2006, recovered and recycled PCs amounted to approximately 4,300 business- and home-use desktop and notebook PCs (up 20% over the previous fiscal year) and about 2,000 monitors (up 5% over the previous fiscal vear).

http://sharp-world.com/corporate/eco/report2007/ Data on recycling of used products

# Promoting Environmental Communication

To enhance environmental communication with its wide range of stakeholders, Sharp discloses environmental information through various media and exhibitions, including Environmental and Social Reports, websites, and newspaper ads. Each Sharp site is also promoting dialogue with stakeholders by holding factory tours and various events.

#### Environmental and Social Report, Website on Social and Environmental Activities

Every year since 1999, Sharp has issued an annual report on its environmental activities. Starting with the 2005 edition, the report expanded to include the social aspects of Sharp's business activities. The title was thus changed to the Environmental and Social Report. The 2006 edition of the Environmental and Social Report won an award of merit in the 10th Green Reporting Awards sponsored by Toyo Keizai Inc. and the Green Reporting Forum.

In addition to using articles from the Environmental and Social Report, Sharp's website presents more specialized content with examples of specific activities and detailed data on environmental impact.

## Advertising and Commercials

In order to share its environmental message and goals with a wider audience, Sharp creates TV and newspaper ads. Using the slogan "Let's go Ecology Class with Sharp," the ads highlight Sharp's environmentally conscious activities.

In fiscal 2006, a Sharp TV commercial introducing environmentally friendly residential photovoltaic power systems won an award for excellence in the environmental TV commercial category of the 10th Environmental Communication Awards in Japan.

TV commercia

Newspaper ad

# Exhibitions

Sharp publicizes its environmental activities through participation in domestic and overseas exhibitions.

In Japan, Sharp participated for the first time in the Ecolife Fair 2006, where it showed how solar power generation can help curb global warming. Sharp has taken part in the Eco Products exhibition every year since 2000, and in 2006 it introduced its environmentally friendly activities, technologies, and products.

At IFA 2006 in Berlin, Germany, Sharp exhibited AQUOS LCD TVs, which are certified for the EU Eco-label.



Sharp Environmental and Social Report 2006 (Japanese, English, and Chinese editions)



Website for Sharp's social and environmental activities http://sharp-world.com/corporate/eco/

# Exchanges with Stakeholders

To enhance communication with its wide range of stakeholders, Sharp holds factory tours and other events.

In November 2006, Sharp invited members of Kobe University and Mie University to its sites. The lively discussions with the visitors gave Sharp



Stakeholder dialogue session with Kobe University's Kokubu Laboratory

some interesting new ideas for future environmental and CSR efforts.

A parent-child study tour held during summer vacation attracted nearly 1,000 people and allowed Sharp to strengthen relations with neighboring residents.



Parent-child study tour during summer vacation (Tenri Plant)



Eco Products 2006



Sharp LCD TVs at the EU Eco-label booth at IFA 2006 in Berlin



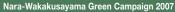
Ecolife Fair 2006

## Information on website

http://sharp-world.com/corporate/eco/report2007/ 
 Exchanges with local communities

Sharp and Society In Pursuit of Becoming a Corporate Group Trusted by Society

Progress in the Social Dimension of CSR43
For Customers
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For Business Partners
Mutual Prosperity with Suppliers and Dealers49
For Employees
Creating a Fair, Positive, and Progressive Workplace51
For Local Communities
Social Contribution Activities on a Corporate Citizen



Nara-Wakakusayama Green Campaign 2007 Since 2003, Sharp has carried out beautification activities at Wakakusayama in Nara Prefecture, Japan. On May 26, 2007, at the fifth edition of this cleanup, about 1,250 Sharp employees, family members, acquaintances, and former employees took part.

# Progress in the Social Dimension of CSR

Sharp established the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct as standards of conduct to fulfill Sharp's business philosophy and business creed, which are the origin of the Sharp Group's CSR. Based on the Group Charter of Corporate Behavior and the Code of Conduct, each functional group sets major social themes and targets in CSR and develops various measures while promoting continual efforts for improvement.

# Promoting CSR Efforts in the Social Dimension

To promote CSR efforts in the social dimension, Sharp takes measures at the levels of management, group, and department.

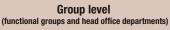
On the management level, the CSR/BRM\*1 Committee (see page 6) discusses and decides company-wide promotion measures, and each functional group implements specific measures across the company.

On the level of departments and employees, CSR is put into practice through work broken down into specific duties.

\*1 BRM: Business risk management

#### **Management level**

• Discuss and decide company-wide basic policy and measures at the CSR/BRM Committee



- Put into practice promotion measures discussed and decided at the CSR/BRM Committee
- Set and promote measures in each group

#### **Department and employee level**

- Fulfill CSR through work based on company-wide promotion measures and group measures
- R-CATS small-group activities
   Participate in the Sharp Green Club (environmental and social contribution activities)

#### Efforts for Fiscal 2006

Examples of Sharp's distinctive efforts in the social dimension of CSR are introduced in the Special Focus section (page 17 to 23: the Customer Assistance Center, CSR activities at sales bases in Japan, and joint environmental education with weathercasters).

In addition to these efforts, Sharp achieved results in the Corporate Affirmative Action for Women Strategy Program and other such activities in fiscal 2006. Sharp will regularly assess the progress of such measures, identify problems and make further improvements thereof—these steps functioning as a management system—and work to incorporate these CSR measures into the work process.

# Build internal control system Management System Practice compliance in business Strengthen business risk management Improve customer satisfaction Secure quality and safety For Customers Create products that are easier to use Strengthen personal information protection For Shareholders and Investors Improve communication with shareholders and investors For Business Partners Promote CSR across entire supply chain Strengthen human resource development Develop company-wide affirmative action for women For Employees Promote occupational safety and health Expand and diversify social contribution For Local Communities

Field

Important Themes

#### CSR Through R-CATS\*2 Small-Group Activities

R-CATS are small-group activities in which production and quality departments, as well as other indirectly related departments, participate. All workplaces in Japan and overseas set themes from the viewpoint of CSR for common problems in everyday work and join together to take action and solve these problems.

From September to October 2006, Sharp held R-CATS Overseas Conventions in three regions: Asia, China, and Pan-Atlantic. In November, Sharp held the Worldwide R-CATS Convention for the best teams selected from the regional conventions. Themes presented in the final round included improvement of production and quality as well as customer assistance and distribution. In fiscal 2006, a total of 40,623 employees from 4,188 teams (including 13,278 employees from 1,280 teams at overseas sites) participated in R-CATS activities to fulfill CSR in each workplace.

\*2 R-CATS: Revolution Creative Action Teams

Efforts (Achier	vements) for Fiscal 2006	Efforts for Fiscal 2007	See page(s)
Improve internal control system	Formulated basic policy for internal control     Established Internal Control Committee     Implemented various measures for improving     internal control system     Provided internal control e-learning	<ul> <li>Have internal control system in place and operating</li> <li>Analyze operation and implement problem-solving measures for internal control system</li> <li>Conduct internal control audits</li> <li>Build internal control IT system</li> </ul>	5
Improve compliance training system	<ul> <li>Provided legal affairs/compliance e-learning</li> <li>Conducted mandatory compliance seminar for directors and management in business groups</li> <li>Revised job-level-specific compliance training curriculum</li> </ul>	Improve compliance enlightenment tools     Oreate compliance guidebook	6
Review management methods for important risks	<ul> <li>Revised risk assessment standards to identify important risks</li> <li>("level of impact" x "probability of occurrence)</li> </ul>	<ul> <li>Create BCM (business continuity management) system</li> <li>Create PDCA cycle-based management system to improve BCP (business continuity plan) of all domestic production sites</li> </ul>	6, website
Improve quality of customer support	<ul> <li>Opened call center in Japan dedicated to AQUOS LCD TVs (toll free phone number for inquiries)</li> <li>Revamped training for improving technical knowledge and inquiry response skills of personnel at Customer Assistance Center in Japan</li> </ul>	<ul> <li>Achieve higher ranking in customer satisfaction surveys of inquiry response skills</li> <li>Use statistics to achieve greater accuracy in predicting number of inquiries; this will lead to improved phone call reception rate</li> </ul>	17•18 45•46
Reduce initial product faults	<ul> <li>Inaugurated special management system in which staff in charge of technology, quality, and service are assigned to Customer Assistance Center, analyze types of inquiries, and promptly respond to these during period immediately after release of new products; this reduces initial product faults</li> </ul>	<ul> <li>Further improve quality in early stages of product making (design, parts procurement, and software)</li> <li>Improve training for quality engineering, etc.</li> <li>Improve system for analyzing parts and materials used</li> </ul>	45
Improve usability (ease of use) of digital consumer electronics	Introduced tests to determine ease of use of product instruction manuals     Honored at 2006 Japan Manual Contest (for DVD/HDD recorder and digital full-color MFP manuals)	<ul> <li>Introduce more universal design products</li> <li>Use data from Customer Assistance Center and results of usability testing to bring universal design to more products</li> </ul>	46
Make company-wide efforts to acquire Privacy Mark certification in Japan	Conducted internal audits and took improvement measures concerning personal information protection	Apply for and acquire Privacy Mark certification     Continue internal audits on departments handling personal information     Continue to provide education to employees	47
<ul> <li>Strengthen IR activities aimed at individual investors</li> </ul>	<ul> <li>Gave presentations at seminars for individual investors</li> <li>Held explanation sessions for salespeople in charge of individual investors at securities companies</li> </ul>	<ul> <li>Improve information disclosure to shareholders and investors</li> <li>Renew contents of investor relations website</li> </ul>	48
<ul> <li>Develop CSR study sessions for business partners</li> <li>Improve green procurement activities for material suppliers</li> </ul>	Held CSR study sessions for persons in charge at subcontractor companies engaged in production and work at domestic production sites     Introduced green procurement online system and conducted survey on environmental management of each material supplier	Improve supply chain CSR measures     Introduce Sharp Supply-Chain CSR Deployment Guidebook and CSR self-check     online system for suppliers	49•50
<ul> <li>Promote development of diversified human resources and capabilities to deal with changes in business environment</li> </ul>	<ul> <li>Improved SHINE program (for fostering young global employees)</li> <li>Promoted career development of engineers</li> <li>Improved employment rate for physically and mentally challenged in Japan (2.0% →2.02%)</li> </ul>	<ul> <li>Promote continual development of diversified human resources and capabilities to deal with changes in business environment</li> <li>Strengthen and expand human resource development programs for management and global personnel</li> </ul>	51•52
Promote Corporate Affirmative Action for Women Strategy Program in Japan Expand various systems for supporting balance between work and family	<ul> <li>Expanded number of departments where women can actively work in to 69; implemented female manager candidate development program</li> <li>Established reemployment following childcare leave system and extended period of time for reduced working hours for childcare reasons, etc.</li> </ul>	<ul> <li>Continue to promote Corporate Affirmative Action for Women Strategy Program and consider additional measures</li> <li>Promote activities to achieve each objective of relevant programs</li> <li>Expand and diversify systems for supporting balance between work and family</li> <li>Review existing systems and consider additional measures</li> </ul>	51, website
Strengthen accident prevention activities     Improve level of safety and health for     temporary staff and employees of     subcontractors stationed inside Sharp     sites	Implemented labor-management safety and health inspections at 10 major domestic plants     Heid monthly safety and health meetings with subcontractors stationed inside Sharp sites in Japan	Strengthen industrial accident risk reduction activities     Implement regular safety and health inspections at 11 major domestic plants, including newly added Toyama Plant     Promote major monthly theme-based targets     Improve safety and health awareness of newly assigned temporary staff and employees of subcontractors stationed inside Sharp sites in Japan     Expand safety and health education for newly assigned employees	52
Japan: • Create Sharp Forests at seven locations • Start environmental education for elementary schools • Carry out local social contribution activities at all 85 sales/service bases Overseas: • Firmly establish social contribution activities at major sites	Japan: • Created Sharp Forests at six locations • Provided environmental education at 55 elementary schools for six months starting October • Total of 14,078 people participated at all 85 bases Overseas: • In China, established Sharp Charitable Fund and started various activities • Continued to carry out environmental social contribution activities at Asian bases	Japan: • Create Sharp Forests at more than 10 locations • Provide environmental education at 500 elementary schools for the year • Expand local social contribution activities at sales/service bases Overseas: • Expand activities centered on Sharp Charitable Fund in China • Develop information network concerning social contribution activities at overseas bases	19•20 21-23 53•54

Sharp and Society In Pursuit of Becoming a Corporate Gr

# For Customers Living Up to Customers' Trust by Delivering Satisfaction

In order to bring out user-friendly products that reflect the desires of customers, Sharp conducts usability testing. Sharp pursues customer satisfaction by supplying products and services that customers can always rely on. The company also takes the customers' viewpoint as it trains its employees to put the concept of usability into actual products.

	Efforts (Achievements) for Fiscal 2006	Efforts for Fiscal 2007
Improve the quality of customer support	Opened a call center in Japan dedicated to AQUOS LCD TVs (toll free phone number for inquiries)     Revamped training for improving the technical knowledge and inquiry response skills of     personnel at the Customer Assistance Center in Japan	<ul> <li>Achieve a higher ranking in customer satisfaction surveys of inquiry response skills</li> <li>Use statistics to achieve greater accuracy in predicting the number of inquiries; this will lead to an improved phone call reception rate</li> </ul>
Reduce initial product faults	<ul> <li>Inaugurated a special management system in which staff in charge of technology, quality, and service are assigned to the Customer Assistance Center, analyze the types of inquiries, and promptly respond to these during the period immediately after the release of new products; this reduces initial product faults</li> </ul>	Further improve quality in the early stages of product making (design, parts procurement, and software) Improve the training for quality engineering, etc. Improve system for analyzing parts and materials used
Improve usability (ease of use) of digital consumer electronics	Introduced tests to determine ease of use of product instruction manuals     Honored at 2006 Japan Manual Contest (for DVD/HDD recorder and digital full-color     MFP manuals)	Introduce more universal design products     Use data from the Customer Assistance Center and the results of     usability testing to bring universal design to more products

## Basic Stance and Vision on Customer Satisfaction and Quality

#### **Quality Philosophy**

To respond to society's needs and make products that satisfy our customers, we keep the slogan "Quality First" in mind at all times.



Displayed at every Sharp site as a company-wide slogan for quality

# Systems for Ensuring Product Safety and Quality

Sharp stresses to employees the importance of ensuring product safety and quality for customers. All employees participate in the constant improvement of quality.

### CS Innovation Activities Improve Service

Guided by the slogan "Aiming for No. 1 in Customer Satisfaction," Sharp is engaged in innovative activities that provide prompt, reliable service to enhance customer satisfaction.

To ensure that customers are not kept waiting for service visits, in fiscal 2006 18 major Sharp bases in Japan introduced a same-day home-visit system for people who purchase large AQUOS LCD TVs. Sharp also started same-day repair service for customers bringing in products, be they old or new, to 12 main sites.

Moreover, to improve the level of technical service and ensure that all customers are treated properly, Sharp encourages all service personnel to acquire internal qualifications for technical skills and customer service sensitivity.

Sharp will continue to pursue a higher level of customer satisfaction by approaching its improvement from all possible angles. Sharp ensures product safety by complying with the revised Consumer Products Safety Law, which went into effect in Japan on May 14, 2007. Moreover, the Sharp Group has established a voluntary action plan on product safety. These specify 1) the Sharp Voluntary Product Safety Action Policy, 2) the product safety promotion system, 3) efforts for ensuring the safety of products, and 4) response to accidents with products. By putting the related plans into action, Sharp is increasing product safety and thus putting consumers at ease.

### Active Disclosure of Quality Information

In the event that a Sharp product is found to be responsible for injury to customers or for damage to property, Sharp will disclose relevant information immediately in newspapers and via its website, and will establish a desk to directly receive inquiries from customers in order to avoid any further problems.

During fiscal 2006, Sharp notified customers as below in Japan, providing free-of-charge inspection, repair, and replacement services.

- Announced that part of the structure of some LED display systems was found to be non-compliant with technical standards under the Japanese Electrical Appliance and Material Safety Law.
- Announced free-of-charge inspection and repair service for some models of twin-tub and fully automatic washing machines for rare cases of potential smoke and fire.

## Overseas Topics Global Parts Meeting

In March 2007, managers of the world's four major service parts bases in Japan, America, Europe, and Asia held the 7th Global Parts Meeting at Sharp's Osaka Head Office. The participants discussed specific measures for achieving both prompt supply of parts and reduction of inventory. By streamlining and centralizing service in future, service personnel will improve customer service worldwide through appropriate inventory management on a consolidated basis.

### American CS Strategy Conference

In August 2006, US sales company SEC welcomed representatives from Sharp bases in the Americas and Sharp Corporation to the American CS Strategy Conference in order to improve product quality and service.

At the conference, Sharp introduced two strategies: the super quality innovation strategy for achieving unparalleled quality; and the CS innovation strategy for becoming No.1 in customer satisfaction. The participants also shared in the creation of an industry-leading service system and in the improvement of a quality assurance program for new product development.



Global Parts Meeting



American CS Strategy Conference

#### Creating Products that Are Easier to Use

#### Making Products Easier to Use Through Usability Testing

In fiscal 2006, Sharp focused on audio-visual products in improving the usability of digital consumer electronics. Examples of these efforts are shown on the right.

Sharp will expand its efforts to improve usability of all products, and will create high-quality, genuine products that give customers greater satisfaction.

#### Creating Easy-to-Understand Instruction Manuals

As digital consumer electronics become increasingly convenient and sophisticated, they also become more complicated to operate. To help customers better understand products, Sharp is conducting usability testing so as to reflect customer requirements in product instruction manuals. Sharp instruction manuals improved through this process have been praised by third-party organizations.

At the 2006 Japan Manual Contest (sponsored by the Japan Technical Communicators Association), which honors user-friendly instruction manuals, Sharp won awards for its DVD/HDD recorder and digital full-color MFP manuals.

#### Training People to Create "Usability"

Sharp provides usability engineer training for persons in charge of product development.

Sharp has also established an in-house qualification system on usability. Staff trained in this system have the knowledge and technical skills needed to play a key role in improving usability at the product development stage.

Information on website

When the record button is pressed, the recorder automatically turns on and starts recording a program being watched on an AQUOS I CD TV LCD displays the type of broadcasting selected Frequently used record and playback buttons are placed near the top for easy access

> Eight direct-function buttons on the AQUOS remote

control enable fast operation SHARP カイト どう違うの?ビデオテーフレコー deres . B -1 5 (inter ilen Gan 見3 ŝ And and



Award of excellence, brochure manual category, 2006 Japan Manual Contest



Training participants discuss usability of an actual product



#### AQUOS Familink

Equipment such as HD recorders, Blu-ray Disc player/recorders, and surround sound systems can be easily operated with a single remote control in combination with the AQUOS LCD TV using the AQUOS Familink.



2) Simple operation guide for digital full-color MFP The effective use of illustrations and color makes the manual easy to understand.

Outstanding award, brochure manual category, 2006 Japan Manual Contest



Training participants role-play an interview during skills training

Sharp Voluntary Product Safety Action Policy Quality guarantee system http://sharp-world.com/corporate/eco/report2007/ ■ ISO 9001-certified sites (companies)

Sharp and Society

• Ma Pr

# For Customers Reinforcing Information Security

Keeping pace with the development of IT infrastructure, companies must now take more responsibility than ever for ensuring the privacy of information. By strengthening information management systems, improving the safety of information infrastructure, and providing employees with comprehensive training on information management and security, Sharp is aiming to become a company that can be thoroughly trusted with information security and personal information protection.

Efforts (Achievements) for Fiscal 2006		Efforts for Fiscal 2007
Nake company-wide efforts to acquire Privacy Mark certification in Japan	<ul> <li>Conducted internal audits and took improvement measures concerning personal information protection</li> </ul>	<ul> <li>Apply for and acquire Privacy Mark certification</li> <li>Continue internal audits on departments handling personal information</li> <li>Continue to provide education to employees</li> </ul>

### System to Protect Personal Information and Corporate Secrets

To protect personal information of customers and other stakeholders as well as its own corporate secrets, Sharp established the Information Security Promotion Department and the Personal Information Protection Promotion Department in 2004. The company is stepping up information security and personal information protection through the system shown in the figure below.

At semi-annual meetings of the Information Security Committee in which managers from all domestic group companies participate, Sharp follows up on semi-annual basic policies and checks how measures are being carried out.

In the area of personal information protection, Sharp formulated audit rules for handling personal information and has conducted annual internal audits since fiscal 2005 that are used to take corrective measures. In fiscal 2007, Sharp will work to qualify for the Privacy Mark, a certification given to businesses that comply with the Japanese Industrial Standard (JIS) for personal information protection.

In information security, Sharp is working to raise the level of protection for confidential information. In fiscal 2005, Sharp introduced a self-check and assessment system to be conducted by every business group at all companies in Japan to monitor how well measures to protect confidential information are being implemented.

Sharp will continue to step up management systems by firmly establishing self-checking and internal audits.

Department general manage

#### Raising Security Levels and Reinforcing Information Security Systems at Overseas Bases

At overseas bases, Sharp has established an information security system based on the laws and circumstances of each country and region. To reinforce and spread the implementation of information security measures at all overseas bases, Sharp focused on the following three measures in fiscal 2006:

- 1) Start of local information security committees in the world's four major areas: Europe, the Americas, Asia, and China (October 2006)
- Formulation of basic rules concerning security management (December 2006)
- Self-assessment of security levels (self-checks similar to those in Japan were conducted in January 2007)

In fiscal 2007, Sharp will introduce centralized management tools (for automatically collecting PC-stored information and automating user authentication in the network) to maintain and develop permanent PC security measures at all Sharp Group bases worldwide, and will take measures to protect important data stored on servers.

#### Information Security Management System Personal Information Protection System rmation Security xecutive Vice Presider Chief General Admi Personal Information Protection Promotion Department Information Security Chairman Promotion Department Business group supervisor Business group supervisor Business group supervisor Business group supervisor Management Management Management superviso supervisor

Department general manage

### Educating Employees Through E-Learning

Department general manage

Since fiscal 2005, Sharp has provided all Sharp Group employees in Japan with once-a-year e-learning courses in information security and personal information protection. The program covers everything that should be considered in protecting information in daily work. The program also includes comprehension tests and awareness surveys, the results of which are used to plan further improvement measures and future e-learning content.



Department general manager

System for information security and protection of personal information in Japan

# For Shareholders and Investors Appropriate Return of Profits and Information Disclosure

One of the most important management principles for Sharp is to return a portion of profits to shareholders. By providing prompt, accurate, and wide-ranging information, Sharp is promoting communication with shareholders and investors in Japan and overseas, and the valuable feedback of these stakeholders is regularly relayed to Sharp management for future improvements.

Efforts (Achi	Efforts for Fiscal 2007	
<ul> <li>Strengthen IR activities aimed at individual investors</li> </ul>	<ul> <li>Gave presentations at seminars for individual investors</li> </ul>	<ul> <li>Improve information disclosure to shareholders and investors</li> </ul>
	<ul> <li>Held explanation sessions for salespeople in charge of individual investors at securities companies</li> </ul>	Renew contents of the investor relations website

### Basic Policies Concerning Profit Sharing

Sharp considers distributing profits to shareholders to be one of the most important management issues. While maintaining consistently stable dividend pay-outs, and while considering its consolidated business performance, financial situation, and future business development in a careful and comprehensive manner, Sharp implements a set of policies to return profits to its shareholders, such as increasing the amount of periodic dividends.

Under such a policy, annual dividends in fiscal 2006 were 26 yen per share, which marked an increase for the seventh consecutive period. Sharp will strive to return its profits to shareholders, aiming for a dividend pay-out ratio of 30%, on a consolidated basis in the future.

Sharp uses internal reserve funds for investment in future growth fields, the development of uniquely featured products and proprietary devices, overseas business development, and environmental protection.

#### Net income per share (consolidated)

(oonsondated)				(fiscal year)
2002	2003	2004	2005	2006
29.37	55.37	70.04	80.85	93.25
				(ven)

#### Cash dividends per share

2002	2003	2004	2005	2006
15	18	20	22	26
(ven				

# Active Investor Relations

# Communication with Institutional Investors and Analysts

In fiscal 2006, Sharp was actively engaged in individual interviews and meetings with institutional investors and analysts at the Osaka and Tokyo offices. Sharp also held quarterly financial result announcements, business strategy briefings, and factory tours. Overseas, Sharp's management and IR teams visited institutional investors and held conferences at consumer electronics shows.

By making its website for investor relations in both Japanese and English, Sharp provides prompt and fair information to investors both in and out of Japan. Sharp will continue to improve the accuracy and frequency of the information that it discloses.

# Communication with Individual Investors

Because Sharp considers it important to have shareholders from a wide range of backgrounds, the company is working to communicate more with individual investors.

In fiscal 2006, Sharp created a website and reports for shareholders that use layman's terms and as little financial jargon as possible. Sharp also participated in various stock-promotion seminars for individual investors, where the company explained its business results and strategy and held question-and-answer sessions. As well, Sharp held explanation sessions for salespeople in charge of individual investors at securities companies.

#### General Shareholders' Meetings

Sharp strives to create an environment that enables shareholders to exercise voting rights at the ordinary general meeting of shareholders: efforts include holding the meetings earlier than most Japanese companies, allowing shareholders to exercise voting rights by computers and mobile phones, participating in a platform for electronic voting rights for institutional investors, and posting English notices about the meetings on the website.

Sharp also makes public the events of shareholders' meetings by posting video on the website the day after the meetings for a certain period of time. For the general shareholders' meeting in June 2007, Sharp used a larger venue so that as many shareholders as possible could attend.

#### Share distribution (as of March 31, 2007)

Japanese corporations and others 7% Japanese individuals 16% Foreign shareholders 30%

## SRI (Socially Responsible Investment)\*

As part of information disclosure to stakeholders, Sharp cooperates in good faith with research organizations doing surveys on socially responsible investment (SRI). In September 2006, Sharp participated in an explanation session for SRI investors sponsored by securities companies in Paris to introduce its main businesses and environmental strategy.

# As of June 2007, Sharp was one of the stocks chosen for the following SRI indices:

- FTSE4 Good Global Index (UK); March 2007
- Ethibel Sustainability Index (Belgium)Morningstar Socially Responsible
- Investment Index (Japan); September 2006
- KLD Global Climate 100 Index (US); May 2007



SRI: Investment in companies that fulfill not only their financial obligations but their environmental and social responsibilities as well.

# For Business Partners Mutual Prosperity with Suppliers and Dealers

Sharp carries out procurement activities through fair evaluation, ensuring that all domestic and overseas companies are provided with equal opportunities. To build good relationship with business partners, Sharp promotes dialogue through explanation sessions and informal gatherings that deepen mutual understanding. It is also Sharp's belief that CSR activities should apply to the entire supply chain, including its business partners.

Efforts (Achievements) for Fiscal 2006		Efforts for Fiscal 2007
<ul> <li>Develop CSR study sessions for business partners</li> <li>Improve green procurement activities for material suppliers</li> </ul>	<ul> <li>Held CSR study sessions for persons in charge at subcontractor companies engaged in production and work at domestic production sites</li> <li>Introduced green procurement online system and conducted survey on environmental management of each material supplier</li> </ul>	Improve supply chain CSR measures     Introduce Sharp Supply-Chain CSR     Deployment Guidebook and CSR self-check     online system for suppliers

#### Equal Opportunity and Fair Evaluation for All Domestic and Overseas Suppliers

With production activities in Japan and overseas, Sharp procures parts, materials, and equipment based on the concept of providing equal opportunities to all domestic and overseas suppliers. It also fairly evaluates whether the procurement meets Sharp's requirements for quality, standards, and performance.

Sharp has stipulated Basic Purchasing Principles that clearly define the fundamentals of impartial and fair purchasing and that promote the development of mutual collaboration and trust with business partners. Sharp thus pursues a prosperous coexistence with its business partners.

#### **Basic Purchasing Principles**

#### 1. Basic Procurement Concept

- Sharp's procurement activities are conducted in an open and impartial manner, with a fair evaluation given to suppliers in and outside Japan.
- Sharp will comply with laws and regulations, and achieve mutual prosperity with suppliers.
- Sharp will practice such social responsibility as the conservation of the environment through procurement activities.
- 4) Sharp pursues optimal quality and cost to the fullest.

#### 2. Guidelines for Procurement Activities

- Open and impartial procurement activities and purchases at optimal cost
- 2) Establishing mutual relationships
- 3) Conservation of the environment
- 4) Securing good product quality
- 5) Securing steady delivery time and stable supply
- 6) Leading technology

## 3. Requests to Suppliers

- 1) Compliance with laws and social standards
- 2) Promotion of sound business operations
- Consideration for the environment
   Securing entirel suplimities and section
- 4) Securing optimal quality and cost
   5) Stable supply of parts and materials
- 6) Leading technology
- 7) No disclosing of confidential
- information

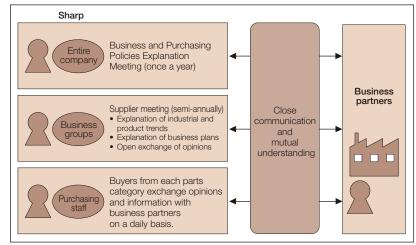
## Making CSR a Common Goal Across the Entire Supply Chain

In fulfilling social responsibility in business activities as a manufacturer, Sharp must go beyond its group companies and include the network of business partners encompassing the entire supply chain from parts and materials procurement to manufacture, distribution, and sales.

Consequently, in May 2004, Sharp revised its Basic Purchasing Principles, which it had originally established in 1990, to include important requirements for suppliers; for example, understanding of and cooperation with Sharp's CSR activities such as environmental conservation and compliance with laws and regulations. In June 2005, Sharp added the requirement that suppliers promote CSR activities. This revision applying to domestic and overseas suppliers has been put in writing and posted on the website so that Sharp's basic concepts and requirements are clear to companies that seek to do business with Sharp.

Sharp will continue to fulfill CSR across the entire supply chain by constantly checking to see that its basic principles and requirements meet the needs of society.

#### Close communication for mutual understanding (Japan)



#### Overseas Topics Green Procurement Survey Explanation Sessions Around the World

From December 2006 to March 2007, Sharp held green procurement survey explanation sessions in 13 locations in seven countries\* in Asia, Europe, and North America. A total of 2,120 representatives from 1,517 business partners participated in the sessions.

At the explanation sessions, Sharp explained its green procurement policy and survey procedure concerning chemical substances contained in parts and materials and requested suppliers' cooperation. The goal was to ensure that suppliers complied with regulations for containment of chemical substances in their countries.

In fiscal 2007, Sharp plans to hold similar sessions

- in South Korea, the Philippines, and Indonesia.
- \* China, Thailand, Malaysia, Poland, France, the US, Mexico



Green procurement survey explanation session in China

#### Approaching CSR Together with Suppliers

In fiscal 2004, Sharp started CSR efforts spanning the entire supply chain, inviting major partner companies in Japan to CSR explanation sessions and seminars. Through these efforts, Sharp helped to implement a CSR promotion system at partner companies and devised a checklist to encourage them to carry out independent evaluation of their progress.

In fiscal 2005, targeting persons in charge at subcontractor companies engaged in production and work at Sharp sites in Japan, Sharp held explanation sessions at each site on themes like labor, safety and health management, and environmental conservation. In fiscal 2006, Sharp held study sessions on topics such as labor laws, safety and health measures, information security, and the environment for persons from subcontractor companies responsible for operations at Sharp sites in Japan.

In fiscal 2006, to help suppliers check their own CSR efforts at the international level, Sharp added its own content to the Supply-Chain CSR Deployment Guidebook issued by JEITA (Japan Electronics and Information Technology Industries Association) and published the Sharp Supply-Chain CSR Deployment Guidebook (tutorials of CSR items and check sheets; Japanese, English, and Chinese editions). Since May 2007,

Sharp is asking suppliers to use this guidebook in stepping up CSR efforts and evaluating their own progress.

In fiscal 2007, Sharp will build a CSR self-check online system based on this guidebook and promote CSR selfchecking by suppliers in Japan and overseas.

By fiscal 2006, Sharp had already concluded Basic Business Agreements and Agreements for Green Procurement with almost all domestic suppliers, and these suppliers have since been carrying out environmental conservation measures through green procurement.

VI Information Security

1. Secure computer networks against threats

2. Prevent the leakage of personal information

editions)

3. Prevent the leakage of customer and

third-party confidential information

1. Contribute to society and community

VII Contribution to Society

## Items explained in Supply-Chain CSR Deployment Guidebook

#### I Human Rights and Labor

- 1. Prohibit forced labor
- 2. Prohibit inhumane treatment and
- infringements of human rights
- 3. Prohibit child labor 4. Prohibit discrimination
- 5. Pay appropriate wages
- 6. Regulate working hours
- 7. Respect the right to freedom of association
- II Occupational Health and Safety
- 1. Apply safety measures for equipment and
- instruments
- 2. Promote safe activities in the workplace
- 3. Promote hygiene in the workplace
- 4. Apply appropriate measures for occupational injuries and illnesses
- 5. Properly manage disasters and accidents
- 6. Be careful about physically demanding work 7. Promote safety and hygiene in all
- company facilities
- 8. Promote health maintenance programs for employees

#### **III Environment**

- 1. Establish and apply an environmental management system
- 2. Control hazardous chemicals in products 3. Control hazardous chemicals in
- manufacturing 4. Minimize environmental pollution
- (water, soil, air)
- 5. Obtain environmental permits
- 6. Promote resource and energy saving by reusing, reducing, and recycling (3R) 7. Promote greenhouse gas reduction
- 8. Promote waste reduction
- 9. Disclose environmental preservation activities

#### **IV** Fair Trading

- 1. Prohibit corruption and bribery
- 2. Prohibit abuse of a superior position 3. Prohibit the offering and receiving of
- inappropriate profit and advantage
- 4. Prohibit impediments to free competition 5. Provide accurate information on products and services

- 6. Respect intellectual property 7. Use appropriate export procedures 8. Disclose appropriate company
- information 9. Detect injustice promptly

#### V Product Quality and Safety

1. Establish and apply a quality management system



### **Response to Subcontract Act**

To comply with the Act Against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors (the Subcontract Act), which protects subcontractors in Japan, Sharp is strengthening measures for in-house education, compliance checks, and ordering systems.

Regarding in-house education, the Corporate Procurement Center of the Corporate Procurement Group provides study sessions on the Subcontract Act at all domestic sites. Each Sharp site evaluates how well it has complied with the Subcontract Act. The center also conducts regular audits of the sites. Sharp also set up a Subcontract Act FAQ section on its website, which facilitates the sharing of information inside the company by posting questions from employees and answers from the company.

Meanwhile, for the ordering system for suppliers, Sharp has 1) built a mold order system that complies with the revised Subcontract Act and 2) made business data transparent using EDI (electronic data interchange). In addition, Sharp actively participates in activities of the Japan Fair Trade Commission and industry organizations (such as JEITA) to keep up with the latest information and trends on the Subcontract Act, and conducts rigorous monitoring and audits of all its domestic sites.

#### Fulfilling CSR Together with Dealers

Sharp's sales and marketing departments in Japan, which deal directly with dealers, introduce the company's CSR concept and efforts at new product seminars for domestic dealers.

By conducting activities that meet the needs of specific regions, Sharp is also creating partnerships to jointly pursue CSR in sales and service.

(For details, see Special Focus 2 on pages 19 and 20)

Information on website http://sharp-world.com/corporate/eco/report2007/ 📕 Sharp Basic Purchasing Principles (full text) 📕 Sharp Supply-Chain CSR Deployment Guidebook

# For Employees Creating a Fair, Positive, and Progressive Workplace

Sharp stresses the importance of basic human rights and personal dignity, provides opportunities to enthusiastic employees, and fosters the diverse abilities of all employees. By creating a work environment where all employees can work safely and maintain good mental and physical health, Sharp is encouraging the growth of the company and its employees.

Efforts (Ac	chievements) for Fiscal 2006	Efforts for Fiscal 2007
<ul> <li>Promote development of diversified human resources and capabilities to deal with changes in the business environment</li> <li>Improved the SHINE program (for fostering young global employees)</li> <li>Promoted career development of engineers</li> <li>Improved the employment rate for the physically and mentally challenged in Japan (from 2.0% to 2.02%)</li> </ul>		<ul> <li>Promote continual development of diversified human resources and capabilities to deal with changes in the business environment</li> <li>Strengthen and expand human resource development programs for management and global personnel</li> </ul>
<ul> <li>Promote the Corporate Affirmative Action for Women Strategy Program in Japan</li> <li>Expand various systems for supporting the balance between work and family</li> </ul>	<ul> <li>Expanded the number of departments where women can actively work in to 69; implemented female manager candidate development program</li> <li>Established the reemployment following childcare leave system and extended the period of time for reduced working hours for childcare reasons, etc.</li> </ul>	Continue to promote the Corporate Affirmative Action for Women Strategy Program and consider additional measures     Promote activities to achieve each objective of relevant programs     Expand and diversify systems for supporting the balance between work and family     Review existing systems and consider additional measures
Strengthen accident prevention activities     Improve the level of safety and health for temporary staff and employees of subcontractors stationed inside Sharp sites	<ul> <li>Implemented labor-management safety and health inspections at 10 major domestic plants</li> <li>Held monthly safety and health meetings with subcontractors stationed inside Sharp sites in Japan</li> </ul>	Strengthen industrial accident risk reduction activities     Implement regular safety and health inspections at 11 major domestic     plants, including the newly added Toyama Plant     Promote major monthly theme-based targets     Improve safety and health awareness of newly assigned temporary staff     and employees of subcontractors stationed inside Sharp sites in Japan     Expand safety and health education for newly assigned employees

#### Basic HR (Human Resources) Policy

For the mutual growth of both the company and employees' happiness, Sharp upholds the following principles.

- Implement a corporate-asset-oriented management strategy, which values the experience and technical skills of each employee
- Carry out flexible personnel placement with a focus on "putting the right employee in the right position," based on performance and ability, without favor or partiality
- Provide support so that each employee can deepen their expertise, as well as obtain knowledge and skills in a broad range

#### Personnel, Education, and Training Systems that Value Employee Initiative and Diversity

Sharp Corporation systematically conducts human resource development, and has introduced a variety of personnel, education, and training systems (as shown below) that value the initiative and diversity of each employee and help them develop their individuality, motivation, and creativity.

In fiscal 2007, Sharp will strengthen and expand programs for fostering global human resources and people playing a key role in future management.

#### Next-generation human resource

- development systems
- Leadership program, Challenge course
   MOT (management of technology) program
- Master system

# Systems for bringing out individual ability and motivation

- Personnel declaration/career development
- system, career development rotation • Recruitment entry system
- Corporate Affirmative Action for Women Strategy Program
- SHINE program (for fostering young global employees)

# Education, training, and self-development support systems

- Seminars classified by function and specialized field
- Correspondence course, Essential course
   Step-up campaign (qualification acquisition acquisition
- encouragement plan)

# Basic Human Rights and Personal Dignity

The Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct stipulate the corporate policy and guiding principles for executives and employees regarding protecting basic human rights and personal dignity, such as the prohibition of both child and forced labor. To promote these values, human rights seminars are held every year at each Sharp domestic site. At overseas bases, Sharp is making efforts to prevent the occurrence of human rights problems, in accordance with relevant local laws and regulations.

### Good Labor-Management Relationship Through Dialogue

Sharp respects employees' right to organize and right of collective bargaining based on the laws in each country and region, and promotes amicable, trusting relationships with labor unions. In Japan, Sharp has monthly labor-management meetings: these include the Central Labor-Management Council, which involves top executives from both sides, and Local Labor-Management Council meetings at each site, where opinions are exchanged on the business situation and labor-management subjects. In Europe, Sharp has held European Works Council meetings every year since 1997.

# Company-Wide Affirmative Action for Women\* Promotion Campaign

In October 2004, Sharp Corporation established a team in the Human Resources Group that is in charge of expanding opportunities for women. This team heads the efforts of the Company-Wide Affirmative Action for Women Promotion Campaign.

Based on analysis of personnel data, for example those from the personnel declaration system, and the results of awareness surveys for all managers and female employees, the Corporate Affirmative Action for Women Strategy Program was started in June 2005. The



Affirmative action for women: A voluntary company effort that seeks to redress discrimination against women in employment and ensure equal opportunities (stipulated under the Law for Equal Employment Opportunity for Men and Women in Japan). program defines measures to be implemented, as well as targets, regarding matters such as the expansion of job fields for female employees and the promotion of women to managerial posts.

Sharp Corporation is also systematically expanding various systems supporting the balance between work and family. In 2006, the company established the reemployment following childcare leave system and extended the period of time for reduced working hours for childcare reasons. As a result of these measures, in April 2007 Sharp Corporation was certified by the Japanese Ministry of Health, Labour and Welfare as a company that achieved the action plan of the Law Concerning the Promotion of Measures for Supporting Next-Generation Development.

With the expansion of various measures and systems under the Company-Wide Affirmative Action for Women Promotion Campaign in Japan, Sharp will create workplaces where all employees can demonstrate their diverse abilities regardless of gender.



Next-generation certification mark (nickname: Kurumin) Shows that the company is certified by the Ministry of Health, Labour and Welfare.

# Labor and Management Discuss and Promote Safety and Health

Sharp Corporation has established the Basic Philosophy and the Safety and Health Principles in the area of safety and health. Every year, the company formulates specific objectives and action plans with the goal of totally eliminating industrial accidents.

Each site plans and carries out various activities based on monthly labormanagement safety and health committee meetings. And since fiscal 2006, each site has held monthly safety and health meetings to further improve the safety and health of employees of subcontractors stationed inside Sharp sites.

Every two months, Sharp Corporation also holds Central Safety and Health Committee meetings that bring Sharp and the labor union together. Participants confirm the status of company-wide safety and health efforts and share valuable information.

Teams composed of safety and health managers from Sharp Corporation and members of the labor union carry out safety and health inspections at each plant.

At Sharp Corporation, the annual rate of industrial accidents per thousand employees (resulting in a shut-down of at

#### **Overseas Topics**

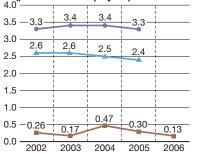
Since fiscal 2004, Sharp Corporation has carried out the SHINE (Sharp International New Experience) program to foster employees capable of doing business internationally. Under the program, young employees (age about 30) are sent overseas for one-and-ahalf to two years to receive practical business training at Sharp subsidiaries or language training at local language schools. A total of 37 trainees have been sent to 12 countries so far. In the practical business course, trainees acquire specialized skills in fields such as sales, administration, production, and material procurement, while in the language course, they learn languages such as Chinese and Russian.

Sharp selects candidates for the program through company-wide open recruitment. Any employee, regardless of post and experience, can apply for the program, and the company has been aggressively enrolling enthusiastic and capable young employees, both male and female.

least four days) was 0.13 in fiscal 2006, a more than 50% decrease over the previous fiscal year.

In the future, through safety and health inspections and major monthly themebased targets, Sharp will firmly establish and strengthen safety and health activities. Sharp will also cooperate with subcontractors stationed inside Sharp sites to help newly assigned and less experienced employees of these subcontractors be aware of safety and health so that industrial accidents can be prevented.

#### Annual industrial accident rates in Japan (per thousand employees)



---- Manufacturing industry average ----- All-industry average ----- Sharp Corporation

Note: Averages for all industries and the manufacturing industry are based on a survey by the Ministry of Health, Labour and Welfare.

#### Employing the Physically and Mentally Challenged and the Elderly

Sharp Corporation has established the Committee for Promoting Employment of the Challenged and remains committed to actively employing the physically and mentally challenged and creating a workerfriendly environment. In fiscal 2006, Sharp Corporation's physically and mentally challenged employment rate reached 2.02%.

Sharp's efforts for the employment of the physically and mentally challenged have a long history. In 1950, Sharp incorporated a separate factory and named it the Tokusen Metal Limited Partnership to help rehabilitate blinded war veterans. Today, its successor, Sharp Tokusen Industry Co., is making efforts as a special subsidiary to increase the special needs employment level.

In employment of the elderly, those employees who have reached the mandatory retirement age of 60 can request reemployment with Sharp Corporation (until the age when they start receiving public pension).

#### Health Promotion for Employees and Their Families

Sharp created Healthy Sharp 21, a comprehensive health-promotion program in Japan for employees and their families. Healthy Sharp 21 includes voluntary fitness programs that encourage individuals to change their lifestyles and daily habits so as to prevent or remedy lifestyle diseases.

Sharp also gives employees periodic physical checkups, with 99.94% of all employees in Japan undergoing these checkups in fiscal 2006. There is also active follow-up for employees who are screened for further medical examinations in the form of reexaminations and health maintenance guidance.

Sharp will work to create programs in Japan to encourage employees to make lifestyle changes involving diet, exercise, and smoking, and to heighten awareness of health self-management so that employees can avoid or treat problems such as metabolic syndrome, one of the major health issues today.

### Mental Health Care

Sharp Corporation helps its employees prevent and deal with mental illnesses at an early stage and supports their smooth return from medical leave. At major sites, the company has developed a counseling system involving medical specialists, company counselors, and an outside medical service institute. To promote correct awareness of mental health, the company also conducts various training and awareness activities.

Since fiscal 2006, as part of periodic health checkups, Sharp Corporation has carried out mental stress checkups on all employees (based on self-diagnosis). For employees who have been found to have high stress levels, the company provides one-on-one counseling through company physicians and counselors.

In the coming years, Sharp Corporation will expand in-house mental health counseling and further strengthen consultation using outside medical service institutes.

#### Information on website

http://sharp-world.com/corporate/eco/report2007/ Personnel, education, and training systems

Company-Wide Affirmative Action for Women Promotion Campaign Personnel data Health and safety data

# For Local Communities Social Contribution Activities as a Corporate Citizen

With the Sharp Green Club (SGC) acting as the core, Sharp conducts community-based activities that contribute to society in Japan and overseas. And since fiscal 2004, Sharp has been creating Sharp Forests all around Japan in areas where Sharp bases and sales offices are located.

_			
	Efforts (Achievements) for Fiscal 2006	Efforts for Fiscal 2007	
	Japan: Japan:	Japan:	

- Create Sharp Forests at seven locations
   Start environmental education for

  - started various activities Continued to carry out environmental social
- Create Sharp Forests at more than 10 locations
- Provide environmental education at 500 elementary schools for Expand local social contribution activities at sales/service bases
- Overseas
  - · Expand activities centered on the Sharp Charitable Fund in China
  - Develop an information network concerning social contribution activities at overseas bases

### Sharp Green Club (SGC) Carries Out Community-Based Activities

elementary schools

Carry out local social contribution

Firmly establish social contribution activities at major sites

Overseas

activities at all 85 sales/service bases

In June 2003 in Japan, Sharp and its labor union jointly established the Sharp Green Club (SGC) as an organization for planning and running a variety of social contribution activities (mainly environmental volunteer activities)

The SGC aims to provide employees with opportunities to contribute to communities by doing physical labor with local citizens while becoming more aware of the importance of the environment and volunteering.

In fiscal 2006, a total of 28,678 employees, an increase of about 1,500 over the previous fiscal year, participated in SGC activities.

For its tree-planting and cleanup activities at Wakakusayama, Nara Prefecture since 2003, the SGC was honored by the Nara Park Management Office as the first volunteer group to carry out landscape conservation activities at Wakakusayama.

Individual overseas sites have also carried out a variety of activities such as tree-planting, cleanups in local communities, and environmental education classes at schools.

Sharp will continue to carry out environmental conservation activities in cooperation with local communities.



Wakakusayama Green Campaign 2007

## Cosponsoring the Asian Pacific Awards

The Asian Pacific Awards (sponsored by Mainichi Newspapers Co. and Asian Affairs Research Council) honor distinguished works on topics including politics, economics, diplomacy, and culture in the Asia-Pacific region. Sharp has been a cosponsor since the start of these awards in 1989 as part of efforts to contribute to development in the Asia-Pacific region. The commendation ceremony of the 18th Asian Pacific Awards was held in November 2006.



18th Asian Pacific Awards ceremony



Kagawa Sharp Forest

Name	Location	Established
Yaita Sharp Forest	Yaita City, Tochigi Prefecture	March 2007
Taki Sharp Forest*	Taki District, Mie Prefecture	May 2006
Tenri Kofun Sharp Forest	Tenri City, Nara Prefecture	April 2006
Sharp Green Club Asuka Forest	Asuka Village, Nara Prefecture	October 2006
Konoyama Sharp Forest*	Kishiwada City, Osaka Prefecture	April 2006
Kagawa Sharp Forest*	Takamatsu City, Kagawa Prefecture	April 2007
Hachihonmatsu Yoshikawa Sharp Forest	Higashi-Hiroshima City, Hiroshima Prefecture	November 2004

Certified as the first example of reforestation in which a prefectural government and private enterprise collaborate.

#### work to do volunteer activities that constitute a significant contribution to society. With the multipurpose leave system, employees can receive eight days of extra paid leave per year that they can use for helping out in the local community, taking care of ill or elderly family members, or doing other socially valuable activities.

### Approximately 160 Students Accepted for Internship

Sharp Corporation has an internship program in Japan that gives university students on-the-job training to support their career development.

In fiscal 2006, the company received about 90 liberal arts students in its business internship programs and about 70 science and technology students in its technical internship programs.

#### Created Sharp Forests at six locations Provided environmental education at 55 elementary

- schools for six months starting October A total of 14,078 people participated at all 85 bases
- Overseas: . In China, established the Sharp Charitable Fund and

  - contribution activities at Asian bases
    - Creating Sharp Forests in Prefectures with Sharp Business Sites

As one of its main activities, the SGC is creating Sharp Forests in areas of Sharp bases and sales offices around Japan.

This initiative aims to contribute to the regeneration of forests by planting and cultivating new trees, as well as foster employee environmental awareness through contact with the natural environment.

Since starting the first Sharp Forest in Hachihonmatsu Yoshikawa in Hiroshima Prefecture in 2004. Sharp has created a total of seven forests including the newest one, the Sharp Forest in Kagawa Prefecture in April 2007.

Within fiscal 2007, Sharp plans to increase the number of Sharp Forests to 10 or more.

Leave Systems to Support

To enhance awareness and make it

easier for employees to contribute to

activities, Sharp Corporation introduced

society and participate in volunteer

the volunteer leave system and the

With the volunteer leave system,

multipurpose leave system in Japan.

employees can take up to one year off

Social Contribution Activities

#### Examples of Local Social Contribution Activities in Japan and Overseas



■ Support activities for local events Sharp cosponsors various local events to deepen exchanges with local communities. Events Sharp has cosponsored include the Abeno Human Documentary Film Festival (cosponsored by Sharp's head office), the National Goldfish Scooping Championship (cosponsored by the Nara Plant), and the Yaita Takahara Marathon (cosponsored by the Tochigi Plant).

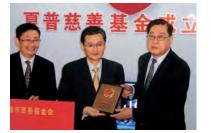


■ Welcoming corporate facility tours In fiscal 2006, Sharp's Tokyo Branch held science experiment classes and solar cell seminars, with about 350 people attending the events. At the Advanced Development & Planning Center in Tenri, Nara, Sharp held a parent-child study tour in which about 1,000 people participated.

At the Higashi-Hiroshima Plant in Hiroshima and at other plants, Sharp provides special programs for junior high school students and younger children to tour and experience workplaces. These programs are used by schools as part of their education and career guidance.



■ Participating in the Environmental Festival In March 2007, about 270 employees of Sharp Corporation and subcontractor companies participated in the Environmental Festival (sponsored by Kameyama City) held in the industrial complex where the Kameyama Plant is located. To protect the natural environment, the employees cooperated with local residents in transplanting some 400 cedar and oak trees growing in a soon-to-be-developed part of the industrial complex to a nearby open ground.



Establishing the Sharp Charitable Fund in China

Sharp established the Sharp Charitable Fund in cooperation with the Shanghai Charity Foundation in May 2006.

Sharp has sponsored the Shanghai Children's Japanese Chess Championship since 2000, in which about 2,000 children from elementary schools and junior and senior high schools participate. Sharp also donated 37-inch LCD TVs (25 units) to 23 hospitals in Shanghai and Jiangsu Province. The Sharp Scholarship System was introduced to 11 universities in Shanghai, Jiangsu Province, and Beijing, with Sharp granting scholarships worth one year of school tuition to 138 students. Sharp has also been engaged in environmental conservation activities such as planting trees in China.



Supporting a museum exhibition (SEF/France)

SEF cosponsored a dragon exhibition at the Museum National d'Histoire Naturelle in Paris from April to November 2006. SEF provided LCD TVs and projectors for the exhibition, which was visited by about 450,000 people.

Bernard FAYE/Museum National d'Histoire Naturelle©



Contributing through local cleanup activities (SATL/Thailand)

With the participation of about 400 employees and their families, SATL conducted cleanup activities with Khaohinsorn Elementary and Junior High School in Chachoengsao Province in December 2006. In addition to cleanup activities, the participants painted notice boards, planted trees, and donated a set of gardening tools to the school.



#### Personnel cooperation based on Sharp's businesses

Since fiscal 2003, the Mie Plant has sent employees to local senior high schools as lecturers for special science classes. In fiscal 2006, the class theme focused on the theory of LCDs and environmental conservation.

In November, employees of the Katsuragi Plant in Nara went to a university in Osaka and gave lectures on the characteristics of solar power systems and how they contribute to the environment.



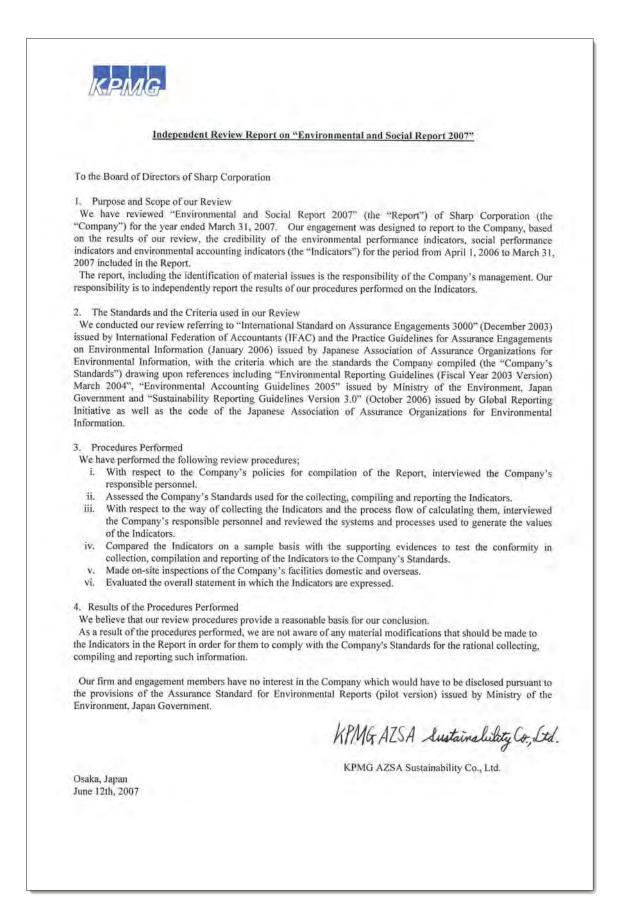
#### New Orleans reconstruction charity project wins American Business Award (SEC/US)

In New Orleans, Louisiana, where reconstruction efforts are still going on after the catastrophic damage from Hurricane Katrina in 2005, SEC sponsored a charity reconstruction project, called SOLA in NOLA, in March 2007. SEC donated Sharp solar power systems to 10 homes along the Mississippi River where damage from the hurricane was most severe. These were installed free of charge in a cooperative effort among SEC, a reconstruction project group named Holy Cross, and employees of SEC's 10 dealer companies.

These activities earned SEC the award for Best Corporate Social Responsibility Program (in the category of companies with 100 to 2,500 employees) from the American Business Awards, which honor the most innovative, outstanding achievements of the year by US businesses.



2007 Winner



# Information on Sharp's Website

Additional information related to this Environmental and Social Report can be found on Sharp's website at:

### http://sharp-world.com/corporate/eco/report2007/

The contents of the website are subject to update, revision, and deletion without prior notice.

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This report has been certified for Color Universal Design, a user-oriented design system developed in consideration of people with various types of color vision, to allow information to be accurately conveyed to as many individuals as possible. The system was developed by the Color Universal Design Organization (CUDO), a nonprofit organization in Japan.

SHARP CORPORATION 22-22 Nagaike-cho, Abeno-ku, Osaka 545-8522, Japan Phone: +81-6-6621-1221 http://www.sharp.co.jp/





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