



**Environmental and Social Report** 

2006



#### **About the Cover**

Crystalline, thin-film, see-through photovoltaic modules installed on the wall of Kameyama Plant No. 2. The modules reduce lighting costs in a room by allowing in moderate lighting and cool the room by blocking direct sunlight in summer.

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### Compiling This Report

#### ■ Organization

This Environmental and Social Report consists of four sections. The first section is a special feature that introduces Sharp's fundamental policy of contributing to society by making products in three business areas: calculators, LCDs and photovoltaic power generation. The "Highlights" section focuses on the main environmental and social topics in fiscal 2005.

The "Sharp and the Environment" section covers the policies, objectives and achievements of Sharp's environmental efforts. "Sharp and Society" is divided into sections that outline what Sharp is doing for each type of stakeholder.

#### ■ Links to the Sharp Web Site

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 Web site (http://sharp-world.com/corporate/ eco/report2006). Items that are covered on the Web site are listed at the bottom of the pages in this report. The last page also lists the items covered on the Web site.

#### ■ Period and Items Covered

Period Covered: Fiscal 2005 (April 2005 to March 2006)

However, some actual results prior to this period, as well as subsequent plans, goals and policies 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)	40 (17 domestic, 23 overseas)
Non-production sites (companies)	32 (10 domestic, 22 overseas)

#### ■ Referenced Guidelines

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

#### ■ Scheduled Publication Date for Next Report

July 2007 (published annually since 1999)

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# 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

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

### Sharp's Business Activities



### Realization of Business Philosophy

■ Perspective of social contribution through

"Contribute to the culture, benefits and welfare of people throughout the world"

- Perspective concerning employees 'Our corporation to grow hand-in-hand with
- Perspective concerning stakeholders "Prosperity is directly linked to the prosperity of the entire Sharp family"

# Contribute to a Sustainable Society by Making Environmentally Conscious Products



1 May

Katsuhiko Machida President, Sharp Corporation

### Recognized with an IEEE Milestone

Aiming to make calculators anyone could use, Sharp conducted tireless R&D that led to the world's first all transistor calculator in 1964. Some years later, Sharp engineers used this passion for originality to successfully develop the world's first IC/LSI calculators, and pocketsize LCD calculators. New technologies that came out of this development process, such as LSIs, LCDs and solar cells, have contributed to the advancement of the electronics industry. In December 2005, these achievements were recognized as the IEEE named Sharp's calculator development an IEEE Milestone.\*

Such honors remind Sharp of its responsibility to contribute to society, a task it will carry out by working even harder to make products for future generations.

### Making products with a focus on environmental consciousness

Today's product development and manufacture must be carried out with a commitment to the environment. No matter how convenient the products, they are of no use if they harm the environment and human health.

Since 1998, Sharp has done its utmost to improve the environmental performance of products, efforts that the company has further expanded into the area of devices since 2004.

In fiscal 2006, Sharp started full-scale operation of a system to assess the environmental impact over the life cycle of products and devices. This system works handin-hand with the incorporation of environmentally conscious design into the product-making process.

### Aiming to become an environmentally advanced company

In fiscal 2004, Sharp set a medium-term goal of becoming an environmentally advanced company and is taking environmentally conscious action in all business activities to achieve this goal.

Sharp is working to minimize the environmental impact of its worldwide production facilities. Factories that meet Sharp's strict standards for environmental protection are certified as Green Factories and Super Green Factories. As of fiscal 2004, all of Sharp's domestic production facilities had achieved Green Factory status. Of special note are the large-scale LCD production facilities in Kameyama and Mie, whose thorough environmental conservation measures have made them Super Green Factories. With the construction of Plant No. 2, the Kameyama Plant is adding more advanced environmental technologies, like a 5-MW photovoltaic power system, the world's largest, and 1-MW fuel cells, the largest of their kind in Japan.

Among overseas factories, eight out of 22 bases achieved the standards for Green Factories in fiscal 2005. Special mention goes to the office equipment manufacturing plant in France, which has become the first overseas factory to achieve the status of Super Green Factory. Sharp plans to make all of its group factories,



including those overseas, Green Factories by fiscal 2007.

But Sharp's environmental action covers the entire spectrum: other efforts include the development of state-of-the-art environmental technologies, the introduction of a proprietary environment management system, and the provision of environmental training for all employees.

### Achieving zero global warming impact by 2010

Sharp recognizes global warming as one of the most pressing environmental issues.

To actively play a part in tackling this problem, in 2004 Sharp defined its corporate vision as "zero global warming impact by 2010." This concept limits to the greatest extent possible the amount of greenhouse gas emissions resulting from business activities, while at the same time, significantly reducing greenhouse gas emissions due to the energy-creating effects of solar cells and to the energy-saving effects of new products manufactured by Sharp. The amount of greenhouse gas emissions reduced is to exceed the amount emitted by fiscal 2010.

Sharp's production of solar cells totaled 428 MW in 2005 (a 32% increase from the previous year), recording the world's largest volume consecutively for the sixth year in a row. Sharp will further expand solar cell production to provide clean energy to the world and achieve its corporate vision.

### Earning the trust of society through CSR

The key to creating a wide range of know-how, and not just the core technologies of products, lies in fostering human resources. To enable all employees to fully demonstrate their abilities, Sharp is actively carrying out a range of human resource development programs. These include the Leadership Program, which nurtures future managment personnel, and Affirmative Action, which creates better opportunities for female employees.

Sharp will boost its effort on the corporate social responsibility (CSR) front by strengthening ties not only within the Sharp Group but also with business partners, suppliers and all other companies involved in Sharp business processes.

Since its foundation, Sharp has contributed to society by making never-before-seen products that meet the needs of the next generation and by creating totally new markets. Sharp will continue to fulfill its social mission in obedience to its business creed of "Sincerity and Creativity."

We look forward to hearing your frank opinions.

June 2006

<sup>\*</sup> IEEE Milestone: Established in 1983 by the IEEE, the world's largest institute of electric and electronics engineers, to honor important historic achievements in electrical and electronics technologies and their relevant fields that have contributed to the betterment of society.

# In an Effort to Further Strengthen Manufacturing and Technological Competency, Sharp is Committed to Making Speedy Managerial Decisions and to Enhancing Management Quality

While further strengthening the Director/Corporate Auditor system through strict observance of business ethics and legal compliance, reinforcement of internal control, and enhancement of audit functions, Sharp will enhance its corporate governance and management system.

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

Business activities of Sharp are clearly bounded by the development, production and sales of products as well as devices. Each area is highly specialized and at the same time, 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 reciprocal managerial responsibilities and execute business responsively and effectively. Also, Sharp is of the opinion that it enhances management functions by reciprocal checks among the directors.

The fact that three of Sharp's four corporate auditors are outside auditors enhances operational soundness.

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 enhance the corporate governance system and ensure transparency and soundness in management, 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.

- Reduced the term for directors from two years to one year (June 2003)
- By unifying internal audit departments, Sharp established the Internal Audit Division under the supervision of the responsible vice president in order to keep auditing separate from the viewpoint of independence from business execution departments (April 2006)
- Introduced a plan to prevent large-scale purchases of Sharp Corporation shares (Anti-Takeover Plan) (April 2006)
- Established the Internal Control Committee as an advisory panel to the Board of Directors (May 2006)
- Established the Advisory Board to obtain a wide range of opinions and proposals from well-informed outside experts in order to assist in management decisions (July 2006)

### 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 for the second time and split into two documents: the Sharp Group Charter of Corporate Behavior, established as the principles of Sharp's corporate behavior; and the Sharp Code of Conduct, as 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), which prevents violations of laws and loss risks, while helping the company quickly adapt to changing business environments, is indispensable in business management. That is why the company pursues both CSR and BRM activities in correlation between them.

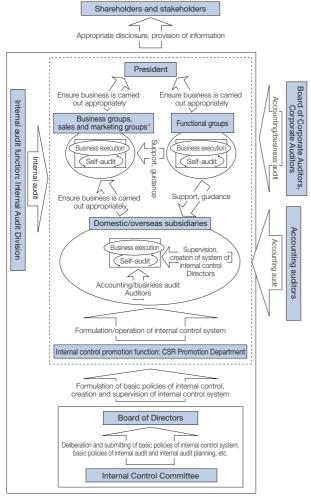
Sharp holds meetings of the CSR/BRM Committee to discuss and check progress in policies and action plans. Held twice a year, these meetings are attended by a Corporate Senior Executive Vice President (Chief General Administration Officer), all group general managers and all general managers of the functional groups.

Sharp has also established the CSR Promotion Department under the supervision of the corporate director in charge of Management Planning in order to plan and implement CSR/BRM measures for the whole 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. Introduced to all Sharp departments, from production and quality to product planning and technical, right down to sales, procurement and administrative departments, R-CATS activities foster CSR awareness across the entire Sharp Group.

\* R-CATS: Revolution Creative Action Teams. See also page 23.

### Diagram of Corporate Governance/ Internal Control System



\*Also responsible for directing and administrating the assigned subsidiaries

### **Preventing Unlawful Grants and Expenditures**

Sharp has a principle of fair and open management. The Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct contain the provisions to strictly prohibit corrupt behavior such as extortion and bribery, and require that donations are handled in a proper manner.

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

### Strict Business Ethics and Legal Compliance

Business ethics and legal compliance are the minimum social responsibilities for any corporation.

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 a variety of continuing education programs in Japan (described below).

Sharp 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 Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct (fiscal 2005)
- Job-level-specific training [managers and new employees, etc.] (every year)
- Training and online lectures in specialized fields [on laws related to antimonopoly, subcontracting, intellectual property rights, export control, labor, etc.] (held when necessary)
- e-learning for all employees:
- Environmental awareness (fiscal 2004)
- Personal information protection (fiscal 2004)
- CSR (fiscal 2005)
- Information security and personal information protection (fiscal 2005)
- Legal affairs and compliance (fiscal 2006)

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

Sharp Corporation and its domestic subsidiaries have established a hotline where employees can report compliance problems and receive consultation.

The hotline is also open to 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 interests, enforced on April 1, 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 disadvantage against people who report compliance violations or seek consultation.

### 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.

### Corporate Profile

Name Sharp Corporation

Head Office 22-22, Nagaike-cho, Abeno-ku, Osaka, Japan

Representative Katsuhiko Machida, President

Founded September 15, 1912

Operations Manufacture and sales of audio/video,

communication and information equipment,

home appliances, LSIs, LCDs, other

electronic components

Capital Stock 204,675,518,238 yen

Number of Employees\* 46,872 (29,484 in Japan; 17,388 overseas)

As of March 31, 2006

\* Sharp Corporation and its consolidated subsidiaries

#### Main Products

### Audio/video 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, MD pickups, facsimiles, telephones, mobile phones, PHS terminals

### **LSIs**





Flash memories, combination memories, CCD/CMOS imagers, LSIs for LCDs, microcomputers

### Home appliances





Refrigerators, microwave ovens, superheated steam ovens, air conditioners, washing machines, drum-type washer/dryers, vacuum cleaners, kerosene heaters, electric heaters, air purifiers, dehumidifiers, small cooking appliances

### **LCDs**



Two-way viewing-angle LCD Reflecting the LCD in a mirror shows that one user sees TV images from the right while another can see an Internet Web



Switchable viewing-angle LCD Reflecting the LCD in a mirror shows that the user sees the PC screen from directly in front while someone sitting on the right or left sides cannot see the same screen

TFT LCD modules, Duty LCD modules, System LCD modules, EL display modules

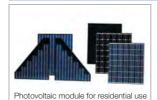
### Information equipment





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

### Other electronic components





Electronic tuners, RF/infrared data communication units, network components, components for satellite broadcasting, laser diodes, hologram lasers, DVD pickups, optoelectronics, regulators, switching power supplies, solar cells, LEDs, analog ICs

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

### Fiscal 2005 Financial Results

Sharp took assertive initiatives through the introduction of one-of-akind products and through the development of proprietary devices which support the creation of these one-of-a-kind 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 color TVs. In anticipation of the fullscale arrival of the digital high-definition TV era, Sharp expanded its lineup of full-spec high-definition LCD TVs and worked toward expanding sales worldwide. Other efforts included an enhancement of unique products, such as mobile phones equipped with original cutting-edge devices.

In the Electronic Components business, Sharp strived to further expand LCD business. The company expanded production capacity at Kameyama Plant No. 1 to meet the growing demand for large-size TV panels. Furthermore, in order to ensure a more stable supply, Sharp started construction of Kameyama Plant No. 2. As for photovoltaic power systems, Sharp continued to take aggressive measures to expand the business, including the commencement of mass production of thin-film photovoltaic modules.

These efforts resulted in record highs in net sales, operating income and net income in fiscal 2005 on a consolidated basis.

#### Outlook for Fiscal 2006

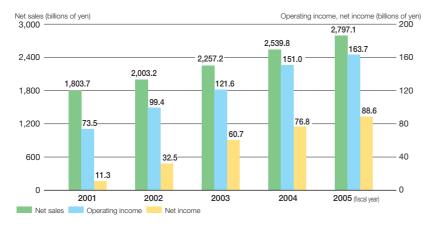
In an effort to achieve further growth, Sharp is strengthening its oneof-a-kind strategy, while working to improve profitability and get the maximum value out of the company.

In the Consumer/Information Products business, Sharp will work to further improve the competitiveness of LCD color TVs. This is to be accomplished through globally expanding its lineup of full-spec highdefinition models. Sharp will also introduce new technologies which enhance image quality and performance, along with establishing a state-of-the-art global production system. One-of-a-kind products in other business areas will also be upgraded. These include original cutting-edge mobile phones corresponding to new services in Japan.

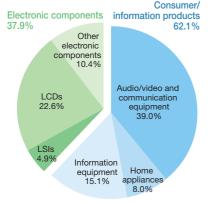
In the Electronic Components business, Sharp will engage in enhancing its line of original devices through the following measures. To further expand the LCD business, the company will realize a stable supply of panels for LCD TVs with the revolutionary productivity of Kameyama Plant No. 2. Other measures include boosting sales of panels for mobile equipment, including System LCDs. In Photovoltaic Power Systems, Sharp will introduce a wide variety of product lineups, increase production capacity and implement technological innovation.

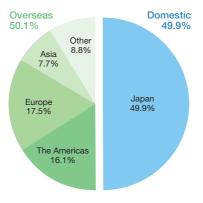
In addition to these efforts, Sharp will continuously promote value engineering and seek innovation in production technologies in order to achieve further growth.

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

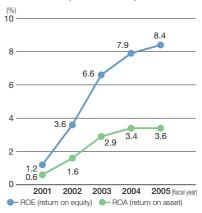


#### Fiscal 2005 net sales by region Fiscal 2005 net sales by product group (consolidated) (consolidated)

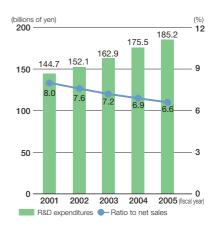




#### Principal financial performance indicators (consolidated)



#### R&D expenditures (consolidated)



Information on Web site

http://sharp-world.com/corporate/eco/report2006 Financial results

# Sharp's Innovation in Technology and Manufacturing Opens the Door to a New Era

Passed down through successive generations, the company's business creed of "Sincerity and Creativity" has allowed Sharp to make products that create new demand and open the door to a new era. This section surveys Sharp's past and future with examples taken from three business areas:



Commemorative plaque presented by the IEEE (behind); four models of Sharp desktop electronic calculators recognized as an IEEE Milestone (From left) CS-10A all-transistor calculator, CS-16A IC calculator, QT-8D LSI calculator and EL-805 LCD calculator

### Sharp's Pioneering Achievements in **Electronic Calculators** Recognized as an IEEE Milestone

The IEEE\*1, the world's largest institute of electrical and electronics engineers, established the IEEE Milestone program in 1983 to honor significant achievements in electrical and electronics engineering that have contributed to the betterment of society. Currently there are 65 Milestones around the world, including Volta's Electrical Battery Invention and the Fleming Valve. In December 2005, Sharp's development of desktop electronic calculators during the years from 1964 to 1973 was recognized as an IEEE Milestone. This is the fifth such IEEE Milestone for Japan\*2, and the first such recognition in the field of information devices.

Following the commercialization of the world's first alltransistor-diode desktop calculator (in 1964), Sharp introduced the world's first electronic calculators incorporating ICs and LSIs (in 1967 and 1969) and a pocketsize LCD electronic calculator (in 1973) that used CMOS-LSI circuitry. These successes in evolving increasingly compact, power-efficient calculators have expanded the use of calculators worldwide.

This IEEE Milestone is confirmation once again of the revolutionary Sharp technology that led to the growth of the LSI industry

Isao Shirakawa, Ph.D. Professor & Dean Graduate School of Applied Informatics University of Hyogo

Worked with Sharp in the initial development of electronic

calculators



Sharp's development of electronic calculators gave the world revolutionary developments—the adaptation of CAD to LSI design and the development of a FORTRAN compiler for logic simulation—that led to progress in the LSI industry.

Sharp engineers were so intensively devoted to their research as to be unaware that their technologies had become the first of a kind in the world. The recognition of Sharp's electronic calculators as an IEEE Milestone is a reaffirmation of the significance of these technological innovations.

- \*1 IEEE: The Institute of Electrical and Electronics Engineers, Inc., the world's largest non-profit, professional association of electrical and electronics engineers. Headquarters in the US.
- \*2 In Japan, the Directive Short Wave ("Yagi") Antenna (1995), the Mount Fuji Radar System (2000), the Tokaido Shinkansen ("Bullet Train") (2000) and the Electronic Quartz Wristwatch (2004) have been recognized as IEEE Milestones. Sharp's electronic calculator is the fifth honor for Japan.

### Sharp's one-of-a-kind product history



Tokuji Hayakawa invents the Ever-Sharp Pencil It was the world's first pencil with a core that could be constantly pushed out to keep the pencil "sharp" at all times. Called the Ever-Ready Sharp Pencil, this invention is the origin of the company name Sharp



Japan's first crystal radio set After the Great Kanto Earthquake, Sharp founder Hayakawa moved to Osaka to rebuild his company where he successfully assembled a crystal radio set.



Japan's first TV In 1931, Sharp began research into TVs. The company built Japan's first prototype in 1951 and started marketing TVs in January 1953.



Began development of solar cells in 1959 and became the first company to mass-produce them in 1963.



LCD Viewcam video camera
The Viewcam was the world's first video camera that used an LCD screen instead of the conventional viewfinder, making it easier to watch the scene as it was being recorded.



Plasmacluster Ion air purifier
Developed the world's first air purification technology utilizing Plasmacluster lons, which eliminates airborne mold and other harmful substances.



AQUOS LCD color TV Marketed as the TV for the 21st century, the AQUOS is thin, light, energy-efficient, space-efficient, resourceefficient and has a long service life



Water Oven (superneated steam oven)
A cooking appliance applying the new idea of "roasting" with water, the Water Oven uses 300°C superheated steam and offers healthy food.

### **Development of Electronic Calculators** Gave Birth to Today's IC, LCD and Solar Cell Businesses

The technology that came out of the development of electronic calculators has greatly advanced the electronics industry. For example, the MOS-LSI electronic calculator in 1969 was the first consumerbased application of LSIs and provided the momentum to create today's huge LSI industry. Moreover, the LCDs used to make compact, energy-efficient electronic calculators evolved into today's LCD TVs, while the solar cells used to power the calculators have evolved into today's photovoltaic power systems.

Sharp founder Tokuji Hayakawa's favorite phrase—"make products that others want to imitate"—is a call to lead the world in creating products the next era will demand, mainstream products that other companies will also want to produce. The development of electronic calculators, which was recognized as an IEEE Milestone, embodies Hayakawa's spirit of making products.

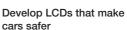


### The Evolution of LCD Technology **Drives Today's Information Society**

After Sharp engineers succeeded in applying liquid crystals to displays in electronic calculators in 1973, their next goal was the development of an LCD wallmounted TV. They proceeded from simple numeric and alphanumeric read-out to image displays, then from monochrome to color displays. Next still images evolved into full-motion video, and from small screens into large ones. To realize their dream of a wall-mounted TV, the engineers pursued innovation in LCD with tenacity and creativity.

Their dream was realized with the development of the AQUOS LCD color TV. Made for today's environmentally conscious consumers, the AQUOS is energy-efficient, space-efficient and resource-efficient. Sharp has designed the AQUOS for superb overall environmental performance, easy to recycle and manufactured with environmentally friendly components and materials.

With its growing use in a variety of equipment such as notebook PCs, mobile phones, car navigation systems and digital cameras, LCDs have created a world of mobile products well beyond the imagination of those original Sharp engineers. As shown by its wide range of applications—in highly detailed monitors for telemedical diagnosis, or in information displays for use in every type of vehicle from cars to airplanes-LCDs have been playing increasingly important roles in the advancement of our information society.



Hideki Yakushigawa Department General Manager Engineering Department II Mobile LCD Design Center Mobile Liquid Crystal Display Group

In charge of development of automotive LCD modules



To develop automotive LCD modules, a company needs more than just state-of-the-art technology: it needs to focus its collective strength as a manufacturer, including its quality and support functions. LCDs have recently been used to display a driver's blind spot. We expect to soon see LCDs that offer integrated displays never before possible for automotive use. By developing increasingly reliable LCD modules, we plan to provide drivers and passengers with the peace of mind that comes from driving in safety and comfort.





A cogeneration system produces about one-third of the electricity used in the whole plant



A 1,000-kW fuel cell system, Japan's largest



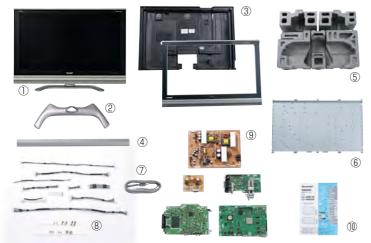
Drainage facilities recycle all process wastewater



A 10-MVA superconducting magnetic energy storage system supplies electricity in case of sudden drops in voltage

### ■ Environmentally conscious AQUOS

Made for today's environmentally conscious consumers at the Super Green Kameyama Plant, the AQUOS is energy-efficient, resource-efficient and space-efficient. Sharp has given the AQUOS superb overall environmental performance, with an easyto-recycle design and environmentally conscious components and materials.



① AQUOS LC-45BE1W, with its environmentally conscious design ② Stand using recycled plastic and ① AUOUS LC-49BETW, with its environmentally conscious design ② Stand using recycled plastic and plant-based paint ③ Cabinet using non-halogen resin gives off almost no dioxins or other toxic substances when incinerated ④ Speaker grill using easy-to-recycle metal ⑤ Packaging buffer made of recycled polystyrene foam ⑥ Chassis made of sheet steel that uses no hexavalent chromium, a hazardous heavy metal ⑦ Halogen-free power cords and wiring ⑥ Screws and nuts using no hazardous hexavalent chromium ⑨ Lead-free solder circuit boards ⑩ Instruction manuals made completely from recycled paper and using soy ink

### The Kameyama Plant— A Model for Environmental Conservation and Coexistence with the Local Community

Launched in January 2004, the Kameyama Plant is the world's first integrated LCD TV production facility, from manufacture of LCD panels to final assembly of LCD TVs. In constructing the Kameyama Plant, Sharp made coexistence with the local community and reduction of environmental impact from production top priorities. This thorough attention to reduce environmental impact resulted in Sharp winning a Sustainable Management Pearl Award at the Japan Sustainable Management Awards (sponsored by Mie Prefecture) in 2004 and the Economy, Trade and Industry Minister's Prize at the Japan Water Award in 2006.

Sharp is currently building Kameyama Plant No. 2, which will use the world's first 8th-generation glass substrates in the production of LCD panels. Plant No. 2 will incorporate improved versions of environmental technologies used in Plant No. 1. It will also have a 5,150-kW photovoltaic power system, the world's largest installation on a building, and a 1,000-kW fuel cell system, the largest in Japan. These measures are part of Sharp's aim to build a state-of-

#### Sharp Receives Economy, Trade and Industry Minister's Prize at the 8th Japan Water Award

For its 100% recycling of production process wastewater at the Kameyama Plant, Sharp won the Economy, Trade and Industry Minister's Prize at the 8th Japan Water Award. Sponsored by water-conservation organizations and various government ministries in Japan, including the Ministry of the Environment, the annual Japan Water Award promotes sound practices in water protection and circulation with the aim of giving Japan and the rest of the world abundant, safe, clean and drinkable water in the 21st century. The Kameyama Plant also won the Grand Prize at the 1st Nikkei Monozukuri Awards and the Sustainable Management Pearl Award at the 3rd Japan Sustainable Management Awards in 2004.



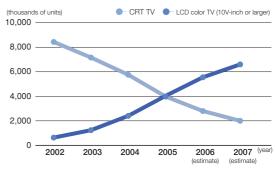
Crystalline, thin-film, see-through photovoltaic modules installed on the wall of Plant No. 2

the-art plant that is more environmentally conscious than anything before. And compared to Plant No. 1, this new plant will be approximately twice as efficient per amount invested (in 45V-inch-panel equivalents). This will allow Sharp to establish a more stable supply system to meet the growing demand for large LCD TVs.

The Kameyama Plant has been cited as a model for manufacturing in Japan through cooperation between local government and private enterprise. Sharp's construction of this LCD production base has attracted other LCD-related companies, leading to the creation of new employment and to development of the local economy and community. Customers often rave about the high quality of the LCD TVs produced at the Kameyama Plant, and as a result many are specifically asking for "made in Kameyama" LCD TVs.

Sharp will continue to use its business to further good relations with the community and contribute to local economic prosperity.

### ■ Total number of color TV shipment in Japan



In comparison with CRT TVs, the demand for LCD TVs that feature energy efficiency and resource and space savings has been expanding every year. In 2005, the volume of shipments of LCD TVs exceeded that of CRT TVs.

Source: JEITA "World Demand Estimate for Main Audio-Video Products" (February 2006)

### Maintaining good partnerships for "Eco-City Kameyama"





Two and a half years have passed since the start of full-sale operation at Sharp's Kameyama Plant. Sharp has established a successful business here with the shipment of high-quality products worldwide: this is a bounty that we all happily share in. As the mayor of the hometown, I wish to express my sincerest respect to Sharp.

Encouraged by Mie Prefecture's scheme of developing a "Crystal Valley," numerous companies have selected our area as the location for their sites, and we continue attracting attention from all over the country as an area that can help restore Japan's position as a manufacturing leader. Under such circumstances, the wishes of residents in the local community are to create a city that coexists with the environment. It is, therefore, my responsibility that we build "Eco-City Kameyama" with companies, citizens and administration acting as one. We hope to maintain a good partnership with Sharp and continue to make progress by enhancing our mutually beneficial relationship.

### Arranging observation areas that local residents can easily visit

Yuriko Fukaya Manager Kameyama Environmental & Industrial Safety Center AVC Liquid Crystal Display Group Deals with environmental conservation at the Kameyama Plant



We are setting up observation areas for displaying state-of-theart environmental technologies at the Kameyama Plant, including areas where visitors will have a chance to see the world's largest scale photovoltaic power system. By facilitating local residents visits, we intend to make our plant a place that provides environmental education for elementary school and junior high school science classes. Through such efforts, we wish to further deepen our relationship with the local community.



### Sharp Aims to Become a "Zero Global Warming Impact Company by 2010" as the World's Top Manufacturer of Solar Cells

The energy from one hour of sunlight shining down onto the surface of the earth is equal to the total amount of energy consumed by all human beings in one year. Photovoltaic power generation that converts this natural blessing into electrical energy is now attracting attention from around the world as a clean source of energy that does not produce greenhouse gases.

Sharp launched development of solar cells in 1959, and swiftly achieved success in mass production in 1963. From the start, Sharp has been engaged in developing solar cells for use under extreme climatic conditions, such as on space satellites or in lighthouses. Sharp has built up a store of wide-ranging technologies gained through such experiences, and today, has the technologies to build photovoltaic power systems and to make solar cells tailored to specific applications from diverse materials, such as silicon (single-crystal, polycrystalline and thin-film) and compounds.

In photovoltaic power systems for housing and industry, whose use has rapidly expanded in recent years, Sharp has been leading the market with development and production drawing on its past experiences. As a result, Sharp's production of solar cells has been the world's largest in terms of yearly volume for six consecutive years since 2000.

As the top manufacturer of solar cells, in order to further clarify its efforts for environmental conservation, Sharp set forth a corporate vision of becoming a "Zero Global Warming Impact Company by 2010."

### ■ Corporate vision: Zero Global Warming Impact by 2010

Sharp's corporate vision limits to the greatest extent possible the amount of greenhouse gas emissions resulting from Sharp's business activities around the world. At the same time, it significantly reduces greenhouse gas emissions by means of the energy-creating effects of solar cells and the energy-saving effects of new products manufactured by Sharp. The idea is for the amount of greenhouse gas emissions reduced will exceed the amount emitted by fiscal 2010.

### I'd like to see Sharp speed up its efforts toward the goal of achieving "10% of total power generation in 2030"



Kosuke Kurokawa, Dr. Eng. Professor Strategic Research Initiative for Sustainability and Survival Graduate School Tokyo University of Agriculture and Technology

Research in 21st-century energy networks and photovoltaic power generation

I am encouraged by the fact that Sharp is leading the industry with enthusiastic production expansion plans and its development of thin-film solar cells. However, I would like to see Sharp speed up its efforts in order to realize Japan's goal of covering 10% of total electricity generated by photovoltaic power generation in 2030\*.

In addition, I also would like Sharp to emphasize the environmental superiority of solar cells via assessment by third-party organizations, as well as the acquisition of the Japanese Eco Mark.

\* "PV Roadmap Toward 2030 (PV2030)" issued by NEDO (New Energy and Industrial Technology Development Organization), Japan

### We aim to commercialize high-efficient, low-cost solar cells



In charge of developing the lates solar cells

Although compound solar cells for use in space are more highly efficient than those for residential use, they cannot be put into practical use for housing due to cost issues. To overcome these problems, we are utilizing our accumulated technologies to develop advanced solar cells that only Sharp with its wide range of experience can perfect.



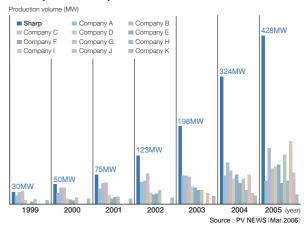
We provide the type of environmental education to children that only business people can

> Fumihiko Hoshika Manager Solar Academy Systems Design Center Solar Systems Group

In charge of Solar Academy classes at schools and citizen courses

Environmental technology is changing moment by moment. Because knowledge of the latest information owned by companies is highly appreciated in classrooms, we receive requests to deliver lectures from schools ranging from elementary to senior high schools. Although it is necessary to enhance education contents and develop new teaching materials, the most important thing in environmental education is "enthusiasm." I would like to convey to children our sincere desire to protect the global environment.

### Sharp's solar cell production volume



Sharp's production of solar cells has been the world's largest in terms of yearly volume for the past six years (since 2000). Sharp will continue to meet growing demand for solar cells, and it plans to increase production to contribute to global environmental conservation.

### Speeding up the Widespread Use of Solar Cells Through Production Cost Reductions and Development of New Technologies and Products

In order to achieve its goal of becoming a "Zero Global Warming Impact Company by 2010," Sharp must continue to increase production of solar cells. With proprietary technologies that have been accumulated over the last 47 years, Sharp will push for even higher performance and lower prices, as well as focus on developing new products that will lead to new applications.

In 2006, Sharp successfully applied design technology for space satellite solar cells to residential-use solar cells and began marketing residential-use photovoltaic modules with a much higher reliability. In commercializing these products, Sharp succeeded in reducing the use of silicon, the supply of which is becoming scarce due to growing global demand for solar cells, as well as in enhancing their durability.

Meanwhile, Sharp regards it as a crucial role for a solar cell manufacturer to publicize the importance of clean energy and the global environment. To that purpose, Sharp has been holding "Solar Academy" classes in Japan since October 2004. Full-time staff visit schools and citizen courses around the country to explain environmental problems and clean energy using simple methods based on quiz games and hand-made teaching materials. People are so eager to learn that the number of participants in classes that have been held so far totaled 3,860 as of March 31, 2006.

Sharp will continue to advocate the importance of environmental conservation to children who form the next generation, and promote the widespread use of photovoltaic power generation through constant technological innovation to build a sustainable society.

### Information on Web site

# SMF in France Becomes the First Overseas Super Green Factory

Sharp's objective is to make all its production sites highly conscious environmentally. Green Factories are steadily making progress overseas. SMF\* became the first overseas plant to match the standards for a Super Green Factory.

\* SMF: Sharp Manufacturing France S.A. Production company for office equipment.





### Our next challenge is sustainable development

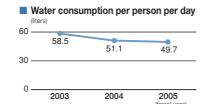
SMF officially took up the challenge, in July 2004, of being ranked the first overseas Super Green Factory. Speaking for myself, I have to admit that ever since the 70s, I have felt concerned about environmental problems. That is why I am very proud to work at a company that makes this issue a priority.

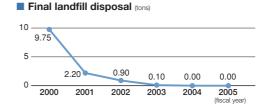
The success of our approach to environmental issues is based on the two following pillars: an ambitious attitude towards permanent improvement and the involvement of all our employees, from workers to management. Thanks to their steady contributions, we have reached our first goal: Super Green Factory. The next challenge is to continue our efforts towards sustainable development.

"We do not inherit the earth from our ancestors, we borrow it from our children" Native American proverb borrowed by the French writer Antoine de Saint-Exupéry

### SMF's environmental performance

### ■ CO₂ emissions er production unit: t-CO2/100 million yen) 2.8 3.6 2.4 2003





#### ■ Examples of SMF's environmental activities (see Web site for details)





















### First ISO 14001-Certified Company in the Alsace Region

SMF, established as a copier production base in May 1989, is located in the Alsace region of northeastern France, which is famous for wine. With some 200 employees, SMF currently produces mainly digital copier/printers.

In September 1996, SMF became the first company in Alsace to acquire ISO 14001 certification and the eleventh to do so in France, indicating that SMF has always been enthusiastic about environmental conservation. Particularly since the late 1990s, SMF has made active environmental efforts to steadily reduce CO2 emissions, water consumption and final landfill disposal. In 2004, SMF achieved zero discharge to landfill and continues to maintain this record.

### Efforts to Become the First **Overseas Super Green Factory**

What lies at the center of Super Green Factory efforts started under the leadership of President Buclon is the "Green Mind" contest.

Sharp started the system of certifying Super Green Factories in fiscal 2004. During the initial year, the Kameyama Plant was certified as a Super Green Factory. Then in fiscal 2005, the Mie Plant reached certification

In July 2004, SMF started the Green Mind contest with the participation of about one-third of all personnel—60 employees divided into 15 teams. In March 2005, the results of their environmental conservation activities were announced in front of all employees and the top three teams that made considerable contributions were honored. These activities continued, resulting in SMF's certification as a Super Green Factory.

It goes without saying that the leadership of management was behind SMF's success. However, while the Kameyama Plant and Mie Plant were certified as Super Green Factories based on the knowledge of experts and leading-edge technologies, SMF's certification was really achieved through all the employees' awareness and actions concerning environmental conservation.



### Our activities aim for sustainable development

Our team brings together personnel from across the company who work for environmental conservation and raising environmental consciousness. In 2005, 60 employees in 15 groups participated in Green Mind activities, which produced results that led to the certification of SMF as a Super Green Factory. We plan to extend our environmental conservation activities towards achieving sustainable development.

### SMF's environmental monitoring team

From left: Jacques Haubensack, Manager, PQA Dept.; Daniel Fried, Assistant Manager, PQA Dept.; Isabelle Langenfeld, Manager, Personnel Dept.; Georges Dalbo, Manager, Engineering Dept.; Jean Michel Humbert, Supply Chain Senior General Manager, Production Dept.; and Dominique Schwartz, General Manager, Production Dept.

# Practical Application of Plant-Based Paint a New Step Towards a Resource-Recycling Society

Sharp and Kansai Paint Co., Ltd. have become the world's first companies to develop technology for painting the plastic parts of consumer electronics with plant-based paint made from corn.



## We will further conduct R&D to make the paint a world standard



Kazuhiko Ohnishi Department Manager Technology Department I Industrial Paint Division Kansai Paint Co., Ltd. Jointly developed plant-based

It was only several years ago that we first started basic research into plant-based paint that we considered would contribute to a sustainable society. I feel extremely honored that, because of Sharp's interest in this environment-friendly paint, we were able to jointly develop a technology for painting the plastic parts of consumer electronics with plant-based paint for the first time in the world. We will further conduct R&D to make the paint a world standard, and establish more one-of-a-kind, next-generation technologies.

### ■ Environment-conscious circulation of plant-based paint

Plant-based paint, when incinerated, releases CO<sub>2</sub> that was originally absorbed by corn during its growth. This means that the total amount of CO<sub>2</sub> in the air does not increase.



The first product in the world to use plant-based paint made from corn\*: the AQUOS LCD TV uses the paint on its stand

\* As of January 26, 2006, for consumer electronics





LC-45BE2W

### **Most Paint-Applied Waste Plastic** is Subject to Landfill or Incineration

When plastic made from petroleum and other fossil resources is incinerated, CO2 is released into the atmosphere. In 2001, Sharp put closed-loop plastic material recycling technology that repeatedly recycles scrap plastic and reuses it in new home appliances into practical use to expand the volume of recycled waste plastic.

However, paint-applied plastic is difficult to recycle and usually ends up in landfill or incineration because the hard film mixed into the plastic significantly deteriorates the characteristics of the material. Sharp took notice of plantbased paint while studying ways to recycle paint-applied waste plastic, and began joint development with Kansai Paint in April 2004.





In April 2004, Sharp's closed-loop plastic material recycling technology received the Education, Culture, Sports, Science and Technology Minister's Prize at the 13th Global Environment Awards in Japan sponsored by the Japan Industrial Journal (above left). The same technology also won the 15th Best Technology

Award sponsored by the Japan Society of Polymer Processing in June 2005 (above



In May 2006, Sharp's plant-based paint received the 56th Industrial Technology Award sponsored by the Osaka Industrial Research Association (above).

### World's First Plant-Based **Paint-Applied Plastic Parts**

As seen in Japanese lacquer ware, plant-based paint has been a familiar commodity in our life from ancient times. However, the application of conventional plant-based paint to mass-produced industrial products has been difficult to achieve due to the hardness of the paint film, its insufficient adherence to materials, and the long time it takes for the paint to dry.

By modifying cornstarch and adjusting its molecular weight as well as optimizing the amount of hardening agent, Sharp and Kansai Paint worked on adherence to materials and hardness of the paint film to improve durability, as well as on gloss and texture to improve quality and performance.

Following R&D that continued for nearly two years, the two companies succeeded in developing a plant-based paint that has performance equal to that of conventional paint made from fossil resources. Sharp used this plant-based paint for the stand of the AQUOS LCD TV that was marketed in March 2006. Thus, Sharp became the world's first company to paint the plastic parts of consumer electronics with plant-based paint.

Plants take in CO<sub>2</sub> during the process of growth. The CO<sub>2</sub> reduction effect of plant-based paint used on the stand of the 45V-inch AQUOS amounts to approximately 24 grams per unit. If plant-based paint had been used in the some four million AQUOS units produced in fiscal 2005, the volume of CO<sub>2</sub> reduction would have totaled 96 tons. This is equivalent to the amount absorbed by a 29-hectare forest.

Sharp plans to use plant-based paint for air conditioners, washing machines and other white goods. Together with technology for blending plant-based plastic and waste plastic, which was developed in July 2005, Sharp will increase considerably the use of plant-based resources to reduce the environmental impact of consumer electronics.

### We will develop future-oriented one-of-a-kind environmental technologies



Yoshitake Sumida Department General Manager Environmental Technology Development Department Environmental Protection Group

Leads R&D in environment-

Products currently manufactured will be due for recycling in approximately 10 years time, or in some cases, even as long as 20 years. Development of recycling technology spans a long period. Without being constrained by the existing flow, we will continue to develop oneof-a-kind technologies by anticipating future trends.

### We want to establish plant-based technology that will become commonplace

The use of plant-based paint for products other than consumer electronics will greatly contribute to environmental conservation. To initiate such a trend, we will further enhance the paint's quality and performance. And by reducing the need for new supplies of fossil resources through the use of plant-based plastic and materials collected from waste consumer electronics, we can contribute to building a sustainable, resource-recycling society.



Yoko Fukushima Junior Manager Environmental Technology Development Department Environmental Protection Group Worked on R&D of plant-based

# Promoting Company-Wide Affirmative Action for Women for Fostering Diversified Human Resources

As part of its "Company-Wide Affirmative Action for Women\* Promotion Campaign," Sharp is expanding job fields for women and raising the percentage of female managers under its "Corporate Affirmative Action for Women Strategy Program" in Japan. This human resource development program aims to give talented and motivated female employees the chance to make the best of their abilities and qualifications.

\* Affirmative action for women: A voluntary effort by a company that seeks to redress discrimination against women in employment to ensure equal opportunities (stipulated under the Law for Equal Employment Opportunity for Men and Women in Japan).



**■** Corporate Affirmative Action for Women Strategy Program



■ Main measures and targets of the **Corporate Affirmative Action for Women Strategy Program** 

			Target	
Main measures		When started	Target (period of achievement)	Results
Development of New Face program (expanding departments [job fields] for female employees*1)	Number of departments where women can actively work in	22 departments	50 departments (as of the end of fiscal 2005)	71 departments (as of March 2006) Target achieved
Development of "female junior manager (sub-managerial positions) 25%" target*2	Ratio of junior managers to all female employees	17.3%	25% (as of the end of fiscal 2007)	19.8% (as of April 2006)
Female manager candidate development program	Number of female managers	21 persons	60 persons (as of the end of fiscal 2007)	28 persons (as of April 2006)
Fostering abilities of female employees (appointing as leaders in small-group activities)	Number of female group leaders	131 persons	250 persons (as of the end of fiscal 2005)	171 persons (as of March 2006) Continue efforts to achieve 250 persons during the first half of fiscal 2006

<sup>\*1</sup> Departments in which the ratio of women is 30% or more and where they can easily demonstrate their abilities and aptitude \*2 Only within Sharp Corporation



Fach site in Japan has an Affirmative Action for Women Promotion Team since December 2005. To date, a total of 23 teams have been organized company-wide to exchange a variety of opinions.

### **Corporate Affirmative Action for Women Strategy Program Fosters Personnel that Support Sharp's** One-of-a-Kind Strategy

Diversifying human resources and effectively using women's abilities have become important elements in global business management. Sharp has so far worked to promote women to managerial posts and revise working systems. To accelerate the initiative, Sharp Corporation established a "Corporate Equal Partnership Project Team" within the Human Resources Group in October 2004 and placed the team in charge of expanding opportunities for women.

After analyzing personnel data, for example those from the Personnel Declaration System, interviewing female employees, and conducting awareness surveys on all managers and female employees, the team formulated the "Corporate Affirmative Action for Women Strategy Program" to provide talented, motivated female employees the chance to fully demonstrate their capabilities.

### Not a Mere Preferential Treatment for Women. but a Business Strategy Aiming to Bring Out the Best in All Employees

Sharp's Company-Wide Affirmative Action for Women Promotion Campaign is not a mere preferential treatment for women, but is a business strategy aiming to bring the capabilities of all employees to their highest levels. The campaign is based on the assumption that women have more room left to grow compared to men.

Sharp is now planning to make full-fledged efforts to increase the number of female managers. The efforts include providing training for candidates and establishing a mentor system of women currently holding managerial posts.

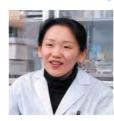
To make all employees more familiarized with the activities and developments of Sharp's affirmative actions, the company has opened an "Equal Opportunity and Work and Life Balance Information" site on the intranet. The site provides tips on how to balance work and family and information on career development as well as introduces messages from employees.

### **Expanding the Range of Benefits to Support Balance Between Work and Family**

In addition to various benefits including maternity and parental leave, Sharp Corporation established the "Reemployment Following Childcare Leave" system in April 2006. The company also extended the period of time for reduced working hours for childcare reasons. And to help employees receiving fertility treatment, the company launched a new leave system and a loan system with the cooperation of a group financing company.

With the Corporate Affirmative Action for Women Strategy Program in place and the expansion of various systems supporting the balance between work and family, Sharp aims to create a workplace where each employee can demonstrate diverse abilities regardless of gender in Japan.

### I hope these efforts will have an impact on the whole society



Tomoko Teranishi Third Research Department Display Engineering Laboratories Display Technology Development Group

To enable a woman to work while raising children, the presence of men who support and understand her is essential. In my own case, with cooperation from my husband. understanding of my superiors and colleagues, and the childcare support systems, I can devote myself to research on next-generation displays, which is one of the most advanced research themes.

Through affirmative action for women, I hope that women who have jobs while raising a family will become nothing rare in the future.

#### My policy is to do the best I can at every moment



Michiyo Toyoda Products Planning Department Document Systems Division Digital Document Systems

My basic stance toward work is dealing with any work as best as I can until I am fully satisfied. Even after my marriage, my policy is unchanged, and remains so even now when I am working while raising a child. My child being only three years old and also having to take my husband's circumstances into consideration, I am not always able to make overnight business trips or work overtime. However, I feel grateful that I can be in charge of business planning and other challenging work. By dealing with work as best as I can, I hope to raise my professional skills.

### I expect the company to be a place where everyone can work without difficulty



Kayo Takashima IBLI Sales & Marketing Department Sales & Marketing Division I Sales & Marketing Group— Electronic Components & Devices Having being assigned to international sales departments since joining the company, I have gained experience of working with overseas customers. My bosses treat men and women equally, and are genuinely concerned about my career and those of other junior staff. With the philosophy behind the Company-Wide Affirmative Action for Women Promotion Campaign further understood by more employees, I hope the company becomes a place where everyone can work without difficulty regardless of gender or

### We aim to create a workplace where employees can demonstrate their individuality and strength

Through interviews at sites and companywide questionnaire surveys conducted by our project team, I have had opportunities to hear the true feelings of female employees, in which I have felt their strong motivation to work. I hope that our Corporate Affirmative Action for Women Strategy Program will create a workplace where more and more women take active roles in their jobs and where male employees will also be inspired to demonstrate their individuality and strength more than ever.



Hitomi Mori Chief Corporate Equal Partnership Human Resources Group

### Information on Web site

# Daycare and Clinic at SEMEX Site Greatly Contribute to the Local Community

SEMEX\* and the Mexican Social Security Institute cooperated to open a public daycare and clinic in Rosarito, Baja California, where public facilities are in short supply. As an excellent example of social contribution, the daycare and clinic have attracted the attention of both the city and the state.

\* SEMEX: Sharp Electronica Mexico S.A. de C.V. Production company for consumer electronics.



### My child looks forward to going to kindergarten



Because the facility cares for my child after the kindergarten class is over until I finish work, I feel secure and appreciate the system very much. My child looks forward to going to kindergarten every day.

SEMEX employee using the daycare Maria del los Angeles Martinez

### We are satisfied with the facilities and services

We work at a nearby

factory and have used this

satisfied with the daycare's

daycare for more than a

year. We are extremely



Amando Contreras, Michelle Marcial and their daughter

### I appreciate the daycare because I work at a nearby factory



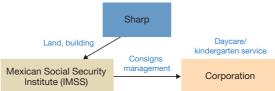
We have just moved here from southern Mexico to obtain a job. Because I work at a nearby factory, I appreciate the daycare service very much.

Karla Sagaste Guzman and her daughter Kimberly



Entrance of the daycare

### ■ How the SEMEX public daycare is run





### **SEMEX Offers Land and Building** Without Charge for a Public Daycare

Rosarito in Baja California, where SEMEX is based, is located on the western coast of Mexico, 20 km south of the US border. It is a young city that became independent from neighboring Tijuana in 1995. The rapid urbanization and population growth due to its reorganization as a city have resulted in chronic shortages of hospitals, schools, daycares and other public facilities.

Upon request from the Mexican Social Security Institute and to enhance the welfare of employees, SEMEX decided to offer some land and a building within its site for use as a public daycare at no charge. Thus, SEMEX's daycare became the first public daycare in Rosarito, and a joint project between the national government and a private enterprise.

### One of the Largest Daycares in the State Widely Accepts **Local Children**

When SEMEX opened the daycare in October 2001, it was assumed that the ratio of children of local residents, except those of SEMEX employees, would account for some 10%. However, the actual ratio far exceeded the estimate, climbing to 40%. With the growing reputation of the daycare's excellent facilities and services, the ratio of children of local residents has now reached about half of the total.

Upon requests from parents, a kindergarten was also established on the site in 2003. As of February 2006, the daycare looks after 216 children (up to four years of age) and the kindergarten cares for 56 children (ranging from four to six years of age). It has become one of the largest among the 95 daycare facilities run by the Mexican Social Security Institute in Baja California.

The opening of the daycare has enabled SEMEX employees to bring their children to work with them and collect them when they leave. Employees can devote themselves to their work knowing their children are safe and cared for. The fact that the daycare accepts children from local residents while being located on a company site has attracted attention from both the city and the state as an unprecedented case of contribution to the local community.

### Clinic Established With the Cooperation of Individuals, Companies and the Government

In rapidly developing Rosarito, medical facilities are also in short supply. Taking this situation into consideration, SEMEX proposed to the Mexican Social Security Institute a plan to jointly establish a public clinic next to the daycare, and the plan became reality. For the clinic's construction, the mayor of Rosarito ran a campaign on TV to solicit donations from citizens and local companies.

Born from the cooperation of individuals, companies and the government, the clinic opened in May 2006 and is expected to solve the problems faced by local residents due to not being able to receive medical treatment and care in the neighborhood. At the same time, SEMEX employees and their families also benefit from the clinic. Employees now have a work environment that enables them to better devote themselves to work.

Through future community activities such as these, SEMEX aims to become a company that can contribute to the local community.

### Five years of duty have helped me learn a lot



Person responsible for running the daycare Margarita Munguia

After working as a junior high school principal and as the person in charge of opening a daycare in neighboring Tijuana, I became responsible for this daycare five years ago. I think it is the daycare's crucial role to help young parents understand the responsibilities and importance of raising children.

### I treat these children with care, just as if they were my own children



Nursery teacher Laura Cordova

I appreciate the fact that this daycare, being a public one, has education programs that run throughout the year. I provide guidance to children based on a class plan prepared at the beginning of the week, and check how much progress the children have made at the end of the week.

### I feel proud of our social contribution through the daycare and clinic



SEMEX President Nobuo Harada

I am delighted that local residents appreciate the daycare and clinic established on our site. I want to place importance on not only SEMEX's contribution to the development of the local economy but also its stance of returning profits to the local community.

### **TOPICS**

# R-CATS Small-Group Activities Play a Big Role in Fulfilling CSR

Sharp has initiated small-group activities called R-CATS (Revolution Creative Action Teams) on a global scale. These activities challenge groups to address and solve common problems and issues in the workplace from the viewpoint of CSR, using the combined effort of everyone at the job site.









The best R-CATS solutions are selected for presentation at contests twice a year in Japan and once a year in each overseas region-Pan Atlantic, Asia and China.



Logo imaged after the Q in "Quality". This represents efforts to improve the quality of mind, products and work with the cooperation of everyone involved.

### One-of-a-Kind Small-Group Activities from the Viewpoint of CSR

Sharp's small-group activities began at a TV production facility 40 years ago in 1966. Sharp began R-CATS on a global scale in 2003 in order to enhance these small-group activities. As of March 2006, a total of 3,024 domestic teams (comprising 27,529 employees) and 1,673 teams from 23 overseas bases (comprising 16,602 employees) took part in R-CATS activities.

R-CATS is a uniquely Sharp small-group activity in which not only production departments, but also all departments in indirect divisions, including those overseas, participate. The groups select important themes closely linked to the department's mission and reponsibilities from the viewpoint of CSR.

Raising efficiency and making improvements at work, such as reducing waste, raising quality levels and securing safety, contribute to not only Sharp, but also to customers and other stakeholders. By designating R-CATS themes from the viewpoint of CSR, everyone in the workplace can work together on themes such as environmental conservation, legal compliance and boosting customer satisfaction.

Sharp regards R-CATS as management activities that enhance the strengths of both the individual and organization to their highest levels. And R-CATS small-group activities conducted in all departments around the world play an important role in fulfilling CSR.

### R-CATS is an ideal tool to spread the thinking behind CSR throughout the entire company

R-CATS small-group activities that solve issues in each department through teamwork have produced considerable effects in the development of human resources and organization. And because R-CATS is a mechanism that directly links the front and base-line of business to management, it is the ideal tool for making Sharp's CSR concept of "fulfilling responsibilities in society through manufacturing and technology-oriented business" better understood throughout the entire Sharp group.



Assistant Department General R-CATS Company-Wide Promotion Office Quality Strategy Section CS Promotion Group

# Sharp and the Environment

In Pursuit of Becoming an Environmentally Advanced Corporate Group

Policies, Objectives and Achievements
Concerning the Environment
Advancing Super Green Management
Developing Super Green Technologies
Creating Super Green Products and Devices
Building Super Green Factories
Reducing Greenhouse Gas Emissions
Minimizing and Recycling Waste
Effectively Managing Chemical Substances,
Conducting Risk Management
Environmentally Conscious Logistics and Packaging
Developing Super Green Recycling
Promoting Environmental Communication



# Policies, Objectives and Achievements Concerning the Environment

In accordance with environmental guidelines established under the 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. To realize the medium-term goal set in fiscal 2004 of becoming an "Environmentally Advanced Company" and to achieve the corporate vision of becoming a "Zero Global Warming Impact Company by 2010," Sharp will continue to strengthen its efforts aimed at environmental conservation.

**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

See Web site for full text

See Web site for full text

### Major Objectives and Fiscal 2005 Results

In fiscal 2005, the second year after Sharp set forth its medium-term goal of becoming an Environmentally Advanced Company, the mechanism put in place during the initial year steadily produced results.

In regard to technologies, the use of Sharp's closed-loop plastic material recycling technology continued to steadily expand. The company also developed a method for blending plant-based plastic and waste plastic. In addition, Sharp began to use plantbased paint in the production of stands for the AQUOS series of LCD TVs, employ easy-release fasteners in phones, and introduce micro-nano bubble technology at its LSI plant in Fukuyama. All of these technologies hold promise for further developments

In regard to products and devices, Sharp achieved all targets for the percentage of sales achieved by four kinds of Green Products and Devices. In fiscal 2006, Sharp established a new framework for making fullscale use of the LCA system, which is expected to further expand and evolve Sharp's efforts for improving environmental perfor-

Regarding facilities, overseas production sites have prominently reduced their impact on the environment. At the global environmental conference in November 2004, Sharp announced a plan to upgrade all its group factories to Green Factories by fiscal 2007, and has since made follow-up announcements at environmental conferences worldwide. These initiatives have accelerated efforts to reduce environmental impact at ev-

With the start of the third year, Sharp will accelerate its efforts to become an Environmentally Advanced Company.

Stages	Themes	Major Objectives		
		Implement Sharp Environmental Management System (S-EMS)		
Environmental Sustainability Management	Enhance and expand environmental management system	Acquire ISO 14001 certification		
	Establish tools for environmental sustainability management	Introduce environmental management accounting and develop tools for promoting environmental sustainability management		
	Hold environmental education programs	Hold environmental seminars		
		Promote closed-loop plastic material recycling		
	Establish 3R technologies	Develop mass-production technology for easy-release fasteners		
		Establish LCD TV recycling technoloy		
Planning and	Improve safety of components and materials	Reduce chemical substances in products		
Design	Develop Green Products	Increase Green Seal Products' share of net sales in Japan*1		
	Botton and Trouble	Increase Super Green Products' share of net sales in Japan		
	Develop Green Devices	Increase Green Devices' share of net sales*2		
	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	Reduce greenhouse gas emissions	Reduce CO <sub>2</sub> emissions (per production unit)		
	Reduce and recycle waste	Reduce the amount of waste discharged (per production unit) and promote conversion to valuable resources		
	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 transportation in Japan		
Recycling	Recycle used products	Enhance and improve recycling systems		
Social Responsibility	Social contribution activities	Expand and diversify environmental social contribution activities		

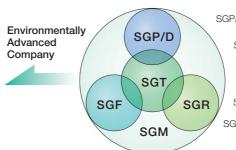
- The sales ratio of Green Seal Products includes sales of Super Green Products.

The sales ratio of Green Devices includes sales of Super Green Devices.
 Amount of waste discharged plus the amount of valuable resources
 Per real 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}

### **Corporate Vision:** Zero Global Warming Impact by 2010

Sharp's corporate vision limits to the greatest extent possible the amount of greenhouse gas emissions resulting from Sharp's business activities around the world. At the same time, it significantly reduces greenhouse gas emissions by means of the energy-creating effects of solar cells and the energy-saving effects of new products manufactured by Sharp. The idea is for the amount of greenhouse gas emissions reduced will exceed the amount emitted by fiscal 2010.

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



SGP/D Super Green Products and Devices Create products and devices with high environmental performance

SGT Super Green Technologies Develop unique environmental technologies that contribute to environmental conservation

SGF Super Green Factories Develop environmentally conscious factories that can be trusted by local communities

SGR Super Green Recycling
Recycle used products to promote reuse of resources

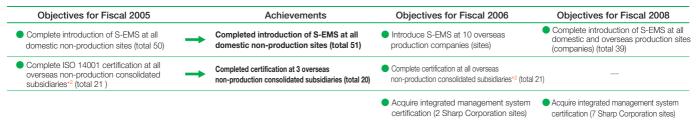
SGM Super Green Management Enhance environmental sustainability management

Self Evaluation ©: Achieved more than targeted O: Achieved as targeted  $\triangle$ : Achieved more than 80% of initial target X: Achieved less than 80% of initial target

Fiscal 2005 Objectives	Fiscal 2005 Achievements	Self- Evaluation	Fiscal 2006 Objectives	Fiscal 2008 Objectives
Complete introduction of S-EMS at all domestic non-production sites (total 50)	Completed introduction of S-EMS at all domestic non-production sites (total 51)	0	Introduce S-EMS at 10 overseas production companies (sites)	Complete introduction of S-EMS at all domestic and overseas production sites (companies) (total 39)
Complete certification at all overseas non-production consolidated subsidiaries (total 21)  Complete certification at 3 overseas non-production consolidated subsidiaries (total 20)		Δ	Complete certification at all overseas non-production consolidated subsidiaries (total 21)	-
Introduce environmental management accounting to all domestic production sites (companies)	Introduced new tool to promote environmental sustainability management (personnel expenses) Developed new tool to promote environmental sustainability management (energy management)	0	Introduce new tool to promote environmental sustainability management (energy management)	Complete introduction of tool to promote environmental sustainability management
General: Continue e-learning in Japan Expert: Continue Compliance: Hold programs at North American and European sites	General: Provided e-learning for new and mid-career employees Expert: Provided environmental master training six times (68 persons participated) Compliance: Held programs in four areas	0	General: Continue overseas training Expert: Train integrated MS auditors Compliance: Continue training on laws and regulations	General: Continue overseas training Expert: Train overseas environmental masters Compliance: Provide reciprocal training at overseas sites
Use 500 tons of recycled plastic in new products	Used approx. 520 tons	0	600 tons	1,000 tons
Use in communications equipment	Used in chargers of cordless handsets for home-use phones	0	Develop easy-release fasteners for audio/video equipment	Use in audio/video equipment
Develop recycling technology for LCD TV cabinet materials	Developed recycling technology for LCD TV cabinet materials	0	Conduct verification tests on technology to recover indium from LCD panels	Implement technology for recovering indium from LCD panels
Have all products for Europe and all new products for all other areas comply with RoHS directive	All products for Europe and new products except for a few products for some areas complied with RoHS directive	Δ	-	-
Green Seal products accounting for 80% of net sales	Approx. 87%	0	85%	90%
Super Green Products accounting for 20% of net sales	Approx. 35%	0	30%	40%
Green Devices accounting for 40% of net sales	Approx. 51%	0	65%	85%
Super Green Devices accounting for 5% of net sales	Approx. 7%	0	10%	20%
Japan: Raise average improvement rate of environmental performance at Sharp Corporation production sites by 11% compared to fiscal 2003 and upgrade 4 domestic subsidiaries/affiliates to GF	Japan: Raised average improvement rate of environmental performance at Sharp Corporation production sites by approx. 16% compared to fiscal 2003 and upgraded 3 domestic subsidiaries/ affiliates to GF.	Δ	Japan: Upgrade 5 Sharp Corporation production sites to SGF and 5 to GF, and 5 subsidiaries/affiliates to GF	Goal for fiscal 2007: Upgrade all Sharp Corporation production sites to SGF Upgrade all other domestic and overseas production sites (subsidiaries/affiliates) to GF or
Overseas: Upgrade 4 production sites to GF	Overseas: Upgraded 1 production site to SGF and 7 to GF	0	Overseas: Upgrade 1 production site to SGF and 14 to GF	higher
Japan: Product sites:Reduce by 2% from previous fiscal year Device sites: Reduce by 5% from previous fiscal year	Japan: Product sites: Reduced by approx. 12% from previous fiscal year Device sites: Increased by approx. 2.5% from previous fiscal year	×	Japan: Product sites: Reduce by 2% (every fiscal year) Device sites: Reduce by 5% (every fiscal year)	Goal for fiscal 2010: Reduce by 25% compared to fiscal 1990 per real production unit. (Japan)
Overseas: Reduce by 2% from previous fiscal year at all production sites	Overseas: Reduced by approx. 15% from previous fiscal year at all production sites	0	Overseas: Reduce by 2% from previous fiscal year	r at all production sites (every fiscal year)
Japan: Recycle 14% of waste into valuable resources	Japan: Recycled approx. 13% of waste into valuable resources	Δ	Japan: Reduce amount of waste discharged b (every fiscal year)	y 3% from previous fiscal year
Overseas: Reduce amount of waste, etc. discharged by 2% from previous fiscal year	Overseas: Reduced amount of waste, etc. discharged by approx. 17% from previous fiscal year	0	Overseas: Reduce amount of waste, etc. discharged by 2% from previous fiscal year (every fiscal year)	
Reduce discharge risk of chemicals by 30% compared to fiscal 2003 at Sharp Corporation production sites		0	Reduce by 55% or more compared to fiscal 2003	Reduce by 60% or more compared to fiscal 2003
Railway cargo transport of 900 containers/month Reduce CO <sub>2</sub> emissions by 3,500 t-CO <sub>2</sub> Approx. 4,133 t-CO <sub>2</sub>		0	1,050 containers/month 4,400 t-CO <sub>2</sub>	1,250 containers/month 5,200 t-CO <sub>2</sub>
Begin smooth operation of recycling systems in Europe	Began operation from countries that have established recycling systems	0	Strengthen domestic recycling of home appliances	Global development of recycling technologies
		Δ	Japan: Develop "Sharp Forests" in seven places around the country Overseas: Encourage SGC activities to take root at major sites	Japan: Goal for fiscal 2007: Develop "Sharp Forests" in ten places around the country Overseas: Encourage SGC activities to take root at major sites

# Advancing Super Green Management

In line with the Environmental Protection Group's management system, Sharp is steadily improving environmental sustainability, as well as the commitment of its employees to environmental conservation. To this end, Sharp has added environmental criteria to the evaluation of business group results. It has also introduced a proprietary environmental management system S-EMS\*1 and environmental management accounting, in addition to promoting environmental education.



- \*1 Sharp Environmental Management System
  \*2 Companies of less than 30 employees are excluded.

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

Sharp Corporation's Environmental Protection Group holds strategy conferences as the governing body that legislates the Sharp Group's environmental sustainability management policies. Overseen by the director in charge of environmental affairs, participants at the conferences deliberate and set guidelines, strategies and objectives. The group also hosts company-wide environmental conferences for sites to discuss and report on progress and to establish concrete action plans for the future.

The group also holds a global environmental conference every two years, where participants gain a deeper understanding of environmental guidelines, strategies and objectives, as well as discuss specific themes and case reports from the sites. Environmental conferences also take place regionally in the US, Europe, ASEAN and China.

The Environmental Protection Group and departments in charge of environmental matters at all sites work closely together to inaugurate committees, project teams and workgroups as special needs arise.

### Integrating Environmental Criteria into the Evaluation of Business Group Accomplishments in Japan

Sharp raised the bar for environmental performance in fiscal 2000, when it first included environmental criteria in the business group accomplishment evaluation system that is used semi-annually to evaluate all business group contributions to corporate manage-

In fiscal 2004, Sharp focused on two important environmental criteria: the sales ratio of Green Products and Devices, and the progress rate of factors that are working toward the prevention of global warming. However, activities aimed at improving environmental performance at factories could not be accurately evaluated with these two existing criteria for judging business results.

Hence, in fiscal 2005 Sharp added two more criteria: how well accident prevention for environmental safety has been achieved, and how well the chemical substances risk reduction plan has been achieved.

Sharp will set forth precise environmental measures to help all business groups enhance their levels of environmental sustainability management and support the entire Sharp Group in achieving its objectives and environmental vision.

### Acquiring ISO 14001 Certification, **Building Integrated Management** System

Sharp is striving to achieve ISO 14001 certification as a management tool for continuously reducing the burden its business activities place on the environment. All of Sharp and its domestic and overseas consolidated subsidiaries are eligible sites (companies) for certification, as well as all domestic and overseas non-consolidated production subsidiaries and affiliates.

Sharp began working toward ISO certification in 1995; today, all 17 domestic and 22 overseas production sites (companies) have successfully achieved ISO 14001 certification. In addition, all domestic non-production sites (companies)\*2 have been certified, and Sharp plans to certify all overseas non-production consolidated subsidiaries (total 21 companies)\*2 within fiscal 2006.

In Japan, Sharp began efforts to create an integrated management system that includes a quality management system in fiscal 2006.

### ■ Environmental sustainability management system





The 1st environmental conference in China (on September 8, 2005, in Shanghai)

### Introducing the Sharp Environmental Management System (S-EMS)

To reinforce environmental compliance and enhance environmental efforts, Sharp established S-EMS, a standard of 49 original management clauses to supplement those specified under ISO 14001 standards. In fiscal 2002, Sharp began introducing S-EMS at all its sites.

By fiscal 2004, Sharp had introduced S-EMS into 10 production sites in Japan. In fiscal 2005, Sharp completed the introduction of S-EMS into all 51 domestic non-production sites\*. Sharp will further accelerate introduction into its production sites (companies), aiming for complete introduction into all its domestic and overseas production sites (companies) in fiscal 2007.

\* Companies of less than 30 employees are excluded.

### S-EMS structure

### Sites ISO 14001 requirements

### Original management items (49 clauses) Examples:

- Clarification of intracompany qualifications for "legal designators"
- Periodic special education and training for persons and supervisors who are working in areas covered by laws and regulations and other required items
- Prepare work procedure manuals for required items concerned with relevant laws, and make self-auditing obligatory

### **Environmental Protection Group**

### **Green Auditing**

- Introduction of S-EMS and evaluation of its usage • Making environmental strategies company-wide
- Confirming environmental performance management
- · Evaluating environmental compliance
- Evaluating operational safety

### **Educating S-EMS Auditors**

In order to promote S-EMS, Sharp auditors will require higher levels of auditing abilities than those required by internal auditors for ISO 14001. That's why the Environmental Protection Group established the S-EMS Auditor Certification System, offering S-EMS training seminars for auditors. Those who completed the training seminars are registered as certified auditors. The number of registered auditors has already surpassed 550 countrywide.

### **Green Auditing**

The Environmental Protection Group carries out "green auditing" at sites where S-EMS has already been introduced. As a general auditing measure, green auditing provides a comprehensive understanding of companywide environmental policies and evaluates environmental performance, environmental compliance and operational safety to confirm the operating status of S-EMS. Through these measures, Sharp aims to not only boost environmental management at all sites, but also to improve and expand the contents of S-EMS to make it a more effective management system.

In fiscal 2005, Sharp conducted green auditing at the Mihara and Kameyama sites. Together with the sites audited in fiscal 2004, this brings the number of domestic sites to receive their first green auditing to 10 sites. The audits revealed that S-EMS was operating correctly at all sites and there were no "nonconforming" issues reported.

### Training on Environmental **Legislative Control**

As part of its efforts aimed at strengthening adherence to environmental laws, the Environmental Protection Group began providing training on environmental legislative control in fiscal 2005.

Environmental legislative control aims conventionally to prevent air and water pollution, but recently the focus has shifted to eliminating harmful chemical substances contained in products, and to improving environmental performance.

In fiscal 2005, on the heels of the latest changes in domestic and overseas environmental legislative control, the Environmental Protection Group held training at the Nara, Mie and Hiroshima sites. The group will continue to provide such training to these sites and others in the future.



Training on environmental legislative control at the Nara site

### Stepping up **Environmental Education**

To help all employees raise their level of environmental awareness and to actively participate in environmental conservation activities, Sharp promotes environmental education through three courses—"Master," "Expert" and "General."

The "master" course fosters leaders who serve as the pillars of environmental sustainability management based on their acquisition of comprehensive knowledge of technology, products and production fields. The "expert" course provides training to help employees learn more about environmental legislative control and expertise concerning special fields. The "general" course provides e-learning and other training to all employees, or employees by job level (new employees, management, etc.), to help them acquire basic environmental knowledge and improve awareness of the environment.

### Environmental education and training system



### Information on Web site

### **Environmental Accounting in Fiscal 2005**

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

#### **Environmental conservation costs**

Upon completion of large-scale investment in the Kameyama Plant, investment decreased approximately 60% from the previous fiscal year. The costs for treating exhaust gas and wastewater accounted for most of the expenses. However, due to expansion of production, expenses concerning waste also increased.

#### Economic benefit

As a result of energy-saving and resource-recycling measures, actual benefit increased about 240 million yen. Reflecting the growth of electric power generation resulting from steady expansion of the photovoltaic power business, estimated benefit increased about 11 billion yen.

( ): (	: Category based on Environmental Accounting Guidelines 2005,		Classification of Environmental Conservation Activities ): Category based on Environmental Accounting Guidelines 2005,		Category based on Environmental Accounting Guidelines 2005,		gory based on Environmental Accounting Guidelines 2005, (Unit: ¥ million)		Be	nomic nefit ( million)	Environmental Conservation Effects	See
١	Ministry of the Environment	Description of Major Activities	Investment	Expenses	Actual Benefit	Estimated Benefit	Physical Effects Estimated Benefit	page				
Sus	vironmental stainability nagement unagement activities)	Operation of environmental management system     Promoting environmental sustainability management     Environmental education activities	0.5	1,337	-	_	Promoting environmental sustainability management  Number of employees Master 68 – with environmental Expert 484 – education General 4,827 –	27 { 30				
Plai (R&	nning and Design D)	R&D on photovoltaic power systems  Promoting closed-loop recycling of plastic materials  R&D on basic environmental technologies	-	1,006	-	21,894	Supplying environmentally conscious products (Unit: ¥ million)  Green Seal products' share of net sales 86.6% —  Super Green products' share of net sales 34.6% —  Total amount of power generated by photovoltaic power systems  CO: emissions controlled by photovoltaic power systems  Electric power saving from energy-saving products  CO: emissions controlled by energy-saving 6,164t-CO2 22	31 { 34				
	Reducing greenhouse gas emissions (global environmental conservation)	Introducing scrubbers for PFCs     Installing photovoltaic power systems     Introducing energy-saving equipment	391	1,610	1,340	2,852	Greenhouse gas emissions reduced by controlling electricity and fuel consumption (Unit: 4 million)  CO <sub>2</sub> emissions controlled 97,147t-CO <sub>2</sub> 352  PFC emissions controlled 688,639GWPt 2,500					
Manufacturing	Minimizing and recycling waste (recycling resources)	Reducing waste discharge and recycling waste into valuable resources     Recycling water	263	3,435	1,096	_	Waste recycled or sent for appropriate disposal  Waste recycled 117,485t –  Recycled and reused water 13,733km³ –	35 \ 38				
ing	Preventing pollution (preventing pollution)	Installing scrubbers     Introducing exhaust gas treatment systems	1,719	4,289	-	_	Observed environmental laws and regulations Prevented air/water pollution and noise/vibration Promoted risk management Chemical substances properly managed and their discharge reduced Reduced risk of soil contamination					
	cycling/Logistics stream/downstream)	Promoting collection, recycling and proper disposal of used products	0	71	54	15	Collection, recycling and proper disposal of used products (Unit: ¥ million)  Used PCs recycled 23.3t -  Used copiers recycled 2,154t -  Used home appliances (4 categories) recycled 36,320t -  Environmental burden during distribution reduced  CO2 emissions controlled 4,133t-CO2 15  Number of low-pollution vehicles introduced 310 -	39 40				
Soc	cial Responsibility	Expanding social contribution activities	0	60	-	-	Environmental social contributions  Number of employees who attended SGC activities  Total 27,108 –	51 52				
Tota	al	t .	2.374	11.808	2.490	24,761	addivided					

#### Vocabulary

#### Environmental conservation costs

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

#### Economic benefit

Economic effects that can be assessed in monetary terms, such as cost saving from energy-saving efforts and use of Actual benefit: recycled water, as well as the profits from the sale of valuable resources

Estimated benefit: Economic effects that can be assessed by converting what cannot be directly indicated in monetary terms into the

equivalent monetary amounts

Monetary equivalents of reduced greenhouse gas emissions and electricity savings from the use of photovoltaic

power generation and energy-saving products
(1) Reduced greenhouse gas emissions converted into equivalent monetary amounts: 3,630 yen/t-CO<sub>2</sub>

(2) Electricity savings converted into equivalent monetary amounts: Unit cost of electricity: 23 yen/kWh

### Sites covered

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

### Period covered

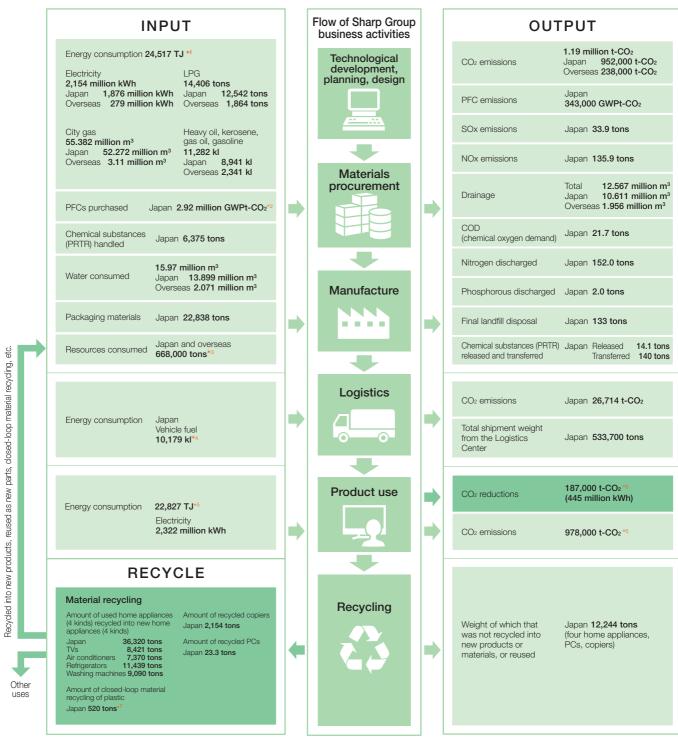
April 1, 2005 through March 31, 2006

### Referenced guidelines

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

### How Business Activities Relate to the Environment

Sharp's numerical values represent the relationship between its business activities and the environment, and they are used to enhance environmental sustainability management. Those values are registered at all stages of Sharp business activities and form the basis of all measures that are proposed, as well as for analyzing and assessing business results. Sharp takes seriously its duty to reduce the burdens it places on the environment.



- \*1 TJ=10<sup>12</sup>J
- \*2 Global warming potential. The value of the scale of impact on global warming converted into CO2 weight.
- \*3 Total weight of products in the 15 major categories shipped in fiscal 2005 (estimate) and waste generated from production sites

- '5 Estimate of annual energy used and amount of CO<sub>2</sub> emitted by products in the 14 major categories shipped in fiscal 2005. Calculation based on each product's energy consumption rate.
- \*6 Amount of annual power generated (kWh) by Sharp's solar cells shipped in 2005 and CO<sub>2</sub> reductions (t-CO<sub>2</sub>).
- \*7 For details, see page 32.

# Developing Super Green Technologies

To realize the corporate vision of becoming a "Zero Global Warming Impact Company by 2010," the development of superior environmental technologies is an essential factor in the performance of products and devices, and the reduction of environmental impact during production. That's why Sharp is making efforts to develop its highest-priority environmental technologies by envisioning them as "One-of-a-Kind Environmental Technologies" in line with its strategy for corporate-wide technology development.

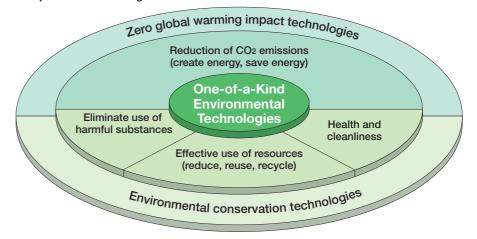
Objectives for Fiscal 2005	ectives for Fiscal 2005 Achievements		Objectives for Fiscal 2008	
Promote closed-loop plastic material recycling; use 500 tons of recycled plastic in new products	Approx. 520 tons of recycled plastic used in new products	Use 600 tons of recycled plastic in new products	<ul> <li>Use 1,000 tons of recycled plastic in new products</li> </ul>	
Develop mass-production technology for easy-release fasteners; use in communications equipment	Used in chargers of cordless handsets for home-use phones	Develop easy-release fasteners for audio/video equipment	Use in audio/video equipment	
Establish LCD TV recycling technology; develop recycling technology for LCD TV cabinet materials	Developed recycling technology for LCD TV cabinet materials	Conduct verification tests on technology to recover indium from LCD panels	<ul> <li>Implement technology for recovering indium from LCD panels</li> </ul>	

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

Sharp classifies environmental technologies into two categories: 1) zero global warming impact technologies and 2) environmental conservation technologies. The latter is further divided into three fields: effective use of resources, reduction of chemical substances, and health and cleanliness

Sharp recognizes the most important ones as "one-of-a-kind environmental technologies" and is aggressively promoting their development in line with its strategy for corporate-wide technology development. Unique technologies evolving from these developments, which contribute to environmental conservation, are what Sharp calls Super Green Technologies.

One-of-a-kind technological development fields that give birth to **Super Green Technologies** 



### Wastewater Treatment Technology Based on Micro-Nano Bubbles\*1

In 2005, Sharp developed the world's first non-dilution technology to remove at least 90% of the nitrogen contained in wastewater discharged from its semiconductor facilities. It combined the company's own system for treating spent developer using microorganisms\*2 with micro-nano bubble technology.

This new method combines Sharp's microorganism treatment technique with micronano bubble technology and a new microorganism culture that can double the concentration of microorganisms. The method activates the microorganisms that treat nitrogen contained in wastewater without the need for diluting. And because this system generates no sludge, it contributes to reducing the amount of waste.

- \*1 Micro-nano bubble technology: Developed in the early 1980s by Professor Hirofumi Ohnari and others at the Tokuvama College of Technology, it shrinks bubbles that are normally several millimeters in diameter to just a few micrometers or nanometers. This technology is mainly used for purifying water in dam reservoirs, and in aqua-
- \*2 Spent developer microorganism treatment system: Proprietary methods, including the use of microorganisms, to purify spent developer. In 1999, received the International Trade and Industry Minister's Prize, Recycling Promotion Achievement Award.

### ■ Non-diluting treatment of nitrogen in wastewater using micro-nano bubbles (semiconductor plant at the Fukuyama site)



#### Information on Web site

http://sharp-world.com/corporate/eco/report2006 Environmental technology development examples

### Development of Closed-Loop Plastic Material Recycling Technology

In 1999, Sharp began to develop a technology for recycling closed-loop plastic. It reuses scrap plastic from four types of home appliances\*1 as material for the manufacture of new units, recycling the same material repeatedly. In fiscal 2005, consumption of recycled plastic was boosted to about 520 tons.

Sharp developed a technology to blend plant-based plastic (polylactic acid) and

waste plastic (polypropylene) jointly with Starlite Co., Ltd., as well as a plant-based paint\*2 jointly with Kansai Paint Co., Ltd.

With these technologies, Sharp is steadily reducing its reliance on plastic using fossile fuels by repeated recycling and by blending them with materials derived from plants.

- \*1 Four home appliances: air conditioners, TVs, refrigerators and washing machines.
- \*2 See pages 17 and 18.

### ■ Closed-loop plastic material recycling flow

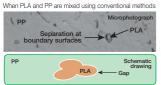


### ■ Closed-loop plastic material recycling target and results (fiscal 2006)

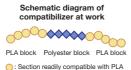
	coop place material response target and results (mean zero)									
		Material Recycled		Material	Q	uantity o	f recycle	d materia	al used (to	on/year)
U	sed parts	type	Technologies	as	FY2001	FY2002	FY2003	FY2004	FY2005	FY 2006 (target)
hine		-	Adjust properties     Improve lifespan	Washing machine tub	40	80	190	180	180	180
ing machine	Washtub	Polypro- pylene	Adjust moldability     Adjust properties     Improve lifespan	Refrigerators parts	-	-	-	80	80	80
Washing	Spin tub/ balancer	Polypro- pylene	Adjust moldability     Improve lifespan	Refrigerators parts	-	-	50	65	140	160
2	Rear	Polypro-	Sort nonincombustible PP     Improve lifespan	Air conditioner parts	-	-	10	20	10	5
F	cabinet	pylene	Improve heat resistance	Refrigerators parts	-	-	15	40	20	15
rator	Vegetable case	Polypro- pylene	Adjust physical properties     Improve lifespan	Refrigerators parts	-	-	-	35	90	160
Refirigerator	Shelf plate	Poly- styrene	Sort materials     Adjust physical properties     Improve lifespan	Air conditioner and refrigerator parts	-	-	5	-	-	-
	Tota					80	270	420	520	600

### ■ Technology for blending plant-based plastic and waste plastic

### Simple blend

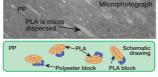


Plant-based plastic (polylactic acid [PLA]) and waste plastic (polypropylene [PP]) tend to be mutually incompatible, causing a gap to form at their boundary surfaces and leading to a significant loss of physical properties, such as impact resistance and thermal resistance.



: Section readily compatible with PF

#### Blending with a compatibilizer PLA is micro dispersed as a result of blending with a compatibilizer



Adding compatibilizer causes PLA to minutely disperse. The section of the compatibilizer that is readily compatible with PLA moves to the PLA side, while the section readily compatible with PP moves to the PP side. The gap between the surface boundaries is eliminated, thereby improving physical properties.

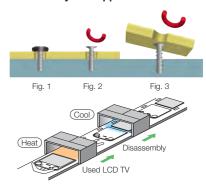
### **Developing Easy-Release Technology**

Since fiscal 2003, Sharp has been working in collaboration with NEC Tokin Corporation, Union Seimitsu Co., Ltd. and Tokai University in Japan to develop mass-production technology for parts that are easy to disassemble for recycling. The resulting fastener consists of a screw and a washer that are made of TiNi\* shape-memory alloy. The washer remains securely fastened in use (Fig. 1) but expands when heated (Fig. 2), enabling the two combined pieces to come apart easily (Fig. 3).

In fiscal 2005, Sharp applied this easy-release fastener to chargers of cordless handsets for phones (CJ-N77CL/N773W). Sharp plans to develop its applications to include home appliances in the future.

\* TiNi: Alloy made of titanium and nickel

#### ■ Sharp-memory alloy and automatic disassembly with application of heat



### Recycling Technology for LCD Application Products

Since fiscal 2003, Sharp has been engaged in developing technology for LCD applications, with guidelines formulated for recycling LCD panels and for the safe removal of mercury backlights.

In fiscal 2005, Sharp developed a technology for recycling plastic used in LCD TV cabinets\*. Sharp will promote the development of technologies that will bring LCD TV recycling into full practice in Japan in the immediate future.

\* Cabinet materials are PC (polycarbonate), ABS (acrylonitrile butadiene styrene) and phosphatic flame retardant.

# Creating Super Green Products and Devices

Sharp continually enhances the environmental performance of its products and devices by annually revising and upgrading its guidelines as it aims for increasingly stricter standards and higher goals. As a result, the ratio of Green Seal Products, Super Green Products and Green Devices to total net sales has increased, and Super Green Devices reached their targeted sales ratio for the first year in fiscal 2005.

Objectives for Fiscal 2005	Achievements	Objectives for Fiscal 2006	Objectives for Fiscal 2008
<ul> <li>Green Seal Products accounting for 80% of net sales in Japan</li> <li>Super Green Products accounting for 20% of net sales in Japan</li> </ul>		<ul><li>85%</li><li>30%</li></ul>	<ul><li>90%</li><li>40%</li></ul>
<ul> <li>Green Devices accounting for 40% of net sales</li> <li>Super Green Devices accounting for 5% of net sales</li> </ul>	<ul><li>Approx. 51%</li><li>Approx. 7%</li></ul>	● 65% ● 10%	● 85% ● 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"

Environmentally conscious products are what Sharp calls "Green Products." Sharp formulated the "Green Product Guidelines" in December 1998, defining specific design targets and design know-how in line with seven concepts. The guidelines are used at all design and production sites in Japan and overseas.

The first step in developing Green Products is product planning, where Sharp applies its guidelines to design a product that is environmentally superior in every aspect. Sharp then sets specific objectives according to the assessment items of the Green Product Standard Sheet. Finally, in the trial manufacture and mass production stages, Sharp determines how well the actual product has met the objectives set out for it.

In fiscal 2005, Green Products had to satisfy at least 90% or more of 48 assessment items, a standard that was met by all of Sharp's new products.

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

Since April 1998, Sharp has been certifying products for Japan, which offer a particularly high level of environmental performance, as "Green Seal Products." Since October 2004, Sharp has begun certifying Green Seal Products with still higher environmental performance as "Super Green Products."

The certification standard of Green Seal Products demands a product that satisfies all four items required by the Environmental Performance Criteria and at least one item in the External Environmental Claim Standards, and that scores 70 points or higher out of a

total 100 points in the Environmental Performance Criteria. The certification standard for Super Green Products is higher still, when compliance with the EU RoHS directive\* and acquisition of the Japanese Eco Mark are added, and products must score 90 points or higher in the Environmental Performance Criteria.

In fiscal 2005, both Green Seal Products and Super Green Products exceeded their initial targets for percentage of total sales. In the coming years, Sharp plans to raise these percentages still higher.

#### Assessment and certification standards for Green Seal Products and Super Green Products in Japan (fiscal 2005)

Category	Green Seal I	Products	Super Gree	n Products	
Level of environmental consciousness	Satisfies at least one item Environmental Claim Star		Is significantly more environmentally conscions than the products of other companies		
I Environmental	Satisfies four required ite Environmental Performar		Satisfies four required items of the Environmental Performance Criteria     Meets the RoHS directive     Has environmental label status		
Performance Criteria (total score: 100)	Prevents global warming Low power consumption, high energy efficiency, etc.  20 points	Makes effective use of resources Designed for recyclability, resource saving, etc. 20 points	for toxic chemicals	Other Has environmental label status, uses minimum packaging materials, etc. 25 points	
	At least 70	points	At least 9	90 points	

All conditions under sections I and II must be satisfied.

\* 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.

### ■ Sharp Green Product concept

consumption

Products that are energy-efficient and use little energy Design products that consume less power both in running and standby mode, and air conditioners/l that give more efficient cooling and heating.

Safety

Products that are safe to use

Carry out tests on products for chemicals and work to abolish or reduce use of chemicals that have negative effects on people's health or the environment.

Resource reduction

Products that use minimum resources
Make products that use less water and detergent, and reduce the amount of materials used in products and packaging.

Recycle

Recyclable products

Choose materials that can be easily recycled or reused in products, and label the type of material used

Use recycled

Products made from recycled materia Use recycled plastic and reuse parts in making

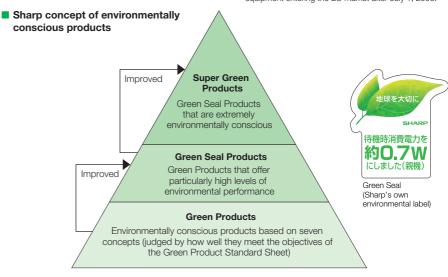
Long life usability

Products with a long life cycle

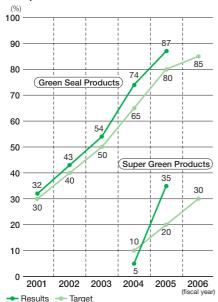
Design products that are upgradeable and easy to

disassemble

Products that are easy to disassemble Design products so that they will be easy to take apart for recycling.



#### ■ Ratio of Green Seal Products and Super Green Products to total net sales



The percentage for Super Green Products in fiscal 2004 represents only the second half of that year

### Four required items in the Environmental Performance Criteria in Japan (fiscal 2005)

Items	Detail
Energy saving	Lower power consumption and standby power consumption than previous models
3R	Easy separation and disassembly, or is upgradeable
Safety	Uses lead-free solder in more than one circuit board
Packaging	Abolishes the use of polystyrene foam (for products weighing less than 10 kg) Increases the ratio of recycled materials, or uses less packaging material than previous models (for products weighing 10 kg or more)

#### ■ Green Seal Products External Environmental Claim Standards (fiscal 2005)

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  O.1W or less (remote controlled products)  O.1W 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 recycled materials (material recycling)
Safety	Green materials  • Abolishing use of halogen-based flame retardants, substituting polyvinyl chloride  • Use of refrigerant with low global warming potential  • Use of no RoHS-designated substances
Eco Mark	Acquired Eco Mark  Acquired Eco Mark authorized by the Japan Environment Association
Others	Original technology  • Sharp technology, the environmental consciousness of which can be evaluated objectively

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

Environmentally conscious devices are what Sharp calls "Green Devices." To define the standards and assessment method for their development, Sharp established guidelines, which it began applying in April 2004. In fiscal 2005, Sharp began developing devices with still higher standards of environmental performance, ones that even surpass those of Green Devices. These devices are what Sharp calls "Super Green Devices."

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

In fiscal 2005, both Green Devices and Super Green Devices exceeded their sales ratio targets. In the coming years, Sharp plans to raise these figures still higher.

Certification standards for Green Devices and Super Green Devices in fiscal 2005: Green Devices must satisfy at least 90% or more of all 21 assessment items (9 of which are compulsory) listed in the Environmental Performance Criteria. Super Green Devices must satisfy at least 95% or more of the 21 assessment items (10 of which are compulsory) listed in the Environmental Performance Criteria. They must be either the industry's No. 1, or the industry's first devices in at least one item of the External Environmental Claim Standards. A number of Super Green Devices were developed in fiscal 2004 which complied with these fiscal 2005 standards

#### ■ Green Device concept

**Energy saving** 

Reduce total power consumption and reduce power consumed in standby mode compared to previous models

Recyclability

Use standard plastic or materials that are easy to separate and disassemble (target: LCD devices)

Resource saving

Reduce device weight or volume compared to previous models

Green materials

Use no RoHS-designated substances or substances prohibited under Sharp standards

Long life

Extend the life of the product with exchangeable parts and consumables (target: LCD devices)

Packaging

Reduce packaging materials

Information disclosure

Provide information on chemical substances in devices

### Start of Comprehensive **Product Environmental Evaluation System**

Sharp combined the know-how it accumulated while developing and assessing environmentally conscious products and devices with its know-how of LCA (life cycle assessment) to create its "Comprehensive Product Environmental Evaluation System." It was installed on Sharp's in-house intranet in March

Going online makes the development process more efficient, while the compilation of databases from design know-how and development data facilitates LCA and feedback to the next development. Thus, Sharp is able to promote environmentally conscious designs and improve accuracy in design and assessment.

In April 2006, Sharp began operation of this system in all domestic product and device groups, and plans to introduce it into overseas design and production bases within fis-

### **Promoting Green Procurement**

In fiscal 2000, Sharp established the "Green Procurement Guidelines" and began efforts to enhance the environmental consciousness of parts and materials at a supplier level.

In fiscal 2003, Sharp formulated its "Survey Manual for Chemical Substances in Parts and Materials" and investigated chemical substance content as determined by the Japan Green Procurement Survey Standardization Initiative (JGPSSI).\* The company also took measures toward eliminating RoHSdesignated substances. Sharp eliminated RoHS-related substances in all products for Europe by the end of 2005 and in new products, except for a few products for some areas, by March 31, 2006.

In fiscal 2005, Sharp revised the Green Procurement Guidelines and the Survey Manual for Chemical Substances in Parts and Materials, and it introduced an online survey response system. In fiscal 2006, Sharp plans to introduce these measures to overseas production sites.

\* 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

# Building Super Green Factories

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

Objectives for Fiscal 2005	Achievements	Objectives for Fiscal 2006	Objectives for Fiscal 2007
Sharp Corporation production sites: 10 (two SGFs and 8 GFs achieved by fiscal 2004  Raise average improvement rate of environmental performance by 11% compared to fiscal 2003	Approx. 16%	SGF 5 GF 5	<ul><li>All SGF</li></ul>
Domestic production sites (subsidiaries and affiliated companies): 7  GF 4	GF 3	● GF 5	<ul><li>All GF or higher</li></ul>
Overseas production sites (subsidiaries and affiliated companies): 22  GF 4	SGF 1 GF 7	● SGF 1 GF 14	<ul><li>All GF or higher</li></ul>

SGF: Super Green Factory GF: Green Factory

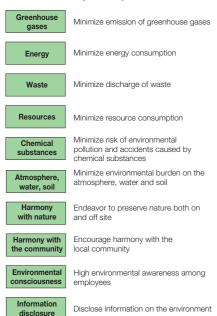
### **Upgrading All Plants to Green Factories**

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

In fiscal 2003, Sharp drew up specific assessment criteria to evaluate environmental performance and began assessments for inhouse certification.

Sharp plans to upgrade all Sharp Corporation production sites to Super Green Factories and all other Sharp Group production sites to Green Factories or higher by fiscal 2007.

### ■ Green Factory concept



### Certification of Green Factories and Super Green Factories

Assessment and approval follow 21 quantified environmental performance criteria grouped into five major categories. After evaluation, a plant scoring 70 points or more out of a possible 100 is certified as Green Factory, and one scoring 90 points or more is certified as Super Green Factory.

When new factories are built, environmental impact assessments are incorporated at the early planning stages to achieve Super Green Factory status. Moreover, Sharp is

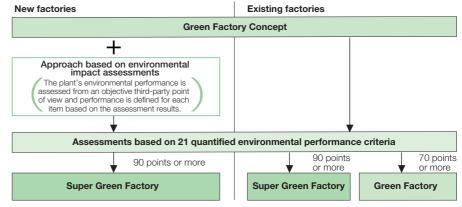
continually improving environmental performance at its existing plants as step-by-step upgrading.

Fiscal 2005 saw overseas production sites dramatically improve their environmental performance and the number of plants to achieve Green Factory status exceed the initial target. Of special note is SMF, Sharp's office equipment manufacturing plant in France, which was certified as the first Super Green Factory overseas (see pages 15 and 16).

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

criteria	Reductions in greenhouse gas emissions	Release reductions of chemical substances	Appropriate disposal of industrial waste	Reductions in the consumption of industrial water	Monitoring, safety and information disclosure
Environmental performance	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 equipment Introduction of new energy sources Continued reductions in emissions per production unit Implementation of managerial decision making standards	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	Disaster and fire prevention measures for hazardous materials     Special safety measures     Adoption of central monitoring measures     Disclosure of environment-related information
Assessment weighting	30	26	14	9	21

### ■ Process required to achieve Super Green Factories



### Information on Web site

http://sharp-world.com/corporate/eco/report2006 Green Factories

## Reducing Greenhouse Gas Emissions

Sharp is taking active measures to restrict greenhouse gas emissions resulting from its business activities. In addition to reducing energy consumption by introducing cogeneration systems and energy-saving equipment, installing photovoltaic power systems, as well as through meticulous energy-saving activities at plants and offices, Sharp is also reducing greenhouse gas emissions such as PFCs\*1 by installing scrubbers and using replacement gases with less global warming potential.

Objectives for Fiscal 2005 Achievements Objectives for Every Fiscal Year Objectives for Fiscal 2010 CO2 emissions per production unit Opmostic product sites: Reduce by 2% from previous fiscal year Approx. 12% reduction Reduce by 2% from previous fiscal year CO<sub>2</sub> emissions per real production unit\*3

Approx. 2.5% increase

Approx. 15% reduction

Domestic device sites: Reduce by 5% from previous fiscal year All overseas production sites: Reduce by 2% from previous fiscal year

Domestic sites include only the business sites of Sharp Corporation. Overseas sites include Sharp To reasonably evaluate the effect of controlling greenhouse gas emissions, Sharp adopts an index

- A general term for perfluorocarbon gases such as  $CF_4$  (carbon tetrafluoride),  $C_2F_8$  (carbon hexafluoride) and
- 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)
   Per real 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}

Reduce by 5% from previous fiscal year

Reduce by 2% from previous fiscal year

## Efforts by the Sharp Group

In fiscal 2005, the Sharp Group reduced its greenhouse gas emissions per production unit by 11% compared to the previous fiscal year. It also tried to offset increases in CO2 emissions resulting from production expansion through energy-saving measures and a large reduction of PFC emissions. However, the launch of Sharp Yonago Corporation slightly increased the total amount of greenhouse gas emissions from the previous fiscal

In future, the Sharp Group will work harder to control emissions and fulfill its corporate vision of "zero global warming impact by 2010.

## Controlling CO<sub>2</sub> Emissions

Sharp's efforts to achieve Green Factory status have produced results at overseas production sites. CO<sub>2</sub> emissions per production unit have been reduced largely by approximately 15% over the previous fiscal year. In Japan, Sharp reduced CO<sub>2</sub> emissions by around 12% at product sites. The company was able to marginalize the increase of CO2 emissions at device sites despite a large fall in shipped prices resulting from changing market conditions.

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

## **Controlling PFC Emissions**

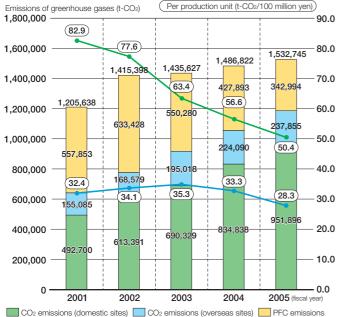
All domestic production sites: Reduce

by 25% compared to fiscal 1990

Sharp reduced emissions of non-CO2 greenhouse gases like PFCs and SF6 by approximately 20% from the previous fiscal year by switching to gases with lower global warming potential and introducing scrubbers to decompose greenhouse gases. For decomposing greenhouse gases, Sharp adopted optimum treatment methods depending on the type or quantity of gases used, thereby achieving a decomposition efficiency rate of more than 90%.

Sharp has installed scrubbers to decompose greenhouse gases in all PFC emission sources at the Kameyama Plant, where production continues to expand, as a measure to eliminate emissions.

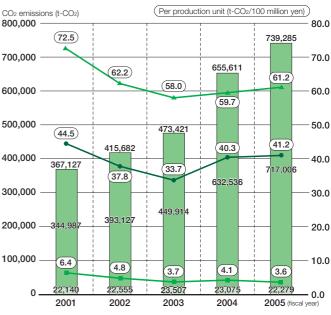
#### Sharp Group's emissions of greenhouse gases and per production unit



Sharp Group's emissions per production unit Overseas emissions per production unit Per production unit is calculated from production-related emissions.

Figures include Sharp Yonago Corporation as of June 2005. Figures exclude domestic company dormitories as of fiscal 2003

#### ■ CO₂ emissions per production unit by business category for Sharp Corporation production sites in Japan



- CO<sub>2</sub> emissions from product production CO<sub>2</sub> emissions from device production
- Emissions per production unit of devices
- Sharp Corporation's emissions per production unit
- -- Emissions per production unit of products

#### Information on Web site

http://sharp-world.com/corporate/eco/report2006 ■ Examples of 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 and to recycle waste as much as possible. As a result, domestic production sites (including subsidiaries and affiliated companies) as a whole have achieved zero discharge to landfill or five 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.

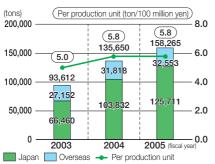


- \*1 Amount of waste discharged = Amount of industrial waste discharged + amount of general waste discharged
- Sharp defines "zero discharge to landfill" as a final landfill disposal rate of less than 0.5%. Final landfill disposal rate (%) = Amount of landfill disposal / amount of waste, etc. discharged (amount of waste discharged amount of valuable resources) x 100
- In fiscal 2005, to make the definition of zero discharge to landfill more rigorous. Sharp changed the denominator
- from "total amount of waste generated" to the lower "amount of waste, etc. discharged (amount of waste discharged + amount of valuable resources)"
- \*3 Recycling rate of waste into valuable resources (%) = Amount of valuable resources\* / amount of waste, etc. discharged (amount of waste discharged + amount of valuable resources) x 100 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 5 Years in a Row, Overseas Sites Reduce Amount of Waste, etc, Discharged by 17%

The total amount of waste, etc. discharged by the Sharp Group in fiscal 2005 increased by 17% over the previous fiscal year due in part to production expansion at the Kameyama and Mie Plants, as well as the start of operation at Sharp Yonago Corporation. However, thorough recycling of waste brought the final landfill disposal rate down to 0.03%. making it five years in a row that Sharp has achieved zero discharge to landfill at its domestic production sites (including subsidiar-

#### Amount of waste, etc. discharged from Sharp Group



Figures include non-production sites

iscal 2003 figures do not include domestic production subsidiaries and

Figures include Sharp Yonago Corporation as of June 2005

## **Recycling Water**

The Sharp Group, particularly the Kameyama and Mie Plants, carried out thorough recovery and recycling of water, increasing the amount of water recovered and recycled by 16% over the previous fiscal year. As a result, despite a considerable increase in production, the Sharp Group was able to restrict the amount of water used to a marginal increase. Sharp will continue aiming for effective use of water resources into the future

ies and affiliated companies) since fiscal 2001.

Although the domestic recycling rate of waste into valuable resources stood at 13.4%, marginally lower than the target, the amount of valuable resources increased by 2,748 tons over the previous fiscal year.

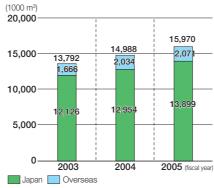
At the same time, significant progress was made in the campaign to realize Green Factories overseas. Production sites reduced the

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



The amount of waste discharged in fiscal 2003 includes the amount of valuable resources Figures include subsidiaries and affiliated companies as of fiscal 2004 Figures include Sharp Yonago Corporation as of June 2005.

#### Amount of water used by Sharp Group

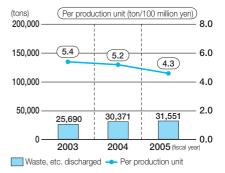


Figures include Sharp Yonago Corporation as of June 2005.

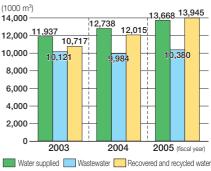
amount of waste, etc. discharged per production unit by 17% over the previous fiscal year.

From fiscal 2006 and onward, Sharp will continue recycling waste and converting it into valuable resources at domestic sites, aiming to reduce the amount discharged per production unit by 3% annually. At overseas sites, Sharp will continue aiming to reduce the amount of waste, etc. discharged per production unit by 2% annually.

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



Amount of water supplied, wastewater, and recovered and recycled water at domestic production sites



Figures include subsidiaries and affiliated companies as of fiscal 2004. Figures include Sharp Yonago Corporation as of June 2005.

Information on Web site http://sharp-world.com/corporate/eco/report2006

■ Examples of reductions in the discharge of waste ■ Data on waste ■ Examples of effective water use ■ Data on water usage

# 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 discharges 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 risk information and promotes good risk communication with local communities.



<sup>\*1</sup> 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**

Risk assessment audits are mandatory when new chemical substances are introduced as well as when handling equipment is installed, taking the environment, safety and health into account. Sharp also provides education and training programs and conducts audits on the environment and safety. Through these measures, accidents are prevented and environmental impact is reduced.

For all 10 Sharp Corporation domestic production sites and 15 out of 22 overseas production sites, Sharp has introduced S-CMS (Sharp Chemical Management System), and it conducts centralized management of the quantities of all chemical substances consumed or discharged.

Sharp also reduces discharge of and conducts appropriate management of chemical substances placed under high-priority control (460 chemical substance groups, including 354 substance groups specified by the PRTR\*2 Law and 106 additional ones, such as hazardous air pollutants).

\*2 PRTR: Pollutant Release and Transfer Register. A system to collect and publicize data, such as the amount of harmful chemicals handled and discharged.

## **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 2005 at all Sharp Corporation production sites in Japan amounted to 16 substances or 6,354 tons (up 55% over the previous fiscal year). Although the use of PRTR chemicals increased when production went up, emissions fell by 9% to 12.4 tons from the previous fiscal year by thoroughly treating and recycling harmful substances

In 2005 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 2005, discharge risks were reduced around 48% over fiscal 2003.

In the current fiscal year, Sharp is stepping up reduction of VOCs (volatile organic compounds), which are handled in large volumes, in order to comply with regulations enacted this April in Japan. Further reductions of chemical substances are being implemented.

## Risk Communication and Information Disclosure

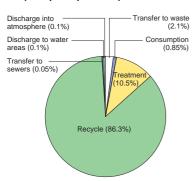
Sharp has selected and trained "risk communicators" at each domestic site, who disclose risk information associated with business activities and promote communication through mutual understanding among Sharp, neighboring residents and the local government. Sharp also discloses information with environment exhibitions at Sharp Festivals and the publication of site reports at each

A survey conducted in 1998 on soil and groundwater identified chlorine solvent pollution within the Nara, Yao, Tenri and Katsuragi sites. With the exception of the Nara site, all sites have reduced contamination levels to lower than those of the environmental standard via biotechnology. Sharp is continuing purification at the Nara site, and regularly notifies local municipalities and residents of the cleanup progress.



Sharp's Large-Scale IC Group received the grand prize at the 2005 PRTR Awards in Japan, sponsored by the Center for Environmental Information Science, in recognition of its continuous risk communication with the local community

#### ■ Destinations of PRTR-covered chemical substances in Japan (Sharp Corporation)



#### ■ Chemical substances released by Sharp Corporation into the atmosphere and water areas in Japan

Main chemical substances	Amount of release (tons) in FY2005	Proportion (%)	Amount of release (tons) in FY2004 (reference)	Destination	
Hydrogen fluoride & its water-soluble salts	8.7	69.7	9.3	Water areas	
2-Aminoethanol	1.8	14.3	1.9	The atmosphere	
Xylene	0.6	4.7	0.5		
2-Ethoxyethyl acetate	0.6	4.5	1.0		
Phenol	0.4	3.0	0.5	The atmosphere	
1,3,5-Trimethylbenzene	0.3	2.8	0.4	1	
Others	0.1	1.0	0.1		

#### Information on Web site

http://sharp-world.com/corporate/eco/report2006 Data on chemical substance management Data on the atmosphere and water quality

## Environmentally Conscious Logistics and Packaging

After the revision of the Law Concerning the Rational Use of Energy in Japan in fiscal 2005, further energy-saving measures are sought in the distribution sectors. In cooperation with shipping contractors, Sharp is working to reduce environmental impact by creating a system to accurately assess environmental impact in distribution and taking as many measures as possible to optimize transport methods and load efficiency.

Objectives for Fiscal 2005 Objectives for Fiscal 2006 Objectives for Fiscal 2008 Achievements Domestic railway cargo transport (container transport): 900 containers/month Domestic railway cargo transport (container transport): 963 containers/month Domestic railway cargo transport (container transport): 1,050 containers/month Domestic railway cargo transport (container transport): 1,250 containers/month Reduce 3,500 t-CO<sub>2</sub> of CO<sub>2</sub> emissions in Japan Reduced approx. 4,133 t-CO2 of CO2 emissions Reduce 4,400 t-CO<sub>2</sub> of CO<sub>2</sub> emissions in Japan Reduce 5,200 t-CO<sub>2</sub> of CO<sub>2</sub> emissions in Japan

## Creating a System to Promote Energy Savings in Distribution

In order to strengthen energy-saving measures for distribution in Japan, Sharp established a "Committee to Deal with Energy-Saving Law as a Shipper" in fiscal 2005. The committee enables Sharp's material, distribution. CS promotion and environmental divisions to assess CO<sub>2</sub> emissions in each field procurement, production, sales, parts\* and waste disposal. Its aim is to implement efficient energy-saving measures throughout

the entire distribution process.

In the future, Sharp will also develop these measures for use at overseas sites, creating a global energy-saving distribution system that includes international transport and transport within local overseas areas (production and sales bases).

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

## ■ Energy-saving promotion system in distribution



Management Strategy Conference

## Changing Modes of Transport

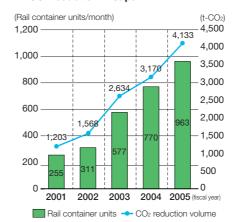
Sharp is shifting from transportation by truck to transportation by more environmentally friendly means in Japan; for example, transport by railway and ships.

In fiscal 2005, Sharp made an average of 963 railway transport trips a month. This resulted in CO<sub>2</sub> emission reductions of 4,133 t-CO<sub>2</sub> per year (a 30% increase over the previous year) compared to transportation by truck.

The Hiroshima branch of Sharp's Nishinihon Logistics Center was commended as an "Excellent Shipper in Shifting Transportation Mode\*" for two years in a row for increasing the ratio of mobile phones transported by rail to 71.3% (from 66.0% in the previous fiscal

Sharp will continue shifting transportation modes and change from air transport for import and export cargos to a new means of transportation such as high-speed vessels.

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



\* A system to commend shipper sites that have actively promoted shifting transportation modes. sponsored by the Chugoku Modal Shift Promotion Council and the Chugoku District Transport Bureau.

### Improvements in Transport Efficiency, Introducing Low-Pollution Vehicles

Sharp is working to reduce total transportation distances by improving load efficiency as it maximizes the volume of each cargo shipped. It is also increasing direct delivery from factories to consumer markets without passing through distribution centers. Sharp used to unload cargos shipped from production bases in China at Osaka Port, and then transport them by truck to consumer markets across the country. Since fiscal 2005, Sharp has begun dispersing the unloading of such cargoes at ports in the vicinity of large consumer markets, located in the Tokyo Metropolitan area, Osaka, Kyushu and Hokkaido, and was thus able to reduce land transportation distances.

Sharp is urging its shipping contractors to introduce low-pollution vehicles, and is aiming to replace all business vehicles in Japan, including cars for sales activities, with lowpollution vehicles by fiscal 2010. As a result, the number of low-pollution vehicles used by the Sharp Group in Japan accounted for 74.3% of the group's approximately 3,900 fleet vehicles in fiscal 2005.

## 3R of Secondary Distribution Materials

Sharp is promoting 3R (Recycle, Reuse and Reduce) of packaging, cushioning and transportation materials to reduce waste at distribution sites.

Sharp's Nishinihon Logistics Center and Kameyama Logistics Center are promoting the use of reusable eco-bands as packaging materials for preventing the collapse of cargo while stored in a warehouse. The Nishinihon Logistics Center won an award of excellence in the Japan Distribution Improvement Examples Contest in 2005 for its recycling activities concerning stretch film\* and plastic.

Made of polyethylene, stretch film is used for wrapping stacked products in order to protect them from dust and water and to prevent collapse of cargo

#### Information on Web site

http://sharp-world.com/corporate/eco/report2006 ■ Data on packaging materials used

# 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 2005 Objectives for Fiscal 2006 Objectives for Fiscal 2008 Achievements Began operation from countries that Strengthen domestic recycling of Begin smooth operation of recycling Global development of recycling have established recycling systems systems in Europe home appliances technologies

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

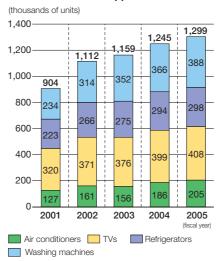
Sharp is constructing a highly efficient recycling system by collaborating with five other consumer electronics companies\* to establish and operate 190 designated sites for picking up old appliances and 16 sites for recycling in Japan.

In fiscal 2005, four types of home appliances designated under the Japanese Home Appliances Recycling Law, about 1.3 million units in total (up 4% over the previous 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 in conditions, such as an increase in the amount of products disposed of, and will work to further improve the processing rate.

\* Five 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 2005) (%)				
		Air conditioners	TVs	Refrigerators	Washing machines
	Recycling rate	85	75	68	75
	Legal standard	60	55	50	50

### **Overseas Topics**

#### Europe

In EU member states, following the enactment of the Waste Electrical and Electronic Equipment (WEEE) Directive in February 2003, industry associations and other organizations are constructing collective recycling systems, with Sharp's local subsidiaries participating in the construction.

In Germany, Sharp's sales subsidiary SEEG, in cooperation with Loewe AG and Philips Consumer Electronics, has established the "ProReturn" recycling system to promote rationalization of recovery and recycling, as well as cost reduction.

#### **United States**

Sharp's US sales subsidiary SEC has been participating in the "Plug-In To eCycling" program promoted by the



"Plug-In To eCycling"

Environmental Protection Agency in various regions of the US since 2002. In 2005, SEC supported 155 recycling events, contributing to recycling of used home appliances across America. In recognition of these continuing activities, SEC was honored by the Environmental Protection Agency for the fifth consecutive year.

## Recycling PCs

In compliance with the Japanese Law for Promotion of Effective Utilization of Resources, Sharp is recycling used PCs from both corporate users and general households.

For home-use PCs, the PC industry is working with Japan Post in a recovery system using special parcel packages called "Yu Packs" available at more than 20,000 post offices around Japan.

In fiscal 2005, recovered and recycled PCs amounted to approximately 3,600 businessuse and home-use desktop and notebook PCs and about 1,900 monitors, an increase of 57% and 19%, respectively, over the previous year.

## Reusing and Recycling Copiers

Sharp is promoting reuse and recycling of used copiers and toner cartridges. A portion of the collected copiers is remanufactured: copiers are disassembled, cleaned and tested before being put back into the production line. New parts are also added to produce copiers with a guarantee of performance and quality equal to new products.

In fiscal 2005, approximately 26,700 copiers (16% more than the previous fiscal year) were recovered, and 476 units (down 42% from the previous fiscal year) were remanufactured and shipped.

Approximately 505,000 toner cartridges (18% more than the previous fiscal year) were recovered, and about 249,000 remanufactured toner cartridges (1% more than the previous fiscal year) were shipped.

Models and parts not targeted for reuse are sorted by material so that they can be recycled.

## Promoting Environmental Communication

To enhance environmental communication within its wide range of stakeholders, Sharp discloses environmental information through various media and exhibitions, including Environmental and Social Reports, Web sites and newspaper ads. Each site also conducts community-based activities by holding original events, factory tours and distributing site reports.

### **Environmental and Social** Report, Web Site on Social and Environmental Activities

Every year since 1999, Sharp has issued an annual report on its environmental activities. Beginning with the fiscal 2002 edition, the report added to its coverage of environmental issues social and economic perspectives of the company in order to give an overall view of Sharp's activities. Starting with the 2005 edition, the report expanded coverage of the social aspects of Sharp's business activities. The title has therefore been changed to "Environmental and Social Report."

The fiscal 2005 edition of the Environmental and Social Report won an award for excellent environmental reporting in the Environmental Communication Awards\*1, and an award for excellence in the Green Reporting Awards\*2.

Using articles from the Environmental and Social Report, Sharp's Web site also presents more specialized content, such as examples of specific activities and detailed data on environmental impact.

- \*1 Sponsored by the Global Environmental Forum and supported by the Ministry of the Environment and Nihon Keizai Shimbun, Inc., these awards recognize outstanding environmental reports.
- \*2 Sponsored by Toyo Keizai Inc. and the Green Reporting Forum, these awards recognize outstanding environmental reports.



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

## Advertising and Commercials

In order to get messages as well as information about its environmental goals to a wider audience, Sharp advertises in print media and on television. Since fiscal 2003 in Japan. with the slogan "Let's go Ecology Class with Sharp," the company has created TV commercials with the theme of environmentally conscious lifestyles, as well as newspaper ads that highlight its environmentally conscious one-of-a-kind products, technologies and production plants.

The series of newspaper ads that Sharp published for five consecutive days from June 5, 2005 (Environment Day) won the grand prize in the readers' choice category in the 22nd Yomiuri Advertising Awards sponsored by the Yomiuri Shimbun.





TV commercial

## **Exhibitions**

Through participation in domestic and overseas exhibitions, Sharp publicizes its environmental technologies as well as environmentally conscious products and devices, along with information on its approach to tackling environmental problems in production. In Japan, Sharp has participated in the Eco Products exhibition every year since fis-

In fiscal 2005, with the theme "Aiming for zero global warming impact through solar power and Ecology Class products," Sharp introduced its corporation vision and other environmental targets, as well as its environmental technologies and environmentally conscious products.

In fiscal 2005, Sharp also took part in major overseas exhibitions, including the 2005 International Consumer Electronics Show (CES) in the US, the IFA 2005 Berlin Show in Germany and the Energy Equipment Exhibition in Thailand.



Eco Products 2005



IFA 2005 Berlin



Dialogue forum at the Fukuyama site

## **Exchanges with Local Communities**

To enhance communication with neighboring residents, the company's domestic sites hold events such as Sharp Festivals as well as conduct factory tours. And to help residents better understand Sharp's environmental goals, all Sharp Corporation's production sites have issued and distributed site reports since 2004.

As part of its risk communication plan, the Fukuyama site held a dialogue forum with the participation of 43 local residents, city officials and experts in July 2005. The Fukuyama site explained its environmental efforts as well as the hazards of chemical substances, and received various opinions from the participants.

# Sharp and Society

In Pursuit of Becoming a Corporate Group Trusted by Society

## For Customers

Enhancing Customer Satisfaction, Ensuring Quality and Safety Reinforcing Information Security

## For Shareholders and Investors

Appropriate Return of Profits and Information Disclosure

## For Business Partners

Mutual Prosperity with Suppliers and Dealers

## For Employees

Creating a Fair, Positive and Progressive Workplace

## For Local Communities

Social Contribution Activities as a Corporate Citizen



## Enhancing Customer Satisfaction, Ensuring Quality and Safety

In pursuit of becoming a company trusted by society, Sharp makes products and provides services from the perspective of the needs of the age and of customers. Sharp always listens to customer comments with sincerity, and utilizes such comments when making new products and improving services.

### **Basic Stance and Vision Concerning Customer** Satisfaction and Quality

Sharp's basic stance concerning quality, based on the slogan "Quality First in Heart and Mind," is to meet requests from society and make products that satisfy customers.

With regard to guarantee of quality, Sharp has made it clear to all its employees that quality should be guaranteed to customers, and is making efforts with the participation of all employees to continually improve quality.

To enhance the safety of products, Sharp not only complies with safety standards and laws and regulations of each country, but has also established and put into practice its own safety technology standards.

## 品質第一 私たちの心です Quality First in Heart and Mind

Displayed at each site as a slogan for company-wide quality enlightenment

## **Customer Assistance to Deliver Maximum Satisfaction**

The Customer Assistance Center in Japan, which handles a variety of inquiries concerning products, including which models to buy and how to use them. considers its biggest mission is to deliver maximum satisfaction to customers by thinking from their points of view and anticipating their needs.

In fiscal 2005, Sharp carried out measures to enhance customer satisfaction, which included offering a toll-free phone number, in Japan. In response to diversification of customer lifestyles and the widespread use of the Internet, Sharp has also enhanced the contents of its Japanese Web support by posting FAQs and providing download access to instruction manuals.



Customer Assistance Center

## **Upskilling Training for Better** Response

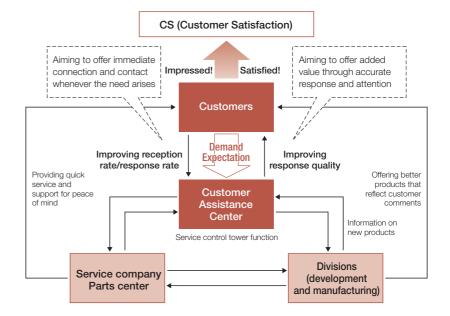
To provide better service at the Customer Assistance Center, Sharp offers upskilling training that targets all representatives and provides coached training as needed to improve their skills.

### **Providing Quicker, More** Reliable Service

Under the slogan "Aiming for No. 1 in Customer Satisfaction," Sharp has been engaged in customer satisfaction innovation activities to provide quicker and more reliable service. These include establishing AQUOS Plaza in Japan,\* as an after-sales service department specializing in AQUOS LCD TVs, and making after-repair calls to ask customers if there are any problems regarding repaired products and service engineers.

\* Opened in 12 places in Japan (Sapporo, Sendai, Saitama, Makuhari, Tokyo, Yokohama, Nagoya, Kyoto, Osaka, Hanshin, Hiroshima and Fukuoka)

#### Mission of the Customer Assistance Center



## Making Products That Can be Easily Used by Anyone

With the diversification of lifestyles and the advance of an aging society, still more consideration and innovation are sought to enable customers to comfortably use products

Sharp conducts tests to learn how users operate the products and door-to-door surveys at the stage of product development. In door-to-door surveys, Sharp gathers various opinions from customers who are actually using the products and utilizes such opinions for future product development.

The accumulation of such efforts has resulted in universal design products that can be easily used by anyone, regardless of ability or experience. In fiscal 2005, the Association for Electric Home Appliances in Japan selected 88 models in 17 categories of Sharp's consumer products as "Universal Design-Conscious Home Appliances."



Sharp conducted surveys of wheelchair users on the user-friendliness of a copier/printer's paper tray



Sharp engineers operated washing machines wearing equipment for simulating the physical conditions of the elderly as a method for better understanding their physical and mental status

## **Developing Usability Testing**

Sharp places high importance not only on the functional quality of products, but also on a product's ease of use, also called the "usage quality of products." By usability testing, the person in charge of product planning and development can observe how people actually use the product and verify ease of use. This "usability testing" has been introduced in all product divisions. As a result, the person in charge quickly discovers factors that hinder the product's ease of use, and makes modifications for greater usability.

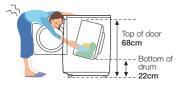
## Immediate and Accurate Disclosure of Information

Sharp has clearly set in-house standards and systems to handle cases when injury is inflicted on customers, or a potential harm to life, body or property is discovered in relation to the use of Sharp products. In the event of such damage or potential harm, Sharp will disclose related information immediately through newspapers and its Web site, and establish an inquiry desk to keep customers informed and minimize any inconvenience.

During fiscal 2005, when defects were found in single-crystal photovoltaic modules in May and LED display systems in August, Sharp immediately disclosed information on free-ofcharge inspection and repair services.

#### **EXAMPLE**

Improvement of drum-type washer/dryer



Sharp's conventional model ES-DG703

#### **Before**

Customers said that because the position of the drum is too low, it is difficult to take out laundry unless they bend over.



Sharp's new model ES-HG90

A proprietary high-drum mechanism (the top of the door is 89 cm and the bottom is 38 cm) makes it easier for a user to take out laundry at the bottom of the drum.

#### **Overseas Topics**

### Aiming to Become No. 1 in Customer Satisfaction

For the third time in the past four years, US sales company SEC became No. 1 in the industry for customer satisfaction, according to the results of the Consumer Electronics Association customer satisfaction study in 2005. The study was conducted on 16 consumer electronics mak-

In Indonesia, the call center of sales company SYA (currently SEID) won the 2005 Call Center Award (household electronics category) from the Center for Customer Satisfaction and Loyalty.\*

Sharp makes efforts to improve its service around the world by holding "Global Service Managers Conferences" annually that is attended by people responsible for service and quality at overseas sales companies and manufacturing bases.

\* A division of the Frontier market research agency in Indonesia for enhancing customer satisfaction and brand loyalty.



SEC's Customer Assistance Center team, No. 1 in the industry for customer satisfaction

## 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. Sharp is aiming to become a company that can be highly trusted with information security and personal information protection, by strengthening information management systems, improving the safety of its information infrastructure, and providing employees with comprehensive training on information management and security.

## **Enhancing the System to Protect Important Information**

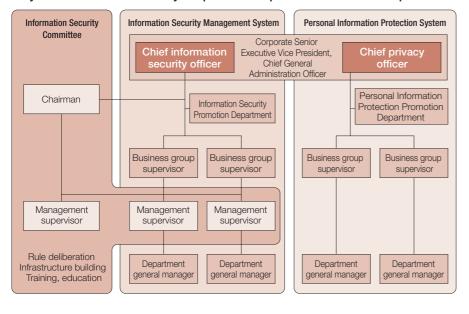
Sharp is strengthening information security to protect vital information of customers and other stakeholders as well as confidential information of Sharp.

In April 2004, Sharp headquarters established the Information Security Promotion Department, and is checking the information security activities of all domestic companies and developing security

measures at semi-annual meetings of the Information Security Committee.

Sharp also established the Personal Information Protection Promotion Department in November 2004, and has established a management system on information security and personal information protection to promote safe management of information.

#### System for information security and protection of personal information in Japan



### Raising Security Levels and Reinforcing Management **Systems**

In response to the Personal Information Protection Act in Japan enforced in April 2005, Sharp formulated audit rules for the handling of personal information, and has systematically conducted audits in Japan.

And in order to effectively monitor the implementation status on confidentiality and information security measures, Sharp has introduced a self-check and assessment system to be conducted by every business group in Japan, and is working to raise information security levels and reinforce management systems.

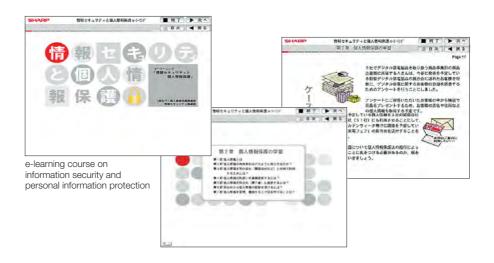
### **Reinforcing Security Systems** at Overseas Bases

Sharp's overseas bases continued to take thorough information protection measures and carried out investigations on how to strengthen future information management systems. With that, Sharp has established a promotional organization at each overseas base, as it has done in Japan for boosting the level of information security.

In fiscal 2006, Sharp will work on establishing regulations common to all overseas bases and standards in accordance with local conditions.

### Education and Training for Employees through e-Learning

Sharp provides regular online e-learning courses in information security and personal information protection for all employees annually in Japan. Sharp also provides technology seminars for information security managers.



For Shareholders and Investors

## ppropriate Return of Profits and Information Disclosure

One of the most important management principles for Sharp is to return a portion of profits to shareholders. That's why Sharp strives to offer shareholders consistent dividends and to implement such other measures as increasing these dividends according to the company's business results and financial situation. Sharp also considers it important to enhance transparency by providing prompt, accurate and wide-ranging information. Sharp fully revised its investor relations Web site in fiscal 2005 to make it easier to understand.

## **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 carefully considering its business performance and financial situation in a comprehensive manner, Sharp has implemented a set of policies to return profits to its shareholders, such as increasing the amount of periodic dividends. Annual dividends in fiscal 2005 were 22 yen per share, which marked an increase for the sixth consecutive period.

To raise the operational efficiency of shareholder equity and further raise shareholder value, Sharp employs the treasury stock system\*, where we consider buying back outstanding shares when the situation allows and holding the shares as treasury stock. In addition, 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 measures.

\* A legal system related to the acquisition and holding of stock in-house. Treasury stock is a company's own stock that it purchases on the market and keeps. If a company acquires its own stock, it can effectively raise the ROE (return on equity) by reducing shareholder equity.

#### ■ Net income per share (consolidated)

(	(**************************************			(IIOOdi yodi)	
2001	2002	2003	2004	2005	
10.10	29.37	55.37	70.04	80.85	
(ve				(ven)	

## ■ Dividend per share

			(liscal year)	
2001	2002	2003	2004	2005
14	15	18	20	22
				(,,,,,,,)

## Staying Financially Healthy and Raising Corporate Value

Sharp makes various efforts to ensure that corporate value can grow further. These include aiming to improve ROE (return on equity) and free cash flow as the main management indicators. Sharp is also focusing on controlling its return on investment in all its business divisions, based on PCC (profit after capital cost), which is calculated by subtracting the cost of invested capital from NOPAT (net operating profit after income taxes)

## **Active Investor Relations**

Sharp actively communicates with investors through investor relations (IR) activities. In fiscal 2005, Sharp held meetings to announce quarterly financial results, business strategy meetings and factory tours for institutional investors and analysts. Sharp also visited major institutional investors both in Japan and overseas to actively exchange

To promote direct communication with individual investors, Sharp participated in various seminars for individuals to explain its business results and strategy. Sharp also fully revised its investor relations Web site to enhance the contents and make it easier to understand.

The valuable feedback gathered from investors and analysts at these meetings is regularly relayed to Sharp management for future improvements.



Investor relations Web site (top page)

## General Shareholders' Meeting

Sharp makes efforts to create an environment that enables shareholders to exercise voting rights at the ordinary general meeting of shareholders, such as holding the meetings earlier than the date most Japanese companies hold theirs, adopting the exercise of voting rights over the Internet, and posting an English notice for convening the meeting on its Web site.

Sharp also makes the shareholders' meeting public by posting images and other information on its Web site the day after the meeting for a certain period in order to provide information to shareholders who could not attend the meeting.

#### Constituent of SRI Indices (Equity Indices) in Japan and **Overseas**

As part of information disclosure to stakeholders, Sharp cooperates in good faith with research organizations doing surveys on socially responsible investment

In 2005, Sharp was selected as one of the stocks among the KLD Global Climate 100 Index comprising the world's top 100 companies engaging in business activities that contribute to reducing global warming factors (established in the US in July 2005). Sharp was also added to the following SRI

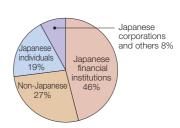
- FTSE4 Good Global Index (UK); September 2005
- Ethibel Sustainability Index (Belgium)
- Morningstar Socially Responsible Investment Index (Japan); September
- SRI: Socially Responsible Investment, Active investment in companies that fulfill social responsibilities not only in financial results, but also from environmental and social aspects.



## **Share Distribution**

The number of Sharp's shareholders was 103,894 as of March 31, 2006. The distribution of stocks owned by shareholders is as follows.

#### Share distribution



## Mutual Prosperity with Suppliers and Dealers

Sharp procurement activities are carried out based on the Basic Purchasing Principles: "Sharp purchases outstanding parts, materials and equipment which meet its requirements, through just and fair evaluation, thus ensuring that all domestic and overseas companies are provided with equal opportunities." It is also Sharp's belief that CSR activities should apply to the entire supply chain, including its business partners.

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

Sharp procures parts, materials and equipment from numerous domestic and overseas suppliers based on the concept of providing equal opportunities to all suppliers, and by procuring superb materials that comply with Sharp conditions and requests through fair evaluations.

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

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

A company must fulfill social responsibility not only within its own group, but also within its entire supply chain and network of suppliers, when doing business domestically and overseas.

Consequently, in May 2004, Sharp revised its Basic Purchasing Principles to include items such as conservation of the environment, compliance with laws and regulations, no disclosing of confidential information and the CSR approach.

In June 2005, Sharp further revised its Basic

Purchasing Principles to add items that suppliers are requested to observe, focusing on matters concerning procurement activities from a CSR perspective. Sharp has posted the contents of the revision on its Web site, and made the requests to its domestic and overseas suppliers in writing.

In March 2006, Sharp revised the Green Procurement Guidelines to strengthen efforts for environmental conservation across the entire supply chain.

#### **Basic Purchasing Principles**

(revised June 2005)

#### 1. Basic procurement concept

- 1) Sharp's procurement activities are conducted in an open and impartial manner, with a fair evaluation given to suppliers in and outside Japan.
- 2) Sharp will comply with laws and regulations, and achieve mutual prosperity with suppliers.
- 3) 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

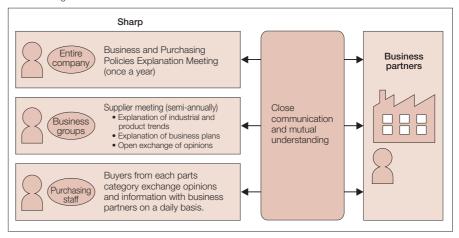
- 1) Open and impartial procurement activities and purchases at optimal
- 2) Establishing mutual relationships
- 3) Conservation of the environment
- 4) Securing good product quality
- 5) Securing steady delivery time and stable supply
- 6) Leading technology

#### 3. Requests to suppliers

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

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

To build strong relationships with its suppliers, Sharp communicates proactively to pursue a balance of mutual understanding.



#### **Overseas Topics**

### Actively Taking Part in Countersample Exhibitions and **Holding Technology Seminars**

In order to expand global procurement, Sharp actively participates in countersample exhibitions\* in Japan and overseas and holds technology seminars where suppliers can propose new materials and parts and introduce new technologies.

The countersample exhibition held in Shanghai in September 2005 attracted about 4,000 visitors, and the Sharp booth received numerous inquiries.

Countersample exhibition: Exhibition where manufacturers display parts and materials they want to procure, in an effort to seek new suppliers.



At the countersample exhibition held in Shanghai

http://sharp-world.com/corporate/eco/report2006 Sharp Basic Purchasing Principles (full text)

## Approaching CSR together with Suppliers

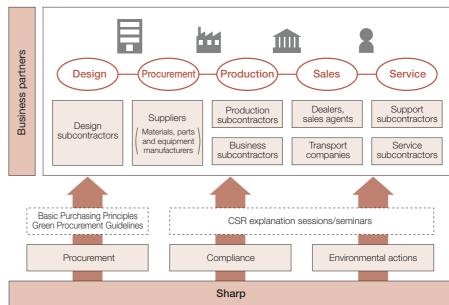
As part of CSR efforts spanning the entire supply chain, Sharp began inviting major subcontractor companies in Japan to CSR explanation sessions and seminars in fiscal 2004. Through these efforts, Sharp helped to implement a CSR promotion system at each company and devised a checklist to let them evaluate their current status.

In fiscal 2005, targeting representatives of subcontractor companies engaging in business at Sharp sites in Japan (218 persons from 146 companies), Sharp held explanation sessions on labor management, safety and health management, environmental conservation and contracts. In fiscal 2006, Sharp will hold similar explanation sessions for representatives of the subcontractor companies, who are responsible for operations at each Sharp site in Japan.

To promote CSR efforts throughout the supply chain, Sharp has assigned supply chain CSR promoters at procurement departments and other related departments of each Sharp site in Japan.

To compile standard industry requests to suppliers and enable suppliers to check CSR efforts by themselves, Sharp participates in the "Supply Chain CSR Working Group" initiated by the JEITA (Japan Electronics and Information Technology Industries Association) and is studying the formulation of a CSR guidebook together with other member companies.

#### ■ Applying CSR to suppliers



## Offering Information on Environmental Actions

Sharp hosted "Environmental Information Network" group seminars in Japan to exchange environment-related information with business partners in May 2005, and again in February 2006. With the participation of 97 companies (108 people) from all over Japan, Sharp provided information on its activities dealing with the revision of ISO 14001 standards in 2004, the trends concerning laws and regulations, and precautions in waste disposal.

At these seminars, companies that have already acquired ISO 14001 certification exchanged information about their environmental activities, while Sharp introduced a method to establish minimum environment management systems to companies that have not yet acquired ISO 14001.

Sharp will strengthen environmental efforts by continuing to place importance on communication with business partners in the future.



Environmental Information Network seminar

### Fulfilling CSR together with Dealers

Sharp's sales and marketing departments in Japan, which directly engage with dealers, host seminars to provide information and training for dealers, to enable them to correctly understand the environmental performance of Sharp products. At these seminars, Sharp introduces its CSR concept and efforts, with the aim of creating partnerships to jointly pursue CSR in sales activities.

## Creating a Fair, Positive and Progressive Workplace

Sharp protects the basic human rights and personal dignity of all employees, provides opportunities to enthusiastic employees, and fosters the diverse abilities of each employee. Through 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.

#### 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
- Provide support so that each employee can deepen their expertise, as well as obtain knowledge and skills in a broad

## Basic Human Rights and Personal Dignity

Sharp stipulates in both the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct the corporate policy and guiding principles for executives and employees regarding protecting basic human rights and personal dignity, including prohibition of both child and forced labor. To promote these values, human rights seminars are held regularly at each Sharp domestic site.

Sharp encourages its business partners through the Basic Purchasing Principles to uphold the same standards in respecting human rights.

## Good Labor-Management Relationship through Dialogue

Sharp values good, trustful relationship through dialogue with labor unions. In Japan, Sharp has monthly labor-management meetings, such as the Central Labor-Management Council involving top executives from both sides, as well as Local Labor-Management Council meetings at each site for exchanging opinions about business environments and labor-management subjects. In Europe, Sharp has held European Works Council meetings every year since 1997.



Central Labor-Management Council

## 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 that value the initiative and diversity of each employee and help them develop their individuality, motivation and creativity.

#### Next-generation human resource development system

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

#### Individual ability and motivation demonstration system

- Personnel declaration/career development system
- Career development rotation
- Recruitment entry system
- SHINE program (for sending young employees to overseas bases)

#### Education, training and selfdevelopment support system

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



Seminars classified by function

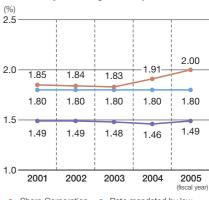
## Employing the Physically and Mentally Challenged

Sharp Corporation has established the "Committee for Promoting Employment of the Challenged" to promote employment and support self-reliance of those who are physically or mentally challenged, and remains committed to creating a worker-friendly environment and promoting employment of the physically and mentally challenged.

Sharp's efforts in this field have a long history. In 1950, Sharp incorporated a separate factory and renamed it Hayakawa Special Metals Factory to help rehabilitate blinded war veterans. Today, its successor, Sharp Tokusen Industry Co., is making efforts as a special subsidiary to increase the employment level of the physically and mentally

In fiscal 2005, Sharp Corporation's physically and mentally challenged employment rate reached 2.00%.

#### Employment rate for the physically and mentally challenged in Japan



--- Sharp Corporation ---- Rate mandated by law Average of all private-sector firms

## **Overseas Topics**

### **Localizing Management**

Being a corporation that does business globally, Sharp fosters local employees and promotes them to executive positions. Particularly, Sharp has actively promoted and recruited local employees to the top executives of overseas sales companies. At present, local employees serve as the top management of most sales companies in Europe, including serving as the regional chief executive.

Since fiscal 2003, Sharp has offered training programs to foster executives at its overseas bases. Under these programs, seminars are

held at a business school in Switzerland, in addition to group seminars held at Sharp's training institute in Japan. The curriculums are designed to help participants acquire the skills and leadership required for executives, and also include Sharp's original business policy, thoughts and approach.



Training of executives from overseas bases

### Labor and Management Discuss and Promote Safety and Health

Sharp Corporation has set a safety and health "Basic Philosophy" and "Safety and Health Principles", and formulates specific objectives and promotion plans annually, aiming for zero industrial accidents. These policies are communicated to all domestic sites as a company-wide campaign through the "Central Safety and Health Convention" and safety and health conventions held at individual sites.

Each site holds monthly labor-management safety and health committee meetings to set specific goals and carry out various activities. At the same time, each site regularly holds safety and health communication meetings to improve the safety and health of employees of business partners stationed inside Sharp sites.

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

The company carries out safety and health tests at each plant, using teams formed from Sharp Corporation's persons in charge of safety and health, the labor union and third-party companies. Dangerous places and operations are singled out, and necessary safety measures are taken to prevent accidents.

At Sharp Corporation, the occurrence of industrial accidents (the annual accident



Inspection of stationary equipment

## **Basic Philosophy**

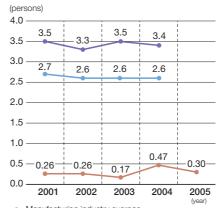
With the goal of creating a work environment where everyone at Sharp can work safely and healthily, Sharp places the utmost priority on health and safety and is working with sincerity and creativity to achieve the target of zero industrial accidents.

#### **Safety and Health Principles**

- 1) Zero industrial accidents.
- 2) Each individual promotes his or her own safety and health.
- 3) Observe the rules and coexist in harmony with local communities.

rate per one thousand employees, closure of more than 4 days) is far below the average value for all industries combined, as well as the manufacturing industry in Japan. 2005 also saw a decrease in the accident rate.

#### Industrial accident rates in Japan (annual accident rates per one 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.

#### Mental Health Care

Sharp Corporation's comprehensive stress care system aims to prevent and deal with mental illnesses at an early stage. The company has introduced various systems in consideration for employees undergoing work environment changes such as assignment, promotion, transfer not accompanied by family, job transfer, and returning from medical leave. To promote correct awareness of mentally related problems, the company also conducts various training and awareness activities.

In the coming years, Sharp Corporation will carry out periodical mental health checkups for all employees, and promote early discovery of and treatment of mental illnesses through enhancement of self-care as well as early treatment by company health staff.

#### ■ Scope of the Sharp Stress Care System

- Face-to-face counseling with specialist doctors and company counselors at main sites
- Counseling through an outside medical service institute by phone or in-person
- Mental health checkups and counseling for all employees undergoing work environment changes such as personnel relocation accompanied with transfer, transfer not accompanied by family, and promotions
- Distribution of handbooks or manuals on mental health care
- Educational seminars for managers by experts, mental health seminars, awareness activities through provision of information using the intranet
- Support program for employees returning from medical leave that combines the efforts of the company physician and the employees' respective departments

## Health Promotion for Employees and Their Families

Diseases caused by lifestyles and habits have become major social and economic problems. That's why Sharp created Healthy Sharp 21, a comprehensive health-promotion program in Japan to prevent these diseases so that employees and their families can enjoy a healthier, happier life. Healthy Sharp 21 includes voluntary fitness programs that encourage individuals to change their lifestyles and daily habits to prevent these diseases.

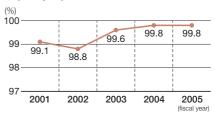
Sharp also gives employees periodic

physical checkups to maintain their health, with 99.8% of all domestic employees undergoing these checkups in fiscal 2005, and follows up on employees screened for further medical examinations through reexamination and health maintenance quidance.

In the future, by widening the target to those who are in risk of suffering from these diseases, Sharp will create programs in Japan to encourage change of lifestyles and habits such as poor diet, lack of exercise

and smoking, and heighten awareness of health self-management.

#### Physical checkup participation rates (in Japan)



#### Information on Web site

http://sharp-world.com/corporate/eco/report2006 Personnel systems and education and training systems Personnel-related data Accident risk management

## 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" around the country as its flagship activity.

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

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

Each site and sales/service base assigns a "promoter" as the leader to play a central role in conducting various community-based activities.

In fiscal 2005, Sharp carried out environmental volunteer activities all over Japan, such as the Wakakusayama Cleanup Campaign in Nara Prefecture and the Nagai Park Cleanup Campaign in Osaka Prefecture, jointly conducted by the Osaka and Nara sites. A total of 27,108 employees, an increase of about 3,000 people over the previous fiscal year, participated in SGC

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

### Cosponsoring the Asian **Pacific Awards**

Sharp cosponsors the Asian Pacific Awards (sponsored by Mainichi Newspapers Co. and Asian Affairs Research Council) to honor distinguished works on topics including politics, economics and culture in the Asia-Pacific region. The commendation ceremony of the 17th Asian Pacific Awards was held in December 2005. Through these awards, Sharp contributes to the stability and development of the Asia-Pacific region.



17th Asian Pacific Awards ceremony

## Creating "Sharp Forests" in Japan

Based on the concept of "Nurturing an environmentally friendly mindset by understanding the link between forests, living things and humans, and deepening bonds with nature," the SGC has plans to create "Sharp Forests" in all prefectures where Sharp's business sites are located. This initiative aims to contribute to the regeneration of forests by planting new trees, as well as foster employees environmental awareness through contact with the natural environment.

Following the tree planting for a Sharp Forest in Hachihonmatsu Yoshikawa in Hiroshima Prefecture in fiscal 2004, the creation of a Sharp Forest in Konoyama in Kishiwada City, Osaka Prefecture started in fiscal 2005, and a total of 1,800 seedlings were planted in



Adopt-a-Forest signing ceremony with Osaka Prefecture and Kishiwada City

## **Approximately 130 Students** Accepted for Internship

Sharp takes part in an internship program in Japan to support college students' career development by giving them on-the-job training. In fiscal 2005, about 80 liberal arts students took part in the business internship programs, while about 50 students took part in the technical internship programs. The students eagerly tackled their assignments at the frontline of business, with guidance, advice and support from Sharp employees.

April 2006. These activities were recognized as the first "Adopt-a-Forest" case initiated by Osaka Prefecture. In May 2006, Sharp announced its participation in the "Mie Prefecture Company Forest Project,"2 becoming the first company to do so.

By fiscal 2007, Sharp plans to create Sharp Forests at 10 locations around Japan.

- \*1 A system to promote protection and regeneration of the natural environment, with Osaka Prefecture acting as a matchmaker for companies that wish to "adopt" a forest.
- \*2 A system in which Mie Prefecture acts as a matchmaker between forest owners and corporations/nonprofit organizations (NPOs) that wish to carry out social contribution activities such as preservation of forests. It aims for the participation of prefectural residents in forestation activities.



Konoyama Sharp Forest tree-planting event

## Leave Systems to Support Social Contribution Activities

To enhance awareness and make it easier for employees to contribute to society and participate in volunteer activities, Sharp introduced the Volunteer Leave System and the Multipurpose Leave System in Japan.

With the Volunteer Leave System, employees can take up to one year off 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 other socially valuable 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).



National Goldfish Scooping Championship held in Yamatokoriyama, Nara Prefecture

## ■ Welcoming corporate facility tours

Sharp's Tokyo Branch hosts science events targeting children during spring and summer holidays. In fiscal 2005, Sharp held programs such as science experiment classes and solar cell seminars, with more than 400 people attending the events

At the Advanced Development & Planning Center in Tenri, Nara, Sharp provides special programs for junior high school students and younger children to tour and experience workplaces. These programs are used in education and career guidance in the schools



Science experiment class held at the Tokyo Branch

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

Since 2003, Sharp has sent employees from its Mie Plant to local senior high schools as lecturers for special science classes. In fiscal 2005, the class theme focused on the theory of LCDs and environmental conservation.

Employees of the Katsuragi Plant in Nara Prefecture delivered lectures at a university in Osaka Prefecture in June and November on the characteristics of solar power systems and environmental contribution.



Special science class held at Mie prefectural Ouka Senior High School

#### ■ Local social contribution activities at each sales and service site

Sharp's sales and service sites across Japan have actively participated in local social contribution activities in their respective neighborhoods, such as cleanups of parks and rivers

In fiscal 2005, a total of about 13,800 people, including Sharp employees, their families and business partners, participated in such activities at 86 sites around the country and deepened exchanges with local communities



Employees from Sharp Tokyo Chuo Building participate in a Taito Ward program to help clean the streets of Tokyo

#### ■ Holding the Wakakusayama Cleanup Campaign annually

To help conserve the environment of Wakakusayama in Nara Prefecture, the Osaka and Nara sites have jointly conducted the Wakakusayama Cleanup Campaign since fiscal 2003

In fiscal 2005, Sharp expanded its conventional cleanup activities into planting licorice, an indigenous vegetation of Wakakusayama. About 1,200 people, including Sharp employees and their families, planted licorice roots.



Wakakusayama Cleanup Campaign

#### ■ Joining wildlife protection group (SUKM, UK)

In December 2005, SUKM became a corporate member of the NWWT\* wildlife protection group in North Wales.

Future NWWT support activities include greening of the company site with wild plants and employees and their families' participation in volunteer activities at NWWTmanaged nature reserves.

\* NWWT: North Wales Wildlife Trust



SUKM receives the corporate membership certificate from the NWWT

#### ■ Participating in Earth Day events (SECL, Canada)

SECL supports the "Ecomentors" education program initiated by the environmental organization Earth Day Canada

On Earth Day in April 2005, SECL along with its employees and their families participated in environmental social contribution activities by planting trees under the Green Team Challenge program sponsored by Earth Day Canada, and by participating in local cleanup events.



Employees and families participate in tree planting

## ■ Supporting Japanese chess (shogi) championship for children in Shanghai (NSEC, SOCC, Shanghai office, China)

Since 2000, Sharp has sponsored the Shanghai Children's Japanese Chess Championship. Some 120,000 children reportedly play Japanese chess in Shanghai and about 2,000 children from approximately 170 elementary schools and junior and senior high schools in Shanghai participated in the championship in 2005. In this way, Sharp supports exchanges between China and Japan.



Awards ceremony for high-ranking winners

#### ■ Hosting environmental classes at local schools (SSI, Indonesia)

SSI hosted environmental classes for local elementary schools in September 2005 and March 2006. SSI employees delivered lectures, while events such as coloring, poem reading and illustration contests were held to raise environmental consciousness.

For hosting the classes, SSI donated garbage cans, fruit trees for planting and cleaning tools to the schools.



SSI's environmental class at a local elementary school



#### Independent Review Report on "Environmental and Social Report 2006"

To the Board of Directors of Sharp Corporation

1. Purpose and Scope of Our Review

We have reviewed "Environmental and Social Report 2006" (the "Report") of Sharp Corporation (the "Company") for the year ended March 31, 2006. Our engagement was designed to report to the Company, based on the results of our review, the credibility of the environmental performance indicators, social performance indicators and environmental accounting indicators (the "Indicators"), for the period from April 1, 2005 to March 31, 2006 included in the Report.

The report, including the identification of material issues is the responsibility of the Company's management. Our responsibility is to independently report the results of our procedures performed on the Indicators.

#### 2. The Standards and the Criteria Used in Our Review

We conducted our review referring to "International Standard on Assurance Engagements 3000 (Revised)" (ISAE 3000) (December 2003) issued by International Federation of Accountants (IFAC), with the criteria which the Company compiled drawing upon references including "Environmental Reporting Guidelines (Fiscal Year 2003 version)" (March2004), "Environmental Accounting Guidelines 2005" (February 2005) issued by Ministry of the Environment, Government of Japan and "Sustainability Reporting Guidelines" (October 2002) issued by Global Reporting Initiative (GRI).

#### 3. Procedures Performed

We have performed the following review procedures;

- With respect to the Company's policies for compilation of the Report, interviewed the Company's responsible personnel.
- Assessed the Company's procedures used for the collecting, compiling and reporting the Indicators.
- 3 With respect to the way of collecting the Indicators and the process flow of calculating them, interviewed the Company's responsible personnel and reviewed the systems and processes used to generate the values of the Indicators.
- Compared the Indicators on a sample basis with the supporting evidences to test the conformity in collection, compilation and reporting the Indicators to the Company's policies and procedures.
- Made on-site inspections of the Company's facilities domestic and overseas.
- 6 Evaluated the overall statement in which the Indicators are expressed.

#### 4. Results of the Procedures Performed

We believe that our review procedures provide a reasonable basis for our conclusion.

As a result of the procedures performed, we are not aware of any material modifications that should be made to the Indicators in the Report in order for them to comply with the Company's policies and procedures for the rational collecting, compiling and reporting such information.

Our firm has no interest in the Company which would have to be disclosed pursuant to the provisions of the Certified Public Accountants Law of Japan.

KPMG AZSA Sustainability Co. Ltd.

KPMG AZSA Sustainability Co., Ltd.

Osaka, Japan May 30th, 2006

# Information on Sharp's Web Site

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

http://sharp-world.com/corporate/eco/report2006

(The contents of the Web site are subject to update, revision and deletion without prior notice.)

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