



## C O N T E N T S

002 | Compiling This Report

## Top Message

003 | Moving Toward an Era of Renewable Energy

005 | Business Philosophy and Business Creed

006 | Corporate Vision

007 | Approach to CSR Activities

## Special Feature

008 | Sharp Makes Solar Power Available to Anyone in the World



## Special Focus

012 | Contribute to the World Through Environment- and Health-Conscious Business, Focusing on Energy-Saving and Energy-Creating Products



014 | Contribute to a Ubiquitous Society with One-of-a-Kind LCDs



## Management

016 | Objectives and Achievements in the Area of Management

017 | Corporate Governance / Internal Control

019 | System to Promote CSR / Risk Management

023 | Compliance

## Sharp and the Environment

028 | Aiming to Contribute to the Environment

029 | Environmental Objectives and Achievements

031 | Mass Balance

032 | Environmental Accounting

## ■ Technologies

033 | Developing Unique Environmental Technologies

## ■ Products

040 | Developing Products and Devices with High Environmental Performance

049 | Expanding the Recycling of Used Products

## ■ Operations

051 | Promoting Environmental Sustainability Management

054 | Raising the Level of Environmental Performance in Factories

058 | Improving the Level of Environmental Performance of Offices

060 | Curbing Greenhouse Gas Emissions

062 | Minimizing and Recycling Waste

064 | Effectively Using Water Resources

065 | Effectively Managing Chemicals Used in Factories

067 | Reducing Environmental Impacts in Distribution and Packaging

## ■ Relationships

070 | Promoting Environmental Communication

## ■ Biodiversity Protection

071 | Protecting Biodiversity

073 | Boundary of Environmental Performance Data, Calculation Standards for Environmental Performance Indices

## Sharp and Society

076 | Objectives and Achievements in the Social Dimension of CSR

## ■ For Customers

079 | Offering Products and Services That Deliver Peace of Mind and Satisfaction

## ■ For Business Partners

086 | Mutual Prosperity with Suppliers and Dealers

## ■ For Shareholders and Investors

090 | Appropriate Return of Profits and Information Disclosure

## ■ For Employees

092 | Creating a Fair, Positive, and Progressive Workplace

## ■ For Local Communities

101 | Social Contribution Activities as a Corporate Citizen

107 | Honors from Third Parties

109 | Outline of the Sharp Group

111 | English Translation of the Independent Assurance Report

## About the Cover



Artist's rendering of a mega solar power generation plant in Thailand that Sharp is building jointly with local construction companies. The plant on 190 hectares of land will have a capacity of 73 MW, one of the largest in the world. See page 11 for details.

## ■ Sharp Environmental and Social Report 2011, and System for Information Disclosure


Information on Sharp's efforts toward corporate social responsibility (CSR), particularly the environmental and social dimensions of CSR is made available in the following three formats to meet the needs of various stakeholders.

### Annual Environmental and Social Report, Highlights Version

This report outlines the highlights of Sharp's CSR efforts during fiscal 2010 in a highly readable, easy-to-understand way, and is available on the Sharp website as a downloadable PDF file.

### Annual Environmental and Social Report This report

This report on Sharp's fiscal 2010 CSR efforts presents special information in sections called Special Feature and Special Focus; detailed information in three sections called Management, Sharp and the Environment, and Sharp and Society; and a variety of related data. It is available as a PDF file and e-book on the Sharp website.

Relevant information posted to the Sharp website is indicated by this  icon.

### Website

The Sharp website will be redesigned to make browsing smoother and provide better access to this report document, supplementary data, and the latest information.

Sharp Social & Environmental Activities website  
<http://sharp-world.com/corporate/eco/>

## ■ Period and Items Covered

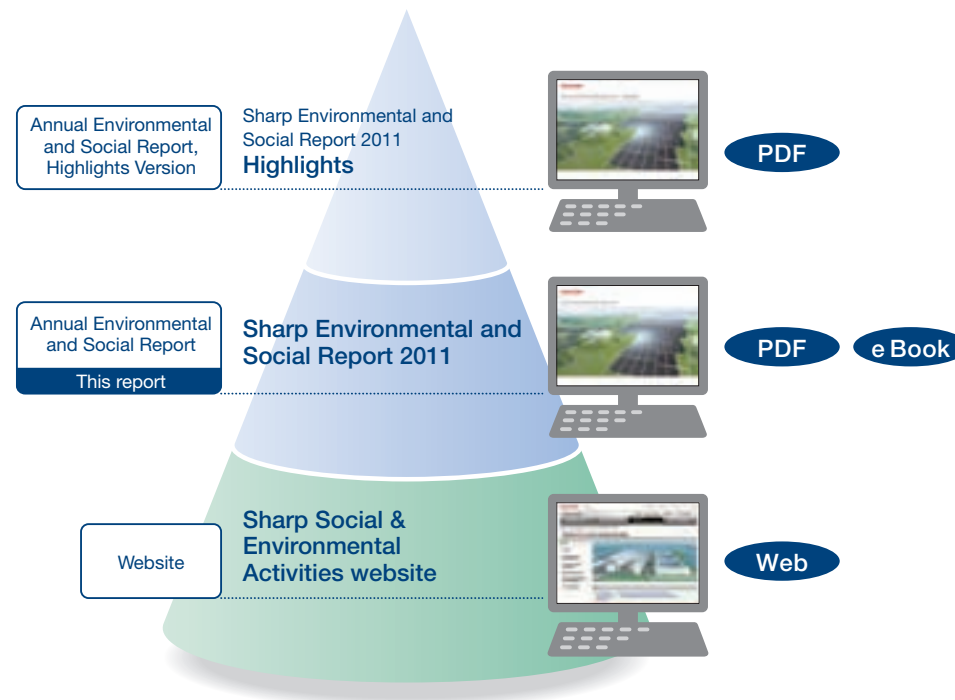
### Period covered:

Fiscal 2010 (April 2010 to March 2011)  
 However, some actual facts prior to and after this period, as well as subsequent policies, objectives, and plans are also included.

### Coverage:


Sharp Corporation, along with its domestic and overseas subsidiaries and affiliates.  
 See page 73 for the boundary of environmental performance data and pages 74 and 75 for the calculation standards for environmental performance indices.

The names of overseas subsidiaries and affiliates are denoted with acronyms, such as SEC. For a list of the full name of subsidiaries and affiliates see page 73.



## ■ Referenced Guidelines

- Environmental Reporting Guidelines (2007 Version), Ministry of the Environment, Japan
- Sustainability Reporting Guidelines Version 3.1 (2011, Japanese), Global Reporting Initiative (GRI)
- Environmental Accounting Guidelines 2005, Ministry of the Environment, Japan

 Environmental Reporting Guidelines content index, GRI content index

## ■ Scheduled Publication Date for Next Report

September 2012 (published annually since 1999)

## ■ Inquiries

**Sharp Corporation**  
 22-22 Nagaike-cho, Abeno-ku, Osaka 545-8522, Japan  
 E-mail: [eco-info@sharp.co.jp](mailto:eco-info@sharp.co.jp)

**Environmental Planning Department, Environmental Protection Group**  
 Tel: +81-6-6625-0438 Fax: +81-6-6625-0153

**Planning Department, CSR Promotion Division, CSR Promotion Group**  
 Tel: +81-6-6625-1167 Fax: +81-6-6625-1274

## Moving Toward an Era of Renewable Energy, Sharp Is Working Globally to Strengthen Its Position as a Total Solar Energy Solutions Company and Manufacturer of Energy-Efficient Products

One of the world's largest mega solar power generation plants under construction in Thailand (artist's rendering)



Katsuhiko Machida Chairman  
Mikio Katayama President (right)

First of all, we would like to express our deepest sympathy to those who have suffered from the devastating impact of the Great East Japan Earthquake of March 11, 2011. Sharp is committed to doing as much as it can to help bring about the earliest possible recovery of the disaster-hit areas.

### Sharp Corporation Today, Built on the Experience of the Great Kanto Earthquake

The catalyst for Sharp Corporation to move forward in its electronics business was the Great Kanto Earthquake of 1923. Sharp Corporation founder Tokuji Hayakawa, who had started his own business in Tokyo in 1912 at the age of 19, invented the Ever-Ready Sharp Pencil (called the “Sharp pencil” in Japan today) in 1915 based on his knowledge of metalworking. His business was going well, with volume orders coming in from overseas. Then, on September 1, 1923, the Great Kanto Earthquake hit Tokyo. He lost the pencil factory to fire. Much worse, he also lost his beloved wife and their two sons.

Determined to rise again, Hayakawa moved to Osaka, about 400 kilometers west of Tokyo, and used his experience in working with metal to develop a crystal radio set. The product succeeded in its first commercial introduction in Japan. His company then developed other products, such as Japan's first television set and the world's first all-transistor-diode electronic calculator. Sharp grew to become a manufacturer of a full range of electronic products.

### Approaching Its 100-Year Anniversary, Sharp Is Working Hard to Realize Its Visions

Sharp will celebrate its 100-year anniversary next year. The spirit of its founder, who was able to

rise up in the face of adversity by challenging himself with a new goal, became a key to Sharp's corporate culture and has been passed along ever since. At Sharp, we consider environmental change to be a new opportunity for innovation and we are pioneering efforts for the next era—starting with transforming ourselves.

Last year, Sharp adopted the concept of becoming an “Eco-Positive Company” as its new corporate vision. An “Eco-Positive Company” is a company that works with all stakeholders in creating solutions that have significantly more positive impact on the environment than the negative impact caused by company operations.

Sharp also developed two business visions to help support its new corporate vision. The first is to “Contribute to the world through environment- and health-conscious businesses, focusing on energy-saving and energy-creating products”. The second is to “Contribute to a ubiquitous society with one-of-a-kind LCDs.”

In response to problems arising from this year's earthquake and subsequent accident at a nuclear power plant, the expectations for solar power generation and renewable energies have increased, and the need for energy saving in our daily lives as well as in business has become more important than ever.

Sharp believes making further efforts to realize these visions will help lead the way to an early recovery of the disaster-hit areas, stimulate growth in Japan, and contribute to the world.

### Moving Forward Globally as a Total Solar Energy Solutions Company

In response to increasing worldwide demand, Sharp has been developing its total solutions business related to solar energy in various parts of the world.

Sharp received an order from one of Thailand's independent power producers, NED (Natural Energy Development Co., Ltd.), to build one of the world's largest mega solar power generation plants with a capacity of 73 megawatts. Sharp is working on the project in cooperation with ITD (Italian-Thai Development Public Co., Ltd.) and ITE (ITALTHAI Engineering Co., Ltd.), Thailand's largest construction companies, with the goal of starting operations by the end of this year.

With an eye to starting an independent power producer business in Europe using solar power, Sharp established the joint venture company ESSE (Enel Green Power & Sharp Solar Energy S.r.l.) in July 2010 with Enel Green Power, a group company of Enel Corporation, the largest electric power company in Italy. ESSE's first solar power generation plant was completed in March 2011 in southern Italy, and the power generation business has begun. Sharp is also planning to build multiple solar power generation plants, with a total capacity of more than 500 megawatts, by the end of 2016 and to develop power generation businesses in Europe, the Middle East, and Africa, focusing on the Mediterranean region.

The solar cells to be used in these power plants will be supplied by a thin-film solar cell plant in Italy. Production at the plant will be carried out by a joint venture that was established in July 2010 between Sharp, Enel Green Power, and STMicroelectronics. The thin-film solar cell plant is planning to start mass production later this year.

In the North American market, last year Sharp acquired Recurrent Energy, LLC, an American developer and operator of solar power generation plants. Sharp is planning to advance the business by developing mega solar power generation plants.

The key factor to growth in solar power generation is to achieve grid parity (where solar power generation costs are equal to conventional power generation). For Japan, it is predicted that technological innovations will make it possible within several years to replace conventional power generation for general households with solar power generation, without raising electricity costs.

Sharp will increase its solutions capability by expanding business throughout the value chain to include the development and production of materials, cells, and modules for solar panels, system design, construction of mega solar power generation plants as well as an independent power producer business. Further, Sharp is aiming to help usher in the era of renewable energy by contributing to the achievement of grid parity worldwide.

### Sharp Expects to Achieve Its Fiscal 2012 Corporate Vision Goal One Year Ahead of Schedule

In addition to energy-creating efforts through its solar power business, Sharp is developing and promoting energy-saving products, such as LCD TVs, LED lighting, air conditioners, refrigerators, and digital MFPs.

Considering the limits of fossil fuels, renewable energy like solar power and energy-saving products are essential for future growth, especially for newly emerging economies and developing countries where energy resources are insufficient. To this end, Sharp is advancing a locally self-sufficient production system of "local production for local consumption" for both solar power generation and energy-saving products.

As a result of Sharp's global operations for promoting energy-creating and energy-saving products, Sharp forecasts that in fiscal 2011 it will achieve its fiscal 2012 goal for reducing greenhouse gas emissions. Sharp will reach this goal—the most important goal for realizing the corporate vision—a year early. Reaching this goal means that the reduction in emissions resulting from customers using Sharp's energy-creating and energy-saving products will be more than double the total greenhouse gas emissions from Sharp's business activities.

Sharp's efforts, based on its corporate vision of becoming an "Eco-Positive Company", have spread throughout the entire Sharp Group and have led to reductions and prevention of greenhouse gas emissions, waste, and other environmental burdens. Environmental awareness among employees has risen as well as a result of progress made, in every area of the world that Sharp operates, in activities designed to contribute to the environment and society.

### Sharp Is Contributing to the Sustainable Development of Society by Creating New Value and Utilizing Management Resources, Based on Its Business Philosophy and Business Creed of "Sincerity and Creativity"

As the international community and the world economy continue to change and shift away from traditional frameworks, Sharp is operating more globally than ever. Sharp is aware that there are growing expectations for its corporate activities to contribute to solutions for issues that are important to the international community, such as protecting the global environment, respecting human rights and equality, and providing opportunities for primary education.


Based on its business philosophy and its business creed of "Sincerity and Creativity," Sharp will continue striving to create new value by developing proprietary technologies and one-of-a-kind products and devices. And Sharp will further contribute to the sustainable development of society by working to help resolve the previously mentioned societal issues through utilizing management resources that include an employee-diversity strategy and activities to support education.

As a participant in the United Nations Global Compact since 2009, Sharp continues to support the Compact's 10 principles regarding human rights, labour, the environment, and anti-corruption. Sharp will fulfill its social responsibility by continuing to make further efforts in each area, so that it can gain trust from all of its stakeholders, including consumers, shareholders, investors, business partners, suppliers, employees, and local communities.

Sharp will continue to make efforts for transparency, disclosing information about its business operations and sharing stakeholders' valuable opinions with management. We look forward to hearing your candid opinions.

July 2011

Chairman  
Katsuhiko Machida



President  
Mikio Katayama



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

## 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.

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

In 1973, Sharp clarified the unchanging spirit of its founder in the company’s business philosophy and business creed. The business philosophy states that Sharp aims for mutual prosperity with society and 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.

The goal that Sharp aims at through its CSR efforts is nothing less than realizing the business philosophy through its business activities, as well as through social contribution activities with a primary focus on these business activities. As it strives to create new value by proposing one-of-a-kind products and new lifestyles—calling upon the “gene of creativity” endowed from its founder—and as it fulfills its social responsibility, notably in the environmental and social areas, Sharp will act with sincerity so that it can continue to be a corporation that is trusted by all.

\* Corporate social responsibility

## 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.

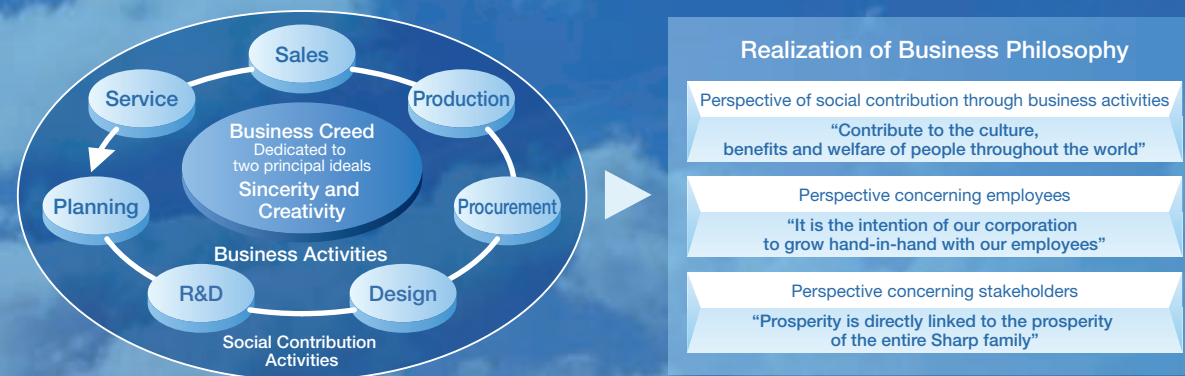
Harmony brings strength ... trust each other and work together.

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



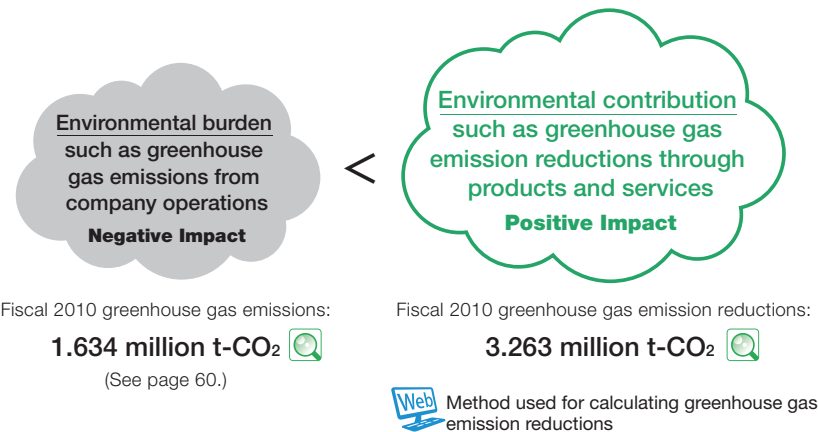
- The business creed is the central axis of all business activities.
- “Sincerity” means a working attitude mindful of what will offer genuinely useful solutions and happiness to everyone.
- “Creativity” means a working attitude not content with the way things are. An attitude which always seeks to add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

# Corporate Vision: Eco-Positive Company

Looking ahead to the year 2012, the 100th anniversary of its founding, Sharp has set two business visions. One is “Contribute to the world through environment- and health-conscious business, focusing on energy-saving and energy-creating products.” The other is “Contribute to a ubiquitous society\* with one-of-a-kind LCDs.” The aim of both of these visions is to contribute to the next generation by using the proprietary technologies that Sharp has built up over many years of development. Through actions geared towards achieving these visions—indeed through everything that Sharp does—Sharp is striving to become an Eco-Positive Company, its corporate vision.

\* A “ubiquitous society” refers to how the whole of society will be connected through the rapid development of IT infrastructure and how networks will always be accessible to users.

## ■ Corporate Vision: Eco-Positive Company



## What's an Eco-Positive Company?

By “Eco-Positive Company,” Sharp means a company that works with all stakeholders in creating solutions that have significantly more positive impact on the environment than the negative impact caused by company operations.

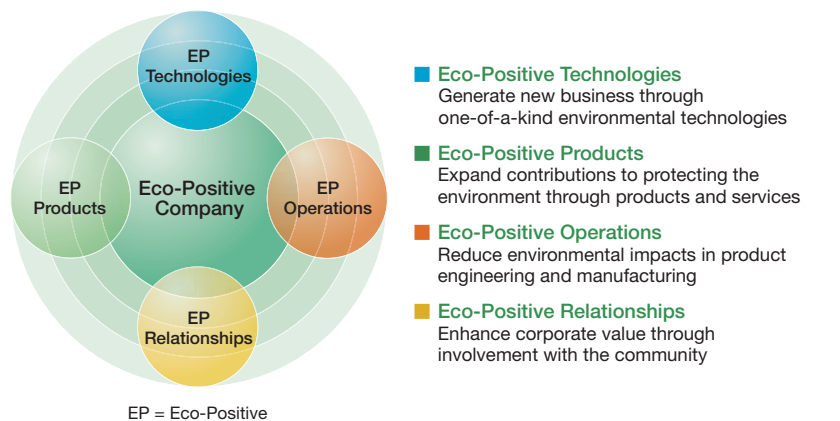
A particular focus is the reduction of greenhouse gas emissions. By fiscal 2012, Sharp’s goal is to have emission reductions that result from customer use of Sharp energy-creating and energy-saving products be more than double the total greenhouse gas emissions from business activities. To this end, Sharp is developing and promoting the use of solar cells and energy-saving products as well as reducing its emissions.

In fiscal 2010, Sharp emitted 1.634 million t-CO<sub>2</sub>, but use of Sharp energy-creating and energy-saving products contributed to emission reductions of 3.263 million t-CO<sub>2</sub>, approximately 1.9 times the amount of Sharp’s emissions. We expect to achieve our goal of having emission reductions be more than double our greenhouse gas emissions in fiscal 2011, one year earlier than initially planned.



Kenji Ohta  
Representative Director  
Executive Vice President  
Sharp Corporation

## ■ The Four Aspects of the Eco-Positive Strategy



## Eco-Positive Strategy

Sharp is striving to realize its corporate vision by carrying out its Eco-Positive Strategy worldwide. Under this strategy, Sharp is pursuing environmental efforts from four aspects (see diagram to the left). We are placing particular emphasis in the areas of products and factories, since these have a direct effect on reducing greenhouse gas emissions. Both products and factories are certified if they pass assessments based on Sharp in-house standards. These assessments have been carried out ever since the Kameyama Plant started operations in fiscal 2003, and their stimulation of competition among Sharp divisions has resulted in great success.

The benefits of our Eco-Positive Strategy go beyond Sharp’s environmental divisions. All divisions in and outside Japan—including product development and manufacturing divisions, as well as indirectly related divisions covering sales, personnel, accounting, and more—are setting goals that will make environmental contributions, and this group-wide effort has boosted not just the reduction of greenhouse gases but also Sharp’s total positive environmental impact.

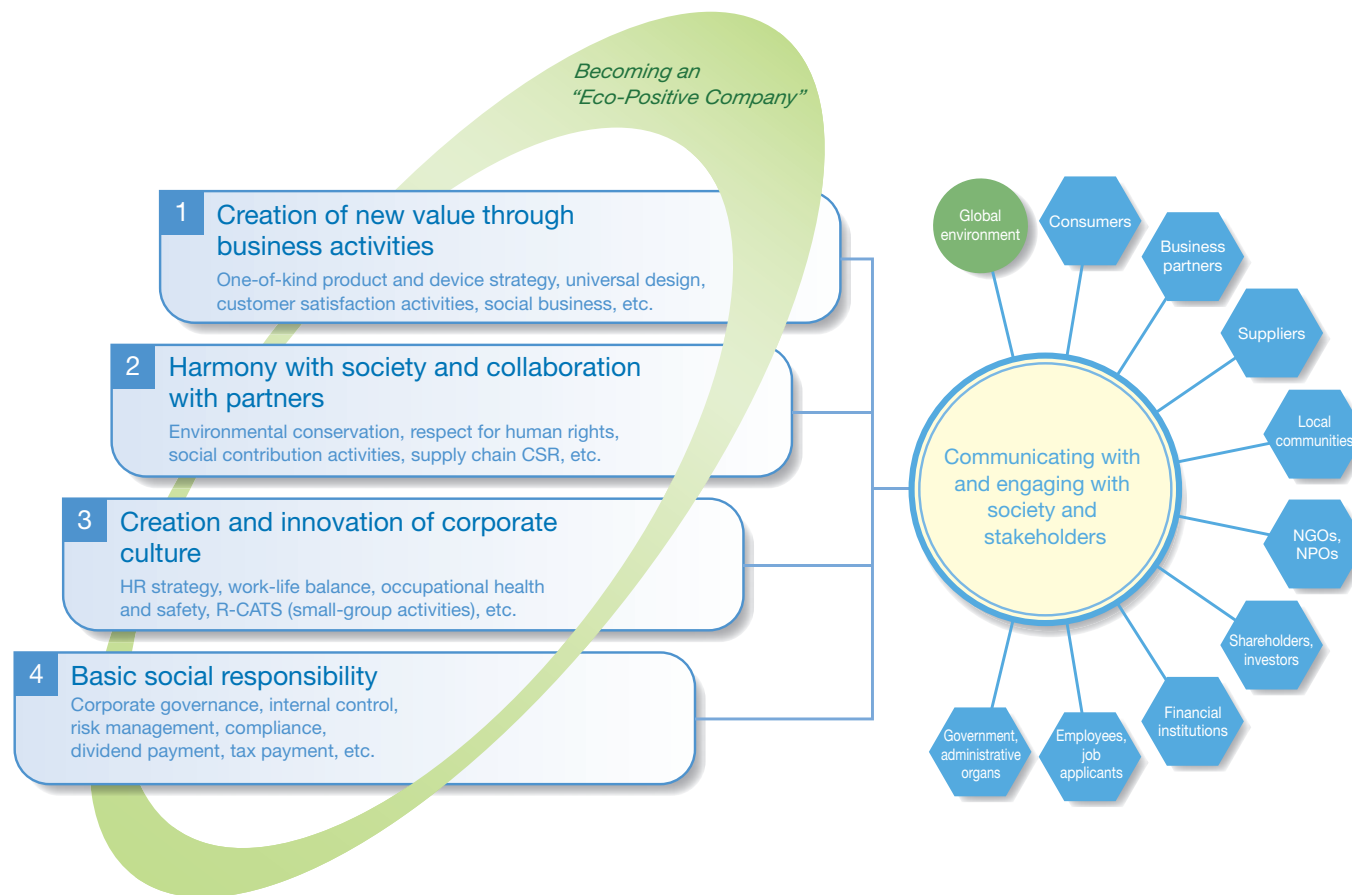


Hiroshi Morimoto  
Executive Officer  
Group General Manager  
Environmental Protection Group  
Sharp Corporation

# Approach to CSR Activities

CSR efforts range widely in the relationship between all business processes of Sharp and its stakeholders. Having sorted its activities into four large categories, Sharp pursues them by overseeing and ensuring well-balanced progression among the activities and the categories, while also communicating with and engaging with society and stakeholders.

Sharp also advances the activities in each category from the standpoint of putting into practice its corporate vision of becoming an "Eco-Positive Company."



## Sharp Will Actively Promote CSR Activities Amid a Changing Environment

With growing environmental problems, economic globalization, and disasters like the recent unprecedented earthquake, the situation surrounding businesses nowadays is becoming increasingly diverse and complex.

Against this background, I believe that the key to achieving sustainable development in unison with society is for a company always to be thinking about—and steadily taking action on—CSR in the conduct of its business activities.

The introduction and revision of guidelines pertaining to CSR and the establishment of laws affecting the promotion of CSR have been expanding on a global basis. In November 2010, ISO 26000\*1 went into effect; in May 2011, an update to the OECD\*2 Guidelines for Multinational Enterprises was adopted; and this year the conflict minerals provision of the Dodd-Frank Wall Street Reform and Consumer Protection Act in the United States is scheduled to go into effect.

CSR efforts encompass a diverse range of activities. Taking into account the aforementioned global situation and the opinions of the general public and stakeholders, Sharp will continue to actively carry out its CSR efforts by having all relevant divisions work closely together and act based on our business philosophy, business creed, and our corporate vision of becoming an "Eco-Positive Company."



**Kazutoshi Goto**  
Executive Officer  
Group General Manager  
CSR Promotion Group  
Sharp Corporation

\*1 ISO 26000: An international standard providing guidelines for social responsibility

\*2 OECD: Organisation for Economic Co-operation and Development; currently 30 member countries



As With Electronic Calculators and LCDs


# Sharp Makes Solar Power Available to Anyone in the World

In 1964, Sharp commercialized one of the world's first all-transistor-diode electronic calculators, and in 1973, embedded for the first time in the world an LCD in a pocket calculator. For both the calculator and the LCD, technological innovations led to improved performance and lower costs, and their use spread around the globe. Now, looking ahead to the coming era of renewable energy, Sharp is putting its full efforts behind initiatives to enable anyone around the world to use and enjoy the benefits of solar-generated electric power.



The state-of-the-art thin-film solar cell plant, operated by 3Sun S.r.l.

## Inauguration Ceremony Held at Italy's Largest Solar Cell Plant

 Inauguration ceremony held

On July 8, 2011, the inauguration ceremony was held in Catania, Italy, for a state-of-the-art thin-film solar cell plant to be operated by 3Sun S.r.l., (hereinafter: 3Sun) a joint venture of Sharp Corporation, Enel Green Power\* (hereinafter: EGP), and STMicroelectronics (hereinafter: ST).

The inauguration ceremony was attended by Raffaele Lombardo, President of Sicily Region, Giuseppe Castiglione, President of the Province of Catania, and Raffaele Stancanelli, Mayor of the City of Catania, as well as executives of Sharp Corporation, Enel, EGP, ST, and 3Sun.

Production capacity in the first phase of operation of this plant is set at 160 MW annually, and plans call for it to expand to 480 MW within the next few years. This thin-film solar cell plant is the largest in Italy and one of the largest in Europe.

Sharp's concept is to contribute to the full-fledged adoption of solar power by moving into the total solutions business for solar-generated electric power—from development and production of solar cells to the design of solar power systems, construction and maintenance of solar power generation plants, and even becoming an independent power producer. This plant plays an important role as one part of this concept.

Over the years, Sharp has taken the lead in developing and broadening the use of products that will be in demand in the coming era. Before introducing Sharp's solar power initiatives, the following pages will provide a brief introduction to the electronic calculator and LCD as examples of successful Sharp business enterprises.

\* Enel Green Power, S.p.A. is a member of the Enel Group of companies, Italy's largest power utility, and develops renewable energy power generation projects in Italy and worldwide.



Ribbon-cutting at the inauguration ceremony



Plant location in Catania on the island of Sicily



Greetings from Sharp Chairman Katsuhiko Machida



Press conference for media in attendance

Special Feature



Commemorative plaque from the IEEE (in background) and Sharp electronic calculators recognized as an IEEE Milestone for innovations in size and power-consumption reduction (From left) CS-10A all-transistor-diode calculator, CS-16A IC calculator, QT-8D LSI calculator, and EL-805 LCD pocket calculator

\*1 The IEEE ("I-triple-E") is the world's largest academic society of electrical and electronics engineers, with headquarters in the US. Through its more than 395,000 members worldwide, the IEEE plays a leading role in technical areas ranging from computing, electronics, and telecommunications to electric power, aerospace engineering, and biomedical technology.

\*2 IEEE Milestone: The IEEE established the IEEE Milestone program in 1983 to honor historic achievements—among significant innovations made in the fields of electrical, electronics, information, and telecommunications engineering—that have been recognized as having contributed to the betterment of society and the advancement of industry. Currently there are approximately 110 Milestones around the world, including Volta's Electrical Battery Invention and the Fleming Valve. In Japan, there are 14 Milestones including Sharp's Electronic Calculator (2005), Sharp's Solar Cell (2010), the Directive Short Wave ("Yagi") Antenna (1995), the Tokaido Shinkansen ("Bullet Train") (2000), the Electronic Quartz Wristwatch (2004), and the Kurobe River No. 4 Hydropower Plant (2010).



**EL-805 LCD Pocket Calculator (1973)**  
Up to 100 hours of use on a single AA battery. Integrating an LCD, LSI/IC chips, and circuit wiring onto a single glass substrate shrunk the size considerably.

■ Comparison of Sharp's First Electronic Calculator (1964) and LCD Calculator (1973)

Model	CS-10A, Sharp's first electronic calculator	EL-805 LCD calculator	Ratio
Outstanding feature	One of the world's first all-transistor-diode electronic calculators	World's first LCD pocket calculator	
Year of introduction	1964	1973	
Size (W x D x H)	420 x 440 x 250 mm	78 x 118 x 20 mm	Thickness: 13:1
Weight	25 kg	195 g	125:1
Number of basic components	Transistors: 530 Diodes: 2,300	LSI: 1 ICs: 2	
Power consumption	90 W	0.02 W	4,500:1
Price	535,000 yen	26,800 yen	20:1

Developing a Calculator That Anyone Could Use, Anytime, Anywhere, Plus Realizing the Dream of a Wall-Mountable TV

In 1960, over half a century ago, Sharp seized on a voluntary proposal from some of its young engineers as an opportunity to launch the development of a calculator that could be used by anyone, anytime, anywhere.

After a great deal of trial and error, Sharp commercialized one of the world's first all-transistor-diode electronic desktop calculators in 1964, followed by the commercial introduction of the world's first IC/LSI-based calculator (1967/1969) and the LCD pocket calculator (1973).

These innovative initiatives to shrink the size of the calculator and to reduce its power consumption made it possible for the use of calculators to spread around the world, and the technologies established over the course of their development contributed greatly to the subsequent development of the global electronics industry. In December 2005, Sharp's pioneering development of the calculator was recognized by a prestigious IEEE\*1 Milestone\*2 from the IEEE, the world's largest academic society for electrical, electronics, information, and telecommunications engineering.

The adoption of an LCD as the screen display accelerated the evolution of the pocket calculator away from desktop models. In addition, the subsequent development of LCD technologies and applications led to these displays being used even more widely in products such as information devices, audio/video equipment and communication appliances.

Even as they moved ahead with these developments, Sharp engineers remained committed to achieving the dream of developing a wall-mount LCD TV, and thanks to a persistent focus on technological innovation, that dream has become a reality. As developers and manufacturers, including Sharp, compete in technological innovations, LCD TVs, like the calculator, are becoming increasingly affordable as well as featuring remarkable improvements in picture quality, lighter weight, thinner profiles, and greater energy efficiency. Today, they have become products used by people the world over.

■ Comparison of CRT TV (2000) and LCD TV (2001, 2011)



(Comparison of models for the Japanese market)

Model	32C-HE1 CRT TV	LC-30BV3 LCD TV	LC-32V5 LCD TV
Screen size	32-inch	30-inch	32-inch
Date of introduction	September 2000	November 2001	March 2011
Size (W x D x H)	99.9 x 55.3 x 54.9 cm	100.2 x 9.6 x 49.7 cm	77.4 x 6.0 x 49.2 cm
Weight (approx.)	63 kg	18 kg	9 kg
Power consumption	224 W	154 W	74 W

Note: LC-30BV3 LCD TV dimensions and weight refer to the display area with detachable speakers in place. LC-32V5 LCD TV dimensions and weight refer to the display area and built-in speakers.

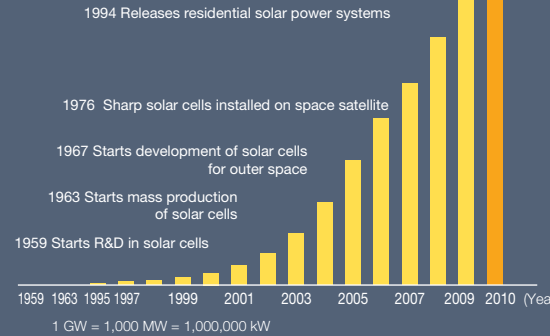


Lighthouse on Ogami Island, Nagasaki Prefecture, Japan (Photo: Japan Coast Guard)

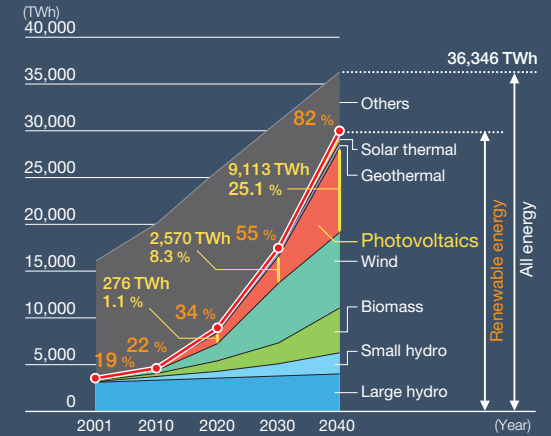
Ume application satellite (launched in 1976) (Photo: JAXA [Japan Aerospace Exploration Agency])

■ Sharp's Cumulative Solar Cell Production Volume  
Total approx. 4.3 GW

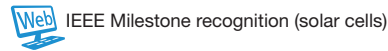
2010 Starts operation of solar cell plant at GREEN FRONT SAKAI  
2005 Starts mass production of thin-film solar cells



■ Forecast for World Electricity Demand



Commemorative plaque from the IEEE (behind) and (from left) two monocrystalline solar modules for lighthouses (installed on the Ogami Island Lighthouse in 1966 and 1978), a monocrystalline solar cell for outer space (installed on the Ume application satellite in 1976), and a residential-use polycrystalline solar cell



Generating Electricity from the Unlimited Light of the Sun

Sharp's research on solar cells started 52 years ago in 1959. From the very beginning, Tokuji Hayakawa, Sharp's founder, stepped into the laboratory and expressed strong interest in the research. His ideas were presented in his writings. "If we could find a way of generating electricity from limitless solar heat and light, that would benefit humankind to an extent we can scarcely imagine..." (from his autobiography, 1970). When speaking about technologies of the future, Hayakawa always touched on solar cells first.

Under Hayakawa's vision, R&D into solar cells made steady progress, and in 1963, Sharp succeeded in mass producing monocrystalline solar cells. However, they were expensive at the time, and their main application was as a stand-alone source of power in places where the electric power grid did not reach, for example, remote lighthouses. In 1966, Sharp delivered to the Maritime Safety Agency of Japan (now the Japan Coast Guard) what was then the world's largest solar power system for lighthouses, which was installed at a lighthouse on Ogami Island in Nagasaki Prefecture. Then, in 1976, Sharp solar cells were installed on Ume, Japan's first application satellite. To the present, Sharp solar cells have been in use on more than 160 space satellites and at lighthouses in more than 2,500 locations.

Sharp solar cells have proven their reliability in harsh environments such as on lighthouses exposed to intense wind and rain, and in outer space with its extreme temperature variations. Since then, this technology has found widespread application, such as in the development of residential solar power systems, and is now playing an active role throughout the world.

Following previous recognition of its pioneering development of the electronic calculator, Sharp's achievements in the commercialization and industrialization of solar cells were recognized as an IEEE Milestone from the IEEE in April 2010.

Toward Achieving Grid Parity

As a result of these efforts spanning more than half a century, Sharp's cumulative production of solar cells reached 4.3 GW (gigawatts) by the end of 2010. This would be enough to power more than one million homes if each house were equipped with a 4-kW residential solar power system.

For medium- to long-term demand for solar power, according to a forecast for global electricity demand (see graph above) by the EREC (European Renewable Energy Council), it is assumed that photovoltaic power generation will continue to expand globally and account for 25.1% of the total demand for electricity worldwide in the year 2040.

However, reaching grid parity—the point at which the cost of photovoltaic electricity is equal to or less expensive than existing grid power—will be absolutely essential to bring about the widespread use of solar power.

In R&D of solar cells spanning more than 50 years, Sharp has consistently taken up the challenge to reduce costs. Sharp has increased the conversion efficiency of crystalline solar cells, reduced the thickness of the silicon used, and tackled innovations in production technology. Sharp has also been conducting R&D on thin-film solar cells which use less silicon and require fewer steps in the production process, and which offer ample room for reducing costs.

The high conversion efficiency of crystalline solar cells makes them ideal for residential applications where installation space is limited. At the same time, thin-film solar cells suffer less of a decline in conversion efficiency at high temperatures, and are ideally suited for large-scale power generation systems in climates with high ambient temperatures. By taking full advantage of the respective properties of these two types of solar cells, Sharp is aiming to reach grid parity at the earliest possible date.



**Artist's Rendering of a 73 MW Mega Solar Power Plant in Thailand—One of the Largest in the World**

Sharp received an order from NED, one of Thailand's independent power producers to build one of the world's largest solar power generation plants with a capacity of 73 MW. Sharp is collaborating on the design and construction with ITD and ITE, the largest construction companies in Thailand, and is supplying thin-film solar cell modules and surrounding systems for the plant. Construction is moving ahead with the goal of starting activity within this year.

- Company name: NED (Natural Energy Development Co., Ltd.)
- Area: 190 ha (1.9 km<sup>2</sup>)
- Power generation capacity: 73 MW
- Details of the system: Thin-film solar cells, inverter, mounting, etc.
- Start of operation: By the end of 2011
- Location: Lop Buri Province, Thailand



Solar cell plant at GREEN FRONT SAKAI

**Bringing Solar Power to People Around the World**

Sharp's newly constructed solar cell plant at GREEN FRONT SAKAI has been producing thin-film solar cells since last year, and in March of this year, started production of new high-efficiency monocrystalline solar cells. In the future, Sharp's idea is to develop production facilities in regional markets around the world according to local demand, with this plant serving as the core "mother plant."

In addition, Sharp is promoting its total solutions business around the world along the entire value chain—from the materials for solar cells, to the development and production of solar modules, to system design, to the construction of mega solar power plants, and even to being an independent power producer.

In July 2010 in Europe, Sharp established a joint venture with EGP to develop a solar independent power producer project. Power generating operations already began in March of this year. By the end of 2016, Sharp will be constructing several more solar power plants with a total generating capacity of more than 500 MW, and has plans to expand its power generation business in Europe, the Middle East, and Africa, particularly in the Mediterranean region. Sharp will produce the solar cells to be installed at these solar power plants at its thin-film solar cell plant in Italy mentioned on page 8.

In addition to the challenges of innovation, Sharp will be expanding its solar power business based on the policy of "local production for local consumption," working in collaboration with leading companies in regions around the world. By increasing our knowledge through our experience as a total solutions company, Sharp will contribute to achieving grid parity worldwide.



**Tetsuo Onishi**  
Executive Managing Officer  
General Manager  
Solar Business  
Group General Manager  
Solar Systems Group  
Sharp Corporation

Sharp will be making every effort to ensure that solar power is widely available so that anyone around the world can take advantage of its use and enjoy its benefits.

# Contribute to the World Through Environment- and Health-Conscious Business, Focusing on Energy-Saving and Energy-Creating Products

One of Sharp's business visions is "Contribute to the world through environment- and health- conscious business, focusing on energy-saving and energy-creating products." Under this vision, Sharp aims to contribute to the welfare of people throughout the world by protecting the Earth's environment and offering people a healthy lifestyle.

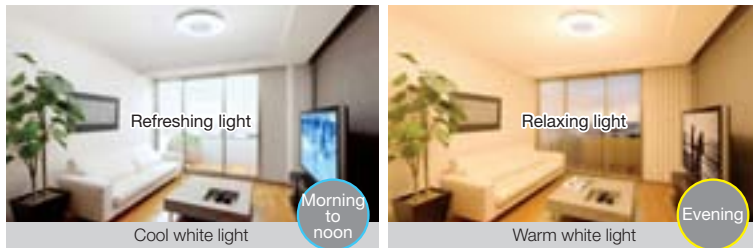
## Creating New Health- and Environment-Friendly Lighting

Efforts to curb global warming and protect the environment are being conducted worldwide. A key to these efforts is the adoption of environmentally friendly LED lighting to take the place of conventional incandescent and fluorescent lighting. Along with energy-creating solar cells, LED is a focus of attention for its energy efficiency, long life, mercury-free construction, and almost complete absence of ultraviolet ray emissions.

Sharp has been developing LED for 43 years. Using one-of-a-kind technologies like planar lighting and dimming algorithms, Sharp began its entry into commercial LED lighting in 2007 with the introduction of a solar-powered LED light. In 2009, it created the stimulus for expansion of LED lighting in the Japanese market with the release of home LED lamps. With further releases, like LED ceiling lights in 2010, Sharp began to expand its lineup of commercial and residential products and became one of the pioneers of the LED lighting industry—all while aiming to contribute to society by offering consumers new value unique to LED lighting.

The solar-powered LED light can keep on shining in the event of a power failure brought on by an earthquake or typhoon, so it helps prevent crime and ensure safety on a local level.

Sharp's LED ceiling lights incorporate the Eco Light Rhythm\*1 function for automatically adjusting the color and brightness of the light. This technology was jointly developed with Nara Women's University.



The Eco Light Rhythm function is a lighting program that makes automatic color and brightness adjustments throughout the day to provide lighting similar to natural sunlight. It enhances the user's lifestyle rhythms while reducing excess brightness and enables the user to save energy without being aware of it. It reduces energy consumption from lighting by up to 65%,\*2 compared to when lights are fully on at all times, thus contributing to reducing overall energy consumption in the home.

Sharp will continue seeking new possibilities for LED in order to meet people's needs to save energy and contribute to the creation of a society where people can live in a healthy environment.

\*1 Incorporated in Sharp's color and brightness adjustable models DL-C601V/C501V/C301V/C302V (as of June 2011).  
\*2 When the three eco-functions (Eco Light Rhythm, Eco Dimmer, and Eco Sensor) are turned on versus turned off.



## Basic Features of LED Lighting

- Energy efficiency**  
Energy consumption is dramatically less than incandescent or fluorescent lighting.
- Immediate brightness**  
Because LED is a semiconductor, it's bright the instant you turn it on.
- Mercury free**  
Because LED lighting generates light in a completely different way than fluorescent lights, it uses no mercury, an environmentally hazardous substance.
- Doesn't easily attract insects**  
Because LED emits minimal ultraviolet light, it doesn't easily attract insects. This means easier cleaning of light fixtures and enduring cleanliness.
- Long life**  
Because they're designed to last 40,000 hours\*3, LED lights require minimal maintenance.
- Low ultraviolet and infrared ray emissions**  
Because LED emits almost no light outside the visible spectrum, there is minimal color fading from ultraviolet light and heat generated from infrared light.
- Withstands repeated on/off switching**  
Even frequent switching of the light on and off will not shorten the life of the LED.
- Low CO2 emissions**  
LED consumes minimal electricity and so results in lower CO2 emissions.

\*3 Design life of 60,000 hours for LED security lights, LED canopy lights, and LED yard lights, and 25,000 hours for DL-J40AN/J40AL LED lamps. This is the amount of time until total luminous flux drops to 80% (oblong and square types) or 70% (down lights, outdoor lighting, LED lamps) of the initial level. Note that these design life estimates are not a guarantee of product service life.



### Where There's Air, There'll Be Plasmacluster

With today's ever-greater need for safe food and clean air, society has high expectations for the creation of safe and sanitary environments.

Based on its business vision, Sharp aims to offer people a healthy and comfortable life by aggressively spreading the use of its health-conscious products.

Sharp first incorporated its proprietary air purifying technology, Plasmacluster, into air purifiers in 2000 and later put it to use in air conditioners, refrigerators, and other Sharp products. The effects and safety of Plasmacluster have been verified by academic and research institutes around the world and recognized by other companies in other industries, with 27 of those companies adopting Plasmacluster technology in their products.

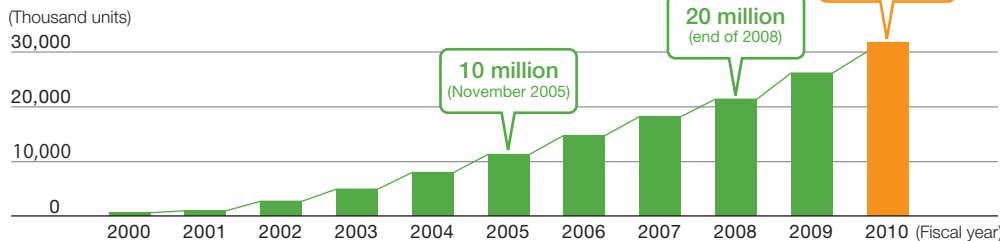
Plasmacluster products are for sale worldwide in approximately 100 countries. In ASEAN and other newly emerging country regions, Sharp offers Plasmacluster products geared to each country's lifestyles. As of the end of December 2010, cumulative sales of Plasmacluster products had reached 30 million units worldwide\*.

Plasmacluster products are at work bringing sanitary air and peace of mind to a wide range of settings: homes, public spaces like hotels and theaters, offices, stores, pharmaceutical factories, and vegetable factories, to name a few.

By bringing people around the world LED lighting, Plasmacluster, and other environment- and health-conscious products that meet consumers' needs, Sharp is realizing its business vision and contributing to society.

\* Total number of Plasmacluster products and Plasmacluster ion generating devices shipped in Japan and other countries between October 2000 and the end of December 2010.

#### Cumulative Total of Plasmacluster Products Sold Worldwide



IG-840 Plasmacluster Ion Generator  
(for rooms up to approx. 50 m<sup>2</sup>)



Plasmacluster in a vegetable factory (Ryobi Holdings Co., Ltd.)



IG-DX100 Plasmacluster Ion Generator  
(portable type for vertical/horizontal placement)



Plasmacluster was a winner in the Best Home Appliance category of the 2011 Mother's Selection Awards sponsored by the Japan Mothers Society

### Words from the Group General Manager



**Noboru Fujimoto**  
Executive Officer  
Group General Manager  
Health and Environment  
Systems Group  
Sharp Corporation

Sharp aggressively develops and releases proprietary environment- and health-conscious products that make people's daily lives healthier and more comfortable. Besides LED lighting and Plasmacluster products, these include the Healsio superheated steam oven for maintaining a healthy diet.

As a manufacturer, we recognize our responsibility to build a sustainable society by harmoniously coexisting with the Earth's natural environment while at the same time bringing the world's people a healthy and plentiful lifestyle.

Amidst today's heightened social concern about energy efficiency, energy-use reduction, safety, and peace of mind, Sharp will strive to achieve its business vision by utilizing its management resources to make products driven by its proprietary environment and health technologies.

# Contribute to a Ubiquitous Society\* with One-of-a-Kind LCDs

Another Sharp business vision is "Contribute to a ubiquitous society with one-of-a-kind LCDs." Sharp will raise the standards of culture and living for people around the world through its business.

## One World: Raising People's Standards of Culture and Living

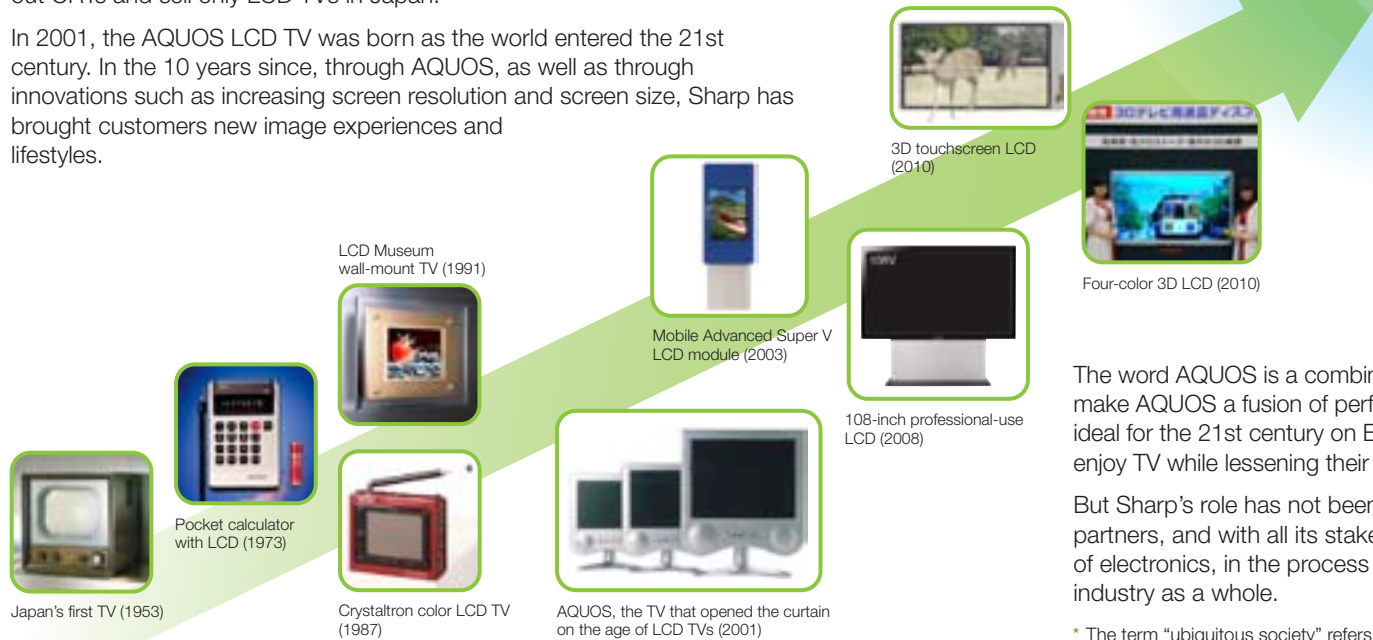
The dizzying pace of advancement in telecommunications infrastructure and networks is giving people access to information from around the world through television and the Internet and creating a borderless information society.

It is said that of our five senses, sight is the one that gives us more than 85% of our information. In an advanced information society, displays are at the core of almost everywhere we look. They contribute to an improved standard of culture and living as windows to information. Today, displays are indispensable to making our lives fulfilling.

In 1931, eighty years ago, a time when radios were beginning to spread, Sharp embarked on research into the new medium of television. In 1951 Sharp created a successful prototype of Japan's first TV. In January 1953, just ahead of the start of television broadcasts in Japan, Sharp began mass producing TVs to open the curtain on the new era of television.

In 1973, Sharp introduced a pocket calculator, the first-ever product to incorporate an LCD screen, after which Sharp devoted itself to progress in advancing this new display medium. In 1998, when CRTs were the dominant screen type, Sharp declared that by 2005, it would phase out CRTs and sell only LCD TVs in Japan.

In 2001, the AQUOS LCD TV was born as the world entered the 21st century. In the 10 years since, through AQUOS, as well as through innovations such as increasing screen resolution and screen size, Sharp has brought customers new image experiences and lifestyles.



**Towards a new stage in LCD applications**

- Information display (professional LCD monitor)
- Multi-screen display system at Huis Ten Bosch theme park, Nagasaki (artist's conception)
- Smartphone, media tablet
- 85-inch direct-view LCD compatible with Super Hi-Vision (ultra high definition) (prototype)
- Free-Style AQUOS
- Electronic whiteboard system

The word AQUOS is a combination of "aqua" and "quality." Sharp's aim from the very start was to make AQUOS a fusion of performance, quality, and environmental consideration—characteristics ideal for the 21st century on Earth, the water planet—and allow as many people as possible to enjoy TV while lessening their impact on the environment at home.

But Sharp's role has not been only to make LCDs. Together with suppliers and other business partners, and with all its stakeholders, Sharp has made LCDs an engine of growth in the world of electronics, in the process making these displays into a major segment that contributes to industry as a whole.

\* The term "ubiquitous society" refers to how the whole of society will be connected through the rapid development of IT infrastructure and how networks will always be accessible to users.

### Contributing to the Realization of a Ubiquitous Society

A 'ubiquitous society' is one in which the lives of people around the world are made more fulfilling, since anyone can connect to a network for access to a range of services anytime and anywhere.

One of Sharp's business visions is to use the one-of-a-kind LCDs it has built up to realize a ubiquitous society in which displays make society better in numerous ways.

In Japan, for example, displays could offer effective teaching methods to solve the problem of the falling levels of education among children today. Or they could help improve the field of medicine by providing remote medical care to solve the problem of shortages of doctors in this age of falling birthrates and aging populations. Sharp is also aiming to contribute widely to society by developing lifestyle support services that can be used by anyone, anywhere, anytime. One such example is a home control system; with today's increasing awareness of the environment and energy conservation, people at home need to know how much electricity they are consuming and how much energy they are generating through their solar power generation systems.

Sharp's mission is to continue to achieve breakthroughs in LCD image and energy-saving technologies that lead to new products that go beyond TVs—products like digital signage, mobile devices and tablets, and electronic whiteboard systems—and that offer never-before-seen value and raise the level of culture and lifestyles for the world's people.



### Words from the General Manager



**Yoshisuke Hasegawa**  
Executive Managing Officer  
General Manager  
Display Device Business  
Sharp Corporation

It was 38 years ago that Sharp introduced a pocket calculator that was the first calculator in the world to incorporate an LCD screen. Since then, Sharp has overcome numerous obstacles to create new possibilities for LCDs, with products boasting color display, a wide viewing angle, high-speed refresh rate, and large screens.

Today, Sharp is on the verge of taking LCDs to whole new fields by building on its innovations over the years.

From ultra-large displays that cover entire walls, to small- and medium-size displays for smartphones and tablets, Sharp is widening the range of applications for LCDs, and we are helping realize information and services via cloud computing, in the process making people's lives better than ever.

Sharp will continue to pursue its business vision of contributing to society by offering new value that is unique to Sharp.

### Case Study Sharp Participates in e-Education Proof-of-Concept Trial in India

India has enjoyed extremely rapid economic growth in recent years, and this has led to a rapidly increasing demand for higher education. A shortage of schools and teachers accompanying this demand has become a serious problem. To resolve these challenges, the development and adoption of electronic systems for education, as well as implementing remote e-education based on them, is urgently needed in India.

Sharp participated in a proof-of-concept trial for electronic education (e-education) in March 2011 at the Indian Institute of Technology Hyderabad to be conducted under the Project for International Expansion of Advanced ICT Business (Ubiquitous Alliance Project) launched by the Ministry of Internal Affairs and Communications of Japan.

In the proof-of-concept trial, the content of textbooks used in courses, as well as curriculum information, was downloaded to the e-textbook terminals via a wireless (Wi-Fi) connection to a dedicated remote e-education server. In addition, the content shown on electronic whiteboards used during class was displayed on the e-textbook terminals. This enabled interactive classes to be conducted, using a microphone and speakers in classrooms where no teacher was present.

This system aims to enable students who are not able to take courses because of a lack of teachers to attend advanced classes.



Students take a remote class; e-textbook (inset)



# Objectives and Achievements in the Area of Management

To contribute to society through manufacturing and technology-oriented business and to continue to be a company that has the trust of society, Sharp is establishing priority action themes in the area of management—the foundation of its business activities. The company will be working for continuous improvement while verifying and assessing the results of these activities

## Overview of Efforts and Achievements in Fiscal 2010

In fiscal 2010, in response to an ever-growing number of demands from stakeholders, particularly shareholders and investors, to strengthen corporate governance and internal control, Sharp continued to work to strengthen the governance system, and took steps to ensure the stable operation of the company's internal control system.

In addition, Sharp thoroughly conveyed to all directors and employees the content of the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct, which were revised in April 2010, and conducted an ongoing series of training and educational activities in Japan and overseas to promote policies for compliance and protecting personal information, which form the very basis of CSR in advancing business activities.

Sharp also pushed forward with ongoing efforts to improve specific management-related areas, such as ensuring information security and protecting intellectual property rights.

Sharp's BCPs (business continuity plans) were activated immediately after the Great East Japan Earthquake, which caused greater-than-expected damage. The emergency actions taken proved effective. However, Sharp will strive to further develop and expand BCPs in preparation for the occurrence of future large-scale disasters.

Self Evaluation ○: Results exceeded objectives ○: Results nearly met objectives △: Certain results were accomplished

Important Themes		Actions in Fiscal 2010	Self Evaluation	Objectives for Fiscal 2011	See page(s)
Reinforce corporate governance	Objectives	(Corporate governance) Clearer separation between functions to provide supervision and make important decisions from functions to execute business	○	<ul style="list-style-type: none"> <li>(Corporate governance) Further improve transparency, objectivity, and soundness in management</li> <li>Appoint two outside members to Board of Directors (June)</li> </ul>	17, 18
	Achievements	<ul style="list-style-type: none"> <li>More clearly separated supervisory and decision-making functions from business execution functions by abolishing position of CEO/COO, and revamped governance system to emphasize each respective role</li> </ul>			
Develop, maintain, operate, and assess internal control system	Objectives	Continuously put into practice various policies related to internal control system	○	<ul style="list-style-type: none"> <li>Continuously put into practice various policies related to internal control system</li> <li>Conduct evaluation of validity and effectiveness of internal control and disclose information regarding development and operational status of internal control system, with reference to revisions to Internal Control Reporting System under Financial Instruments and Exchange Act</li> </ul>	18, website
	Achievements	<ul style="list-style-type: none"> <li>Continuously put into practice various policies related to internal control system (implemented internal control policies as a corporate group, including for new subsidiaries)</li> <li>Submitted internal control reports, disclosing information about development and operational status of internal control system (June)</li> </ul>			
Review systems for promoting CSR	Objectives	Content of Sharp Group Charter of Corporate Behavior and Sharp Code of Conduct revised in April 2010 thoroughly conveyed to all directors and employees	○	<ul style="list-style-type: none"> <li>Formulate policies and plan and promote measures based on new trends in CSR (publishing of ISO 26000 guidance on social responsibility, revised OECD Guidelines for Multinational Enterprises, etc.)</li> </ul>	19, 21, 22, website
	Achievements	<ul style="list-style-type: none"> <li>Boards of Directors of Sharp Group companies around the world adopted resolutions to apply revised Charter of Corporate Behavior and Code of Conduct; also, implemented measures to thoroughly communicate their content through internal notices, pamphlets, and training</li> </ul>			
Strengthen business risk management	Objectives	Ongoing improvement of BCM system	○	<ul style="list-style-type: none"> <li>Ongoing improvement of BCM system</li> <li>Conduct BCP disaster simulation exercises for domestic sales groups and non-production bases, assuming occurrence of earthquake</li> <li>Conduct BCP disaster simulation exercises for domestic subsidiaries, assuming occurrence of earthquake</li> <li>Review and improve existing BCPs on an ongoing basis</li> </ul>	20-22
	Achievements	<ul style="list-style-type: none"> <li>Conducted BCP disaster simulation exercises for domestic production bases, assuming occurrence of earthquake</li> <li>Reviewed and developed BCPs for domestic subsidiaries</li> <li>Developed BCPs for major overseas production bases</li> </ul>			
Practice compliance in business	Objectives	Ongoing implementation of compliance promotion measures	○	<ul style="list-style-type: none"> <li>Ongoing implementation of compliance promotion measures</li> <li>Ongoing compliance training (job-level-specific training, e-learning, etc.) for all employees in Japan</li> <li>Ongoing compliance training at all overseas bases</li> <li>Disseminate anti-bribery guidebook to preclude corrupt practices involving foreign public officials to overseas bases</li> <li>Disseminate guidebook to comply with antitrust laws in business tie-ups with other companies</li> </ul>	23-25
	Achievements	<ul style="list-style-type: none"> <li>Held compliance training (job-level-specific training, e-learning, etc.) for all employees in Japan</li> <li>Ongoing compliance training at all overseas bases</li> <li>Ongoing internal audits and guidance on complying with antitrust laws</li> <li>Created anti-bribery guidebook to preclude corrupt practices involving foreign public officials and disseminated it to bases throughout Japan</li> <li>Created guidebook to comply with antitrust laws in business tie-ups with other companies</li> </ul>			
Strengthen measures for maintaining confidentiality and information security	Objectives	Revamp contents of self-checks for maintaining confidentiality and information security, and implement them on a continuing basis in Japan and overseas	○	<ul style="list-style-type: none"> <li>Revamp contents of self-checks for maintaining confidentiality and information security, and implement them on a continuing basis in Japan and overseas</li> </ul>	26
	Achievements	<ul style="list-style-type: none"> <li>Revamped contents of self-checks for maintaining confidentiality and information security, and implemented them on a continuing basis in Japan and overseas</li> <li>Implemented compliance training through e-learning for all Sharp Group employees</li> </ul>			
Strengthen personal information protection system	Objectives	Ongoing implementation of policies to promote protection of personal information	○	<ul style="list-style-type: none"> <li>Ongoing implementation of policies to promote protection of personal information</li> <li>Ongoing implementation of internal audits related to protecting personal information</li> <li>Ongoing implementation of education and awareness policies related to protecting personal information for employees and others</li> </ul>	26
	Achievements	<ul style="list-style-type: none"> <li>Ongoing implementation of internal audits related to protecting personal information</li> <li>Ongoing implementation of education and awareness policies related to protecting personal information for employees and others</li> </ul>			

# Corporate Governance / Internal Control

Sharp is working to improve the quality of management while strengthening its Director/Corporate Auditor System, for example, by appointing outside directors, speeding up managerial decisions by separating supervisory and decision-making functions from business execution functions based on an executive officer system, and expanding the Internal Audit Division as an organization that works with the Board of Corporate Auditors to provide oversight and maintain a rein on management. In addition, by continuously developing and maintaining the internal control system, Sharp is working to enhance this system to ensure the propriety of operational activities of the entire Sharp Group.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011
<ul style="list-style-type: none"> <li>(Corporate governance) Clearer separation between functions to provide supervision and make important decisions from functions to execute business</li> </ul>	<ul style="list-style-type: none"> <li>More clearly separated supervisory and decision-making functions from business execution functions by abolishing position of CEO/COO, and revamped governance system to emphasize each respective role</li> </ul>	<ul style="list-style-type: none"> <li>(Corporate governance) Further improve transparency, objectivity, and soundness in management</li> <li>Appoint two outside members to Board of Directors (June)</li> </ul>
<ul style="list-style-type: none"> <li>Continuously put into practice various policies related to internal control system</li> </ul>	<ul style="list-style-type: none"> <li>Continuously put into practice various policies related to internal control system (implemented internal control policies as a corporate group, including for new subsidiaries)</li> <li>Submitted internal control reports, disclosing information about development and operational status of internal control system (June)</li> </ul>	<ul style="list-style-type: none"> <li>Continuously put into practice various policies related to internal control system</li> <li>Conduct evaluation of validity and effectiveness of internal control and disclose information regarding development and operational status of internal control system, with reference to revisions to Internal Control Reporting System under Financial Instruments and Exchange Act</li> </ul>

## Concept of Corporate Governance

Sharp is engaged in integrated production—from development to the manufacture and sale of products in a wide range of fields. Each of these areas works in harmony to boost managerial efficiency. Consequently, a management system is required in which directors who have a strong grasp of each area work closely with the R&D and manufacturing divisions in order to facilitate speedy decision-making and business execution. Under such a concept, Sharp is working with the aim of rapid management decision-making by separating supervisory and decision-making functions from business execution functions. At the same time, Sharp is taking steps to strengthen business execution functions by establishing committees that work in close cooperation with the Board of Directors to supplement its execution functions. In addition, as a company with statutory auditors, Sharp is

continuously improving the quality of its management while strengthening the Director/Corporate Auditor system.

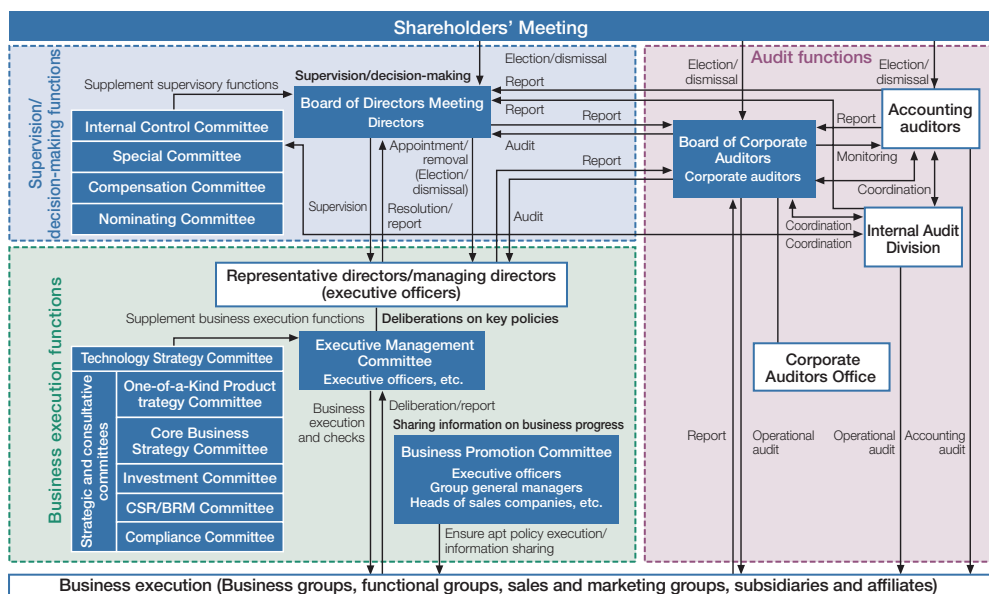
In June 2008, Sharp introduced the executive officer system to focus on both management decision-making and execution of business processes, as well as work toward effective and speedy corporate management. In addition, Sharp dissolved the Advisory Board established in 2006 to make the best use of opinions from knowledgeable outside experts in various fields, and in its stead appointed an outside member to the Board of Directors in June 2009. In addition, to further improve the transparency, objectivity, and soundness of management, in June 2011, Sharp appointed one additional new member to its Board of Directors, for a total of two outside members.

To ensure the smooth functioning of the executive officer system, in April 2010, Sharp revamped its governance system and abolished the position of CEO/COO to more clearly separate supervisory and important decision-making functions from business execution functions, thereby enabling more rapid management by emphasizing each respective role.

Sharp has also designated three of four current corporate auditors as outside auditors, and has strengthened their capability to monitor and hold management in check by establishing the Internal Audit Division as an organization that works with the Board of Corporate Auditors.

In the future, Sharp will further strengthen its Director/Auditor/Executive Officer system, while working to enhance and improve corporate governance.

## Corporate Governance System



## Status of Corporate Governance System

The Board of Directors Meetings of Sharp Corporation are held on a monthly basis to make decisions on matters stipulated by law and management-related matters of importance, and to supervise the state of business execution. To improve management agility and flexibility, and to clarify the responsibilities of the company management during each accounting period, the term of office for members of the Board of Directors is set at one year.

In addition to the Board of Directors, the company has the Executive Management Committee, where matters of importance related to corporate management and business operation are discussed and reported twice a month. In addition, the Business Promotion Committee generally meets once a month to share information and thoroughly review corporate and management policies with managers in each business area.

The Board of Corporate Auditors formulates audit policies, listens to reports from accounting auditors, and receives reports on the execution of duties, in particular from the Board of Directors. Corporate auditors also exchange information and opinions on such matters as the progress of deliberations of important meetings and auditing (on-site auditing) results, which increases the validity of audits.

## Selection, Compensation, and Evaluation of Corporate Directors

Sharp has established an Internal Control Committee as well as a Special Committee, a Nominating Committee, and a Compensation Committee, which complement the supervisory functions of the Board of Directors. One purpose of establishing these committees has been to improve the fairness and transparency of the selection and compensation of corporate directors who have been entrusted by shareholders to manage the company.

The Nominating Committee, in which outside directors also participate, recommends and determines candidates for directors. In addition, monthly compensation and bonuses for all directors are at the maximum limit of total compensation as set forth in a resolution adopted at a shareholders' meeting, and will be fairly determined by setting evaluation criteria—such as financial results, level of contribution to the company, and so on—in the Compensation Committee, which includes the outside directors.

## eS-SEM Strategic Management System

In fiscal 2004, Sharp introduced its own strategic management system (eS-SEM) using the balanced scorecard method. The goal of eS-SEM is to improve the performance of the organization and individuals by balancing the strategy of an organization from both financial and non-financial perspectives and breaking down company-wide organizational goals to the level of the individual, thereby improving the effectiveness of objectives. The system is revised every fiscal year based on the business environment to ensure that the results obtained are in line with company-wide strategies.

## Basic Policy for Internal Control and Maintaining the Internal Control System

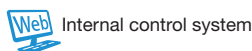
Sharp is developing and maintaining its internal control system to ensure that the entire Sharp Group engages in fair and appropriate business practices based on provisions of Japan's Companies Act and the Internal Control Reporting System under the Financial Instruments and Exchange Act.

In response to the enactment of the Companies Act in May 2006, the Board of Directors passed a resolution to adopt a basic policy related to the development and maintenance of systems necessary to ensure the properness of business practices (Basic Policy for Internal Control).

In conjunction with this, as part of building and strengthening the internal control system for the entire Sharp Group, Sharp has implemented various measures such as requesting that the Boards of Directors of its major consolidated subsidiaries and affiliated companies in Japan pass resolutions to adopt basic policies for developing internal control systems, and promoting the development of all necessary rules and regulations to build internal control systems at consolidated subsidiaries and affiliated companies. Sharp has also taken similar initiatives for major consolidated subsidiaries and affiliated companies established since the Companies Act became law.

In accordance with this policy, Sharp also established the Internal Control Committee to serve as an advisory panel to complement the supervisory functions of the Board of Directors. The Internal Control Committee discusses various policy measures related to the internal control system and affirms their operational status.

In addition, the entire Sharp Group has been making preparations since before the Internal Control Reporting System mandated by the Financial Instruments and Exchange Law (business year 2006) became applicable, and has been evaluating the effectiveness of the internal control system in relation to financial reporting. Sharp has also taken steps to reduce various business risks through the sound operation of the internal control system.



## Message from an Outside Director

The fundamental principle of corporate management is to maximize corporate value. This is because maximization of corporate value is the starting point for creating a virtuous circle in the relationship with stakeholders. Maximizing corporate value is a difficult thing to accomplish and brings numerous strategic options and challenges. Today management has become far more complex and sophisticated than in the past, involving manifold variables. Naturally, one important aspect is the executive capability needed to view each variable in light of the business environment and implement the best course of action. At the same time, an aspect that has become even more important is the management capability needed to carry out optimal overall management taking the balance of all of these variables.

The future of management will increasingly see the competitiveness of companies depend upon their ability to realize both partial enhancements in each business and overall optimization at the same time.

For Sharp, I believe a robust strategy for achieving this synchronization is to win the support and understanding of the broad range of stakeholders, and improve the image of the Sharp brand still further, while taking full measures to raise brand value.

I believe that the recent Great East Japan Earthquake will bring a new dimension to the relationship between companies and stakeholders. In the future, I think it is important that business and stakeholders work together to create medium- to long-term sustainable value.

As an outside director, I hope I can make even a small contribution to helping Sharp achieve this kind of management.



**Kunio Ito**  
Outside Director

### Career Overview

April 1992	Professor, Faculty of Commerce and Management, Hitotsubashi University
August 2002	Dean, Graduate School of Commerce and Management, Hitotsubashi University
December 2004	Vice President and Executive Staff of Hitotsubashi University
December 2006	Professor, Graduate School of Commerce and Management, Hitotsubashi University (current position)
June 2009	Director, Sharp Corporation (current position)

# System to Promote CSR / Risk Management

Sharp has set up internal systems to promote CSR including a CSR/BRM Committee. Additional efforts toward CSR include revising the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct, and participating in the United Nations Global Compact. Sharp is also continuously improving business risk management through actions such as developing and improving BCPs (business continuity plans) to be followed in the event of a major earthquake or other disaster.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011
<ul style="list-style-type: none"> <li>Content of Sharp Group Charter of Corporate Behavior and Sharp Code of Conduct revised in April 2010 thoroughly conveyed to all directors and employees</li> </ul>	<ul style="list-style-type: none"> <li>Boards of Directors of Sharp Group companies around the world adopted resolutions to apply revised Charter of Corporate Behavior and Code of Conduct; also, implemented measures to thoroughly communicate their content through internal notices, pamphlets, and training</li> </ul>	<ul style="list-style-type: none"> <li>Formulate policies and plan and promote measures based on new trends in CSR (publishing of ISO 26000 guidance on social responsibility, revised OECD Guidelines for Multinational Enterprises, etc.)</li> </ul>
<ul style="list-style-type: none"> <li>Ongoing improvement of BCM system</li> </ul>	<ul style="list-style-type: none"> <li>Conducted BCP disaster simulation exercises for domestic production bases, assuming occurrence of earthquake</li> <li>Reviewed and developed BCPs for domestic subsidiaries</li> <li>Developed BCPs for major overseas production bases</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing improvement of BCM system</li> <li>Conduct BCP disaster simulation exercises for domestic sales groups and non-production bases, assuming occurrence of earthquake</li> <li>Conduct BCP disaster simulation exercises for domestic subsidiaries, assuming occurrence of earthquake</li> <li>Review and improve existing BCPs on an ongoing basis</li> </ul>

## Structure to Promote CSR Policies and Activities

Sharp holds semi-annual meetings of the CSR/BRM\* Committee to discuss and check policies, measures, and progress for the entire company. These meetings are attended by an Executive Vice President (Chief Officer, General Administration) and all group general managers of both the business groups and the functional groups. This committee serves to complement the business execution functions of Sharp.


In addition, Sharp has established the CSR Promotion Group for planning and promoting CSR policies and measures for the entire Sharp Group. The CSR Promotion Group collects and analyzes information related to domestic and overseas trends, formulates policies on issues deemed important from the perspective of CSR, and plans and promotes measures to implement policies, working in collaboration with relevant functional and business groups.

\* BRM: Business risk management Related information Page 17: Corporate governance system

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

To put into practice its Business Philosophy and Business Creed—the foundation of Sharp's CSR—and to fulfill its social responsibilities, Sharp has established the Sharp Group Charter of Corporate Behavior, the principles of corporate behavior of all Sharp Group companies; and the Sharp Code of Conduct, the standards of conduct for all directors and employees.

In April 2010, the Charter of Corporate Behavior and Code of Conduct were revised for the first time since May 2005 to accommodate changes in the business environment, including changes in the nature of what society and stakeholders expect of companies. The revisions also reflect changes to existing laws and the enactment of new ones. The Charter of Corporate Behavior and Code of Conduct represent a common set of behavioral norms and standards of conduct for the Sharp Group. The Boards of Directors of Sharp Group companies around the world passed resolutions to adopt them, and Sharp is working to thoroughly communicate their content through internal notices, pamphlets, and training.

 [Sharp Group Charter of Corporate Behavior, Sharp Code of Conduct](#)

## United Nations Global Compact

Sharp became a participant in the United Nations Global Compact in June 2009. Since then, Sharp has set concrete targets for its efforts in support of the 10 principles of the Global Compact in the areas of human rights, labour, the environment, and anti-corruption, and is working to further promote these efforts throughout the Sharp Group.



The Global Compact's Ten Principles	See page(s)
<b>Human Rights</b> Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and Principle 2: make sure that they are not complicit in human rights abuses.	4 · 77 · 87 · 88 · 92 · 98–100
<b>Labour</b> Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; Principle 4: the elimination of all forms of forced and compulsory labour; Principle 5: the effective abolition of child labour; and Principle 6: the elimination of discrimination in respect of employment and occupation.	4 · 77 · 87 · 88 · 92–98
<b>Environment</b> Principle 7: Businesses should support a precautionary approach to environmental challenges; Principle 8: undertake initiatives to promote greater environmental responsibility; and Principle 9: encourage the development and diffusion of environmentally friendly technologies.	4 · 8–16 · 28–75
<b>Anti-Corruption</b> Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.	4 · 16 · 24 · 25

## Creating Integrated CSR and BRM Activities

Sharp believes BRM (business risk management) is indispensable in fulfilling corporate social responsibility and makes it a top priority to conduct integrated CSR and BRM activities.

The semi-annual meetings of the CSR/BRM Committee (see page 19) regularly review major risks, deliberate on company-wide BRM measures for dealing with them, and communicate those measures throughout the company. As well, Sharp's functional groups and business groups identify major risks pertinent to their business and mission, and plan and promote measures to either prevent them or minimize their impact.

## Promoting BRM

### 1) Rules of Business Risk Management

Sharp developed the Rules of Business Risk Management as a basic policy for the company-wide promotion of BRM, and controls business risks based on these rules. In the Rules, Sharp has identified risk items that could have a major impact on management. The company has designated those items, which number more than 100, as "specific risks" and has created a risk control manual. For each specific risk, Sharp has designated a functional group to be responsible for risk management across the entire company, and is continuously moving forward with initiatives to minimize and optimize risks, rectify those that need attention, and prevent risks from becoming a reality.

In addition, Sharp established the Rules of Emergency Response, detailing responses if a potential risk does come to pass. Taking prompt and appropriate action when an emergency situation occurs works to minimize loss and prevent the damage from spreading not only across the company, but also to society at large. These Rules also specify action items to be implemented to ensure prompt and appropriate information disclosure to stakeholders.

Sharp periodically reviews and revises these Rules and the manual to reflect changes in the business environment; for example, adding new specific risks.

### 2) Management Methods for Important Risks

From among specific risks, those that have a greater potential impact and a higher probability of occurrence are selected as "priority management risks" and become the subject of intense focus in the risk management activities of each group. Each group then formulates and moves forward with schedules and plans, which appoint a person in charge to deal with these priority management risks, and reviews them on a regular basis from the perspective of policy measures to (1) reduce the likelihood of a risk occurring and (2) reduce the impact on business activities in the unlikely event that a risk incident actually does occur. In addition, the CSR/BRM Committee mentioned above presents case studies and reviews risk incidents that have occurred within the company, and works proactively to prevent similar incidents by sharing information and ensuring that countermeasures are deployed across the company.

### 3) Promoting BCM and BCP

Sharp considers BCM (business continuity management) to be a priority issue for management. This effort is intended to ensure the safety of employees and their families and expedite an early recovery of important business operations when a major disaster occurs. Sharp is also committed to continuously reviewing and improving BCPs (business continuity plans) to cope with natural disasters, such as an earthquake or an outbreak of a new strain of influenza.

In fiscal 2010, Sharp upgraded BCPs at subsidiaries in Japan and key production sites overseas to respond to a possible occurrence of an earthquake (at some locations, a hurricane or flood, etc.) or an outbreak of a new strain of influenza. In addition, at production sites in Japan, Sharp conducted disaster simulation exercises based on BCPs already created, and then re-evaluated the effectiveness of existing BCPs and made improvements where necessary.

In fiscal 2011, Sharp will conduct BCP simulation exercises for subsidiaries and all sales groups in Japan to review and improve existing BCPs.

## TOPICS

### Response to the Great East Japan Earthquake

The Great East Japan Earthquake, which struck on March 11, 2011, was a disaster on a scale far greater than ever expected. Based on the experience of the response made to the disaster, Sharp has been promoting efforts that give top priority to human life, along with initiatives that reaffirm the importance of BCM in routine activities.

Sharp responded to this emergency by activating its BCP immediately after the earthquake occurred and set up an Emergency Operations Center at the Sharp Head Office with the President in command. Its first action following the quake was to give the highest priority to confirming the safety of employees and their families (including temporary employees and employees of subcontractors on Sharp premises), followed by assessing the damage at each sales office and the level of damage sustained by business partners in the Tohoku area.

Because none of Sharp's production sites or sales offices sustained significant damage as a direct result of ground motion or the subsequent tsunami, and hence, little time would be required for operations at production facilities to resume, Sharp was able to focus its energies on making initial damage assessments and getting a system up and running to quickly implement needed support measures under the BCPs. However, Sharp is continuing to review issues that still remain, such as assessing damage to the supply chain.

In addition, this summer, regulatory restrictions on electricity use have been imposed within the service territories of Tokyo Electric Power Co. and Tohoku Electric Power Co., and users served by Kansai Electric Power Co. have been asked to conserve power. In response, Sharp made this a priority management issue and set up a special task team led by an Executive Vice President (Chief Officer, General Administration) to develop measures to cope with the situation. Sharp has declared conserving power to be a company-wide policy, and is making its best endeavors—as in the measures listed below—to reduce electricity usage in ways that will not impact the production and supply of products and components.

- Implement measures to save electricity in facilities and offices, such as setting the air conditioning cooling temperature at 28°C, taking a certain percentage of lights out of service, sharing the use of photocopiers, and removing some elevators from service.
- Introduce daylight saving time within the company, and relax the summer dress code.

## Case Study Japan

### CSR Efforts in Sales and Marketing Areas in Japan

The Domestic Sales and Marketing Group, which is in charge of sales and marketing activities in Japan, conducts business with a focus on CSR, based on the basic principles of “customer first” and “compliance first.”

To ensure that Sharp employees at sales and service bases all over Japan fulfill their social responsibility in local communities and to create bases even more firmly anchored in local communities, Sharp is working to strengthen its efforts to make contributions to local communities. This is achieved through sales and service activities and by further raising the level of awareness of CSR among all employees through activities described below, such as morning meetings.

In addition, Sharp is working to deepen the understanding of its CSR efforts among its business partners and to build partnerships to promote CSR activities together.

### Promoting CSR Through the PDCA Cycle and a Dedicated Organization

The CSR Promotion Department, established within the Domestic Sales and Marketing Group, works on the planning and promotion of a broad range of policies and activities on a more pragmatic level, particularly in terms of compliance at sales and service sites.

Looking to further boost CSR awareness and improve and maintain action programs put in place at sales and service bases, Sharp is promoting efforts through a PDCA management cycle (“plan, do, check, and act”) for CSR. Efforts include regularly holding domestic sales and marketing CSR/BRM promotion meetings in which relevant Head Office divisions and all sales and service companies in Japan participate; continuously providing training and education; supporting on-site problem solving activities; and monitoring the results.

### Further Raising Awareness of CSR Among Sales and Service Employees

#### 1) Holding Morning Meetings to Coordinate CSR Activities

At business locations shared by affiliated sales and service companies, morning meetings are held at the beginning of each week to exchange sales and service information and conduct joint planning and review of CSR efforts that each base is expected to implement as a member of the local community. In addition, since fiscal 2008, Sharp has been compiling information on CSR and compliance in an easy-to-understand format in the CSR/BRM Newsletter, which is dispatched to Sharp business offices in Japan from the Domestic Sales and Marketing Group. Leaders of the morning meetings use this information to maintain and improve employee knowledge about CSR.

#### 2) Introduction of an Online Self-Auditing System

Each quarter, sales and service managers assess how well they are complying with laws and in-house rules related to operational activities, as well as the status of management activities with respect to business risks. These results are analyzed quantitatively and qualitatively, and are reflected in new policies and mechanisms to mitigate risks and prevent crises.

#### 3) Promoting Community-Based Social Contribution Activities (see page 102)

A major CSR activity undertaken by Sharp sales and service bases is to jointly plan and participate in social contribution activities with local communities. These constructive action programs are intended to anchor Sharp sales and service bases more firmly in the community. In fiscal 2010, based on Sharp’s corporate vision of becoming an Eco-Positive Company, employees participated in activities sponsored by local governments, in particular, community cleanup activities focused on preserving biodiversity (such as protecting the ocean, rivers, lakes, and forests). Such community service activities were held approximately 700 times at sales and service bases throughout Japan, with a total of about 17,700 participants.

#### 4) Serving as Environmental Education Teachers in Elementary Schools (see page 103)

A total of approximately 430 employees of sales and service bases in Japan have served as teachers for environmental education classes conducted in elementary schools nationwide as part of Sharp’s community service activities. Sharp works with the Weathercaster Network, a nonprofit organization of weather forecasters in the Japanese media, to make presentations in 500 schools each year on topics such as recycling and new energy sources (such as solar power).

### Words from a CSR Representative



Hiroyuki Ishitobi  
CSR Promotion Department  
Domestic Sales and  
Marketing Group  
Sharp Corporation

At bases in all parts of the country, all sales and service companies that come under the “Sharp Is One” umbrella are working in close coordination and collaborating on community-based activities.

The CSR Promotion Department to which I belong serves as the overall coordinator. The first thing we do is provide employee education through e-learning and training to enable sales and service employees to put compliance into practice in their routine activities.

In addition, to promote knowledge acquisition related to environmental issues based on the growing interest in the environment in recent years, currently more than 70% of sales and service employees in Japan have acquired the Eco Test certification. Based on trends outside the company, we will continue to plan and promote CSR initiatives in domestic sales.



## Case Study Overseas

### CSR Efforts at SEC in the United States

SEC\*<sup>1</sup> (headquarters in Mahwah, New Jersey) has established a Compliance and Ethics Committee and Corporate Social Responsibility (CSR) Committee, on which the executives of the company serve. SEC promotes its CSR activities in accordance with the SEC Code of Conduct and the Sharp Group Charter of Corporate Behavior.

### Compliance and Ethics Program

SEC has nominated a Compliance and Ethics Officer to manage the North America compliance and ethics responsibilities. The Compliance and Ethics Officer works closely with the SEC Compliance and Ethics Committee in a monthly meeting, with the goal of building trust and integrity throughout the organization and amongst stakeholders. Communications and online training programs are mandatory for all SEC employees. In 2010, 2,000 employees in the US, Canada, and Mexico completed vital training programs, including those covering code of conduct, antitrust compliance, conflict of interest compliance, and the US Foreign Corrupt Practices Act.

### Code of Conduct

The SEC Code of Conduct handbook has been distributed to all SEC employees and, along with the Sharp Group Charter of Corporate Behavior, is posted on the SEC intranet for easy access by all employees. Because SEC is committed to ensuring the highest standards of social responsibility both internally and from its vendors and suppliers, the SEC Supplier Code of Conduct was instituted in January 2011. SEC has been successful in obtaining a signed acceptance by major domestic and foreign suppliers and OEM partners. This Supplier Code of Conduct is an important responsibility under the US Foreign Corrupt Practices Act, and reinforces SEC's high standards of ethics and social responsibility.

### Earth Week and Biodiversity at SEC

After study and confirmation by the CSR Committee, SEC celebrated Earth Week in April of 2011 and sponsored health and environment-themed lectures, discussions, and educational films. Highlighting inspiring stories from companies on the forefront of eco-friendly business practices, SEC was proud to communicate the benefits of corporate social responsibility and biodiversity. Highlights of the weeklong program included a lecture on sustainable gardening from a local college professor, a waste-free lunch program, and employee discounts on earth-friendly products.

### Social Contribution Activities

In the spirit of building closer ties with the communities in which they work and live, SEC and its employees play an active role in a large number of local environmental and charitable activities, carried out per discussions with the CSR Committee. In keeping with Sharp's business creed, which calls for "Sincerity and Creativity," SEC strives to grow hand-in-hand with employees, facilitating their professional potential and encouraging them to make a meaningful contribution to society. Food drives, environmental cleanups, holiday toy and clothing drives, and Sharp Solar Academy, whereby SEC volunteers visit local elementary schools and provide environmental education classes to students, are some of the examples of this commitment by SEC employees.

In April 2011, SEC named Vera Amaral, an SEMCA\*<sup>2</sup> employee who has devoted years to helping the needy around the world, as the winner of the SEC Community Service Award. Most recently, Ms. Amaral used her vacation time to visit countries like Haiti, working in orphanages and participating in other relief activities.

\*1 Sharp Electronics Corporation, established in 1962 as a manufacturing and sales company for consumer electronics, office equipment, and electronic components.

\*2 Sharp Electronics Marketing Company of America, a consumer electronics sales division of SEC.

### Compliance and Ethics, the Right Way to Go



**Tom Cunningham**  
Compliance and Ethics Officer  
SEC

This is the motto of the Compliance and Ethics Program at SEC. The success of our program depends on the commitment of senior management to comply with and enforce the Code of Conduct and the Sharp Group Charter of Corporate Behavior in all SEC business practices. Compliance and ethics programs are more important than ever. SEC is proud of its program, from a CSR standpoint, of encouraging the best possible behavior, prohibiting discrimination of any kind, and providing a safe and harassment-free work environment. As Compliance and Ethics Officer for SEC, I am proud to represent a world-class company, and I encourage all employees of SEC to follow our Code of Conduct in their daily job responsibilities.

# Compliance

In strengthening its global business expansion, Sharp has been using the PDCA cycle to develop and improve its compliance system for Sharp Corporation as well as affiliated companies in Japan and overseas subsidiaries, and has been working to foster awareness of compliance on a global basis and promote the spread of this awareness throughout the Sharp Group.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011
<ul style="list-style-type: none"> <li>Ongoing implementation of compliance promotion measures</li> </ul>	<ul style="list-style-type: none"> <li>Held compliance training (job-level-specific training, e-learning, etc.) for all employees in Japan</li> <li>Ongoing compliance training at all overseas bases</li> <li>Ongoing internal audits and guidance on complying with antitrust laws</li> <li>Created anti-bribery guidebook to preclude corrupt practices involving foreign public officials and disseminated it to bases throughout Japan</li> <li>Created guidebook to comply with antitrust laws in business tie-ups with other companies</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing implementation of compliance promotion measures</li> <li>Ongoing compliance training (job-level-specific training, e-learning, etc.) for all employees in Japan</li> <li>Ongoing compliance training at all overseas bases</li> <li>Disseminate anti-bribery guidebook to preclude corrupt practices involving foreign public officials to overseas bases</li> <li>Disseminate guidebook to comply with antitrust laws in business tie-ups with other companies</li> </ul>
<ul style="list-style-type: none"> <li>Revamp contents of self-checks for maintaining confidentiality and information security, and implement them on a continuing basis in Japan and overseas</li> </ul>	<ul style="list-style-type: none"> <li>Revamped contents of self-checks for maintaining confidentiality and information security, and implemented them on a continuing basis in Japan and overseas</li> <li>Implemented compliance training through e-learning for all Sharp Group employees</li> </ul>	<ul style="list-style-type: none"> <li>Revamp contents of self-checks for maintaining confidentiality and information security, and implement them on a continuing basis in Japan and overseas</li> </ul>
<ul style="list-style-type: none"> <li>Ongoing implementation of policies to promote protection of personal information</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing implementation of internal audits related to protecting personal information</li> <li>Ongoing implementation of education and awareness policies related to protecting personal information for employees and others</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing implementation of policies to promote protection of personal information</li> <li>Ongoing implementation of internal audits related to protecting personal information</li> <li>Ongoing implementation of education and awareness policies related to protecting personal information for employees and others</li> </ul>

## Basic Policy Regarding Compliance

Sharp defines compliance as “observing company regulations and social codes of conduct, including laws and corporate ethics,” and regards it as the foundation of fulfilling its CSR (corporate social responsibility). Accordingly, Sharp is pursuing on a global basis and through the PDCA cycle the ongoing development and strengthening of systems and policy measures to promote management practices where compliance is given first priority.

## Strengthening the System to Promote Global Compliance

Sharp is continuously strengthening its compliance and legal systems in Japan, and is also reinforcing the system to ensure that compliance is integrated into management practices on a global level, as well as strengthening cooperation with the Legal Division at the Head Office.

To strengthen compliance and legal systems in Japan, the Legal Division at the Head Office holds regular meetings with legal affairs chiefs and staff members for each Sharp Corporation business group and affiliated company in Japan. In these meetings, they discuss problems and case studies related to legal affairs as part of an ongoing effort to establish a shared awareness of compliance issues.

In addition, the Compliance Committee serves to complement the work of the CSR/BRM Committee and holds meetings on a regular basis. These meetings, which are chaired by an Executive Vice President (Chief Officer, General Administration) and include group general managers of the functional groups, are held to plan compliance measures, check the progress of implementation, and institute any necessary corrective action for the entire Sharp Group.

In 2009, to strengthen its compliance and legal systems overseas, Sharp appointed those responsible for Sharp business in the four major regions around the world (US, Europe, China, Asia/Africa) as Compliance

Officers (CO), and appointed a legal affairs staff member from Sharp’s Legal Division at the Head Office to each region. To strengthen the compliance and legal functions in the region, each legal affairs staff member, as staff of each regional CO, works in cooperation with the legal affairs department of each base in the region, and also holds regular meetings with Sharp’s Legal Division at the Head Office.

The Compliance Committee confirms the status of these efforts to promote compliance in all overseas regions, and works to ensure steady progress.

In fiscal 2010 in Japan, Sharp implemented compliance training through e-learning for all employees and disseminated a guidebook on preventing bribery of foreign public officials. Overseas, Sharp implemented training on complying with antitrust laws at each base and strengthened its efforts to prevent antitrust practices (for example, the formation of cartels) by introducing a checklist of specific items to be followed to comply with antitrust laws into the internal control self-check system.

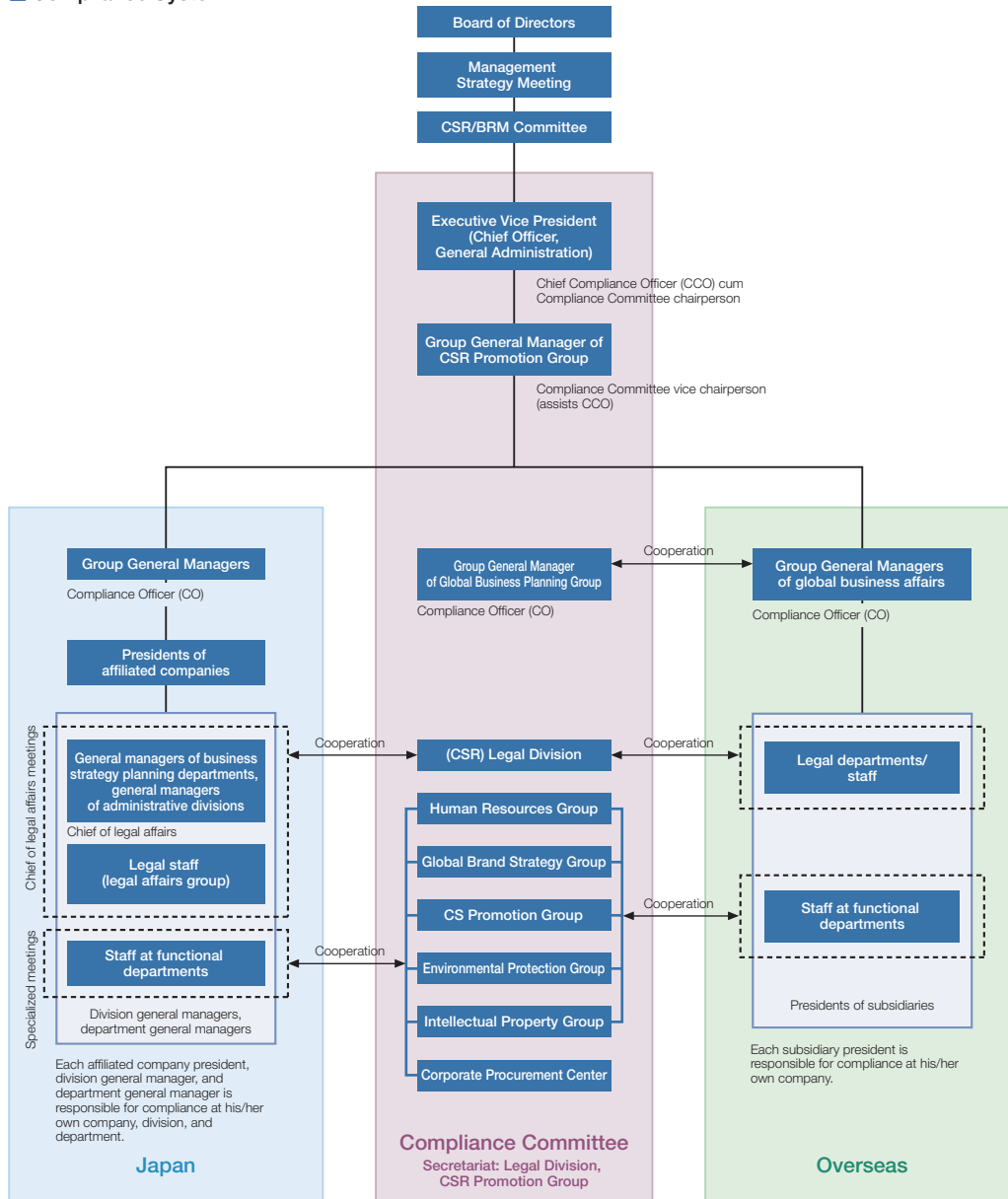
Further, in conjunction with even wider business expansion globally, Sharp will further expand and improve its initiatives to comply with various laws and regulations so that its business activities are carried out appropriately, in line with regulations applicable globally or unique to specific regions.

In fiscal 2011, Sharp plans to make the contents of the guidebook for compliance with antitrust laws in business tie-ups (including production joint ventures and OEM partners) created in fiscal 2010 as widely known as possible in Japan. It will also make necessary changes to the guidebook on preventing bribery of foreign public officials to reflect the laws and regulations in each country and region, and will distribute it to employees at overseas bases.

In the future, as mentioned above, Sharp will continuously promote efforts to put compliance management into practice on a global basis.



■ Compliance System



Raising Legal and Ethical Awareness to Ensure Compliance

In a social environment in which social responsibility is being subjected to ever more severe scrutiny, Sharp regards the role of the corporation as not merely to pursue profits, but rather to sustain and continue business activities in a way that places the highest priority on compliance. In this light, Sharp produced the Sharp Group Compliance Guidebook to ensure that each individual employee understands well the meaning of compliance and how to put compliance into practice in their routine work activities.

Sharp Corporation and its affiliated companies in Japan use training sessions as an opportunity to disseminate the contents of this guidebook, and are working to foster awareness of compliance and ensure that this awareness permeates the entire Sharp Group. These sessions include job-level-specific training for directors, senior executives, managers, mid-career employees and new employees, training for employees transferred overseas, and specialized training in specific fields.

In fiscal 2010, Sharp implemented compliance e-learning for all employees in Japan. In addition, Sharp's Legal Division at the Head Office conducted compliance audits at Sharp Corporation business groups and affiliated companies in Japan.

At overseas bases, Sharp has used teaching materials customized to the laws and regulations in each region to conduct training in antitrust laws, compliance, and the Sharp Code of Conduct, and has expanded efforts to foster awareness and acceptance of compliance on a global basis.

Consultation Hotline for Compliance Issues

Sharp Corporation and its affiliated companies in Japan have set up a hotline for providing counseling services related to general compliance issues, and an antitrust law hotline as a contact point specifically for issues related to antitrust laws. These hotlines are accessible inside the company and externally (via an outside law firm providing legal counsel) to enable employees and temporary staff, as well as employees of business partners\*, to ask questions or request a consultation in line with the spirit of Japan's Whistleblower Protection Act.

These services enable Sharp to work with employees to quickly catch violations of the law or acts likely to be violations, and take early action to resolve the problem. Each year, the compliance hotline receives about 50 reports and requests for consultation. In fiscal 2010, there were approximately 40 such contacts; however, there were no material compliance violations. For the antitrust law hotline, there were no reports or consultation requests in fiscal 2010, reflecting the results of Sharp's commitment to in-depth internal training that encourages employees to consult the Legal Division at an early stage with regard to various questions related to antitrust laws.

The Sharp Code of Conduct clearly stipulates that the privacy of individuals who report compliance violations or seek consultation will be strictly protected and that those persons will suffer no unfavorable treatment or penalties.

Similar reporting and consultation services have been set up at Sharp bases in the US and China.

\* Only the compliance hotline is available for use by employees of business partners.

### Preventing Corruption in All Forms and Dealing Properly with Donations

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

In Japan, Sharp prevents illegal payoffs and improper expenditures through a system of compulsory reviews by the Monetary Contribution Examination Committee on CSR in place since December 2008 to assess the propriety of monetary disbursements such as donations and contributions made by Sharp Corporation and its affiliated companies.

	First half of fiscal 2009	Second half of fiscal 2009	First half of fiscal 2010	Second half of fiscal 2010
Number of reviews	69	108	116	105

In fiscal 2010, Sharp prepared a guidebook for preventing bribery of foreign public officials, and worked to make the contents as widely known as possible through meetings held with the legal affairs chiefs and staff members in Japan, and by audits of departments that are involved in international transactions. In fiscal 2011, Sharp plans to disseminate this guidebook globally, using training materials customized to reflect the laws and regulations of each region where Sharp has overseas bases.

### Compliance with Antitrust Laws

Sharp has made antitrust laws a priority area and is working constantly to ensure compliance with them. In fiscal 2010, Sharp implemented an online training program in antitrust laws for all employees in Japan, conducted training at overseas bases, and reviewed the answers submitted by Sharp employees for the checklist in its internal control self-check system to comply with antitrust laws in Japan (which prevent the formation of cartels). Sharp's Legal Division at the Head Office also began audits of the actions of all Sharp Corporation business groups and affiliated companies in Japan. In addition, Sharp prepared a guidebook for compliance with antitrust laws in business tie-ups with other companies and made it available to all employees on the company's intranet.

In fiscal 2011, Sharp will work to strengthen compliance with antitrust laws by holding training sessions for Sharp Corporation and its affiliated companies in Japan to make the contents of the guidebook on antitrust laws as widely known as possible.

### Preventing Insider Trading

Sharp has established regulations restricting insider trading, and has established controls on material facts ("insider tips") and instituted restrictions on the buying and selling of stocks and other securities. Sharp has also implemented in-house training related to insider trading such as an educational campaign targeting Sharp Group employees in Japan on the corporate intranet and other methods, with the aim of preventing insider trading by Sharp Group directors or employees.

In addition, given the importance of disclosure, when "material facts specified in the Financial Instruments and Exchange Act" and/or "important company information that should be disclosed in a timely manner as stipulated by securities exchanges" is generated, Sharp will do its utmost to disclose and publicize them promptly. Further, regarding interviews by outside media, Sharp will deal with them in a positive manner, while fully honoring the spirit of disclosure and remaining attentive so as not to violate insider-trading regulations.

In fiscal 2010, bearing in mind socioeconomic conditions in which problems with insider trading increased, Sharp continued to maintain strict controls on material facts. The company made a concentrated effort to further strengthen initiatives aimed at preventing insider trading—for example, through lectures on insider trading regulations at new employee orientations and during on-the-job training for new managers, and through seminars held at key business sites.

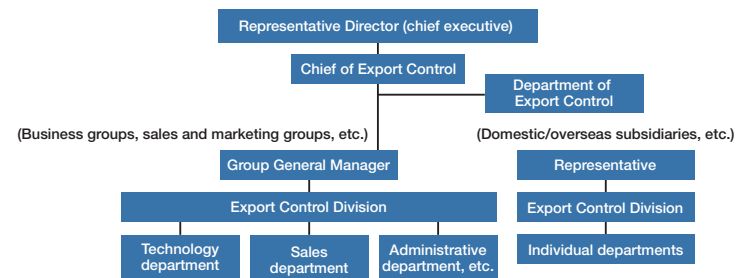
### Export Control

To comply with laws and regulations related to export control such as the Foreign Exchange and Foreign Trade Act in Japan, Sharp has established policies in the Sharp Code of Conduct and imposed rigorous controls on exports.

Regarding specific export control activities, Sharp has established a company-wide compliance program for export control, under which a determination is made whether a product or component, or a technology (including software) falls under "list control," which is part of the legal framework of Japan's export control law. Sharp's technology departments, which are thoroughly familiar with the law, make this determination and the Export Control Division at each business group re-checks the decision.

If a product or technology falls under the regulations, Sharp follows the requisite internal procedures to submit an application for an export license if authorization is needed from the Minister of Economy, Trade and Industry. In addition, to check whether a product or technology could be used for the development of weapons of mass destruction or conventional weapons, Sharp carefully screens customers and conducts a rigorous review of all transactions, and only proceeds with a transaction after receiving approval from the Department of Export Control. In addition, Sharp is providing training to departments within the company involved in this process to strengthen awareness and make the importance of export controls as widely known as possible.

#### Export Control Organizational System



The Department of Export Control supports the Export Control Divisions, and the Export Control Divisions support individual departments.

### Basic Policy on Information Security

Sharp Corporation has established a basic policy on information security, as outlined below, and is taking initiatives to ensure information security by promoting the safe and secure use of information under its control as well as its information systems.

1. Sharp will construct mechanisms to ensure that problems such as unauthorized disclosure ("leaks"), malicious alteration, or loss of information under its control does not occur, and will manage its information assets in accordance with the importance of the information. Specially, Sharp will exercise strict control over the personal information of customers and over important information disclosed by business partners and others.
2. In order for Sharp, together with its directors and employees, to ensure the security of information, Sharp will conduct education and training regarding information security for all directors and employees on a regular basis.
3. Sharp will comply with all laws and contractual obligations relating to information security.
4. Sharp will promote the construction of mechanisms to ensure the safe and proper use, and the continual management of information assets under its control. In addition, Sharp will aim to become a leading company in information security by reviewing these mechanisms on a regular basis and working constantly to improve them.

### Raising the Level of Information Security

In line with the aforementioned Basic Policy on Information Security, Sharp is carrying out various measures company-wide to protect trade secrets and personal information.

In Japan, Sharp holds semi-annual meetings of the IT Infrastructure/Information Security Committee, which brings together IT/security managers from all departments of the Sharp Group. The committee ensures the thoroughness of basic policies and security measures, and works to improve the level of information security governance throughout the entire Sharp Group by implementing annual company-wide self-checks of progress in promoting countermeasures at each level of the organization.

In addition, once a year, Sharp conducts e-learning training for all employees of the Sharp Group to alert them of security incidents in Japan and overseas, and to make trends in attacks, exploits, and vulnerabilities, as well as how to combat them, as widely known as possible.

Overseas, Sharp has established Regional Information Security Committees in regions around the world (North America, Europe, China, and Asia), and has initiated activities to improve the level of information security through self-checks at each base.

### Protecting Personal Information

Sharp Corporation and its domestic affiliates have established a basic policy for protection of personal information, and are promoting measures related to the protection of personal information by constructing an in-house management system.

Sharp is taking proactive steps to improve this system and to raise employees' awareness of the importance of protecting personal information. Specifically, each year, Sharp implements measures such as correcting problems uncovered during internal audits and conducting e-learning training for all employees (implemented in such a way that the course is successfully completed only when all questions in the training test have been answered correctly).

As a result of efforts to promote these measures, Sharp Corporation and the affiliated companies in Japan listed below have acquired Privacy Mark certification, and are successively renewing certification.

As befits a company that has acquired certification, Sharp will constantly strive to improve and strengthen its system for protection of personal information in the future.

#### ■ Privacy Mark-Certified Companies

- Sharp Corporation
- Sharp Document Systems Corporation
- Sharp System Products Co., Ltd.
- Sharp Finance Corporation
- Sharp Engineering Corporation
- Sharp Amenity Systems Corporation
- Sharp Electronics Marketing Corporation



Sharp Corporation's Privacy Mark

#### ■ E-Learning Screens



### Intellectual Property Strategy and Management System

Sharp regards its strategy on intellectual property as one of its most important management measures, and is promoting it together with its business strategy and R&D strategy. Sharp is aggressively pursuing the acquisition of patents to ensure the superiority of its one-of-a-kind products and devices, thereby working to strengthen the foundation of its business.

In developing a unified intellectual property strategy, Sharp's Intellectual Property Group based at the Head Office is responsible for overall strategic management, and is involved in a variety of activities related to intellectual property, working in mutual cooperation with patent-related departments located within the R&D groups and each production business group and base.

Regarding patent acquisition, Sharp is clarifying the business areas that form the core of each of its businesses, and is staffing these core business fields with engineers well versed in patent-related matters. Sharp is thus able to file strategic patent applications tightly focused on the actual situation. In addition, Sharp is also acquiring useful patents invented in cooperation with other companies or derived from the activities of alliances, such as industry-university cooperation.

As of the end of March 2011, Sharp's patent holdings consisted of 19,932 Japanese patents and 24,170 foreign patents. Sharp is using this patent portfolio to strengthen its strategic businesses, and is aggressively analyzing the products of competitors with the aim of finding further applications. In addition, Sharp is filing applications and registering rights for designs and trademarks globally under its brand strategy.

Date	End of March 2009	End of March 2010	End of March 2011
Japanese patents	18,449	17,501	19,932
Foreign patents	22,052	22,568	24,170

### Protecting Intellectual Property

Sharp's business and R&D strategies are interlinked with its intellectual property assets, which are used to the fullest possible advantage. At the same time, Sharp is firmly committed to protecting its own intellectual property rights, while respecting the intellectual property rights of others. Even though Sharp regards discussion as the basis for resolving cases of infringement, it is the company's policy to seek judgment from a third party such as the courts when its intellectual property rights are not respected.

By strengthening in-house rules, Sharp is also working to bolster protection for trade secrets and to prevent unauthorized disclosure of production technologies and manufacturing know-how, particularly those that are unique or critically important to Sharp.

Further, counterfeit Sharp-brand products have had a growing impact in overseas markets in recent years, and Sharp is taking measures to counter these imitations through cooperation with industry groups and with regulatory authorities taking enforcement actions.

With regard to respect for the intellectual property rights of others, Sharp is responding by holding company-wide conferences for persons involved with patents and by training of engineers.

### Incentives for Employee Inventions

To comply with the intent of Article 35 of Japan's Patent Law, Sharp Corporation consulted with employees before stipulating its in-house rules, called the "Regulations for Employee Inventions." The regulations include detailed standards on rewarding an employee who comes up with an invention during work for the company, when and after the employee reports the invention and hands over the rights to the invention to the company.

Sharp also reviewed and revised compensation systems in subsidiaries and affiliated companies in Japan according to the intent of the Patent Law, and has come up with programs that improve incentives for employees who devise inventions. Thus, Sharp has built and is promoting systems that compensate employees fairly and appropriately, depending on the contribution their invention makes to the company, as well as the contribution that each employee involved made to the invention.

### Combating Counterfeit Goods

Sharp has implemented the following two main initiatives to combat counterfeit goods:

- 1) When counterfeit goods are traded within the national borders of a country, Sharp will petition local law enforcement agencies to intervene and will hold training workshops for officials, as well as cooperate with other companies in the same business area to expose the goods.
- 2) When counterfeit goods are moved from one country to another country, Sharp will petition local customs authorities to intervene, and will hold training workshops for officials.

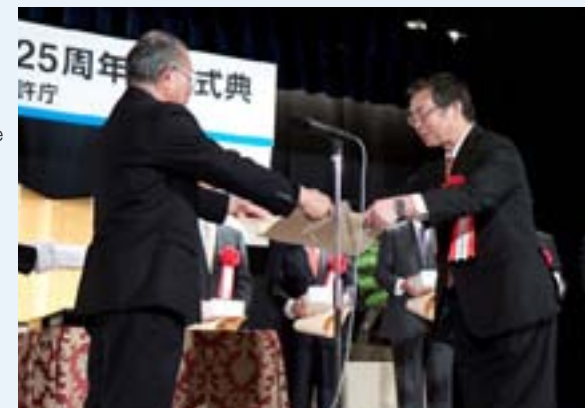
Sharp will continue its efforts against counterfeit goods through these actions.

#### TOPICS

#### Sharp Wins Intellectual Property Achievement Award

Sharp makes active use of the system of trademark rights on a routine basis across the entire company. In addition, Sharp formulates and manages licensing standards for trademark use and establishes usage guidelines, while at the same time, aggressively acting to combat counterfeiting.

In recognition of these efforts, Sharp received the Intellectual Property Achievement Award 2010 (Award from the Minister of Economy, Trade and Industry) for being an "enterprise excelling in trademark utilization" (sponsored by the Japan Patent Office).



Toshio Adachi, Sharp Corporation Representative Director and Executive Vice President (right), accepts the certificate of merit on behalf of Sharp

# Aiming to Contribute to the Environment

In accordance with environmental conservation guidelines established in line with Sharp's Basic Environmental Philosophy, the Sharp Group Charter of Corporate Behavior, and the Sharp Code of Conduct, Sharp is pursuing environmental consciousness across all of its business activities. Since fiscal 2010, Sharp has been further strengthening its efforts to contribute to the environment based on its corporate vision of becoming an "Eco-Positive Company."

## 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 make efforts to further contribute to global environmental conservation by strengthening our development of proprietary technologies for protecting the global environment, and by carrying out 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

## Corporate Vision

**Eco-Positive Company**

## Strengthening Environmental Sustainability Management to Achieve the Corporate Vision

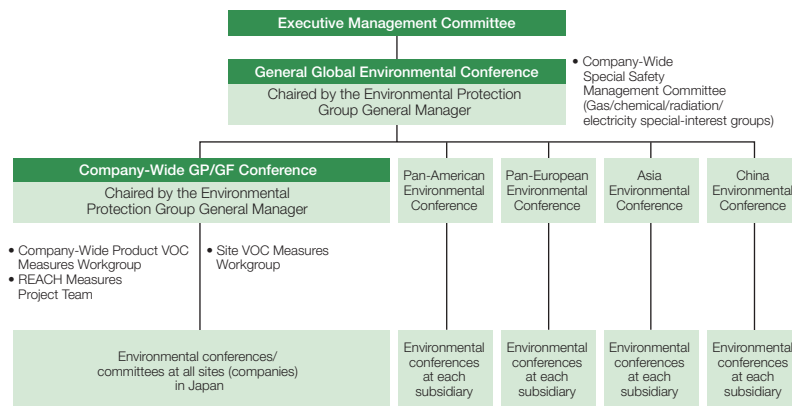
Sharp set up the Environmental Protection Group to plan and promote overall company strategy for protecting the global environment. This Group forms the core of Sharp's system to promote environmental conservation, and facilitates the deployment of environmental sustainability management on a global basis.

The Environmental Protection Group consults with the Executive Management Committee regarding critical policies, strategies, and measures relating to environmental sustainability management, and with the approval of corporate executives, ensures that they are implemented across the entire Sharp Group. Specifically, the Group General Manager of the Environmental Protection Group serves as the chair of the semiannual General Global Environmental Conferences, where general managers responsible for environmental affairs from each division and overseas base become thoroughly familiar with Sharp Group environmental policies and discuss environmental policies, objectives, and measures for each division. The Environmental Protection Group also hosts Company-Wide GP (Green Product) and GF (Green Factory) Conferences in Japan and holds regional environmental conferences overseas to ensure that Sharp Group environmental policies are thoroughly disseminated and to discuss environmental policies and measures for each department and site. Sharp also works closely with members of environmental departments at each site in Japan and overseas through various committees, project activities, and Eco Best Practice Forums (see page 55), while promoting various environmental initiatives across the Sharp Group.

In fiscal 2010, with the aim of further strengthening environmental sustainability management, Sharp established the Eco-Positive Strategic Measures as priority objectives under the group performance evaluation system, based on Sharp's original strategic management system (eS-SEM\*). All divisions at Sharp Corporation and all Sharp Group companies are introducing these measures and working proactively to help protect the environment by striving to make Sharp's corporate vision of being an Eco-Positive Company a reality.

\* eS-SEM (e-Sharp Strategic Enterprise Management): Sharp's original strategic management system based on the balanced scorecard concept.

## Sharp Group's Environmental Sustainability Management



# Environmental Objectives and Achievements

Sharp aims to achieve its corporate vision of becoming an Eco-Positive Company, and not only takes the environment into account in all its business activities, but also pursues what will create positive outcomes for the environment. All divisions set environment-related objectives, but this section reports on the objectives overseen by the Environmental Protection Group, which is responsible for company-wide environmental strategy, and on their results.

## Fiscal 2010 Achievement Summary

Fiscal 2010 marked the second year of Sharp's Eco-Positive environmental strategy. Eco-positive efforts have spread throughout the Sharp Group, and each site has developed its own diverse range of activities.

At the 10 factories of Sharp Corporation that had advanced to satisfy the requirements for SGF II, the second level of Super Green Factory status, efforts to reduce environmental impacts focusing primarily on CO<sub>2</sub> and waste have surely and steadily yielded results. With regard to Sharp's goal of keeping emissions below the levels reached in fiscal 2007, the highest ever, CO<sub>2</sub> emissions in fiscal 2010 were reduced by 31.3%, and waste by 52.4%, well below their respective fiscal 2007 levels. In addition, every fiscal year, Sharp sets new goals for reductions in emissions compared to BAU (business as usual) levels (estimated emissions if no mitigation measures were implemented). In fiscal 2010, Sharp was able to reach these goals, namely, reductions of 3% for CO<sub>2</sub> emissions and 6% for waste.

As a result, despite the fact that production output increased reflecting the start of full-scale operations at the LCD panel plant and the start of operations at the solar cell plant at GREEN FRONT SAKAI, emissions for both CO<sub>2</sub> and waste for the Sharp Group were both less than the emission levels of fiscal 2007. In the future, the technologies and know-how for reducing environmental impacts developed at the 10 plants of Sharp Corporation will be deployed across the entire Sharp Group.

For a look at the main objectives and achievements, please refer to the table below and to the pages indicated on the right side of that table.

Self Evaluation ○ : Achieved more than targeted ○ : Achieved as targeted △ : Achieved more than 80% of initial target × : Achieved less than 80% of initial target

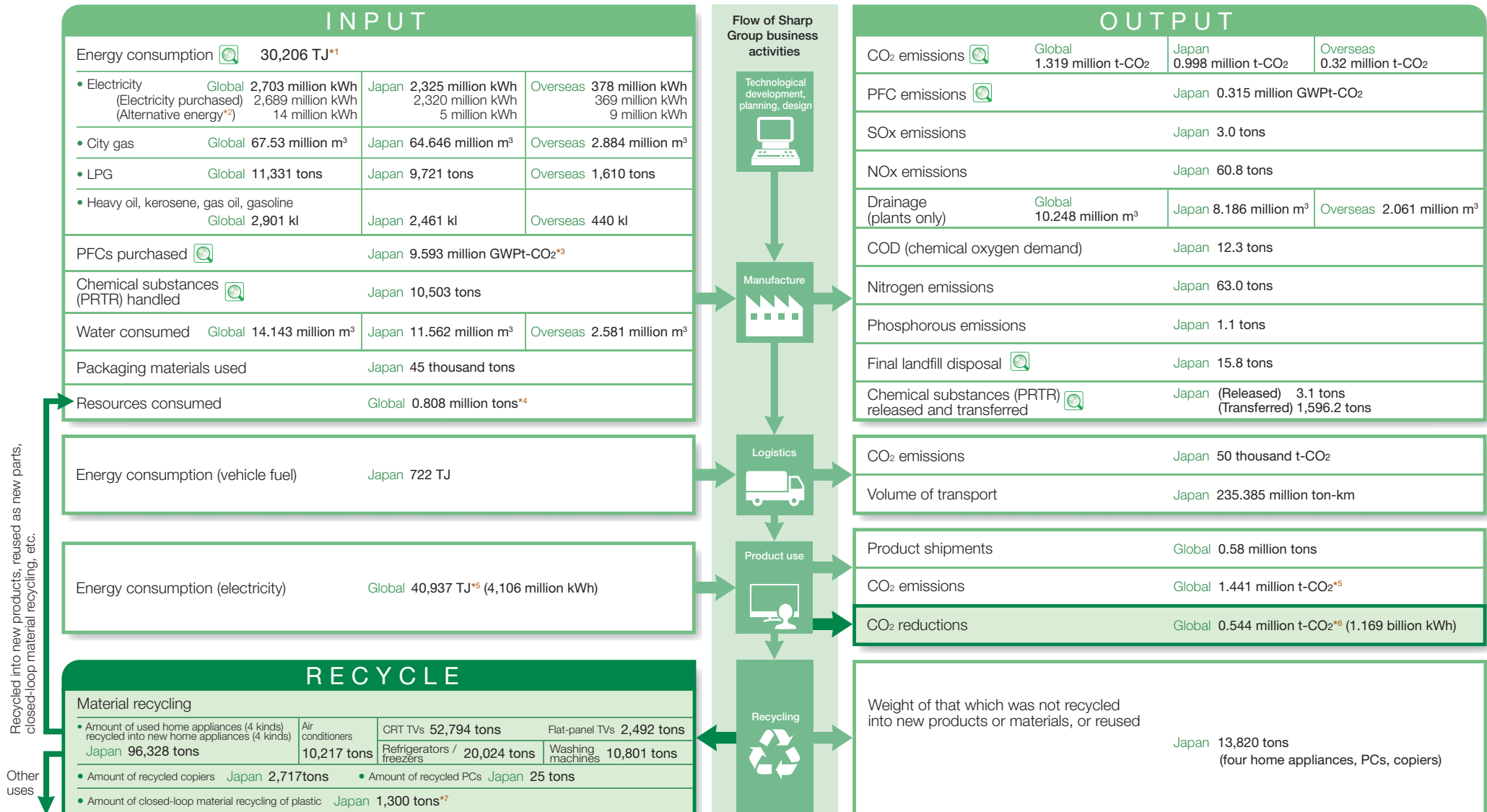
Stages	Themes	Major Objectives	Fiscal 2010 Objectives	Fiscal 2010 Achievements	Self Evaluation	Fiscal 2011 Objectives	Fiscal 2012 Objectives	See page(s)
Technologies	Develop 3R technologies	Expand closed-loop plastic material recycling	Use 1,300 tons of recycled plastic in new products	Used 1,300 tons	○	Use 1,400 tons	Use 1,500 tons	34
		Develop LCD panel recycling technology	Develop recycling technology for scrap glass discarded during LCD panel production process	Developed recycling technologies to use scrap glass in road paving materials and glass plates Introduced proof-of-concept plant for recycling LCD panels	○	Implement proof-of-concept trials for LCD panel recycling	Develop recycling technology for LCD panels recovered from used LCD TVs	35
Products	Improve environmental performance of products and devices	Increase Super Green Products' share of net sales in Japan	60% or more	56%	△	50% or more	50% or more	40   47
		Increase Advanced Green Products' share of net sales in Japan	90% or more	86%	△	80% or more	80% or more	
		Increase Super Green Devices' share of net sales	20% or more	37%	◎	30% or more	30% or more	
		Increase Green Devices' share of net sales	90% or more	95%	◎	92% or more	95% or more	
	Recycle used products	Enhance and improve recycling system	Increase recycling efficiency to process growing number of CRT TVs collected	Constructed safety-conscious, highly efficient operational system	○	Construct operational system to accommodate decreasing number of CRT TVs collected	Implement high-value-added recycling of recovered components and materials	49 • 50

Self Evaluation ○ : Achieved more than targeted ○ : Achieved as targeted △ : Achieved more than 80% of initial target × : Achieved less than 80% of initial target

Stages	Themes	Major Objectives	Fiscal 2010 Objectives	Fiscal 2010 Achievements	Self Evaluation	Fiscal 2011 Objectives	Fiscal 2012 Objectives	See page(s)	
Operations	Enhance and improve environmental management system	Restructure S-EMS at plants	Re-evaluate S-EMS and compile proposed revisions	Completed re-evaluation of S-EMS provisions Acquired ISO 14001 certification as one of 11 participating companies at GREEN FRONT SAKAI	○	Restructure framework to promote environmental sustainability management system at plants	Ensure that new promotion system is firmly established	51   53	
		Restructure framework to promote environmental sustainability management system at offices in Japan	Set up supervisory sites in each region	Completed re-evaluation of current framework to promote environmental sustainability management	○	Transition to promotion on individual corporate body basis Implement EMS training for auditors under new framework	Ensure that system to promote environmental management on individual corporate body basis is firmly established Expand and improve EMS training to accommodate new system		
		Promote environmental e-learning	Hold step 2 (advanced course)	Implemented e-learning in refresher training for internal auditors	○	—	—		
	Improve environmental performance of plants and offices	Certify more plants as Green Factories (GF) and Super Green Factories (SGF)	10 Sharp Corporation plants: 2 plants SGF II Grade A or higher based on new evaluation criteria	10 plants SGF II Grade A or higher based on new evaluation criteria (4 plants SGF II Grade S, 1 plant SGF [Sakai solar cell plant])	10 plants SGF II Grade A or higher based on new evaluation criteria (4 plants SGF II Grade S, 1 plant SGF [Sakai solar cell plant])	◎	All plants SGF II Grade A or higher (8 plants SGF II Grade S)	All plants SGF II Grade S	54   57
			8 Japanese plants (subsidiaries/affiliates): Implement SGF II at 3 SGF, 5 SGF in total	Implemented SGF II at 3 SGF, 4 SGF in total	Implemented SGF II at 3 SGF, 4 SGF in total	○	Implement SGF II at 4 SGF, 8 SGF in total	All plants SGF II Grade B or higher	
			21 overseas plants (subsidiaries/affiliates): Implement SGF II at 11 SGF, 16 SGF in total	Implemented SGF II at 11 SGF, 18 SGF in total	Implemented SGF II at 11 SGF, 18 SGF in total	○	Implement SGF II at 18 SGF, 21 SGF in total	All plants SGF II Grade B or higher	
		Hold Eco Best Practice Forums	Hold forums at least once a year in each region (North America, Europe, Asia, and China)	Held forums at least once a year in North America, Europe, Asia, and China (at least once a year in each region for a total of 13 times)	○	Hold forums at least once a year in each region (North America, Europe, Asia, and China)	Hold forums at least twice a year in each region	55	
		Strengthen certification criteria in Japan and overseas Certify more offices as Green Offices	Revise certification criteria in Japan and overseas Number of Green Office certified sites Japan: Certify all 54 offices Overseas: Certify 8 (two each in North America, Europe, Asia, and China) out of the total 20 offices	Revised certification criteria in Japan and overseas Japan: 46 out of the total 46 offices Overseas: 19 out of the total 20 offices	◎	Japan: Introduce new organizational structure centered on main offices Overseas: Introduce organizational structures on a regional basis in North America, Europe, Asia, and China	Japan: Establish new organizational structure Overseas: Establish organizational structures on a regional basis	58 • 59	
	Curb greenhouse gas emissions	Reduce CO <sub>2</sub> emissions	10 Sharp Corporation plants: Reduce to below fiscal 2007 levels, reduce by 3% compared to BAU	Reduced by 31.3% from fiscal 2007 levels, reduced by 3.2% compared to BAU	◎	Every fiscal year: Reduce to below fiscal 2007 levels Every fiscal year: Reduce by 3% compared to BAU	60 • 61		
		Reduce CO <sub>2</sub> emissions (per adjusted production unit)	All 11 Sharp Corporation plants: Reduce by 35% from fiscal 1990 levels	Reduced by 46.3% from fiscal 1990 levels	◎	Reduce by 35% from fiscal 1990 levels (average for fiscal 2008 to 2012)			
		Reduce CO <sub>2</sub> emissions (per production unit)	Overseas plants: Reduce by 2% from previous fiscal year	Reduced by 15.5% from previous fiscal year	◎	Every fiscal year: Reduce by 2% from previous fiscal year			
	Reduce and recycle waste	Reduce amount of waste discharged	10 Sharp Corporation plants: Reduce to below fiscal 2007 levels, reduce by 6% compared to BAU	Reduced by 52.4% from fiscal 2007 levels, reduced by 12.0% compared to BAU	◎	Every fiscal year: Reduce to below fiscal 2007 levels Every fiscal year: Reduce by 6% compared to BAU	62 • 63		
		Reduce amount of waste, etc. discharged (per production unit)	Overseas plants: Reduce by 2% from previous fiscal year	Reduced by 7.5% from previous fiscal year	◎	Every fiscal year: Reduce by 2% from previous fiscal year			
Reduce distribution-related CO <sub>2</sub> emissions	Reduce CO <sub>2</sub> emissions per shipping volume	Sharp Group in Japan: Between fiscal 2007 and fiscal 2010, reduce by average 1% each year against fiscal 2006	Reduced by 4% from previous fiscal year	◎	Every fiscal year: Reduce by 1% from previous fiscal year	67 • 68			
Biodiversity Protection	Contribute to biodiversity protection	Develop Sharp Biodiversity Initiative	Introduce Sharp Biodiversity Initiative at Sharp Group bases in Japan and overseas	Introduced Sharp Biodiversity Initiative at all Sharp Group bases in Japan and overseas and assessed progress in efforts to protect biodiversity	○	Every fiscal year: Increase rate of progress set out in Sharp Biodiversity Initiative by three points from previous fiscal year	71 • 72		

# Mass Balance

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



\*1 TJ (terajoule) = 10<sup>12</sup> Joules

\*2 Amount of solar power generated; amount of green power purchased.

\*3 GWP (global warming potential) is a measure of how much a given amount of greenhouse gas will contribute to global warming, expressed relative to an equivalent mass of CO<sub>2</sub>.

\*4 Total weight of products in the 15 major categories sold in fiscal 2010 (estimate), plus waste, etc. discharged from production sites. \*7 For details, see page 34.

\*5 Estimate of annual energy used and amount of CO<sub>2</sub> emitted by products in the 13 major categories sold in fiscal 2010.

Calculation based on each product's annual energy consumption rate.

\*6 Amount of electricity generated (kWh) annually by Sharp solar cells shipped in fiscal 2010, plus CO<sub>2</sub> emissions reduction (t-CO<sub>2</sub>).



# Environmental Accounting

Sharp introduced environmental accounting in fiscal 1999 to provide a quantitative assessment of the costs and benefits of its environmental conservation activities, and has applied the results to environmental sustainability management. Beginning in fiscal 2010, Sharp also presented results based on the Connected Reporting Framework (CRF).

## Environmental Conservation Costs

Sharp's environmental conservation investment was approximately 4.3 billion yen, an increase of 0.8% over the previous fiscal year, reflecting the start of operations of the solar cell plant at GREEN FRONT SAKAI (Sakai City, Osaka Prefecture). Environmental conservation expenditures were approximately 30 billion yen, an increase of 26% compared to the previous fiscal year.

## Economic Benefits

Actual benefit was approximately 7.1 billion yen, resulting from expanded use of recycled water and expanded recycling of waste into valuable resources. Estimated benefit was approximately 172.2 billion yen, due to an increase in the number of energy-creating and energy-saving products.

### Explanation of Terminology

#### Environmental Conservation Costs

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

#### Economic Benefits

Contributions to society and to the company, which result from environmental conservation activities, expressed in monetary units.

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

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

- (1) Reduced greenhouse gas emissions converted into equivalent monetary amounts: 1,471 yen/t-CO<sub>2</sub>.
- (2) Electricity savings converted into equivalent monetary amounts: Unit cost of electricity: 21 yen/kWh.

#### Sites Covered

Sharp Corporation sites (Tochigi, Yao, Hiroshima, Nara, Katsuragi, Fukuyama, Mie, Tenri, Mihara, Karneyama, Toyama, Tanabe, the Head Office, Kashiwa, and Sakai), Sharp Manufacturing Systems Corporation, Sharp Niigata Electronics Corporation, Sharp Yonago Corporation, Sharp Display Products Corporation, and Sharp Mie Corporation

#### Period Covered

April 1, 2010 to March 31, 2011

#### Referenced Guidelines

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

\*1 Figures inside square brackets [ ] include technology development centers at all sites beginning this fiscal year for the purposes of conducting detailed management.

\*2 A general term for perfluorocarbon gases, which are greenhouse gases.

\*3 Total benefit related to measures implemented using the equipment during depreciation.

\*4 GWP (global warming potential) is a measure of how much a given amount of greenhouse gas will contribute to global warming, expressed relative to an equivalent mass of CO<sub>2</sub>.

Classification of Environmental Conservation Activities ( ): Category based on Environmental Accounting Guidelines, Ministry of the Environment	Description of Major Activities	Environmental Conservation Costs (Unit: ¥ million)		Economic Benefits (Unit: ¥ million)		Environmental Conservation Effects		See page(s)		
		Investment	Expenses	Actual Benefit	Estimated Benefit	Tangible Effects	Estimated Benefit			
Environmental Sustainability Management (management activities)	<ul style="list-style-type: none"> <li>Operation of environmental management system</li> <li>Promote environmental sustainability management</li> <li>Environmental education</li> </ul>	216 (59)	1,674 (1,641)	-	-	Promote environmental sustainability management		52		
						Number of employees with environmental education	Master		149	-
							Expert		621	-
Planning and Design (R&D)	<ul style="list-style-type: none"> <li>R&amp;D on solar power generation systems</li> <li>Promote closed-loop recycling of plastic materials</li> <li>R&amp;D on basic environmental technologies</li> <li>R&amp;D on biomass materials</li> </ul>	921 [3,485]	6,790 [15,005]	-	168,894	Supply environmentally conscious products (Unit: ¥ million)		7 1 11 34 48		
						Green Seal products' share of net sales			86.1%	-
						Super Green products' share of net sales			56.1%	-
						Total amount of electricity generated by solar power generation systems			3,604 GWh	75,684
						CO <sub>2</sub> emissions reduced by solar power generation systems			1,584 million t-CO <sub>2</sub>	2,330
Manufacturing	<ul style="list-style-type: none"> <li>Reduce greenhouse gas emissions (global environmental conservation)</li> <li>Minimize and recycle waste (recycle resources)</li> <li>Prevent pollution (prevent pollution)</li> </ul>	682 (2,800)	2,234 (2,481)	2,084*3 (2,049)	3,350 (4,304)	Greenhouse gas emissions reduced by controlling electricity and fuel consumption (Unit: ¥ million)		54 66		
						CO <sub>2</sub> emissions reduced			51 thousand t-CO <sub>2</sub>	75
						PFC emissions reduced			2,227 million GWPt-CO <sub>2</sub>	3,276
Recycling/Logistics (upstream/downstream)	<ul style="list-style-type: none"> <li>Reduce waste discharge and recycle waste into valuable resources</li> <li>Recycle water</li> <li>Promote collection, recycling, and proper disposal of used products</li> </ul>	52 (8)	13,656 (10,341)	2,121*3 (1,831)	-	Waste recycled or sent for appropriate disposal		49 50 67 68		
						Waste recycled			148 thousand tons	-
						Recycled and reused water			18,701 million m <sup>3</sup>	-
Social Responsibility	<ul style="list-style-type: none"> <li>Install scrubbers</li> <li>Introduce exhaust gas treatment systems</li> <li>Expand social contribution activities</li> </ul>	2,436 (697)	6,325 (5,144)	-	-	Observe environmental laws and regulations		101 106		
						Prevent air/water pollution and noise/vibration				
						Promote risk management				
Total*1		4,307 [6,841] (4,273)	30,849 [39,064] (24,485)	7,135 (6,368)	172,244 (128,150)	Collection, recycling, and proper disposal of used products				
						Used PCs recycled			25 tons	-
						Used copiers recycled			2,717 tons	-
						Used home appliances (4 categories) recycled			96,328 tons	-
						Environmental burden during distribution reduced				
Railway/ship cargo transport (container transport)		31,749 containers	-							
Number of low-pollution vehicles introduced		99.1%	-							
Environmental social contributions										
Number of employees who attended SGC activities		Total 31,206	-							
Number of schools where environmental/craftsmanship education was provided		Total 656	-							

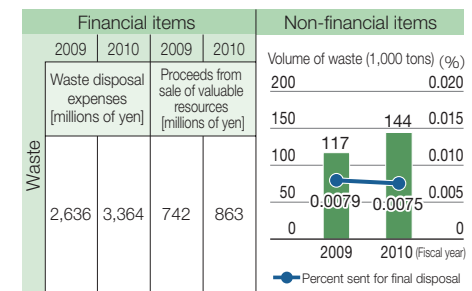
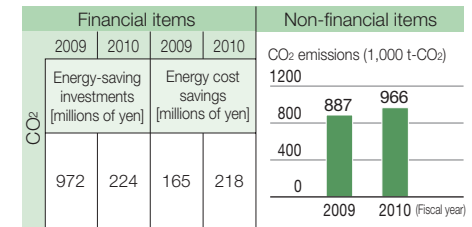
Note: Figures in parentheses below entries represent actual values from the previous fiscal year.

## Reporting under CRF

As shown at the left, Sharp is continuing to base its environmental accounting on guidelines published by the Japanese Ministry of the Environment, and has long been working to collect and report environmental accounting information in a way that shows the links between costs and benefits wherever possible.

The Connected Reporting Framework (CRF) advocated by the Accounting for Sustainability project, a British NGO, is an integrated reporting scheme that presents both financial and non-financial results as an integrated representation of a company's performance. These results can be calculated and reported using the same classifications and items that Sharp has thus far been using in its environmental accounting.

Calculated totals under the CRF for Sharp's efforts in fiscal 2010 to reduce CO<sub>2</sub> emissions and the amount of waste generated are presented below. Although Sharp took aggressive action to reduce the level of both these emissions, increased production output resulted in an increase of CO<sub>2</sub> emissions of 79,000 t-CO<sub>2</sub> and an increase in the amount of waste generated of 27,000 tons, both compared to the previous fiscal year.



# Developing Unique Environmental Technologies

Sharp is working to develop unique environmental technologies to raise the environmental performance of its products and devices, and to lower the environmental impacts of its production facilities.

Sharp is advancing research and development of people-friendly and environmentally friendly technologies covering four areas—energy saving and energy creation, effective use of resources, safety and peace of mind, and health and comfort.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>Expand closed-loop plastic material recycling</li> <li>Use 1,300 tons of recycled plastic in new products</li> </ul>	<ul style="list-style-type: none"> <li>Used 1,300 tons</li> </ul>	<ul style="list-style-type: none"> <li>Use 1,400 tons</li> </ul>	<ul style="list-style-type: none"> <li>Use 1,500 tons</li> </ul>
<ul style="list-style-type: none"> <li>Develop LCD panel recycling technology</li> <li>Develop recycling technology for scrap glass discarded during LCD panel production process</li> </ul>	<ul style="list-style-type: none"> <li>Developed recycling technologies to use scrap glass in road paving materials and glass plates</li> <li>Introduced proof-of-concept plant for recycling LCD panels</li> </ul>	<ul style="list-style-type: none"> <li>Implement proof-of-concept trials for LCD panel recycling</li> </ul>	<ul style="list-style-type: none"> <li>Develop waste LCD panel recycling technology</li> <li>Develop recycling technology for LCD panels recovered from used LCD TVs</li> </ul>

## R&D on Unique Environmental Technologies

In fiscal 2010, the volume of plastic derived from closed-loop plastic material recycling technology\*1 that was recycled and reused in new products increased to 1,300 tons. This technology represents an example of a unique environmental technology that helps reduce the consumption of fossil-based resources and contributes to the effective use of resources. Sharp also continued to work on the development of recycling technologies for LCD TVs and technologies for using biomass materials.

Sharp also developed four-color technology\*2 that combines rich color rendering and energy efficiency in LCDs, as well as a proprietary airflow control technology that increases the efficiency of air conditioners and new high-efficiency monocrystalline solar cells. Also, total sales of products equipped with Plasmacluster Ion technology, Sharp's unique air purification technology, reached 30 million units worldwide, and Sharp continued to pursue new instances where the effectiveness of this technology has been proven.

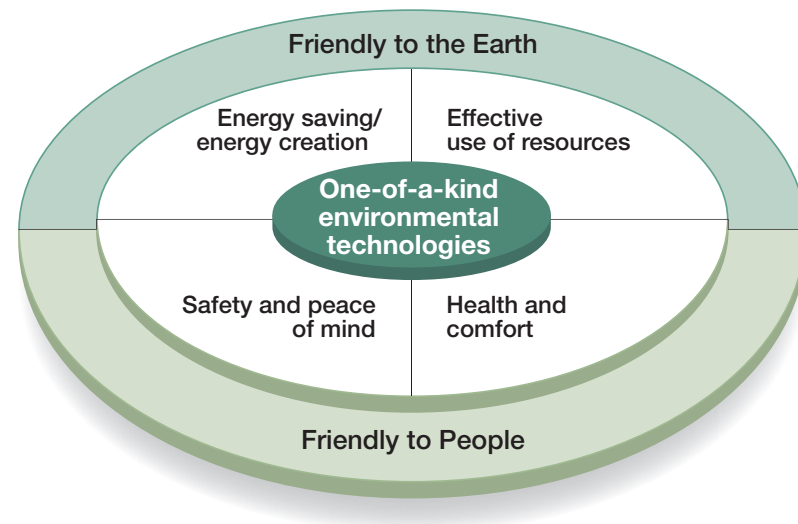
In addition, as initiatives looking to the future, Sharp is conducting joint research with Osaka Prefecture University on plant cultivation and recovering resources from waste at GREEN FRONT SAKAI, Sharp's base in Sakai City, Osaka Prefecture, Japan.

Sharp will continue to work to improve the environmental performance of its products and devices, as well as develop and put into practical use unique environmental technologies to reduce the level of environmental impact at its production facilities.

\*1 Recycling technology for repeatedly recovering plastic from used consumer electronics and reusing it in parts of new consumer electronics.

\*2 Sharp's four-color concept was designed for use with LCDs; it differs from the conventional three-primary-color concept of light and color.

### One-of-a-Kind Technological Development Fields



Case Study 1

Developing and Using Closed-Loop Plastic Material Recycling Technology for Repeatedly Reusing Plastic

In fiscal 2001, in conjunction with the enactment of the Home Appliance Recycling Law, Sharp and Kansai Recycling Systems Co., Ltd.\*1 jointly developed and put into practical use closed-loop plastic material recycling technology that repeatedly recovers plastic from used consumer electronics and reuses it in parts of new consumer electronics for the Japanese market.

During the 10 years since, Sharp developed a high-efficiency metal removal line\*2 and high-purity PP separation and recovery technology\*3, which led to the recovery of larger amounts of recyclable plastic. In addition, Sharp and Ube Industries, Ltd., a comprehensive chemical manufacturer in Japan, worked together to develop plastic pigmentation technology\*4 and flame retardant technology to add value to the recycled plastic, thereby expanding the applications of the recycled plastic to components such as the exterior panels of home appliances. As a result of these technology developments, the volume of plastic recycled and reused has expanded each year from the 40 tons in fiscal 2001 to approximately 1,300 tons in fiscal 2010.

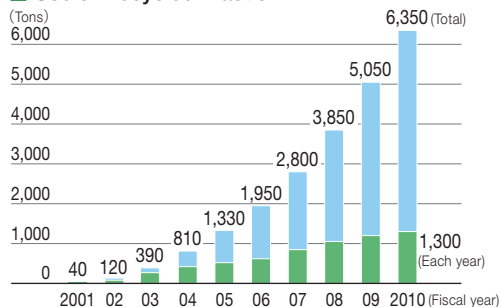
Washing machines equipped with tubs made from plastic recycled using this technology are now reaching the end of their service life, and have begun to be collected and sent to recycling plants. Thus, the plastic is entering its second cycle of recovery and reuse.

In the future, Sharp will work to advance the effective use of limited resources by actively developing new technologies centered on closed-loop plastic material recycling technology.

\*1 A consumer electronics recycling company in Japan established with joint investment from Sharp, Mitsubishi Materials Corporation, and five other companies.

\*2 \*3 \*4 See graphics to the right.

Use of Recycled Plastic



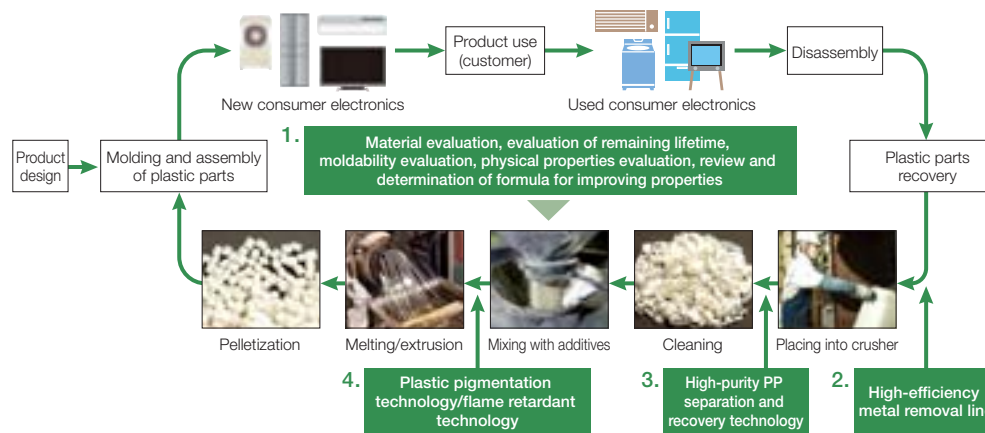
Examples of Closed-Loop Recycled Plastic Use



Awards

Year	Award Name	Sponsor
2004	Education, Culture, Sports, Science and Technology Minister's Prize; 13th Global Environment Awards	Japan Industrial Journal
2005	15th Best Technology Award	Japan Society of Polymer Processing
2008	Director-General's Prize, Industrial Science and Technology Policy and Environment Bureau, Ministry of Economy, Trade and Industry; 2008 Resource Recycling Technologies and Systems Commendation	Clean Japan Center
2010	Technological Achievement Award	Research Association for Feedstock Recycling of Plastics, Japan

Closed-Loop Plastic Material Recycling Flow



① Closed-Loop Plastic Material Recycling Technology

Technology to repeatedly recycle and reuse plastic an arbitrary number of times based on improving the properties of the plastic to meet the specifications required for the target material, efficient removal of contaminants (to extract foreign matter as well as improve yields), and applying quality control adapted for recycled materials.

② High-Efficiency Metal Removal Line

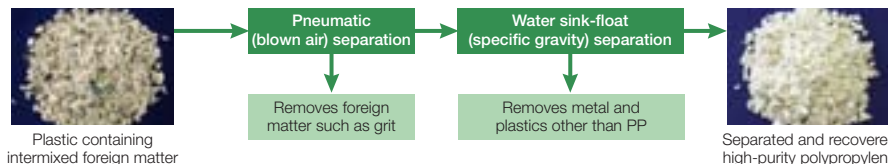
System to detect and remove metal parts with a high degree of precision, such as screws attached to recovered plastic components.



High-efficiency metal removal line (Kansai Recycling Systems Co., Ltd.)

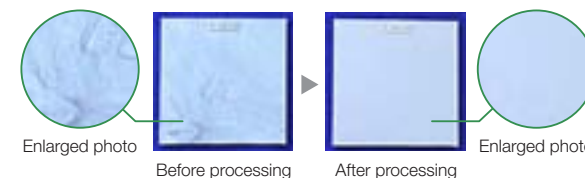
③ High-Purity PP Separation and Recovery Technology

Technology to recover high-purity polypropylene (PP) from waste plastic containing different types of plastic intermixed with metal.



④ Plastic Pigmentation Technology

Technology to add pigments to visually obscure foreign matter intermixed with the recycled material.



Case Study 2

Developing and Using Technology to Recycle LCD TVs

Sharp began recycling of flat-screen TVs in April 2009 following revisions to the Home Appliance Recycling Law.

As a leading manufacturer of LCD TVs, Sharp was among the first to establish a research group on LCD TV recycling in fiscal 2002, and the following year in fiscal 2003, began R&D on recycling technologies. One of the results was a plastic material for use in the rear cabinets of AQUOS LCD TVs that can be recycled in the closed-loop material recycling\*1 process. This plastic has been in practical use in the Japanese market since fiscal 2006\*2. Sharp is also working to develop recycling technologies for conventional rear cabinets, and is continuing development of other recycling technologies, including recovery of indium from scrapped LCD panels, and finding uses for glass recycled from waste LCD panels.

Looking ahead, Sharp will be actively working to develop and commercialize new technologies with the goal of high-efficiency recycling and effective use of resources recovered from LCD TVs, which will be collected in increasing numbers in the future.



Rear cabinet that can be recycled in the closed-loop material recycling process (LC-46AE7)

\*1 See page 34.

\*2 Fiscal 2010 models: LC-52AE7/46AE7, LC-52DX3/46DX3, LC-60LV3/52LV3, LC-60LX3/52LX3, LC-52DZ3/46DZ3, LC-52LB3

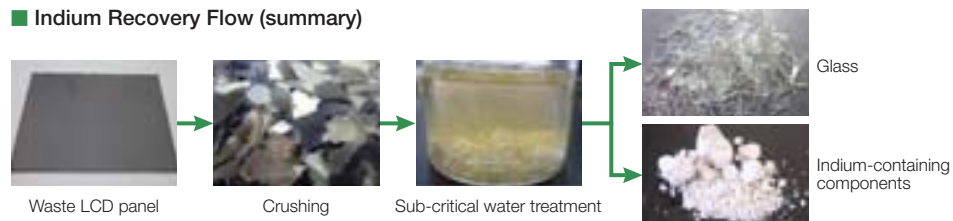
Developing Technology to Recover Indium from Waste LCD Panels

In fiscal 2009, Sharp, working in cooperation with Osaka Prefecture University, developed recycling technology for waste LCD panels that uses sub-critical water\*3.

Taking advantage of sub-critical water's effectiveness at dissolving organic substances, this technology strips away the organic layer from the glass substrate of the LCD panel, and separates and recovers the indium, a rare metal, from the glass. In fiscal 2010, Sharp completed the design and installation of a proof-of-concept plant, and began research on commercialization of this technology.

\*3 Up to a temperature of 374°C and a pressure of 218 atmospheres, water is a liquid but has not entered the gaseous state. This temperature and pressure is called the critical point, and water in a temperature range slightly below the critical point is called sub-critical water.

Indium Recovery Flow (summary)



Developing Technologies to Recycle Waste LCD Panel Glass

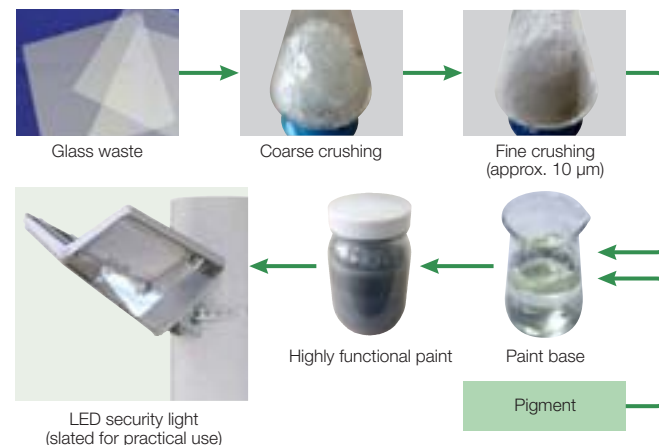
In fiscal 2009, Sharp developed a highly functional paint offering high strength, and excellent abrasion and corrosion resistance, that uses scrap glass\*4 discarded during the LCD panel production process.

The glass used for LCD panels features outstanding physical properties such as high strength, low thermal expansion, and high heat resistance, but because its softening temperature is high, re-melting this glass for reuse as a new raw material is difficult using existing equipment. Accordingly, Sharp succeeded in developing a highly functional paint that takes advantage of the characteristics of LCD panel glass without melting the waste glass by finely crushing it and mixing the resulting powder with paint base or pigment.

This paint can dramatically improve the long-term durability of products installed outdoors and exposed to sunlight, wind and rain, and sand and dust. Sharp is currently working to use this paint on the exterior parts of LED security lights.

\*4 Scrap glass is generated when the large glass substrate sheets are cut down to screen size.

How Highly Functional Paint Is Made



In addition to highly functional paint, Sharp is continuing to develop applications for recycled waste glass that take advantage of the outstanding properties of the glass used in LCD panels, and has thus far found practical uses in road paving materials and for glass plates.

In the future, Sharp will promote its use in home appliances and will develop new applications, including new market areas such as architectural materials and roadway ancillary fixtures and hardware.



Glass plate made from recycled waste LCD panel glass (Photo courtesy of Minocraft Corporation)

Case Study 3

Developing and Using Technology for Utilizing Biomass Materials

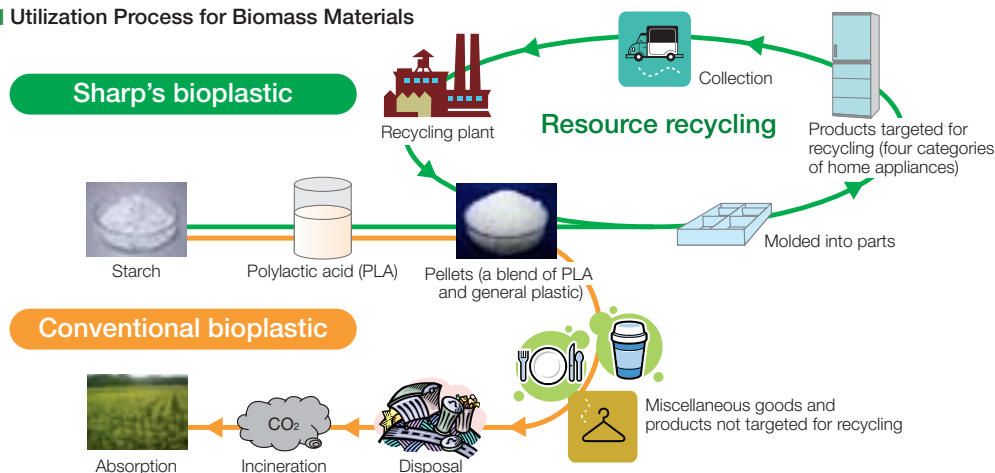
In an effort to reduce the consumption of limited fossil resources, Sharp is developing technologies to use biomass materials based on the concept of “resource recycling.”

In fiscal 2006, Sharp developed technology that blends starch-based bioplastic (PLA) and general plastic, such as polypropylene and polystyrene. And by increasing the durability of the blended bioplastic, it can withstand the closed-loop plastic material recycling\*1 process. Sharp has since improved some of the properties of this plastic, such as moldability and coloration. Since 2007, this plastic has been used for desktop mobile phone holders released in the Japanese market.

Sharp will continue to develop biomass materials with even greater durability and recyclability with the goal of using them in products such as home appliances, audio/video equipment, and photocopiers.

\*1 See page 34.

Utilization Process for Biomass Materials



Examples of Bioplastic Use



Desktop holder for 004SH mobile phone (SoftBank Mobile Corp.)



Desktop holder for SH-01C/SH-09C mobile phone (NTT DOCOMO, Inc.)

Case Study 4

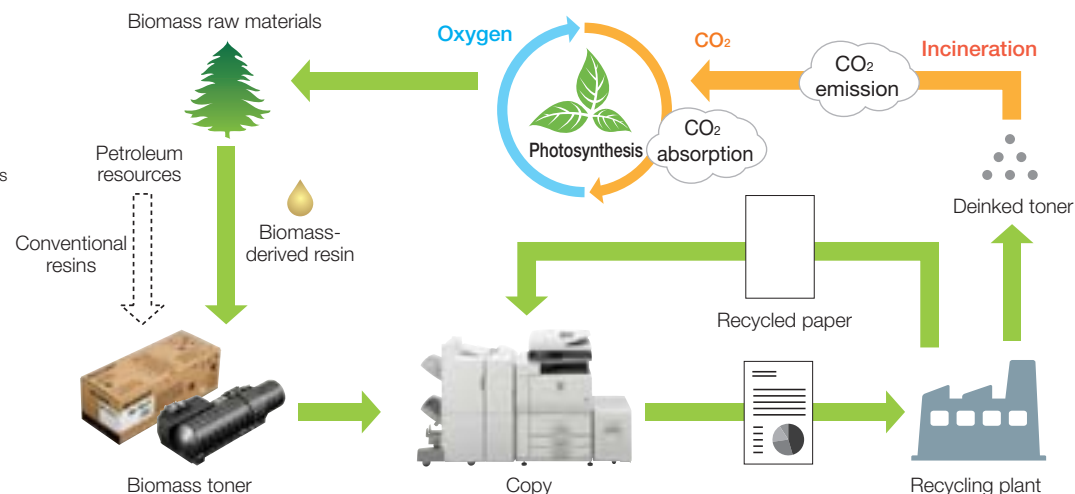
Developing Mycrostoner EP Based on Biomass Materials

Sharp has developed Mycrostoner EP, which is largely made up of a resin component that contains a biomass raw material. Incinerating spent toner releases CO<sub>2</sub> from the combustion of the biomass-derived resin. But this CO<sub>2</sub> was originally absorbed by the plants that make up the resin feedstock during their growth process, and hence, the disposal process can be considered carbon-neutral (i.e. has no net effect on the total amount of CO<sub>2</sub> in the atmosphere).

This toner is also the first to receive the BP Mark, a certification by the Japan BioPlastics Association (JBPA) as a biomass plastic product that contains at least a certain level of organic resources. It is already being put to practical use in the Japanese market.\*2

\*2 Used in models MX-M753/MX-M623.

Carbon Neutral Closed Carbon Cycle



Mycrostoner EP Is the First Toner to Receive BP Mark Certification in Japan



Biomass material



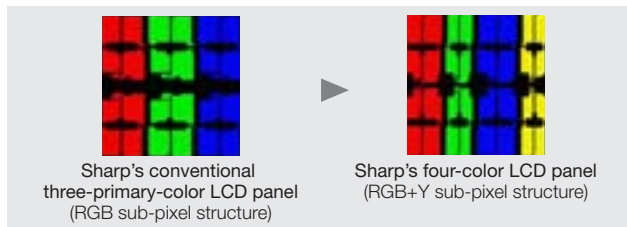
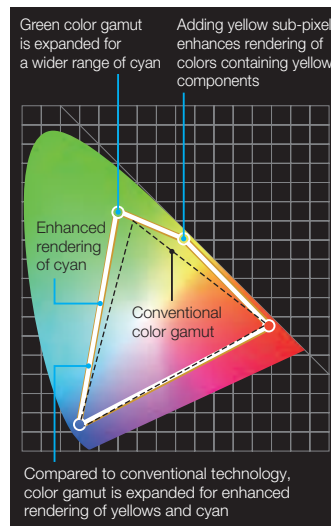
Case Study 5

Developing Technology to Achieve Both High Image Quality and High Energy Efficiency in LCD TVs

Sharp has developed four-color technology\*1 that makes it possible to render rich, vivid colors. In combination with Sharp's UV<sup>2</sup>A technology\*2 and LED backlight technology, it achieves both high image quality and high energy efficiency in LCD TVs.

Four-Color Technology Dramatically Improves the Ability to Faithfully Render Colors

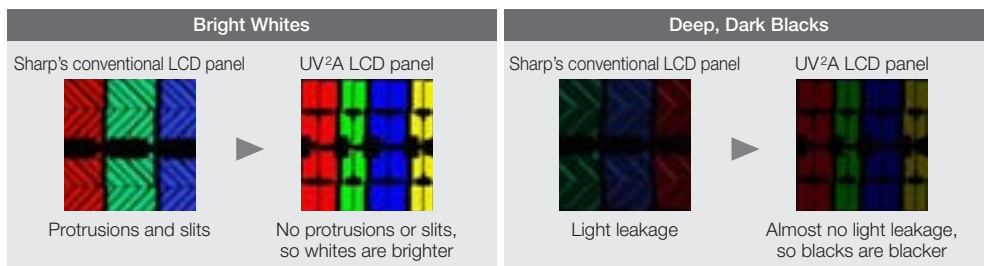
Sharp developed four-color technology that newly adds Y (yellow) to the three RGB (red, green, blue) primary colors. Its advanced color rendering makes it possible to vividly reproduce colors such as brilliant yellow, brassy gold, and emerald green that are difficult to reproduce using the three conventional primary colors, and enables both 2D and 3D images to be reproduced with outstanding clarity and image quality.



Outstanding Energy Efficiency

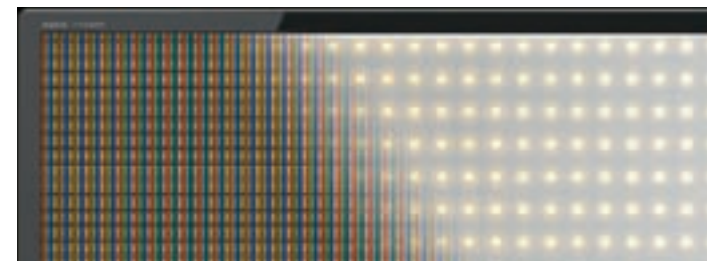
UV<sup>2</sup>A Technology

In previous technologies, structural elements in the LCD cell caused light leakage and interference, resulting in lower light transmissivity (lower aperture ratio). Sharp succeeded in eliminating this structure in its UV<sup>2</sup>A technology. Reducing light leakage yields higher contrast, and at the same time, raises the aperture ratio and cuts the power required by the backlight, leading to lower power consumption.



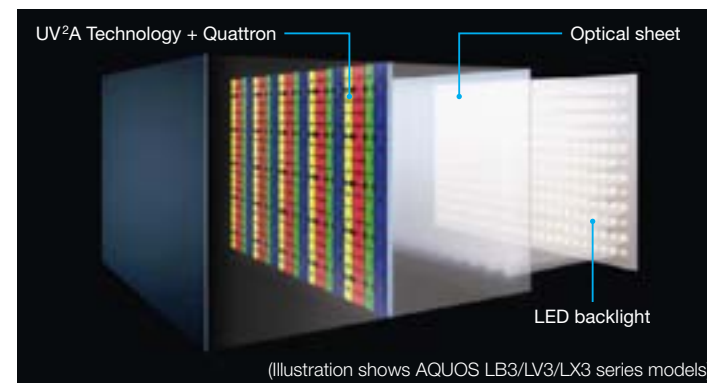
LED Backlight

Sharp has adopted LEDs as the light source to enable precise control of brightness plus fast response. LED light diffusion technology provides energy-efficient and uniform illumination across the entire screen, and in combination with LCD panels equipped with UV<sup>2</sup>A technology, achieves a TV contrast of 5,000,000:1\*3. Sharp is working to further improve performance and image quality.



Four-Color Technology

Sharp's AQUOS Quattron\*4 LCD TVs feature four-color technology which adds a yellow sub-pixel. Yellow naturally appears bright to the human eye, and yellow pixels have the property of enabling more efficient use of the yellow wavelength components in the light produced by the LED backlight, the light source for the LCD panel. Effectively taking advantage of the characteristics of this yellow color yields higher brightness. As a result, compared to the conventional three-primary-color displays, images can be rendered even more brightly with lower power, resulting in significantly improved energy efficiency.



\*1 Sharp's four-color concept was designed for use with LCDs; it differs from the conventional three-primary-color concept of light and color.  
 \*2 UV<sup>2</sup>A stands for "Ultraviolet-induced Multi-domain Vertical Alignment," a photo-alignment technology for precisely controlling the alignment of liquid crystal molecules in a simple LCD panel structure.  
 \*3 Applies to the LB3/LV3/Z5/LX3/XF3 series. When viewed from the front, TV contrast is the maximum contrast level a TV set is capable of achieving (the ratio of maximum screen brightness for an all-white signal to the minimum screen brightness with an all-black signal). TV contrast of 5,000,000:1 is when AV position is set to "Dynamic".  
 \*4 Quattron is a combination of the word "quattro" meaning "four" in Italian, and the word "electron" in English.

Case Study 6

Applying Biomimetics to Fan Design to Raise Energy Efficiency in Air Conditioners

Sharp applied the science of biomimetics to design the fans for split-type air conditioners. The fan for the indoor unit is modeled on the shape of a dragonfly wing, and for the outdoor unit, the shape of a bird wing. These designs resulted in an approximately 30% improvement in airflow efficiency for the indoor unit and approximately 20% for the outdoor unit compared to conventional designs.

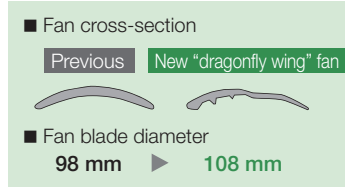
Indoor Unit Technologies



Airflow efficiency improved by approx. **30%**

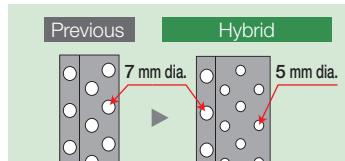
1 Cross-Flow Fan Modeled on the Shape of Dragonfly Wings

A redesigned fan blade modeled on the shape of a dragonfly wing plus a larger blade diameter resulted in improved airflow efficiency.



2 Hybrid Heat Exchanger with Improved Efficiency

Adopting finer diameter tubing (5 mm dia.) increased density, resulting in improved heat exchanger efficiency.



3 New Eco-Friendly Design Boosts Airflow Efficiency

Efficiently draws in air through large inlet louvers and gently directs air from ultra-wide airflow vents to reach even the far corners of the room.



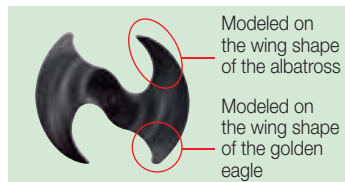
Outdoor Unit Technologies



Airflow efficiency improved by approx. **20%**

1 Outdoor Unit Fan Takes Nature as Its Model

Sharp adapted the wing shapes of the albatross and the golden eagle to cleverly take advantage of the natural flow of air to achieve efficient operation.



2 Increasing Airflow Volume While Trimming Fan Weight

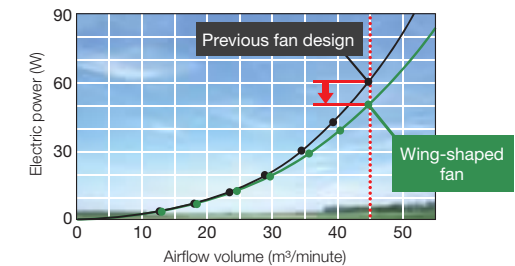
Modeled on the airfoil geometry of bird wings, the aerodynamic fan blade slices cleanly through the air, reducing drag and increasing the volume of air moved. Its lightweight design also uses less material, conserving resources.



3 Less Electricity Used During Operation

Improved fan efficiency reduced electricity consumption by about 20% while moving the same volume of air.

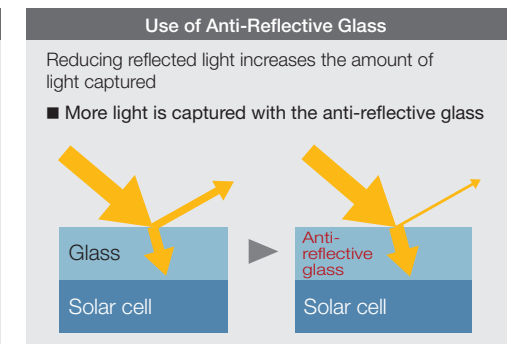
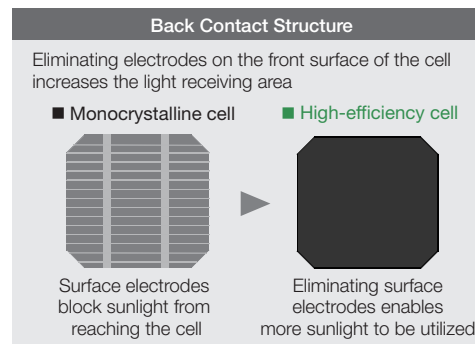
Power versus Airflow Volume



Case Study 7

Developing High-Efficiency Monocrystalline Solar Modules Using Back Contact Structure

Sharp has developed monocrystalline solar modules that achieve high conversion efficiency. These solar cells use a Back Contact structure (electrodes are connected on the back-side) that eliminates electrodes on the front surface, thereby increasing the light receiving area. In addition, the use of anti-reflective glass reduces reflected light from the glass surface, increasing the amount of light captured. As a result, output is approximately 20% higher than with predecessor models.



Case Study 8

Eco House Demonstration Project—  
Aiming to Minimize Energy Consumption in the Home

Energy consumption in the residential sector in Japan has increased by approximately 40% compared to fiscal 1990, and of the total amount of electrical energy consumed in Japan, home use accounts for about 30%. Reducing power consumption in the home is regarded as a critical factor in energy conservation and the prevention of global warming.

Against this background, Sharp has for some time been actively engaged in research on an energy-efficient, environmentally friendly house, and recently completed construction of the Sharp Eco House at GREEN FRONT SAKAI (Sakai City, Osaka Prefecture) designed to be the ultimate in an energy-saving home. Sharp is now conducting tests of experimental technologies intended to minimize power consumption while contributing to a comfortable living environment.



Sharp Eco House constructed at GREEN FRONT SAKAI

Works in conjunction with electric vehicles

Sharp has developed a home energy management system (HEMS) for the Sharp Eco House that provides three levels of control: Visualization, Automation, and Prediction.

Level 1: Visualization

This level uses intelligent power-measuring plugs equipped with wireless networking capabilities to measure the power consumption of home appliances and consumer electronics. Residents can use displays such as an AQUOS LCD TV or media tablet to show the amount of power used by each appliance.

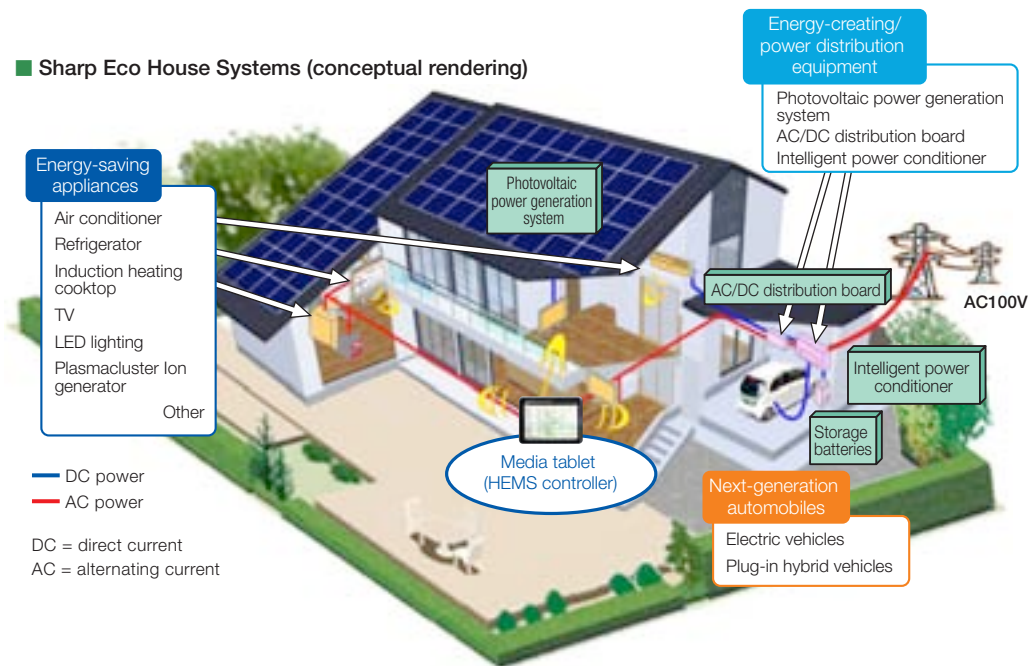
Level 2: Automation

At this level, HEMS acts automatically on behalf of the home occupant to control energy use and minimize power consumption based on sensor information.

Level 3: Prediction

HEMS predicts human behavior while providing even more sophisticated and detailed automatic control.

Sharp Eco House Systems (conceptual rendering)



In addition, Sharp is validating the concept of DC power distribution and DC home appliances\* that enable direct-current electricity from solar panels and storage batteries to be used in the home without the need for conversion to AC power. It is also exploring the use of the battery pack of an electric vehicle as a power storage device for the home.

Sharp is working to move these various technologies from the experimental level to practical reality, and will be proposing lifestyles that are both comfortable and energy-efficient.



Intelligent power-measuring plugs (left) and media tablet



Power consumption of all home appliances can be checked at a glance

\* Home appliances that run on direct-current (DC) power



# Developing Products and Devices with High Environmental Performance

Along with having guidelines for environmentally conscious design, Sharp sets objectives for the development of environmentally conscious products and devices as well as assessment standards for certification as such. Every year, the company revises these guidelines and standards, thus constantly improving the environmental performance of its products and devices.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>Super Green Products account for 60% or more of net sales in Japan</li> </ul>	<ul style="list-style-type: none"> <li>Super Green Products accounted for 56% of net sales in Japan</li> </ul>	<ul style="list-style-type: none"> <li>Super Green Products account for 50% or more of net sales in Japan</li> </ul>	<ul style="list-style-type: none"> <li>Super Green Products account for 50% or more of net sales in Japan</li> </ul>
<ul style="list-style-type: none"> <li>Advanced Green Products account for 90% or more of net sales in Japan</li> </ul>	<ul style="list-style-type: none"> <li>Advanced Green Products accounted for 86% of net sales in Japan</li> </ul>	<ul style="list-style-type: none"> <li>Advanced Green Products account for 80% or more of net sales in Japan</li> </ul>	<ul style="list-style-type: none"> <li>Advanced Green Products account for 80% or more of net sales in Japan</li> </ul>
<ul style="list-style-type: none"> <li>Super Green Devices account for 20% or more of net sales</li> </ul>	<ul style="list-style-type: none"> <li>Super Green Devices accounted for 37% of net sales</li> </ul>	<ul style="list-style-type: none"> <li>Super Green Devices account for 30% or more of net sales</li> </ul>	<ul style="list-style-type: none"> <li>Super Green Devices account for 30% or more of net sales</li> </ul>
<ul style="list-style-type: none"> <li>Green Devices account for 90% or more of net sales</li> </ul>	<ul style="list-style-type: none"> <li>Green Devices accounted for 95% of net sales</li> </ul>	<ul style="list-style-type: none"> <li>Green Devices account for 92% or more of net sales</li> </ul>	<ul style="list-style-type: none"> <li>Green Devices account for 95% or more of net sales</li> </ul>

## Making All Products Green Products

Sharp calls its environmentally conscious products Green Products (GP). The GP Guidelines, which define development and design guidelines in line with seven concepts, have been in use at all product design departments in Japan and overseas since fiscal 1998.

In developing products, Sharp sets specific objectives according to the GP Standard Sheet, which is formulated based on the GP Guidelines; and in the trial manufacture and mass production stages, it determines how well the actual product has met these objectives, with those achieving the standards being named GP. Each year, Sharp reviews the objectives contained in the GP Standard Sheet, and although they have been made progressively more challenging, all new products since fiscal 1998 have met the assessment criteria necessary to be designated as GP. Sharp will continue working to develop products with even higher environmental performance.

### Green Product Concepts

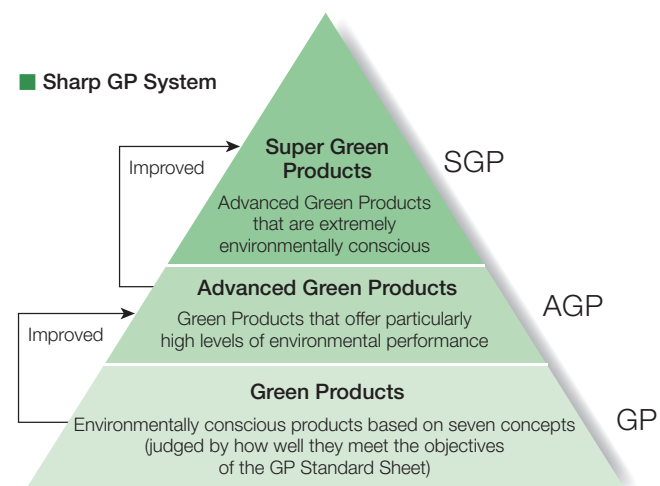
<b>Energy Saving / Energy Creating</b>	<b>Products with superb energy-saving / energy-creating performance</b> Improve the energy efficiency and reduce the energy consumption of products; other measures
<b>Resource Conservation</b>	<b>Products designed to conserve resources</b> Reduce the amount of materials used; design products that conserve resources during use; extend the life span of products; other measures
<b>Recyclability</b>	<b>Products designed for recycling</b> Design products that are easy to disassemble; use easy-to-recycle materials; other measures
<b>Safe Use and Disposal</b>	<b>Products that can be used and disposed of safely</b> Do not use substances that negatively affect people's health or the environment; other measures
<b>Use of Green Materials and Devices</b>	<b>Products that use green materials and devices</b> Use recycled materials / plant-based plastics; other measures
<b>Environmental Consciousness Pertaining to Batteries, etc.</b>	<b>Products that use batteries, manuals, and packaging with enhanced environmental consciousness</b> Reduce product packaging; design products that allow easy removal of batteries; other measures
<b>Showing Eco Information of Products</b>	<b>Products that show their environmental performance and information</b> Acquire environmental labels (eco labels); implement LCA; other measures

## Developing Super Green Products on a Global Basis

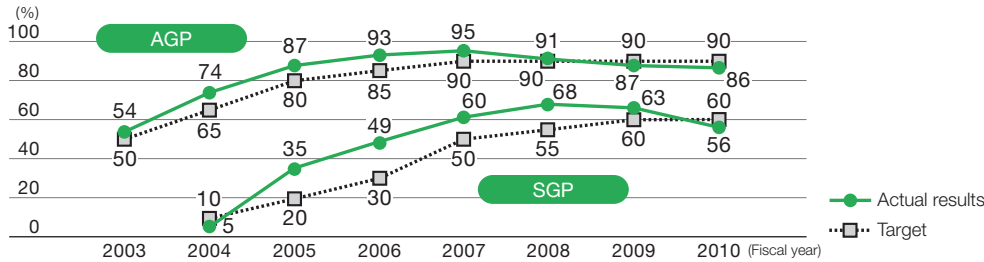
Among Green Products, Sharp has been certifying those that offer a particularly high level of environmental performance as Advanced Green Products (AGP), and further, among these AGP, certifying those with the highest possible levels of environmental performance as Super Green Products (SGP). (In Japan, products that meet the criteria for AGP certification bear Sharp's proprietary Green Seal label.)

SGP and AGP certifications apply to products worldwide, but Sharp incorporates certification criteria set by region based on the needs of customers and on official systems introduced in each region to not only deliver high environmental performance, but also to create SGPs and AGPs tailored to specific regions.

In Japan, where interest in energy-efficient products is especially high, Sharp has revised the evaluation criteria for energy efficiency to be even more stringent.



Ratio of SGP and AGP to Net Sales in Japan



Assessment and Certification Standards for SGP and AGP (Fiscal 2010)

Products are assessed in terms of a score based on an overall environmental performance evaluation (Environmental Performance Criteria), as well as having environmental functions and performance that can be claimed to be superior to those of other companies (External Environmental Claim Standards).

Japan

	Environmental Performance Criteria (total 78 items including required items)	External Environmental Claim Standards
<b>SGP</b>	Satisfies items (1) to (10) to the right and scores at least 90 points	Is significantly more environmentally conscious than the products of other companies
<b>AGP</b>	<b>Global warming prevention</b> (has low power consumption, high energy efficiency, etc.) (1) Equal to or better than previous models (2) Has over 100% achievement rate of the energy-saving standard (3) TV, air conditioner, or refrigerator is industry-leading model in multi-level labeling system Point allocation: 15 points	Satisfies at least one of the following items: <b>Power consumption</b> ..... Is the industry-leading model in its product category <b>Standby power consumption</b> ..... Is the industry-leading model in its product category • Consumes 0.1W or less (for remote controlled products/products with timer function) • Consumes 1.0W or less (phones, faxes) <b>Energy creating</b> ..... Has industry-leading conversion efficiency <b>Resource savings during use (except electricity)</b> ..... Is the industry-leading model in its product category (saves water and detergent, etc.) <b>Compact/lightweight</b> ..... Is the industry-leading model in its product category • Is at least 30% lighter or more compact than previous models <b>Recycled materials</b> ..... Uses materials that were recycled using the closed-loop material recycling process <b>Green materials</b> ..... Uses no halogenated flame retardants, uses polyvinyl chloride substitutes • Uses refrigerant with low global warming potential <b>Acquisition of Eco Mark</b> ..... Has acquired the Eco Mark, authorized by the Japan Environment Association <b>Original technology</b> ..... Uses industry-first or original Sharp technology
	<b>Efficient use of resources</b> (is designed for recyclability, resource saving, etc.) (4) Is easy to separate and disassemble, or is upgradeable Point allocation: 25 points	
	<b>Substitution of toxic chemical substances</b> (meets the RoHS directive, etc.) (5) Meets the EU RoHS directive (6) Completely conforms to RoHS and RoHS-related regulations of destination market (7) Uses no substances prohibited under Sharp standards (8) Uses no cadmium batteries Point allocation: 30 points	
	<b>Others</b> (has environmental label status, uses less packaging materials, etc.) (9) Has undergone LCA (10) Has environmental label status Point allocation: 30 points	

Overseas

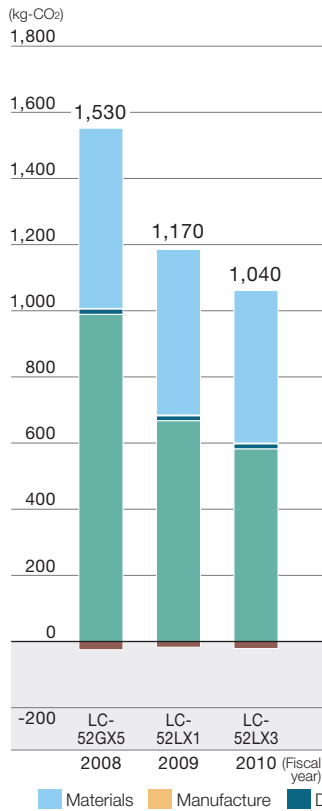
	Environmental Performance Criteria (total 78 items including required items)	External Environmental Claim Standards
<b>SGP</b>	Satisfies items (1) to (6) to the right and scores at least 90 points	<b>Energy saving/energy creating</b> ..... Has overwhelmingly superior energy-saving/energy-creating performance compared to products of other companies (Customer needs and various systems are taken into account in setting criteria for evaluation) <b>Environmental labeling</b> ..... Third-party environmental labeling is being acquired, or application has been made, or is expected to be made • For countries/regions that have a multi-level labeling system, even if there is no third-party environmental label certification system, be the best in the industry under the multi-level labeling system
<b>AGP</b>	<b>Global warming prevention</b> (has low power consumption, high energy efficiency, etc.) Point allocation: 15 points <b>Efficient use of resources</b> (is designed for recyclability, resource saving, etc.) (1) Is easy to separate and disassemble, or is upgradeable Point allocation: 25 points <b>Substitution of toxic chemical substances</b> (meets the RoHS directive, etc.) Point allocation: 30 points	<b>Energy saving/energy creating</b> ..... Has excellent energy-saving/energy-creating performance (Customer needs and various systems are taken into account in setting criteria for evaluation) <b>Environmental labeling</b> ..... Third-party environmental labeling is being acquired, or application has been made, or is expected to be made • For countries/regions that have a multi-level labeling system, even if there is no third-party environmental label certification system, be the best in the industry under the multi-level labeling system
	<b>Others</b> (has environmental label status, uses less packaging materials, etc.) (2) Meets the EU RoHS directive (3) Completely conforms to RoHS and RoHS-related regulations of destination market (4) Uses no substances prohibited under Sharp standards (5) Uses no cadmium batteries Point allocation: 30 points (6) Has undergone LCA	

### Identifying and Reducing Environmental Impacts Throughout the Life of Products

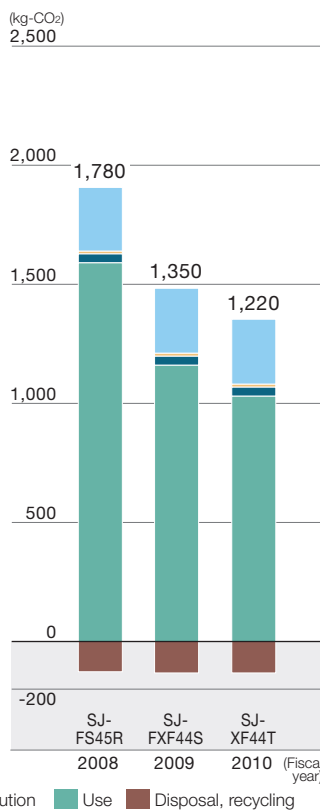
Sharp performs a life cycle assessment (LCA) on its products to identify their impact on the environment throughout their service life. Converting this impact into CO<sub>2</sub> emissions provides a quantitative measure that Sharp uses in its efforts to reduce environmental impacts by enabling it to focus on the areas where the impact is especially large. For example, TVs and other consumer electronics have a large impact during use. Consequently, the result of lowering the power consumption of the product can be effective in reducing the overall impact.

In the future, Sharp will continue to work to enable the creation of products with smaller environmental impacts.

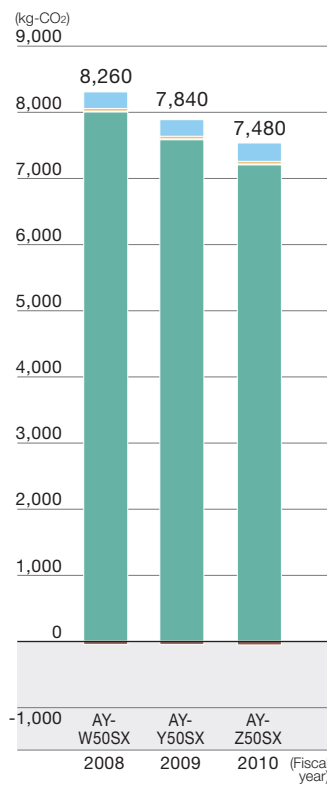
#### LCA Data for LCD TVs\*



#### LCA Data for Refrigerators



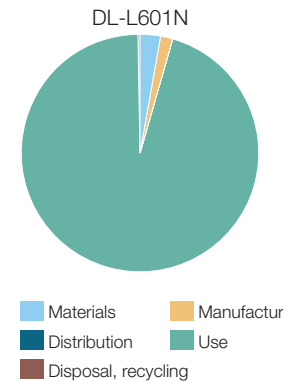
#### LCA Data for Air Conditioners



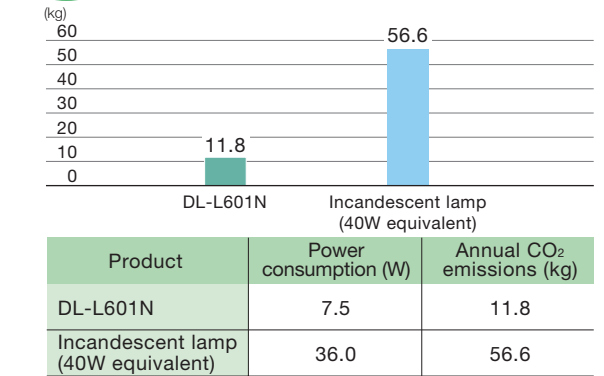
Note: CO<sub>2</sub> emissions during use are calculated using a CO<sub>2</sub> emission coefficient of 0.43 kg-CO<sub>2</sub>/kWh (based on the environmental household account book of "The Environmental Minister in My Home" program implemented by the Ministry of the Environment, Japan).

\* CO<sub>2</sub> emissions during use are calculated from annual power consumption based on fiscal 2010 measurement methods under targets set for Top Runner criteria based on the Law Concerning the Rational Use of Energy (Energy Conservation Law).

#### LCA Data for LED Lamps



#### Comparison of Annual CO<sub>2</sub> Emissions During Use (LED lamp vs. incandescent lamp)



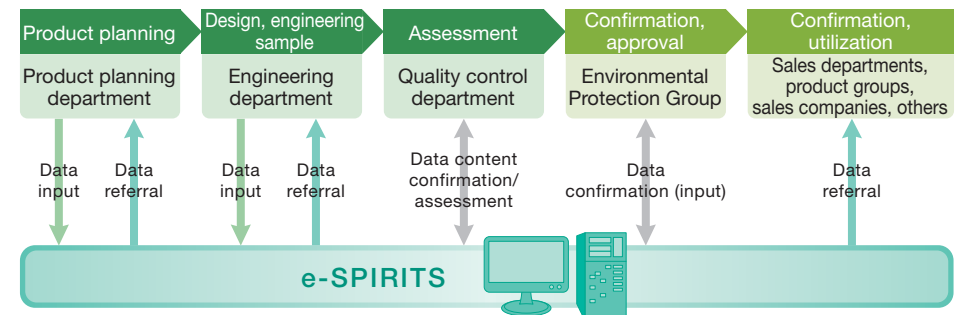
### e-SPIRITS—New Product Environmental Assessment System

In January 2011, Sharp introduced e-SPIRITS, a system for the integrated management of data used for conducting environmental assessments of products.

Sharp's first major step towards being environmentally compliant and ensuring that it constantly designs more environmentally conscious products was in fiscal 2006 when Sharp began introducing the I-EARS product environmental assessment system to its domestic and worldwide design and development bases.

Taking the place of I-EARS, e-SPIRITS is a database of green product and device development know-how and design data that is used to raise design standards and introduce consistent LCA. As well, e-SPIRITS aids in the creation of environmentally conscious products compliant with Sharp's SGP and AGP systems, which were introduced in fiscal 2009 for Sharp overseas products.

#### e-SPIRITS Flow



### Developing Green Devices and Super Green Devices

Sharp calls its environmentally conscious devices Green Devices (GD). To define guidelines for development and design based on seven concepts, Sharp established the GD Guidelines, which it began applying at all device design departments in fiscal 2004.

In developing devices, Sharp sets specific objectives according to the GD Standard Sheet, which is formulated based on the GD Guidelines; and in the trial manufacture and mass production stages, it determines how well the actual device has met these objectives, with those achieving the standards being named GD.

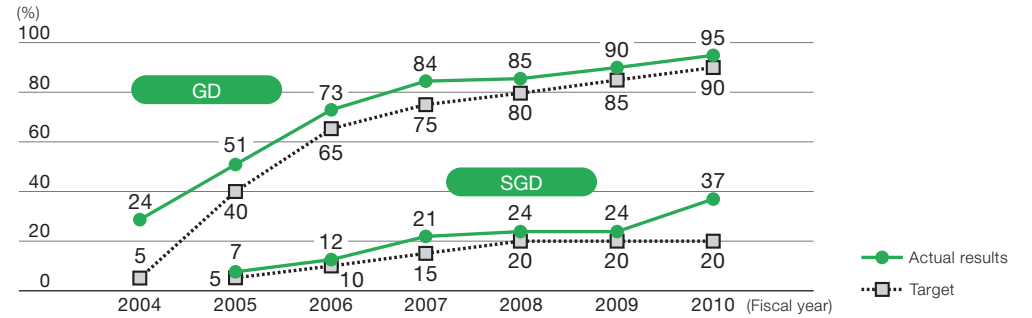
Sharp began certifying devices from among GD with the highest possible levels of environmental performance as Super Green Devices (SGD) from fiscal 2005.

In fiscal 2010, both GD and SGD exceeded their sales ratio targets. In the coming years, Sharp plans to raise these figures even higher.

#### Green Device Concepts

- Energy Efficiency** Devices with superior energy efficiency and that consume less energy  
Reduce power consumption during operation and in standby mode; other measures
- Resource Conservation** Devices designed to conserve resources  
Reduce device weight or volume; other measures
- Recyclability** Devices designed for recycling  
Use standard plastic; design devices that are easy to disassemble; other measures
- Safe Use and Disposal** Devices that can be used and disposed of safely  
Manage usage of chemical substances contained in parts and materials; other measures
- Long Life** Devices that make products last longer  
Extend the life of the product with exchangeable parts and consumables (target: LCD devices); other measures
- Packaging** Devices that use packaging with enhanced environmental consciousness  
Reduce packaging; other measures
- Information Disclosure** Devices that give environmental information  
Provide information on chemical substances in devices; other measures

Ratio of SGD and GD to Net Sales



SGD and GD Certification Standards (Fiscal 2010)

	Environmental Performance Criteria		External Environmental Claim Standards
	Required items	Percentage of 34 evaluation items satisfied, including required items	
SGD	Satisfies items (1) to (13) to the right	95% or more	Has environmental performance at the top of the industry
GD	Satisfies items (1) to (10) to the right	90% or more	-

Examples of Fiscal 2010 Certified SGP and AGP (Overseas)

SGP AQUOS LCD TV

Europe / North America / Australia



**Europe**  
Acquired the EU Ecolabel and an EU energy efficiency classification of A+



**North America**  
Qualified for the ENERGY STAR® program



**Australia**  
Achieved a 7-star rating under Australia's MEPS (Minimum Energy Performance Standards) program

Energy Efficient

- Achieves both high image quality and high energy efficiency by combining an LCD panel that uses four-color technology\*1 and UV<sup>2</sup>A technology\*2 with an LED backlight that offers precise, efficient control of light

\*1 \*2 See page 37.

AGP Digital B/W MFP

Europe / North America

Energy Efficient

- Various energy-saving functions including short warm-up time, standby power consumption of less than 1W in night standby mode, and power save key
- Qualified for the ENERGY STAR® program
- Certified with the Nordic Ecolabel and the Blue Angel



AGP Thin-Film Solar Module

Europe

High Energy-Conversion Efficiency

- Highly efficient energy creation using unlimited sunlight
- Module conversion efficiency 9.5% (previous model NA-F128G5: 9.0%)
- Because thin-film silicon solar cells can be fabricated using low-temperature processes at less than 200°C and because there are fewer steps in the production process, they can be manufactured using less energy than conventional crystalline silicon solar cells



TOPICS

SEC (United States) Wins 2011 ENERGY STAR® Award for Excellence

SEC, Sharp's sales subsidiary based in New Jersey, has received an ENERGY STAR® Award for Excellence sponsored by the US Environmental Protection Agency (EPA) and the Department of Energy (DOE). The ENERGY STAR Awards 2011 were given to companies and organizations out of the more than 20,000 that participate in the ENERGY STAR program<sup>\*3</sup>.

SEC received high ratings for promoting environmentally friendly activities, such as achieving ENERGY STAR qualification for all its professional LCD monitors, introducing AQUOS Quattron LCD TVs, which feature 65% higher energy efficiency compared to LCD TVs that use conventional fluorescent tube backlights, and introducing solar power generation systems to plants in Japan and the US.



Plaque for the ENERGY STAR Award for Excellence 2011

\*3 An environmental labeling program to promote savings through the use of energy-efficient electrical appliances.

Examples of Fiscal 2010 Certified SGP (Japan)



Plasmacluster Ion Technology

A proprietary Sharp air purification method, this technology generates—through plasma discharge—and releases into the air positive and negative ions like those found in nature. These ions inhibit the action of airborne viruses and break down and eliminate airborne mold.

SGP Plasmacluster Refrigerator

Japan



Energy Efficient

- A high-performance compressor and wide linear inverter controller reduce power consumption
- Eco-friendly design features high-efficiency freezing cycle and high-efficiency cooling fan to limit heat loss
- Power-saving functions such as Eco Mode reduce power consumption by approximately 10% compared to normal operation, and Eco Alert informs users of wasteful electricity usage
- Annual power consumption: 220 kWh/year (JIS C9801-2006) (18.5% reduction compared to previous model introduced in November 2009)

Green Materials

- Uses recycled plastic made using closed-loop material recycling technology\*1
- Non-CFC refrigerant (R600a)



SJ-XW47T

SGP Plasmacluster Air Conditioner

Japan



Energy Efficient

- Improved airflow efficiency by applying the science of biomimetics to design fans modeled on "nature's wings": the shape of bird wings for the outdoor unit and the shape of a dragonfly wing for the indoor unit\*3
- Proprietary eco-friendly louver design draws in air more efficiently. Sharp's airflow control technology provides Wrap-Around Airflow by changing the way the long diffuser panel opens depending on whether the unit is set for heating or for cooling. These technologies enable healthy heating and cooling without using excessive amounts of energy.
- Recommended Eco Mode gives comfort and energy efficiency with the push of a button on the remote control
- Automatic filter cleaning function extends the benefits of energy efficiency
- Seasonal power consumption: 1,727 kWh (JIS C9612-2005)



AY-A50SX



Acquired the Evidence-Based Relaxation & Comfort Recommendation Mark (one mark for "cooling," a second mark for "heating," and a third mark for "cooling at bedtime") Sponsor: Osaka Healthcare Service Industry Collaboration Platform (OHS: Open innovation of Healthcare Service)

\*3 See page 38.

SGP Plasmacluster Washing Machine

Japan



Water Saving

- A hole-less tub, which prevents water from going between the water tub and wash/spin tub, saves water and detergent
- Water used: 89 liters for an 8 kg wash load (2004 Sharp models used an average 114 liters for a 4.5 kg wash load)\*2

Energy Efficient

- Hole-less tub dries clothes efficiently by keeping heat in and enabling the temperature inside the tub to rise quickly
- Power consumption: 1,750 Wh (for 4.5 kg wash and dry load)\*2

Green Materials

- Uses recycled plastic made using closed-loop material recycling technology\*1



ES-TX800

\*1 See page 34.

\*2 Measurements based on washing machine performance evaluation criteria set by the Japan Electrical Manufacturers' Association.

SGP LED Ceiling Light

Japan

Long Life

- Design life of 40,000 hours\*4. Provides at least 10 years of service when lit 10 hours per day.

Energy Efficient

- Three eco functions—Eco Light Rhythm, Eco Dimmer, and Eco Sensor—deliver energy savings of up to 65% compared to keeping the unit continually lit\*5

Green Materials

- Mercury-free

Adjustable Color and Brightness

- Color and brightness of the white light can be adjusted to a total of 110 different levels—from cool daylight to warm evening light (10 color levels × 10 brightness levels, plus 10 brightness levels for night-light function)



DL-C501V



\*4 Design life is regarded as the time until total luminous flux declines to 70% of the initial level. However, product service life cannot be guaranteed.

\*5 Sharp measurements. When three eco-functions (Eco Light Rhythm, Eco Dimmer, Eco Sensor) are turned on versus turned off. Will be darker than full brightness depending on time of day and installation conditions.

Examples of Fiscal 2010 Certified SGP (Japan) and SGD

**SGP Solar-Powered Mobile Phone Japan**

**Energy Creating**

- Features a solar panel. A 10-minute solar charge provides approximately two minutes of talk time, or approximately three hours of standby time\*1.

**Waterproof**

- Waterproof (to standards equivalent to IPX5/IPX7)



SOLAR HYBRID™ SoftBank 842SH for SoftBank Mobile Corp.

\*1 Typical value measured by Sharp test methods under the following conditions: unit used in Japan; when calling, solar charging initiated immediately after power runs out; ambient temperature of 25°C; charged in direct daytime sunlight with the sun not obscured by clouds; charged with the solar panel oriented perpendicular to the sun (with the solar panel not in shadow); backlight brightness set to "2"; good mobile reception; and call initiated by dialing "117" (automated time announcement) immediately after turning unit on.

**SGP TOUCH WOOD Mobile Phone Japan**

**Energy Efficient**

- Auto Eco Mode automatically adjusts the brightness of the LCD screen and other items according to remaining battery charge

**Contributions to Forest Conservation Activities**

- The mobile handset body uses sustainably harvested wood from the forests of the "more trees"\*2 organization. The wood is produced as a result of periodic thinning necessary for healthy forest growth.
- Sharp, together with NTT DOCOMO, Inc. and Olympus Corporation, donate 1,000 yen per handset to "more trees". The instruction manual is also printed on paper made from sustainably harvested wood.



SH-08C TOUCH WOOD for NTT DOCOMO, Inc.

\*2 A general incorporated association promoting forest conservation activities. Established by five founders, including musician Ryuichi Sakamoto, along with more than 100 supporters from various fields.

**SGP Smartphone Japan**

**Energy Efficient**

- Sharp's proprietary power-saving control technology makes it possible to watch approximately six hours of One-Seg mobile TV broadcasts\*3 on this multifunction smartphone

**Compact and Multifunctional**

- Compact size (about 55 × 112 × 14.1 mm) with rounded body fits comfortably in the hand. Includes popular and convenient features such as One-Seg receiving functions and infrared communications.



ISO5 for KDDI Corporation

\*3 Sound settings set to OFF and using earphones.

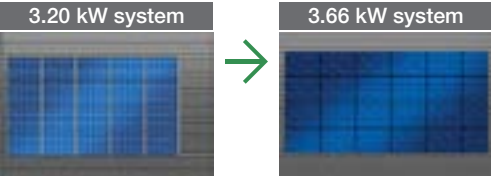
**SGP Polycrystalline Solar Module for Residential Applications Japan**

**High Energy-Conversion Efficiency**

- Highly efficient energy creation using unlimited sunlight
- Module conversion efficiency: 13.9% (ND-160BW)


**Greater Installation Capacity**

- "Roofit" design makes efficient use of available roof-top installation space by combining solar modules of different sizes. Installation capacity is increased by up to 14.3% compared to existing products.



3.20 kW system (ND-160AV) → 3.66 kW system (ND-160BW)

Installation capacity 14.3% higher

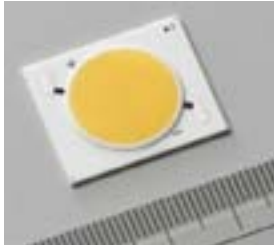


ND-160BW Number of installed modules: 20  
ND-114CW Number of installed modules: 4

**SGD High-Output, High-Color-Rendering LED Lighting Device**

**High Color Rendering**

- High color rendering depicts illuminated objects with colors close to those perceived under natural light
- Color rendering index (Ra)\*4: 83



GM5DMC30M04

\*4 A numerical value expressing the level of color distortion compared to a reference light source. The closer the value to 100, the lower the color distortion.

**Industry's Highest Luminous Efficiency**

- Excellent energy efficiency. LED chip and phosphors featuring outstanding high-temperature characteristics deliver high brightness with luminous flux of 2,370 lumens and luminous efficiency of 91 lm/W, the industry's highest in a 25W-class device.

SGP and AGP-Certified Models for Fiscal 2010

		Product	Model
SGP	Japan	LCD TV	LC-16K5 / LC-19K3 / LC-20DZ3 / LC-20V5 / LC-22K3 LC-22K5 / LC-24K5 / LC-26DV7 / LC-26DZ3 / LC-26V5 LC-32DZ3 / LC-40DX3 / LC-40DZ3 / LC-40LV3 / LC-40LX3 LC-40Z5 / LC-46DX3 / LC-46DZ3 / LC-46LB3 / LC-46LV3 LC-46LX3 / LC-46V5 / LC-46XF3 / LC-46Z5 / LC-52DX3 LC-52DZ3 / LC-52LB3 / LC-52LV3 / LC-52LX3 / LC-52V5 LC-52XF3 / LC-52Z5 / LC-60LV3 / LC-60LX3
		Refrigerator	SJ-23T / SJ-PW38S / SJ-PW38T / SJ-XF44T / SJ-XF47T SJ-XF52T / SJ-XF56S / SJ-XF56T / SJ-XF60S / SJ-XF60T SJ-XW44T / SJ-XW47T
		Air conditioner	AY-A50SX / AY-A50XE8 / AY-A63SX / AY-A63XE8 / AY-A71SX AY-A71XE8
		Washing machine	ES-TX900 / ES-GE55K / ES-55E6 / ES-G55KC / ES-GE60K ES-TX800 / ES-T80E7 / ES-V520
		Air purifier	FU-Z51CX / KC-Z40 / KC-Z45 / KC-450Y3 / KC-Z65 KC-650Y3 / KC-65E7 / KC-Z80
		Plasmacluster Ion generator	IG-C20 / IG-CC15 / IG-CM1
		Mobile phone	001SH / 002SH / 004SH / DM008SH / 840SH / 840SH PREMIUM 841SH / 842SH / 843SH / 944SH / 945SH / IS03 / IS05 / SH007 SH008 / SH009 / SH010 / SH011 / SH-05C / SH-06C / SH-01C SH-08C / SH-07B / SH-08B / SH-09B
		Facsimile	UX-D33CL / UX-D33CW / UX-D83CL / UX-E790CL / UX-D83CW UX-E790CW
		Electronic dictionary	PW-AC10 / PW-AC20 / PW-AC920 / PW-A7000 / PW-A9000 PW-G4000 / PW-G5000 / PW-HC1
		LED lighting	DL-C201D / DL-C301D / DL-C301V / DL-C302V / DL-C501D DL-C501V
	Digital MFP	MX-M753 / MX-M623 / MX-2310F / MX-3610FN MX-2610FN / MX-3110FN	

SGP	Japan	LCD monitor (information display)	PN-L601B / PN-T321 / PN-T321B / PN-V601
		Solar module	ND-160BW / ND-061LW1 / ND-061RW1 / ND-114CW1 ND-160BW1 / ND-061RW / ND-114CW / ND-163AW ND-163AW1 / ND-163AY / ND-163AY1
		Humidifier	HV-302 / HV-Z50CX / HV-50E7 / HV-Z70CX / HV-70E7
		Vacuum cleaner	EC-AX110 / EC-AX120 / EC-A1E7 / EC-PX120 / EC-VX210 / EC-VX220
		Residential power conditioner	JH-G0C4 / JH-M0C3

		Product	Model
SGP	Europe	LCD TV	LC-52LE820E / LC-52LE822E / LC-46LE810E LC-46LX810E / LC-46LE812E / LC-46LX812E LC-46LE820E / LC-46LE822E
	North America	LCD TV	LC-52LE925UN / LC-60LE925UN
	Australia	LCD TV	LC-52LE820X
AGP	Europe	LCD TV	LC-40LE810E / LC-40LX810E / LC-40LE812E LC-40LX812E / LC-40LE820E / LC-40LU820E LC-LE822E / LC-40LU822E
		Digital MFP	MX-M753U / MX-M623U / MX-2310U
		Thin-film solar module	NA-F135G5
	North America	LCD TV	LC-60LE810UN / LC-60LE820UN
		Digital MFP	MX-M753U / MX-M753N / MX-M623U / MX-M623N
	China	LCD TV	LCD-52FF1A / LCD-46FF1A
Malaysia	LCD TV	LC-52LE820M	

Number of Environmental Label Products in Fiscal 2010

International ENERGY STAR® Program*1	LCD TV	Blu-ray Disc recorder	Audio	MFP	
	62	6	5	98	
	Printer	LCD monitor (information display)	Facsimile	Air conditioner	
	2	23	14	10	
Eco Mark*2	MFP	Calculator	Printer		
	15	20	1		
PC Green Label*2	PC		EU Eco Label*3	LCD TV	
	1			36	
Nordic Swan*4	MFP		Blue Angel*5	MFP	
	9			13	

Canada EcoLogo Program	MFP	Printer	Hong Kong Energy-Saving Label	MFP	Air conditioner
	17	1		8	8
Thai Green Label	MFP	Air conditioner	China Environmental Labeling	MFP	
	10	10		14	
Taiwan Green Mark	MFP		Taiwan Energy-Saving Label	Air conditioner	
	17			4	
Energy Conservation Certification*6	LCD TV		Projector	MFP	
	4		3	12	
	LCD monitor (information display)		Air conditioner	Microwave oven	
	2		14	2	

Target countries : \*1 Japan, United States, EU nations, etc. \*2 Japan \*3 EU nations \*4 Norway, Denmark, Finland, Iceland, Sweden \*5 Germany \*6 China



## Green Procurement

In fiscal 2000, Sharp established the Green Procurement Guidelines to procure goods with low environmental impact with the cooperation of suppliers, and has been working to increase environmental consciousness at the level of parts and materials.

Beginning in fiscal 2006, with the aim of greater efficiency, Sharp introduced online surveys of suppliers in Japan and overseas. In fiscal 2009, Sharp revised its Green Procurement Guidelines to strengthen management of chemical substances in procurement, and has been working with suppliers to promote the manufacture of environmentally conscious products while advancing environmentally focused business activities.

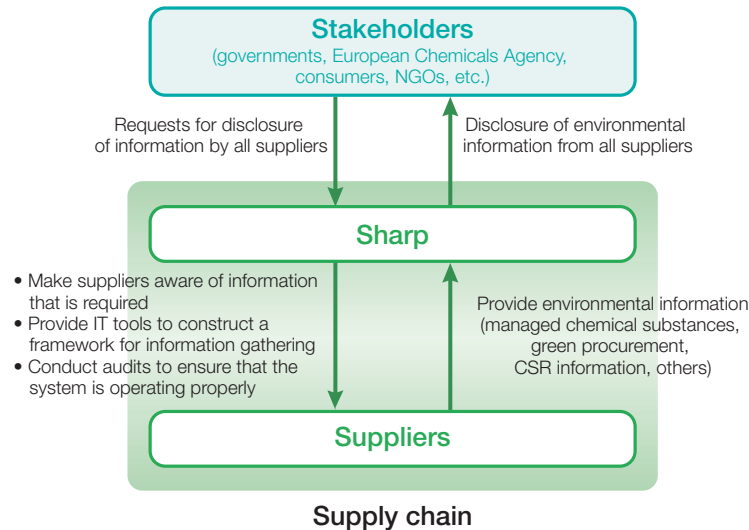
In addition, in the midst of increasing calls for greater disclosure of information throughout the supply chain, Sharp constructed the Global Green Supply Chain (GGSC), a new scheme that packages IT tools to enable the construction of a framework to efficiently collect needed information, along with an audit system to ensure the proper operation of the system.

As a first step, in fiscal 2010, Sharp introduced a partnership program\*1 in the China region for the management of chemical substances contained in Sharp products, and is working to strengthen support assistance, including consulting, and improve the level of management.

In fiscal 2011, Sharp plans to ensure that this program is firmly established and push ahead with its deployment to other areas such as Southeast Asia.

\*1 This program incorporates a framework to collect information on chemical substances contained in materials and products as a part of required environmental information. It makes primary suppliers aware of the data items required by Sharp, and requires that information on chemical substances be disclosed and conveyed to secondary suppliers and downstream links in the supply chain.

### Global Green Supply Chain (GGSC) Overview



## Managing Chemical Substances in Products

Appliances such as refrigerators and TVs are composed of hundreds or thousands of parts, each of which contains a variety of chemicals. In fiscal 1994, Sharp introduced the Chemical-Product Assessment (C-PA) system to evaluate the safety of the chemical substances contained in parts and materials at the development and design stages. In this way, Sharp has been working to ensure the safety of products during use and to reduce the environmental impact at the time of disposal.

Beginning in 2003, Sharp investigated chemical substance content, as stipulated by the Japan Green Procurement Survey Standardization Initiative (JGPSSI)\*2, and took measures toward eliminating RoHS\*3-designated substances. Sharp was in complete compliance with the RoHS Directive for all products for the European market by the end of fiscal 2005.

In addition, Sharp constructed a system to meet the REACH\*4 regulation registration criteria in fiscal 2008 and completed pre-registration\*5 by the end of November 2008. In fiscal 2009, to pursue an investigation of Substances of Very High Concern (SVHCs) on a global basis, Sharp held meetings for suppliers to explain its action plan to comply with REACH regulations in Japan, Europe, Asia, and China. In addition, in fiscal 2010, Sharp constructed a system to comply with notification obligations under the REACH regulations and conducted surveys on chemical substances contained in procured parts and materials, completely fulfilling its notification obligations by June 1, 2011.



Meeting aimed at suppliers to explain Sharp's action plan to comply with the REACH regulation

\*2 A council that aims to standardize research on chemical substances in parts and materials, comprising 2 organizations and 57 companies, mainly electronics manufacturers including Sharp Corporation.  
 \*3 An EU directive on the "Restriction on the use of certain Hazardous Substances," RoHS restricts 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.  
 \*4 REACH is a new regulation on the Registration, Evaluation, and Authorization of Chemicals produced in and imported into the EU.  
 \*5 Pre-registration: A transition regulation for the application of REACH to existing chemical substances. Companies were given a grace period until official registration if they had pre-registered between June 1 and December 1, 2008.

## Reducing VOCs in Products

Sharp is working to make products that are safer and that offer greater peace of mind by reducing their VOC\*6 emissions.

In fiscal 2010, Sharp conducted measurements of VOCs in 43 models of 14 product categories for the Japanese market, focusing on consumer electronics that see frequent use in living rooms, and on mobile products. Sharp also provided low-VOC product development training using VOC measurement and analysis equipment, targeting engineers who are responsible for the development of those products (50 people per session; a total of 140 people participated).

Sharp plans to continuously push forward with developing low-VOC products, with the aim of making its products even more user friendly.

\*6 VOC (volatile organic compounds) are assumed to be one of the causes of multiple chemical sensitivity and/or sick building syndrome.

# Expanding the Recycling of Used Products

Sharp recycles products that have reached the end of their service life based on three policies: 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 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>Enhance and improve recycling system</li> <li>Increase recycling efficiency to process growing number of CRT TVs collected</li> </ul>	<ul style="list-style-type: none"> <li>Constructed safety-conscious, highly efficient operational system</li> </ul>	<ul style="list-style-type: none"> <li>Construct operational system to accommodate decreasing number of CRT TVs collected</li> </ul>	<ul style="list-style-type: none"> <li>Implement high-value-added recycling of recovered components and materials</li> </ul>

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

As a member of the B Group\*1 for home appliance recycling, Sharp has constructed and is operating a highly efficient recycling system based on 18 recycling plants in Japan.

In fiscal 2010, Sharp collected about 3.68 million units of the four types of appliances covered by the Home Appliance Recycling Law. This figure represents a significant increase over the previous year (up 61%), and reflects the impacts of a record heat wave, the Eco-Point system\*2, and the end of analog TV broadcasting in July 2011.

The breakdown is approximately 270,000 air conditioners (up 46%), approximately 2.34 million CRT TVs (up 82%), approximately 280,000 flat-panel TVs (up 211%), about 420,000 refrigerators (up 14%), and about 350,000 washing machines (no change), all compared to the previous fiscal year.

The B Group as a whole responded swiftly, and these used products were properly recycled. Sharp processed and recycled about 3.43 million units (up 63% over the previous fiscal year) of the four types of home appliances designated under the Home Appliance Recycling Law. The recycling rates exceeded the legal standard for all four kinds of appliances.

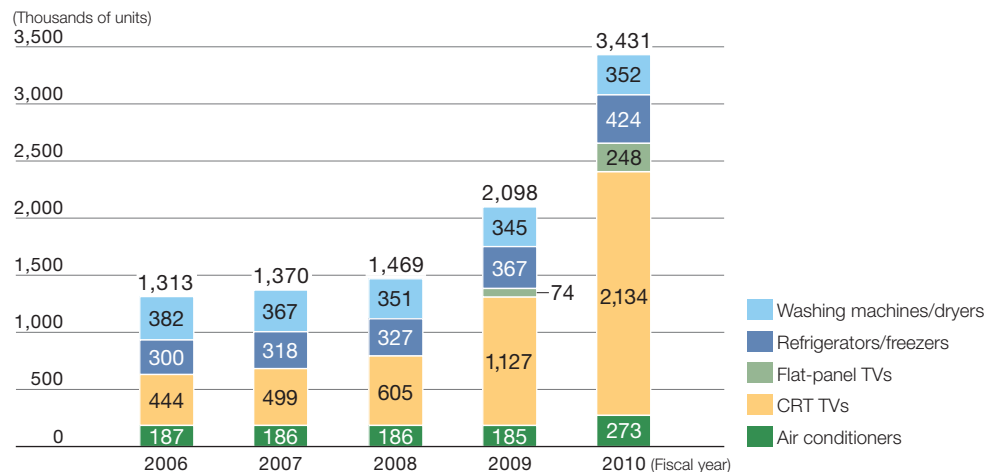
\*1 The B Group consists of Sharp Corporation, Sanyo Electric Co., Ltd., Sony Corporation, Hitachi Appliances, Inc., Fujitsu General Ltd., Mitsubishi Electric Corporation, and other companies.

\*2 Designed to stimulate consumption and promote the use of environmentally friendly products, this program allows buyers of certain types of energy-efficient air conditioners, refrigerators, and TVs to earn "eco points" that can be exchanged at a later time for other goods.

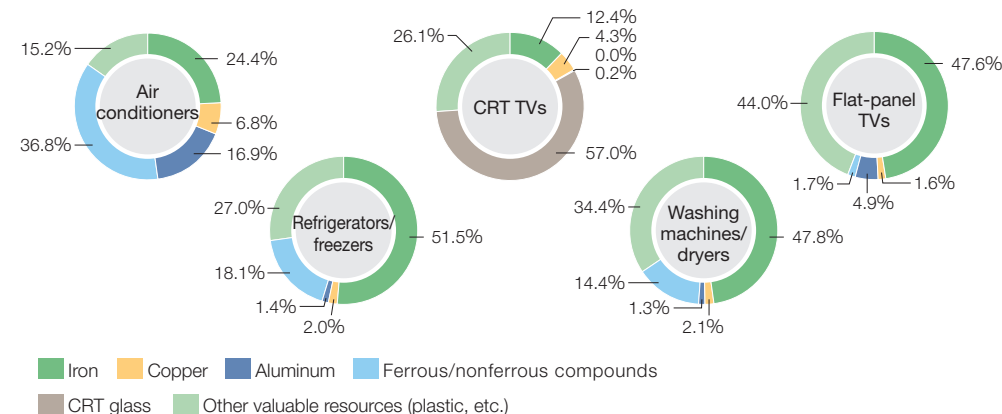
### Sharp Corporation's Processing and Recycling Status of the Four Home Appliances in Japan (Fiscal 2010)

	Unit	Air conditioners	CRT TVs	Flat-panel TVs	Refrigerators/freezers	Washing machines/dryers	Total
Units collected from designated collection sites	Thousand units	277	2,348	286	425	351	3,687
Processed and recycled units	Thousand units	273	2,134	248	424	352	3,431
Processed and recycled weight	Tons	11,269	57,804	3,007	25,998	12,030	110,108
Recycled weight	Tons	10,217	52,794	2,492	20,024	10,801	96,328
Recycling rate	%	90	91	82	77	89	—
Legally required recycling rate	%	70	55	50	60	65	—

### Sharp Corporation's Processed and Recycled Units for the Four Home Appliances in Japan



### Sharp Corporation's Recycling Component Ratio of Materials for the Four Home Appliances



TOPICS

Enactment of the Home Appliance Recycling Law—10 Years Later

This year marks the tenth year since the Home Appliance Recycling Law (official name: Law for Recycling of Specified Kinds of Home Appliances) was enacted in April 2001. With the goal of promoting the efficient use of resources, this law designates four types of major home appliances—air conditioners, TVs, refrigerators/freezers, and washers/dryers—and mandates their recycling to reduce waste and recover useful materials.

These four designated appliance categories account for approximately two-thirds of the total weight of discarded electrical and electronic equipment. A combined total of approximately 130 million units were processed and recycled by A Group and B Group manufacturers over the past 10 years (of which Sharp's share was approximately 15 million units), and calculations show that every person in Japan recycled at least one appliance. More than 80% of the material in these products, or approximately 3.8 million tons by weight, has been recovered and recycled as resources available for reuse.

Sharp and Kansai Recycling Systems Co., Ltd.\*1 have been working together to develop advanced recycling technologies, including closed-loop plastic material recycling technology\*2 and building a dedicated high-efficiency recycling line for flat-panel TVs. These efforts have received high marks from outside the company, and Sharp will continue to take cutting-edge initiatives toward building a sustainable recycling-based society.

\*1 A consumer electronics recycling company in Japan established with investment from Sharp Corporation, Mitsubishi Materials Corporation, and five other companies (Sanyo Electric Co., Ltd., Sony Corporation, Hitachi Appliances, Inc., Fujitsu General Ltd., and Mitsubishi Electric Corporation).

\*2 See page 34.

Post-Enactment Initiatives

Initiative	Timeframe
Reduce recycling fees for TVs and refrigerators/freezers	November 2008
Add LCD and plasma TVs, and laundry dryers as appliances accepted for recycling	April 2009
Share designated collection sites	October 2009
Reduce recycling fees for air conditioners	April 2011

Awards

Sharp won a Director-General's Prize, Industrial Science and Technology Policy and Environment Bureau, Ministry of Economy, Trade and Industry; 2008 Resource Recycling Technologies and Systems Commendation (left) for the development of closed-loop material recycling technology for plastic recovered from waste appliances, and a Reduce, Reuse, Recycle Promotion Association Chairman's Prize at the 2010 Reduce, Reuse, Recycle Promotion Achievement Awards for the construction of a dedicated high-efficiency recycling line for flat-panel TVs.



Continuing Design-for-Recycling Training

Since fiscal 2001, to promote easy-to-recycle product design, Sharp has been conducting design-for-recycling training, mainly aimed at personnel responsible for product planning and design. In fiscal 2010, 18 people took part.

This training program, held with the cooperation of recycling plants, combines actual hands-on experience in dismantling used home appliances, with seminars and visits to a recycling line to observe dismantling operations. It aims to encourage participants to reflect their experience of design-related problems in their work to plan and design new products.

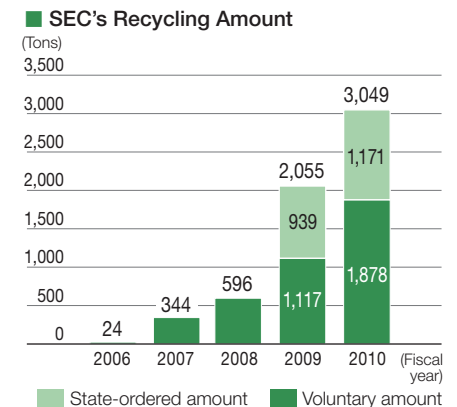
Sharp will offer this training program on an ongoing basis, and will work to ensure that the concept of design-for-recycling pervades the entire design process.



Hands-on training in dismantling used home appliances

Recycling TVs and Other Consumer Electronics in the United States (SEC, US)

SEC, Sharp's sales subsidiary located in New Jersey, US, established the Electronic Manufacturers Recycling Management Company, LLC (MRM) in cooperation with Panasonic Corporation of North America and Toshiba America Consumer Products, LLC in September 2007 for the recycling of audio-visual products, mainly TVs. The MRM recycling network expanded nationwide in November 2008, providing recycling opportunities at approximately 600 collection points. MRM holds special events and carries out voluntary activities to promote the recycling of used consumer electronics and complies fully with the laws and regulations of each state. In fiscal 2010, approximately 3,000 tons of used consumer electronics were recycled.



Reusing and Recycling Copiers in Japan

Sharp is reusing and recycling copiers collected both through Sharp distribution channels and common industry channels. In fiscal 2010, approximately 29,000 used copiers were collected (down 15% over the previous fiscal year). Many of these were dismantled and the disassembled components sorted and recycled by type of material. For some models, Sharp worked with sales subsidiaries to create a system to refurbish the units through a process of cleaning, replacing worn parts, and inspection.

Sharp also collected approximately 1.1 million used toner cartridges (up 13% over the previous fiscal year) through its own collection channels and remanufactured them into approximately 580,000 toner cartridges (up 35% over the previous fiscal year; 15 varieties of cartridges), assuring customers the same quality as new toner cartridges.

Sharp will continuously work to increase the numbers of models of copiers and types of toner cartridges it recycles with the goal of expanding reuse and recycling.

# Promoting Environmental Sustainability Management

Sharp operates an environmental management system to improve the environmental awareness of employees and to strengthen environmental sustainability management. To further improve the efficiency of plants and offices in accordance with their respective characteristics, Sharp is working to restructure the underlying framework of this system, including the rules and operational structure of environmental sustainability management.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>Restructure S-EMS at plants</li> <li>Re-evaluate S-EMS and compile proposed revisions</li> </ul>	<ul style="list-style-type: none"> <li>Completed re-evaluation of S-EMS provisions</li> <li>Acquired ISO 14001 certification as one of 11 participating companies at GREEN FRONT SAKAI</li> </ul>	<ul style="list-style-type: none"> <li>Restructure framework to promote environmental sustainability management system at plants</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that new promotion system is firmly established</li> </ul>
<ul style="list-style-type: none"> <li>Restructure framework to promote environmental sustainability management system at offices in Japan</li> <li>Set up supervisory sites in each region</li> </ul>	<ul style="list-style-type: none"> <li>Completed re-evaluation of current framework to promote environmental sustainability management</li> </ul>	<ul style="list-style-type: none"> <li>Transition to promotion on individual corporate body basis</li> <li>Implement EMS training for auditors under new framework</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that system to promote environmental management on individual corporate body basis is firmly established</li> <li>Expand and improve EMS training to accommodate new system</li> </ul>
<ul style="list-style-type: none"> <li>Promote environmental e-learning</li> <li>Hold step 2 (advanced course)</li> </ul>	<ul style="list-style-type: none"> <li>Implemented e-learning in refresher training for internal auditors</li> </ul>	—	—

## Developing the Sharp Environmental Management System

Sharp is promoting its environmental management system at its plants and offices to improve environmental awareness among employees and strengthen environmental sustainability management.

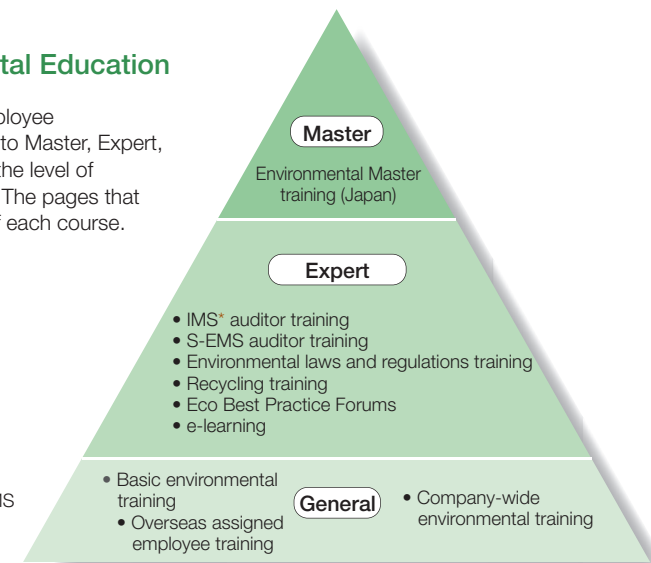
Since fiscal 2004, Sharp has put in place its own environmental management system (S-EMS: Sharp Environmental Management System) at its plants, based on ISO 14001 plus an additional 49 original management criteria. This proprietary system is intended to improve environmental performance and reinforce environmental legal compliance. In fiscal 2010, Sharp restructured and revised S-EMS to work toward greater efficiency. In addition, Sharp Corporation and the 10 other companies participating in GREEN FRONT SAKAI jointly acquired ISO 14001 certification in March 2011.

In fiscal 2010, at office locations, Sharp conducted a review of its system to promote environmental sustainability management to comply with the revised Energy Conservation Law that requires that individual corporate bodies ascertain the actual amount of energy they use. After reviewing various methods for implementing promotion systems, such as on the individual company basis or on a regional basis, Sharp made the decision to work for greater efficiency by transitioning from the previous system of operating on an individual business site basis to a consolidated system with the head office departments of each company and the branches that supervise each region at its core.

In the future, Sharp will work to tailor this environmental sustainability management system to the characteristics of each individual plant and office.

## Stepping Up Environmental Education

Sharp systematically promotes employee environmental education, divided into Master, Expert, and General courses according to the level of knowledge about the environment. The pages that follow present working examples of each course.



\* IMS (Integrated Management System) was created by merging S-EMS and QMS (Quality Management System)

## Environment-Related Accidents or Violations of Laws

There were no lawsuits against the Sharp Group, or fines levied against the Group related to the environment in fiscal 2010. There were also no serious environment-related accidents.

## Examples of Environmental Education Courses

### ■ Master Course

The Master course is designed to foster the leaders needed for future environmental sustainability management.

Environmental Master training, which targets the environmental departments of plants in Japan, was held six times in fiscal 2010 for a total of 149 people under the theme of energy conservation. This training is designed to provide an opportunity to share the latest information, such as activities at each business site and initiatives taken by other companies. In the future, Sharp plans to expand this training overseas.



Environmental Master training

### ■ Expert Course

The Expert course targets environmental promotion leaders and persons in charge of environmental affairs at each department with the goal of enhancing professional competence, for example, by providing training in environmental laws and regulations, and environmental management systems (ISO 14001), relating to the business activities of their own department.

In fiscal 2010, Sharp provided Internal Environmental Auditor training a total of 11 times for 196 individuals, and also conducted refresher training for internal auditors, which is required every three years, for 186 individuals. In addition, at plants in Japan, training can be provided at any time in response to a request from the plant. In fiscal 2010, Sharp conducted a training course at the Katsuragi Plant (Katsuragi City, Nara Prefecture) on environmental laws and regulations for 42 individuals. At offices in Japan, training was held on the theme of internal audits as part of education about the environmental sustainability management system for a total of 322 participants.

Overseas, Sharp worked to further increase environmental awareness across the entire Sharp Group by holding Eco Best Practice Forums\* 13 times for environmental promotion leaders at a total of 21 production facilities.

\* See page 55.

### ■ General Course

This course is intended to help all employees master basic knowledge about the environment and improve environmental awareness.

In fiscal 2010, with the goal of expanding the number of individuals who have passed the Eco Test (Certification Test for Environmental Specialists), Sharp conducted Eco Test workshops for 1,096 individuals at 17 business locations in Japan. In addition, Sharp also worked to enhance the acquisition of environmental knowledge by inviting representatives from environmental certification organizations to speak and conducting environmental refresher training for 110 individuals at the Head Office and Tanabe Building.

## Systematic Environmental Education for Employees (SSI, Indonesia)

SSI, Sharp's manufacturing subsidiary located in Karawang, Indonesia, has been working to raise environmental awareness among employees and improve their knowledge and skills by conducting ongoing systematic environmental education.

In fiscal 2010, SSI provided training on waste management in eight sessions with a total of 93 participants. The aim of this training is to give employees working in manufacturing a deeper understanding of waste generated during each production process. Pre- and post-session tests ensure that the knowledge is firmly anchored and enable SSI to measure the effectiveness of the training.

In addition, SSI held chemical substance management training a total of nine times for 145 individuals. This training will help ensure that chemical substances are properly managed and strengthen understanding and awareness of environmental laws and regulations.



Waste management training

## Lecture on Preserving Biodiversity (Kameyama Plant, Japan)

The Kameyama Plant (Kameyama City, Mie Prefecture) hosted a lecture with speakers invited from the Mie Prefecture Environmental Conservation Agency aimed at raising awareness among employees about preserving biodiversity. This same agency conducted environmental impact assessments at the time the industrial park where the Kameyama Plant is located was constructed, and is familiar with the environment around the plant, as well as conservation measures taken at the time of construction and their subsequent progress.

Through this lecture, Sharp was able to heighten the interest of participants in preserving biodiversity, including the relationship between the plant and the surrounding environment, and the shape of future environmental protection activities.



Sharp employees gain a deeper understanding of biodiversity protection

■ ISO 14001-Certified Plants and Offices

Japan As of March 31, 2011

Plants	Sharp Corporation	Tochigi Plant
		Yao Plant
		Hiroshima Plant
		Nara Plant
		Katsuragi Plant (including Toyama Plant)
		Fukuyama Plant
		Mie Plant
		Tenri Plant
		Mihara Plant
		Kameyama Plant
		GREEN FRONT SAKAI solar cell plant
		Sharp Manufacturing Systems Corporation
		Sharp Niigata Electronics Corporation
		Sharp Yonago Corporation
Sharp Mie Corporation		
Sharp Tokusen Industry Co.		
Kantatsu Co., Ltd.		
Sharp Takaya Electronic Industry Co., Ltd.		
Sharp Display Products Corporation		
Offices	Sharp Corporation	Head Office/Tanabe Building
		Makuhari Building (Tokyo Branch)
		Tokyo Ichigaya Building
	Sharp Electronics Marketing Corporation	
	Sharp System Products Co., Ltd.	
	Sharp-Engineering Corporation	
	Sharp Document Systems Corporation	
	Sharp Amenity Systems Corporation	
	Sharp Trading Corporation	
	Sharp Business Computer Software Inc.	
	One Stop Support Corporation	
	Sharp Office Rental Corporation	
	Sharp Electronics Sales Okinawa Corporation	
Sharp Finance Corporation		
Recycling Plant	Kansai Recycling Systems Co., Ltd.	

North America

Plants	Sharp Manufacturing Company of America (SMCA)*1	US
	Sharp Electrónica Mexico S.A. de C.V. (SEMEX)	Mexico
Offices	Sharp Electronics Corporation (SEC)	US
	Sharp Laboratories of America, Inc. (SLA)	
	Sharp Electronics of Canada Ltd. (SECL)	Canada

\*1 Manufacturing division of SEC

Europe

Plants	Sharp Manufacturing Company of U.K. (SUKM)*2	UK
	Sharp Electrónica España S.A. (SEES)	Spain
	Sharp Manufacturing France S.A. (SMF)	France
	Sharp Manufacturing Poland sp. z o.o. (SMPL)	Poland
Offices	Sharp Electronics (Europe) GmbH (SEEG)	Germany
	Sharp Electronics (U.K.) Ltd. (SUK)	UK
	Sharp Laboratories of Europe, Ltd. (SLE)	
	Sharp Electronics France S.A. (SEF)	France
	Sharp Electronics (Italia) S.p.A. (SEIS)	Italy
	Sharp Electronics (Schweiz) AG (SEZ)	Switzerland
	Sharp Electronics (Nordic) AB (SEN)	Sweden
	Sharp Electronics Benelux B.V. (SEB)	Netherlands

\*2 Manufacturing division of SUK

Asia, Middle East, Oceania

Plants	Shanghai Sharp Electronics Co., Ltd. (SSEC)	China
	Sharp Office Equipments (Changshu) Co., Ltd. (SOCC)	
	Wuxi Sharp Electronic Components Co., Ltd. (WSEC)	
	Nanjing Sharp Electronics Co., Ltd. (NSEC)	
	Sharp Technical Components (Wuxi) Co., Ltd. (STW)	
	Sharp Appliances (Thailand) Ltd. (SATL)	Thailand
	Sharp Manufacturing (Thailand) Co., Ltd. (SMTL)	
	Sharp Manufacturing Corporation (M) Sdn. Bhd. (SMM)	Malaysia
	Sharp (Phils.) Corporation (SPC)	Philippines
	PT. Sharp Semiconductor Indonesia (SSI)	Indonesia
	PT. Sharp Electronics Indonesia (SEID)	
	Shanghai Sharp Mold and Manufacturing Systems Co., Ltd. (SSMC)	China
	Sharp India Limited (SIL)	India
	Sharp Korea Corporation (SKC)	Korea
S&O Electronics (Malaysia) Sdn. Bhd. (SOEM)	Malaysia	
Offices	Sharp Electronics (Shanghai) Co., Ltd. (SES)	China
	Sharp Electronics Sales (China) Co., Ltd. (SESC)	
	Sharp Electronic Components (Taiwan) Corporation (SECT)	Taiwan
	Sharp Electronics (Malaysia) Sdn. Bhd. (SEM)	Malaysia
	Sharp-Roxy Sales (Singapore) Pte., Ltd. (SRS)	Singapore
	Sharp Electronics (Singapore) Pte., Ltd. (SESL)	
	Sharp Software Development India Pvt. Ltd. (SSDI)	India
	Sharp Middle East Free Zone Establishment (SMEF)	UAE
	Sharp Corporation of Australia Pty. Ltd. (SCA)	Australia
	Sharp Corporation of New Zealand Ltd. (SCNZ)	New Zealand
	Sharp-Roxy Sales & Service Company (Malaysia) Sdn. Bhd. (SRSSC)	Malaysia
	Sharp-Roxy (Hong Kong) Ltd. (SRH)	Hong Kong (China)

# Raising the Level of Environmental Performance in Factories

Sharp is working to raise the level of environment performance at all its factories to a level above Green Factory by putting into place a certification system that evaluates the environmental performance of its production facilities using its own criteria and standards. Sharp is also promoting efforts to raise all its plants to the level of Super Green Factory, which features an extremely high level of environmental performance.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>10 Sharp Corporation plants                             <ul style="list-style-type: none"> <li>2 plants SGF II Grade A or higher based on new evaluation criteria</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>10 plants SGF II Grade A or higher based on new evaluation criteria (4 plants SGF II Grade S, 1 plant SGF [Sakai solar cell plant])</li> </ul>	<ul style="list-style-type: none"> <li>10 Sharp Corporation plants                             <ul style="list-style-type: none"> <li>All plants SGF II Grade A or higher (8 plants SGF II Grade S)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>All plants SGF II Grade S</li> </ul>
<ul style="list-style-type: none"> <li>8 Japanese plants (subsidiaries/affiliates)                             <ul style="list-style-type: none"> <li>Implement SGF II at 3 SGF</li> <li>5 SGF in total</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Implemented SGF II at 3 SGF</li> <li>4 SGF in total</li> </ul>	<ul style="list-style-type: none"> <li>Implement SGF II at 4 SGF</li> <li>8 SGF in total</li> </ul>	<ul style="list-style-type: none"> <li>All plants SGF II Grade B or higher</li> </ul>
<ul style="list-style-type: none"> <li>21 overseas plants (subsidiaries/affiliates)                             <ul style="list-style-type: none"> <li>Implement SGF II at 11 SGF</li> <li>16 SGF in total</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Implemented SGF II at 11 SGF</li> <li>18 SGF in total</li> </ul>	<ul style="list-style-type: none"> <li>Implement SGF II at 18 SGF</li> <li>21 SGF in total</li> </ul>	<ul style="list-style-type: none"> <li>All plants SGF II Grade B or higher</li> </ul>
<ul style="list-style-type: none"> <li>Eco Best Practice Forums                             <ul style="list-style-type: none"> <li>Hold forums at least once a year in each region (North America, Europe, Asia, and China)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Held forums at least once a year in North America, Europe, Asia, and China (at least once a year in each region for a total of 13 times)</li> </ul>	<ul style="list-style-type: none"> <li>Hold forums at least once a year in each region (North America, Europe, Asia, and China)</li> </ul>	<ul style="list-style-type: none"> <li>Hold forums at least twice a year in each region</li> </ul>

## Making More Factories Super Green Factories

In addition to reducing environmental impacts, Sharp has set a goal to earn the trust of the community, and so has defined factories with a certain level of environmental consciousness as Green Factories (GF). The basic policies and operational know-how to achieve GF status have been formulated in line with 10 concepts in the GF Guidelines, which Sharp has been applying to all production bases in Japan since fiscal 1999 and overseas since fiscal 2001.

With construction of the Kameyama Plant (Kameyama City, Mie Prefecture), in fiscal 2003 in Japan Sharp established assessment criteria for Super Green Factories (SGF)—factories with exceptionally high levels of environmental performance—and launched efforts to award in-house certification. Sharp started GF certification in fiscal 2004 and overseas as well, and achieved its medium-term objective of having all Sharp plants in Japan and overseas certified for GF status and all 10 Sharp Corporation plants in Japan certified for SGF status by fiscal 2007.

For the assessment criteria, Sharp has established its own environmental performance evaluation items, each with a quantitative numerical value, to provide more detailed scoring in the assessment. A plant must score 70 or more points out of a possible 100 in the assessment process to earn GF certification, and score 90 points or more to achieve SGF certification.

In fiscal 2010, an additional two plants in Japan and seven overseas were certified as SGF\*, making 33 of Sharp's 40 worldwide plants SGFs.

\* See page 55.

## Green Factory Concepts

- Greenhouse gases** Minimize emission of greenhouse gases
- Energy** Minimize energy consumption
- Waste** Minimize discharge of waste
- Resources** Minimize resource consumption
- Chemical substances** Minimize risk of environmental pollution and accidents caused by chemical substances
- Atmosphere, water, soil** Minimize environmental burden on the atmosphere, water, and soil
- Harmony with nature** Endeavor to preserve and restore nature both on and off site
- Harmony with the community** Encourage harmony with the local community
- Environmental consciousness** Foster high environmental awareness among employees
- Information disclosure** Disclose information on the environment

### SGF II—An Initiative to Further Enhance the Environmental Performance of SGF

Beginning in fiscal 2008, Sharp launched SGF II, a new initiative for plants in Japan that have attained SGF certification. In addition to prior initiatives that focused on upgrading “hard” aspects, such as introducing high-efficiency equipment and abatement systems, SGF II incorporates the “soft” aspects in evaluation points such as the know-how to maintain and manage this environmental equipment to ensure operation at full performance. SGF II has evolved into a mechanism for assessing overall performance, for example, the resulting emission reductions.

In fiscal 2009, Sharp began expanding its SGF II efforts to plants outside of Japan that have been SGF certified, and looking ahead to fiscal 2012, has set a goal of having all plants in Japan and overseas attain Grade B or above under the SFG II system.

### Case Study: Japan

#### Reducing the Environmental Impact of Production Equipment

Sharp has been focusing on utility equipment\* in pursuing reductions in environmental impacts at its production facilities in Japan. Sharp’s environmental management divisions, production engineering divisions, and production divisions have also been jointly taking proactive steps to reduce the environmental impact of production equipment, which accounts for a large percentage of the impacts, without hurting product quality or productivity.

\* Ancillary services and equipment such as power, air conditioning, etc.

### Case Study: Overseas

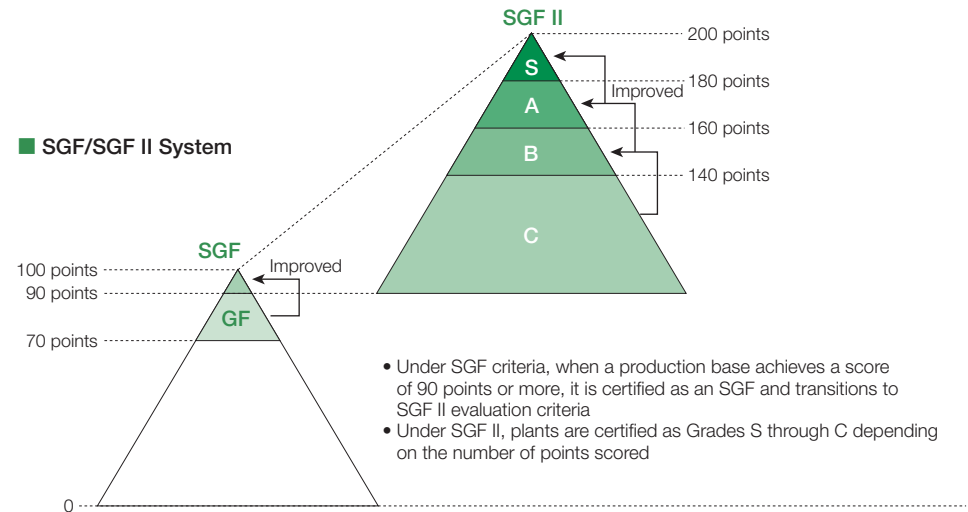
#### Raising Environmental Performance Levels Through Eco Best Practice Forums

As an initiative to improve the “soft” aspects of environmental performance prioritized under SGF II, Eco Best Practice Forums for mutual learning are held to share valuable environmental protection know-how and ensure that it is deployed widely. These forums are linked by videoconference and have been held at overseas production bases since fiscal 2009. They provide participants from each plant who may have little contact with one another in the course of routine business activities with an opportunity to introduce their environmental protection efforts and to generate new ideas and develop new know-how by discussing problems and solutions.

In fiscal 2010, Eco Best Practice Forums were held a total of 13 times in North America, Europe, Asia, and China with the participation of all 21 Sharp production sites. Sharp will continue to hold these forums on a regular basis to further enhance the eco-friendliness of its plants around the globe.



Four production sites in Europe participated in an Eco Best Practice Forum



- Under SGF criteria, when a production base achieves a score of 90 points or more, it is certified as an SGF and transitions to SGF II evaluation criteria
- Under SGF II, plants are certified as Grades S through C depending on the number of points scored

#### SGF/SGF II Quantified Environmental Performance Criteria and Assessment Weighting

Environmental performance criteria				Assessment weighting	Sub total	Total
SGF II	Reduction of environmental impacts and contribution to management	Greenhouse gases	<ul style="list-style-type: none"> <li>• Reductions in CO<sub>2</sub> emissions</li> <li>• Reductions in energy costs</li> </ul>	65 points	100 points	200 points
		Waste	<ul style="list-style-type: none"> <li>• Reductions in waste discharges</li> <li>• Reductions in waste disposal costs</li> </ul>			
	Safety measures	Operational safety and emergency preparedness	<ul style="list-style-type: none"> <li>• Operational safety and emergency preparedness measures</li> </ul>	25 points		
Information disclosure and community-based interactions		<ul style="list-style-type: none"> <li>• Measures implemented related to information disclosure, community interaction, and community service activities</li> </ul>	10 points			
SGF	Reductions in greenhouse gas emissions per production unit		<ul style="list-style-type: none"> <li>• Reductions in PFC gases</li> <li>• Promotion of variable control systems</li> <li>• Recovery and recycling of waste heat</li> <li>• Introduction of high-efficiency equipment</li> <li>• Introduction of new energy sources</li> <li>• Implementation of managerial decision-making standards</li> </ul>	25 points	100 points	
	Reductions in the release of chemical substances		<ul style="list-style-type: none"> <li>• PRTR atmospheric emissions</li> <li>• PRTR water emissions</li> <li>• Sulfoxides produced by combustion</li> <li>• Elimination of all noxious odors</li> </ul>	27 points		
	Appropriate disposal of industrial waste		<ul style="list-style-type: none"> <li>• Zero discharge to landfill</li> <li>• Confirmation of appropriate disposal</li> <li>• Recycling waste as valuable resources</li> </ul>	18 points		
	Reductions in the consumption of industrial water		<ul style="list-style-type: none"> <li>• Use of rain and condensate water</li> <li>• Recovery of production rinse water</li> </ul>	10 points		
	Monitoring and safety		<ul style="list-style-type: none"> <li>• Disaster and fire prevention measures for hazardous materials</li> <li>• Special safety measures</li> <li>• Adoption of central monitoring measures</li> </ul>	20 points		



## Certified Plants

		Country	Fiscal 2003	Fiscal 2004	Fiscal 2005	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010		
Sharp Corporation	Tochigi Plant	Japan		GF	GF	GF	SGF	SGF II in place	Equivalent to SGF II grade A or higher (based on self evaluation)	Grade A		
	Yao Plant		GF	GF	SGF	SGF	Grade A					
	Hiroshima Plant		GF	GF	SGF	SGF	Grade A					
	Nara Plant		GF	GF	SGF	SGF	Grade S					
	Katsuragi Plant		GF	GF	GF	SGF	Grade A					
	Fukuyama Plant		GF	GF	GF	SGF	Grade S					
	Mie Plant		SGF	SGF	SGF	SGF	Grade S					
	Tenri Plant		GF	GF	GF	SGF	Grade A					
	Mihara Plant		GF	GF	GF	SGF	Grade A					
	Kameyama Plant		SGF	SGF	SGF	SGF	Grade S					
	GREEN FRONT SAKAI solar cell plant										SGF	
	Sharp Manufacturing Systems Corporation				GF	GF	GF			SGF	Introduce SGF II	Introduce SGF II
	Sharp Yonago Corporation					GF	GF			SGF		
Sharp Niigata Electronics Corporation				GF	GF	GF	GF	GF				
Sharp Mie Corporation			GF	GF	GF	GF	GF	GF				
Sharp Tokusen Industry Co.			GF	GF	GF	GF	GF	GF				
Kantatsu Co., Ltd.					GF	GF	SGF	Introduce SGF II				
Sharp Takaya Electronic Industry Co., Ltd.			GF	GF	GF	GF	GF	GF				
Sharp Display Products Corporation								SGF				
SEMEX	Mexico		GF	GF	GF	SGF	Introduce SGF II	Introduce SGF II				
SUKM*1	UK		GF	GF	GF	SGF						
SEES	Spain			GF	GF	SGF						
SMF	France		SGF	SGF	SGF	SGF						
SOCC	China		GF	SGF	SGF	SGF						
NSEC			GF	GF	SGF	SGF						
SOEM	Malaysia			SGF	SGF	SGF						
SMM			GF	GF	GF	SGF						
SMTL	Thailand			GF	SGF	SGF						
SMCA*2	US				GF	GF			GF	SGF		
SSEC	China		GF	GF	GF	GF			SGF	Introduce SGF II		
WSEC				GF	GF	GF			GF	SGF		
STW					GF	GF			GF	GF		
SSMC	Korea			GF	GF	GF	GF	SGF				
SKC				GF	GF	GF	GF	SGF				
SATL	Thailand				GF	GF	GF	SGF				
SPC	Philippines				GF	GF	GF	SGF				
SSI	Indonesia				GF	GF	SGF	Introduce SGF II				
SEID					GF	GF	GF	GF				
SIL	India				GF	GF	GF	GF				
SMPL	Poland						GF	SGF				

\*1 Manufacturing division of SUK \*2 Manufacturing division of SEC

## SGF Certified Plants Worldwide

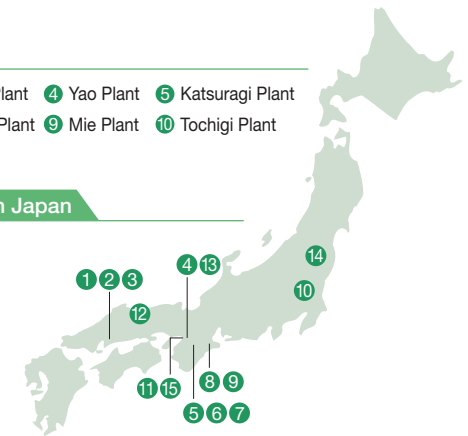
### Sharp Corporation

- ① Hiroshima Plant ② Mihara Plant ③ Fukuyama Plant ④ Yao Plant ⑤ Katsuragi Plant
- ⑥ Nara Plant ⑦ Tenri Plant ⑧ Kameyama Plant ⑨ Mie Plant ⑩ Tochigi Plant
- ⑪ GREEN FRONT SAKAI solar cell plant

### Subsidiaries and Affiliated Companies in Japan

- ⑫ Sharp Yonago Corporation
- ⑬ Sharp Manufacturing Systems Corporation
- ⑭ Kantatsu Co., Ltd.
- ⑮ Sharp Display Products Corporation

● SGF in Japan: 15

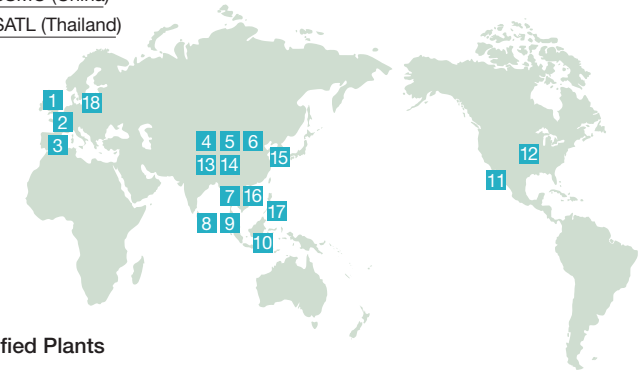


### Subsidiaries and Affiliated Companies Overseas

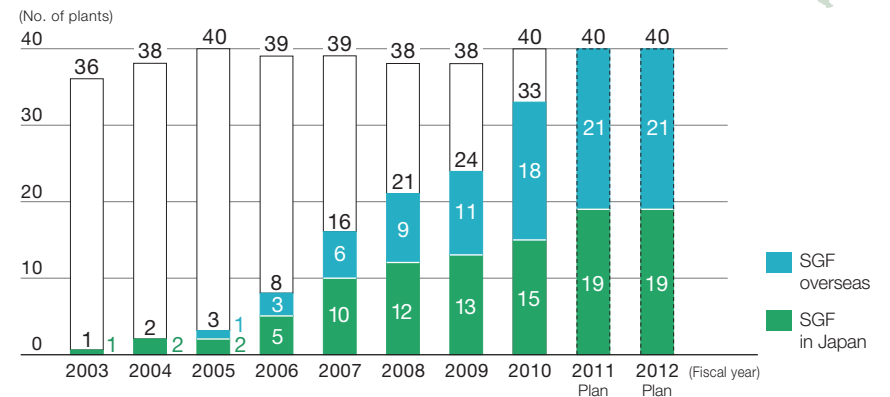
- ① SUKM (UK) ② SMF (France) ③ SEES (Spain) ④ NSEC (China)
- ⑤ SOCC (China) ⑥ SSEC (China) ⑦ SMTL (Thailand) ⑧ SOEM (Malaysia)
- ⑨ SMM (Malaysia) ⑩ SSI (Indonesia) ⑪ SEMEX (Mexico) ⑫ SMCA (US)
- ⑬ WSEC (China) ⑭ SSMC (China)
- ⑮ SKC (Korea) ⑯ SATL (Thailand)
- ⑰ SPC (Philippines)
- ⑱ SMPL (Poland)

■ SGF overseas: 18

Note: Underlined plants achieved SGF in fiscal 2010



## Number of SGF Certified Plants



### SATL (Thailand) Achieves SGF Status

In 2010, manufacturing subsidiary SATL in Chachoengsao, Thailand started operation at a new plant for producing refrigerators and air conditioners, which it named Cool e<sup>3</sup>. The plant makes possible natural ventilation thanks to large louvers on the outside walls combined with indoor fans, and a monitor roof. As well, it was designed to allow natural light into the building. And there's a solar power generation system on the roof.



SATL's new Cool e<sup>3</sup> plant

SATL aggressively reuses and recycles in order to reduce waste by separating 22 kinds of non-hazardous waste and 12 kinds of hazardous waste. A portion of the company's plastic waste is given to a local women's organization, which uses it to make packaging.

SATL is also taking part in a project with the TEI (Thailand Environment Institute) to expand green procurement and spread the use of environmentally friendly products, and it is active in community work such as tree-planting. As a result of these efforts, in fiscal 2010 SATL was designated as an SGF.



Ventilation through large louvers on the outside wall



Air is sent out through a monitor roof



Natural light through a skylight



Solar power generation system



Plastic waste is given to a local women's organization to be reused as packaging



Project meeting between SATL and the TEI

### TOPICS

#### Numerous Honors for GREEN FRONT SAKAI



Located in Sakai City, Osaka Prefecture, GREEN FRONT SAKAI is an environmentally advanced manufacturing complex at which Sharp makes energy-efficient LCD panels and energy-creating solar cells. A number of companies with cutting-edge technology are concentrated and coordinate business at GREEN FRONT SAKAI to create one virtual company that realizes environmentally friendly, highly efficient operation. The site also boasts the latest environmental facilities, including an integrated energy management center that uses IT to keep GREEN FRONT SAKAI energy- and labor-efficient; an inter-building transport system that reduces environmental impact in transporting items between plants and raises productivity; and approximately 100,000 LED lights around the entire site. These efforts have earned Sharp high praise, including an Award of Excellence in the 2010 Nikkei Global Environmental Technology Awards sponsored by Nikkei Inc.

The LCD panel plant (Sharp Display Products Corporation) and the solar cell plant (Sharp Corporation) of GREEN FRONT SAKAI achieved SGF status in fiscal 2010.

Sharp Corporation and the other 10 companies that make up GREEN FRONT SAKAI have been jointly awarded ISO 14001 certification. Through shared environmental policy, goals, and targets, it is expected that GREEN FRONT SAKAI's environmental protection measures will be conducted even more smoothly.



Artist's rendering of GREEN FRONT SAKAI



Certification for ISO 14001 for the 11 companies of GREEN FRONT SAKAI

#### Awards for GREEN FRONT SAKAI

Award Name	Sponsor
Award of Excellence, 2010 Nikkei Global Environmental Technology Awards	Nikkei Inc.
Minister of Economy, Trade and Industry Prize; Green IT Award 2010	Green IT Promotion Council
Osaka Governor's Award, 4th Osaka Sustainable Architecture Awards	Osaka Prefecture
Outstanding Facility Award, 2009 Good Lighting Awards	Illuminating Engineering Institute of Japan

# Improving the Level of Environmental Performance of Offices

Sharp established the Green Office certification system as an initiative to increase the level of environmental performance at its offices. This system builds on the know-how accumulated under the Green Factory certification system, which achieved demonstrable results in strengthening the environmental performance of production facilities. This system was introduced in Japan in fiscal 2007 and overseas in fiscal 2009.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>Revise certification criteria in Japan and overseas</li> <li>Number of Green Office certified sites                             <ul style="list-style-type: none"> <li>Japan: Certify all 54 offices</li> <li>Overseas: Certify 8 (two each in North America, Europe, Asia, and China) out of the total 20 offices</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Japan: 46 out of the total 46 offices*</li> <li>Overseas: 19 out of the total 20 offices</li> </ul>	<ul style="list-style-type: none"> <li>Japan: Introduce new organizational structure centered on main offices</li> <li>Overseas: Introduce organizational structures on a regional basis in North America, Europe, Asia, and China</li> </ul>	<ul style="list-style-type: none"> <li>Japan: Establish new organizational structure</li> <li>Overseas: Establish organizational structures on a regional basis</li> </ul>

\* At the beginning of fiscal 2010, the Green Office certification system was being applied to 54 offices in Japan. However, as a result of organizational changes and office consolidation, and the impact of the Great East Japan Earthquake, a total of 46 offices were ultimately evaluated for environmental performance.

## Green Office Initiatives in Japan

In fiscal 2007, Sharp began applying its Green Office certification system to improve the environmental performance level of its offices at the Head Office and the offices of its sales and service subsidiaries in Japan. Under this system, which is intended for offices that have acquired ISO 14001 certification, an annual performance evaluation is conducted based on certification criteria covering 27 items in eight fields (see table at right). Offices that meet the specified criteria in all eight fields are certified as Green Offices.

In fiscal 2009, all 54 offices attained Green Office certification, and for fiscal 2010, Sharp set a goal to achieve a higher level, and added new evaluation indicators, such as the percentage of employees who have passed the Eco Test. Following the success in fiscal 2009, all 46 offices were certified as Green Offices. In fiscal 2011, Sharp will introduce a new promotion system with greater autonomy centered on relatively large-scale offices and will work to ensure that this system is firmly established.

## Green Office Initiatives Overseas

In fiscal 2009, Sharp began to introduce the Green Office certification system for the 20 offices of its main sales subsidiaries overseas. Because environmental laws and regulations are different in each country and region, and because infrastructure and business customs vary widely, Sharp has established a total of 34 performance-evaluation criteria in five fields divided into "common criteria" which all offices must address, and "optional criteria" that are specific to the characteristics of each individual region (see table at right).

In fiscal 2009, the first year this system was applied, a total of 13 offices attained Green Office certification. In fiscal 2010, Sharp strengthened this initiative by adding evaluation criteria for preserving biodiversity, as well as holding informational meetings on a regional basis to present case studies and introduce concepts related to saving energy, a problem common to all offices. As a result, 19 offices attained Green Office certification. In fiscal 2011, Sharp will introduce a promotion system on a regional basis (North America, Europe, Asia, and China), and will give it a jump-start by specifically designing the system to better fit each region, and will work to ensure that it becomes firmly established.

### Green Office Certification Standards (Japan, Fiscal 2010)

Field	Key Evaluation Indicators (number of items)
Compliance with environmental laws	Compliance with laws, system for ensuring compliance with laws, other measures (3)
Reduction of environmental impact through work specific to each business division	Status of achievement of work specific to each business division, improvement of skills, other measures (2)
Prevention of global warming	Reduction of CO <sub>2</sub> emissions, reduction of electricity use, other measures (4)
Waste management	Reduction of total emissions, recycling of waste as valuable resources, other measures (4)
Green purchasing, etc.	Promotion of green purchasing, use of FSC-certified paper, other measures (4)
Environmental maintenance in the workplace	Operational management of equipment, introduction of advanced equipment, other measures (4)
Environmental education, etc.	Eco Test certification acquisition ratio, environmental auditor training, other measures (2)
Environmental social action programs	Community activities, other measures (2)

### Green Office Certification Standards (Overseas, Fiscal 2010)

Field	Key Evaluation Indicators (number of items; common/optional)
Expansion of sales of energy-saving and energy-creating products	Sales of environmentally conscious products, other measures (1/2)
Reduction of environmental impacts from business activities	Reduction of electricity use, waste reduction, other measures (8/9)
Environmental governance	Environmental action plans, promotion of local environmental strategy, other measures (1/3)
Compliance with environmental laws	Conditions of compliance as evaluated by audits, statutory reports, other measures (3/0)
Environmental communication, etc.	Environmental education, community services, biodiversity protection, other measures (3/4)

### SESC (China) Receives Green Office Certification

At Sharp sales subsidiary SESC in Shanghai, China, all employees strive daily to protect the environment through efforts like saving energy and reducing the amount of paper used. Environmental education is part of Sharp's Eco-Positive Strategic Measures\*<sup>1</sup>, and SESC places special emphasis on conducting training for new employees every year. The training teaches Chinese environmental laws as well as Sharp policy and initiatives in order to raise awareness of the importance of environmental protection among employees. SESC also leads environmental education at local elementary schools.

In fiscal 2007, SESC began recycling copier toner cartridges, with cartridge collection boxes placed next to Sharp copiers. In fiscal 2010, SESC teamed up with office equipment manufacturing subsidiary SOCC in Changshu to create a system for repairing the circuit boards of copiers. And in January 2011, SESC contracted with a subcontractor for the recycling of the copiers themselves. Such recycling efforts help reduce the use of non-genuine toner and prevent the illegal reselling of used copiers on the market.

Thanks to these and other efforts, in fiscal 2010 SESC was certified for Sharp's Green Office certification system. The company will continue to pool the hard work of all employees in working for the environment.

\*<sup>1</sup> See page 28.



A brochure recommending the use of genuine Sharp toner



Environmental training session for new SESC employees

### SUK (United Kingdom) Runner-Up in Sustainable FM Awards

Sharp sales subsidiary SUK in Middlesex, UK was judged a runner-up in the category of the Most Sustainable Private Sector Organization at the Sustainable FM Awards 2010\*<sup>2</sup>, organized by Abbey Publishing & Exhibitions (UK) Ltd. The award recognizes SUK's comprehensive environmental efforts including energy-saving equipment, a motion lighting sensor system, solar panels installed on the SUK office roof, a toner cartridge recycling scheme, the setting of environmental targets, and education for employees.

The company set a target of zero discharge to landfill, which it achieved in August 2010 by making it possible to recycle all of its waste.

In November 2010, it held Green Week as part of employees' environmental education. With seminars led by outside experts and activities like tree-planting, the week further raised employee awareness and led to greater energy-saving actions.

\*<sup>2</sup> Awards honoring public and private sector organs that show outstanding results in managing facilities in a sustainable manner. FM stands for "Facilities Management."

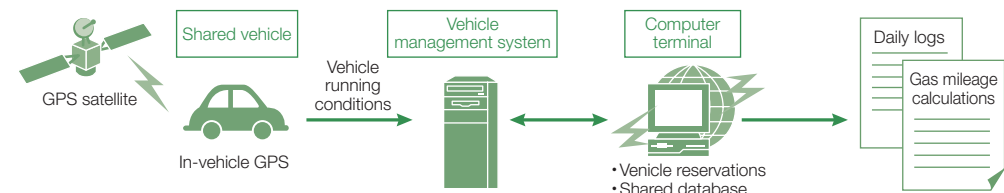


Sustainable FM Awards 2010 certificate

### Car Sharing at SEMC (Japan)

In 2009, Sharp Electronics Marketing Corporation (SEMC), a sales subsidiary in Japan, introduced car sharing at three sites (Ichigaya and Ueno in Tokyo, Ebisu in Osaka). All shared vehicles are equipped with a GPS linked to a centralized management system that monitors vehicle running conditions and route information. The system enables eco driving by monitoring sudden start-ups and accelerations and by automatically calculating gas mileage, thus greatly reducing vehicle operation and maintenance costs as well as raising employees' environmental awareness.

#### ■ Car Sharing System



# Curbing Greenhouse Gas Emissions

Sharp is taking active measures to curb greenhouse gas emissions resulting from its business activities. Sharp is reducing CO<sub>2</sub> emissions through the introduction of cogeneration systems and energy-efficient equipment, the installation of solar power generation systems, and the meticulous implementation of energy-saving activities at plants and offices. At the same time, Sharp is also reducing emissions of greenhouse gases such as PFCs\*<sup>1</sup> by installing abatement systems and adopting replacement gases with lower global warming potential.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011 and 2012
<ul style="list-style-type: none"> <li>Production-based CO<sub>2</sub> emissions for the 10 Sharp Corporation plants*<sup>2</sup> <ul style="list-style-type: none"> <li>Reduce to below fiscal 2007 levels</li> <li>Reduce by 3% compared to BAU*<sup>3</sup></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Reduced by 31.3% from fiscal 2007 levels (fiscal 2007: 968,000 t-CO<sub>2</sub> → fiscal 2010: 665,000 t-CO<sub>2</sub>)</li> <li>Reduced by 3.2% compared to BAU</li> </ul>	<ul style="list-style-type: none"> <li>Every fiscal year: Reduce to below fiscal 2007 levels</li> <li>Every fiscal year: Reduce by 3% compared to BAU</li> </ul>
<ul style="list-style-type: none"> <li>Production-based CO<sub>2</sub> emissions per adjusted production unit*<sup>4</sup> for all 11 Sharp Corporation plants                             <ul style="list-style-type: none"> <li>Reduce by 35% from fiscal 1990 levels</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Reduced by 46.3% from fiscal 1990 levels</li> </ul>	<ul style="list-style-type: none"> <li>Reduce by 35% from fiscal 1990 levels (average for fiscal 2008 to 2012)</li> </ul>
<ul style="list-style-type: none"> <li>CO<sub>2</sub> emissions per production unit*<sup>5</sup> for overseas plants                             <ul style="list-style-type: none"> <li>Reduce by 2% from previous fiscal year</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Reduced by 15.5% from previous fiscal year</li> </ul>	<ul style="list-style-type: none"> <li>Every fiscal year: Reduce by 2% from previous fiscal year</li> </ul>

\*<sup>1</sup> A general term for perfluorocarbon gases, which are greenhouse gases. \*<sup>2</sup> The 10 plants of Sharp Corporation, excluding the solar cell plant at GREEN FRONT SAKAI (see page 73). \*<sup>3</sup> Business As Usual: Amount of CO<sub>2</sub> estimated to be emitted, relative to emission levels in the preceding fiscal year, assuming no measures to reduce CO<sub>2</sub> emissions are implemented. \*<sup>4</sup> Per adjusted production unit (t-CO<sub>2</sub>/100 million yen) = CO<sub>2</sub> emissions (t-CO<sub>2</sub>) ÷ {production output (100 million yen) ÷ Japanese corporate price index determined by the Bank of Japan}. (Corporate price index: Weighted average of "Electrical machinery & equipment," "Information & communications equipment," and "Electronic components & devices") \*<sup>5</sup> Per production unit (t-CO<sub>2</sub>/100 million yen) = CO<sub>2</sub> emissions (t-CO<sub>2</sub>) ÷ production output (100 million yen)

## Sharp Group Activities to Control Greenhouse Gas Emissions

Total greenhouse gas emissions for the Sharp Group in fiscal 2010 increased by 9% compared to the previous fiscal year as a result of production increases associated with the LCD panel plant (Sharp Display Products Corporation) at GREEN FRONT SAKAI (Sakai City, Osaka Prefecture) entering full-scale operation, and the start of operations at the solar cell plant at the same location (1).

For the 10 factories of Sharp Corporation\*<sup>2</sup>, CO<sub>2</sub> emissions were reduced by 6.4% compared to the previous fiscal year, and by 31.3% compared to fiscal 2007 levels. They were also reduced by 3.2% of baseline (BAU emissions) (2, 3). In addition, CO<sub>2</sub> emissions per adjusted production unit for all 11 Sharp Corporation plants were reduced by 46.3% from fiscal 1990 levels (4). This is the result of establishing a target to lower CO<sub>2</sub> emissions by 3% of baseline (BAU emissions) beginning in fiscal 2010 based on a program to reduce CO<sub>2</sub> emissions, taking fiscal 2007 as the peak year for such emissions. These results reflect Sharp's commitment to strengthen its efforts by extending them to all equipment, including production equipment as well as utility equipment.

At the same time, CO<sub>2</sub> emissions at production facilities abroad increased by 8% compared to the previous fiscal year, reflecting a rebound in production, while CO<sub>2</sub> emissions per production unit decreased by 15.5% compared to the previous fiscal year (5).

In addition to deploying energy-saving measures, Sharp will continue its efforts to curb greenhouse gas emissions to the greatest possible extent by optimizing operation of abatement systems on all PFC emission sources. Sharp will also take steps to reduce CO<sub>2</sub> emissions overseas by deploying know-how developed in Japan to overseas production facilities.

## Promoting Private Power Generation

Sharp is working to provide a stable supply of electric power and reduce CO<sub>2</sub> emissions by generating its own electricity privately. Sharp has been installing cogeneration and fuel cell systems, as well as solar power generation systems.

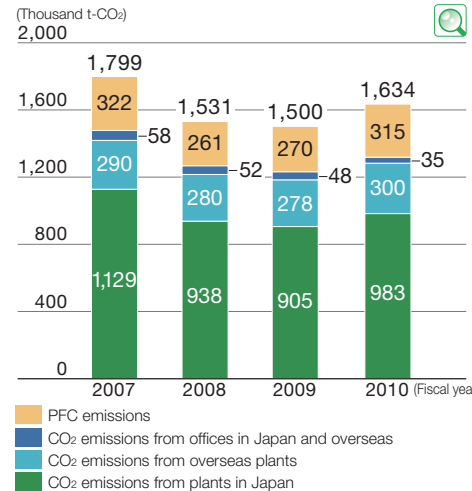
### Self-Generated Electricity Output

(millions of kWh)

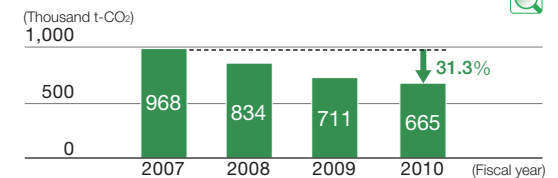
\*<sup>6</sup> Electricity generated by on-site cogeneration systems, solar power generation systems, and fuel cell systems.

	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010
Self-generated electricity output* <sup>6</sup>	287	261	285	220

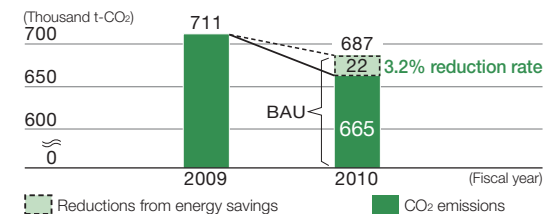
### 1 Amount of Sharp Group's Greenhouse Gas Emissions



### 2 Amount of Production-Based CO<sub>2</sub> Emissions for the 10 Sharp Corporation Plants\*<sup>2</sup>



### 3 BAU Reduction Rate of CO<sub>2</sub> Emissions for the 10 Sharp Corporation Plants\*<sup>2</sup>



- Refer to page 75 for the CO<sub>2</sub> emission coefficients used.
- Based on the Energy Conservation Law, emissions since fiscal 2010 exclude CO<sub>2</sub> emissions from fuel used outside of Sharp premises such as in company vehicles.
- CO<sub>2</sub> emissions for the Sharp Group as a whole, not taking into account inputs from purchases of Green Power Certificates (renewable energy certificates), were 1.638 million t-CO<sub>2</sub>; for overseas plants, 301,000 t-CO<sub>2</sub>; and for offices in Japan and overseas, 39,000 t-CO<sub>2</sub>.

### 4 Production-Based CO<sub>2</sub> Emissions per Adjusted Production Unit\*<sup>4</sup> for All 11 Sharp Corporation Plants

Fiscal Year	Production-Based CO <sub>2</sub> Emissions per Adjusted Production Unit* <sup>4</sup> (t-CO <sub>2</sub> /100 million yen)
Fiscal 1990	32.2
Fiscal 2010	17.3 (down 46.3% from fiscal 1990 levels)

### 5 CO<sub>2</sub> Emissions per Production Unit\*<sup>5</sup> for Overseas Plants

Fiscal Year	CO <sub>2</sub> Emissions per Production Unit* <sup>5</sup> (t-CO <sub>2</sub> /100 million yen)
Fiscal 2009	30.4
Fiscal 2010	25.7 (down 15.5% compared to the previous fiscal year)

Case Study 1 Saving Energy

Mie Plant (Japan) Focuses on Energy Efficiency

At the Mie Plant (Taki District, Mie Prefecture), the CO<sub>2</sub> Emissions Reduction Sectional Committee, made up of employees from the production, process technology, and utility management departments, meets monthly to consider measures for reducing the volume of CO<sub>2</sub> emissions. It also holds a monthly meeting with persons in charge of production equipment. In fiscal 2010, the meetings included representatives of subcontractors, in comprehensive efforts across the entire plant to reduce CO<sub>2</sub> emissions.



Regular meeting of the CO<sub>2</sub> Emissions Reduction Sectional Committee

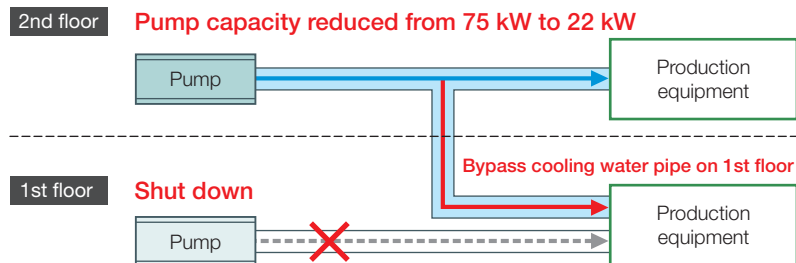
These efforts have resulted in the Mie Plant reducing CO<sub>2</sub> emissions by 3% a year for three consecutive years starting in fiscal 2008.

Case Study 2 Saving Energy

Nara Plant (Japan) Optimizes Cooling Water Pump to Realize Energy Savings

At the Nara Plant (Yamato-Koriyama City, Nara Prefecture), greater energy efficiency has been achieved by adjusting operation of the cooling water pump for production equipment. Since production equipment gives off heat from its operation, it must be constantly cooled using water. Cooling used to be carried out using pumps on both the first and second floors, but Sharp optimized the cooling system by replacing production equipment and determining the minimal amount of water needed for cooling. The second floor pump was made smaller and a bypass cooling water pipe was installed, connecting the second floor and first floor production equipment, and allowing the first floor pump to be shut down. The result was an annual reduction of approximately 90 t-CO<sub>2</sub>.

Optimization of Cooling Water Pump



Case Study 3 Saving Energy

SMCA (United States) Installs 460 kW of Solar Power on Site

SMCA, the Tennessee-based manufacturing division of SEC, is harnessing the power of the sun to help power manufacturing operations in Memphis. To date, SMCA has installed 460 kW of solar power generation systems and 20 solar-powered LED pathway lights on site, demonstrating to the community SMCA's commitment to the environment and the practical benefits solar power brings to business and industry.



Solar power generation system on the roof of SMCA

As part of its goal of spreading eco-awareness in the community, SMCA gives lectures in the local community to introduce its environmental efforts. It has also launched the Sharp Solar Academy to give environment-themed lessons in local elementary schools.



Solar LED pathway lights



Solar array on SMCA premises

Case Study 4 Saving Energy

SSEC (China) Honored for Energy Savings

On December 15, 2010, Sharp manufacturing subsidiary SSEC in Shanghai received multiple honors for contributions to energy efficiency. Sponsored by the Energy Reduction Forum, which operates under Shanghai Yidian Holding (Group) Company, the awards recognized SSEC in three categories: outstanding efforts in reducing energy consumption by a company; outstanding group energy-saving project; and outstanding individual efforts in reducing energy consumption, for SSEC President Norimasa Akinaga. The award for outstanding efforts in reducing energy consumption by a company recognizes SSEC's overall success in reducing energy consumption, while the outstanding group energy-saving project award honors the company's success in reducing energy consumption by re-designing the air conditioner heat exchanger production line.



2010 award for outstanding efforts in reducing energy consumption by a company



2010 award for outstanding group energy-saving project



2010 award for outstanding individual efforts in reducing energy consumption

# Minimizing and Recycling Waste

Sharp has been working to bring down its total amount of waste discharged and to recycle as much of its waste as possible.

Sharp plants in Japan\*1 have achieved zero discharge to landfill\*2 for 10 consecutive years, and overseas production facilities have reduced the level of waste, etc. discharged per production unit. Sharp will continue to advance these efforts in the future.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Every Fiscal Year
<ul style="list-style-type: none"> <li>Amount of waste discharged*3 at the 10 Sharp Corporation plants*4                             <ul style="list-style-type: none"> <li>Reduce to below fiscal 2007 levels</li> <li>Reduce by 6% compared to BAU*5</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Reduced by 52.4% from fiscal 2007 levels (fiscal 2007: 170,000 t-CO<sub>2</sub> → fiscal 2010: 81,000 t-CO<sub>2</sub>)</li> <li>Reduced by 12.0% compared to BAU</li> </ul>	<ul style="list-style-type: none"> <li>Every fiscal year: Reduce to below fiscal 2007 levels</li> <li>Every fiscal year: Reduce by 6% compared to BAU</li> </ul>
<ul style="list-style-type: none"> <li>Amount of waste, etc. discharged*6 per production unit at overseas plants                             <ul style="list-style-type: none"> <li>Reduce by 2% from previous fiscal year</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Reduced by 7.5% from previous fiscal year</li> </ul>	<ul style="list-style-type: none"> <li>Every fiscal year: Reduce by 2% from previous fiscal year</li> </ul>

\*1 The 10 plants of Sharp Corporation excluding the solar cell plant at GREEN FRONT SAKAI, plus subsidiaries and affiliates in Japan, excluding Sharp Display Products Corporation (see page 73).

\*2 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 replaced the value for the denominator of "total amount of waste generated" with "amount of waste, etc., discharged (amount of waste discharged + amount of valuable resources)", a smaller value. Figures from fiscal 2004 include subsidiaries and affiliates.

\*3 Amount of waste discharged = Industrial waste discharged + general waste from business activities

\*4 The 10 plants of Sharp Corporation, excluding the solar cell plant at GREEN FRONT SAKAI (see page 73).

\*5 Business As Usual: Amount of waste estimated to be discharged, relative to discharge levels in the preceding fiscal year, assuming no measures to reduce waste are implemented.

\*6 Amount of waste, etc. discharged = Waste discharged + valuable resources

## Curbing the Amount of Waste, etc. Discharged by the Sharp Group

In fiscal 2010, waste, etc. (waste and valuable resources recovered from waste) discharged by the Sharp Group increased by 19%, exceeding levels of the previous fiscal year both in Japan and overseas (1). This increase reflected expanded production volume resulting from the LCD panel plant (Sharp Display Products Corporation) at GREEN FRONT SAKAI (Sakai City, Osaka Prefecture) entering full-scale operation, and the start of operations at the solar cell plant at the same location.

The 10 Sharp Corporation plants\*4 achieved dramatic reductions in waste discharges of 14.7% compared to the previous fiscal year and 52.4% compared to fiscal 2007, and the percentage of valuable resources recovered rose by 3.9 points compared to the previous fiscal year (2). In addition, waste discharges were reduced by 12.0% compared to baseline levels (BAU emissions) (3). This is the result of reinforcing efforts in this area by setting a goal of reducing discharges by 6% of baseline (BAU emissions), based on a program to curb waste, taking fiscal 2007 as the peak year for such discharges. In particular, the Kameyama Plant (Kameyama City, Mie Prefecture) and the Mie Plant (Taki District, Mie Prefecture) made significant contributions to this effort through measures to reduce discharges of liquid waste, and the Katsuragi Plant (Katsuragi City, Nara Prefecture) through measures to reduce the amount of waste glass. In addition, in fiscal 2010, at some Sharp Corporation plants, the amount of waste discharge subject to administrative reporting requirements was affected by excluding waste discharged by on-site subcontractors.

Fiscal 2010 was the 10th consecutive year for Sharp production plants in Japan\*1 to achieve zero discharge to landfill (4).

At overseas plants, total waste, etc. discharged increased by 21% compared to the previous fiscal year. However, waste discharged per production unit declined by 7.5% compared to the previous fiscal year (5). This can be attributed to making full use of the Eco Best Practice Forums\*7 to deploy effective waste reduction measures on a global basis.

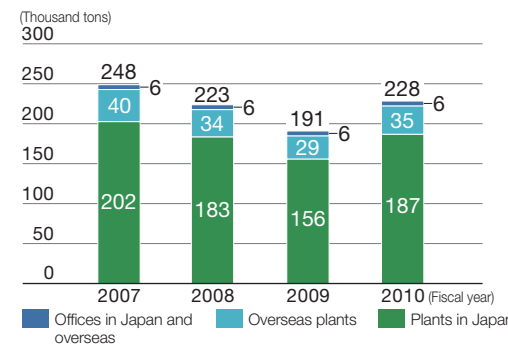
Sharp will continue to work proactively to recycle waste and curb emissions.

\*7 See page 55.

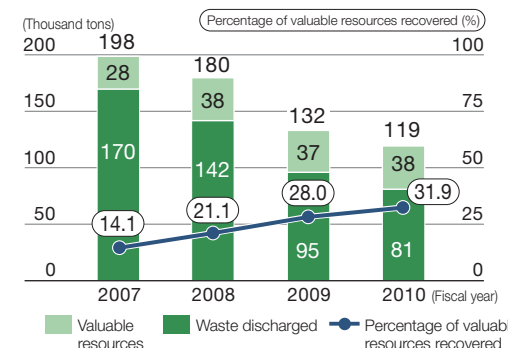
## Appropriate Storage and Treatment of PCB Wastes in Japan

Sharp complies to the fullest extent with laws and regulations covering PCB (polychlorinated biphenyls) wastes, their proper storage, and reporting requirements to the government. In addition, Sharp has achieved its target of completing registration with the Japan Environment Safety Corporation (JESCO) for treatment of its PCB wastes prior to the 2016 deadline set by law, and is treating PCB wastes according to schedules set by JESCO. Sharp also does not use PCBs, with the exception of a certain amount present in high-voltage transformers.

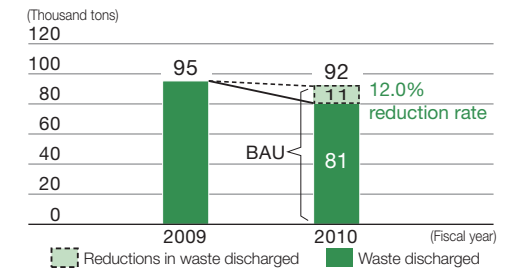
1 Amount of Waste, etc. (Including Valuable Resources) Discharged by the Sharp Group



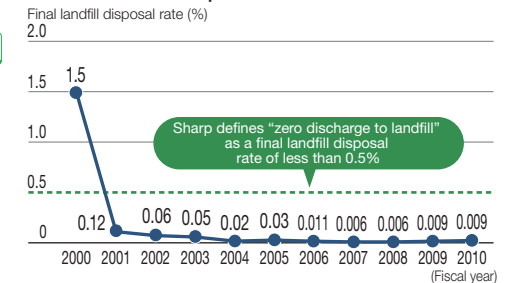
2 Amount of Waste and Valuable Resources Discharged, and Percentage of Valuable Resources Recovered, at the 10 Sharp Corporation Plants\*4



3 BAU Reduction Rate of Waste Discharge for the 10 Sharp Corporation Plants\*4



4 Final Landfill Disposal Rate of Waste from Plants in Japan



5 Waste, etc. Discharged per Production Unit at Overseas Plants

Fiscal Year	Waste, etc. Discharged per Production Unit (ton/100 million yen)
Fiscal 2009	3.20
Fiscal 2010	2.96 (down 7.5% compared to the previous fiscal year)

\* Waste discharge in fiscal 2010 is the sum total of discharges subject to administrative reporting requirements excluding the amount discharged by subcontractors on the premises of the Kameyama Plant and Mie Plant (11,000 tons).

Amount of Waste by Category from Sharp Corporation Plants in Fiscal 2010

(Unit: tons)

	Waste, etc.*1	Waste*2	Recycled into valuable resources	Recycled (not including valuable resources)	Intermediate treatment	Final landfill disposal
Waste alkali	40,910	36,282	4,628	36,282	0	0
Waste oil	30,933	10,335	20,597	10,334	1	0
Sludge	9,187	9,135	52	9,135	0	0
Waste fluid (waste acid)	20,795	17,990	2,804	17,979	11	0
Waste paper	7,936	755	7,182	711	42	2
Waste glass	8,010	5,167	2,843	5,165	0	2
Scrap iron	439	18	421	18	0	0
Waste plastic	2,664	1,573	1,091	1,517	55	1
Others	908	493	412	489	0	4
Total	121,782	81,748	40,030	81,630	109	9

\*1 Amount of waste, etc. discharged = Waste discharged + valuable resources

\*2 Amount of waste discharged = Waste recycled + intermediately treated + amount of landfill disposal

Case Study 1 Reducing Waste

Katsuragi Plant and Others (Japan) Convert Scrap Glass to a Valuable Resource

The solar cell plant at GREEN FRONT SAKAI (Sakai City, Osaka Prefecture) and the Katsuragi Plant (Katsuragi City, Nara Prefecture) are promoting the conversion of scrap glass cut from the edges of thin-film solar modules during the production process into a valuable resource.



Scrap glass used effectively as an insulation material (top) and in reflective marking materials for lane stripes on roadways

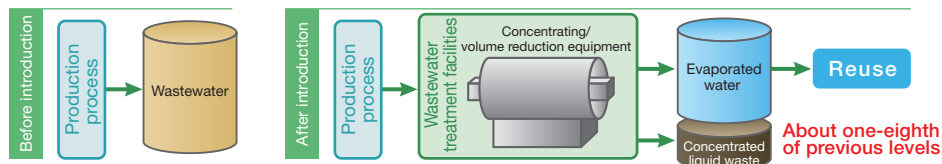
There are many types of waste glass, but thanks to technologies to make the sorting process more efficient and a membrane separation technology developed by a subcontractor, all types of scrap glass can be converted to valuable resources. The recovered scrap glass can be used as an effective heat insulation material and in reflective marking materials for lane stripes on roadways, enabling waste sent for final disposal to be reduced by about 2,600 tons annually.

Case Study 2 Reducing Waste

Kameyama Plant (Japan) Reduces Discharge of Wastewater Containing Chemical Elements from LCD Cleaning Process

The Kameyama Plant (Kameyama City, Mie Prefecture) is working to reduce the amount of wastewater containing chemical elements that is discharged from the cleaning process in LCD panel production. Previously, such wastewater was treated "as is" as industrial waste. However, after noting that the wastewater was highly diluted, the plant began using existing concentrating/volume reduction equipment\*3 to concentrate the chemical elements, making it possible to reuse the evaporated water. As a result, the amount of wastewater discharged was reduced to about one-eighth of previous levels.

\*3 System to concentrate the chemicals contained in wastewater by separating out the water

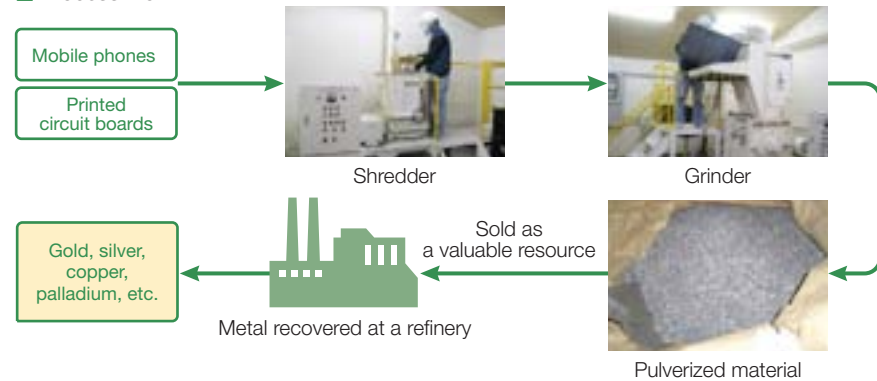


Case Study 3 Reducing Waste

Hiroshima Plant (Japan) Recycles Mobile Phones into Valuable Resources

The Hiroshima Plant (Higashi-Hiroshima City, Hiroshima Prefecture) is working to recycle mobile phones and other devices that have outlived their usefulness into valuable resources. The plant takes mobile phones used in development and prototyping and for evaluation purposes inside the plant, as well as printed circuit boards replaced as part of repair and service, and subjects them to a shredding and grinding process to ensure security. The plant sells approximately 30 tons of the resulting material each year as a valuable resource. The material is sold to metal refineries where scarce metals such as gold, silver, copper, and palladium are recovered.

Process Flow



Case Study 4 Reducing Waste

STW (China) Earns Cleaner Production Certificate by Promoting Waste Reduction

STW, Sharp's manufacturing subsidiary in Wuxi, China, changed the material used for trays to transport parts for LCD panels from polystyrene (PS) to the more durable polyethylene terephthalate (PET), and was able to reduce the number used by more than 7,000 each year. In addition, by increasing the reuse of packaging materials, STW reduced the number used by more than 2,700 units per year.

In addition to these efforts, STW was praised for various energy conservation and resource conservation measures, and as a result, earned a Cleaner Production Certificate from Wuxi City for 2010. STW will continue to work on reducing environmental impacts.



PET trays



Cleaner Production Certificate from Wuxi City



# Effectively Using Water Resources

Sharp has worked to reduce the amount of new water (i.e., water from the water supply system) it uses by expanding the use of recycled water. In addition, it makes efforts to reduce the volume of water used in production from the viewpoint of saving energy and aims to conserve valuable water resources.

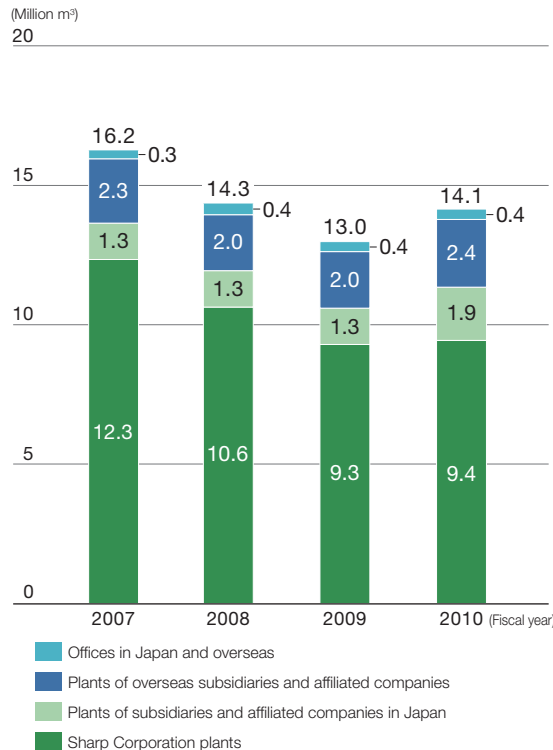
## Effectively Using Water Resources

The volume of new water used by the Sharp Group in fiscal 2010 increased by 8% over the previous fiscal year due to the expansion of production (1). However, the Group is making efforts to increase the use of recycled water and reduce the volume of water used per unit produced (2, 3, 4).

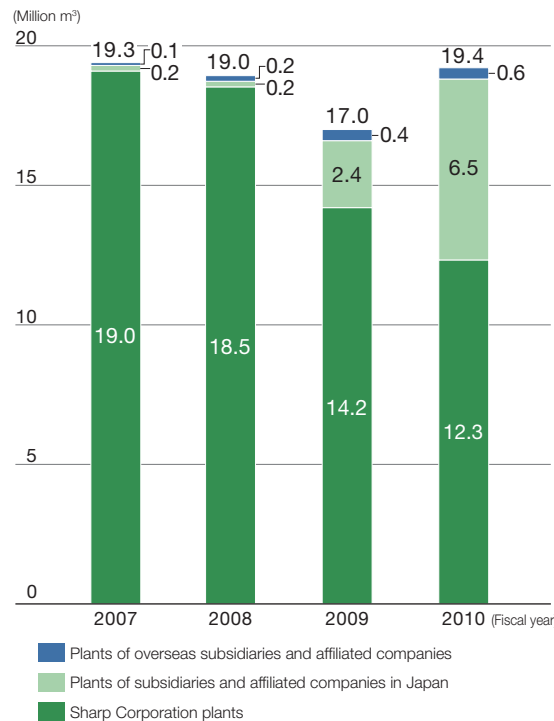
The volume of recycled water used at the plants of subsidiaries and affiliates in Japan increased 2.7 times, as a result of the LCD panel plant (Sharp Display Products Corporation) at GREEN FRONT SAKAI (Sakai City, Osaka Prefecture) entering full-scale operation. At the same time, it dropped 13% over the previous fiscal year at Sharp Corporation plants (2), due to efforts made to reduce the volume of water used in production from an energy-saving viewpoint (4).

Sharp will continue its efforts to reduce the volume of water it uses by effectively using water resources.

### 1 Volume of New Water Used by the Sharp Group



### 2 Amount of Water Reused at Sharp Group Plants

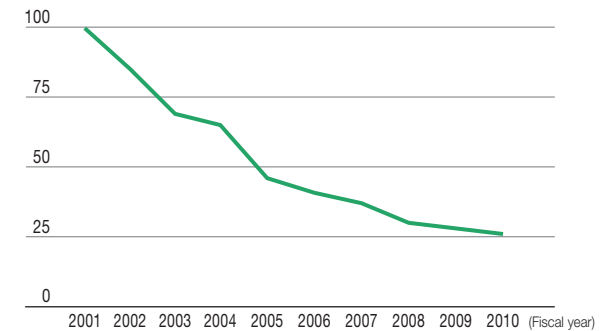


## Reducing the Use of New Water

The Mie Plant (Taki District, Mie Prefecture) continues efforts not to increase the volume of new water it uses, despite expanding production, through increasing its use of recycled water, monitoring the volume of cooling water used in air conditioning, and other efforts.

As a result, the volume of new water per unit produced in fiscal 2010 was approximately a quarter of that used in fiscal 2001.

### 3 Amount of New Water Used per Unit Produced at the Mie Plant (fiscal 2001=100)

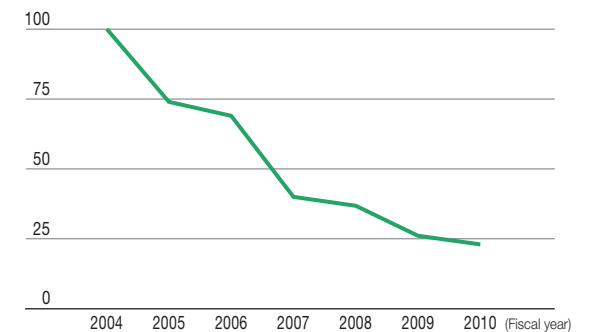


## Reducing the Volume of Water Used

Equipment that recycles 100% of the drainage from the production process was installed at the Kameyama Plant (Kameyama City, Mie Prefecture) when it was built. However, since a large amount of energy is necessary for the recycling process, the plant is making efforts to reduce the volume of water it uses from an energy-saving viewpoint.

As a result, the volume of new water used per unit produced in fiscal 2010 was approximately a quarter of that used in fiscal 2004.

### 4 Volume of Water Used per Unit Produced at the Kameyama Plant (fiscal 2004=100)



# Effectively Managing Chemicals Used in Factories

Sharp meticulously controls chemical substances used at its plants and manages their safety through preliminary audits based on the process assessment system, daily operation safety activities, and emergency response training simulating accidents.

## Effective Management of Chemical Substances

When introducing new chemical substances and handling equipment and when revamping existing handling equipment, Sharp conducts rigorous preliminary audits based on the process assessment system\*1 to ensure safety, health, and lower environmental impact.

Sharp strives for effective management of chemical substances: employees handling these go through regular education and drills to prevent accidents, the Special Safety Management Committees oversee all control activities, and checks are carried out through an environmental safety operations audit system\*2.

Of the chemical substances covered by the PRTR\*3 Law, the number of chemicals handled in quantities 500 kg or more in fiscal 2010 at each plant in Japan was 17 substances, revised according to the reduction in the volume used and amendments to the law. Moreover, the total amount handled in Japan was approximately 10,503 tons. Even with the start of full-scale operations at the LCD panel plant (Sharp Display Products Corporation) and the solar cell plant at GREEN FRONT SAKAI (Sakai City, Osaka Prefecture), the volume of chemicals used decreased 10% from the previous fiscal year (fiscal 2009: approximately 11,709 tons).

\*1 A system for conducting preliminary safety assessments of chemical substance handling equipment.

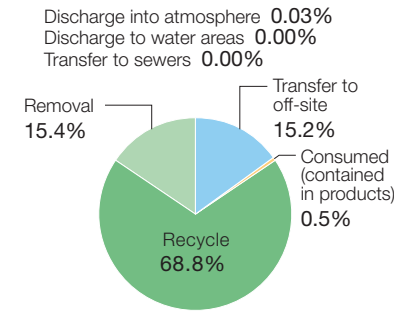
\*2 A system for assessing the activities of the division in charge of environmental management at factories.

\*3 PRTR: Pollutant Release and Transfer Register. A system to collect and publicize data, such as the amount of harmful chemicals discharged and transferred.

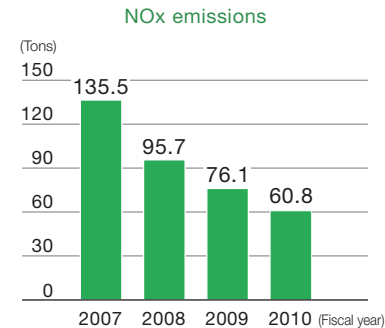
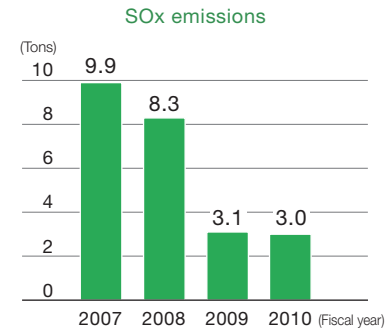
### Fiscal 2010 PRTR Data (Japan)

Chemical	Amount handled	Amount discharged		Amount transferred		Amount consumed		Amount removed
		Into atmosphere	Into public water area	Into sewage	To off-site	Contained in products	Recycled	
2-Aminoethanol	8,984,200	896	44	0	781,355	0	7,073,243	1,128,663
Indium and its compounds	36,881	0	0	0	8,284	1,129	27,467	0
Ferric chloride	185,121	0	0	0	0	0	117,326	67,795
Xylene	1,589	48	0	0	636	0	0	905
Silver and its compounds	63,246	0	0	0	0	54,101	9,146	0
1, 3-Dioxolan	644	9	0	0	242	0	0	393
N, N-dimethyl-formamide (DMF)	40,503	16	0	0	6,539	0	0	33,948
1, 2, 4-Trimethylbenzene	515	217	0	0	298	0	0	0
1, 3, 5-Trimethylbenzene	628	18	0	0	251	0	0	359
Naphthalene	941	396	0	0	545	0	0	0
Lead and its compounds	1,618	0	0	0	95	1,521	2	0
Pyrocatechol (also known as catechol)	3,585	0	0	0	3,585	0	0	0
4-Tertiary butylphenol	5,304	39	0	0	5,265	0	0	0
Hydrogen-fluoride and its water-soluble salts	1,167,121	1,420	0	0	781,036	0	0	384,665
Boron and its compounds	5,731	3	0	0	5,728	0	0	0
Polyoxyethylene alkyl ether	1,700	0	6	0	1,509	0	0	185
Molybdenum and its compounds	3,611	0	31	0	790	262	2,527	0
Total	10,502,938	3,062	81	0	1,596,158	57,013	7,229,711	1,616,913

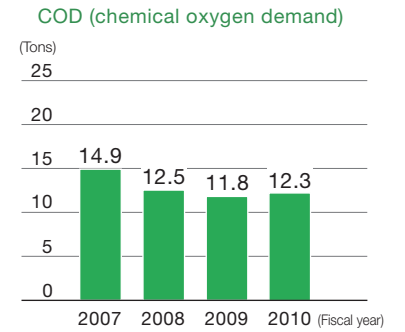
### Destinations of PRTR-Listed Chemical Substances in Japan



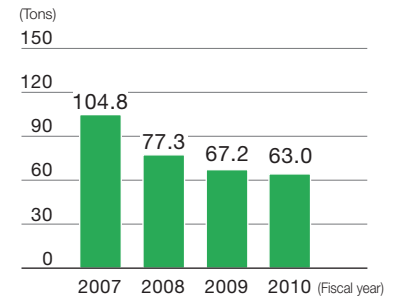
### Atmosphere Emissions in Japan



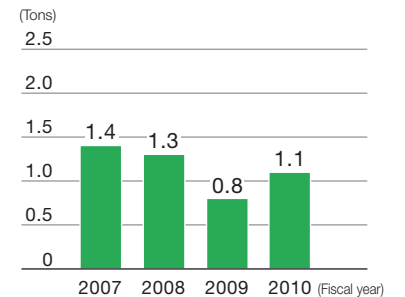
### Pollutant Loads of Public Water Areas in Japan



### Nitrogen pollutant load



### Phosphorous pollutant load



### An Environmental Safety Operations Audit System for Reducing Environmental Safety Risks

An environmental safety operations audit system was created based on Sharp's Environmental Safety Operations Guideline and implemented at all plants in Japan in fiscal 2010.

■ **Business Classification (total: 9 categories, 237 items)**

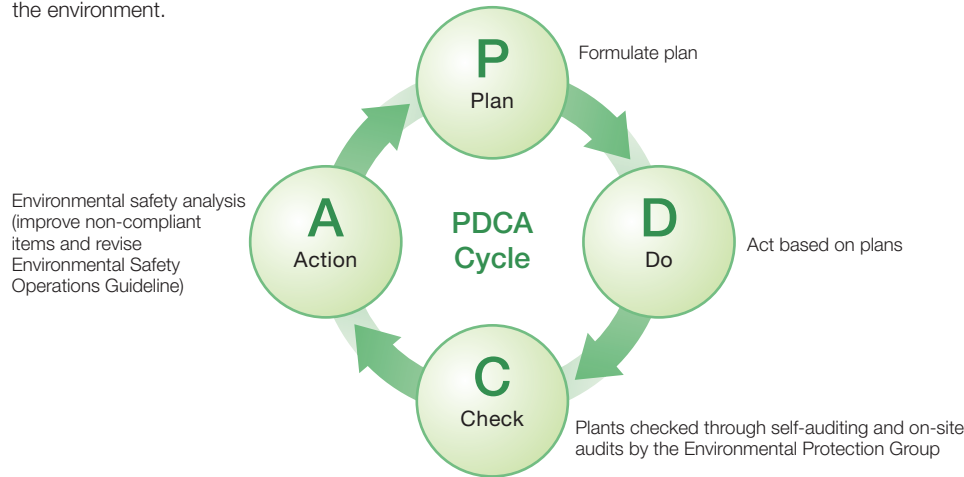
- ① Pollution prevention
- ② Waste processing
- ③ Operations safety management\*\*1
- ④ Emergency response
- ⑤ Special safety management\*\*2
- ⑥ Energy Conservation Law/Act on Promotion of Global Warming Countermeasures
- ⑦ SGF promotion
- ⑧ Human resource development
- ⑨ On-site facility management

\*1 Maintenance and management of energy supply facilities, production facility utilities, environmental protection facilities, and other facilities.

\*2 Safety management of hazardous materials and toxic chemicals among the chemical substances used at the plants.

■ **Evaluating Achievement Levels**

Plants are evaluated on four levels per item in each business category and audited on site. Based on the results of this audit, improvement and corrective action are taken to reduce any further risk to the safety of the environment.



Audit at the Katsuragi Plant

### Special Safety Management of Hazardous Materials and Toxic Chemicals

Special safety management is Sharp's program to safely manage the hazardous materials and toxic chemicals among the chemical substances used at its plants. Sharp strives for meticulous, wide-ranging management of these substances—from R&D to production lines.

Sharp has established Special Safety Management Committees at each plant in Japan made up of engineers in the production, technical, and environmental management divisions. The committees oversee the process assessment system and carry out education and emergency response training in preparation for the possibility of an accident, with the goal of continuously raising the level of safety.



**Katsuragi Plant: Chemical Handling Training Session**

The Katsuragi Plant (Katsuragi City, Nara Prefecture) holds training sessions twice annually taught by outside specialists. These sessions help employees reaffirm their basic knowledge regarding the handling of chemicals. Employees learn about the behavior, risk, and handling of various chemicals; leak and fire prevention; fire emergency response; accident case studies; and other areas.

### Risk Communication and Information Disclosure

On the environmental and social activities section of the Sharp website and in site reports published by the plants, Sharp regularly discloses information on the environmental risk associated with business activities. Sharp also promotes communication between the company, its neighboring residents, and the local government through regular environmental festivals and meetings.



**Mie Plant: Public Meeting**

The Mie Plant (Taki Town, Mie Prefecture) holds public meetings regarding environmental efforts with employees from the Taki Town Office and the heads of each region within Taki Town.



**Fukuyama Plant: Three-Party Wastewater Sampling and Analysis**

At the Fukuyama Plant (Fukuyama City, Hiroshima Prefecture), Sharp, local residents, and the local municipal government each collect and analyze wastewater samples two times a year. The results are checked and compiled and this event is used as an opportunity to enhance communication among all concerned parties.

# Reducing Environmental Impacts in Distribution and Packaging

In cooperation with shipping contractors, Sharp is working to reduce environmental impacts in distribution; for example, by improving transport methods, transport routes, and load efficiency.

In packaging, Sharp is also working to further reduce environmental impacts by reducing the use of packaging materials.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011	Objectives for Every Fiscal Year
<ul style="list-style-type: none"> <li>CO<sub>2</sub> emissions per shipping volume*<sup>1</sup> by Sharp Group in Japan</li> <li>Between fiscal 2007 and fiscal 2010, reduce by average 1% each year against fiscal 2006</li> </ul>	<ul style="list-style-type: none"> <li>Reduced by 4% from previous fiscal year</li> </ul>	<ul style="list-style-type: none"> <li>Reduce by 1% from previous fiscal year</li> </ul>	<ul style="list-style-type: none"> <li>Every fiscal year: Reduce by 1% from previous fiscal year</li> </ul>

\*1 CO<sub>2</sub> emissions per shipping volume (t-CO<sub>2</sub>/thousand ton-km) = CO<sub>2</sub> emissions (t-CO<sub>2</sub>) ÷ shipping volume (thousand ton-km)

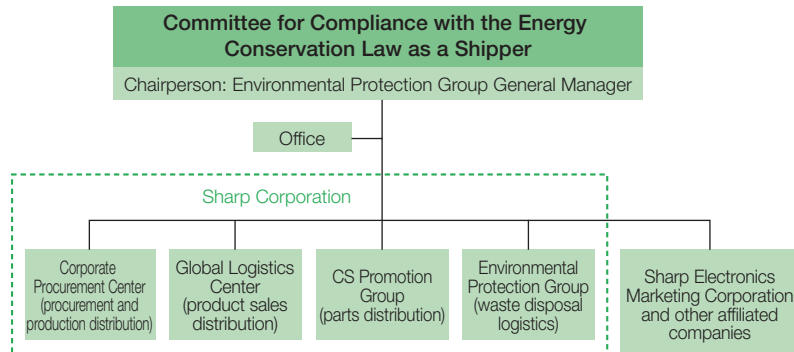
## Promoting Measures to Reduce Environmental Impacts in Each Area of Distribution

Sharp established the Committee for Compliance with the Energy Conservation Law as a Shipper in fiscal 2006. This committee assesses the environmental impacts of logistics in the areas of product sales, procurement and production, waste disposal, and parts\*<sup>2</sup>, and works to strengthen energy-saving measures in distribution across the Sharp Group. Sharp has declared an objective of achieving an average annual reduction in CO<sub>2</sub> emissions per shipping volume of 1% or greater, a legal mandate for specified shippers, for all members of the Sharp Group in Japan, and is promoting efforts to save energy, such as shifting to environmentally friendly modes of transport and improving transport and load efficiencies.

In fiscal 2010, Sharp Group CO<sub>2</sub> emissions from shipping activities in Japan were 50 thousand t-CO<sub>2</sub>. This was up 18% from the previous fiscal year but at the same level as the base year of fiscal 2006. Emissions per shipping volume were 0.21 t-CO<sub>2</sub>/thousand ton-km, down 4% from the previous fiscal year and 13% lower than in fiscal 2006.

\*2 Distribution of parts used for after-sales service, such as repair and maintenance of products.

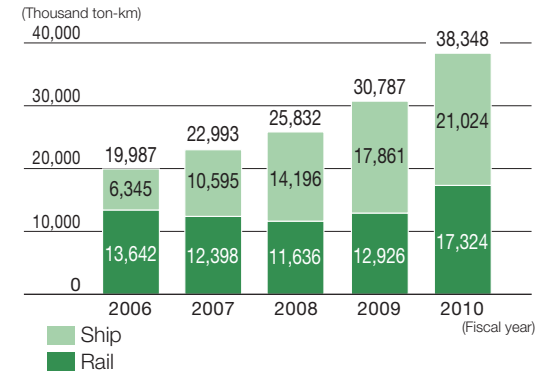
### System to Promote Energy Savings in Distribution



## Shifting to Environmentally Friendly Modes of Transport in Japan

In Japan, Sharp is shifting from conventional trucking to more environmentally friendly transportation modes, such as rail and ships. In fiscal 2010, Sharp was able to increase the use of rail and ship transport by approximately 25% over the previous fiscal year. Sharp will continue expanding the shift in transport modes.

### Transport Volume by Rail and Ship



## Case Study: Environmentally Friendly Modes of Transport

### Sharp Certified as Eco Rail Mark Authorized Company

In fiscal 2008, Sharp mobile phones acquired the Eco Rail Mark enacted by the Ministry of Land, Infrastructure, Transport and Tourism and the Railway Freight Association. In fiscal 2009, Sharp was recognized as an authorized Eco Rail Mark\*<sup>3</sup> company after expanding its mobile phone shipments to 17,000 tons of railway freight in Japan. Further, domestic railway shipments of mobile phones reached 21,000 tons in fiscal 2010, and Sharp again acquired company certification.

\*3 Companies must meet one of the following criteria for transporting freight overland via rail for distances greater than 500 km: the volume or the volume multiplied by the distance transported is over 15%, the volume transported per annum is over 15,000 tons, or the volume multiplied by the distance is over 15 million ton-kilometers.



Eco Rail Mark authorized company certificate

### Green Logistics Wins METI Minister Award (Hiroshima Plant, Japan)

Sharp received the Ministry of Economy, Trade and Industry (METI) Minister Award, the top award, in the 2010 Excellent Green Logistics Commendation Program\*1 for efforts related to transportation logistics involving the shipment of mobile phones and related products from the Hiroshima Plant (Higashi-Hiroshima City, Hiroshima Prefecture) to telecom service providers. This award was jointly presented to Sharp and Tonami Transportation Co., Ltd., Sharp's distribution partner, for the distinguished achievement of Sharp's transportation logistics efforts in counteracting global warming.

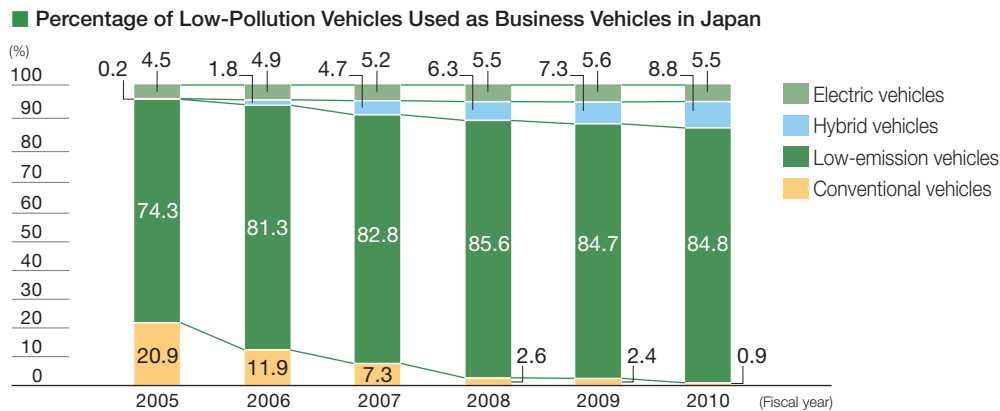
They received recognition for reducing CO<sub>2</sub> emissions through the introduction of a double-rack system that improved load efficiency and the switch from truck transport to rail transport for approximately 80% of all deliveries from the Hiroshima Plant to various telecom service providers (with delivery distances greater than 500 km).

\*1 Awarded by METI; the Ministry of Land, Infrastructure, Transport and Tourism (MLIT); and freight and logistics organizations.



### Introducing Low-Pollution Vehicles

Sharp is switching to the use of low-pollution vehicles for the cars used by sales people and for the forklifts used in logistics activities. More and more low-emission, hybrid, and electric vehicles are being used as business vehicles and all forklifts used are electric. 99% of Sharp's business vehicles are now low-pollution models.



### Case Study: Low-Pollution Vehicles

#### Introducing Hybrid Forklifts (West Japan Logistics Center, Hiroshima, Japan)

The West Japan Logistics Center in Hiroshima, which mainly handles the transportation logistics of mobile phones, introduced hybrid forklifts for use at the logistics center with the cooperation of Tonami Transportation Co., Ltd.

The hybrid forklift is fitted with a capacitor, as well as a conventional battery, so the amount of energy used decreases approximately 20%, because it can efficiently store regenerative energy created when the forklift starts moving or stops.



A hybrid forklift used at the logistics center

#### Reducing the Environmental Burden of International Distribution

Sharp is also making efforts overseas to cut CO<sub>2</sub> emissions from international and intraregional transportation. In fiscal 2010, the CO<sub>2</sub> emissions from internationally transporting products and devices that were produced by domestic and overseas Sharp Group production companies and sold to Sharp Group companies overseas came to approximately 310,000 t-CO<sub>2</sub>. Sharp is working to reduce the environmental burden of distribution through reducing air transportation, improving load efficiency, and preferring to use shipping companies that are actively reducing CO<sub>2</sub> emissions.

In China, Sharp decreased its annual CO<sub>2</sub> emissions by 193 tons. This was achieved by switching from trucks to rail for the transport of LCD TVs from Nanjing—where they are produced by Sharp's manufacturing subsidiary, NSEC—to Chengdu. The new transportation method was initiated in January 2010.

Moreover, sales subsidiary SEC participates in the SmartWay Transport Program\*2 in the United States, takes the initiative to spread the program, and promotes awareness through stop-idling activities and other activities. The total weight of freight volume of products distributed by SEC that complies with the program has reached over 99%.



Loading a rail container with LCD TVs bound for Chengdu

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

Case Study 1 Reducing the Environmental Burden of Packaging

Making AQUOS LCD TV Packages Thinner

Sharp is moving to make the AQUOS LCD TV package thinner as the TV itself becomes thinner. Sharp made the enclosed stand mounting fixture more compact and adopted a package design that prevents the package from tipping over due to it being thinner. These measures reduced the cubic volume of the package for the new 2011 domestic models by 36%, and the depth by 34%, when compared to the 2010 model package. As a result, the volume of packaging used was reduced by 20% and the volume that can be loaded on a 10-ton truck increased 66%.

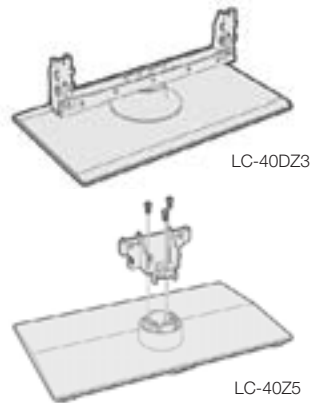
Package Comparison



LC-40DZ3  
(2010 model)

LC-40Z5  
(2011 model)

Downsizing the Stand Mounting Fixture



LC-40DZ3

LC-40Z5

Anti Tip-Over Design



LC-40Z5

Case Study 2 Reducing the Environmental Burden of Packaging

Introducing Biodegradable Packaging (SEC, US)

SEC, Sharp's sales subsidiary in New Jersey introduced biodegradable package cushioning and stretch film\*. Microorganisms work to break these materials down into water and carbon dioxide and return them to the soil, thereby reducing the environmental burden when compared to the disposal of conventional plastic and paper packaging waste.

\* Packaging material used to prevent the load collapsing and soiling when transporting by pallet.



Biodegradable package cushioning



Biodegradable stretch film

# Promoting Environmental Communication

To provide environmental communication for its wide range of stakeholders, Sharp discloses environmental information through exhibitions and forums, as well as Environmental and Social Reports, websites, and site reports.

## Environmental and Social Report, Website, and Site Reports

Every year, Sharp issues a report on its environmental and social activities, and discloses in plain language its policies, objectives, achievements, challenges, and future plans related to the environment and CSR. Sharp's website uses articles from the Environmental and Social Report, and also presents examples of community-based social action programs. The 2010 edition of the Environmental and Social Report was produced in two forms—a detailed version for professionals and specialists (PDF), and a simplified version for the general public (printed hardcopy and PDF)—with the aim of meeting the widely varying needs of various stakeholders. In addition, the Sharp website has been redesigned to make browsing smoother.

In addition, a site report has been issued for each factory in Japan and overseas. Copies of these reports are distributed to residents in the vicinity as well as to visitors to the facilities. The Mie Plant site report won the Encouragement Prize in the 14th Environmental Communication Award jointly sponsored by the Global Environmental Forum and Ministry of the Environment for the second consecutive year.



Sharp Environmental and Social Report 2010 (Japanese, English, and Chinese editions)



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



Mie Plant Site Report

## Exhibitions

Sharp introduces its environmental activities to the public by taking part in trade fairs and exhibitions. At Eco-Products 2010, one of Japan's largest environmental fairs, Sharp used the slogan "Sharp eco efforts will change the world. Sharp—an eco-positive company" to show how it is contributing to a green society. On display were examples of Sharp's efforts in solar power—symbolizing Sharp's goal of becoming a total solar power solutions company—and energy-efficient products such as the AQUOS Quattron LCD TV and LED lighting.



Eco-Products 2010

## Environmental Forums

To more widely disseminate information on its initiatives on behalf of the environment, Sharp has been holding environmental forums for government officials, journalists, and the general public. In fiscal 2010, Sharp held such forums in Japan and China.

Sharp has held a total of 10 environmental forums in China since fiscal 2007, including one in fiscal 2010 in Kunming. At the Kunming forum, a total of 24 government officials and journalists gathered to hear Sharp presentations on the targets and actions that make up its Eco-Positive Company corporate vision and Eco-Positive Strategy. Kunming Deputy Mayor Wang Daoxing introduced his city's environmental policies and offered Sharp some advice. The forum was a valuable opportunity to strengthen ties with government officials and the media.



A scene from the 10th Environmental Forum in Kunming, China

## Factory Tours and Community Exchanges

To enhance communication with its wide range of stakeholders, Sharp holds factory tours, exchange conferences, and other events. Sharp Corporation holds public festivals at its factories, where employees host their families and local residents to help them learn about Sharp's environmental activities, interact with and know the environment better, and enjoy eco-related games and events. Participants have praised Sharp for such efforts to contribute to the community and get to know residents in a lively, amicable atmosphere.

As part of environmental studies held by "COP10 in Mie"—a partnership program in support of the 10th meeting of the Conference of the Parties to the Convention on Biological Diversity (COP10)—the Kameyama Plant (Kameyama City, Mie Prefecture) held tours for 157 participants from seven countries attending that program.

And at the Mie Plant (Taki District, Mie Prefecture), fruitful ideas were exchanged at a meeting between Sharp and Mie University in an effort to improve environmental reporting and the Mie Plant site report.



An environmental lesson by COP10 in Mie

# Protecting Biodiversity

Under the Sharp Group Policy on the Sustainable Support of Biodiversity, the Sharp Group carries out a multifaceted approach in which it protects biodiversity through business activities and social action programs at all worldwide bases.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011	Objectives for Every Fiscal Year
<ul style="list-style-type: none"> <li>Develop Sharp Biodiversity Initiative</li> <li>Introduce Sharp Biodiversity Initiative at Sharp Group bases in Japan and overseas</li> </ul>	<ul style="list-style-type: none"> <li>Introduced Sharp Biodiversity Initiative at all Sharp Group bases in Japan and overseas and assessed progress in efforts to protect biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>Increase rate of progress set out in Sharp Biodiversity Initiative by three points from previous fiscal year</li> </ul>	<ul style="list-style-type: none"> <li>Every fiscal year, increase rate of progress set out in Sharp Biodiversity Initiative by three points from previous fiscal year</li> </ul>

## Contribute to Biodiversity Protection Through Business and Social Action Programs

Biodiversity refers to the existence of a variety of ecosystems, species, and genes. With the modern world's environmental pollution, more and more species are becoming extinct and ecosystems are in danger. Since Sharp both affects and benefits from biodiversity, it is crucial that it protects and makes sustainable use of it in all of its business activities.

Based on the Sharp Group Policy on the Sustainable Support of Biodiversity, Sharp formulated detailed measures, the Sharp Biodiversity Initiative, in November 2009. The initiative's aim is to ensure the protection and sustainable use of the world's biodiversity through business activities and social action programs.

In addition, the Sharp Biodiversity Initiative explains the link between environmental measures and biodiversity. It is also used to monitor the progress of environmental activities. Sharp has detailed measures in each step of the value chain for ensuring that business activities exert minimal impact on biodiversity. And in social action programs, Sharp strives to continue carrying out activities that match the lifestyles and environment of each community and region.

Sharp will keep tabs on the progress made at each base and will share information across bases so that the entire Sharp Group can better protect biodiversity.

### ■ Sharp Group Policy on the Sustainable Support of Biodiversity

#### 1. Basic Concept

Aim to be a more "Eco-Positive Company" by promoting Sharp's Eco-Positive Strategy and social action programs with an eye to conservation and the sustainable support of biodiversity.

#### 2. Objective: Understand the Link with Biodiversity

Understand the link between every stage of the value chain and biodiversity (how Sharp business activities benefit from biodiversity and how they affect biodiversity).

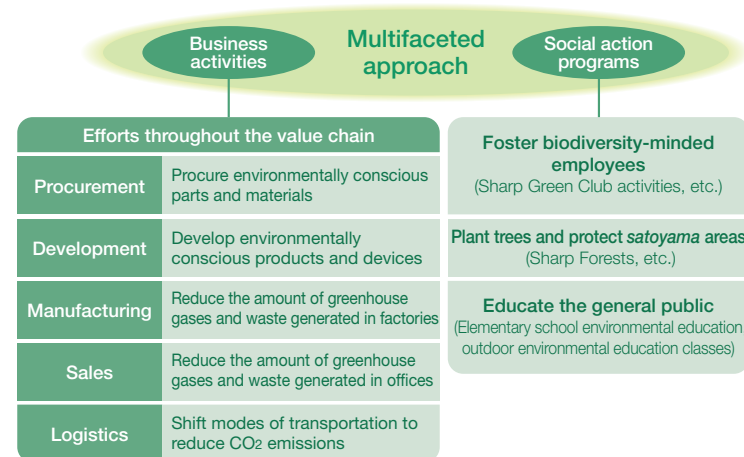
#### 3. Objective: Reduce Impact on Biodiversity

Try to reduce the negative impact of business activities on biodiversity with an eye to conservation and sustainable support.

#### 4. Promotion Structure

Sharp's Environmental Protection Group and CSR Promotion Group are in charge of promoting company-wide activities pertaining to biodiversity.

### ■ Sharp's Efforts for Protecting Biodiversity





### Global Activities Based on the Sharp Biodiversity Initiative

To increase the effectiveness of the Sharp Biodiversity Initiative, which has been introduced at all Sharp Group bases around the world, Sharp has created a tool for monitoring progress in its efforts to protect biodiversity. Using a 26-item checklist, this tool monitors the progress being made at each step of the value chain: procurement, development, manufacture, sales, and logistics—the fundamentals of Sharp’s business activities—as well as in social action programs.

In the area of procurement, for example, Sharp monitors the level of environmental protection and biodiversity-conscious business activities by suppliers, based on its Green Procurement Guidelines for environmentally conscious procurement.

In the area of social action programs, Sharp monitors its efforts to protect biodiversity, in order to help build a society where nature and people can coexist harmoniously, as well as to raise the awareness of employees in this regard.

By itemizing in this management tool the efforts that should be made across all areas of Sharp’s business activities, Sharp is helping every employee conduct business in a way that is mindful of the need to protect biodiversity.

The global implementation of this management tool has enabled Sharp to centrally monitor the progress of efforts made at all its bases and to rank those efforts into three levels. In fiscal 2010, Sharp issued the “Good Examples towards Biodiversity Conservation and Sustainable Use,” which introduces examples of excellent efforts from various bases, aiming to improve the level of efforts by the Sharp Group as a whole. Sharp will continue to make such efforts, integrating them into its business activities at a deeper level, and will work hard to protect biodiversity around the world.



Good Examples towards Biodiversity Conservation and Sustainable Use

### Social Action Programs Leading Toward Protection of Biodiversity (SUKM, UK)

SUKM, the Wrexham, Wales-based manufacturing division of sales subsidiary SUK, has been utilizing part of the factory’s profit from sales of valuable materials for activities to protect biodiversity.

Since fiscal 2006, SUKM has been participating in various programs, including the Dormouse Project run by the North Wales Wildlife Trust, which is showing good improvements in the numbers of these rare hibernating mammals. In May 2010, in support of the United Nations International Day for Biological Diversity, SUKM planted 12 apple trees to start an orchard on the factory campus. North Wales used to have many farms and orchards, but 95% of those orchards have been lost over the past 60 years, and wildlife lost habitat as a result. In order to protect as much wildlife as possible, SUKM plans to continue its tree-planting program. SUKM has also been growing rare plants, such as red cowslip, contributing to the increase of insects such as bees and butterflies.

SUKM has also been engaging in activities such as repainting benches and planting flowers in the yards of local elementary schools so that students can learn about biodiversity by experiencing nature directly.



Dormice



Planting apple trees on factory grounds

### Protecting Local Habitats and Wildlife

The United Nations has designated the next 10 years (2011–2020) as the ‘United Nations Decade on Biodiversity.’

For a number of years, SUKM has been helping local community projects in North Wales that aim to support biodiversity. All of our efforts are showing real benefits, creating new habitats, and conserving existing ones.

At SUKM, we are proud of the involvement we have had over the last several years, and we will continue to play our part in the restoration and conservation of our local habitats and wildlife.



**Bill Thomas**  
General Manager  
Quality Control Centre  
SUKM

## ■ Boundary of Environmental Performance Data

Sharp Corporation and consolidated subsidiaries. Note that the category "plants" includes non-consolidated subsidiaries and affiliated companies.

Plants: 41 plants/30 companies (19 plants/9 companies in Japan, 22 plants/21 companies overseas)

Offices: 78 offices/31 companies (54 offices/8 companies in Japan, 24 offices/23 companies overseas)

As of March 31, 2011

### Japan

Plants	Sharp Corporation		Tochigi Plant		
			Yao Plant		
			Hiroshima Plant		
			Nara Plant		
			Katsuragi Plant (including Toyama Plant performance)		
			Fukuyama Plant		
			Mie Plant		
			Tenri Plant (including Advanced Materials & Energy Engineering Laboratories performance)		
			Mihara Plant		
			Kameyama Plant		
			GREEN FRONT SAKAI solar cell plant		
			Consolidated subsidiaries	Sharp Manufacturing Systems Corporation	
				Sharp Niigata Electronics Corporation	
Sharp Mie Corporation					
Sharp Yonago Corporation					
Sharp Display Products Corporation					
Non-consolidated subsidiary	Sharp Tokusen Industry Co.				
Affiliated companies	Kantatsu Co., Ltd.				
	Sharp Takaya Electronic Industry Co., Ltd.				
Offices	Sharp Corporation		Head Office/Tanabe Building		
			Makuhari Building (Tokyo Branch)		
			Tokyo Ichigaya Building		
	Consolidated subsidiaries	Sharp Electronics Marketing Corporation			
		Sharp System Products Co., Ltd.			
		Sharp-Engineering Corporation			
		Sharp Document Systems Corporation			
		Sharp Amenity Systems Corporation			
		Sharp Trading Corporation			
	Sharp Business Computer Software Inc.				

### North America

Plants	Consolidated subsidiaries	Sharp Manufacturing Company of America (SMCA)*1	US	Tennessee
		Sharp Electrónica Mexico S.A. de C.V. (SEMEX)	Mexico	Baja California
Offices	Consolidated subsidiaries	Sharp Electronics Corporation (SEC)	US	New Jersey
		Sharp Laboratories of America, Inc. (SLA)		Washington
		Sharp Electronics of Canada Ltd. (SECL)	Canada	Ontario
		Sharp Corporation Mexico S.A. de C.V. (SCMEX)	Mexico	Mexico City

\*1 Manufacturing division of SEC

### Europe

Plants	Consolidated subsidiaries	Sharp Manufacturing Company of U.K. (SUKM)*2	UK	Wrexham, North Wales
		Sharp Electrónica España S.A. (SEES)	Spain	Barcelona
		Sharp Manufacturing France S.A. (SMF)	France	Soultz
		Sharp Manufacturing Poland sp. z o.o. (SMPL)	Poland	Torun
Offices	Consolidated subsidiaries	Sharp Electronics (Europe) GmbH (SEEG)	Germany	Hamburg
		Sharp Electronics (U.K.) Ltd. (SUK)	UK	Middlesex
		Sharp Laboratories of Europe, Ltd. (SLE)		Oxford
		Sharp Electronics France S.A. (SEF)	France	Paris
		Sharp Electronics (Italia) S.p.A. (SEIS)	Italy	Milan
		Sharp Electronics (Schweiz) AG (SEZ)	Switzerland	Rüschlikon
		Sharp Electronics (Nordic) AB (SEN)	Sweden	Bromma
		Sharp Electronics Benelux B.V. (SEB)	Netherlands	Houten
		Sharp Electronics Russia LLC (SER)	Russia	Moscow

\*2 Manufacturing division of SUK

### Asia, Middle East, Oceania

Plants	Consolidated subsidiaries	Shanghai Sharp Electronics Co., Ltd. (SSEC)	China	Shanghai
		Sharp Office Equipments (Changshu) Co., Ltd. (SOCC)		Changshu
		Wuxi Sharp Electronic Components Co., Ltd. (WSEC)		Wuxi
		Nanjing Sharp Electronics Co., Ltd. (NSEC)		Nanjing
		Sharp Technical Components (Wuxi) Co., Ltd. (STW)		Wuxi
		Sharp Appliances (Thailand) Ltd. (SATL)	Thailand	Chachoengsao
		Sharp Manufacturing (Thailand) Co., Ltd. (SMTL)		Nakornpathom
		Sharp Manufacturing Corporation (M) Sdn. Bhd. (SMM)		Johor
		Sharp (Philis.) Corporation (SPC)	Philippines	Manila
		PT. Sharp Semiconductor Indonesia (SSI)	Indonesia	Karawang
	PT. Sharp Electronics Indonesia (SEID)	Jakarta		
	Non-consolidated subsidiaries	Shanghai Sharp Mold and Manufacturing Systems Co., Ltd. (SSMC)	China	Shanghai
		Sharp India Limited (SIL)	India	Pune
	Affiliated companies	Sharp Korea Corporation (SKC)	Korea	Incheon
S&O Electronics (Malaysia) Sdn. Bhd. (SOEM)		Malaysia	Kedah	
Offices	Consolidated subsidiaries	Sharp Electronics (Shanghai) Co., Ltd. (SES)	China	Shanghai
		Sharp Electronics Sales (China) Co., Ltd. (SESC)		
		Sharp Electronic Components (Taiwan) Corporation (SECT)	Taiwan	Taipei
		Sharp Electronics (Malaysia) Sdn. Bhd. (SEM)	Malaysia	Selangor
		Sharp-Roxy Sales (Singapore) Pte., Ltd. (SRS)	Singapore	
		Sharp Electronics (Singapore) Pte., Ltd. (SESL)		
		Sharp Software Development India Pvt. Ltd. (SSDI)		India
		Sharp Middle East Free Zone Establishment (SMEF)	UAE	Dubai
		Sharp Corporation of Australia Pty. Ltd. (SCA)	Australia	New South Wales
		Sharp Corporation of New Zealand Ltd. (SCNZ)	New Zealand	Auckland

## ■ Calculation Standards for Environmental Performance Indices

[1] Period covered April 1, 2010 to March 31, 2011

[2] Organizations covered

Sharp Corporation and consolidated subsidiaries. Note that the category “plants” includes non-consolidated subsidiaries and affiliated companies.

Plants: 41 plants/30 companies (19 plants/9 companies in Japan, 22 plants/21 companies overseas)

Offices: 78 offices/31 companies (54 offices/8 companies in Japan, 24 offices/23 companies overseas)

[3] Calculation method for environmental performance indices Environmental Reporting Guidelines (2007 Version) published by the Japanese Ministry of the Environment were used as reference.

Environmental performance indices		Unit	Calculation method				
I N P U T  M a n u f a c t u r e	Energy consumption	TJ	<p>Electricity purchased annually (kWh) x units of heat used*1 + <math>\Sigma</math> [ Annual consumption of each fuel x heat value per unit *2 ]</p> <p>*1 Based on regulations of the Law Concerning the Rational Use of Energy (enforced April 1, 2006):  <ul style="list-style-type: none"> <li>Daytime electricity 9.97 MJ/kWh</li> <li>Nighttime electricity 9.28 MJ/kWh</li> </ul> </p> <p>*2 Based on the heat value per unit per energy source used by the Agency for Natural Resources and Energy (February 2002):  <ul style="list-style-type: none"> <li>City gas</li> </ul> <table border="1"> <tr> <td>Japan</td> <td>Figure individually confirmed for each gas provider:  <ul style="list-style-type: none"> <li>Tokyo Gas/Osaka Gas: 45.0 GJ/km<sup>3</sup></li> <li>Fukuyama Gas: 46.0 GJ/km<sup>3</sup></li> <li>Toho Gas/Hiroshima Gas: 46.04655 GJ/km<sup>3</sup></li> <li>Hokkaido Gas: 46.05 GJ/km<sup>3</sup></li> </ul> </td> </tr> <tr> <td>Overseas</td> <td>Highest figure from among those known in Japan:  <ul style="list-style-type: none"> <li>46.05 GJ/km<sup>3</sup></li> </ul> </td> </tr> </table> <ul style="list-style-type: none"> <li>LPG: 50.8 GJ/t</li> <li>Heavy oil: 39.1 GJ/kl</li> <li>Kerosene: 36.7 GJ/kl</li> <li>Gas oil: 37.7 GJ/kl</li> <li>Gasoline: 34.6 GJ/kl</li> <li>Steam: (SSEC) 2.817 GJ/t, (WSEC) 3.771 GJ/t, (NSEC) 3.782 GJ/t</li> <li>Heating/cooling: Figure individually confirmed for each gas provider (currently, only the 0.802 GJ/GJ value for Makuhari is available)</li> </ul> </p>	Japan	Figure individually confirmed for each gas provider: <ul style="list-style-type: none"> <li>Tokyo Gas/Osaka Gas: 45.0 GJ/km<sup>3</sup></li> <li>Fukuyama Gas: 46.0 GJ/km<sup>3</sup></li> <li>Toho Gas/Hiroshima Gas: 46.04655 GJ/km<sup>3</sup></li> <li>Hokkaido Gas: 46.05 GJ/km<sup>3</sup></li> </ul>	Overseas	Highest figure from among those known in Japan: <ul style="list-style-type: none"> <li>46.05 GJ/km<sup>3</sup></li> </ul>
	Japan	Figure individually confirmed for each gas provider: <ul style="list-style-type: none"> <li>Tokyo Gas/Osaka Gas: 45.0 GJ/km<sup>3</sup></li> <li>Fukuyama Gas: 46.0 GJ/km<sup>3</sup></li> <li>Toho Gas/Hiroshima Gas: 46.04655 GJ/km<sup>3</sup></li> <li>Hokkaido Gas: 46.05 GJ/km<sup>3</sup></li> </ul>					
	Overseas	Highest figure from among those known in Japan: <ul style="list-style-type: none"> <li>46.05 GJ/km<sup>3</sup></li> </ul>					
	Electricity	Million kWh	Electricity purchased annually				
	City gas	Million m <sup>3</sup>	City gas purchased annually				
	LPG	Tons	LPG purchased annually				
	Heavy oil, kerosene, gas oil, gasoline	kl	Fuel oil purchased annually				
	PFCs purchased	Thousand GWP t-CO <sub>2</sub>	PFCs purchased annually				
	Chemical substances (PRTR) handled	Tons	Among the substances covered under the PRTR Law*3, the total amount of substances handled in quantities 500 kg or more annually at each plant				
Water consumed	Million m <sup>3</sup>	Annual consumption of water supply, well water, and water for industrial use					
Packaging materials used	Thousand tons	Packaging materials consumed annually					
Resources consumed	Million tons	Total weight of products in the 15 major categories sold in fiscal 2010 (estimate), plus waste, etc. generated					
Logistics	Energy consumption	TJ	Revised ton-km system				
Product use	Energy consumption	TJ (million kWh)	Estimate of annual energy used by products in the 13 major categories sold in fiscal 2010. Calculation based on each product's annual energy consumption rate (using a heat value per unit of 9.97 MJ/kWh).				
R e c y c l i n g	Home appliances (four kinds)	Tons	Amount of used home appliances (four kinds) recycled into new home appliances				
	Copiers		Amount of recycled copiers				
	PCs		Amount of recycled PCs				
	Amount of closed-loop material recycling of plastics		Amount of closed-loop material recycling of plastics				

\*3 Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management

Environmental performance indices		Unit	Calculation method																															
O U T P U T	Manufacture	CO <sub>2</sub> emissions	<p>Million t-CO<sub>2</sub></p> <p>Σ [ Electricity purchased annually x CO<sub>2</sub> emission coefficient + annual consumption of each fuel x CO<sub>2</sub> emission coefficient for each ]</p> <p>CO<sub>2</sub> emission coefficient</p> <ul style="list-style-type: none"> <li>Electricity</li> </ul> <table border="1"> <thead> <tr> <th colspan="2">Fiscal year</th> <th>2007</th> <th>2008</th> <th>2009</th> <th>2010</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Overseas</td> <td>Japan</td> <td>0.453</td> <td>0.373<sup>*1</sup></td> <td>0.351<sup>*1</sup></td> <td>0.351<sup>*1</sup></td> </tr> <tr> <td>Other</td> <td colspan="4">Using the fiscal 2003 coefficient of each country from the Report on the CO<sub>2</sub> Emissions Intensity of the Power Sector of Various Countries that was compiled by the Japan Electrical Manufacturers' Association (June 2006)</td> </tr> </tbody> </table> <p><sup>*1</sup> Based on the values officially announced by the Federation of Electric Power Companies of Japan (after reflecting the Kyoto Mechanism credit). Figure for fiscal 2009 updated from that announced last year (0.373).</p> <ul style="list-style-type: none"> <li>City gas</li> </ul> <table border="1"> <thead> <tr> <td rowspan="2">Overseas</td> <td>Japan</td> <td colspan="3">Calculated by multiplying the standard calorific value (GJ/km<sup>3</sup>) individually confirmed for each gas provider x carbon conversion factor (0.0136 t-C) x 44/12(t-CO<sub>2</sub>/t-C)</td> </tr> <tr> <td>Other</td> <td colspan="3">Highest figure from among those known in Japan:</td> </tr> </thead> <tbody> <tr> <td colspan="2"></td> <td colspan="3"> <ul style="list-style-type: none"> <li>• Tokyo Gas/Osaka Gas: 2.244 t-CO<sub>2</sub>/km<sup>3</sup></li> <li>• Fukuyama Gas: 2.294 t-CO<sub>2</sub>/km<sup>3</sup></li> <li>• Toho Gas/Hiroshima Gas/Hokkaido Gas: 2.296 t-CO<sub>2</sub>/km<sup>3</sup></li> <li>• 2.296 t-CO<sub>2</sub>/km<sup>3</sup></li> </ul> </td> </tr> </tbody> </table> <p>Values taken from the guidelines for calculating, reporting, and announcing greenhouse gas emissions, Article 3 of the Act on Promotion of Global Warming Countermeasures published by the Ministry of the Environment, Japan:</p> <ul style="list-style-type: none"> <li>• LPG: 2.999 t-CO<sub>2</sub>/t</li> <li>• Heavy oil: 2.710 t-CO<sub>2</sub>/kl</li> <li>• Kerosene: 2.489 t-CO<sub>2</sub>/kl</li> <li>• Gasoline: 2.322 t-CO<sub>2</sub>/kl</li> <li>• Gas oil: 2.585 t-CO<sub>2</sub>/kl</li> <li>• Steam: (SSEC) 0.166 t-CO<sub>2</sub>/t, (WSEC) 0.158 t-CO<sub>2</sub>/t, (NSEC) 0.159 t-CO<sub>2</sub>/t</li> <li>• Heating/cooling: Figure individually confirmed for each gas provider (currently, only the 0.032 t-CO<sub>2</sub>/GJ value for Makuhari is available)</li> </ul>	Fiscal year		2007	2008	2009	2010	Overseas	Japan	0.453	0.373 <sup>*1</sup>	0.351 <sup>*1</sup>	0.351 <sup>*1</sup>	Other	Using the fiscal 2003 coefficient of each country from the Report on the CO <sub>2</sub> Emissions Intensity of the Power Sector of Various Countries that was compiled by the Japan Electrical Manufacturers' Association (June 2006)				Overseas	Japan	Calculated by multiplying the standard calorific value (GJ/km <sup>3</sup> ) individually confirmed for each gas provider x carbon conversion factor (0.0136 t-C) x 44/12(t-CO <sub>2</sub> /t-C)			Other	Highest figure from among those known in Japan:					<ul style="list-style-type: none"> <li>• Tokyo Gas/Osaka Gas: 2.244 t-CO<sub>2</sub>/km<sup>3</sup></li> <li>• Fukuyama Gas: 2.294 t-CO<sub>2</sub>/km<sup>3</sup></li> <li>• Toho Gas/Hiroshima Gas/Hokkaido Gas: 2.296 t-CO<sub>2</sub>/km<sup>3</sup></li> <li>• 2.296 t-CO<sub>2</sub>/km<sup>3</sup></li> </ul>		
		Fiscal year		2007	2008	2009	2010																											
		Overseas	Japan	0.453	0.373 <sup>*1</sup>	0.351 <sup>*1</sup>	0.351 <sup>*1</sup>																											
			Other	Using the fiscal 2003 coefficient of each country from the Report on the CO <sub>2</sub> Emissions Intensity of the Power Sector of Various Countries that was compiled by the Japan Electrical Manufacturers' Association (June 2006)																														
		Overseas	Japan	Calculated by multiplying the standard calorific value (GJ/km <sup>3</sup> ) individually confirmed for each gas provider x carbon conversion factor (0.0136 t-C) x 44/12(t-CO <sub>2</sub> /t-C)																														
			Other	Highest figure from among those known in Japan:																														
				<ul style="list-style-type: none"> <li>• Tokyo Gas/Osaka Gas: 2.244 t-CO<sub>2</sub>/km<sup>3</sup></li> <li>• Fukuyama Gas: 2.294 t-CO<sub>2</sub>/km<sup>3</sup></li> <li>• Toho Gas/Hiroshima Gas/Hokkaido Gas: 2.296 t-CO<sub>2</sub>/km<sup>3</sup></li> <li>• 2.296 t-CO<sub>2</sub>/km<sup>3</sup></li> </ul>																														
		PFC emissions	Thousand GWP t-CO <sub>2</sub>	<p>Σ [ Annual emissions of each PFC gas<sup>*2</sup> (t) x global warming potential of each PFC gas<sup>*3</sup> ]</p> <p><sup>*2</sup> CF<sub>4</sub>, C<sub>2</sub>F<sub>6</sub>, c-C<sub>4</sub>F<sub>8</sub>, CHF<sub>3</sub>, SF<sub>6</sub>, NF<sub>3</sub></p> <p><sup>*3</sup> Based on the IPCC's Third Assessment Report:</p> <ul style="list-style-type: none"> <li>• Sulfur hexafluoride: 22,200</li> <li>• The coefficient corresponding to segmentalized gas is used for HFC and PFC</li> </ul>																														
		SO <sub>x</sub> emissions	Tons	<p>(1) When a gaseous fuel is burnt: Handled as if there are no emissions because it is assumed that the fuel contains no sulfur.</p> <p>(2) When a liquid fuel is burnt: Amount of sulfur contained in fuel (kg/year)/32(kg-S) x (32+16x2) (kg-SO<sub>2</sub>)/1,000</p>																														
NO <sub>x</sub> emissions	Tons	<p>(1) When a gaseous fuel is burnt: Fuel consumption per year (Nm<sup>3</sup>/year) x dry base combustion gas (Nm<sup>3</sup>/Nm<sup>3</sup>) x concentration of released NO<sub>x</sub> (ppm) x 10<sup>-6</sup> x (14+16x2) (kg-NO<sub>2</sub>) / 22.4 (Nm<sup>3</sup>)/1,000</p> <p>(2) When a liquid fuel is burnt: Fuel consumption per year (liters/year) x fuel specific gravity (kg/liter) x dry base combustion gas (Nm<sup>3</sup>/kg) x concentration of released NO<sub>x</sub> (ppm) x 10<sup>-6</sup> x (14+16x2) (kg-NO<sub>2</sub>) / 22.4 (Nm<sup>3</sup>)/1,000</p>																																
Drainage	Million m <sup>3</sup>	Annual drainage into public body of water and sewer system																																
COD (chemical oxygen demand)	Tons	COD concentration (mg/l) x drainage into public body of water (m <sup>3</sup> ) x 10 <sup>-6</sup>																																
Nitrogen pollutant load	Tons	Nitrogen concentration (mg/l) x drainage into public body of water (m <sup>3</sup> ) x 10 <sup>-6</sup>																																
Phosphorus pollutant load	Tons	Phosphorus concentration (mg/l) x drainage into public body of water (m <sup>3</sup> ) x 10 <sup>-6</sup>																																
Final landfill disposal	Tons	Final landfill disposal of industrial waste + final landfill disposal of general waste discharged from business activities																																
Chemical substances (PRTR) released and transferred	Tons	Among the substances covered under the PRTR Law, the amount of substances, which are handled in quantities 500 kg or more annually at each plant, released and transferred																																
Logistics	CO <sub>2</sub> emissions	Thousand t-CO <sub>2</sub>	Revised ton-km system																															
	Transport volume	Million ton-km	Revised ton-km system																															
Product use	Product shipments	Million tons	Total weight of products in the 13 major categories sold in fiscal 2010 (estimate)																															
	CO <sub>2</sub> emissions	Million t-CO <sub>2</sub>	Estimate of annual energy used and amount of CO <sub>2</sub> emitted by products in the 13 major categories sold in fiscal 2010. Calculation based on each product's annual energy consumption rate.																															
	CO <sub>2</sub> reductions	Million t-CO <sub>2</sub>	Amount of electricity generated annually by Sharp solar cells shipped in fiscal 2010, plus CO <sub>2</sub> emissions reduction																															
Recycling	Weight of that which was not recycled into new products or materials, or reused	Tons	Weight of four kinds of home appliances, PCs, and copiers collected – Weight recycled into new products or materials, or reused																															

# Objectives and Achievements in the Social Dimension of CSR

On the basis of its business philosophy, its business creed of "Sincerity and Creativity," the Sharp Group Charter of Corporate Behavior, and the Sharp Code of Conduct, Sharp sets major social themes and targets for each type of stakeholder within the framework of CSR and promotes activities following those themes, to continue to be a company that has the trust of people and society.

## Promoting CSR Efforts in the Social Dimension

To promote CSR efforts in the social dimension, Sharp develops important initiatives for its different types of stakeholders, sets fiscal-year goals, and implements a variety of measures.

The Sharp business philosophy states: "Our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders ...indeed the entire Sharp family." Therefore, Sharp makes efforts to communicate with its various types of stakeholders and promotes CSR activities accordingly.

Sharp will work proactively to incorporate these CSR objectives and measures into operational processes by regularly assessing their progress and by utilizing a management system that enables the identification of emerging problems and the implementation of further improvements.

## Overall Results of CSR Efforts in Fiscal 2010

As in the previous year, Sharp after-sales service received high ratings in fiscal 2010. Achievements in other areas include implementing CSR trial audits for suppliers, initiatives to develop global personnel with an emphasis on diversity, and conducting environmental education in special-needs schools in Japan to teach hearing-impaired children.

Sharp is also involved in a wide range of efforts in various fields, particularly responding to the recent earthquake disaster by providing assistance to the affected areas.

The results of Sharp's special efforts such as these can be seen in the Close-Up, Topics, and Case Study sections on pages categorized by type of stakeholder.



Highly rated for after-sales service (see page 83 "For Customers")



Holding environmental education classes for elementary schools worldwide (see page 103 "For Local Communities")

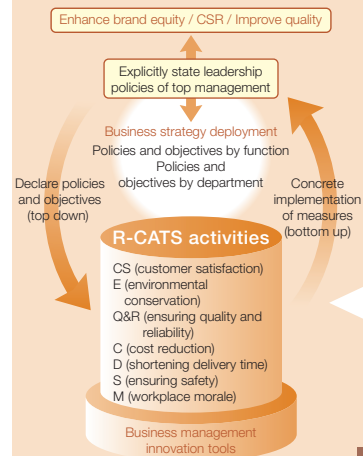
## R-CATS\* Small-Group Activities with a CSR Perspective

To offer products and services that deliver satisfaction and peace of mind to stakeholders, particularly customers, all Sharp employees in Japan and overseas belong to small groups called R-CATS. These teams engage in group activities that take the viewpoint of stakeholders in confronting the challenges of improving the quality of their work and building new systems and methods to carry out job tasks.

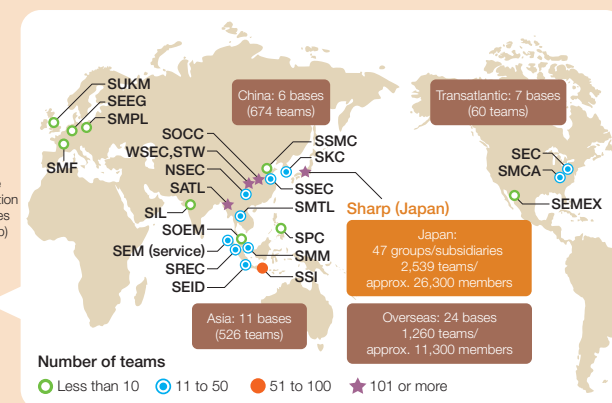
In fiscal 2010, over 37,000 employees worldwide participated in R-CATS activities.

\* R-CATS: Revolution-Creative Action Teams

### ■ Status of Activities



### ■ Activity Teams and Participants Around the World



### Company-Wide Convention (semi-annual)

Create a place where employees can receive recognition  
Held twice a year  
Presidential awards

**Japan**  
Group conventions  
Affiliated company conventions

**Overseas**  
Regional conventions  
• Asian convention  
• Transatlantic convention  
• China convention

Overseas bases also participate  
Sharing know-how globally



Self Evaluation ○: Results exceeded objectives ○: Results nearly met objectives △: Certain results were accomplished

Field (Stakeholders)	Important Themes	Actions for Fiscal 2010		Self Evaluation	Objective for Fiscal 2011	See page(s)
For Customers	Secure quality and safety	Objectives	<ul style="list-style-type: none"> <li>Strengthen global quality assurance and customer service activities</li> </ul>	○	<ul style="list-style-type: none"> <li>Advance global efforts on measures to improve quality and customer satisfaction</li> <li>Improve customer response skills through implementing knowledge systems in call centers in overseas bases</li> <li>Improve quality consciousness and methodology by training engineers in overseas bases</li> </ul>	79, 80
		Achievements	<ul style="list-style-type: none"> <li>Established contact points in China for inquiries on LCD TV installation (Shanghai) and smartphone assistance (Beijing) to handle surge in inquiries stemming from increased sales of LCD TVs and smartphones there</li> <li>Held training sessions for 140 engineers to improve quality and technique at five bases in China</li> </ul>			
	Create products that are easier to use	Objectives	<ul style="list-style-type: none"> <li>The pursuit of usability</li> </ul>	○	<ul style="list-style-type: none"> <li>Improve products by taking on customer's point of view</li> <li>Continue improving products by taking on customer's point of view</li> <li>Develop VOC program in China, following programs in North America and Europe, to incorporate customer feedback in product design</li> </ul>	81, 82
		Achievements	<ul style="list-style-type: none"> <li>Improved products in major categories to make them more user-friendly for customers</li> <li>Extended VOC (Voice of the Customer) program by collecting feedback (call information) from European and North American customers to analyze in Japan</li> </ul>			
	Improve customer satisfaction	Objectives	<ul style="list-style-type: none"> <li>Improve service quality</li> </ul>	○	<ul style="list-style-type: none"> <li>Implement Japanese-style training systems for service staff in China to improve quality of service</li> </ul>	83-85
		Achievements	<ul style="list-style-type: none"> <li>Implemented repair service visits that allows customers to select time they want repairs to be made by introducing 365-days-a-year service and service staff shift work system in Japan</li> <li>Conducted training on customer satisfaction skills to improve interaction with customers</li> </ul>			
For Business Partners	Promote CSR across entire supply chain	Objectives	<ul style="list-style-type: none"> <li>Build system to conduct audits and do on-site verification of status of CSR measures</li> </ul>	○	<ul style="list-style-type: none"> <li>Build CSR audit system based on CSR audit trials</li> </ul>	86-89, website
		Achievements	<ul style="list-style-type: none"> <li>Conducted trials of CSR audits for plants of suppliers in Japan and China</li> </ul>			
For Shareholders and Investors	Improve communication with shareholders and investors	Objectives	<ul style="list-style-type: none"> <li>Improve information disclosure to shareholders and investors and respond to diversifying needs of investors</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue improving information disclosure and strengthen information transmission for shareholders and investors</li> </ul>	90, 91, website
		Achievements	<ul style="list-style-type: none"> <li>Increased amount of information available on website</li> <li>Held various kinds of IR meetings</li> </ul>			
For Employees	Expand efforts related to human rights	Objectives	<ul style="list-style-type: none"> <li>Continue strengthening human rights education</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue strengthening human rights awareness activities</li> <li>Continue human rights training sessions at business sites and affiliates in Japan</li> <li>Undertake human rights training sessions for management staff assigned overseas</li> </ul>	92
		Achievements	<ul style="list-style-type: none"> <li>Undertook approximately 60 human rights training sessions at business sites and affiliates in Japan</li> <li>Distributed booklets, covering topics like respect for human rights, to newly appointed heads of overseas Sharp bases</li> </ul>			
	Strengthen human resource development	Objectives	<ul style="list-style-type: none"> <li>Continue training to support development of global business</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue training to support development of global business</li> <li>Promote GATE and G-BANK training</li> <li>Promote GOAL program</li> <li>Promote GRID program for fostering young global employees</li> </ul>	93, 94
		Achievements	<ul style="list-style-type: none"> <li>Approximately 170 employees received overseas assignee training (GATE)</li> <li>Approximately 90 employees received global personnel training (G-BANK)</li> <li>Started GOAL language training program (January 2011)</li> </ul>			
	Development of company-wide diversity management (strategy for utilizing employee diversity)	Objectives	<ul style="list-style-type: none"> <li>Establish diversity program</li> </ul>	○	<ul style="list-style-type: none"> <li>Take diversity programs company-wide</li> <li>Hold activities to raise awareness about diversity inclusion</li> <li>Have diversity committees at each site</li> <li>Take diversity training company-wide</li> </ul>	95-98
		Achievements	<ul style="list-style-type: none"> <li>Formulated and promoted specific objectives and measures to promote utilization of four demographic groups: female, non-Japanese, physically or mentally challenged, and elderly employees in Japan</li> <li>Appointed first female executive officer (April 2011)</li> <li>Dramatic increase in percentage of male employees who took childcare leave, expansion of programs for nursing care</li> <li>Planned and implemented diversity inclusion training</li> </ul>			

Self Evaluation ◎: Results exceeded objectives ○: Results nearly met objectives △: Certain results were accomplished

Field (Stakeholders)	Important Themes	Actions for Fiscal 2010		Self Evaluation	Objective for Fiscal 2011	See page(s)	
For Employees	Promote occupational health and safety	Objectives	<ul style="list-style-type: none"> <li>Continue strengthening industrial accident risk reduction activities</li> </ul>	◎	<ul style="list-style-type: none"> <li>Continue strengthening global health and safety management and activities to reduce and remove industrial accident risks</li> <li>Bring operations at production sites more strictly in line with OHSAS 18001</li> <li>Formulate standards for in-house occupational health and safety management system covering administrative sites and affiliates</li> <li>Build globally applicable health and safety promotion system, and systematically introduce occupational health and safety management system at overseas production sites</li> </ul>	99	
		Achievements	<ul style="list-style-type: none"> <li>Implemented risk assessment and measures to reduce and remove risks by introducing occupational health and safety management system</li> <li>Acquired OHSAS 18001 certification at 7 sites in Japan</li> </ul>				
		Objectives	<ul style="list-style-type: none"> <li>Strengthen measures for primary prevention of mental illnesses (illness prevention and health promotion)</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue strengthening measures for primary prevention of mental illnesses (illness prevention and health promotion)</li> <li>Continue mental health group work training</li> <li>Improve knowledge of mental health-related issues by encouraging acquisition of third-party certification in mental health management</li> </ul>	100	
		Achievements	<ul style="list-style-type: none"> <li>Held mental health group work training, with approximately 10,000 taking part</li> <li>Raised knowledge on mental health by having employees take third-party certification course (in fiscal 2010, approximately 720 people passed exam for level II and III of Mental Health Management certification program)</li> </ul>				
		Objectives	<ul style="list-style-type: none"> <li>Implement aggressive measures for health promotion</li> </ul>	○	<ul style="list-style-type: none"> <li>Implement aggressive measures for employee health promotion</li> <li>Follow up health exams with improved health guidance for employees who require it (including counseling focused on metabolic syndrome)</li> <li>Hold group health seminars and health workshops at each workplace</li> <li>Get people in the habit of exercising and energize the workplace through events like sports festivals and team walking</li> <li>Implement smoking cessation measures such as no-smoking campaigns centered around Sharp No-Smoking Day</li> </ul>	100	
		Achievements	<ul style="list-style-type: none"> <li>Health checkup participation rate was 99.99%. Health guidance (including counseling focused on metabolic syndrome) was given to 97% of those who needed follow-up</li> <li>Held company-wide sports festivals (approximately 6,800 participants for the year)</li> <li>Held walking events such as company-wide team walking (approximately 16,800 participants for the year)</li> </ul>				
For Local Communities	Expand and diversify social contribution activities	Objectives	<p>Japan</p> <ul style="list-style-type: none"> <li>Promote and expand Sharp Forest activities</li> <li>Provide environmental education at 500 elementary schools, provide craftsmanship education at 100 elementary schools</li> <li>Hold new educational programs that combine factory tours, visits to the Sharp Technology Hall, and environment/craftsmanship classes</li> <li>Provide educational support for persons with disabilities (at special-needs schools)</li> <li>Continue local social contribution activities at all Sharp sales and service bases</li> <li>Encourage volunteering among employees, with a goal of having 30,000 employees volunteer</li> </ul>	○	<ul style="list-style-type: none"> <li>Hold community-based Sharp Forest activities that lead to the protection of biodiversity</li> <li>Provide environmental education at 500 elementary schools, provide craftsmanship education at 100 elementary schools</li> <li>Continue educational programs that combine factory tours, visits to the Sharp Technology Hall, and environment/craftsmanship classes</li> <li>Continue educational support for persons with disabilities (at special-needs schools)</li> <li>Continue local social contribution activities at all Sharp sales and service bases</li> <li>Encourage volunteering among employees, with a goal of having 30,000 employees volunteer</li> </ul>	101-106	
		Achievements	<ul style="list-style-type: none"> <li>Created new Sharp Forests, bringing the total to 12</li> <li>Provided environmental education for about 27,100 children at 520 elementary schools and craftsmanship education for about 2,800 children at 91 elementary schools</li> <li>Began programs that combine factory tours and environment/craftsmanship classes; about 2,300 children from 45 schools took part</li> <li>Began providing educational support at special-needs schools for the hearing impaired; about 260 children at 20 schools took part</li> <li>A total of about 25,000 employees participated in a total of 903 local social contribution activities at all Sharp sales and service bases</li> <li>A total of about 30,000 employees participated in volunteer activities at all Sharp offices and bases</li> </ul>				
		Objectives	<p>Overseas</p> <ul style="list-style-type: none"> <li>Continue activities centered on Sharp Charity Foundation in China</li> <li>Expand environmental education in overseas regions</li> </ul>				<ul style="list-style-type: none"> <li>Continue activities centered on Sharp Charity Foundation in China</li> <li>Continue expanding environmental education in overseas regions</li> <li>Promote environmental protection activities and other social action programs in overseas regions</li> </ul>
		Achievements	<ul style="list-style-type: none"> <li>In China, provided scholarships (about 150 people at 9 universities), donated Sharp high-density Plasmacluster Ion generators (a total of about 100 units to 27 hospitals and 8 welfare facilities), carried out beautification campaigns in areas near Sharp bases, conducted tree-planting activities, built elementary schools, etc.</li> <li>Conducted environmental education lessons at overseas locations, notably in North America and China (for about 7,100 children at 75 schools)</li> </ul>				

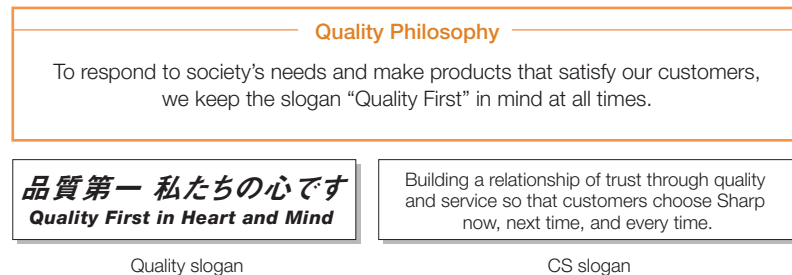
# Offering Products and Services That Deliver Peace of Mind and Satisfaction

Constantly thinking from the customer's point of view in order to develop and provide products and services that customers find useful is one of Sharp's fundamental values. Sharp is also applying customer feedback toward making better products that customers can rely on for years and striving to improve sales and after-sales service. Sharp seeks to satisfy customers so that they choose Sharp now, next time, and every time.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011
<ul style="list-style-type: none"> <li>Strengthen global quality assurance and customer service activities</li> </ul>	<ul style="list-style-type: none"> <li>Established contact points in China for inquiries on LCD TV installation (Shanghai) and smartphone assistance (Beijing) to handle surge in inquiries stemming from increased sales of LCD TVs and smartphones there</li> <li>Held training sessions for 140 engineers to improve quality and technique at five bases in China</li> </ul>	<ul style="list-style-type: none"> <li>Advance global efforts on measures to improve quality and customer satisfaction                             <ul style="list-style-type: none"> <li>Improve customer response skills through implementing knowledge systems in call centers in overseas bases</li> <li>Improve quality consciousness and methodology by training engineers in overseas bases</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>The pursuit of usability</li> </ul>	<ul style="list-style-type: none"> <li>Improved products in major categories to make them more user-friendly for customers</li> <li>Extended VOC (Voice of the Customer) program by collecting feedback (call information) from European and North American customers to analyze in Japan</li> </ul>	<ul style="list-style-type: none"> <li>Improve products by taking on customer's point of view                             <ul style="list-style-type: none"> <li>Continue improving products by taking on customer's point of view</li> <li>Develop VOC program in China, following programs in North America and Europe, to incorporate customer feedback in product design</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Improve service quality</li> </ul>	<ul style="list-style-type: none"> <li>Implemented repair service visits that allows customers to select time they want repairs to be made by introducing 365-days-a-year service and service staff shift work system in Japan</li> <li>Conducted training on customer satisfaction skills to improve interaction with customers</li> </ul>	<ul style="list-style-type: none"> <li>Implement Japanese-style training systems for service staff in China to improve quality of service</li> </ul>

## Basic Stance and Vision on Quality and Customer Satisfaction (CS)

The Sharp Group meets customer needs and demands, and offers safety, quality, reliability, and better environmentally friendly products and services to gain customer trust and to improve customer satisfaction.



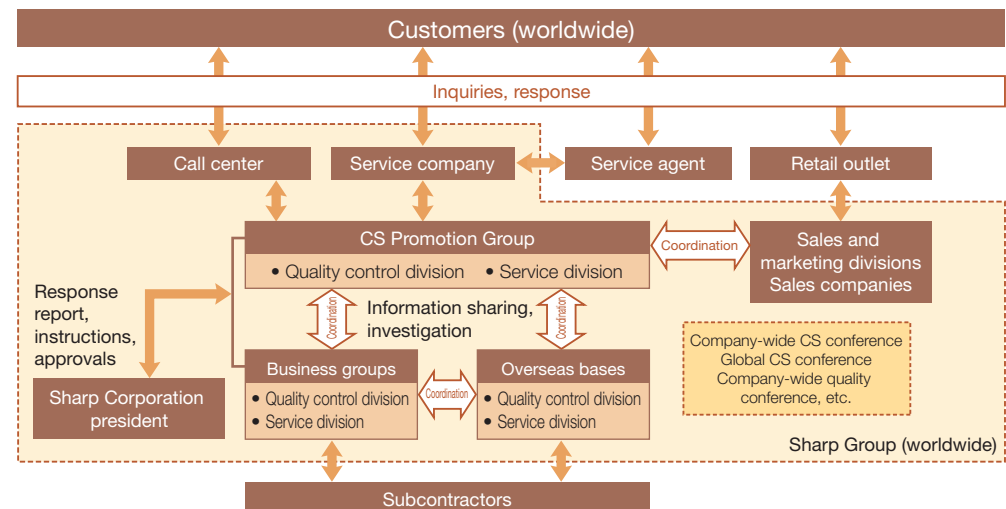
## Quality and Customer Satisfaction Promotion System

Sharp undertakes all its business activities from product development through sales and service based on management from the customer's point of view, and has established the CS Promotion Group as a company-wide promotion organization to further boost product quality and safety, and customer satisfaction.

Sharp established a CS Promotion Center and a Quality Assurance Division that undertake product service and quality control in each business group, and the Sharp Group, including overseas bases and

subcontractors, established a system that can provide safe, high-quality products and service. In fiscal 2010, Sharp responded to a surge in inquiries stemming from increased sales of LCD TVs and smartphones in China by strengthening the capability of call centers there. Sharp established new contact points for inquiries on LCD TV installation (Shanghai) and smartphone assistance (Beijing).

## Quality and CS System

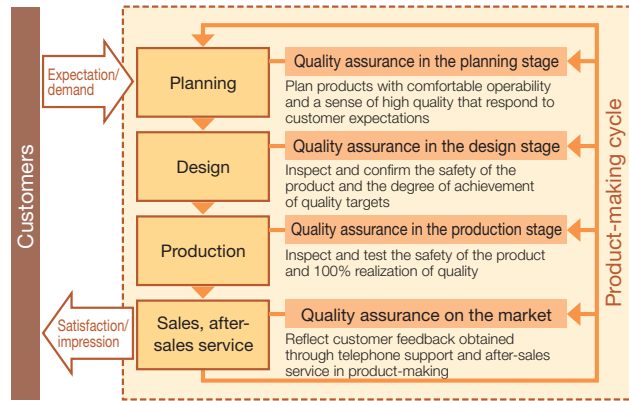




### Quality Assurance System

Sharp specifies the quality levels it provides to customers, thus ensuring that all employees in product planning, design, production, sales, and after-sales service aim for the same targets in their ongoing pursuit of quality improvement.

All Sharp Corporation business groups and all production sites of consolidated subsidiaries in Japan and abroad have obtained the international ISO 9001 certification of quality management. They have also adopted the SHARP Corporation Standards—the Sharp Group’s proprietary quality assurance standards—and conduct various quality assurance activities in each stage of the product-making process, from planning, design, and manufacture to testing/evaluation and marketing.



### Sharp Voluntary Product Safety Action Policy

Since the Sharp Group acknowledges that ensuring product safety is one of the most important management issues and one of its corporate social responsibilities, for customer safety and peace of mind it promotes information disclosure and prioritizes efforts to ensure the safety of the products it manufactures and sells. To put this into practice, Sharp compiled a voluntary action plan on product safety and it strives to receive an even higher level of confidence from society.

### Efforts to Ensure Product Safety

At Sharp, product safety is based on adherence to the safety standards, laws, and regulations of every country. In addition, Sharp has its own technical safety standards, which are applied to all products. Through these standards, Sharp aims to ensure complete safety even when rare and unexpected problems arise, especially concerning issues such as incombustible material usage and abnormal motion detection. To ensure an even higher level of safety, Sharp revises the standards whenever the need arises.

Also, Sharp is adjusting its system for ensuring product safety so that unexpected product problems can be dealt with more swiftly and precisely. Along with responding in a timely manner to changes in the social situation and revisions to laws pertaining to product safety, Sharp will continue to increase its efforts at offering products that customers can use with peace of mind.

### ISO 9001-Certified Sites (as of April 2011)

Certified business groups and subsidiaries in Japan	Location
Audio-Visual Systems Group	Yaiza City, Tochigi Prefecture; Kameyama City, Mie Prefecture
Health and Environment Systems Group	Yao City, Osaka Prefecture
Business Solutions	Yamato-Koriyama City, Nara Prefecture
Communication Systems Group	Higashi-Hiroshima City, Hiroshima Prefecture; Yamato-Koriyama City, Nara Prefecture
Solar Systems Group	Katsuragi City, Nara Prefecture; Yao City, Osaka Prefecture
Electronic Components and Devices Group	Osaka City, Osaka Prefecture; Katsuragi City and Tenri City, Nara Prefecture; Mihara City and Fukuyama City, Hiroshima Prefecture
Display Device Business	Kameyama City and Taki Town, Taki District, Mie Prefecture; Nara City, Nara Prefecture; Minato Ward, Tokyo
Large Liquid Crystal Display Business Group	Kameyama City, Mie Prefecture; Sakai City, Osaka Prefecture
Sharp Display Products Corporation	Sakai City, Osaka Prefecture
Sharp System Products Co., Ltd.	Chiba City, Chiba Prefecture; Shinjuku Ward and Sumida Ward, Tokyo; Osaka City, Osaka Prefecture
Sharp Manufacturing Systems Corporation	Yao City, Osaka Prefecture
Sharp Business Computer Software Inc.	Sumida Ward, Tokyo; Osaka City, Osaka Prefecture
Sharp Niigata Electronics Corporation	Niigata City and Kashiwazaki City, Niigata Prefecture; Toyama City, Toyama Prefecture
Sharp Yonago Corporation	Yonago City, Tottori Prefecture

Certified bases (companies) overseas	Location
Sharp Manufacturing Company of America (SMCA)	US
Sharp Electrónica Mexico S.A. de C.V. (SEMEX)	Mexico
Sharp Manufacturing Company of U.K. (SUKM)	UK
Sharp Manufacturing France S.A. (SMF)	France
Sharp Electrónica España S.A. (SEES)	Spain
Sharp Manufacturing Poland sp. z o.o. (SMPL)	Poland
Shanghai Sharp Electronics Co., Ltd. (SSEC)	China
Sharp Office Equipments (Changshu) Co., Ltd. (SOCC)	China
Wuxi Sharp Electronic Components Co., Ltd. (WSEC)	China
Sharp Technical Components (Wuxi) Co., Ltd. (STW)	China
Nanjing Sharp Electronics Co., Ltd. (NSEC)	China
Sharp Korea Corporation (SKC)	Korea
Sharp Appliances (Thailand) Ltd. (SATL)	Thailand
Sharp Manufacturing (Thailand) Co., Ltd. (SMTL)	Thailand
Sharp Manufacturing Corporation (M) Sdn. Bhd. (SMM)	Malaysia
S & O Electronics (Malaysia) Sdn. Bhd. (SOEM)	Malaysia
PT. Sharp Electronics Indonesia (SEID)	Indonesia
PT. Sharp Semiconductor Indonesia (SSI)	Indonesia
Sharp (Phil.) Corporation (SPC)	Philippines
Sharp India Limited (SIL)	India

### TOPICS

#### Quality and Technique Training at 5 Bases in China

In fiscal 2010, a number of training sessions in quality and technique were held for a total of 140 engineers belonging to the design centers and quality control departments at five design/development/manufacturing bases in China (Shanghai, Nanjing, Changshu, and two in Wuxi).

The three-day training included lectures on statistical quality control, reliability engineering, and quality engineering, as well as practical exercises in statistical analysis using analytical tools. Sharp will continue these training sessions as a way to further raise the reliability of its products.



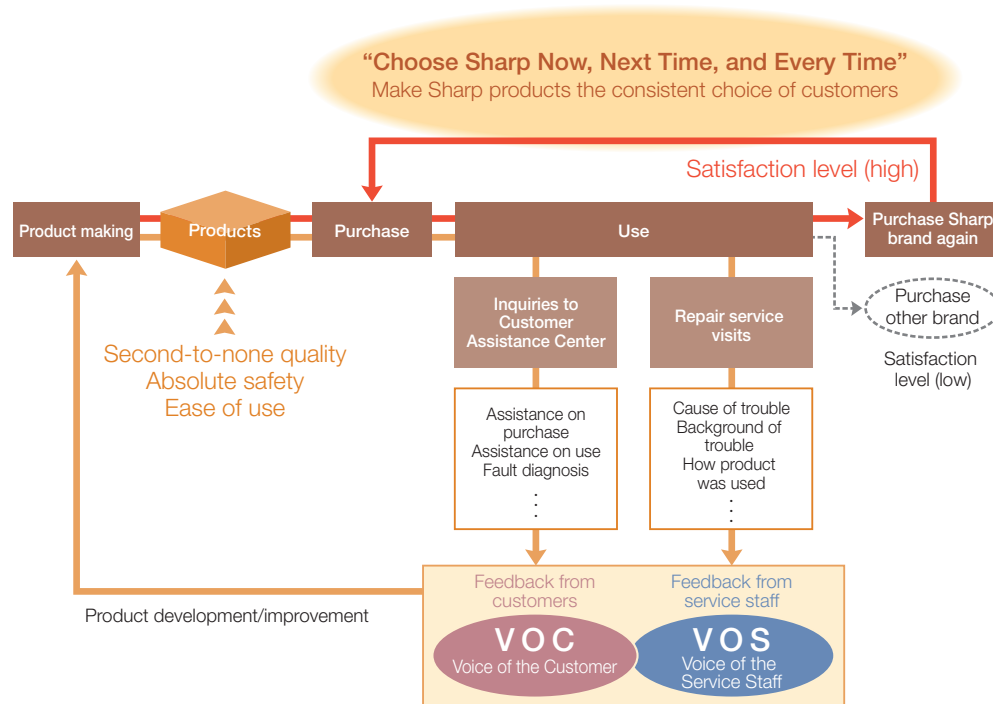
Engineers in Changshu learn about quality and technique

### Applying Customer Feedback to the Making of Products

In order to deliver products that customers find easy to use, Sharp is implementing VOCS (Voice of the Customer & Service Staff) activities so that customer evaluations and opinions are put to use when products are made.

Sharp carries out VOC activities to improve its products by finding out what kind of issues customers face and when they feel Sharp products are not easy to use. Sharp collects and analyzes customer feedback obtained from the Customer Assistance Center or during repair service visits. While protecting the anonymity of customers, the results of this analysis are then published on the company intranet, so that employees in product planning, development, and design can access them.

The development departments constantly keep an eye on customer feedback and use that information to understand what can be quickly improved and to make progress in product improvement. Through cooperation and information sharing between the customer service departments and the development departments, Sharp continuously aims to create products from the user's point of view and that meet the needs of customers to make its products even more appealing.



### Case Study

#### Investigating the Latent Dissatisfaction and Needs of Customers and Reflecting Them in Product Design

Based on the concept of user-centered design (UCD), as outlined in the international ISO 13407 standard, Sharp investigates customers' latent dissatisfaction and needs as part of its product development process and reflects those findings in the specifications and design of its products.

In addition to getting feedback from its Customer Assistance Center, Sharp collects information on how customers interact with products through field research and surveys, as well as usability tests (observing how customers actually use Sharp products). Sharp then improves its products based on those results.

Sharp also promotes the manufacture of products that take into consideration universal design, so many more customers can comfortably use its products. As of November 2010, 67 models of 17 products had been recognized as universal design home appliances by the Association for Electric Home Appliances in Japan.

Through activities such as these, Sharp is raising the appeal of its products.

#### Field Research



Conducting research at a customer's home

#### Usability Tests



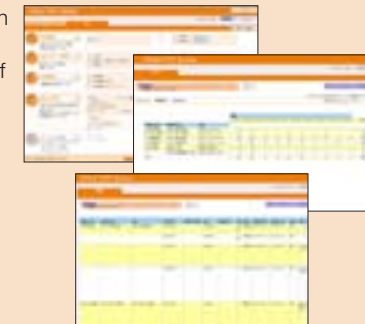
A customer tries out a product

#### Global VOC System for Utilizing Customer Feedback

Sharp developed the Global VOC System to gather information in Japan from overseas call centers and utilize that information for the improvement of product quality and the development of easy-to-use products.

In fiscal 2010, the Global VOC System was expanded to include information from call centers in Europe as well as information from North America. That information has since been made accessible.

Sharp will continue to advocate the importance of VOC activities to managers of local call centers and make progress in global information sharing.



Case Study Product Improvements

Humidifying Air Purifier (KC-Z80/Z65/Z45)

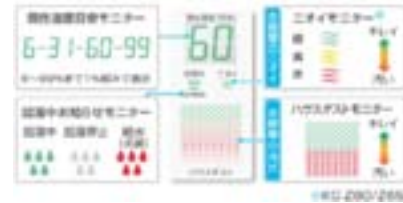


■ Wheels enable easy movement during housecleaning



■ Verifiable results—monitor displays moisture and cleanliness levels

- Shows the current humidity level and humidifier status
- Shows air quality—level of household dust, odors—at a glance



■ Water tank is easy to fill and easy to clean



Digital MFP (MX-2310F)

A design that delivers ease of use

■ Concave buttons are easy to press



■ Easy-grip handles make it easy to open/close paper drawers



MX-2310F



AQUOS LCD TV (LC-Z5/V5 Series and other models)



A Z5 Series model



Z5 Series remote control

V5 Series remote control

■ Frequently used buttons are double the size of those on previous models (compared to ES50 Series remote control buttons)

■ Certified for Color Universal Design (CUD)\* thanks to adopting an easily visible color combination for the color keys frequently used for functions in digital broadcasts



\* A user-oriented design system developed in consideration of people with various types of color vision to allow information to be accurately conveyed to as many individuals as possible. The system was developed by the Color Universal Design Organization, a nonprofit entity in Japan.

### Customer Service That Exceeds Expectations

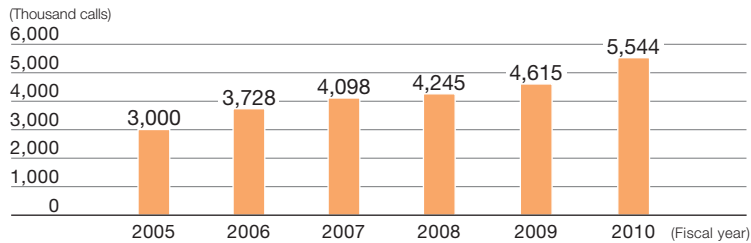
From before a product is purchased until after the customer is finished using a product, Sharp's Customer Assistance Center in Japan always aims to meet or exceed customer expectations.

All Customer Assistance Center agents (operators) are periodically monitored by a response-quality manager. Based on those results, agents undergo training to improve their responsiveness in terms of providing assistance that matches the customer inquiry as well as their methods of speaking and listening. This enables the agents to maintain a high level of response skills while also boosting their awareness of customer satisfaction.

In fiscal 2010, Sharp took steps to ensure that customers do not have to wait on the phone when calling the Customer Assistance Center. It also enhanced the support section of its website so that customers can solve problems without calling. The website provides customer-oriented services that include eight types of Fault Diagnosis Navigation, where customers themselves diagnose the symptoms and solve problems by following instructions on the screen, and a section titled "Smart Use of Consumer Electronics," which explains how to maintain products and ways to save energy.

Sharp also actively supports the sales and service activities of its dealers. In fiscal 2010, Sharp consolidated the different contact points for its dealers on such areas as product assistance, maintenance and repair assistance, repair parts ordering, and solar technology assistance for solar installation companies.

#### Number of Calls Received at the Customer Assistance Center (Japan)



#### TOPICS

##### Internal CS Contests

Sharp regularly holds internal CS contests in Japan as part of ongoing efforts to improve the response skills of Customer Assistance Center employees. A form of training, the contests help employees understand the feelings and needs of customers through practice with pretend customers.

Sharp will work to further improve the quality of its telephone communications, which are a key part of supporting Sharp's status as the top brand in customer satisfaction.



### Case Study Efforts in After-Sales Service in Japan

#### No.1 in After-Sales Service Satisfaction in 4 Product Categories for 2 Years Running

Sharp was selected as the top brand in four product categories—flat-screen TV, Blu-ray/DVD/HDD recorder, air conditioner, and washing machine/dryer—in the 2010 After-Sales Service Satisfaction Ranking survey published in the July 26, 2010 issue of the *Nikkei Business* magazine, following the same achievement in fiscal 2009. Sharp is the first company to be ranked as the top brand in four categories two years in a row.

In order to improve the repair skills of service staff to ensure that they can complete repairs in one visit, Sharp set up a training facility where consumer electronic products are placed with furniture and other everyday items, simulating the house of a customer, for service staff to be trained on their repair skills in a realistic setting. In fiscal 2010, in addition to maintaining quick service, Sharp implemented 365-days-a-year repair service visits and a service staff work shift system to fit with the diverse lifestyles of customers, making repair visits on the date and time requested by the customer. All the customer service-related departments, including service companies, call centers, and parts centers, made efforts to boost service, and those efforts were reflected in Sharp's after-sales service satisfaction rankings.

Sharp will continue to improve its customer service and the technical skills of employees involved in after-sales service to retain its top-brand status. Sharp will also continue to work hard to provide the kind of high-quality service that increases the loyalty of customers so they will choose Sharp again.

Fiscal 2010 ranking	Fiscal 2009 ranking	Surveyed products
1	1	Flat-screen TV
1	1	Blu-ray/DVD/HDD recorder
1	1	Air conditioner
1	1	Washing machine/dryer

#### Words from a Service Employee

Achieving the No. 1 position for the second year in a row has heightened customers' expectations for Sharp. We will not be able to satisfy customers just by providing conventional services. Without becoming complacent, we will work hard to improve our service skills, such as communication skills and technical skills, to provide service that each one of our customers can be satisfied with.

Tsutomu Wada  
Kobe Service Center  
Sharp Engineering Corporation



### Global Customer Support System

As in Japan, Sharp is working hard to improve customer satisfaction in the main regions of the world where it does business, with call centers functioning as the control tower for the entire customer service process. Service agents in overseas regions carry out repair services using know-how developed in Japan and adopted internationally, aiming to provide fast, reliable, and locally rooted after-sales service.

Sharp will continue striving to improve its brand image through after-sales service worldwide.

#### Sharp Call Centers Around the World



No.	Region	Call center locations (country and city)	No. of calls handled (2010)
1	North America	US (Chicago), Jamaica (Kingston)	900,000
2	China	China (Shanghai, Hong Kong)	1,590,000
3	Europe	Germany (Dortmund), The Netherlands (Maastricht), France (Orleans)	120,000
4	Asia	Indonesia (Jakarta)	260,000
5	Oceania	Australia (Sydney)	40,000

SEC: Sharp Electronics Corporation (sales subsidiary in the US) / SESC: Sharp Electronics Sales (China) Co., Ltd. (sales subsidiary in China) / SRH: Sharp-Roxy (Hong Kong) Ltd. (sales subsidiary in Hong Kong) / SEEG: Sharp Electronics (Europe) GmbH (sales subsidiary in Germany) / SEID: PT. Sharp Electronics Indonesia (sales and manufacturing subsidiary in Indonesia) / SCA: Sharp Corporation of Australia Pty. Ltd (sales subsidiary in Australia)

### Case Study Efforts in After-Sales Service Overseas

#### Improving Customer Satisfaction in Indonesia

##### — Third-party recognition for after-sales service —

SEID, a manufacturing and sales subsidiary in Indonesia, has been providing value-added after-sales service like its Royal Service, which provides service visits within three hours of receiving a request by phone, for users of AQUOS LCD TVs and Healsio superheated steam ovens.

For its locally rooted programs and for making its services accessible through the most extensive service network in the region (about 290 bases), SEID has earned outside recognition. At the Indonesian Service Quality Awards 2011 in May of the same year, SEID was selected from among approximately 500 eligible companies in 26 industries to receive—for the second year in a row—the SQ (Service Quality) Golden Award in two categories: home entertainment and home appliances. In October 2010, SEID received the ICSA (Indonesian Customer Satisfaction Award) 2010 for providing the best service in two categories: refrigerators and washing machines.



Winner of SQ Golden Awards for two years in a row



Indonesian Customer Satisfaction Awards

#### 1st Home Appliance After-Sales Service Convention Held in Vietnam

In June 2010, sales subsidiary SVN in Vietnam hosted its first home appliance after-sales service convention, welcoming about 100 people from 97 service agencies for home appliances and audio-visual products from across Vietnam. Participants learned about Sharp's customer satisfaction efforts in Vietnam, Sharp's basic service policies, and quality assurance systems at Sharp manufacturing bases. SVN will continue to do its best to improve customer support in cooperation with all service agencies.



A scene from the first home appliance after-sales service convention in Vietnam

### Educational Activities in Japan for the Safe Use of Products

Through its website and pamphlets, Sharp is enlightening customers on the safe use of its products.

In response to the aftermath of the recent Great East Japan Earthquake, Sharp also added on its website information on how to handle electronics products in case of power outages, tips for saving power and water, as well as measures to prevent products from tipping over or falling.



Web page showing tips for saving power and water

### Disclosure of Information When Quality Problems Arise

In the event that a Sharp product is found to be responsible for injury to customers or for damage to property, Sharp will disclose relevant information immediately in newspapers and via its website, or through other methods. Sharp also has contact points to directly receive inquiries from customers and is striving to keep quality problems to an absolute minimum. During fiscal 2010, Sharp notified customers as below, providing free-of-charge inspection, repair, and product recovery.

Based on the Sharp Voluntary Product Safety Action Policy, Sharp also releases on its website details of serious accidents involving products that are judged to be caused by a product or suspected to be caused by a product that were reported to the Consumer Affairs Agency and the Ministry of Economy, Trade and Industry in Japan.

#### Free-of-Charge Inspection and Repair

- **32-Inch LCD Color TV for the US (August 2010)**

In response to the occurrence of cracking in the section connecting the stand and display due to faulty resin parts, Sharp conducted free inspections and parts replacement.

- **Blu-ray Disk Recorder for Japan (January 2011)**

In response to the occurrence of malfunctions in some products due to problems with a software update downloaded via digital broadcasts, Sharp provided an update disk to update the software.

- **Refrigerator/Freezer for Japan (May 2011)**

In response to the occurrence of cooling system (for freezing and refrigerating) malfunctions in some products due to an overheating problem in the starting relay (electric component for starting up the system), Sharp conducted free inspections and parts replacement.

Close-Up

### Special Service Support in Response to the Great East Japan Earthquake

After the March 2011 Great East Japan Earthquake, Sharp started providing a special service for consumer electronics products being used by customers in the disaster-hit areas. Sharp lowered its repair fees as part of efforts to support the recovery of those areas.

Although Sharp's service bases in the Tohoku region were not hit directly by the tsunami, after-sales service had to be suspended for a week due to the disruption of utilities and transportation systems. Soon after that, employees rushed from service bases across the country to help resume repair services. By the end of May 2011, some 500 people had taken part in activities to support the Tohoku region.

For disaster relief, Sharp service bases have also taken on the task of installing Sharp-donated home appliances in emergency shelters and temporary housing so that displaced residents can start using the donated appliances as soon as possible.

Knowing that it will take a long time for the disaster-hit areas to fully recover, Sharp will continue to make efforts to contribute to local communities as much as possible through after-sales activities.

#### Words from a Service Employee

Right after the disaster, there was not enough gasoline, and infrastructure restoration was nowhere in sight, so we were not able to go right away to customers wanting repairs. When, after several days, we were finally able to make visits, customers thanked us for coming, despite having had to wait in inconvenience for so long.

We will do everything we can to help the people of the Tohoku region by solving customers' problems as quickly as possible through our after-sales service.



Yuki Washio  
Sendai Service Center  
Sharp Engineering Corporation

# Mutual Prosperity with Suppliers and Dealers

Sharp conducts its business activities on the basis of fair evaluation, ensuring that all companies are provided with equal opportunities.

Sharp aims for mutual prosperity with business partners by building relationships of cooperation and trust through dialogue and communication that deepen mutual understanding.

Sharp is also promoting CSR activities throughout the entire supply chain.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011
<ul style="list-style-type: none"> <li>Build system to conduct audits and do on-site verification of status of CSR measures</li> </ul>	<ul style="list-style-type: none"> <li>Conducted trials of CSR audits for plants of suppliers in Japan and China</li> </ul>	<ul style="list-style-type: none"> <li>Build CSR audit system based on CSR audit trials</li> </ul>

## Determining Procurement Based on Providing Equal Opportunity and Fair Evaluation

Sharp has production activities around the world and it chooses who it will procure local parts, materials, and equipment from by providing all Japanese and overseas suppliers with an equal opportunity to do business with Sharp. This opportunity includes a fair evaluation of whether a supplier's procurement conditions meet Sharp's requirements for quality, standards, and performance.

Sharp has also formulated Basic Purchasing Principles that contribute to a prosperous coexistence with business partners. The Principles stipulate impartiality and fairness in all purchasing activities and the creation of a relationship of cooperation and trust with suppliers.

## Close Communication and Mutual Understanding

To ensure continued mutual growth and prosperity with its suppliers, as well as to achieve sustainable development, Sharp is going beyond initiatives related to the quality, price, and delivery of parts and materials. Through CSR initiatives across the entire supply chain, Sharp is also seeking to fulfill its social responsibilities over a wide range of areas including product safety, environmental protection, human rights and labor, and health and safety.

Implementing CSR initiatives such as complying with all laws, regulations, and social standards, and protecting the environment, is clearly stated as one of Sharp's procurement policies in the Basic Purchasing Principles. To help its business partners gain an understanding of such concepts and to deepen the understanding between Sharp and its business partners, Sharp business groups and overseas production bases have been holding regular roundtables and meetings for their suppliers. In addition, buyers for various materials used by Sharp exchange ideas and information with sales representatives of suppliers on a daily basis.



## Basic Purchasing Principles 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
- Compliance with laws related to manufacture and distribution of material
  - Compliance with laws related to labor
  - Compliance with laws related to health and safety and arrangement of proper labor environment
  - Prohibition of child and forced labor
  - Prohibition of discrimination based on race and sex and respect for the dignity of each employee
  - Compliance with environmental laws
  - Prohibition of bribery and unfair act

## Words from a Materials Procurement Manager Aiming to Be No. 1 in QCD + CSR

Our task in Sharp's procurement department is to work with suppliers based on a relationship of cooperation and trust to procure the highest quality goods (Q) at a reasonable cost (C) with timely delivery (D), so that Sharp as a product manufacturer can provide customers with safety and peace of mind as well as joy and pleasure. At the same time, in the global electronics market, borderless competition with international corporations is growing, and the globalization of business activities, including procurement, is unavoidable. As companies move forward with globalization, there are many laws, regulations, and social standards that must be followed with regard to corporate social responsibility, such as the problem of conflict minerals set against the background of human rights and labor protection, controlling toxic substances as an activity to protect the environment, fair trade practices and ethics, and the rejection of business dealings with socially destructive companies. Demands for implementing CSR efforts up and down the supply chain are strong.

In 2007, Sharp produced and published the Sharp Supply-Chain CSR Deployment Guidebook. Since then, Sharp has been actively involved in a wide variety of CSR activities working together with its suppliers, and by redoubling its efforts along the entire supply chain, is aiming to be "No. 1 in the world for QCD + CSR".

We would like to express our thanks to everyone involved for their support and cooperation.



**Fumihiko Yamazoe**  
General Manager  
Corporate Procurement  
Center  
Sharp Corporation

## Promoting CSR Measures Throughout the Supply Chain

In 2000, Sharp formulated its own Green Procurement Guidelines and requested that its suppliers adhere to them in manufacturing eco-friendly parts and providing environmentally friendly materials as well as in their routine business activities. And in 2007, to help its suppliers gain an understanding of Sharp's CSR philosophy and promote measures toward CSR among suppliers, Sharp created its own Sharp Supply-Chain CSR Deployment Guidebook and distributed it to major suppliers, and also made it available on the Sharp website.

Through this initiative, Sharp is advancing CSR efforts throughout the entire supply chain by requesting that suppliers around the world step up their efforts in areas related to CSR. This guidebook conforms to the Supply-Chain CSR Deployment Guidebook produced and distributed by the Japan Electronics and Information Technology Industries Association (JEITA).

In fiscal 2007, Sharp began gradually introducing a CSR Procurement Survey based on this Guidebook, and in fiscal 2011, will be working in cooperation with suppliers on the following initiatives as a next step:

1. Revise the Basic Parts Purchase Agreement to clearly explain compliance items in their CSR efforts based on the Sharp Supply-Chain CSR Deployment Guidebook; and,
2. Visit supplier manufacturing and work sites to verify their CSR efforts based on the results of the CSR Procurement Survey, and develop a system to implement CSR audits with the intention of improving CSR efforts.

### Contents of the Sharp Supply-Chain CSR Deployment Guidebook

#### I. Human Rights and Labor

- Prohibit forced labor • Prohibit inhumane treatment and infringements of human rights • Prohibit child labor • Prohibit discrimination • Pay appropriate wages • Regulate working hours • Respect the right to freedom of association

#### II. Occupational Health and Safety

- Apply safety measures for equipment and instruments • Promote safe activities in the workplace • Promote hygiene in the workplace • Apply appropriate measures for occupational injuries and illnesses • Properly manage disasters and accidents • Be careful about physically demanding work • Promote safety and hygiene in all company facilities • Promote health maintenance programs for employees

#### III. Environment

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

#### IV. Fair Trading

- Prohibit corruption and bribery • Prohibit abuse of a superior position • Prohibit the offering and receiving of inappropriate profit and advantage • Prohibit impediments to free competition • Provide accurate information on products and services • Respect intellectual property • Use appropriate export procedures • Disclose appropriate company information • Detect injustice promptly

#### V. Product Quality and Safety

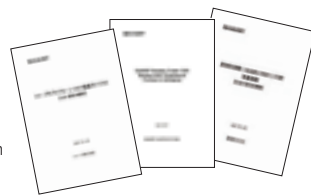
- Establish and apply a quality management system • Ensure product safety

#### VI. Information Security

- Secure computer networks against threats • Prevent the leakage of personal information • Prevent the leakage of customer and third-party confidential information

#### VII. Contribution to Society

- Contribute to society and community



Sharp Supply-Chain CSR Deployment Guidebook (Japanese, English, and Chinese editions)

## CSR Procurement Survey Status

In fiscal 2007, Sharp began gradually introducing globally a CSR Procurement Survey using an online response system to enable suppliers to use the Internet to enter answers to self-checks based on the Sharp Supply-Chain CSR Deployment Guidebook.

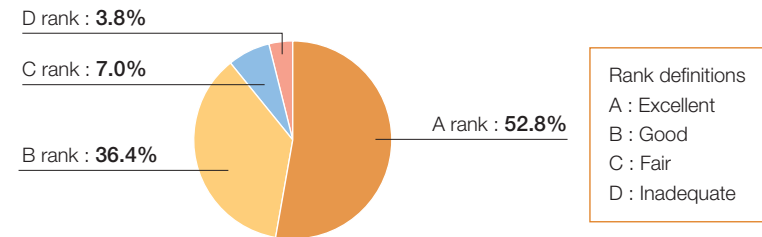
Based on the results of the self-check, Sharp requests that suppliers prepare and submit an improvement plan for any area that received a low score and where improvement is needed.

In fiscal 2010, Sharp conducted a third survey of suppliers in Japan, as well as a second survey of suppliers in China and Malaysia, and for the first time, introduced the survey to suppliers throughout the Asian region as well as in Europe and North America. To date, CSR Procurement Surveys have been completed by approximately 2,000 supplier business partners worldwide.

Sharp plans to continue conducting surveys once a year as a general rule. Sharp will also request that needed improvements in low-scoring areas and items be made and will provide support for measures to implement them.

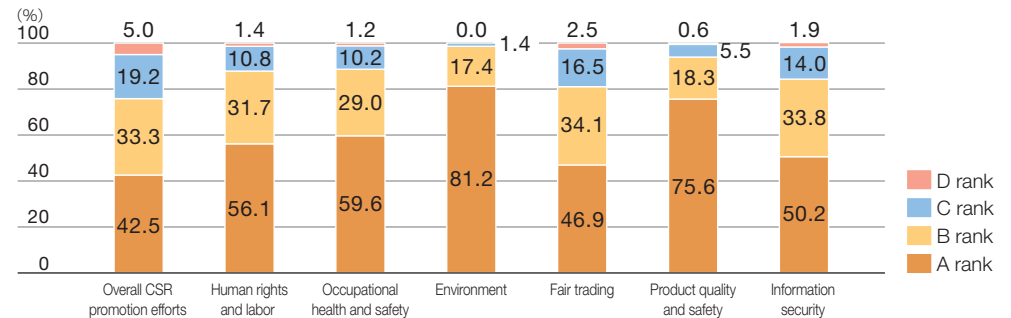
### Status of Supplier Self-Evaluations in the CSR Procurement Survey\*

#### Rankings by Overall Score



Rank definitions  
 A : Excellent  
 B : Good  
 C : Fair  
 D : Inadequate

#### Evaluation Ranking by Area



\* Status of suppliers serving Sharp production bases in Japan and overseas that completed the CSR Procurement Survey in fiscal 2010.



Close-Up

## Working with Suppliers with the Goal of Further Improving Supply Chain CSR Efforts

With the globalization of its business activities, Sharp's entire value chain—from design to development, procurement, production, sales/marketing, and service—has spread around the world.

In this light, Sharp is committed to implementing measures on a global basis to fulfill its corporate social responsibility, and is working in collaboration with suppliers based on the Sharp Supply-Chain CSR Deployment Guidebook and Green Procurement Guidelines to ensure compliance with laws for controlling and managing chemical substance such as the European REACH regulations\*1.

Based on the results of answers to self-checks conducted by suppliers as part of current CSR procurement surveys, Sharp constructed a CSR audit framework under which Sharp visits the production sites of suppliers to verify their CSR efforts. In fiscal 2010, Sharp conducted a total of 16 trial CSR audits, including suppliers in Japan and China, and also provided guidance aimed at improving the areas that diverge from desired results and at helping suppliers to better their efforts.

In fiscal 2011, Sharp plans to continue trial audits, and through not only on-site verifications, but also through direct communication with suppliers, aims to establish an audit framework that will foster a common understanding and further improve efforts related to CSR.

Through mechanisms such as ongoing CSR procurement surveys and audits, Sharp will be working continuously with suppliers to improve the level of their CSR efforts, with the aim of making even greater contributions to the global community throughout the entire supply chain.

Related information

Page 48: Green Procurement

\*1 REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) are a set of regulations legislated by the European Union to advance safety assessments of existing chemical substances. This law was adopted in December 2006 and went into effect in June 2007.

### Production and Procurement Bases That Conducted CSR Procurement Surveys in Fiscal 2010



### Words from a Supplier Who Underwent a CSR Audit

Our company has also been actively promoting CSR in recent years, but this is the first time that we have been audited by a customer. Our staff was a bit nervous, but we welcomed the members of the audit team.

In the audit, representatives from Sharp explained the supply chain CSR movement, and we learned that CSR had become bigger than we imagined in the electronics industry. They also explained the latest CSR trends in China. There were many parts related to issues we face on a daily basis, such as environmental regulations, and we were again reminded that CSR will continue to spread rapidly in China in the future.

We then gave the audit team a look at the actual efforts of our company, such as a Safety Experience Corner set up inside the plant to enable workers to gain hands-on experience in dealing with work-related hazards.

The basic concepts of CSR are woven into the business philosophy and action guidelines of our company group, and to remain a company trusted by society, we are striving to put them into practice on a daily basis to build good relationships with all stakeholders. This audit showed us that CSR is not something that can be achieved by only one company. We also came to realize that it must be achieved working in conjunction with the entire supply chain.

Our whole group will continue to work hard to make improvements.



**Takeshi Matsuda**  
General Manager  
Management Division  
Suzhou NSG Electronics  
Co. Ltd.

### Words from a Materials Manager at an Overseas Base

SOCC,\*2 located in Changshu City, China, has been actively promoting CSR as well as efforts to protect the environment as part of the corporate strategy of the Sharp Group, based on Sharp's business philosophy and its business creed of "Sincerity and Creativity." In addition, playing a leading role in the supply chain, we take the hands of suppliers and put CSR into practice together.

In fiscal 2010, to respond to the European REACH regulations, we conducted a top-to-bottom review of our response and revamped our practices, working in cooperation with those involved inside the company. We then implemented a survey of the amounts of chemical substances contained in products delivered from hundreds of our suppliers.

In that process, we repeatedly explained the importance of CSR and environmental protection to our suppliers, and by explaining in detail the importance of complying with laws and regulations of various countries relating to importation of goods on both a global and regional basis, and the specific measures taken by the Sharp Group, our suppliers were able to gain a deeper understanding and awareness of the importance of implementing these efforts in a variety of fields.

\*2 Sharp Office Equipments (Changshu) Co., Ltd.; a manufacturing subsidiary in China



**Gu Haipeng**  
Procurement Division  
SOCC

## Dealing with the Conflict Mineral Issue

In the Democratic Republic of the Congo (DRC), the environmental destruction and inhumane acts against local residents perpetrated by armed anti-government militia forces have become a major international issue. Minerals such as coltan, tin, gold, and tungsten mined illegally in the DRC and adjoining countries have become a source of financing for the militias, and hence, these minerals are called “conflict minerals.” Companies that use these minerals for the manufacture or functionality of their products have been strongly urged to conduct their procurement activities appropriately in an effort to cut off funding to such armed forces.

These minerals are also used in Sharp products, particularly, tin, which is a component of solder. Sharp believes it important to take appropriate measures in response to this conflict mineral issue.

For some time, Sharp has been requesting that its suppliers put initiatives into practice to fulfill their social responsibility in areas such as human rights, labor, and the environment, based on Sharp’s Basic Purchasing Principles and the Sharp Supply-Chain CSR Deployment Guidebook. Recognizing that the conflict mineral issue is one of the key elements of supply chain CSR, Sharp has launched initiatives as a member of the global community, and instituted a basic policy of not using minerals that are mined illegally in its products and devices.

As an initial step in dealing with the conflict mineral issue, Sharp began asking suppliers in January 2011 whether such minerals are contained in products and materials supplied to Sharp, and, if so, what is their country of origin.

Sharp will continue to respond to the conflict mineral issue while remaining in accord with guidelines whose stated purpose is a resolution to the conflict mineral issue. Such guidelines include the expected rules of the conflict minerals provision (section 1502) of the Dodd-Frank Wall Street Reform and Consumer Protection Act established in the United States in July 2010, and the Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, created by the Organisation for Economic Co-operation and Development (OECD).

## Audits and Education to Ensure Full Compliance with the Subcontract Act

To comply with the Subcontract Act (Act Against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors) in Japan, Sharp Corporation and its affiliated companies implement compliance checks and in-house education on an ongoing basis.

Regarding compliance checks, since fiscal 2002, Sharp’s Corporate Procurement Center has conducted regular audits of all business groups in Japan once a year. In addition, in fiscal 2009, to encourage internal voluntary reporting of compliance issues and further strengthen precautionary measures to prevent recurrence of problems, the material supply and outside manufacturing divisions of all business groups, as well as Head Office groups and affiliated companies, began self-audits in which they check how well they are complying with the Subcontract Act.

To further ensure complete compliance with the Subcontract Act by the Sharp Group, Sharp plans to hold training workshops on the Subcontract Act for manufacturing subsidiaries in Japan, working in collaboration with the Sharp Legal Affairs Division, legal affairs staff at all business groups, and the persons responsible for compliance with the Subcontract Act at affiliated companies.

## Device Exhibitions with Leading Suppliers

Sharp’s Advanced Development and Planning Center in Tenri, Nara Prefecture, has been hosting technology exhibitions and business meetings sponsored by regional governments to provide opportunities for meetings between companies, with the objectives of encouraging new business deals and sparking new business and technology alliances. At these product shows, companies invited by the regional governments mount panel displays to explain their products and technologies. Sharp executives, designers, and engineers attend the show and engage in lively exchanges of information with the participants.

On November 5, 2010, an exhibition entitled “Gumma New/Advanced Technology Exhibition and Business Meeting at Sharp” was held in collaboration with Sharp and 29 SMEs (small and medium enterprises) from Gumma Prefecture. The number of contacts with Sharp for potential business reached approximately 1,000.

In addition, on February 2, 2011, the “Tokushima Prefecture New Manufacturing Technologies Exhibition and Business Meeting at Sharp” was held. The Governor of Tokushima Prefecture attended, along with around 340 individuals from Sharp. In addition to exhibitions and business meetings, separate technology presentations were also held.

Through such opportunities to communicate with local and regional SMEs who have such outstanding technologies and products to offer, Sharp is working toward mutual prosperity with suppliers and will continue to contribute to the development of the communities where these businesses are located.



A scene from a technology exhibit/business meeting

## Working Together with Dealers in Their Efforts Toward the Environment

Sharp’s sales companies in Japan are helping with the CSR activities of dealers. Through workshops and study sessions, and as part of routine sales activities, individual sales representatives are communicating information to employees of dealers on topics ranging from environmental issues on the global level to environmental initiatives in everyday activities.

In turn, dealers are making proposals to customers for environmentally conscious products and environmentally friendly ways of using them. And the dealers themselves are aiming to build environmentally friendly stores that take the environment into consideration by making the most of efforts such as energy conservation in their own business.

In proposing these initiatives, Sharp sales representatives are taking full advantage of knowledge gained through taking the Eco Test mentioned previously (see page 21).

Sharp, working together with dealers, is engaging in business activities that can contribute to the environment and the community while encouraging employees to further improve their skills.

# Appropriate Return of Profits and Information Disclosure

One of the most important management principles for Sharp is to return a portion of profits to shareholders. Through general shareholders' meetings and IR (investor relations) activities that respond to the diversifying needs of investors, Sharp is promoting communication with shareholders and investors, and the valuable feedback of these stakeholders is applied toward management improvements.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011
<ul style="list-style-type: none"> <li>Improve information disclosure to shareholders and investors and respond to diversifying needs of investors</li> </ul>	<ul style="list-style-type: none"> <li>Increased amount of information available on website</li> <li>Held various kinds of IR meetings</li> </ul>	<ul style="list-style-type: none"> <li>Continue improving information disclosure and strengthen information transmission for shareholders and investors</li> </ul>

## 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 payouts, and while considering its consolidated business performance, financial situation, and future business development in a careful and comprehensive manner, Sharp implements a set of measures to return profits to its shareholders.

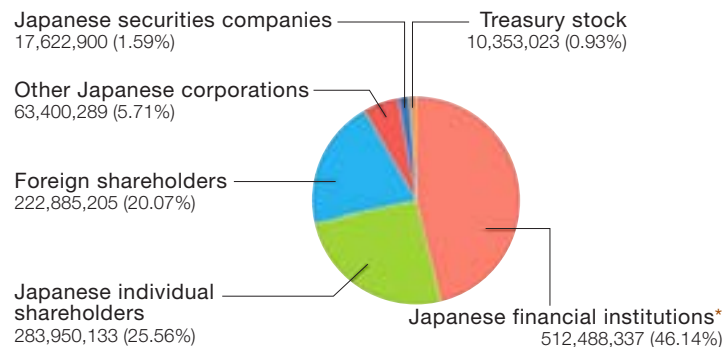
For fiscal 2010, Sharp distributed a year-end dividend of 7 yen per share. The total annual dividend was 17 yen per share.

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

### Net Income per Share (Consolidated) and Cash Dividends per Share

Fiscal year	2006	2007	2008	2009	2010
Net income (yen)	93.25	93.17	▲114.33	4.00	17.63
Cash dividends (yen)	26	28	21	17	17

### Share Distribution (as of March 31, 2011)



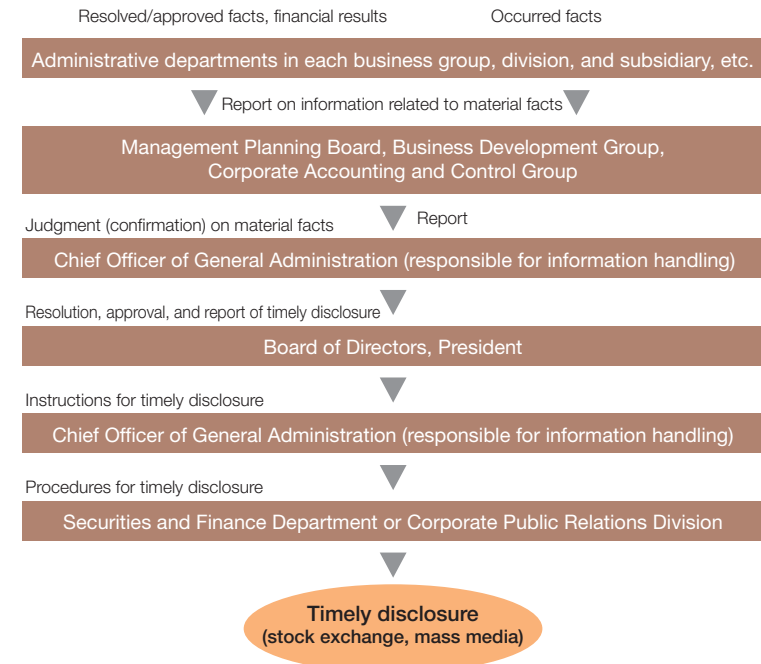
\* A total of 64,041,000 shares (5.77%) in investment trusts and pension trust funds are included in shares held by Japanese financial institutions.

## IR Disclosure Policy

Sharp discloses information to shareholders and investors in a fair and timely manner, in order to increase trust in its IR activities and to ensure a proper assessment of Sharp's corporate value in capital markets.

Sharp discloses information designated under the laws and regulations of Japan, and also actively discloses other information, such as business development, management policy, and strategy.

### How Sharp Discloses Corporate Information in a Timely Manner



## Holding Open General Shareholders' Meetings

Sharp holds ordinary general shareholders' meetings earlier than most Japanese companies and sends out early notices of the meetings. It also strives to create an environment that enables shareholders to easily exercise their voting rights. Efforts include allowing shareholders to exercise voting rights by computers and mobile phones, participating in an electronic voting platform for institutional investors, and posting English notices about the meetings on its website. In addition, Sharp is working to further enhance information disclosure, such as by posting video of the shareholders' meeting on the website the day after the meeting for a certain period of time.

## IR Activities Designed to Meet the Diversifying Needs of Investors

Sharp is striving to disclose a wide range of information in a timely and accurate manner while proactively engaging in communication with shareholders and investors through domestic and overseas IR activities. It also provides investors with easy-to-understand information on company performance, such as financial briefings and presentation materials.

In addition to updating and expanding information on the IR website, Sharp has improved the site's search capability and viewability. Sharp also strives to provide information needed by investors in a timely manner, including financial materials and reports given at briefings. There is also a site for individual investors, where they can easily access relevant information presented in an easy-to-understand format that employs layman's language, charts, graphs, and figures.

And to further promote understanding of its businesses and strategies among investors, Sharp does all it can to make its annual reports engaging and informative.

Sharp is continuing to go beyond its legal obligations to supply certain designated information by actively disclosing additional information about its businesses, as well as its management policies and strategies.



Investor relations website



2010 Annual Report

## Communication with Shareholders and Investors

Major activities in fiscal 2010 included holding individual interviews and meetings with institutional investors and analysts at the Osaka and Tokyo offices upon request, as well as hosting briefings on quarterly financial results and business strategies, and giving factory tours for shareholders.

Sharp holds overseas meetings to retain existing shareholders and attract new shareholders, for example, visiting influential institutional investors in the US and Europe.

Sharp also participated in securities company-sponsored conferences, where Sharp explained its business results and strategies and held question-and-answer sessions.

Through future IR activities, Sharp will continue to make sure a broad range of investors fully understand the condition of the company's business.

### SRI (Socially Responsible Investment)\*

As of September 2011, the following SRI ratings agencies had given Sharp a favorable CSR rating or included Sharp in their SRI indices.

- FTSE4Good Global Index (UK)
- MSCI Global Climate Index (US)
- Ethibel Sustainability Index (Belgium)
- Morningstar Socially Responsible Investment Index (Japan)
- oekom research AG (Germany), Corporate Responsibility Prime Status



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

# Creating a Fair, Positive, and Progressive Workplace

Sharp stresses the importance of basic human rights and personal dignity, provides opportunities for growth to enthusiastic employees, and strives to realize a human resource system and workplace conducive to a diverse range of people using their individual talents to the fullest. It also has systems for helping employees maintain a healthy balance between their work and home lives, and it strives to create a workplace that offers employees mental and physical well-being.

Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011
<ul style="list-style-type: none"> <li>Continue strengthening human rights education</li> </ul>	<ul style="list-style-type: none"> <li>Undertook approximately 60 human rights training sessions at business sites and affiliates in Japan</li> <li>Distributed booklets, covering topics like respect for human rights, to newly appointed heads of overseas Sharp bases</li> </ul>	<ul style="list-style-type: none"> <li>Continue strengthening human rights awareness activities                             <ul style="list-style-type: none"> <li>Continue human rights training sessions at business sites and affiliates in Japan</li> <li>Undertake human rights training sessions for management staff assigned overseas</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Continue training to support development of global business</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 170 employees received overseas assignee training (GATE)</li> <li>Approximately 90 employees received global personnel training (G-BANK)</li> <li>Started GOAL language training program (January 2011)</li> </ul>	<ul style="list-style-type: none"> <li>Continue training to support development of global business                             <ul style="list-style-type: none"> <li>Promote GATE and G-BANK training</li> <li>Promote GOAL program</li> <li>Promote GRID program for fostering young global employees</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Establish diversity program</li> </ul>	<ul style="list-style-type: none"> <li>Formulated and promoted specific objectives and measures to promote utilization of four demographic groups: female, non-Japanese, physically or mentally challenged, and elderly employees in Japan</li> <li>Appointed first female executive officer (April 2011)</li> <li>Dramatic increase in percentage of male employees who took childcare leave, expansion of programs for nursing care</li> <li>Planned and implemented diversity inclusion training</li> </ul>	<ul style="list-style-type: none"> <li>Take diversity programs company-wide</li> <li>Hold activities to raise awareness about diversity inclusion                             <ul style="list-style-type: none"> <li>Have diversity committees at each site</li> <li>Take diversity training company-wide</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Continue strengthening industrial accident risk reduction activities</li> </ul>	<ul style="list-style-type: none"> <li>Implemented risk assessment and measures to reduce and remove risks by introducing occupational health and safety management system</li> <li>Acquired OHSAS 18001 certification at 7 sites in Japan</li> </ul>	<ul style="list-style-type: none"> <li>Continue strengthening global health and safety management and activities to reduce and remove industrial accident risks                             <ul style="list-style-type: none"> <li>Bring operations at production sites more strictly in line with OHSAS 18001</li> <li>Formulate standards for in-house occupational health and safety management system covering administrative sites and affiliates</li> <li>Build globally applicable health and safety promotion system, and systematically introduce occupational health and safety management system at overseas production sites</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Strengthen measures for primary prevention of mental illnesses (illness prevention and health promotion)</li> </ul>	<ul style="list-style-type: none"> <li>Held mental health group work training, with approximately 10,000 taking part</li> <li>Raised knowledge on mental health by having employees take third-party certification course (in fiscal 2010, approximately 720 people passed exam for level II and III of Mental Health Management certification program)</li> </ul>	<ul style="list-style-type: none"> <li>Continue strengthening measures for primary prevention of mental illnesses (illness prevention and health promotion)                             <ul style="list-style-type: none"> <li>Continue mental health group work training</li> <li>Improve knowledge of mental health-related issues by encouraging acquisition of third-party certification in mental health management</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Implement aggressive measures for health promotion</li> </ul>	<ul style="list-style-type: none"> <li>Health checkup participation rate was 99.99%. Health guidance (including counseling focused on metabolic syndrome) was given to 97% of those who needed follow-up</li> <li>Held company-wide sports festivals (approximately 6,800 participants for the year)</li> <li>Held walking events such as company-wide team walking (approximately 16,800 participants for the year)</li> </ul>	<ul style="list-style-type: none"> <li>Implement aggressive measures for employee health promotion                             <ul style="list-style-type: none"> <li>Follow up health exams with improved health guidance for employees who require it (including counseling focused on metabolic syndrome)</li> <li>Hold group health seminars and health workshops at each workplace</li> <li>Get people in the habit of exercising and energize the workplace through events like sports festivals and team walking</li> <li>Implement smoking cessation measures such as no-smoking campaigns centered around Sharp No-Smoking Day</li> </ul> </li> </ul>

## Respect for Basic Human Rights and Personal Dignity

Sharp participates in the United Nations Global Compact as part of its worldwide efforts to abide by international standards for human rights and labor.

The Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct stipulate the guiding principles on human rights for all executives and employees regarding protecting basic human rights and personal dignity, prohibiting discrimination and human rights violations, and prohibiting both child and forced labor.

Overseas, Sharp strives to prevent human rights violations based on local laws, and it gives newly appointed heads of Sharp bases booklets covering topics like respect for human rights. In Japan, Sharp works to ensure respect for human rights by annually conducting human rights training at each site (a total of approximately 60 sessions in fiscal 2010).

## Good Labor-Management Relationship Through Dialogue

Sharp respects employees' right to organize and right of collective bargaining based on the laws in each country and region, and works to strengthen trusting relationships with labor unions.

In Japan, Sharp has monthly meetings of labor-management heads: these include the Central Labor-Management Council, which involves top executives from both sides, and local labor-management meetings at each site, where opinions are exchanged on the business environment and labor-management issues.

In Europe, Sharp holds European Works Council meeting every year to review managerial issues throughout Europe. In China, under the Employment Contract Law enacted in 2008, companies are obligated to hold meetings with employee representative assemblies to decide on issues like employee working conditions. In line with this law, Sharp strives to build a system in which workplace issues can be solved in a manner beneficial to both labor and management.

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

As a global corporation striving to expand business in the world's rapidly growing markets, Sharp systematically promotes human resource development. In addition to holding seminars classified by function and job type to help employees deepen their knowledge and gain required expertise, Sharp has implemented a variety of personnel, education, and training systems designed to bring out the character, motivation, and creativity of each employee. Sharp's human resource development systems (introduced below) are based on respect for employee individuality and diversity.

### Next-Generation Human Resource Development Systems

#### ■ Leadership Program, Challenge Course

Sharp introduced the Sharp Leadership Program in Japan as an educational and promotion system targeting all employees, from younger employees in semi-managerial positions to those in supervisory positions, with the objective of systematically nurturing management personnel. It is intended to nurture management skill and leadership that is in line with global standards.

The Challenge Course, for younger employees in semi-managerial positions, eliminates seniority-based factors and sets up a monthly compensation system based on performance. Along with an education support system, it is intended to enable early promotion of younger personnel.

#### ■ Master System

The Master System in Japan was designed to create and develop one-of-a-kind technical skills, pass down these skills to the younger generation, and foster master technicians. Through the scouting and nurturing of highly skilled persons, Sharp aims to maintain vitality within the company organization. The system covers seven types of skills.

#### ■ Systems for Training Global Personnel (see page 94)

Sharp implements the GATE overseas assignee training, the G-BANK global personnel training, the GRID program for fostering young global employees, and the GOAL language training program.



GATE training

### Talent Development and Motivation-Boosting Programs

#### ■ Open Recruitment System

Sharp implements the Open Recruitment System in Japan to solicit applicants from among all employees company-wide, inviting them to take newly available positions in critically important areas, such as expanding business in newly emerging economies, pioneering new business, as well as developing new technologies and products. In fiscal 2010, jobs were offered in approximately 70 topic areas, and about 120 employees were assigned a new position.

#### ■ Personnel Declaration/Career Development System, Career Development Rotation

Sharp Corporation has a number of job rotation systems that promote individual skills and career development. Under Sharp's Personnel Declaration/Career Development System, once a year all employees in Japan document a career development plan and their job aptitude. Sharp then uses the information to develop skills and organize job rotations. Sharp also implements a Career Development Rotation to give mainly young employees in Japan the opportunity to experience multiple types of jobs. The aim is to systematically foster personnel who balance a high degree of expertise and a wide intellectual horizon.

### Education, Training, and Self-Development Support Systems

#### ■ Step-Up Campaign (Qualification Acquisition Encouragement Plan)

Supporting self-development for employees, Sharp introduced the Qualification Acquisition Encouragement Plan in September 2004 in Japan to reward employees who have acquired any of the specified six qualifications, such as public accountant certification. In 2010, in addition to the existing required qualifications in techniques and skills for specialized fields, as well as those directly related to daily duties, the plan now covers 242 qualifications, with a focus on language training and other skills needed for the development of global employees. Employees receive monetary rewards for acquiring these qualifications, with the amount depending on the difficulty in acquiring the qualification. Approximately 5,200 qualified applicants received the respective monetary rewards in fiscal 2010.

#### ■ Commendation System

Sharp annually honors domestic and overseas employees and divisions/departments that have achieved outstanding performance. In fiscal 2010, approximately 150 awards were presented to about 4,000 employees.



Fiscal 2010 ceremony to award employees who achieved outstanding performance

### TOPICS

#### China Personnel Development Center Promotes Employee Growth

Until recently, each Sharp base in China handled its own personnel development. But now Sharp wants to be able to constantly train personnel capable of driving the rapidly growing business in China, and to this end Sharp established the China Personnel Development Center in October 2010 as a dedicated site for the comprehensive planning and implementation of consistent human resource development.

The center runs the Sharp Leadership Program China (SLP-C) for the training of leaders who can tackle and solve management issues. This is just one of numerous programs in which human resource and education systems merge with the aim of fostering the growth of employees.

Close-Up

## Stressing Diversity to Develop Human Resources Who Can Compete Worldwide

Sharp believes that having people of diverse values and languages smoothly communicating and furthering business will create new value and help it grow as a global company. To achieve this, Sharp is building human resource development systems and a corporate climate conducive to turning out internationally minded people who respect the individuality and values of others and who use diversity to maximum effect.

Sharp human resource development systems include the following:

1. GATE for the training of employees scheduled for immediate overseas assignments
2. G-BANK for the training of employees scheduled for overseas assignments within three years
3. GRID for the training of young employees who will be key to developing Sharp's future overseas business
4. GOAL for training employees throughout Sharp in second languages

Name of system	Details of activities
GATE	<ul style="list-style-type: none"> <li>Employees assigned outside of Japan are given systematic training that gives them the concrete and practical knowledge and skills needed for understanding culture and carrying out management duties in other countries</li> <li>Starting in fiscal 2011, the following two courses are being introduced to boost the program:                             <ol style="list-style-type: none"> <li>1. Global leadership (turn out people who can work in a global setting by training them to exert their influence on the organization and the diverse people around them)</li> <li>2. Study of particular newly emerging economy (participants acquire the knowledge and know-how for doing business in a particular emerging economy in areas such as laws, social norm, business practices, history, government, and legal risk)</li> </ol> </li> <li>Approximately 170 participants in fiscal 2010; the cumulative total for the three years since fiscal 2008 is approximately 300; plans are for 240 trainees in fiscal 2011</li> </ul>
G-BANK	<ul style="list-style-type: none"> <li>Participants acquire the basic knowledge for working in a global setting and improve their second language skills</li> <li>Approximately 90 participants in fiscal 2010; the cumulative total for the three years since fiscal 2008 is approximately 590; plans are for 120 trainees in fiscal 2011</li> </ul>
GRID	<ul style="list-style-type: none"> <li>Employees will be sent for one or two years to newly emerging economies (countries with promising economic growth such as India and Russia), both those with and without Sharp bases, where they will learn in the actual market by immersing themselves in local culture and lifestyles</li> <li>The program started in April 2011 and plans are for approximately 200 participants over three years</li> </ul>
GOAL	<ul style="list-style-type: none"> <li>Workplaces where foreign languages like Chinese and English are necessary are designated as Global Workplaces (as of the end of February 2011 there were 286 such workplaces with approximately 3,240 employees), and relevant employees are given intensive language training</li> <li>All employees are given support and awareness in the study of second languages</li> </ul>

With employees getting more opportunities to work with people of various nationalities in various places, Sharp's aim is to step up these training programs and promote diversity in Sharp.

### Case Study

#### GOAL: Language Learning Support and Awareness Activities

##### Language Learning Support

- Subsidies for part of an employee's language training
- Monetary rewards for passing standardized tests such as TOEIC and the Chinese Proficiency Test
- English study method seminars

##### Awareness Activities

- Established GOAL website, a language learning portal site
- Posters promoting GOAL in Sharp workplaces
- GOAL introduced in Sharp in-house magazine



Language study session in the workplace



Posters put up in all workplaces



GOAL website

The website contains useful information for improving language skills, including study advice from people who have passed proficiency tests, details on what each workplace is doing, recommended study materials, and test information.

#### Words from a GATE Participant

This is my first overseas assignment, so naturally I'm anxious and confused but working full speed ahead every day. In China, I was stressed out worrying about whether I could get my job done in a country with a different culture, language, and business practices. Then I remembered the words of my instructor in the GATE program in Japan, who said, "Start by trying to communicate." So I had an intimate discussion with the Chinese staff and did my best to understand what they were thinking while telling them how I felt. Even if you're not good at your second language, you can get your point across if you have the will. So I was gradually able to set a good work pace. Work processes are systematized and countries differ, but in the end you are working with another fellow human being. What's most important is mutual understanding and trust. I had a chance to meet some of my GATE classmates in Shanghai, and after talking about our problems and exchanging information, I left with a feeling that there is still much more I can do. My study in the GATE program, as well as the people I have met and worked with, have been invaluable assets in my work and life in China.



**Kiyoshi Odai**  
Section Chief  
Technical Planning  
Department  
Sharp Laboratories of  
China Co., Ltd. (SLC)

## Efforts Toward Diversity

Sharp believes that carrying out diversity management\*1 is crucial to boosting the competitiveness of a company in a world in which business is becoming increasingly global. From this point of view, Sharp initiated the Corporate Affirmative Action for Women Strategy Program as the first step in diversity management in June 2005 in Japan.

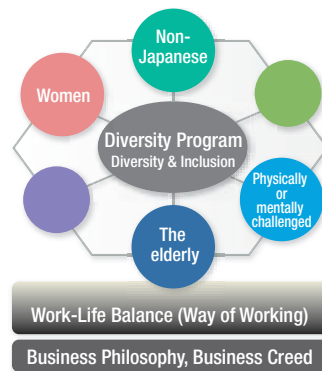
In October 2004, the company established the Corporate Equal Partnership Project Team, which was responsible for planning and promoting affirmative action programs, and in March 2009, changed the name of the organization to the Diversity Development Team. In addition to continuing to create an environment where women can excel, Sharp in Japan is promoting total diversity, including utilizing the skills and talents of non-Japanese employees in Japan, employing the physically or mentally challenged, and reemploying retirees who have reached mandatory retirement age.

The Diversity Promotion Committee is made up of managers responsible for promoting diversity and members representing various groups. The Committee, as well as topic-based subcommittees, holds regular meetings to confirm the implementation status of diversity promotion measures for each group, exchange views on policies, and share information on problems. The aim of the Committee is to foster mutual cooperation while promoting diversity in a consistent manner.

These efforts have earned high appraisal from outside the company, with Sharp receiving a special award at the 4th Diversity Management Awards sponsored by Toyo Keizai Inc. in April 2011.

### ■ Concepts Underlying the Diversity Program

1. Diversity management is a human resources strategy for utilizing a diverse range of employees; it is also a business strategy.
2. Diversity is part of Sharp's business philosophy.
3. Based on their unique individual attributes, formulate and promote programs aimed at promoting the active participation of women, non-Japanese employees in Japan, the physically or mentally challenged, and the elderly.
4. Consistently promote diversity.
5. As a foundation for promoting diversity, strive to ensure that systems supporting the balance between work and family are established and become widespread.
6. Work to build a corporate environment that accepts diversity.



\*1 Diversity management (strategy for utilizing diverse employees) accepts the ideas and values of employees with diverse backgrounds (with regard to gender, age, or nationality) without being influenced by previous corporate or social standards. It is a strategy for promoting company growth and the personal satisfaction of employees by responding rapidly and flexibly to changes in the business environment. (Taken from the report by the Diversity Work Rule Study Group of the Japan Federation of Employers' Associations.)

## Diversity Inclusion (Workplace Improvement for Equal Opportunity)

Sharp is providing information on the effectiveness and importance of diversity as a business strategy, as realized through diversity management. As well, Sharp is striving to build a foundation of diversity inclusion by holding workshops in each department to encourage employees to be aware of diversity.

### Case Studies

#### Win-Win Network

Sharp posts information on its intranet Win-Win Network that disseminates information on work-life balance and diversity, with the aim of creating a work environment where diverse employees can happily exercise their potential. Sharp uses its Win-Win Network to post results of in-house attitude surveys and information on various programs as well as to introduce a variety of role models for all employees.



Win-Win Network information site

#### Diversity Workshops

Each department holds workshops with the goal of raising awareness of diversity inclusion.



Workshop

#### Participation in External Networks

In 2010, Sharp signed the Women's Empowerment Principles, collaboratively created by UNIFEM (now UN Women\*2) and the UN Global Compact. For this support, Sharp was honored with a certificate at the APEC WLN (Women Leaders Network) Sakai meeting in Japan in September 2010.

With the aim of becoming a corporation in which women can succeed, Sharp participates as an organizing corporation in the Women's Networking Forum (60 corporations/ organizations and 550 members), which was established in 2005 in Japan.

In this way, Sharp is networking beyond the corporate framework and creating a work environment that can accept diversity.



Certification ceremony at the APEC WLN Sakai meeting  
Moez Doraid, Deputy Executive Director of UNIFEM (at the time; left) presents the certificate to Nobuyuki Taniguchi, Sharp Corporation Director and Executive Officer, Group General Manager, Human Resources Group

\*2 The United Nations Entity for Gender Equality and the Empowerment of Women, established through the merger of four former UN entities for women's empowerment.



## Taking Diversity Programs Company-Wide

### Promoting Activities of Female Employees (Corporate Affirmative Action for Women Strategy Program)

Sharp continues to promote the creation of an environment where female employees can excel, not as preferential treatment for women, but as a business strategy for maximizing the abilities of each female employee.

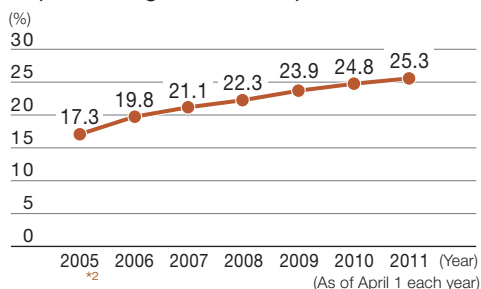
In fiscal 2010, Sharp stepped up training for female managers with the aim of putting more women into management positions.

Thanks to these efforts, in April 2011, Sharp's first-ever female executive officer was appointed.

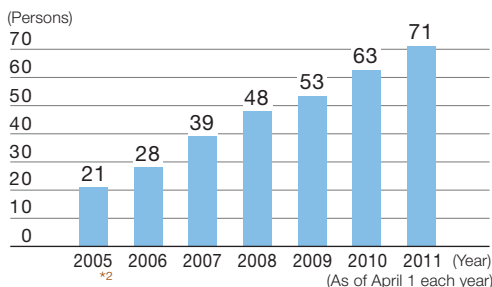
#### Corporate Affirmative Action for Women Strategy Program Targets

- 1) Female leader candidate development program: Expanding the number of female managers (at least 100 persons in fiscal 2012)
- 2) Development of female junior managers: Increase the ratio of junior managers to all female employees (30% in fiscal 2012)

#### Percentage of Female Junior Managers (Sub-Manual Positions)\*1



#### Number of Female Managers\*3



\*1 Sharp Corporation only

\*2 Corporate Affirmative Action for Women Strategy Program started in 2005

\*3 Managers at Sharp Corporation in Japan, including personnel posted to domestic affiliates

### Words from Sharp's First-Ever Female Executive Officer

To carry out one-of-a-kind management for the pursuit of "one-of-a-kindness" in everything we do, it is essential that we think out of the box. To do this, we must put diversity into action by creating a workplace where a diverse range of people—men and women of all ages and nationalities—can energetically use their talents to the fullest. Besides looking forward to everyone's contributions in this respect, I will do everything in my power to help create a workplace where diversity plays a vibrant, central role.



Keiko Okada  
Executive Officer

Group General Manager, One-of-a-Kind Products and Corporate Design Group  
Group General Manager, Global Brand Strategy Group  
Sharp Corporation

### Sharp Corporation Personnel Composition

(As of April 1, 2011)

		Male	Female	Total (persons)
Directors, executive officers, auditors		37	1	38
Employees	Managers	3,037	64	3,101
	Sub-managers	7,479	561	8,040
	General staff (fiscal 2011 new employees)	9,380 (218)	1,589 (37)	10,969 (255)
	Subtotal	19,896	2,214	22,110
Total		19,933	2,215	22,148
Ratio (%)		90.0	10.0	100.0

### Personnel by Gender at Major Overseas Subsidiaries

(As of March 31, 2011)

Base		Directors/ managers		Non-supervisory employees (permanent employees)		Total	
		Male (%)	Female (%)	Male (%)	Female (%)	Male (%)	Female (%)
SEC (US)	Sales	80.3	19.7	67.8	32.2	70.2	29.8
SMCA (US)	Manufacturing	78.9	21.1	42.3	57.7	45.2	54.8
SEMEX (Mexico)	Manufacturing	84.4	15.6	53.6	46.4	54.8	45.2
SEEG (Germany)	Sales	91.5	8.5	61.5	38.5	67.1	32.9
SUK (UK)	Sales	76.9	23.1	68.6	31.4	71.2	28.8
SUKM (UK)	Manufacturing	95.5	4.5	67.8	32.2	69.2	30.8
SMPL (Poland)	Manufacturing	91.8	8.7	30.1	69.9	31.2	68.8
SEID (Indonesia)	Manufacturing/sales	85.2	14.8	62.7	37.3	64.2	35.8
SATL (Thailand)	Manufacturing	79.4	20.6	27.7	72.3	29.9	70.1
SMM (Malaysia)	Manufacturing	72.5	27.5	34.1	65.9	39.8	60.2
SESC (China)	Sales	83.2	16.8	60.5	39.5	62.9	37.1
SOCC (China)	Manufacturing	90.9	9.1	31.3	68.7	33.2	66.8
NSEC (China)	Manufacturing	63.1	36.9	62.6	37.4	62.6	37.4
WSEC (China)	Manufacturing	66.7	33.3	39.2	60.8	41.6	58.4

### Employment of Non-Japanese

With the globalization of business, Sharp is working globally to secure and systematically train human resources who match the needs of each overseas base. The aim is to strategically nurture local human resources who can play a central role in overseas markets in the future. Sharp will also expand the hiring of foreign students and other foreign nationals in Japan.

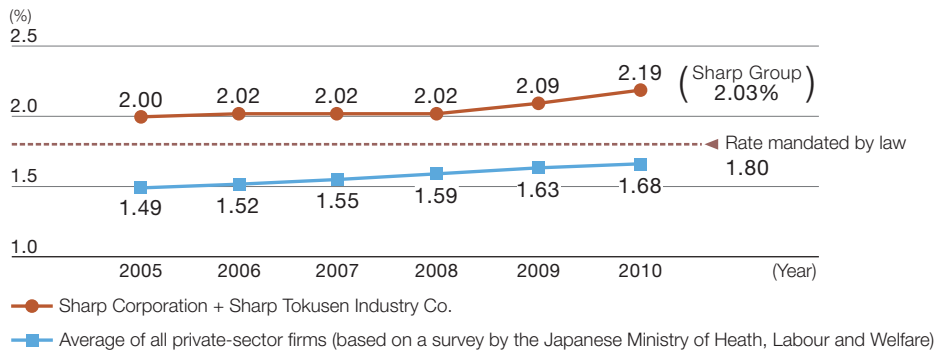
### Promoting the Employment of the Physically or Mentally Challenged

Sharp has been deeply concerned about social service and welfare since its establishment and has worked to promote the employment of the physically or mentally challenged. Each company within the Sharp Group makes efforts to proactively employ the physically or mentally challenged and create a better work environment for these employees.

The ratio of physically or mentally challenged employees at Sharp Corporation is 2.19% (2.03% for the Sharp Group), exceeding the rate mandated by law (1.8%) as stated in the Act for Employment Promotion etc. of Persons with Disabilities.

One recently started effort is a website containing news and information on physically or mentally challenged Sharp employees. Sharp is also trying to make the company an easier place to work through efforts such as sign language lessons in departments that intend to hire the hearing impaired.

#### Physically or Mentally Challenged Employment Rate in Japan



### Reemployment of Seniors

In response to the fact that public pension is not paid until a retiree is 65 years of age in Japan, Sharp basically reemploys interested employees who have reached the mandatory retirement age of 60 until they are 65. This is not in response to a legal request, but from the stance of the company to promote the utilization of senior employees who have a strong work ethic, and from the stance of the employees who wish to give back to society their skill and knowledge accumulated over many years.

### Case Study

#### Efforts of Sharp Tokusen Industry Co.

The precursors of Sharp Tokusen Industry Co., a special subsidiary, were the Hayakawa Branch Factory, a pressing factory for blinded WWII veterans, and later the Tokusen Metal Limited Partnership, which was founded in 1950—both established on the strong feelings of Sharp founder, Tokuji Hayakawa, who wanted to repay persons with disabilities for opening up his life path. In 1977, Sharp Tokusen Industry was the first company to be certified as a special subsidiary to employ the physically or mentally challenged in Japan. It changed and expanded its operations to fit the development of Sharp Corporation's electronics business, and operates utilizing cutting-edge equipment today.

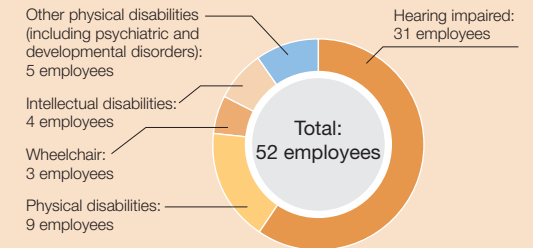
Sharp Tokusen Industry's main business includes the processing and inspection of laser chips, the processing of refrigerator parts, the functional evaluation of mobile phones, LCD panel repairs, document printing, digitization, and translation. For employees, the greatest joy is achieving the realization that happiness comes from overcoming one's limitations through hard work.

Towards that end and to help fulfill its corporate social responsibilities, Sharp Tokusen Industry will continue to proactively expand employment and will further develop its areas of business.



The current office building

#### Employment by Disability



#### Website for the Hiring of the Physically or Mentally Challenged



Website for the hiring of the physically or mentally challenged

#### Holding Sign Language Classes



A sign language class at Sharp

### Promoting Work-Life Balance

In line with its promotion of diversity, Sharp supports its employees by creating a rewarding, safe, and healthy workplace. Sharp gives employees a choice of work styles—allowing them to select the style that best suits them at various stages in their lives—thereby helping them achieve a work-life balance that will enable them to lead rich lives both at work and at home.

To this end, Sharp is expanding support programs focusing on childcare and nursing care to meet today's employee needs. Sharp is trying to familiarize employees with these programs and promote their use through company intranet information that includes program explanations and examples of employees who are participating in these programs, and it is holding seminars and making the childcare system easier for men to take advantage of.

To help employees realize an efficient working style that offers satisfaction both at the company and at home, Sharp labor and management continuously work together to change the way people work through initiatives like No Overtime Day and by encouraging employees to plan for and take their annual paid vacation days.

These efforts have earned high appraisal from outside the company, with Sharp receiving certification from the Japanese Ministry of Health, Labour and Welfare based on the Act on Advancement of Measures to Support Raising Next-Generation Children, as well as being honored in the 4th Work-Life Balance Awards sponsored by the Japan Productivity Center.



Work-Life Balance Guidebook and Nursing Care Guidebook



The Next-Generation Certification mark (nicknamed Kurumin) shows that the company is certified by the Ministry of Health, Labour and Welfare

### Case Study

#### Nursing Care Seminars Held

In Japan, Sharp holds nursing care seminars that offer nursing care information from both inside and outside the company. The aim is to ensure that when the need arises employees are prepared to take care of an elderly family member without delay.

The seminars give preliminary knowledge that makes it easier to handle nursing care issues so that employees are prepared to handle sudden emergencies or increasingly serious nursing care problems.

Nursing care can also go on for extended periods. The seminars help avoid the problem of family members becoming physically and mentally worn out by explaining what company support systems and outside services are available and appropriate.

With an increasing number of employees expected to face the issue of nursing care, Sharp will continue holding these seminars so that employees can take care of their family without interruptions to work.



A nursing care seminar

### Work-Life Balance Support Programs (Main Programs and Participation at Sharp Corporation)

Program name	Description	Participation (year and no. of persons)		
		2008	2009	2010
Childcare Leave	Allows a leave of any length until the last day of March following the child's first birthday or until the child is 18 months old. (In 2008–2009, 97.5% of those who took childcare leave returned to work.) Childcare assistance grants: 1) The 10-day period beginning at the start of the childcare leave period is treated as a period with pay. 2) An allowance of 60,000 yen a month is provided during the leave period (excluding the 10-day period when salary is paid).	170 ( : Men (78)	109 (54)	288 (211)
Reduced-Hours Employment During Childbearing/Childcare	A system by which an employee can reduce work time for a maximum of three hours per day in units of 30 minutes during pregnancy. Also allows a female/male employee the same reduced-hours employment system until the last day of March after her/his child has reached the sixth year of elementary school.	80	72	62
Childcare Support Work Program	Allows flexible work schedules (work day start and end times) until the last day of March after the child has reached the sixth year of elementary school. Allows an employee to shorten working hours up to an average of three hours per day in one-hour units.	344	389	428
Nursing Care Leave	Allows an employee to take leave to care for a family member requiring nursing care for a total of two years (can be divided up).	11	11	9
Nursing Care Support Work Program	Allows flexible work schedules (work day start and end times) for nursing care for a six-month period per application (can be renewed if necessary). Employee can shorten working hours in one-hour units up to an average of three hours per day.	9	9	9

#### Other Programs

Reduced-Hours Employment for Nursing Care, Guaranteed Reemployment after Childbearing/Childcare, Paternity Leave, Daycare Adaptation Leave, Reduced Weekly Working Days for Nursing Care, Home Helper Expense Subsidies, Volunteer Leave, Multipurpose Leave, Leave of Absence/Increasing Half-Day Use of Annual Paid Holidays for Fertility Treatment, Fertility Treatment Financing System, Multipurpose Leave Taken in One-Hour Units (or half-day units)

#### Life Planning Seminars Held

In Japan, Sharp holds life planning seminars for employees 45 and 55 years old so that after retirement they can enjoy their new life with peace of mind.

The seminars focus on what is needed for each age group: life planning basics and financial preparation for 45-year-olds, and social insurance and financial management for 55-year-olds. So that the employees' spouses can also take part, the seminars are held on weekends and at main Sharp offices. Last year approximately 900 employees took part in the seminars for both age groups.

Participants have praised the seminars for giving them an opportunity to think about life planning and better understand pension plans.

### Basic Philosophy and Principles on Health and Safety

Sharp Corporation has established the Basic Philosophy and Principles on Health and Safety. Every year, the company draws up specific objectives and action plans, with the goal of totally eliminating industrial accidents.

#### Basic Philosophy

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

#### Health and Safety Principles

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

### Aiming for a Secure, Safe, and Healthy Workplace

Every three months, Sharp Corporation holds Central Health and Safety Committee Meetings that bring the company and the labor union together to confirm the status of company-wide health and safety efforts and share valuable information. It has also organized a team consisting of Central Health and Safety Committee members to conduct health and safety inspections at each plant.

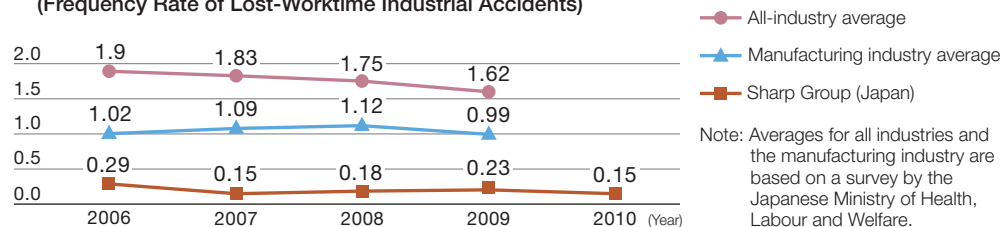
Moreover, a Health and Safety Committee consisting of labor and management representatives at each business location holds a monthly meeting to report and discuss health and safety activities and decide on improvement measures. Also, the Health and Safety Council at each business location holds meetings to further improve the health and safety of subcontractor employees permanently stationed within Sharp sites.

The result of these continuing measures is that the Sharp Group's<sup>\*1</sup> industrial accident rate (frequency rate of lost-worktime industrial accidents<sup>\*2</sup>) in Japan in 2010 was 0.15. This rate is consistently below the national average for the manufacturing industry.

\*1 Sharp Group in Japan: Sharp Corporation, SEMC, SEO, SAS, SSP, SEK, SDS, SFC, SMS, SDP, STC, OSS, SOR, iDeep Solutions

\*2 Indicator that represents the incidence of industrial accidents per million work hours (one day or more of suspended operations).

■ Sharp Corporation's Annual Industrial Accident Rates (Frequency Rate of Lost-Worktime Industrial Accidents)



### Promoting the Introduction of the Occupational Health and Safety Management System

Sharp is promoting the introduction of an occupational health and safety management system in an effort to further address the potential risk of accidents in the workplace and to firmly set in motion proactive safety activities that prevent or reduce risks. As of fiscal 2010, Sharp Corporation's 11 domestic production sites had acquired OHSAS 18001 certification<sup>\*3</sup>. In fiscal 2011, with the aim of giving Sharp Corporation's non-production sites and affiliates the same level of know-how in preventative safety measures as production sites, the company is formulating the standards for an original occupational health and safety management system.

In addition, to raise the standard of its occupational health and safety management globally, Sharp is also making continued efforts to acquire OHSAS 18001 or certification for occupational health and safety management system standards in each country<sup>\*4</sup> for its overseas manufacturing bases.

\*3 One of the occupational health and safety management system certification standards; it is the most widely used standard around the world today.

\*4 For example, manufacturing subsidiary SATL in Thailand acquired TIS 18001 Thai occupational health and safety certification in August 2007.

#### ■ OHSAS 18001-Certified Sites (as of March 31, 2011)

	Sites & overseas bases	Date certification acquired	
Japan	Mie Site	Plant No. 2	May 2004
		Plant No. 1 and 3	April 2009
	Kameyama Site	June 2007	
	Mihara Site	January 2010	
	Toyama Site	February 2010	
	Katsuragi Site	July 2010	
	Hiroshima Site	July 2010	
	Tochigi Site	Plant No. 1	August 2010
	Nara Site	September 2010	
	Fukuyama Site	December 2010	
	Yao Site	January 2011	
Sakai Site	March 2011		
Overseas	PT. Sharp Semiconductor Indonesia (Indonesia)	February 2009	
	Sharp Manufacturing Poland sp. z o.o. (Poland)	September 2009	
	Wuxi Sharp Electronic Components Co., Ltd. (China)	December 2009	

## Enhancing Mental Health Care and Expanding the Support System for Employees Taking or Returning from Medical Leave

In order to help employees prevent mental illnesses or deal with them at an early stage and to support employees on medical leave in making a smooth return to work, Sharp has an improved counseling system in which medical specialists or industrial counselors are stationed at main offices and plants. The company also conducts various training and educational activities.

Also, as part of periodic health checkups, Sharp carries out mental stress checkups on all employees by self-diagnosis (99.6% participation rate in fiscal 2010). For employees who are diagnosed with high stress levels, Sharp gives one-on-one counseling through industrial physicians or counselors.

In fiscal 2011, Sharp will continue working for the primary prevention of mental illnesses by strengthening cooperation among its staff (General Affairs Department, industrial physicians, Healthcare Division, union chapters, counselors, etc.) at Sharp sites and affiliates. It will also (1) conduct mental health group work training, (2) raise knowledge of mental health-related issues by encouraging employees to acquire third-party certification in mental health management, and (3) encourage the use of counseling resources both inside and outside the company.

## Getting and Keeping Employees in Shape

Sharp in Japan has company-wide fitness measures relating to metabolic syndrome, smoking, and mental health. Sharp strives to make these measures an integral part of employees' daily routines that they use to improve their lifestyles by carrying out the Get Healthy campaign. Employees receive support from Sharp so that they can take care of their own health by setting targets for exercising, eating properly, stopping smoking, and watching their weight. In fiscal 2010, in addition to previous systems for individual support and group education, Sharp introduced workshops held at each workplace and led by company healthcare staff, which allowed Sharp to provide a wider range of employees with health-related information.

Exercise is indispensable to preventing disease and improving health. Sharp has therefore been working to make exercise an integral part of employees' lives, with events like company-wide sports festivals, team walking, and other walking events. At the sports festivals, a cumulative total of approximately 6,800 employees took part in the three sports of futsal, softball, and bowling. And the number of people taking part in the regularly held team walking events has grown to a cumulative total of 16,800, making these events a successful way to create vitality in the workplace.



Softball game at a sports festival

To help employees quit smoking, in fiscal 2010 Sharp held its first-ever all-day Sharp No-Smoking Day as a first step towards creating an atmosphere conducive to stopping smoking. A total of 490 employees took part in the company-wide quit-smoking campaign, which helped employees take the first steps to quitting smoking by offering individual support including providing medicine, and holding the Mission Sparkling Clean Teeth campaign.

The company, the labor union, and the Sharp Health Insurance Association will continue to work together to do everything possible to contribute to improving employees' health.

## Programs for Mental Health Care

- Providing job-level-specific training and other mental health awareness activities
- Providing mental stress checkups simultaneously with regular physical checkups for all employees
- Providing face-to-face counseling at main sites by company counselors or medical specialists
- Giving advice by e-mail, phone, or in-person counseling through specialized outside organizations
- Counseling for those employees who have experienced major changes in their environment, such as transfer, transfer not accompanied by family, and job promotion
- A support system that provides ongoing communication with employees on medical leave from work
- A support program to help employees who were on medical leave from work make a smooth return to work, in cooperation with an industrial physician, one's assigned department, and the General Affairs Department
- Providing a trial period for employees who were on medical leave to support their return-to-work training
- Holding regular meetings attended by the person in charge of mental health at every office and plant, and the company's healthcare staff

## Programs That Get Sharp Employees in Shape

- Aggressive population approach\*
  - Information on the Sharp Health Insurance Association website and the intranet bulletin board, health education activities
  - \* The approach works to prevent lifestyle diseases, reducing health risks in all of Sharp by helping individual employees exercise regularly and eat properly.
- Post-health-checkup support and counseling for individual employees by industrial physicians and company healthcare staff members
- Rebuilding of a data management system that includes health checkup results and the creation of an improved and consistent follow-up system for checkups
- Improvement of the health guidance system (including counseling focused on metabolic syndrome), skills training, case reports
- Health education including group seminars and workshops at each workplace led by company healthcare staff
- Forming exercise habits
  - Company-wide sports festivals to create vitality in the workplace
  - Regular company-wide team walking and other walking events to encourage employees to get into the habit of exercising
- Promote smoking cessation
  - Besides Sharp No-Smoking Day, initiated in fiscal 2010, Sharp No-Smoking Week was established in fiscal 2011 to step up efforts to get employees to stop smoking
  - Helping employees take the first steps to quit smoking by offering individual support including providing medicine
  - Support for employees from dentists (oral hygiene guidance) and fitness center staff (exercise guidance)



Walking event

# Social Contribution Activities as a Corporate Citizen

Based on its business philosophy “to contribute to the culture, benefits and welfare of people throughout the world” and as a corporate citizen, Sharp addresses various social challenges with a global viewpoint and conducts community-based social contribution activities, aiming for a harmonious coexistence with society. Sharp recognizes environment, education, and social welfare as priority fields, has created structures and systems for these activities, and voluntarily and continuously tackles these areas.

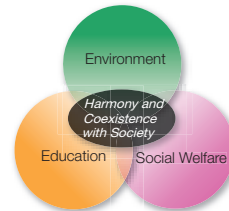
Objectives for Fiscal 2010	Achievements for Fiscal 2010	Objectives for Fiscal 2011
<p>Japan:</p> <ul style="list-style-type: none"> <li>Promote and expand Sharp Forest activities</li> <li>Provide environmental education at 500 elementary schools, provide craftsmanship education at 100 elementary schools</li> <li>Hold new educational programs that combine factory tours, visits to the Sharp Technology Hall, and environment/craftsmanship classes</li> <li>Provide educational support for persons with disabilities (at special-needs schools)</li> <li>Continue local social contribution activities at all Sharp sales and service bases</li> <li>Encourage volunteering among employees, with a goal of having 30,000 employees volunteer</li> </ul>	<ul style="list-style-type: none"> <li>Created new Sharp Forests, bringing the total to 12</li> <li>Provided environmental education for about 27,100 children at 520 elementary schools and craftsmanship education for about 2,800 children at 91 elementary schools</li> <li>Began programs that combine factory tours and environment/craftsmanship classes; about 2,300 children from 45 schools took part</li> <li>Began providing educational support at special-needs schools for the hearing impaired; about 260 children at 20 schools took part</li> <li>A total of about 25,000 employees participated in a total of 903 local social contribution activities at all Sharp sales and service bases</li> <li>A total of about 30,000 employees participated in volunteer activities at all Sharp offices and bases</li> </ul>	<ul style="list-style-type: none"> <li>Hold community-based Sharp Forest activities that lead to the protection of biodiversity</li> <li>Provide environmental education at 500 elementary schools, provide craftsmanship education at 100 elementary schools</li> <li>Continue educational programs that combine factory tours, visits to the Sharp Technology Hall, and environment/craftsmanship classes</li> <li>Continue educational support for persons with disabilities (at special-needs schools)</li> <li>Continue local social contribution activities at all Sharp sales and service bases</li> <li>Encourage volunteering among employees, with a goal of having 30,000 employees volunteer</li> </ul>
<p>Overseas:</p> <ul style="list-style-type: none"> <li>Continue activities centered on Sharp Charity Foundation in China</li> <li>Expand environmental education in overseas regions</li> </ul>	<ul style="list-style-type: none"> <li>In China, provided scholarships (about 150 people at 9 universities), donated Sharp high-density Plasmacluster Ion generators (a total of about 100 units to 27 hospitals and 8 welfare facilities), carried out beautification campaigns in areas near Sharp bases, conducted tree-planting activities, built elementary schools, etc.</li> <li>Conducted environmental education lessons at overseas locations, notably in North America and China (for about 7,100 children at 75 schools)</li> </ul>	<ul style="list-style-type: none"> <li>Continue activities centered on Sharp Charity Foundation in China</li> <li>Continue expanding environmental education in overseas regions</li> <li>Promote environmental protection activities and other social action programs in overseas regions</li> </ul>

## Fundamental View of Social Contribution Activities

Sharp promotes social contribution activities based on the business philosophy “to contribute to the culture, benefits and welfare of people throughout the world.” Sharp focuses on social challenges from a global viewpoint and uses its own resources to conduct community-based activities that contribute to society in Japan and in areas around the world.

Sharp recognizes the environment, education, and social welfare as priority fields for these activities, has created structures and systems for these activities, and voluntarily and continuously tackles these areas. These activities will help Sharp both maintain the trust of society and aim for a harmonious coexistence with society.

### Three Important Fields of Social Contribution Activities



## Structures and Systems for Promoting Social Contribution Activities

Sharp Corporation has a division that specializes in the planning and promotion of all domestic and overseas social contribution activities. This division plans social action measures and builds structures and systems for implementing social contribution activities.

For its educational support programs, Sharp continues to develop human resources, including training employees to serve as instructors in regions throughout Japan and registering those employees as in-house-qualified personnel. Sharp also encourages employees to acquire a skill—like sign language—that would enable them to contribute to society.

Sharp also works to foster a corporate climate conducive to volunteering and to enhance employees’ social awareness. It does this by providing the systems and the type of environment that make it easier for its employees in Japan to participate in social contribution activities.

Sharp provides employees with opportunities for contributing to their local communities through volunteer activities. It also has a volunteer leave system, whereby employees can take up to a one-year leave from work to engage in volunteer activities, and a multipurpose leave system, whereby employees can receive eight days of extra paid leave per year to engage in socially valuable activities.

And in a unique initiative, Sharp and its labor union in Japan jointly established the Sharp Green Club (SGC) to carry out such activities as local cleanup campaigns and forest preservation activities.

## Great East Japan Earthquake Reconstruction Support

Sharp is supporting the reconstruction of the areas afflicted by the disaster through monetary donations and the use of corporate resources to provide what help it can.

Soon after the earthquake, Sharp and Shin-Kobe Electric Machinery Co., Ltd. jointly prepared solar power systems\* for the devastated areas and donated them to emergency shelters with the cooperation of the Japanese Ministry of Defense. Moreover, Sharp provided LCD TVs, refrigerators, washing machines, and other household appliances for use at temporary housing.

Sharp will continue to support the recovery of the afflicted areas.



\* The disaster-relief solar power system is a stand-alone power system that consists of Sharp solar cells, Shin-Kobe Electric Machinery storage batteries, and an AC power strip. The generated power can be used for purposes such as recharging mobile phone batteries.

Disaster-relief solar power system (left)  
Solar power systems being sent to afflicted areas with the help of the Ministry of Defense (right)

Case Studies Environment

As a corporate citizen, Sharp undertakes activities to protect biodiversity, as well as other environmental conservation activities, and contributes to the global environment through its business activities, as laid out in its vision of "Becoming an Eco-Positive Company." Sharp also carries out activities led by the joint labor-management organization Sharp Green Club (SGC). In Japan, these activities include Sharp Forest work, cleanup campaigns, and greening activities at all production sites and sales and service bases. Forest preservation work and other environmental conservation activities are also conducted at bases outside of Japan, in close coordination with local communities. It is also worth noting that Sharp has formulated the Sharp Biodiversity Initiative, a set of company-wide measures for protecting biodiversity, and is continuously carrying out activities rooted in local lifestyles and social climates.

[Related information](#) Page 71 & 72: Protecting Biodiversity

Environmental Conservation Activities in Japan

Sharp is developing 12 Sharp Forests near its large-scale production sites and sales and service bases. Activities related to that are mainly carried out by SGC and include biodiversity protection and regeneration of the area between the foot of a mountain and arable land, known in Japan as *satoyama*. In Sharp Forests, participants plant trees and take care of trees that have already been planted. Some Sharp Forests are also the site of outdoor environmental classes. SGC has been recognized for its efforts over the past five years to regenerate *satoyama* areas in the Konoyama Sharp Forest in Kishiwada, Osaka Prefecture and has received a certificate of appreciation from the governor of Osaka.

Sharp promotes cleanup campaigns, greening activities, and biodiversity protection activities in areas and communities near its production sites and offices. In fiscal 2010, a total of approximately 25,000 employees participated in approximately 900 campaigns. Sharp will continue making contributions to local communities through a variety of activities aimed at strengthening ties with them.



COP10 Partnership Campaign\*

From August to November 2010 at all Sharp Forests across Japan, about 1,000 Sharp employees and their family members took part in such activities as taking care of trees and nature observation walks, as part of the COP10 Partnership Campaign.

\* A campaign of environmental efforts implemented by various organizations in Japan in support of the 10th meeting of the Conference of the Parties to the Convention on Biological Diversity (COP10).

[Related information](#) Page 21: Further Raising Awareness of CSR Among Sales and Service Employees



Cleaning Up the Beach in Ishikawa Prefecture

In May 2011, about 30 Sharp employees and their family members took part in Clean Beach Ishikawa, a campaign to clean up approximately 584 kilometers of shoreline in Ishikawa Prefecture. The campaign now involves the entire prefecture and has expanded to cleaning up mountains, rivers, and the ocean—all an important part of the natural ecosystem. Participants cleaned up the beach in the hope of protecting wild birds and the ocean's biodiversity.

SGC: A Joint Labor-Management Volunteer Group

Jointly established by Sharp and its labor union in Japan in 2003, SGC is a volunteer organization aimed at fostering an awareness of environmental protection among employees. It does this through various environmental protection activities and by developing a tighter coexistence with local communities. SGC will actively continue these activities as chances for each employee to think about environmental protection and as opportunities to make social contributions that deepen the sense of fellowship among our employees and local residents.



Akikazu Tsuda  
SGC Vice Chairman  
(Sharp Workers Union Chairman)

[Web](#) Sharp Forests

Overseas Environmental Conservation Activities

As a corporate citizen, Sharp is proactively undertaking environmental conservation activities, such as biodiversity protection, targeting various environmental social issues at local bases around the world. Sharp aims to develop environmental awareness among its employees through these activities, while at the same time contributing to the global environment.

In fiscal 2010, biodiversity protection activities were held in 26 countries and regions in support of the May 22 United Nations International Day for Biological Diversity.

Sharp will continue developing community-based environmental conservation activities.



Tree Planting in a National Park in Mexico

Since 2010, about 100 employees of Mexico-based sales subsidiary SCMEX and their families have been planting trees in a national park.



Tree Planting in a Park and Kindergarten in Austria

In June 2011, Austria-based sales subsidiary SCEE planted trees in a local park and on the grounds of a kindergarten, in cooperation with an NGO.



Beach Cleanup in Thailand

In May 2010, 363 employees of Thailand-based manufacturing subsidiary SMTL cleaned up a local beach.

Case Studies Education

Sharp is undertaking educational activities directed at children, on whose shoulders the future will rest, to increase their awareness of global environmental issues and their interest in science, and to get them thinking about future careers. In Japan, Sharp began providing environmental education at elementary schools from fiscal 2006, and craftsmanship education at elementary schools from fiscal 2009. In fiscal 2010, Sharp officially started a program that combines factory tours and environment/craftsmanship education. Recognizing that environmental issues are global social issues, Sharp is also undertaking environmental education around the world.

Educational Activities in Japan

Elementary School Environmental Education

Since October 2006, Sharp has conducted environmental education activities—in collaboration with the Weathercaster Network (WCN) and with the cooperation of the Asaza Fund—at a total of 500 elementary schools across the nation annually. The aim of the classes is to foster concern for the global environment in children, on whose shoulders the future will rest, by conveying to them current global environmental issues in easy-to-understand lessons, leading them to do environmentally conscious activities at home. Another aim is to increase children's interest in science through presentations on environmental technologies, experiments, and other methods.

By November 2010, classroom presentations had been given in a total of approximately 2,000 schools, reaching 130,000 children. These activities have earned high praise from local communities, and in February 2011, Sharp received the "Environmental Relay for the Future" special award at the 8th Corporate Philanthropy Awards in Japan.

Elementary School Craftsmanship Education

From fiscal 2009, craftsmanship education classes are being given at a total of 100 elementary schools around Japan annually. These classes aim at conveying to children in easy-to-understand language the fun and dreams of craftsmanship, and the importance of teamwork, an inquiring mind, and curiosity in craftsmanship, in the hope that the lessons will act as a catalyst to increase students' interest in science and get them thinking about future careers.

In January 2011, Sharp received the 2010 Award of the Minister of Education, Culture, Sports, Science and Technology for Excellence in Career Education by School Boards, Schools, Companies, and PTA Groups on the recommendation of the Sakai Municipal Board of Education, which highly valued Sharp's efforts.

Factory Tours and Environmental/Craftsmanship Classes

In fiscal 2010, Sharp began combining tours to its factory in Kameyama and R&D center in Tenri with its environmental and craftsmanship classes for schoolchildren in Japan. With the aim of increasing the children's interest in science and their awareness of environmental issues, this program features a variety of displays that explain, in an easy-to-understand way, Sharp's cutting-edge technologies and the environmental efforts made by its factories. These tours are popular with local educators, who find the educational content to be much more effective than that of conventional factory tours.



8th Corporate Philanthropy Awards  
Japan Philanthropic Association Director Yoko Takahashi (left) and Moriyuki Okada, Sharp Corporation Executive Managing Officer; General Manager, Domestic Sales and Marketing; Group General Manager, Domestic Sales and Marketing Group



2010 Award of the Minister of Education, Culture, Sports, Science and Technology for Excellence in Career Education by School Boards, Schools, Companies, and PTA Groups  
Isao Shibamura, Superintendent of Education, Sakai City (left) and Kazutoshi Goto, Sharp Corporation Executive Officer; Group General Manager, CSR Promotion Group

Factory (Kameyama) tour and environmental/craftsmanship class

Overseas Environmental Education

Environmental education for elementary school students began in fiscal 2008, starting in the United States and China, and has since expanded to other countries. In Malaysia and Indonesia, the presentations have focused on themes related to local environmental issues like ecological preservation, which has been taught through tree planting at the schools. Environmental education was also given at local Japanese schools in Germany. In fiscal 2010, approximately 7,000 students in 75 schools overseas learned about the environment.



Environmental education at an elementary school in Malaysia



Environmental education at an elementary school in Indonesia



Environmental education at a Japanese school in Germany



Case Studies Social Welfare

Sharp conducts various activities on a global scale, including employment of the physically or mentally challenged, job assistance for the physically or mentally challenged through sales opportunities for vocational training centers, environmental education classes for physically or mentally challenged children in Japan, and donations to welfare facilities and charities overseas.

Social Welfare Activities in Japan

Activities at a Special Subsidiary

Sharp Tokusen Industry Co. was the first company to be established as a special subsidiary in Japan and employ the physically or mentally challenged, allowing them to participate in society.

In October 2010, an employee received an award for long-time service from the Osaka Prefectural Association of Employment Development.



Award from the Osaka Prefectural Association of Employment Development

Sharp Tokusen Industry also actively fulfills requests for work experience from special-needs schools and other schools. In fiscal 2010, 70 students participated in the work experience program and found it a useful experience for their future careers.



Work experience training

Related information

Page 97: Promoting the Employment of the Physically or Mentally Challenged

Providing Sales Opportunities for Vocational Training Center\* Products

As a joint effort between labor and management, Sharp provides sales opportunities on its premises for handmade products from vocational training centers, working together with local governments and non-profit organizations. As of the end of fiscal 2010, sales took place at 12 locations throughout Japan, and there are plans to expand sales to other sites in the future.



Sales at Sharp Tokusen Industry

\* A workplace for the physically or mentally challenged who have difficulty gaining immediate employment at corporations and businesses.

Environmental Education at Special-Needs Schools

Sharp conducts environmental education lessons at approximately 20 special-needs elementary schools for educating the hearing impaired across Japan annually. The lessons are based on the government curriculum guidelines and incorporate visual lesson aids and interactive experiments, with the aim of increasing the students' interest in science.



Environmental education at a special-needs school

Related information Page 106: Close-Up

Words from a Cooperating Support Group

Face-to-face selling at large corporations is an invaluable experience for the physically or mentally challenged working at vocational training centers.

The challenged from those centers derive a boost to their confidence and much pleasure from the experience, which also leads to the advancement of the vocational assistance business.

This is great encouragement for us, and we hope to support such opportunities in the future.



Yuichiro Asada  
Osaka Intellectual Disabilities Employment Promotion Building Service Cooperative Business Association (L-Challenge)

Overseas Social Welfare Activities

As a corporate citizen, Sharp is proactively undertaking activities, targeting priority issues in social welfare even at local bases around the world.

Sharp is specifically focusing on undertaking donation and charity activities for facilities and schools for the physically or mentally challenged and the elderly.

These activities will lead to an improved social awareness in Sharp employees, while at the same time contributing to local society.

Sharp will continue developing community-based social action programs.



Donating School Supplies in the Philippines

In December 2010, employees of Philippines-based sales and manufacturing subsidiary SPC collected school supplies, clothing, and toys and donated them to a local facility for the physically or mentally challenged.



Selling Products Made at a Welfare Facility in China

In January 2011, China-based manufacturing subsidiary NSEC cooperated with the local community and began sales at its company store of products made by the physically or mentally challenged.



Renovating a Schoolyard in the UK

In July 2010, UK-based sales subsidiary SUK repaired and repainted the benches and tables in a local schoolyard to make it a better place for students.

Case Studies Disaster Area Reconstruction Assistance, Others

Reconstruction Support to Areas Stricken by the Great East Japan Earthquake

Sharp made monetary donations and undertook the following reconstruction support activities for the areas devastated by this unprecedented, large earthquake and tsunami. Sharp will continue making contributions to the region's quick recovery through volunteer reconstruction activities conducted by employees and through other methods.

Monetary Donations

- Corporate donation (via Japanese Red Cross Society and other organizations): 100 million yen
- Sharp Group employee donations (incl. overseas employees): Approximately 42 million yen

Product Donations

- Disaster-relief solar power systems: 250 units
- Six varieties of household appliances: 1,325 units (LCD TVs, refrigerators, microwave ovens, fully automatic washing machines, rice cookers, Plasmacluster Ion air purifiers)
- Industrial-use Plasmacluster Ion generators: 335 units

Related information

Page 101: Great East Japan Earthquake Reconstruction Support



To show solidarity with Japan, US-based sales subsidiary SEC invited employees' families to its offices and procured children's t-shirts decorated with a heart and a red cross. All of the proceeds were donated to an earthquake relief fund. The children also sent messages of support to Japan.



Employees of UK-based R&D subsidiary SLE held a charity concert and an auction to raise money for the disaster victims. They also paid silent tribute to the victims.

A Message from the Minamisoma Municipal General Hospital

Sharp received a letter of appreciation and photographs from the Minamisoma Municipal General Hospital staff, who are caring for victims in emergency shelters, after providing 70 Plasmacluster Ion air purifiers for use at the four emergency shelters in Minamisoma, Fukushima Prefecture.



Many citizens of Minamisoma are still living in emergency shelters due to the recent disaster. Because they spend their waking and sleeping hours in school gymnasiums, which are now serving as emergency shelters, evacuees are concerned about the physical impact of this lifestyle. The Plasmacluster Ion air purifiers provided by Sharp have reduced dust and odors, alleviating some of the health concerns of evacuees and greatly improving their living conditions. We thank you for warming the hearts of the evacuees.

Sachio Kanazawa, Director, Minamisoma Municipal General Hospital, sender of the letter (left), Akemi Takada, nurse (right). With them, emergency shelter staff (center left) and Hideaki Shinoda, Board Member, NPO Peacebuilders, coordinator of the installation (center right)

Examples of Disaster-Area Support in Fiscal 2010

- (1) April 2010, Qinghai Earthquake, China: Donation approximately 14 million yen
- (2) November 2010, Indonesian natural disasters (West Sumatra earthquake, Mt. Merapi eruption): Relief supplies worth 2 million yen
- (3) January 2011, Australian flood damage: Donation approximately 2 million yen
- (4) February 2011, New Zealand earthquake: Donation approximately 3.6 million yen

TOPICS

Sharp Charity Foundation in China Actively Helps Out the Community in Fiscal 2010 Through Air Purifier Donations, Scholarships, and Other Measures

Every year, the Sharp Charity Foundation (SCF), established in 2006, continues its social contribution activities, such as donating Sharp products, granting scholarships, cleaning and tree-planting activities, and conducting environmental education. In fiscal 2010, SCF donated about 100 high-density Plasmacluster Ion generators to 27 hospitals and 8 welfare facilities, and granted about 150 youth scholarships to nine universities. SCF also held a charity auction of event display models and donated the proceeds towards part of the construction costs of an elementary school. The Sharp Hope Primary School\* was completed in September in Dahua Yao Autonomous County, Guangxi Province, and an inauguration ceremony was held the same month.

\* The third Sharp Hope Primary School following those in Anhui Province and Chongqing City.



Donating to the Shanghai Charity Foundation. Shanghai Charity Foundation Vice Chairman Song Yiqiao (right) and Nobuyuki Sugano, Sharp Corporation Director and Senior Executive Managing Officer; Group General Manager, China Group



Inauguration ceremony for the Sharp Hope Primary School

Close-Up

## Environmental Education at Special-Needs Schools for the Hearing Impaired

In fiscal 2010, Sharp Corporation and domestic affiliated companies officially began environmental education in special-needs elementary schools for the hearing impaired based on the appraisal of the National Association for the Deaf School Principals in Japan.

The classes are conducted using visual aids and experiments, so the content is easy to understand for hearing-impaired students. Sharp received the following positive feedback from the teachers. "The classes were effective in increasing hearing-impaired students' appetite for learning." "The lessons were easy to understand through the use of sign language introductions and a sign language interpreter. The content was also highly suited to the children." "Few visiting teachers are invited to our special-needs school for the hearing impaired, so these classes were a great stimulant for the students."

Sharp aims to increase the number of schools at which classes are held to meet higher expectations. Sharp is also considering conducting classes at special-needs schools for the visually impaired and will continue its educational support activities in line with the welfare ideals of its founder.



Environmental education at a special-needs school for the hearing impaired



Children write their impressions of the classes

### Words from the National Association for the Deaf School Principals



Shigeki Suzuki  
President  
National Association for the Deaf School Principals

When Sharp proposed its elementary school environmental education program, I was impressed with the depth of the content and the opportunity for our students to learn from actual specialists, so I approached schools for the hearing impaired across the country. The response has been superb. The presentations incorporated information assurance\* for hearing-impaired children and taught the students in a visual, easy-to-understand way through experiments. That's why I have received requests to hold the classes again next year. We are grateful that, for this social contribution activity, Sharp not only adjusts the lessons to suit each school's needs, but also conducts the classes using student participation and hands-on experiments. We hope Sharp continues this activity in the future.

\* To support communication with a hearing-impaired person.

### Words from a Cooperating Board of Education



Mieko Sakai  
Former Head Direction Manager  
Osaka Prefectural Education Center  
Osaka Prefectural Board of Education

The lesson concept was clear and, as expected from a corporation, made an impact. The instructors had learned sign language and made efforts to deliver the information to the students. I was impressed that this was also excellent career education for the children. I am sure the students were left with a strong sense of the importance of environmental efforts and deep impressions of seeing adults take pride in their work.

### Words from a School at Which a Class Was Held



Tomio Furukawa  
Primary School Teacher  
Nara Prefectural School for the Deaf

We rarely have weather forecasters and employees from manufacturers present to us within our daily routine, so it was like a dream. These activities show the corporate power Japan has built up over many years. They have a large influence on the education of children who are the future of Japan. We hope to see Sharp continue these classes with conviction.

### Words from a Cooperating Weathercaster Network Instructor



Akiko Okada  
NPO Weathercaster Network

I remember being very nervous on the first day I made a presentation, especially about whether I could sign properly. But I could strongly sense the children's enthusiasm for these environmental lessons, and after finishing, I began looking forward to the next one. The children make me feel there is a purpose to my work.

### Words from a Sharp Environmental Education Network Instructor



Mayumi Domen  
Assistant Supervisor  
No. 2 Sales Division  
Chugoku & Shikoku Branch  
Sharp Electronics Marketing Corporation

I went to the first presentation wondering how the children would feel about the presentation, but they were a feisty bunch and it was fun. I was so moved on seeing their diligence at not letting their disability hamper them that I had tears in my eyes. I am looking forward to the next presentation.

■ Efforts

Year	Month	Award	Sponsor	Winner
2011	5	SQ Golden Award (home entertainment and home appliances), Indonesian Service Quality Awards 2011	Carre-CCSL (Carre-Center for Customer Satisfaction and Loyalty), <i>Marketing</i> magazine (Indonesia)	PT. Sharp Electronics Indonesia
	4	Special award, 4th Diversity Management Awards	Toyo Keizai Inc. (Japan)	Sharp Corporation
		ENERGY STAR® Award for Excellence 2011	Environmental Protection Agency, Department of Energy (US)	Sharp Electronics Corporation (US)
	2	“Environmental Relay for the Future” special award, 8th Corporate Philanthropy Awards	Japan Philanthropic Association	Sharp Corporation
		Encouragement Prize, 14th Environmental Communication Awards	Ministry of the Environment, Global Environmental Forum (Japan)	Sharp Corporation Mie Site
		Osaka Governor’s Award, 4th Osaka Sustainable Architecture Awards	Osaka Prefecture (Japan)	GREEN FRONT SAKAI
		Wuxi City Cleaner Production Certificate	Wuxi City (China)	Sharp Technical Components (Wuxi) Co., Ltd. (China)
	1	Osaka Governor’s Award, 9th QC Circle Championship in Osaka	QC Circle Kinki Branch (supported by Osaka Prefecture, Japan)	Sharp Corporation West Japan Customer Assistance Center
		2010 Award of the Minister of Education, Culture, Sports, Science and Technology for Excellence in Career Education by School Boards, Schools, Companies, and PTA Groups	Ministry of Education, Culture, Sports, Science and Technology (Japan)	Sharp Corporation
		Excellent Company Award, 2010 Internet IR Best Company Awards	Daiwa Investor Relations Co., Ltd. (Japan)	Sharp Corporation
2010	12	World’s Top 500 Corporations – China Contribution Award	Southern Weekly (China)	Sharp Electronics Sales (China) Co., Ltd.
		2010 China Best CSR Award	21st Century Business Herald (China)	Sharp Electronics Sales (China) Co., Ltd.
		Ministry of Economy, Trade and Industry Minister Award; 2010 Excellent Green Logistics Commendation Program	Japan Institute of Logistics Systems; Japan Federation of Freight Industries; Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism	Sharp Corporation; Tonami Transportation Co., Ltd.
		Outstanding efforts in reducing energy consumption by a company; outstanding group energy-saving project; outstanding individual efforts in reducing energy consumption	Shanghai Yidian Holding (Group) Company (China)	Shanghai Sharp Electronics Co., Ltd. (China)
	11	Award of Excellence, 2010 Nikkei Global Environmental Technology Awards	Nikkei Inc. (Japan)	GREEN FRONT SAKAI
		Award of Excellence, 12th Green Purchasing Awards	Green Purchasing Network (Japan)	Sharp Corporation
		Green Management Prize, 2010 China Business News Green Love Eco-Series Green Awards	China Business News	Sharp Electronics Sales (China) Co., Ltd.
		Award of Excellence, 4th Work-Life Balance Awards	Japan Productivity Center	Sharp Corporation
		59th Chugoku and Shikoku Region Greening Contributor Award (for Sharp Forest tree-planting activities)	Chugoku and Shikoku Region Greening Association (Japan)	Sharp Green Club (Fukuyama, Mihara, Higashi-Hiroshima)
		Minister of Economy, Trade and Industry Award; Intellectual Property Achievement Award 2010	Japan Patent Office; Ministry of Economy, Trade and Industry	Sharp Corporation
	10	Minister of Economy, Trade and Industry Prize; Green IT Award 2010	Green IT Promotion Council (Japan)	Sharp Corporation; Kanden Energy Solution Co., Ltd.; Yokogawa Electric Corporation
		Reduce, Reuse, Recycle Promotion Association Chairman’s Prize; 2010 Reduce, Reuse, Recycle Promotion Achievement Awards	Reduce, Reuse, Recycle Promotion Association (Japan)	Sharp Corporation Environmental Protection Group; Kansai Recycling Systems Co., Ltd.
		Reduce, Reuse, Recycle Promotion Association Chairman’s Prize; 2010 Reduce, Reuse, Recycle Promotion Achievement Awards	Reduce, Reuse, Recycle Promotion Association (Japan)	Sharp Corporation Fukuyama Plant

■ Efforts

Year	Month	Award	Sponsor	Winner
2010	10	ICSA (Indonesian Customer Satisfaction Award) 2010	Frontier Consulting Group, <i>SWA Sembada</i> magazine (Indonesia)	PT. Sharp Electronics Indonesia
		Runner-up, Sustainable FM Awards 2010	Abbey Publishing & Exhibitions (UK) Ltd.	Sharp Electronics (U.K.) Ltd.
	7	2010 Outstanding CSR Award	China Business News	Sharp Electronics Sales (China) Co., Ltd.
		No. 1 in four categories of the After-Sales Service Satisfaction Ranking (flat-screen TV, BD/DVD/HDD recorder, air conditioner, washing machine/dryer)	Nikkei BP Marketing, Inc. (Japan)	Sharp Corporation
	6	Technological Achievement Award	Research Association for Feedstock Recycling of Plastics, Japan	Sharp Corporation
	5	Outstanding Facility Award, 2009 Good Lighting Awards	Illuminating Engineering Institute of Japan	GREEN FRONT SAKAI
		SQ Golden Award (home entertainment and home appliances), Indonesian Service Quality Awards 2010	Carre-CCSL (Carre-Center for Customer Satisfaction and Loyalty), <i>Marketing</i> magazine (Indonesia)	PT. Sharp Electronics Indonesia
	4	IEEE Milestone (for the commercialization and industrialization of solar cells)	IEEE (US)	Sharp Corporation
		Award of Merit, 13th Green Reporting Awards	Toyo Keizai Inc. (Japan)	Sharp Corporation
		Minister's Award; Ministry of Education, Culture, Sports, Science and Technology; 19th Grand Prize for the Global Environment Award (for elementary school environmental education)	Fujisankei Communications Group (Japan)	Sharp Corporation, Weathercaster Network

■ Products

Year	Month	Award	Sponsor	Winner
2011	5	Winner (Best Home Appliance category), Mother's Selection, 4th Best Mother Awards 2011	Japan Mothers Society	Plasmacluster air purifiers, ion generators
	2	Information Processing Technology Heritage	Information Processing Society of Japan	Compet CS-10A desktop electronic calculator
		Grand Prize (Nikkei Sangyo Shimbun Award), 2010 Nikkei Outstanding Products and Services Awards	Nikkei Inc. (Japan)	AQUOS Quattron
	1	Grand Prize, 53rd 10 Best New Products Awards	Nikkan Kogyo Shimbun, Ltd. (Japan)	Development and practical application of e-book service platform
2010	8	European TV Innovation Award, EISA Awards	EISA (European Imaging and Sound Association)	Quattron four-color technology
	4	Award of Excellence, 2010 Electrical Technology Achievement Awards	JEMA (Japan Electrical Manufacturers' Association)	Health-function air conditioners: 1st and 2nd products ever to receive Evidence-Based Relaxation & Comfort Recommendation Mark (third-party certification)
		Award of Merit, 2010 Electrical Technology Achievement Awards	JEMA (Japan Electrical Manufacturers' Association)	Development of SJ-ZF52S and X Series Plasmacluster refrigerators
		Award of Merit, 2010 Electrical Technology Achievement Awards	JEMA (Japan Electrical Manufacturers' Association)	Development of highly efficient, lightweight air conditioner outdoor unit fan modeled on the shape of a bird wing
		Science and Technology Award (development category); Minister of Education, Culture, Sports, Science and Technology Awards	Ministry of Education, Culture, Sports, Science and Technology (Japan)	Development of home air conditioner with anti-fatigue effect and its verification protocol

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	Operations*	Manufacture and sales of audio-visual and communication equipment, health and environmental equipment, information equipment, LCDs, solar cells, and other electronic devices
Head Office	22-22, Nagaike-cho, Abeno-ku, Osaka 545-8522, Japan	Capital Stock*	204,675 million yen (rounded down to the nearest million)
Representatives	Katsuhiko Machida, Chairman Mikio Katayama, President	Number of Employees*	Consolidated: 55,580 Entire Sharp Group: 64,246 (31,510 in Japan; 32,736 overseas)
Founded	September 15, 1912		* As of March 31, 2011

## Main Products

### Audio-Visual and Communication Equipment

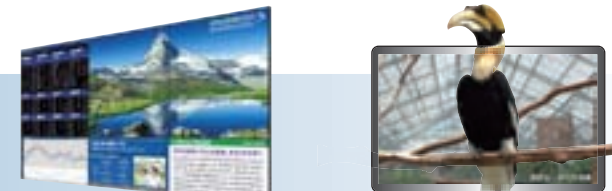


Free-Style AQUOS

Smartphones

LCD color TVs, color TVs, projectors, DVD recorders, Blu-ray Disc recorders, Blu-ray Disc players, mobile phones, mobile communications handsets, electronic dictionaries, calculators, facsimiles, telephones

### LCDs



Multi-screen display system

3D LCD

TFT LCD modules, Duty LCD modules, System LCD modules

### Health and Environmental Equipment



Plasmacluster Ion generators

LED ceiling lights

Refrigerators, superheated steam ovens, microwave ovens, air conditioners, washing machines, vacuum cleaners, air purifiers, dehumidifiers, humidifiers, electric heaters, small cooking appliances, Plasmacluster Ion generators, LED lights, solar-powered LED lights, network control units

### Solar Cells



High-efficiency monocrystalline solar module

Solar power generation plant in Thailand using Sharp thin-film solar cells (artist's rendering)

Crystalline solar cells, thin-film solar cells

### Information Equipment

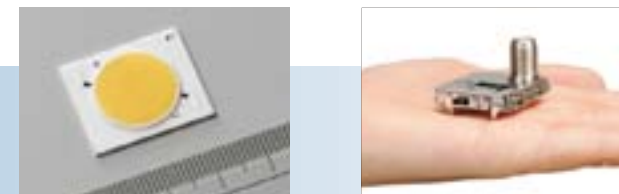


Information display

Digital full-color MFP

POS systems, handy data terminals, electronic cash registers, information displays, digital MFPs (multifunction printers), options and consumables, software, FA equipment, ultrasonic cleaners

### Other Electronic Devices

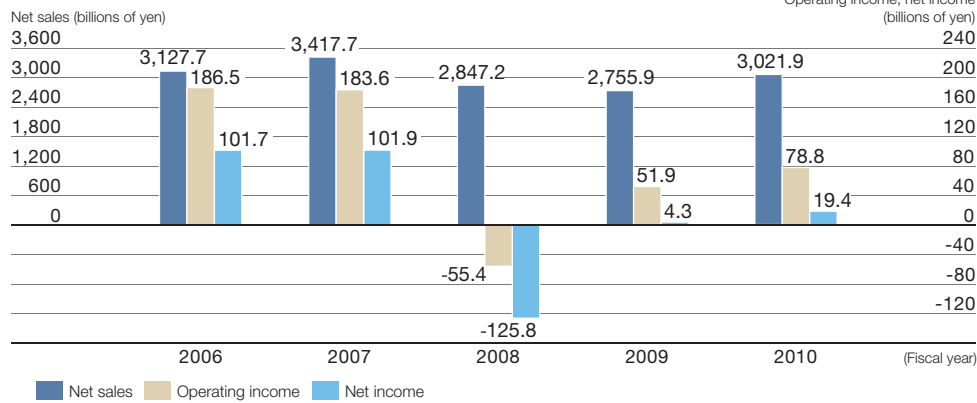


LED lighting device

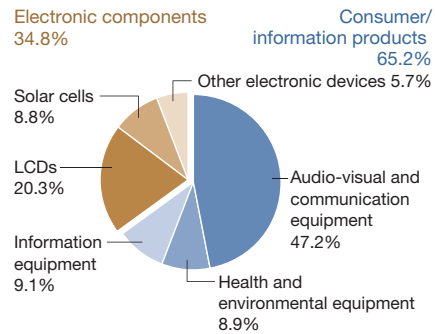
Tuner unit for terrestrial digital/analog broadcasting

CCD/CMOS imagers, LSIs for LCDs, microprocessors, flash memory, analog ICs, components for satellite broadcasting, terrestrial digital tuners, RF modules, network components, laser diodes, LEDs, optical pickups, optical sensors, components for optical communications, regulators, switching power supplies

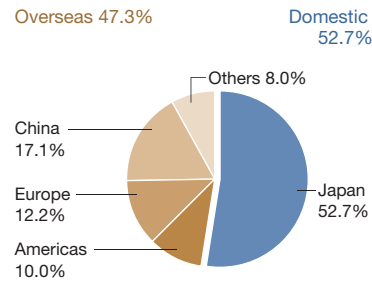
## Net Sales, Operating Income, and Net Income (Consolidated)



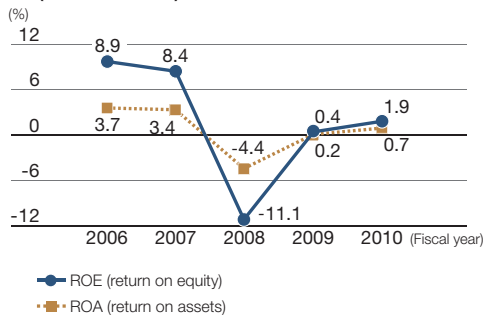
## Fiscal 2010 Net Sales Component Ratio by Product Group (Consolidated)



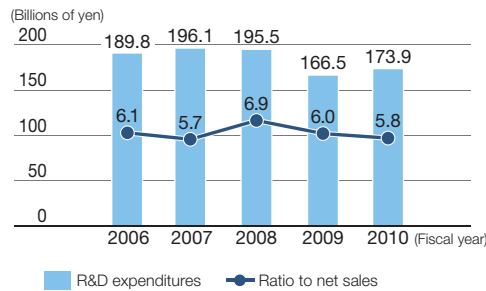
## Fiscal 2010 Net Sales Component Ratio by Region (Consolidated)



## Principal Financial Performance Indicators (Consolidated)



## R&D Expenditures (Consolidated)

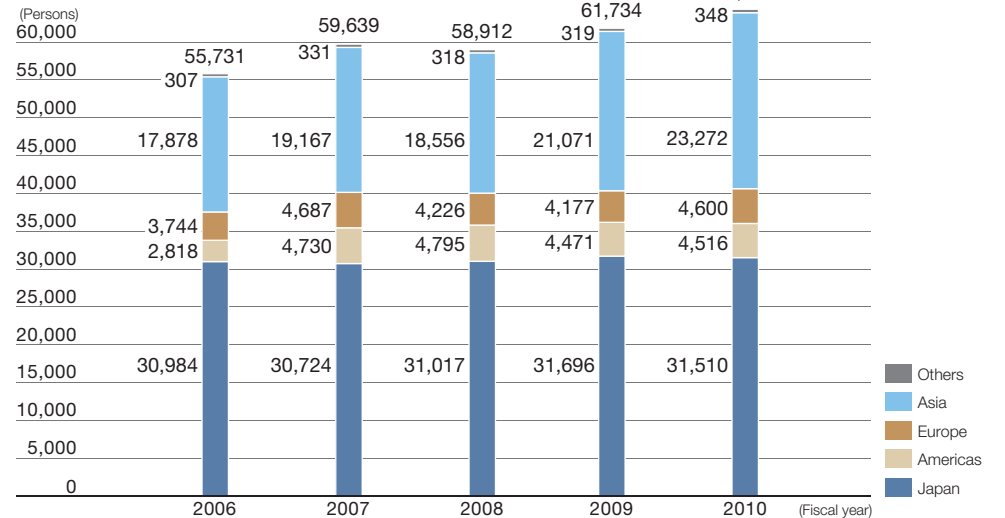


## The Sharp Group at a Glance (as of March 31, 2011)

- Consolidated subsidiaries: 70 (16 in Japan, 54 overseas)
- Overseas structure

Sales subsidiaries	30 companies in 25 countries/regions
Manufacturing bases	21 companies in 13 countries/regions
R&D bases	5 companies in 4 countries/regions
R&D company and parts supplier	1 company in 1 country/region
Solar project developer	1 company in 1 country/region
Finance company	1 company in 1 country/region
Representative offices	2 offices in 1 country/region
<b>Total</b>	<b>61 companies/offices in 26 countries/regions</b>

## Number of Sharp Group Employees



Note: Sharp Group comprises Sharp Corporation, its consolidated subsidiaries, affiliated companies accounted for by the equity method, and other affiliated companies. Figures as of the end of each fiscal year (March 31).


This is an English translation of the "Independent Assurance Report" issued in Japanese by KPMG AZSA Sustainability Co., Ltd., for "Sharp Environmental and Social Report 2011" prepared originally in Japanese by Sharp Corporation.

July 20, 2011

Mr. Mikio Katayama, the President of Sharp Corporation

KPMG AZSA Sustainability Co., Ltd.  
Osaka Binomachi Building, 3-6-5  
Kawara-machi, Chuo-ku Osaka 541-0049  
Usami Ryuta (Seal)  
Chief Executive Officer  
Yukiohbo Matsuo (Seal)  
Executive Director

#### **Purpose and Scope**

We were engaged by Sharp Corporation (the "Company") to provide limited assurance on its 'Sharp Environmental and Social Report 2011' (the "Report") on its website for the fiscal year ended March 31, 2011. The purpose of our assurance engagement was to express our conclusion, based on our assurance procedures, on whether the environmental performance indicators marked with  for the period from April 1, 2010 to March 31, 2011 included in the Report (the "Indicators") are prepared, in all material respects, in accordance with the Company's reporting criteria.

The content of the Report is the responsibility of the Company's management. Our responsibility is to carry out limited assurance procedures and to express our conclusion.

#### **Criteria**

The Company applies its own reporting criteria as described in the Report. These are derived, among others, from the Sustainability Reporting Guidelines 2006 of the Global Reporting Initiative and Environmental Reporting Guidelines of Japan's Ministry of the Environment. We used these criteria to evaluate the Indicators.

#### **Procedures Performed**

We conducted our engagement in accordance with 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Assurance Standards Board, and the 'Practical Guidelines of Sustainability Information Assurance' of the Japanese Association of Assurance Organizations for Sustainability Information ("J-SUS").

The limited assurance engagement on the Report consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviews with the Company's responsible personnel to obtain an understanding of its policy for the preparation of the Report.
- Reviews of the Company's reporting criteria.
- Inquiries about the design of the systems and methods used to collect and process the Indicators.
- Analytical reviews of the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and also a recalculation of the Indicators.
- Visits to the Company's factory.
- Evaluating the overall statement in which the Indicators are expressed.

#### **Conclusion**

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report.

We have no conflict of interest relationships with the Company that are specified in the Code of Ethics of J-SUS.



**SHARP**

**SHARP CORPORATION**

22-22 Nagaike-cho, Abeno-ku, Osaka 545-8522, Japan

Phone: +81-6-6621-1221

<http://sharp-world.com/>

Published September 2011