

**SHARP**

Sustainability Report 2012

100<sup>th</sup>  
ANNIVERSARY



2012  
INTERNATIONAL YEAR OF  
SUSTAINABLE  
ENERGY FOR ALL

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About the Cover



The cover illustration represents our hope of becoming a truly global company that respects the irreplaceable planet Earth that is home to all of us.



100th Anniversary Logo

Sharp was established on September 15, 1912. The support of our stakeholders over the years has brought us to this year's centennial celebration.



2012  
INTERNATIONAL YEAR OF  
SUSTAINABLE  
ENERGY FOR ALL

United Nations International Year Logo

The United Nations General Assembly has designated 2012 as the International Year of Sustainable Energy for All. Sharp, celebrating its 100th anniversary in 2012, is in accord with the purpose of this United Nations' activity and advances the development and diffusion of solar power generation around the world, as we enter our second century—aiming to make solar power available to everyone in the world.

## ■ Sharp Sustainability Report 2012 and System for Information Disclosure

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

Starting with the 2012 edition, the "Environmental and Social Report" was renamed the "Sustainability Report."

### Annual Report, Highlights Version

This report outlines the highlights of Sharp's CSR efforts during fiscal 2011 in a simple, concise way and is available on the Sharp website as a downloadable PDF file.

### Annual Report This report

This report on Sharp fiscal 2011 efforts presents special information in a section called Special Feature; detailed information in three sections called Management, Sharp and the Environment, and Sharp and Society; and a variety of related data. It is available on the Sharp website as a downloadable PDF file.

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

### Website

The Sharp website provides 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:

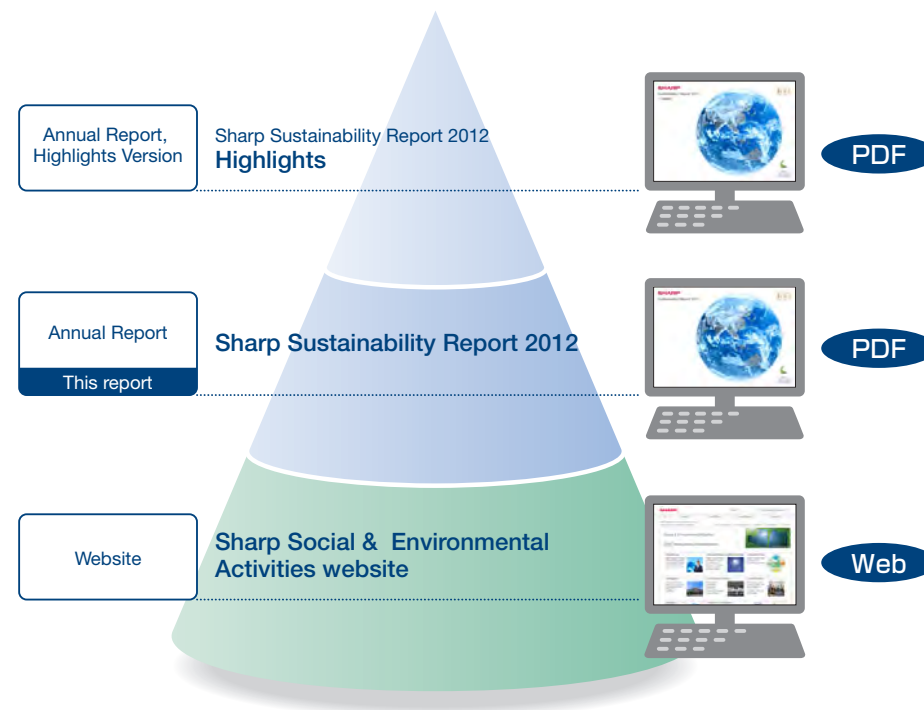
Fiscal 2011 (April 2011 to March 2012)

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 64 for the boundary of environmental performance data.

The names of overseas subsidiaries and affiliates are denoted with acronyms, such as SEC. For a list of the full names of subsidiaries and affiliates, see page 64.



## ■ 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

August 2013 (published annually since 1999)

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President  
Takashi Okuda

## Looking Ahead to the Next 100 Years, Sharp Aims to be a True Global Company, Trusted and Valued by People around the World

This year Sharp celebrates its 100th anniversary, the company having been founded in Tokyo on September 15, 1912 by an 18-year-old Tokuji Hayakawa.

We would like to express our heartfelt gratitude to all our customers and stakeholders who have supported the development of our business.

### ■ Looking Ahead to the Next 100 Years

Sharp currently finds itself in extremely trying circumstances.

Reflecting the turbulence of the era, our financial report for fiscal 2011 was more severe than ever before. A long list of external factors contributed to this, including the spread to other regions of governmental debt problems in Europe; the slowing of growth in China and newly emerging economies; the reduction of prices for products and devices such as LCD TVs and solar cells; the rapid rise of the yen; and the sudden drop in demand for LCD TVs in Japan after the discontinuation of domestic analog broadcasting. However, we recognize that the fundamental challenge is to transform ourselves and quickly construct a system that can spur us on to meet changes in the business environment.

Over the past several years, under the banner of management with a global viewpoint, Sharp has promoted a strategy of local production for local consumption, targeting growing markets in newly emerging economies. But we must still pick up the pace. Commoditized digital appliances require greater cost efficiency and production speed—both of which can be achieved by expanding the production scale. It is difficult for the company to stay on top of the global electronics market, for example, while handling by itself everything from R&D, design, and production to sales and after-sales service.

Looking ahead to the next 100 years, Sharp will bolster its foundations in each region of the world and speed up its transformation. We will also continue to create one-of-a-kind, energy-creating businesses and energy-saving products, and we will offer them globally in collaboration with our powerful partners around the world.



One of the world's largest mega-solar power generation plants, with a 73 MW capacity using Sharp thin-film solar cells, completed in Thailand in March 2012. Sharp, along with Thailand's largest construction companies ITD (Italian-Thai Development Public Co., Ltd.) and ITE (ITALTHAI Engineering Co., Ltd.), received an order for its construction from Thai independent power producer NED (Natural Energy Development Co., Ltd.). Sharp has also been entrusted with repair and maintenance.

### ■ Sharp Is Even More Determined to Become an Eco-Positive Company

Twenty years have passed since the United Nations held the Earth Summit (i.e., the United Nations Conference on Environment and Development)—an event that prompted the whole world to seek commonly recognized solutions to global environmental issues.

Sharp has swiftly addressed environmental conservation and endeavored to realize a vision of becoming an “Eco-Positive Company”. Sharp seeks to achieve an environmental contribution (positive impact) that largely exceeds its environmental burden (negative impact) by refocusing business activities in cooperation with all of its stakeholders.

Under this approach, Sharp considers the reduction of greenhouse gases to be an especially important issue. Hence, Sharp promotes the development and dissemination of energy-creating solar cells and energy-saving products, and it works to limit the amount of emissions from its business activities. In fiscal 2011, the reduction in emissions resulting from customers using Sharp's energy-creating and energy-saving products was more than triple the amount of emissions from business activities.

Sharp changed its index in fiscal 2012 and adopted a new goal: by fiscal 2020, the company seeks to achieve an amount of emissions reductions from its solar power-related businesses that is large enough to offset emissions from its business activities (including the supply chain) and customer use of Sharp products.

### ■ Sharp Globally Promotes Energy-Creating Businesses and Energy-Saving Products

This March in Thailand, construction was completed of one of the world's largest mega-solar power generation plants—one with a 73 MW capacity. Mega-solar power plants have also been constructed in six places in Italy in collaboration with the Enel Group. Electric power generation has already begun there. Meanwhile, Recurrent Energy, LLC of the Sharp Group in North America is constructing mega-solar power plants in California and Arizona, and it is promoting a large project in Canada. In addition, construction of mega-solar power plants is planned at various locations in Japan in order to meet the start of the buyback program for renewable energy this July.

Amid mounting expectations for renewable energy, the construction of mega-solar power plants has been promoted in numerous places around the world. With further cost reductions,

we anticipate the rapid spread of solar power generation—a method of capturing energy that does not depend on limited fossil fuel resources, that does not generate noise, and that does not emit pollutants such as CO<sub>2</sub> that lead to global warming.

Sharp has accumulated energy-creating technologies for solar power generation and energy-saving technologies for use in products such as LCD TVs, LED lighting, and refrigerators. With these technologies and in collaboration with its powerful international partners—such as the previously mentioned Enel Group and the Hon Hai Group, with whom a joint LCD endeavor is planned—Sharp will globally provide energy-creating businesses and energy-saving products. Through such efforts, the company will contribute to the realization of a sustainable society.

### ■ Sharp Seeks to Contribute to the World with Sincerity and Creativity

As we celebrate our 100th anniversary, Sharp will—through sincerity and original technologies and while remaining firmly grounded in our business philosophy and business creed—continue to contribute to solving social issues from a global viewpoint. Maintaining our support for the 10 principles set in the United Nations Global Compact on human rights, labour, the environment, and anti-corruption, we seek to fulfill our social responsibility by practicing and further improving activities in the management, environmental, and social areas described in this report.

Sharp develops business activities that contribute to the realization of a sustainable society throughout the world. It aims to become a true global company, trusted and valued by people everywhere.

Now and in the future, Sharp will continue to disclose information about our business operations; we will also continue to reflect the valuable opinions of Sharp stakeholders in our management practices.

June 2012

President  
Takashi Okuda

# 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.

## 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.

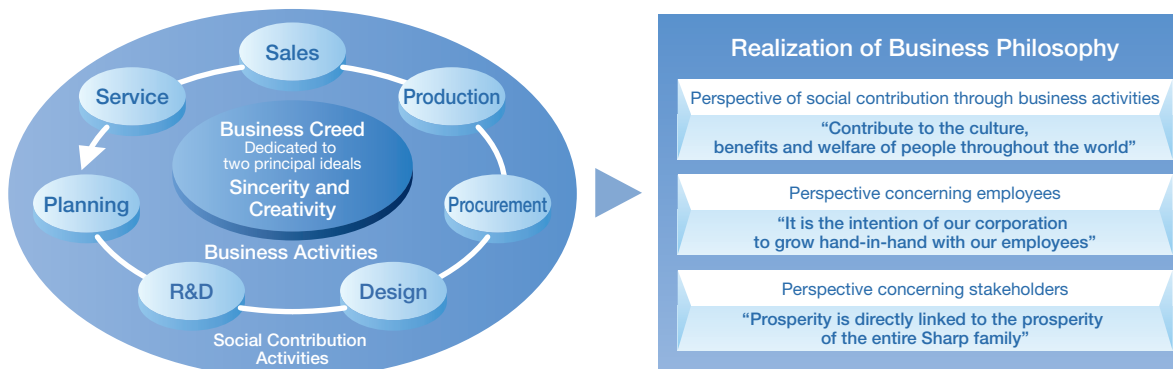
“Make products that others want to imitate.” These words, spoken by Sharp founder Tokuji Hayakawa, embody Sharp’s management concept. As a manufacturer, Sharp contributes to society by being the first to make products that meet the needs of a new era. Successive generations of Sharp leaders have, in 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 articulated 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 to put its business philosophy into action and contribute to building a sustainable society through its business activities. And to continue being a company that is known and trusted throughout society, Sharp is reaffirming this goal in 2012, the year of its 100th anniversary. Sharp will earn this trust by practicing sincerity of conduct and action and by calling upon the “gene of creativity” endowed from its founder to create new value through the development of one-of-a-kind products and new lifestyle possibilities.

\* Corporate social responsibility

## ■ 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.

# Extending the Spirit of Manufacturing and Gratitude of Sharp's Founder over the Next 100 Years

Sharp's founder Tokuji Hayakawa was born in Tokyo in 1893. He founded a metalworking shop in September 1912. Showing ingenuity and creativity, he invented the Sharp Pencil (a mechanical pencil) and grew his business.

Pursuing his vision of continually staying ahead by pioneering new fields, he succeeded in assembling Japan's first crystal radio set in 1925. His company became a leading radio manufacturer, establishing the foundation for Sharp Corporation.

This was followed over the years by Japan's first TV set and numerous other revolutionary 'firsts' that stand as milestones in the history of consumer electronics. Tokuji was truly a modern visionary; for example, more than half a century ago, he had the foresight to turn his attention to solar energy.

He was also a humanitarian who never forgot to feel grateful and who always wanted to repay kindness. He made countless contributions to communities and society at large. For instance, he established a factory where challenged persons could work autonomously; this would become Japan's first special subsidiary\*.

"Make products that other companies want to imitate" and "Feel gratitude and repay kindness."

Spoken by Tokuji, these phrases symbolizing his spirit have continued to echo in the deeds of generations of Sharp employees.



2004 Superheated steam oven      2010 LED ceiling light      2011 Touchscreen LCD monitor      2011 High-efficiency monocrystalline solar module for residential use



2000 Camera-equipped mobile phone      2000 Air purifier using Plasmacluster technology      2001 AQUOS LCD color TV



1964 All-transistor-diode electronic desktop calculator      1989 Dual-swing door refrigerator      1992 LCD ViewCam camcorder



1953 Mass production of the first Japan-made TV      1962 Japan's first mass-produced microwave oven      1963 Solar module



1912 Tokuji Hayakawa invents the Tokubijo snap buckle and founds a business      1915 Hayakawa mechanical pencil      1925 First Japan-made crystal radio set



Possessing a "gene of creativity" since its foundation, Sharp has applied a fundamental business policy of delivering satisfaction to its customers and using its unique technologies to offer new one-of-a-kind products and devices.

Sharp will continue to develop unique groundbreaking ideas that create new trends. These one-of-a-kind ideas will take up the challenge of the competitive flow and establish the new mainstream.

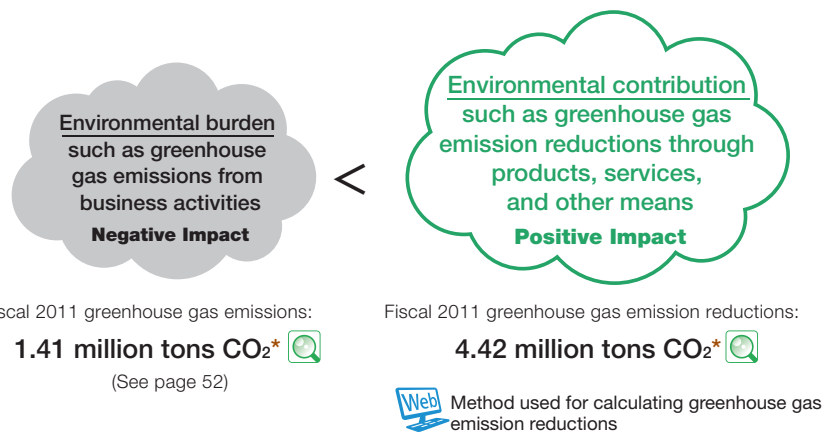
In 2012, the 100th year of its founding, Sharp will once again mobilize the resolve of all its members to realize sustained growth.

\* Special subsidiary: A subsidiary established after obtaining a license from the Minister of Health, Labour and Welfare with the purpose of promoting employment of mentally or physically challenged people in Japan.

# Corporate Vision: Eco-Positive Company

Sharp's corporate vision is to become 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 business activities. One important effort towards this vision is the reduction of greenhouse gas emissions. In addition to reducing greenhouse gas emissions from its business activities, Sharp is developing and spreading the use of energy-creating solar cells and energy-saving products.

## ■ Sharp's Eco-Positive Company corporate vision; fiscal 2011 greenhouse gas emissions and greenhouse gas emission reductions



## Reducing Greenhouse Gas Emissions

Under its Eco-Positive Company corporate vision, Sharp works to reduce greenhouse gas emissions through energy-creating and energy-saving products.

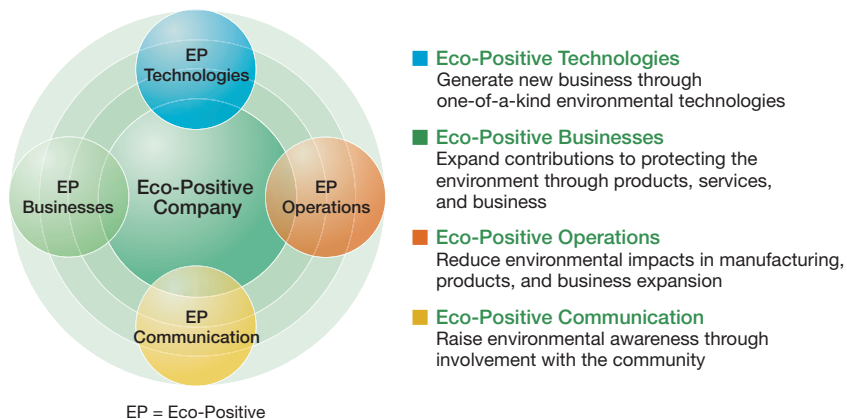
In fiscal 2004, Sharp announced its goal of having its energy-creating and energy-saving products more than balance out its greenhouse gas emissions by fiscal 2010. The aim was to have emission reductions that result from customer use of Sharp energy-creating and energy-saving products be more than total greenhouse gas emissions from Sharp's business activities, and this was achieved in fiscal 2008. Another goal was to have greenhouse gas emission reductions be more than double actual greenhouse gas emissions by fiscal 2012, and this was achieved in fiscal 2011. In fiscal 2011, Sharp emitted 1.41 million tons CO<sub>2</sub>, but the use of Sharp energy-creating and energy-saving products contributed to emission reductions of 4.42 million tons CO<sub>2</sub>, 3.1 times actual emissions.

Sharp changed its index in fiscal 2012 and is now shooting for a new goal: by fiscal 2020, have greenhouse gas emission reductions achieved through Sharp's solar power-related businesses be at least equal to greenhouse gas emissions from Sharp business activities (including those in the supply chain) and the use of Sharp products. The idea is to further increase reductions while limiting emissions as much as possible.



**Shigeaki Mizushima**  
Executive Vice President  
Group General Manager  
CS and Environmental  
Promotion Group  
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 on "businesses" (products, solar power-related business, and others) and on "operations" (mainly factories), since these have a direct effect on reducing greenhouse gas emissions. Ever since operations started at the Kameyama Plant in fiscal 2003, Sharp has been going all out to assess and certify the environmental performance of its products and factories based on in-house standards. This system has spurred friendly competition among different Sharp business groups and has resulted in significant advances in making Sharp greener.

Through the Eco-Positive Strategy, all Sharp divisions in Japan and around the world are setting environmental goals and working together—not just to reduce the company's greenhouse gas emissions but to increase Sharp's overall positive impact on the natural environment.



**Tetsuro Muramatsu**  
Group Deputy General Manager  
CS and Environmental  
Promotion Group  
Sharp Corporation

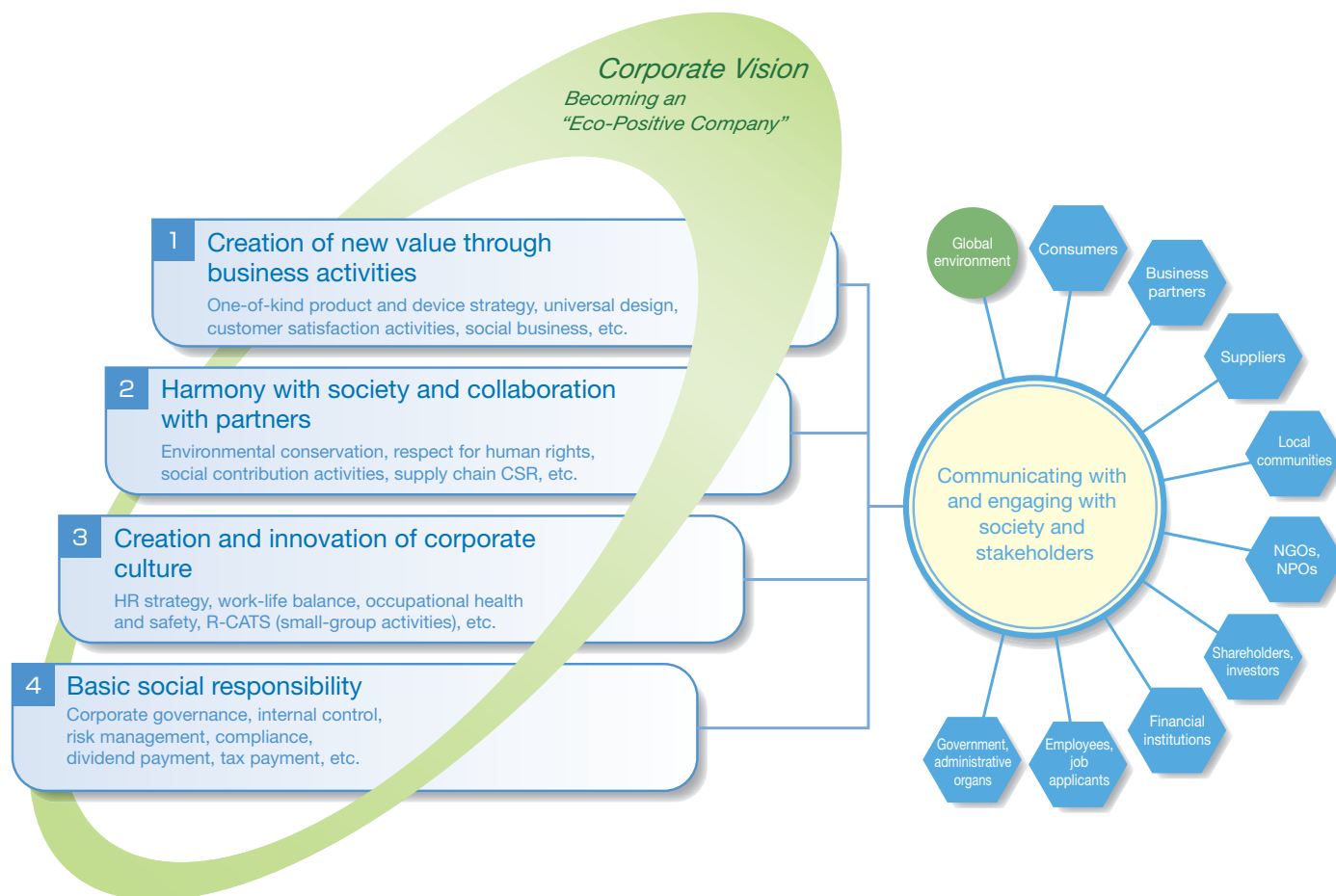
\* In fiscal 2011, Sharp switched to using the GHG Protocol calculation tools (GHG emissions from purchased electricity ver. 4.3, August 2011) as the coefficient for calculating (for bases outside Japan) greenhouse gas emissions (from electricity). If calculated using the fiscal 2010 method, fiscal 2011 greenhouse gas emissions would be 1.45 million tons CO<sub>2</sub> and greenhouse gas emission reductions would be 4.96 million tons CO<sub>2</sub>.



# Approach to CSR Activities

Sharp's 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."



## Carry Out Sharp's CSR to Realize Sustainable Development

The Great East Japan Earthquake, large-scale flooding in Thailand, currency crises in Europe—2011 was a tumultuous year of events that shook private enterprise and economies around the world. There were also corporate scandals in which companies blatantly broke the law. Meanwhile, efforts continue to be made to find solutions to unresolved global issues, such as environmental problems.

I truly feel that in this age of compounding problems, the public's expectations and demands of corporations are growing in scope and significance with each passing year.

This year marks Sharp's 100th anniversary. As the executive officer in charge of CSR promotion, I will strive to ensure that, as we abide by our business philosophy and business creed of "Sincerity and Creativity", we always aim to realize sustainable development of both Sharp and society. We shall achieve this through a linkage of management strategy and CSR activities and through close communication and engagement with society and our stakeholders.



**Kazutoshi Goto**  
Executive Officer  
Group General Manager  
Legal Group  
Sharp Corporation

# Helping Create a Sustainable Society by Developing Energy-Creating Businesses and Energy-Saving Products Worldwide to Contribute to the Culture, Benefits, and Welfare of People throughout the World

Twenty years ago, in June 1992, the United Nations Conference on Environment and Development (commonly known as the Earth Summit) was held in Rio de Janeiro, Brazil. The concept of sustainable development as a way to avoid destruction of the Earth's environment was shared by the world. Nations, companies, and individuals took this opportunity to speed up efforts to preserve the world environment.

However, there has been limited success over the past 20 years. Greater wisdom and action are needed in order to pass on our beautiful, irreplaceable Earth to the next generation. In this respect, the role of a company can be extremely important.

## ■ For the Realization of a Sustainable Society

Sharp will commemorate its 100th anniversary on September 15, 2012.

Looking back over its business, Sharp has contributed to the realization of new lifestyles by anticipating the demands of the era, working rapidly in technology development, and providing such technology to the world in the form of its products. There are many examples: the invention of the snap buckle (1912) and the Hayakawa propelling pencil\* (Ever-Ready Sharp Pencil, 1915) around the time of the establishment of the company in anticipation of the change from Japanese-style clothing to Western-style clothing; the first domestic crystal radio (1925), which was commercialized at the advent of radio broadcasting; the first domestic black-and-white TV (1953), which was mass-produced as TV broadcasting just began; the early start of research in solar cells (1959) — an up-and-coming energy source — and their successful mass production (1963); development of the world's first all-transistor-diode

electronic desktop calculator (1964) aimed for an era of general use; the world's first successful application of a liquid crystal display to a pocket-sized electronic calculator (1973); and the realization of the dream of a wall-mountable LCD color TV (1991).

Today, many of Sharp's businesses contribute to what is perhaps the world's most important need: the realization of a sustainable society.

In this special feature, Sharp's representative businesses will be introduced in three aspects: pioneering an era of renewable energy through solar power generation; achieving rich communication by energy-saving displays; and contributing to a safe, healthy, environmentally friendly life through energy creation and energy saving.

\* Term used by Tokuji Hayakawa on the patent application for his mechanical pencil.



Solar cell plant at GREEN FRONT SAKAI (operations began March 2010)



This mega solar power plant in Calabria, Italy was constructed and is operated by Enel Green Power & Sharp Solar Energy S.r.l. (ESSE), a joint solar independent power producer company established by Sharp and Enel Green Power, a group company of Enel S.p.A., Italy's largest power utility. Five additional power plants have been constructed in Italy and are now under operation. ESSE plans to expand its power generation business to not only Europe but also the Middle East and Africa.



Thin-film solar cell plant in Italy (operations began December 2011)

## ■ Pioneering an Era of Renewable Energy through Solar Power Generation

According to an announcement by the International Energy Agency (IEA), worldwide CO<sub>2</sub> emissions reached an all-time record of 31.6 billion tons in 2011 (3.2% increase over the previous year). This figure is the amount of CO<sub>2</sub> emitted by the consumption of fossil fuels, and considered to comprise approximately 90% of all greenhouse gases. Emissions will continue to increase due to economic growth in newly emerging economies, making it difficult to achieve the international goal of limiting the rise in global atmospheric temperature to no more than two degrees higher than the temperature before the industrial revolution.

Using renewable energies is one way we can halt rising global temperatures, but we have to introduce these at a much faster pace than we have been doing.

Solar power is one example of renewable energy. Sharp got an early start in solar power, beginning research in 1959. When speaking about the technologies of the future, Sharp's founder Tokuji Hayakawa always touched on solar cells first, saying, "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."

Under Hayakawa's vision, Sharp succeeded in mass producing solar cells in 1963 and has gone on to develop and commercialize various types of solar cells, including monocrystalline, polycrystalline, thin-film, and compound. It has built up technological know-how and earned the trust of customers by putting these solar cells into a wide range of applications, including lighthouses, satellites, commercial and residential power systems, and mega solar power plants.

Sharp's solar cell plant at GREEN FRONT SAKAI has been producing thin-film solar cells and monocrystalline solar cells using cutting-edge technologies. Sharp's idea is to develop production facilities in regional markets around the world, with this plant serving as the core "mother plant." In Europe, the largest consumer region for solar power, a thin-film solar cell plant—the largest of its kind in Italy—operates under the joint cooperation of Sharp and a leading local company. And electricity generation is now underway at a mega solar power plant that uses these locally produced thin-film solar cells (see page 45).

To achieve full-scale expansion of solar power generation, its costs must be cut to the point of grid parity (the point at which solar power generation costs are equal to those of conventional power generation). Sharp is in the process of building a worldwide comprehensive solar power solutions business that covers the development and production of solar cells and modules, the design of solar power systems, the construction of mega solar power generation plants, and management as an independent power producer. Sharp is also focusing its R&D on increasing the conversion efficiency of solar cells. Sharp has so far achieved the world's highest conversion efficiency of 43.5%\* with its concentrator solar cell.

Sharp will continue to pioneer an era of renewable energy through efforts in solar power generation.

\* As of June 2012



Sharp develops concentrator solar cell with world's highest conversion efficiency of 43.5%

# Special Feature



A videoconference and meeting using the touchscreen LCD monitor. This interactive whiteboard capability is changing the way people communicate.



Production of LCD panels using oxide semiconductors (IGZO) began at Kameyama Plant No. 2 (Kameyama City, Mie Prefecture)



JR Osaka Station



AQUOS LC-80GL7 80-inch LCD TV for Japan. The screen shows a Visual Motion Guide\*1 which lists TV programs and website information for easier navigation. At the bottom, the menu for the new AQUOS City Internet service is displayed. AQUOS City offers a range of information and living assistance services such as e-mail notifications of TV use at home to keep an eye on family living far away\*2.

\*1 Simulated screen image. Service content may change. Program names are not real.

\*2 Internet service requires a broadband connection, setup, contract with a carrier or provider, and usage fees.



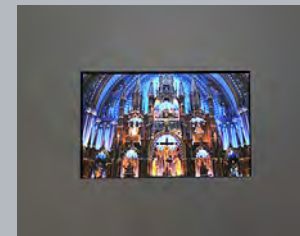
Media tablets RW-T110 (10.1-inch) and RW-T107 (7-inch) for Japan. These can be used for sending\*3 and sharing meeting materials in a system linked with the touchscreen LCD monitor.

\*4 Separately sold file-sharing software required

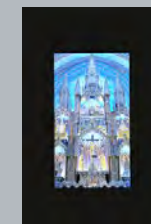


JL-T100 study tablet with handwriting input capability for Japan. Interactive classes can be held in schools by linking with the touchscreen LCD monitor\*3.

\*3 Development of applications and construction of delivery systems are required



New IGZO LCD (prototype) (above: 6.1-inch for mobile devices) (left: 4.9-inch for smartphones)



## ■ Achieving Rich Communication by Energy-Saving Displays

Today, LCDs are routinely used by everyone, everywhere—in TVs, smartphones, tablets, and copier control panels, to name just a few. A wide range of information can be displayed, from black-and-white characters to high-resolution full-color video. Thin, light, and energy-saving LCDs are used in mobile devices for easy access to information and knowledge from around the world through the Internet and SNS (social networking services), and have become indispensable for communicating and exchanging opinions. Thin, light, high-resolution, and energy-saving LCDs are also widely used indoors as large-size displays.

Sharp began studying the practical use of LCDs in 1969. Fierce competition in the miniaturization and price reduction of calculators was the impetus for this research for thin display devices with minimal power consumption. Through the persistent efforts of its engineers, in 1973 Sharp succeeded in developing the world's first pocket-sized electronic calculator to include an LCD. Due to its superb energy-saving capability, it could run on one AA battery for 100 hours, and it contributed to creating significantly smaller calculators.

Sharp continued to research and expand the applications for LCDs, along the way evolving the screen display capabilities from numbers and letters to images, from black-and-white to color, from still images to video, and to gradually thinner, lighter, larger, higher-resolution, and more

energy-efficient screens. The next dream of Sharp's engineers was the development of a wall-mountable TV, which would provide a new lifestyle by replacing CRT TVs with thin and energy-saving LCD TVs. The rest is history, as today hundreds of millions of CRT TVs worldwide have been replaced with LCD TVs, bringing people new lifestyles and energy and resource savings.

Sharp continues in its efforts to further evolve LCDs. In collaboration with Semiconductor Energy Laboratory Co., Ltd., Sharp developed a new technology using oxide semiconductors (IGZO). Through this technology, higher resolution, lower power consumption, and enhanced touchscreen performance are possible. Furthermore, IGZO can be applied to organic EL displays.

Sharp is contributing to rich and varied communication through its energy-saving and high-resolution displays.



Sharp Eco House at GREEN FRONT SAKAI conducts tests of the home energy management system (HEMS)



JH-RTP1/JH-RTP2 power consumption visualizing system for Japan (conceptual image). The real-time power consumption of individual home appliances connected to a power-measuring tap can be checked on a dedicated tablet.



RX-V100 home cleaning robotic appliance for Japan, equipped with cleaning function and Plasmacluster ions, brings comfort and a sense of security to daily life. Advanced functions such as AI, voice recognition, sensors, and smartphone connection enable interactive control, communications such as simple greetings, and monitoring of room conditions from outside. (Conceptual image)

## ■ Contributing to a Safe, Healthy, Environmentally Friendly Life through Energy Creation and Energy Saving

Sharp utilizes the Earth's resources and energy to create products. And further energy is consumed when customers use these products. Sharp strives to recycle resources more efficiently and promote energy that does not produce greenhouse gases.

Sharp works to recycle resources by promoting the recycling of used products (see pages 43 and 44) and by using proprietary closed-loop recycling technology for the repeated use of plastics. As a result, recycling volumes have increased (see page 30). Furthermore, since the start of operations in 2004, the Kameyama Plant has recycled 100% of the water used in its production processes. In addition, Sharp's plants in Japan conduct thorough recycling of waste materials and have achieved zero discharge to landfill for the past 11 years (see page 54).

Regarding energy, Sharp seeks to reduce greenhouse gas emissions by thorough energy savings in all its business activities, beginning with manufacturing at its plants. And by expanding production of solar cells and enhancing the energy-saving performance of products, Sharp contributes to the further reduction of such gases. In fiscal 2011, Sharp emitted 1.41 million tons CO<sub>2</sub>, but the use of Sharp energy-creating and energy-saving products contributed to emission reductions of 4.42 million tons CO<sub>2</sub>, 3.1 times actual emissions. For fiscal 2012 and beyond, Sharp has established a new goal and is working towards further reduction of greenhouse gases (see page 7).

For advanced countries to maintain their abundant lifestyles, and for newly emerging and developing countries to continue to grow, it is crucial that we develop and use fossil-free energy sources and that we save energy through the effective use of products.

With original technologies accumulated over the years, Sharp is promoting the development of energy-creating businesses through solar power generation, energy-saving products, and management systems that optimally control energy. In the Eco House at GREEN FRONT SAKAI, Sharp carries out tests for its home energy management system. Throughout the world, Sharp participates in smart community projects such as Kashiwa no ha Smart City in Chiba Prefecture.

Sharp is also promoting the development of air purification technologies. Plasmacluster technology is Sharp's unique technology that inactivates and removes airborne viruses and mold. To date, Sharp has delivered more than 30 million Plasmacluster-equipped products and ion generating devices in Japan and overseas.

Using its original technologies and in collaboration with powerful international partners, Sharp helps people around the world create energy and save energy, and live a life that is safe, healthy, and environmentally friendly. This helps advance culture, improve the well-being of communities, and realize a sustainable society.

# Objectives and Achievements in the Area of Management

The Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct characteristically include the “practice of fair and open 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 2011

In fiscal 2011, in response to an ever-growing number of demands from stakeholders to strengthen corporate governance and internal control, Sharp continued to work to improve the objectivity and soundness of the governance system and took steps to ensure the stable operation of the company’s internal control system. With a view to its global operations, Sharp conducted an ongoing series of training and educational activities

to promote policies for compliance, which form the very basis of CSR in advancing business activities, as well as implementing further measures to ensure total compliance with antitrust laws. Sharp also pushed forward with ongoing efforts to improve specific management-related areas, such as BCPs (business continuity plans), ensuring information security, and protecting personal information and intellectual property rights.

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

Important Themes		Achievements for Fiscal 2011	Self Evaluation	Objectives for Fiscal 2012	See page(s)
Reinforce corporate governance	Objectives	<ul style="list-style-type: none"> <li>• (Corporate governance) Further improve transparency, objectivity, and soundness in management</li> </ul>	○	<ul style="list-style-type: none"> <li>• (Corporate governance) Further improve transparency, objectivity, and soundness in management</li> </ul>	14, 15
	Achievements	<ul style="list-style-type: none"> <li>• Appointed one new outside member to Board of Directors (June), establishing two outside board member positions</li> </ul>			
Develop, maintain, operate, and assess internal control system	Objectives	<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>	○	<ul style="list-style-type: none"> <li>• Continuously put into practice various policies related to internal control system</li> <li>• In each internal control area, review progress of implementation to improve efficiency from operational perspective and mount intensive efforts to resolve critically important items (problem areas)</li> </ul>	15, 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>• Conducted evaluation of validity and effectiveness with reference to revisions to Internal Control Reporting System and submitted Internal Control System Report (information disclosure) (June)</li> </ul>			
Review systems for promoting CSR	Objectives	<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>• Expand and improve CSR measures in Japan and abroad, giving consideration to ISO 26000 and OECD Guidelines for Multinational Enterprises, etc.</li> </ul>	16, website
	Achievements	<ul style="list-style-type: none"> <li>• Self-analysis carried out by each functional business group for major guidelines under ISO 26000</li> </ul>			
Strengthen business risk management	Objectives	<ul style="list-style-type: none"> <li>• Ongoing improvement of BCM (business continuity management) system</li> </ul>	○	<ul style="list-style-type: none"> <li>• Ongoing improvement of BCM system</li> <li>• Ongoing review and improvement of BCPs for major overseas production bases</li> </ul>	17
	Achievements	<ul style="list-style-type: none"> <li>• Conducted BCP disaster simulation exercises for domestic sales groups and non-production bases, assuming occurrence of large-scale earthquakes</li> <li>• Ongoing review of existing BCPs for domestic production bases</li> </ul>			
Practice compliance in business	Objectives	<ul style="list-style-type: none"> <li>• Ongoing implementation of compliance promotion measures</li> </ul>	○	<ul style="list-style-type: none"> <li>• Ongoing compliance training for employees in Japan and abroad</li> <li>• Ongoing training on antitrust laws for employees of all business groups and domestic subsidiaries</li> <li>• Ongoing implementation of education and awareness of anti-bribery guidelines</li> </ul>	19–21, website
	Achievements	<ul style="list-style-type: none"> <li>• Ongoing compliance training (job-level-specific training, e-learning, etc.) for employees in Japan and abroad</li> <li>• Held training on antitrust laws for employees of all business groups and domestic subsidiaries</li> <li>• Implementation of education and awareness of compliance items for antitrust laws in business tie-ups with other companies</li> <li>• Implementation of education and awareness of anti-bribery guidelines to preclude corrupt practices involving foreign public officials</li> </ul>			
Strengthen measures for maintaining confidentiality and information security	Objectives	<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>• Conduct regular security assessments of publicly accessible servers</li> <li>• Centralize and unify management of publicly accessible servers</li> </ul>	22
	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>• Conducted security assessment of publicly accessible servers</li> </ul>			
Strengthen personal information protection system	Objectives	<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>	22
	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

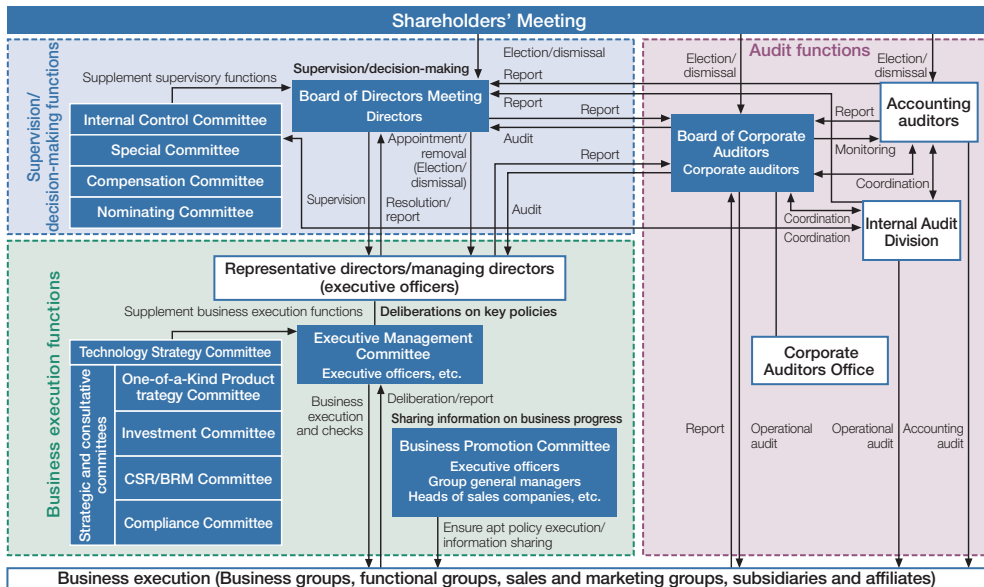
Sharp is working to improve corporate governance functions while strengthening its Director/Corporate Auditor System, for example by appointing outside directors, speeding up managerial decisions by separating supervisory and decision-making functions from business execution functions based on an executive 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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>(Corporate governance) Further improve transparency, objectivity, and soundness in management</li> </ul>	<ul style="list-style-type: none"> <li>Appointed one new outside member to Board of Directors (June), establishing two outside board member positions</li> </ul>	<ul style="list-style-type: none"> <li>(Corporate governance) Further improve transparency, objectivity, and soundness in management</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>	<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>Conducted evaluation of validity and effectiveness with reference to revisions to Internal Control Reporting System and submitted Internal Control System Report (information disclosure) (June)</li> </ul>	<ul style="list-style-type: none"> <li>Continuously put into practice various policies related to internal control system</li> <li>In each internal control area, review progress of implementation to improve efficiency from operational perspective and mount intensive efforts to resolve critically important items (problem areas)</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 corporate governance functions while strengthening the Director/Corporate Auditor system.

### Corporate Governance 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, with the aim of further improving 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.

### 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 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 with the management of 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

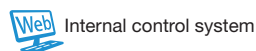
Sharp is developing and maintaining its internal control system to ensure that the entire Sharp Group engages in fair and appropriate business practices based on provisions of Japan's Companies Act and the Internal Control Reporting System under the Financial Instruments and Exchange Act.

In response to the enactment of the Companies Act in 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 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, 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 rules and regulations required to build internal control systems at consolidated subsidiaries and affiliated companies in Japan and overseas. Sharp has also taken similar initiatives for newly established major consolidated subsidiaries and affiliated companies.

At the same time, in response to the Financial Instruments and Exchange Act, the Sharp Group has been evaluating the effectiveness of the internal control system in relation to financial reporting. It has also taken steps to reduce various business risks through the sound operation of the internal control system.



### Message from an Outside Director

The major disaster of the Great East Japan Earthquake renewed worldwide awareness of not only the extent to which such disasters can affect companies but also the risks that business activities bring to the environment and society. Many industries and companies are using this experience as an opportunity to accelerate decentralization of the value chain and development of alternative energy sources, and are reconsidering measures to reduce business risks.

Initiatives companies undertake to help resolve environmental preservation issues and human rights and other social issues become critical elements for stakeholders, including customers, shareholders, and financial institutions, to evaluate those companies from the perspective of social responsibility. Furthermore, to achieve sustainable development, many companies are strengthening their business activities in terms of not only economic dimensions, but also environmental and social dimensions. It is essential for those companies to actively disclose that information through sustainability reports and other media to ensure their activities are widely known and to enhance communication with stakeholders.

Last year we saw a succession of corporate scandals that shook the state of Japan's corporate governance. Initiatives are underway to revise the legal system in an attempt to tighten regulations. As an outside director, I hope to fulfill my role to oversee Sharp's management operations from an independent standpoint and use my experience built up over many years conducting global business management at a trading company to help restore Sharp's performance and confidence, to the greatest extent possible.



**Makoto Kato**  
Outside Director

#### Career Overview

- June 1995 Director, Itochu Corporation
- October 1998 Representative Senior Managing Director, Itochu Corporation
- April 2001 Representative Executive Vice President, Itochu Corporation
- April 2006 Vice Chairman, Itochu Corporation
- June 2007 Corporate Senior Advisor, Itochu Corporation
- June 2011 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 instituting the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct as a set of principles and standards of behavior for putting CSR into practice, 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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012
<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>Self-analysis carried out by each functional business group for major guidelines under ISO 26000</li> </ul>	<ul style="list-style-type: none"> <li>Expand and improve CSR measures in Japan and abroad, giving consideration to ISO 26000 and OECD Guidelines for Multinational Enterprises, etc.</li> </ul>
<ul style="list-style-type: none"> <li>Ongoing improvement of BCM (business continuity management) system</li> </ul>	<ul style="list-style-type: none"> <li>Conducted BCP disaster simulation exercises for domestic sales groups and non-production bases, assuming occurrence of large-scale earthquakes</li> <li>Ongoing review of existing BCPs for domestic production bases</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing improvement of BCM system</li> <li>Ongoing review and improvement of BCPs for major overseas production bases</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 the Chief General Administration Officer, as well as 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 Division for planning and promoting CSR policies and measures for the entire Sharp Group. The CSR Promotion Division 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 14: 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.

The Charter of Corporate Behavior and Code of Conduct were reviewed as appropriate and recently revised in April 2010 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 · 68 · 76 · 77 · 82 · 86–89
<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 · 68 · 76 · 77 · 82–87
<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 · 7 · 9–12 · 24–66
<b>Anti-Corruption</b> Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.	4 · 13 · 20

## Responding to New Trends in CSR

In fiscal 2011, relevant functional groups performed self-analysis of main components of ISO 26000, an international standard providing guidelines for social responsibility. Based on stakeholder engagement and other issues discovered in analyses and in consideration of the OECD Guidelines for Multinational Enterprises and other guidelines, each functional group works together with the CSR Promotion Division to continuously expand Sharp’s CSR activities in Japan and abroad.

## 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 16) 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) Management Based on the Rules of Business Risk Management

Sharp developed the Rules of Business Risk Management as a basic policy for the promotion of BRM, and controls business risks based on these rules. In the Rules, Sharp has identified more than 100 risk items that could have a major impact on management 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 and prevent risks from actually occurring.

In addition, Sharp established the Rules of Emergency Response, detailing responses if a major potential risk incident 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 works on an ongoing basis to formulate and move forward with plans every six months to deal with these priority management risks 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 to prevent similar incidents by sharing information and ensuring that countermeasures are deployed across the company. Further, in fiscal 2011, efforts to further strengthen risk management among the main functional groups and the CSR Promotion Division were reaffirmed.

### 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 expedite the continuation or early recovery of business 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 2011, Sharp conducted BCP simulation exercises for subsidiaries and sales groups in Japan, and instituted a system in Japan based on the PDCA cycle to hold ongoing reviews and make improvements in BCPs.

In fiscal 2012, Sharp will continue to hold ongoing reviews and work to improve BCPs at major overseas bases.

## Case Studies

### Response to the Great East Japan Earthquake

Due to their geographical location, none of Sharp's production bases sustained damage as a direct result of ground motion or the tsunami. The strongest impact was to material procurement. In response, efforts were made to procure materials from multiple sources, and company-wide policies were prepared, such as actions to help people stranded by paralyzed transportation systems to return to their homes.

In response to requests by the government and electric power companies to conserve power, Sharp implemented initiatives such as setting the air conditioning cooling temperature at 28°C and heating temperature at 18°C, taking a certain percentage of lights out of service, introducing daylight saving time within the company, and relaxing the summer dress code. Through these efforts, power was reduced by about 30% within the service territories of Tokyo Electric Power Co. and about 10% throughout all Group companies during the period from July 1 to September 22, 2011 compared to the peak power period in 2010.

### Response to Massive Flooding Damage in Thailand

When floods swept over Thailand in October 2011, Sharp immediately inaugurated an emergency operations council comprising the Head Office and local production and sales bases. As the damage became more extensive, the council was quickly converted into an emergency operations center with the Sharp Corporation President in command. The center collected information on flooding risk and impact on operations for local bases and business partners and carried out various countermeasures.

Sharp had various flood countermeasures in place at its bases in Thailand, but those locations luckily did not suffer any direct flood damage. Unfortunately, considerable damage was sustained by business partners, affecting production for Sharp at local production bases as well as those outside of Thailand.

Thanks to the valuable efforts of numerous business partners, Sharp was able to escape prolonged effects of the Thailand floods. However, the company plans to review and revise its BCP for its bases, including the ones in Thailand, based on the lessons learned from the flood.

## Case Study (Japan)

### CSR Efforts in Sales and Marketing Areas in Japan, and Promoting CSR through the PDCA Cycle

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 and compliance first.”

Sales and service bases all over Japan are engaged in ongoing efforts to become firmly anchored in local communities through further raising the level of awareness of CSR among all employees.

In addition, the CSR Promotion Department, established within the Domestic Sales and Marketing Group, works to plan and promote the PDCA management cycle (“plan, do, check, and act”) for CSR through ongoing training and support for on-site problem solving activities and monitoring of the results. These efforts are aimed at improving compliance at sales and service sites, and also serve to implement a broad range of policies and activities on a more pragmatic level.

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

At business sites where multiple sales and service bases are located, morning meetings are held to maintain and improve employee knowledge about CSR. At the meetings, participants exchange 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, Sharp is demonstrating its commitment to community-based social action programs and to raising awareness of preserving biodiversity by conducting cleanup activities for wetlands that fall under the Ramsar Convention (selecting the 10 wetland areas located nearest the bases).

Further, in environmental education classes conducted in elementary schools, a key component of Sharp’s community service activities, employees of sales and service bases nationwide serve as teachers, working with a nonprofit organization with a goal of making presentations in 500 schools each year.

**Related Information** Page 91: Environmental Conservation Activities in Japan  
Page 92: Educational Activities in Japan

### Words from a CSR Representative

The CSR group that I am in charge of supports activities to raise awareness of compliance during sales and service, and plans and promotes environmentally focused community service activities.

All sales and service companies around the country work in coordination under the concept of “Sharp as one,” and jointly undertake community-oriented activities.



**Kenji Nejime**  
Assistant Supervisor  
Strategic Planning Department (CSR)  
Domestic Sales and Marketing Group  
Sharp Corporation

## Case Study (Overseas)

### Promoting CSR at SEID, a Manufacturing and Sales Subsidiary in Indonesia

All employees at SEID\*, a manufacturing and sales subsidiary in Indonesia, are involved in CSR activities based on the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct translated into the local language.

All employees are familiarized with the Sharp Group Compliance Guidebook, as well as with a manual on prohibitions derived from antitrust laws. SEID actively promotes compliance, for example by setting up a hotline for whistle-blowers in May 2008. Moreover, its training center provides employees with thorough training programs that teach topics such as occupational health and safety.

SEID also focuses efforts on business risk management, for example by promoting CSR in the supply chain and formulating a BCP outlining the appropriate response to take during emergencies such as earthquakes and outbreaks of a new strain of influenza.

**Related Information** Page 76: Example of Overseas Supplier Meeting

### Activities That Contribute to Local Communities

The Sharp Green Club (SGC) was established at SEID in 2004. As a part of its CSR initiatives, it carries out activities to contribute to local communities. SGC policies are based on the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct and prioritize “contribution to conservation of the global environment.”

SEID is building good relations with people of the local community and carrying out various environmental conservation activities in order to heighten residents’ awareness of environmental issues. It also holds workshops on measures to prevent dengue fever, nutrition for infants, and occupational training for women and young people (such as screen printing and cooking).

To heighten awareness of the environment in children from a young age, SEID holds environmental education classes at local elementary schools. Through demonstrations and hands-on lessons, children have fun learning about environmental issues, biodiversity, renewable energy, global warming, and other topics.

SEID has held environmental education classes at about 50 elementary schools in Indonesia from 2008 until the present.

\* P.T. Sharp Electronics Indonesia manufactures and sells audio-visual equipment and health and environmental equipment  
**Related information** Page 49: SEID in Indonesia Achieves SGF Status  
Page 92: Overseas Environmental Education

### Training Department Provides Full Support for CSR Activities

The SEID Training Department has experienced trainers on staff to ensure elementary school students and regular citizens can easily understand environmental issues. Trainers provide information in an easy-to-understand manner while maintaining dialogues, thereby promoting interest in and willingness to understand environmental issues.



**Ramdani**  
Manager  
Training Department  
SEID

# 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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>Ongoing implementation of compliance promotion measures</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing compliance training (job-level-specific training, e-learning, etc.) for employees in Japan and abroad</li> <li>Held training on antitrust laws for employees of all business groups and domestic subsidiaries</li> <li>Implementation of education and awareness of compliance items for antitrust laws in business tie-ups with other companies</li> <li>Implementation of education and awareness of anti-bribery guidelines to preclude corrupt practices involving foreign public officials</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing compliance training for employees in Japan and abroad</li> <li>Ongoing training on antitrust laws for employees of all business groups and domestic subsidiaries</li> <li>Ongoing implementation of education and awareness of anti-bribery guidelines</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>Conducted security assessment of publicly accessible servers</li> </ul>	<ul style="list-style-type: none"> <li>Conduct regular security assessments of publicly accessible servers</li> <li>Centralize and unify management of publicly accessible servers</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 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 social codes of conduct and company regulations, 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

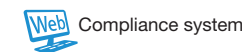
Sharp is working not only to strengthen its compliance and legal systems in Japan, but also improve and enhance its legal systems internationally to ensure that compliance is integrated into management practices on a global level.

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 of Sharp Corporation 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 2009, to strengthen its compliance and legal systems overseas, Sharp appointed a top management executive in major regions overseas (such as the US, Europe, and China) to serve as a Compliance Officer (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 as well as share information, each legal affairs staff member, as staff of each regional CO, works in cooperation with each base in the region, and also holds regular meetings with Sharp's Legal Division at the Head Office.

In relation to these efforts to promote compliance in all regions in Japan and abroad, the Compliance

Committee was formed as a complementary body to the CSR/BRM Committee, and is chaired by the Chief General Administration Officer and includes group general managers of the functional groups. This committee proposes compliance measures for the Sharp Group and periodically confirms their implementation status and checks on corrective actions.



Compliance system

## TOPICS

### Promoting Compliance in China

A legal affairs and compliance division has been established at SCIC, Sharp Chinese headquarters, that works with Chinese in-house lawyers to give legal support to local bases and implement compliance measures at those bases. The division previously formulated a Chinese language version of the Compliance Guidebook and a Q&A list on antimonopoly law and provided training workshops in order to instill a basic awareness of compliance and ensure strict adherence to antimonopoly law. In fiscal 2011, it began publishing a monthly compliance newsletter with the goal of expanding continuous educational activities.

The newsletter is distributed to all employees in bases in mainland China. The division also held study sessions for production and sales bases on topics such as the legal system concerning representations of products and important points for business activities. In the future, the division will strive to reduce compliance risks that are inevitable for a manufacturer by holding special-purpose workshops for each legal field.

In fiscal 2012, we will continue working hard to make risks visible and establish a PDCA plan.



**Ryutarō Nagaya**  
Section Chief  
Chief of Legal Affairs in China  
Legal Affairs and Compliance Division  
SCIC

## 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 as a how-to guide to ensure that each individual employee has a thorough understanding of the meaning of compliance and how to put compliance into practice in their routine work activities.

Sharp in Japan uses training sessions as an opportunity to disseminate the contents of this guidebook, and is 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 2011, Sharp implemented compliance e-learning for all employees in Japan, and also published a compliance newsletter containing case studies and explanations of key laws and regulations.

At overseas bases, as in the previous year, 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.

In fiscal 2012, in addition to the ongoing initiatives described above, as its business expands even further globally, Sharp will continue to further expand and improve its efforts toward regulatory compliance so that business activities are carried out properly in accordance with regulations that apply globally and with local laws and regulations.

## Compliance with Antitrust Laws

Sharp has made antitrust laws in particular a priority area and is working constantly to ensure compliance with them.

In fiscal 2011, 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 implemented study groups on compliance with antitrust laws for all Sharp Corporation business groups and affiliated companies in Japan.

In fiscal 2012, Sharp will continue its efforts to raise awareness of compliance items related to antitrust laws by holding training sessions for all business groups of Sharp Corporation and its affiliated companies in Japan.

## 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. In fiscal 2011, the compliance hotline received about 20 reports and requests for consultation; however, there were no material compliance violations.

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, China, and Indonesia.

\* 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.

	Fiscal 2009	Fiscal 2010	Fiscal 2011
Number of reviews	177	221	183

In fiscal 2011, Sharp worked to ensure compliance items as much as possible based on a guidebook for preventing bribery of foreign public officials, which was prepared in the previous fiscal year.

In fiscal 2012, Sharp plans to produce training materials customized to reflect the laws and regulations of each region where Sharp has overseas bases, and to disseminate them globally.

### Preventing Insider Trading

Sharp has effectuated regulations restricting insider trading, established controls on undisclosed 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. This training includes, among other approaches, an educational campaign on the corporate intranet that targets Sharp Group employees in Japan with the aim of preventing insider trading by Sharp Group directors, auditors, executive officers, 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 promptly disclose and publicize the relevant details. Further, regarding media and analyst coverage, Sharp will deal with it in a positive manner, while fully honoring the spirit of disclosure and remaining attentive so as not to violate insider-trading regulations.

In fiscal 2011, Sharp revamped a portion of the regulations to take a stricter approach to controls on material facts. Sharp also made a concerted effort to further strengthen initiatives aimed at preventing insider trading—for example, through holding lectures on insider trading regulations at new employee orientations and during on-the-job training for new managers.

### Compliance with Laws Related to Fair Advertising Practices and Proper Representations

Sharp, based on the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct, is committed to compliance with laws and regulations regarding fair advertising and publicity activities, the Act against Unjustifiable Premiums and Misleading Representations, and labeling under the fair competition code.

In addition to building a labeling checking system for the entire company, Sharp holds regular company-wide meetings to promote proper labeling. The company also works to prevent violations of laws and regulations by ensuring that labeling is in accord with in-house standards and checklists.

Along with ongoing training sessions for in-house personnel involved in labeling, Sharp has established a website for proper labeling on its corporate intranet. The company is working to enhance the content of training to support building up the skills of the individuals in charge.

Sharp will work on an ongoing basis to further strengthen its labeling checking system in Japan and abroad, while also enhancing related policy measures. The company will continue to ensure compliance with labeling laws as well as laws and regulations governing fair advertising and publicity activities aimed at stakeholders (and customers in particular).

項目	確認事項
1. 表示内容	1. 表示内容が正確であること 2. 表示内容が公平であること 3. 表示内容が明瞭であること 4. 表示内容が正確であること 5. 表示内容が公平であること 6. 表示内容が明瞭であること
2. 表示方法	1. 表示方法が適切であること 2. 表示方法が公平であること 3. 表示方法が明瞭であること 4. 表示方法が正確であること 5. 表示方法が公平であること 6. 表示方法が明瞭であること
3. 表示場所	1. 表示場所が適切であること 2. 表示場所が公平であること 3. 表示場所が明瞭であること 4. 表示場所が正確であること 5. 表示場所が公平であること 6. 表示場所が明瞭であること
4. 表示時期	1. 表示時期が適切であること 2. 表示時期が公平であること 3. 表示時期が明瞭であること 4. 表示時期が正確であること 5. 表示時期が公平であること 6. 表示時期が明瞭であること

Checklist for consumer electronics fair competition code used by persons in charge of advertising and labeling

### Export Control

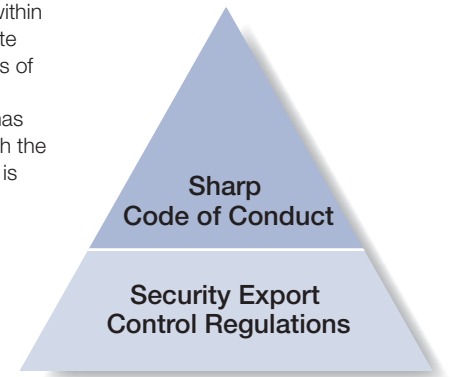
To comply with laws and regulations related to export control—such as Japan’s Foreign Exchange and Foreign Trade Act—Sharp has established certain policies in the Sharp Code of Conduct. The entire Sharp Group, including domestic and overseas subsidiaries, imposes rigorous controls on exports. Regarding specific activities, Sharp has established a company-wide compliance program for export control, under which a determination is made whether a Sharp product, component, or technology (including software) falls under Japan’s export regulations (“non-applicability”).

Sharp’s technology departments, which understand the technical specifications, make the determination of non-applicability, and the Export Control Division at each business group re-checks the decision. If a product or technology falls under the regulations and if authorization is needed from the Ministry of Economy, Trade and Industry, Sharp follows the requisite internal procedures to submit an application for an export license.

In addition, Sharp issues a notice of prohibited export when a product that does fall under the regulations is supplied to a customer in Japan, and it issues a certificate of non-applicability (“parameter sheet”) when a customer requests that it be provided.

Furthermore, to check whether a product or technology could be used for the development of weapons of mass destruction (nuclear weapons, biological/chemical weapons, missiles, etc.) or conventional weapons, Sharp carefully screens customers, conducts a rigorous review of all transactions, and proceeds with a transaction only after receiving approval from the Department of Export Control at the Head Office.

Sharp provides training on a regular basis to departments within the company involved in this process, in order to disseminate information about export controls and strengthen awareness of their importance. Considering the recent expansion of globalization in areas such as overseas production, Sharp has also been promoting key initiatives aimed at compliance with the legal systems of all countries where a Sharp overseas base is located.



## Management of Confidential and Personal Information

Sharp strictly manages not only internal information, but also confidential and personal information received from customers, business partners, and others based on internal regulations to prevent risks of leaks.

In Japan, e-learning sessions are provided to all employees each year on topics such as information security and protection of personal information. In addition, regular audits are carried out (as a general rule, once a year) on management of confidential and personal information at each business group and affiliated company.

In fiscal 2012, Sharp will further raise the level of its information management by developing a company-wide information management system, reviewing and enhancing relevant policies including revisions of the Basic Policy on Information Security to fit global standards, and conducting workshops, self-checks, and audits based on the new policies.

### Global Basic Policy on Information Security (revised in May 2012)

To ensure the safe and appropriate management and use of information and information systems (hereinafter "Information Assets"), the Sharp Group\* (hereinafter the "Group") stipulates a Global Basic Policy on Information Security as below, striving at all times to maintain the security of its information.

1. We recognize that information is a vital management resource in supporting and improving the competitive position of the Group. We will strive to manage our Information Assets prudently and use them safely and appropriately in order to build reliable relationships with customers, business partners, and other stakeholders.
2. We will construct a framework for information security with reference to the status of information protection systems in countries and regions around the world, and thereby implement a variety of related measures.
3. In using both hardware and software, we will maintain systems and arrangements to manage our Information Assets prudently and use them safely and appropriately. We will constantly work to improve these systems and arrangements, reviewing them continuously.
4. We will take appropriate measures to maintain our Information Assets and thereby establish information security measures commensurate with the importance of each Information Asset, in order to protect them from divulgement, tampering, loss, external penetration of information systems, or other damage.
5. Our basic principle is to convey only the necessary information to the members within the scope necessary for the conduct of operations. In particular, we will exercise strict management of all important information and personal information disclosed to us by customers and business partners.
6. Directors, officers, and employees will work together to maintain effective information security. To this end, education and training is provided on a regular basis to all Group directors, officers, and employees.
7. We will strictly comply with all laws, contractual obligations, and other standards regarding information security.
8. We will require all our business partners who hold information about the operations of the Group to take the measures necessary to maintain information security.
9. In the event that a problem arises with respect to the security of Information Assets, we will take prompt action to discover the cause of the problem and take the necessary steps to minimize damage and prevent recurrence.

## Raising the Level of Information Security

In fiscal 2011, Sharp carried out an assessment in Japan and abroad of the security status of its websites, which had become a problem.

In addition, in March 2012, the IT Infrastructure/Information Security Committee advised that thorough precautions be taken to avert risks to corporate websites.

In fiscal 2012, Sharp will continue regular security assessments of its websites. It is also planning to bring publicly accessible servers under centralized management and control and to conduct training to strengthen the capability to respond rapidly to the occurrence of security incidents.



A meeting of the IT Infrastructure/Information Security Committee, using a Sharp interactive whiteboard

## Acquiring Privacy Mark Certification

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. As a result of these efforts, Sharp Corporation and the affiliated companies in Japan listed below have received 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

## 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 Center 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 2012, Sharp's patent holdings consisted of 20,644 Japanese patents and 24,232 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 patent utilization. In addition, Sharp is filing applications and registering rights for designs and trademarks globally under its brand strategy.

Date	End of March 2010	End of March 2011	End of March 2012
Japanese patents	17,501	19,932	20,644
Foreign patents	22,568	24,170	24,232

## 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 crack down 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 crack down, and will hold training workshops for officials.

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

## TOPICS

### Exchanging Opinions on Intellectual Property Rights Protection with Chinese Customs

The Japanese Ministry of Economy, Trade and Industry and Japanese companies are working together with the Chinese government to implement countermeasures against products that violate intellectual property rights. In August 2011, in an attempt to deepen mutual understanding, employees from the General Administration of Customs of China that is beefing up control to prevent infringing products from leaving the country were invited to Japan and visited Sharp within the private sector.

As its brand recognition increases around the world, Sharp is also the victim of serious intellectual property right violations. Protection of intellectual property rights is set as a high priority from the perspective of protecting the brand.

At the meeting, each party introduced its initiatives and gave its opinions on effective methods to crack down on products that violate intellectual property rights. The meeting was also an opportunity to confirm that, going forward, the two parties will cooperate with each other to strengthen countermeasures against infringing products.

Sharp will continue to work together with government agencies to carry out initiatives to protect its brand from the perspective of intellectual property.



Meeting to exchange opinions on intellectual property rights protection



# 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 has set up an organization to plan and promote overall company strategy for protecting the global environment, and it is deploying environmental sustainability management on a global basis.

Critical policies, strategies, and measures relating to environmental sustainability management are referred to the Executive Management Committee. With the approval of corporate executives, these initiatives are thoroughly implemented across the entire Sharp Group. Specifically, the director in charge of environmental affairs 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. Sharp also holds Company-Wide GP (Green Product) and GF (Green Factory) Conferences in Japan and 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<sup>\*1</sup>, 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<sup>\*2</sup>). 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.

\*1 See page 49.

\*2 See page 15.

## Sharp Group's Environmental Sustainability Management



# Environmental Objectives and Achievements

Under its corporate vision of becoming an Eco-Positive Company, Sharp 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 CS and Environmental Promotion Group, which is responsible for company-wide environmental strategy, and on their results.

## Fiscal 2011 Achievement Summary

Due to the unanticipated worsening of the business environment in terms of both scale and speed, fiscal 2011 was a year of unprecedentedly bad business performance. Changing market conditions resulted in a sharp drop-off in sales, which necessitated that adjustments be made to production. As a result, although greenhouse gas and waste discharge per production unit worsened, reduction efforts were implemented that contributed to a significant reduction in the total volume discharged.

Sharp is celebrating the 100th anniversary of its founding amidst turbulent times, but this will not deter efforts to make Sharp a “true global company” with key hubs in each region of the world, partnering with leading companies to develop energy-creating business and energy-saving products tailored to the needs of local communities worldwide.

Fiscal 2011 was also the third year of Sharp’s Eco-Positive Strategy, and Eco-Positive efforts have spread throughout the Sharp Group. For the future, the focus will be on encouraging regional hubs to develop and implement their own initiatives that incorporate local regional characteristics as a complement to the wealth of group-wide initiatives already in place. These regionally tailored efforts will involve local communities in a fashion that further develops the essence of what it means to be “eco-positive.”

For a look at the main objectives and achievements, please refer to the tables below and on the next page and to the pages indicated on the right side of those tables.

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

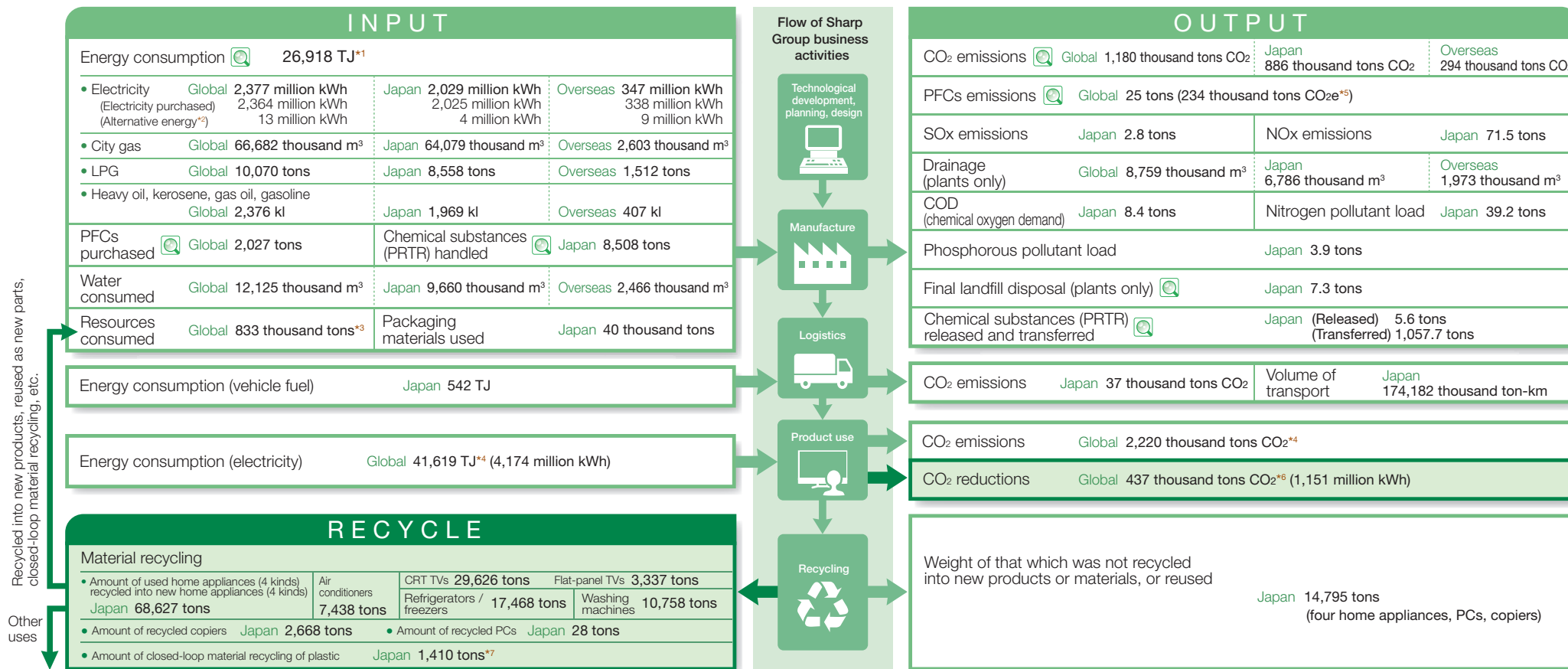
Stages	Themes	Fiscal 2011 Objectives	Fiscal 2011 Achievements	Self Evaluation	Fiscal 2012 Objectives	Fiscal 2015 Objectives	See page(s)
Technologies	Develop 3R technologies	<ul style="list-style-type: none"> <li>Expand closed-loop plastic material recycling</li> <li>Use 1,400 tons of recycled plastic in new products</li> </ul>	<ul style="list-style-type: none"> <li>Used 1,410 tons</li> </ul>	◎	<ul style="list-style-type: none"> <li>Use 1,800 tons</li> </ul>	<ul style="list-style-type: none"> <li>Use 2,000 tons</li> </ul>	29   31
		<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>Implemented proof-of-concept trials for LCD panel recycling</li> </ul>	○	<ul style="list-style-type: none"> <li>Develop waste LCD panel recycling technology</li> </ul>	<ul style="list-style-type: none"> <li>Develop waste LCD TV recycling technology</li> </ul>	
Products	Improve environmental performance of products and devices	<ul style="list-style-type: none"> <li>Increase Super Green Products' share of net sales in Japan</li> <li>50%</li> </ul>	<ul style="list-style-type: none"> <li>52%</li> </ul>	◎	<ul style="list-style-type: none"> <li>50%</li> </ul>	<ul style="list-style-type: none"> <li>50%</li> </ul>	34   41
		<ul style="list-style-type: none"> <li>Increase Advanced Green Products' share of net sales in Japan</li> <li>80%</li> </ul>	<ul style="list-style-type: none"> <li>91%</li> </ul>	◎	<ul style="list-style-type: none"> <li>80%</li> </ul>	<ul style="list-style-type: none"> <li>80%</li> </ul>	
		<ul style="list-style-type: none"> <li>Increase Super Green Devices' share of net sales</li> <li>30%</li> </ul>	<ul style="list-style-type: none"> <li>47%</li> </ul>	◎	<ul style="list-style-type: none"> <li>30%</li> </ul>	<ul style="list-style-type: none"> <li>30%</li> </ul>	
		<ul style="list-style-type: none"> <li>Increase Green Devices' share of net sales</li> <li>92%</li> </ul>	<ul style="list-style-type: none"> <li>97%</li> </ul>	◎	<ul style="list-style-type: none"> <li>95%</li> </ul>	<ul style="list-style-type: none"> <li>95%</li> </ul>	
	Recycle used products	<ul style="list-style-type: none"> <li>Enhance and improve recycling system</li> <li>Construct operational system to accommodate rapidly decreasing number of CRT TVs collected</li> </ul>	<ul style="list-style-type: none"> <li>Shifted employee work hours and expanded number of collected parts by introducing manual disassembly to accommodate decreasing number of used appliances collected due to the end of Eco-Point system and analog broadcasts in Japan</li> </ul>	○	<ul style="list-style-type: none"> <li>Implement high-value-added recycling of recovered components and materials</li> </ul>	<ul style="list-style-type: none"> <li>Increase recycling efficiency of used LCD TVs to accommodate increasing number of products collected</li> <li>Formulate collection scheme for used solar panels</li> </ul>	43 • 44

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	Fiscal 2011 Objectives	Fiscal 2011 Achievements	Self Evaluation	Fiscal 2012 Objectives	Fiscal 2015 Objectives	See page(s)	
Operations	Enhance and improve environmental management system (EMS)	● Restructure EMS promotion system at plants	● Plants in Japan: Restructured IMS promotion system	○	—	—	46 47	
		● Offices in Japan ● Transition to corporate unit-centered EMS promotion system ● Implement EMS training for auditors under new system	● Offices in Japan ● Transitioned to corporate unit-centered EMS promotion system ● Prepared EMS e-learning for auditors	○	● Offices in Japan ● Ensure that corporate unit-centered EMS promotion system is firmly established ● Systematize corporate-unit EMS training	● Offices in Japan ● Establish corporate-unit EMS promotion system		
	Improve environmental performance of plants and offices	● 11 Sharp Corporation plants ● All plants SGF II Grade A or higher (8 plants SGF II Grade S)	● 10 plants SGF II Grade A or higher (8 plants SGF II Grade S)	△	● All plants SGF II Grade S	Develop new SGF measures taking into account characteristics of each plant and region	48 49 50	
		● 5 Japanese plants (consolidated subsidiaries) ● Implement SGF II at 3 SGF ● Certify remaining 2 GF as SGF	● Implemented SGF II at 3 SGF ● Certified 1 GF as SGF	△	● All plants SGF II Grade B or higher			
		● 15 overseas plants (consolidated subsidiaries) ● Implement SGF II at 14 SGF ● Certify remaining 1 GF as SGF	● Implemented SGF II at 14 SGF ● Certified 1 GF as SGF	○	● All plants SGF II Grade B or higher			
		● Eco Best Practice Forums ● Hold forums at least once a year in each region (North America, Europe, Asia, and China)	● Held forums once in each region (North America, Europe, Asia, and China)	○	● Hold forums at least twice a year in each region			● Hold forums at least twice a year in each region
		● 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: Introduced new organizational structure at 21 offices ● Overseas: Held Green Office study sessions on a regional basis ● Green Office certification ● Japan: 21 out of the total 21 offices ● Overseas: 20 out of the total 20 offices	○	● Transition from evaluation/certification to mutual learning ● Issue Green Office Guidelines ● Overseas: Hold Green Office study sessions on a regional basis			● Firmly establish voluntary Green Office activities at each office
	Curb greenhouse gas emissions	● Production-based CO <sub>2</sub> emissions for the 10 Sharp Corporation plants ● Reduce to below fiscal 2007 levels ● Reduce by 3% compared to BAU	● Reduced by 40.2% from fiscal 2007 levels ● Reduced by 3% compared to BAU	◎	● Reduce to below fiscal 2007 levels ● Reduce by 3% compared to BAU	● All 11 Sharp Corporation plants ● Reduce production-based CO <sub>2</sub> emissions by 3% compared to BAU every fiscal year ● Improve specific energy consumption rate by average 1% each year (from fiscal 2013 to 2020) ● CO <sub>2</sub> emissions for overseas plants ● Reduce by 3% compared to BAU every fiscal year	52 53	
		● Production-based CO <sub>2</sub> emissions per adjusted production unit for all 11 Sharp Corporation plants ● Reduce by 35% from fiscal 1990 levels (average for fiscal 2008 to 2011)	● Reduced by 42.2% from fiscal 1990 levels	◎	● Reduce by 35% from fiscal 1990 levels (average for fiscal 2008 to 2012)			
		● CO <sub>2</sub> emissions per production unit for overseas plants ● Reduce by 2% from previous fiscal year	● Increased by 8.2% from previous fiscal year (CO <sub>2</sub> emissions reduced by 7%)	×	● Reduce by 2% from previous fiscal year			
	Reduce and recycle waste	● Amount of waste discharged at the 10 Sharp Corporation plants ● Reduce to below fiscal 2007 levels ● Reduce by 6% compared to BAU	● Reduced by 76.5% from fiscal 2007 levels ● Reduced by 14.9% compared to BAU	◎	● Reduce to below fiscal 2007 levels ● Reduce by 6% compared to BAU	● Amount of waste discharged at all 11 Sharp Corporation plants ● Reduce by 6% compared to BAU every fiscal year ● Reduce by 6% compared to BAU every fiscal year	54 55	
		● Amount of waste, etc. discharged per production unit at overseas plants ● Reduce by 2% from previous fiscal year	● Increased by 6.7% from previous fiscal year (waste, etc. reduced by 8.6%)	×	● Reduce by 2% from previous fiscal year			
Reduce distribution-related CO <sub>2</sub> emissions	● CO <sub>2</sub> emissions per shipping volume by Sharp Group in Japan ● Reduce by average 1% each year for the most recent 5 years (fiscal 2007 to 2011)	● Reduced by average 2% each year	◎	● Reduce by average 1% each year for the most recent 5 years	● Every fiscal year: Reduce by average 1% each year for the most recent 5 years	59 60		
Biodiversity Protection	Contribute to biodiversity protection	● Develop Sharp Biodiversity Initiative ● Increase rate of progress set out in Sharp Biodiversity Initiative by 3 points from previous fiscal year	● Increased rate of progress set out in Sharp Biodiversity Initiative by 8 points from previous fiscal year ● 58% of target bases achieved Grade A set out in progress management tool	◎	● Increase rate of progress set out in Sharp Biodiversity Initiative by 5 points from previous fiscal year ● 70% or more of target bases achieve Grade A	● All bases in Japan and overseas achieve Grade A	62 63	

# 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 certificates purchased.

\*3 Total weight of products in the 15 major categories sold in fiscal 2011 (estimate), plus waste, etc. discharged from production sites.

\*4 Estimate of annual energy used and amount of CO<sub>2</sub> emitted by products in the 13 major categories sold in fiscal 2011. Calculation based on each product's annual energy consumption rate.

\*5 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>.

\*6 Amount of electricity generated (kWh) annually by Sharp solar cells shipped in fiscal 2011, plus CO<sub>2</sub> emissions reduction (tons CO<sub>2</sub>).

\*7 For details, see page 30.

## Greenhouse Gas Emissions Based on the GHG Protocol Initiative

Sharp calculates greenhouse gas emissions based on the GHG Protocol Initiative\*8 and then works to limit those emissions resulting from customer use of Sharp products and Sharp's business activities including the supply chain. The results for fiscal 2011 are shown at right.

Scope	Emissions Level (thousand tons CO <sub>2</sub> )	Notes
Scope 1 (direct GHG emissions from business activities)	422	Burning of heavy oil at plants and offices; emissions from company vehicles; etc.
Scope 2 (indirect GHG emissions from energy usage in business activities)	992	Electrical usage at plants and offices; etc.
Scope 3 (indirect GHG emissions from areas outside the scope of business activities)	8,442	Calculated for 10 categories such as Procurement, Shipping & Distribution, Product Usage, Employee Commuting & Business Trips

\*8 Jointly established in 1998 by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI), the GHG Protocol Initiative develops and promotes the use of standards relating to greenhouse gas (GHG) emission calculation and reporting.

# 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 3.5 billion yen, a decrease of 49% from the previous fiscal year as a result of unfavorable business conditions. Meanwhile, environmental conservation expenditures were approximately 41.1 billion yen, an increase of 5% compared to the previous fiscal year.

## Economic Benefits

Actual benefit was approximately 4.2 billion yen, resulting from the introduction of energy-saving equipment and expanded recycling of waste into valuable resources. Estimated benefit was approximately 246.8 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: 431 yen/tons 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, Kameyama, 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 Referenced Guidelines

April 1, 2011 to March 31, 2012  
Environmental Accounting Guidelines 2005 published by the Ministry of the Environment, Japan

\*1 HFCs, PFCs, sulfur hexafluoride, nitrogen trifluoride, HCFCs  
\*2 Total benefit related to measures implemented using the equipment during depreciation.  
\*3 5-ton containers

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>	148	1,424	-	-	Promote environmental sustainability management			46	
		(216)	(1,674)	-	-	Number of employees with environmental education	Master	17		-
						Expert	483	-		
						General	35	-		
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>	3,079	18,441	-	245,967	Supply environmentally conscious products (Unit: ¥ million)			9 12 29 42	
		(3,485)	(15,005)	-	(168,894)	Green Seal products' share of net sales	91%	-		
						Super Green products' share of net sales	52%	-		
						Total amount of electricity generated by solar power generation systems	4,773 GWh	100,233		
						CO <sub>2</sub> emissions reduced by solar power generation systems	1,749 thousand tons CO <sub>2</sub>	754		
					Electric power saved from energy-saving products	6,849 GWh	143,829			
					CO <sub>2</sub> emissions reduced by energy-saving products	2,667 thousand tons CO <sub>2</sub>	1,150			
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>	108	2,071	2,445 <sup>*2</sup>	886	Greenhouse gas emissions reduced by controlling electricity and fuel consumption (Unit: ¥ million)			48 58	
		(682)	(2,234)	(2,084)	(3,350)	CO <sub>2</sub> emissions reduced	67 thousand tons CO <sub>2</sub>	29		
						PFCs emissions reduced	1,988 thousand tons CO <sub>2e</sub>	857		
		4	11,335	1,778 <sup>*2</sup>	-	Waste recycled or sent for appropriate disposal				
		(52)	(13,656)	(2,121)	-	Waste recycled	91 thousand tons	-		
						Recycled and reused water	17,037 thousand m <sup>3</sup>	-		
Recycling/ Logistics (upstream/downstream)	<ul style="list-style-type: none"> <li>Install scrubbers</li> <li>Introduce exhaust gas treatment systems</li> <li>Promote collection, recycling, and proper disposal of used products</li> </ul>	160	6,462	-	-	Observe environmental laws and regulations			43 44 59 60	
		(2,436)	(6,325)	-	-	Prevent air/water pollution and noise/vibration				
						Promote risk management				
						Chemical substances properly managed and their discharge reduced				
		0	137	-	-	Reduce risk of soil contamination				
		(0)	(23)	-	-	Collection, recycling, and proper disposal of used products				
						Used PCs recycled	28 tons	-		
						Used copiers recycled	2,668 tons	-		
						Used home appliances (4 categories) recycled	68,627 tons	-		
						Environmental burden during distribution reduced				
						Railway/ship cargo transport (container transport)	21,598 containers <sup>*3</sup>	-		
						Percentage of low-pollution vehicles	99.4%	-		
Social Responsibility	<ul style="list-style-type: none"> <li>Expand social contribution activities</li> </ul>	0	554	-	-	Environmental social contributions			90 95	
		(0)	(147)	-	-	Number of employees who attended SGC activities	Total 22,365	-		
						Number of schools where environmental/craftsmanship education was provided	Total 616	-		
<b>Total</b>		<b>3,499</b>	<b>40,424</b>	<b>4,223</b>	<b>246,853</b>					
		<b>(6,871)</b>	<b>(39,064)</b>	<b>(4,204)</b>	<b>(172,244)</b>					

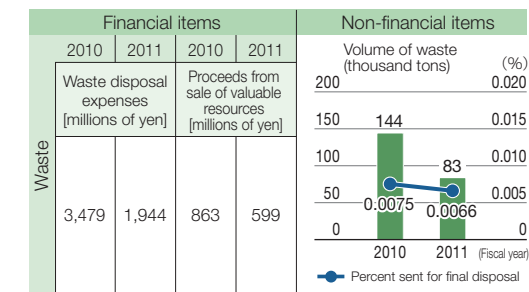
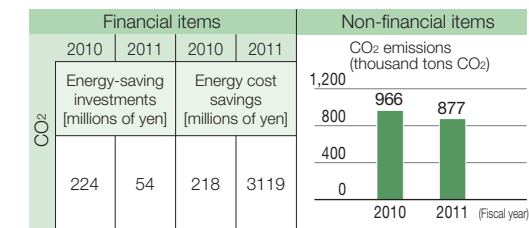
Note: Figures in parentheses below entries represent actual values from the previous fiscal year.

## 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 2011 to reduce CO<sub>2</sub> emissions and the amount of waste generated are presented below. Decreased production had an impact, reducing CO<sub>2</sub> emissions by 9% and waste output by 42% compared to the previous fiscal year. The percentage of waste sent for final landfill disposal was 0.0066%, which means Sharp has achieved zero discharge to landfill for the eleventh year in a row.



# 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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012	Objectives for Fiscal 2015
<ul style="list-style-type: none"> <li>Expand closed-loop plastic material recycling                             <ul style="list-style-type: none"> <li>Use 1,400 tons of recycled plastic in new products</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Used 1,410 tons</li> </ul>	<ul style="list-style-type: none"> <li>Use 1,800 tons</li> </ul>	<ul style="list-style-type: none"> <li>Use 2,000 tons</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>Implemented proof-of-concept trials for LCD panel recycling</li> </ul>	<ul style="list-style-type: none"> <li>Develop waste LCD panel recycling technology</li> </ul>	<ul style="list-style-type: none"> <li>Develop waste LCD TV recycling technology</li> </ul>

## R&D on Unique Environmental Technologies

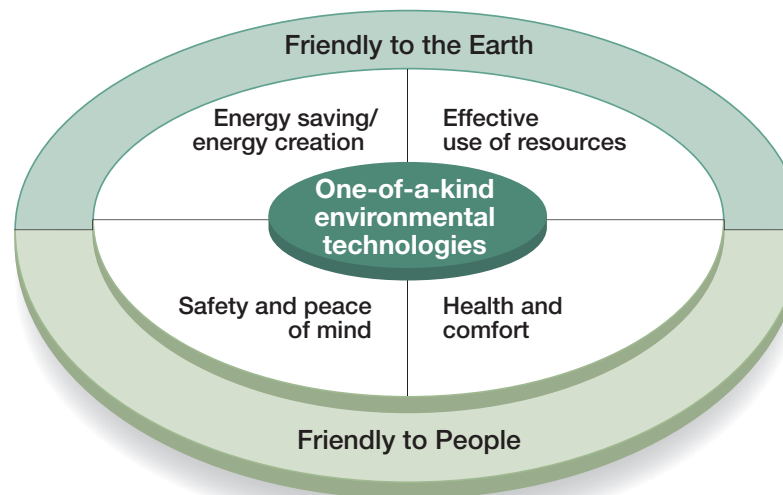
In fiscal 2011, the volume of plastic derived from closed-loop plastic material recycling technology\*1 that was recycled and reused in new products increased to 1,410 tons. This technology represents an example of a unique environmental technology that helps reduce the consumption of fossil-based resources and contributes to the effective use of resources. Sharp also continued to work on the development of recycling technologies for LCD panels and technologies for using biomass materials.

Sharp has also developed energy-saving UV<sup>2</sup>A technology\*2 and LED backlighting for LCDs; biomimetic applications for air conditioners, washing machines, and other home appliances; and a compound solar cell that achieved 36.9%\*3 conversion efficiency—the highest in the world\*4.

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.

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



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

\*2 Abbreviation of Ultraviolet induced multi-domain Vertical Alignment. Photo-alignment technology that can precisely control the alignment of liquid crystal molecules using a manufacturing method based on UV light exposure.

\*3 Conversion efficiency confirmed by the National Institute of Advanced Industrial Science and Technology (AIST; one of several organizations around the world that officially certifies energy conversion efficiency measurements in solar cells) in September 2011 (cell surface: approx. 1 cm<sup>2</sup>).

\*4 As of November 4, 2011, for non-concentrator solar cells at the research level (based on Sharp survey).

Case Study 1

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

Sharp and Kansai Recycling Systems Co., Ltd.\*1 jointly developed 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. This technology has been in practical use since fiscal 2001.

Thanks to the development of a high-efficiency metal removal line, high-purity PP (polypropylene) separation and recovery technology, and other property improvement/quality control technologies that integrate everything from recovery to quality control, Sharp has been able to recover a greater volume of recyclable plastic, as well as find high-value-added applications for recycled plastic, such as in the exterior panels of home appliances and as flame-retardant materials.

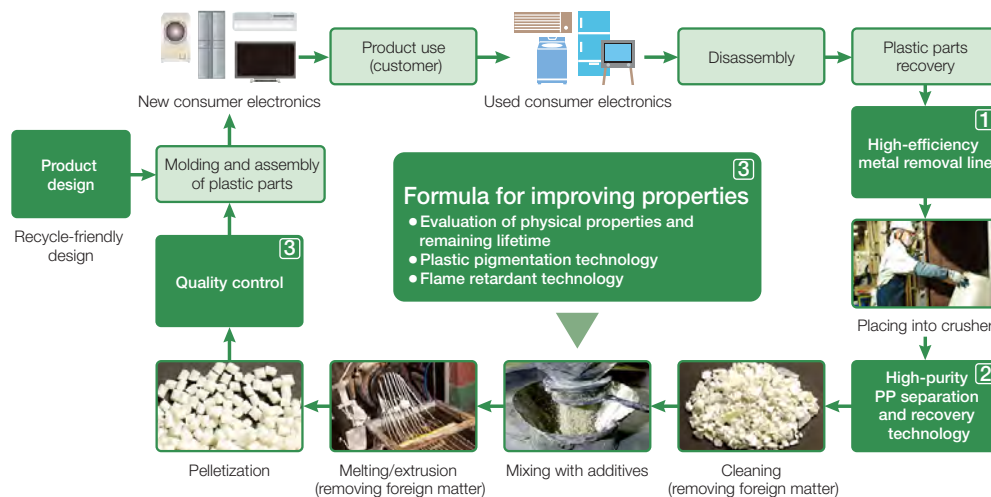
Because recycled plastic can be reused numerous times, it has been adopted for use in washing machines, refrigerators, and other such home appliances sold within Japan which are subject to the Home Appliance Recycling Law. From the very start of commercial application, this recycled plastic has been utilized in the tubs of all top-loading washer/dryers and fully automatic washing machine models. And with respect to refrigerators, it has been used intensively in Sharp's high-energy-efficiency flagship models.

The volume of recycled and reused plastic reached 1,410 tons in fiscal 2011. Sharp plans to expand this amount to 2,000 tons in fiscal 2015.

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 four other companies.

Closed-Loop Plastic Material Recycling Flow



1 High-Efficiency Metal Removal Line

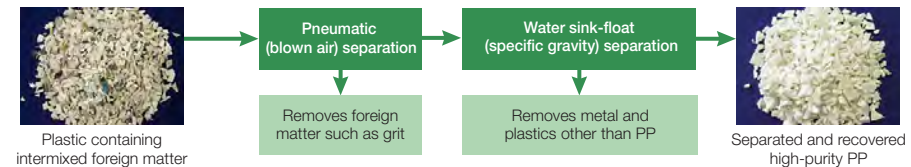


High-efficiency metal removal line (Kansai Recycling Systems Co., Ltd.)

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

2 High-Purity PP (Polypropylene) Separation and Recovery Technology

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

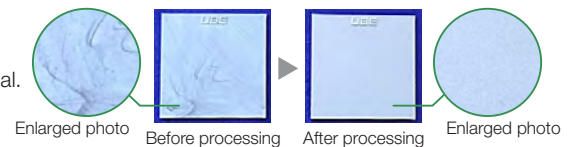


3 Property Improvement/Quality Control

Technology to enable the repeated reuse of recycled plastic; for example, by improving properties to match specifications demanded by the components it will be used in and implementing quality control suitable for recyclable materials.

Example) Plastic Pigmentation Technology\*2

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

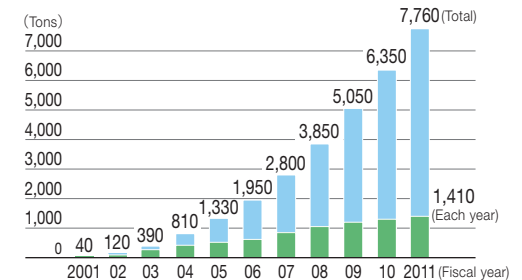


\*2 An original technology of Ube Industries, Ltd.

Examples of Closed-Loop Recycled Plastic Use



Use of Plastic Derived from Closed-Loop Material Recycling Technology



Case Study 2

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\*1.

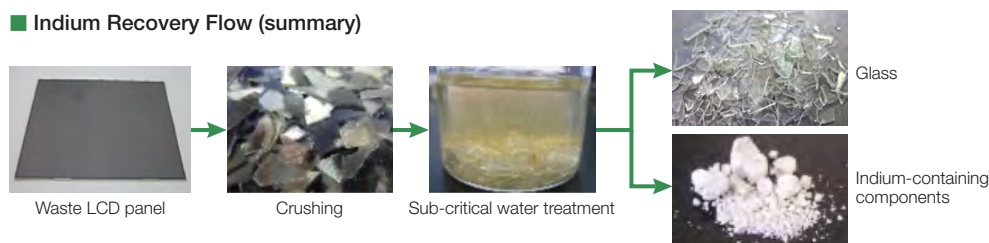
Taking advantage of sub-critical water's effectiveness at dissolving organic substances, this technology strips away the organic layer from the glass substrate of the LCD panel, and separates and recovers the indium, a rare metal, from the glass.

In fiscal 2011, Sharp carried out demonstration testing at its proof-of-concept plant. Waste materials produced from the manufacturing process used at LCD panel plants were utilized in this testing, which helped advance research geared towards commercial applications.

Sharp aims to achieve early commercialization with an eye towards realizing full-scale flat-panel TV recycling.

\*1 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)



Testing equipment (left) and a scene from the experiment

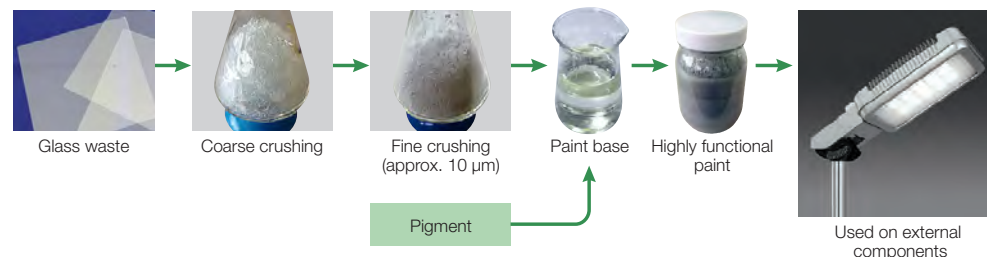
Developing Technologies to Recycle Waste LCD Panel Glass

In 2009, Sharp developed a highly functional paint made using scrap glass\*2 discarded during the LCD panel production process. Offering high strength and excellent abrasion and corrosion resistance, the paint was used on external components for products installed outdoors—the first such commercial application of its kind in the industry.

The glass used for LCD panels has a high softening temperature, which means that re-melting and recycling it is difficult using existing equipment; thus, until now, it has simply been disposed of. Sharp, however, used a recycling method that does not require melting. This enabled the company to develop a highly functional paint that takes advantage of the characteristics of LCD panel glass. The waste LCD panel glass is finely crushed, and the resulting powder is mixed with paint base or pigment. This paint improves the durability of products installed outdoors that are exposed to sunlight, wind, rain, sand, and dust. LED lighting that utilized this paint for its external components has been well received by users in Japan and overseas.

\*2 Scrap glass is generated when the large glass substrate sheets are cut down to screen size.

How Highly Functional Paint Is Made



Example of Use



LED lighting along a main road in Bulgaria



Case Study 3

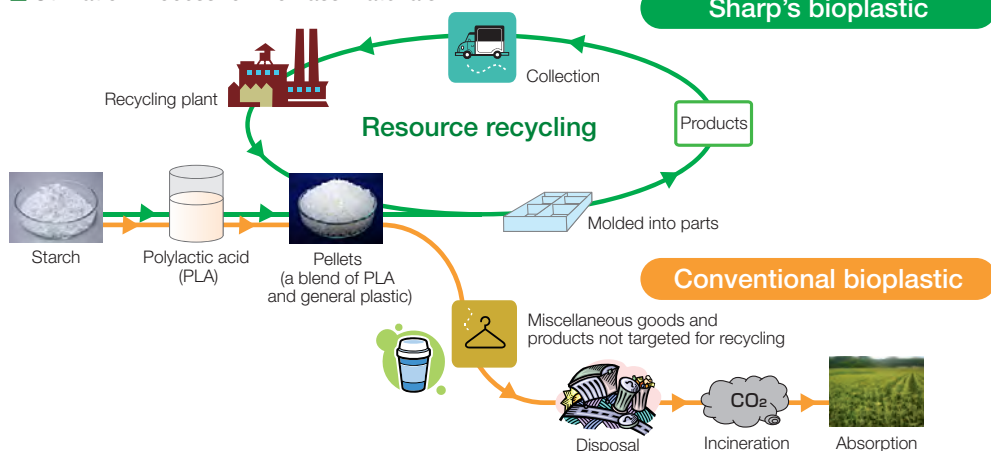
Developing and Using Technology for Utilizing Biomass Materials

In an effort to reduce dependence on fossil resources, Sharp is developing technologies for utilizing renewable biomass materials.

In 2006, Sharp used technologies for blending and enhancing the durability of non-edible starch-based bioplastic (polylactic acid) and general plastic (such as polypropylene and polystyrene) to develop bioplastic that can withstand the closed-loop plastic material recycling process. In 2007, after improving moldability, coloration, and other properties, this plastic found commercial application in desktop mobile phone holders released in Japan.

Sharp will continue to develop its technology to produce highly functional biomass materials with greater rigidity, heat resistance, and flame-retardant properties. The company will seek to use such materials in various products, such as home appliances, audio/video equipment, and photocopiers.

Utilization Process for Biomass Materials



Examples of Bioplastic Use



Desktop holder for 007SH mobile phone (SoftBank Mobile Corp.)

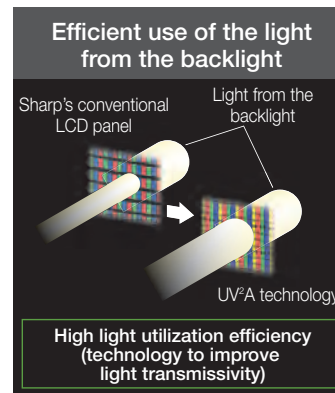


Desktop holder for SH-10C mobile phone (NTT DOCOMO, Inc.)

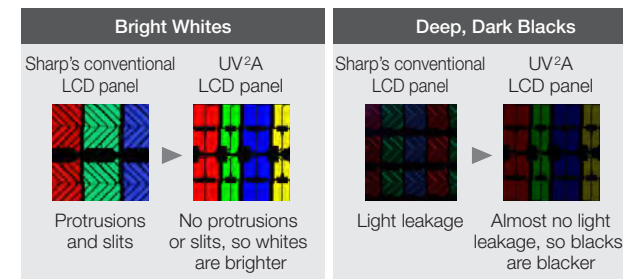
Case Study 4

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

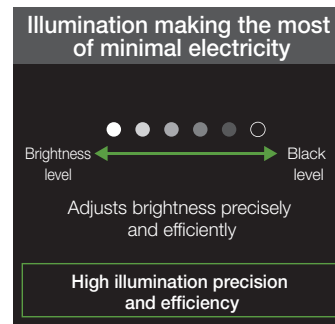
UV<sup>2</sup>A Technology\* Wastes No Light



In previous Sharp 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.



High-Efficiency 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 high TV contrast\*<sup>2</sup>. Sharp is working to further improve performance and image quality.

\*1 Abbreviation of Ultraviolet induced multi-domain Vertical Alignment. Photo-alignment technology that can precisely control the alignment of liquid crystal molecules using a manufacturing method based on UV light exposure.

\*2 TV contrast is the maximum contrast level a TV set is capable of achieving (the ratio of maximum screen brightness for a 30% white signal to the minimum screen brightness with an all-black signal) when AV position is set to "Dynamic."

Case Study 5

Developing Applied Biomimetic Technologies

Applying Dragonfly and Bird Wing Shapes to Air Conditioner Fans to Reduce Energy Consumption

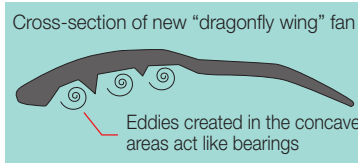
Indoor Unit Technologies

Dragonfly Wings for Reduced Air Friction

The shape of the dragonfly wing, which moves as if on bearings to reduce air resistance, was applied to the design of the cross-flow fan in the indoor unit.



Airflow efficiency improved by approx. 30%

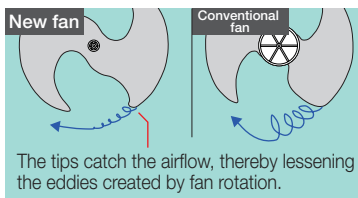
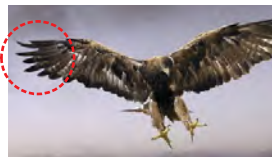
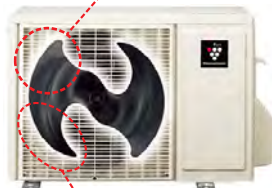


Outdoor Unit Technologies

Golden Eagle Wings for Airflow Control

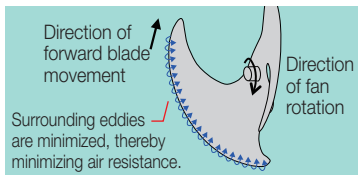
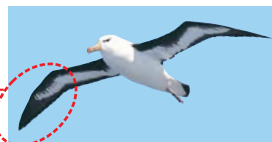
The shape of the golden eagle wing, which has separated tips to enable stable flight even in turbulent airflow, was applied to the design of the fan used in the outdoor unit. The fan is thus able to catch and move air efficiently.

Airflow efficiency improved by approx. 20%

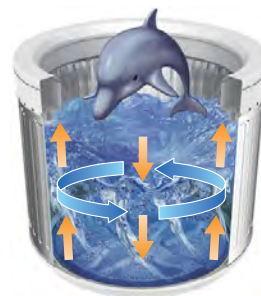


Albatross Wings Adapted to Long-Distance Flight

The shape of the albatross wing, which enables continuous, gliding flight for tens of thousands of kilometers, was applied to the design of the fan used in the outdoor unit. Low air resistance allows for efficient airflow.



Applying the Principles of Dolphin High-Speed Swimming to Pulsators to Save Water



(Conceptual image)

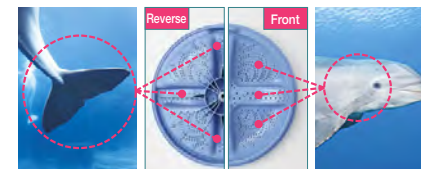
Sharp developed a new type of pulsator (rotor) that applies the same principles as those that enable dolphins to swim at high speeds. The reverse side of the new pulsator has two crescent-shaped wings modeled after a dolphin's tail fin. This unique design creates a powerful vertical water flow in addition to the conventional rotating water flow, thereby significantly improving washing power from even a small amount of water.

Save 2 liters of water per 8 kg of laundry

- Conventional Sharp pulsator (ES-TX800): 89 liters
- New Sharp pulsator (ES-TX810): 87 liters

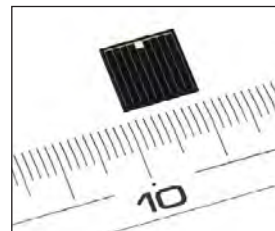
Design of the New Pulsator

Sharp applied the shape of a dolphin's tail fin to produce a powerful vertical water flow and a dolphin's skin wrinkles to reduce water resistance.



Case Study 6

Developing Solar Cells with the World's Highest\*<sup>1</sup> Conversion Efficiency of 36.9%\*<sup>2</sup>



Triple-junction compound solar cell with the world's highest conversion efficiency of 36.9%

Sharp has achieved the world's highest solar cell conversion efficiency of 36.9% using a triple-junction compound solar cell in which the solar cell has a stacked three-layer structure.

Compound solar cells utilize photo-absorption layers made from compounds consisting of two or more elements, such as indium and gallium. Because of their high conversion efficiency, compound solar cells have been used primarily on space satellites.

This new solar cell developed by Sharp reduces the resistance of the junction areas required to connect the solar cells in series, thereby boosting conversion efficiency above the 35.8% of conventional compound solar cells. Sharp achieved this latest breakthrough as a result of efforts that were part of the "R&D on Innovative Solar Cells" project promoted by Japan's New Energy and Industrial Technology Development Organization (NEDO).

\*<sup>1</sup> As of November 4, 2011, for non-concentrator solar cells at the research level (based on Sharp survey).  
\*<sup>2</sup> Conversion efficiency confirmed by the National Institute of Advanced Industrial Science and Technology (AIST; one of several organizations around the world that officially certifies energy conversion efficiency measurements in solar cells) in September 2011 (cell surface: approx. 1 cm<sup>2</sup>).

# 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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012	Objectives for Fiscal 2015
• Super Green Products account for 50% or more of net sales in Japan	• 52% of net sales in Japan	• 50% or more of net sales in Japan	• 50% or more of net sales in Japan
• Advanced Green Products account for 80% or more of net sales in Japan	• 91% of net sales in Japan	• 80% or more of net sales in Japan	• 80% or more of net sales in Japan
• Super Green Devices account for 30% or more of net sales	• 47% of net sales	• 30% or more of net sales	• 30% or more of net sales
• Green Devices account for 92% or more of net sales	• 97% of net sales	• 95% or more of net sales	• 95% or more of net sales

## 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.

Every year since fiscal 1998, all new Sharp products have met the standards for GP. Moreover, the content of the GP Standard Sheet—the benchmark for these assessments—is revised and made more stringent each year, in order to further improve the environmental performance of Sharp products.

### Green Product Concepts

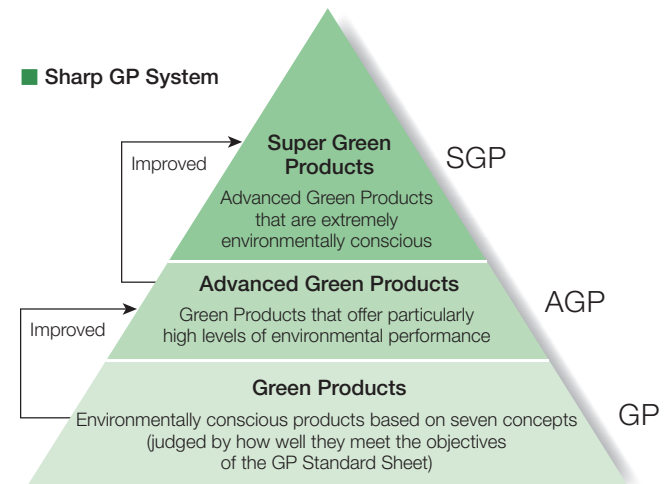
<b>Energy Saving / Energy Creating</b>	<b>Products with superb energy-saving / energy-creating performance</b> Improve the energy efficiency and reduce the energy consumption of products; other measures
<b>Resource Conservation</b>	<b>Products designed to conserve resources</b> Reduce the amount of materials 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

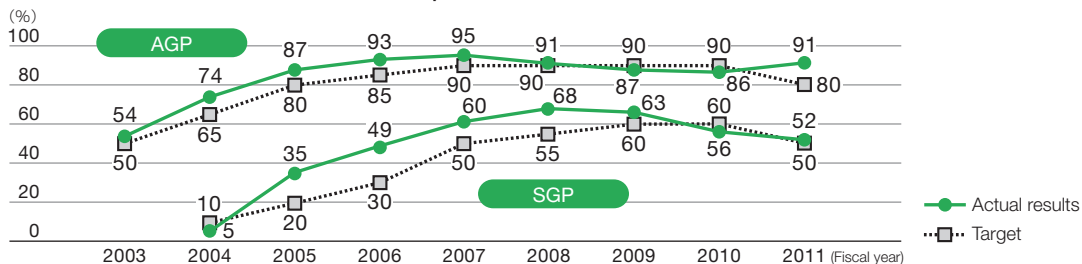
Among Green Products, Sharp has been certifying those that offer a particularly high level of environmental performance as Advanced Green Products (AGP), and further, among these AGPs, certifying those with the highest possible levels of environmental performance as Super Green Products (SGP). (In Japan, 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 light of growing global awareness of the need for energy conservation, Sharp has been applying the evaluation criteria for energy efficiency more stringently this fiscal year.



Ratio of SGP and AGP to Net Sales in Japan



Assessment and Certification Standards for SGP and AGP (Fiscal 2011)

Products are assessed for having outstanding overall environmental performance (Environmental Performance Criteria), as well as for having environmental functions and performance that can be claimed to be superior to those of products from other companies (External Environmental Claim Standards).

Japan

	Environmental Performance Criteria [total 78 items including required items (1) to (10)]	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>	<p><b>Global warming prevention</b> (has low power consumption, high energy efficiency, etc.)</p> <p>(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</p> <p><b>Efficient use of resources</b> (is designed for recyclability, resource saving, etc.)</p> <p>(4) Is easy to separate and disassemble, or is upgradeable</p> <p><b>Substitution of toxic chemical substances</b> (meets the RoHS directive, etc.)</p> <p>(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</p> <p><b>Others</b> (has environmental label status, uses less packaging materials, etc.)</p> <p>(9) Has undergone LCA (10) Has environmental label status</p>	
	Satisfies items (1) to (9) to the right and scores at least 70 points	

Overseas

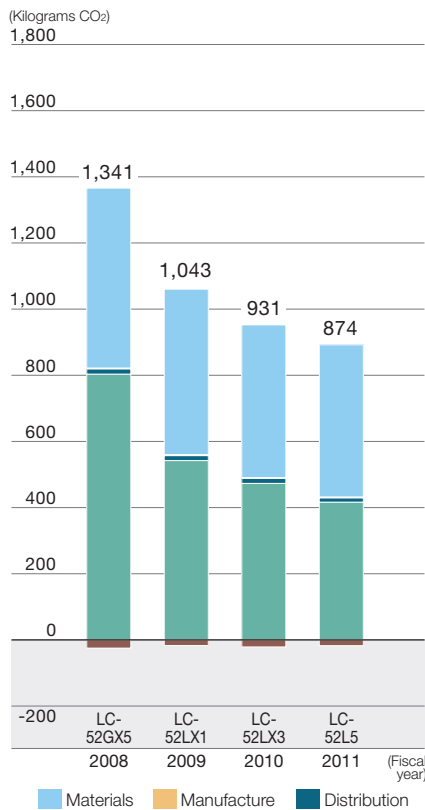
	Environmental Performance Criteria [total 78 items including required items (1) to (6)]	External Environmental Claim Standards
<b>SGP</b>	Satisfies items (1) to (6) to the right and scores at least 90 points	<p><b>Energy saving/energy creating</b> ..... Has overwhelmingly superior energy-saving/energy-creating performance compared to products of other companies (Customer needs and various systems are taken into account in setting criteria for evaluation)</p> <p><b>Environmental labeling</b> ..... Third-party environmental labeling is being acquired, or application has been made, or is expected to be made</p> <p>..... 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</p>
<b>AGP</b>	Satisfies items (1) to (6) to the right and scores at least 70 points	

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

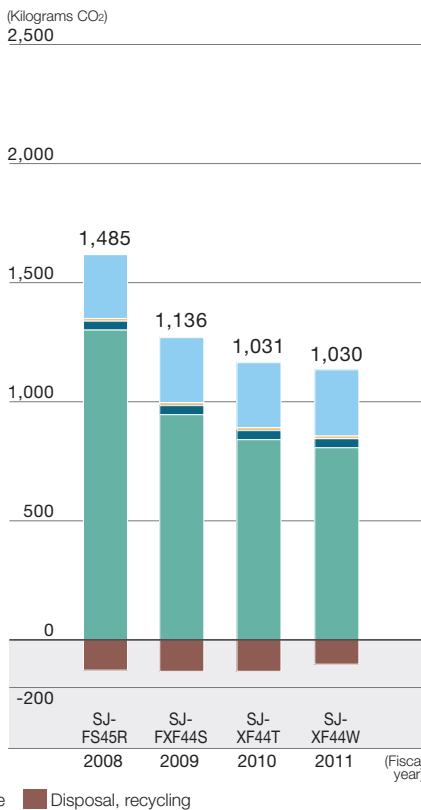
Sharp performs a life cycle assessment (LCA) on its products to identify their impact on the environment throughout their service life. Converting this impact into CO<sub>2</sub> emissions provides a quantitative measure that Sharp uses in its efforts to reduce environmental impacts by enabling it to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

Sharp will continue to use LCA as a tool that contributes to the development of products with smaller environmental impacts.

#### LCA Data for LCD TVs\*1



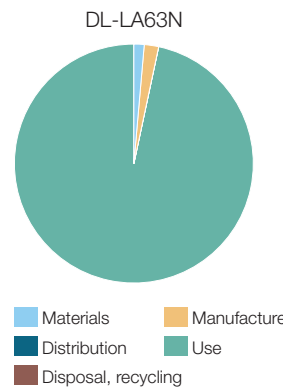
#### LCA Data for Refrigerators



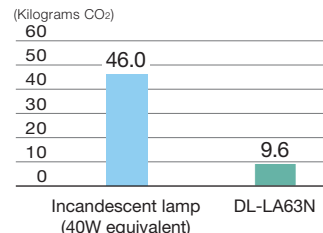
Note: CO<sub>2</sub> emissions during use are calculated using a CO<sub>2</sub> emission coefficient of 0.35 kilograms CO<sub>2</sub>/kWh (announced by the Federation of Electric Power Companies of Japan for fiscal 2011).

\*1 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).

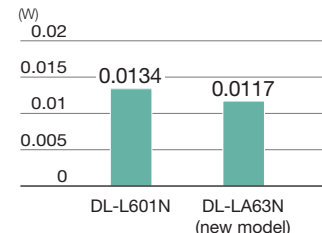
#### LCA Data for LED Lamps



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



#### Comparison of Power Consumption per 1 Lumen\*2



Product	Power consumption (W)	Annual CO <sub>2</sub> emissions (kilograms CO <sub>2</sub> )
DL-LA63N	7.5	9.6
Incandescent lamp (40W equivalent)	36.0	46.0

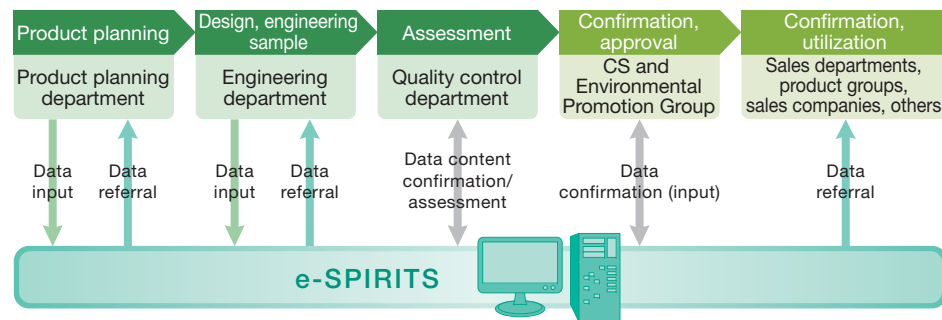
\*2 The lumen is a unit for measuring the total amount of light emitted in all directions from a single light source.

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

In January 2011, Sharp revamped the I-EARS product environmental assessment system—introduced in fiscal 2006 in order to ensure compliance with environmental laws and regulations as well as promote environmentally conscious product design—by introducing the e-SPIRITS system for the integrated management of data used for conducting environmental product assessments.

With the introduction of e-SPIRITS, a database of green product and device development know-how and design data was established at all Sharp design and development bases in Japan and overseas. This database is used to raise design standards as well as standardize in-house life-cycle assessments (LCA). In addition, e-SPIRITS is used in the certification of Super Green Products (SGP) and Advanced Green Products (AGP). This way, e-SPIRITS is contributing the creation of environmentally conscious Sharp products and devices worldwide.

#### 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 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.

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.

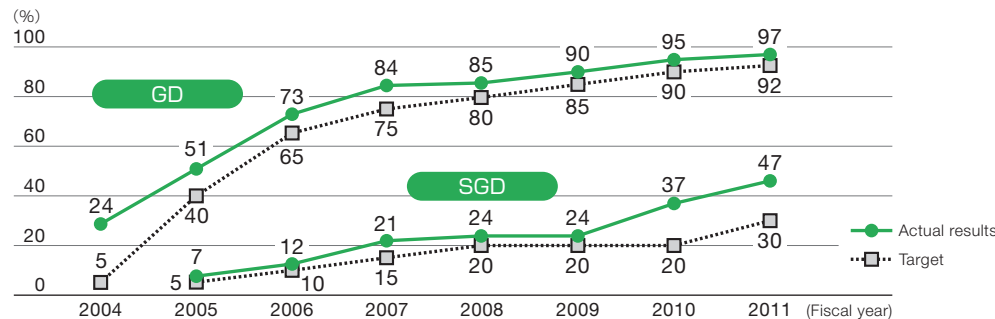
Sharp began certifying devices from among GD with the highest possible levels of environmental performance as Super Green Devices (SGD) from fiscal 2005.

In fiscal 2011, both GD and SGD exceeded their sales ratio targets. In the future, Sharp will undertake a yearly revision of its GD Standard Sheet to make it increasingly stringent and will undertake efforts to make devices that are more environmentally conscious.

#### Green Device Concepts

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

#### Ratio of SGD and GD to Net Sales



#### SGD and GD Evaluation and Certification Standards

	Environmental Performance Criteria		
	Required items	Percentage of 34 evaluation items satisfied, including required items	External Environmental Claim Standards
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 2011 Certified SGP (Japan)

SGP L5 Series AQUOS Quattron LCD TV Japan

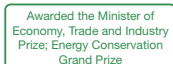
Energy Efficient

- Incorporates four-color technology\*1 for rich color display, UV<sup>2</sup>A technology\*2 for high-speed response, and an LED backlight\*3
- Save Mode enables users to reduce screen brightness and consume approximately 15%\*4 less power. Also, an OPC (optical picture control) sensor automatically adjusts backlight brightness to match room brightness.
- Annual power consumption  
LC-60L5: 161 kWh/year, LC-52L5: 132 kWh/year  
LC-46L5: 120 kWh/year, LC-40L5: 106 kWh/year

Green Materials

- Uses lead-free solder on circuit boards
- User manual printed on paper certified as environmentally friendly

\*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 \*3 See page 32.  
\*4 Based on a comparison of power consumption between when the TV is set to the "Standard" AV position with the brightness sensor turned off versus when the Save mode is turned on. Results will vary depending on the image and surrounding brightness.



LC-60L5

SGP LCD Monitor Japan

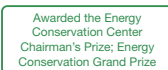
Energy Efficient

- Features an LCD panel utilizing UV<sup>2</sup>A technology\*2 and LED backlighting\*3. Incorporates a "local dimming" function\*5

Green Materials

- Uses halogen-free plastics in some external components

\*5 Local dimming allows specific groups of LEDs to be independently dimmed or brightened according to the image displayed, thereby improving image contrast while reducing power consumption.



PN-V602

SGP Touchscreen LCD Monitor Japan

Energy Efficient

- Features an LCD panel utilizing UV<sup>2</sup>A technology\*2 and LED backlighting\*3
- Power consumption PN-L602B: 170 W, PN-L702B: 240 W, PN-L802B: 260 W

Resource Saving

- Allows direct data transfers to/from Sharp tablets, thus facilitating paperless meetings and training sessions

Green Materials

- Uses halogen-free plastics in some external components



PN-L602B

TOPICS

Sharp Wins the Minister of Economy, Trade and Industry Prize and the Energy Conservation Center Chairman's Prize at the Energy Conservation Grand Prize Awards

In the Product and Business Model category of the 2011 Energy Conservation Grand Prize\*6 event in Japan, Sharp's SGP-certified AQUOS L5 Series LCD TVs (four models in total) were awarded the Minister of Economy, Trade and Industry Prize, while its PN-V602 LCD monitor was awarded the Energy Conservation Center Chairman's Prize.

The Minister of Economy, Trade and Industry Prize is the highest prize awarded, and it was bestowed on the AQUOS L5 Series in recognition of the fact that this series rated highest in the energy-saving standard achievement rate in each screen-size category (as of November 2011). This was made possible by combining an advanced LCD panel—which incorporates four-color and UV<sup>2</sup>A\*2 technologies—with LED backlighting\*3 to achieve both high image quality and energy efficiency. (Annual power consumption was reduced by more than 25% compared to previous Sharp models\*7.)

In addition, Sharp's PN-V602 LCD monitor was awarded the Energy Conservation Center Chairman's Prize in recognition of the fact that it is capable of providing the same level of brightness as other LCD monitors while delivering a significant power reduction of approximately 50%\*8, thanks to the adoption of UV<sup>2</sup>A technology, LED backlighting, and local dimming\*5. The PN-V602 was highly rated as a commercial-use display offering an unprecedented energy-saving benefit, and this award represents the hope that it will find widespread adoption.

\*6 Held by the Energy Conservation Center, Japan in order to recognize outstanding energy conservation efforts and cutting-edge energy-saving products of companies, local governments, and other organizations.

\*7 Compared with the AQUOS Quattron 3D LV3 line.

\*8 Compared with existing models under fixed conditions. Measurement results obtained by Sharp when displaying broadcast content (11.6) stipulated by IEC62087 Ed.2.0. Results will vary depending on the image displayed.

SGP Digital B/W MFP Japan

Energy Efficient

- Various energy-saving functions including LEDs as the scanner light source, a power save key to reduce standby power consumption, and standby power consumption of less than 1 W\*9 during fax/network standby mode
- Significant reduction in TEC value\*10  
MX-M264FP: 1.63 kWh/week (25% less than Sharp's 2009 model)  
MX-M314FP: 2.06 kWh/week (21% less than Sharp's 2009 model)  
MX-M354FP: 2.33 kWh/week (40% less than Sharp's 2009 model)

Green Materials

- BP Mark-certified by the Japan BioPlastics Association (JBPA) as a biomass plastic product that contains at least a certain level of organic resources
- Uses halogen-free plastics in external and most internal components
- PVC-free AC power cord

\*9 Fax standby mode when power is off; TCP/IP and wired LAN are connected.

\*10 Acronym for "Typical Electricity Consumption," the typical amount of energy consumed in a hypothetical week. This value represents a benchmark for conformity to the ENERGY STAR® program.



MX-M264FP/M314FP/M354FP



Examples of Fiscal 2011 Certified SGP (Japan)

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 heat dissipation structure to limit heat loss
- When set in Power Save Mode, artificial intelligence assesses and responds to refrigerator usage to save up to 15% more power than under normal operation. Energy-saving results are displayed in three levels.
- Annual power consumption: 200 kWh/year\*1 (9% reduction compared to previous model introduced in November 2010)

Green Materials

- Uses recycled plastic made using closed-loop material recycling technology\*2

\*1 Annual power consumption measurement values based on the JIS C9801-2006 standard.

\*2 See page 30.



SJ-XW44W



SGP Sakura (Cherry Blossom) Pink LED Lighting

Japan

Long Life

- Design life of 40,000 hours\*6. Provides at least 10 years of service when lit 10 hours per day.

Energy Efficient

- Three eco functions—Eco Light Rhythm Sakura Plus, Eco Dimmer, and Eco Sensor—deliver energy savings of up to 74% compared to keeping the unit continually lit\*7

Adjustable Color and Brightness

- Color and brightness of the light can be adjusted to a total of 130 different levels—from cool daylight to warm evening light, and including two types of cherry blossom pink and a night-light (10 color levels × 10 brightness levels, plus 10 brightness levels for the two types of pink and the night-light)

- Cherry blossom pink lighting contributes to a comfortable environment to facilitate restful sleep (acquired the Evidence-Based Relaxation & Comfort Recommendation Mark from the OHS [Open innovation of Healthcare Service]\*8)

Green Materials

- Mercury-free

\*6 Design life is regarded as the time until total luminous flux declines to 70% of the initial level; product service life is not guaranteed.

\*7 Sharp measurements. When three eco-functions (Eco Light Rhythm Sakura Plus, Eco Dimmer, Eco Sensor) are turned on versus turned off. Will be darker than full brightness depending on time of day and installation conditions. Energy-saving rate will also vary depending on location, climate conditions, and other factors.

\*8 Acquired the OHS No. 4 mark (issued on January 10, 2012) for the restful sleep support functionality of the cherry blossom-colored light (applicable models: DL-C604V/504V/304V).



DL-C504V



Evidence-Based Relaxation & Comfort Recommendation Mark

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
- A newly designed pulsator\*3, which applies the same principles as those which enable dolphins to swim at high speeds, produces a powerful vertical water flow that provides a thorough wash using less water

Energy Efficient

- Hole-less tub dries clothes efficiently by keeping heat in and enabling the temperature inside the tub to rise quickly. Power consumption for a 4.5 kg wash and dry load is 1,700/1,700 Wh (50/60 Hz)\*4
- Clothes Sensor detects fabric type and then optimizes water, time, and power consumption\*5

Green Materials

- Uses recycled plastic made using closed-loop material recycling technology\*2

\*3 See page 33.

\*4 Power consumption measurement values based on voluntary standards set by the Japan Electrical Manufacturers' Association.

\*5 When the percentage of synthetic fabric is 85%, a standard course for an 8 kg laundry load will use 84 liters of water (compared with conventional 87 liters), take 34 minutes (compared with conventional 36 minutes) and use 61 Wh of energy (compared with conventional 67 Wh).



ES-TX810



SGP Plasmacluster Air Purifier

Japan

Energy Efficient

- Four sensors (dust, odor, temperature, and humidity) promote energy efficiency by adjusting operation in response to the specific conditions in the air
- Reduced power consumption, thanks to a humidifier rotor system that increases humidification efficiency and an automated air volume selection function that optimizes airflow efficiency

Quiet

- Uses a fan that adopts the shape of a dragonfly's wing\*9. Results in smooth, quiet airflow.

Information Visualization

- Equipped with a digital off timer and an electricity bill monitor that indicates power costs for the day. Enables users to get a real sense of energy consumption and practice effective energy conservation.

\*9 See page 33.



KI-AX80




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.



Examples of Fiscal 2011 Certified SGP (Japan) and SGD

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



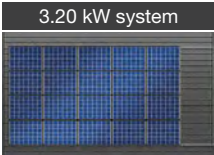
**High Energy-Conversion Efficiency**

- Highly efficient energy creation using unlimited sunlight
- Module conversion efficiency: 16.5%

**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 35.6% compared to existing products.

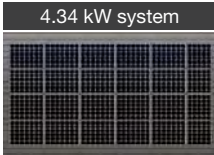
3.20 kW system



**ND-160AV**  
Number of installed modules: 20

➔

4.34 kW system



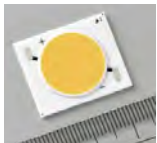
**NQ-190AA** Number of installed modules: 20  
**NQ-135AA** Number of installed modules: 4

Installation capacity  
**35.6%**  
higher

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

**Industry’s Highest Luminous Efficiency**

- High-luminous-efficiency LED chip and phosphors deliver luminous efficiency of 93.3 lm/W, the industry’s highest in the 50W input power class, at the 3000K color temperature commonly used in downlights for retail stores and with a color rendering index\*1 (Ra) of 83.



GW5DME30MR5


**High Color Rendering**

- High color rendering depicts illuminated objects with colors close to those perceived under natural light
- Color rendering index (Ra)\*1: 80 (Lineup also includes high-performance models with a color rendering index [Ra greater than 90.]

\*1 A numerical value expressing the level of color distortion compared to a reference light source. The closer the value is to 100, the lower the color distortion.

Examples of Fiscal 2011 Certified SGP (Overseas) and AGP

**SGP AQUOS LCD TV** Australia




**Energy Efficient**

- Annual energy consumption of 368 kWh/year (previous model LC-60LE830X: 483 kWh/year)
- Achieved an 8-star rating under Australia’s MEPS (Minimum Energy Performance Standards) program
- Achieves both high image quality and energy efficiency by combining an LCD panel that uses four-color technology\*2 and UV²A technology\*3 with an LED backlight\*4 that offers precise, efficient control of light

\*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.  
\*3 \*4 See page 32.

**AGP Thin-Film Solar Module** North America, Europe



**High Energy-Conversion Efficiency**


- Highly efficient energy creation using unlimited sunlight
- Module conversion efficiency: 9.6% (previous model NS-F130G5: 9.3%)
- 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 2012 ENERGY STAR® Award for Excellence**

SEC, Sharp’s sales and manufacturing 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 2012 were given to companies and organizations out of the roughly 20,000 that participate in the ENERGY STAR program.

SEC was lauded for securing ENERGY STAR\*5 certification on 155 product models over the course of the year, including energy-saving LCD monitors and LCD TVs utilizing four-color\*2 technology, as well as for providing ongoing environmental education to retailers, dealers, and students. To date, approximately 10,000 elementary school students have taken part in Sharp’s Solar Academy.



Sharp has received the ENERGY STAR® Award for Excellence three years in a row

\*5 An environmental labeling program to promote savings through the use of energy-efficient electrical appliances.

SGP and AGP-Certified Models for Fiscal 2011

		Product	Model
SGP	Japan	LCD TV	LC-40L5, LC-46L5, LC-52L5, LC-60L5, LC-40Z5, LC-46Z5, LC-52Z5, LC-70X5, LC-20V5, LC-26V5, LC-46V5, LC-52V5, LC-26V7, LC-32V7, LC-40V7, LC-46V7, LC-26R5, LC-32R5, LC-40R5, LC-19K7, LC-22K7, LC-24K7, LC-60B5, LC-20FE1, LC-20E90, LC-22U5
		Blu-ray Disc player	BD-HP35
		Projector	XVZ-17000
		Refrigerator	SJ-GF60W, SJ-XF56W, SJ-XF60W, SJ-XF44W, SJ-XW44W, SJ-PW38W
		Washing machine	ES-V520, ES-V530, ES-TX910, ES-GE55L, ES-GE60L, ES-GE80L, ES-T71E8, ES-T81E8, ESA70E7N
		Air purifier	KC-A40, KI-AX70, KI-AX80, FU-A51, FU-A80, KC-500Y4, KC-700Y4
		Humidifier	HV-50E8, HV-70E8
		Plasmacluster Ion generator	IG-DK100, IG-DX100, IG-D230, IG-DK1S, IG-DL1S, IG-DM1S, IG-DC15, PFETC1
		Electric fan	PJ-B2CS
		Vacuum cleaner	EC-WX300, EC-VX300, ECAX200, EC-PX200, EC-S220C
		LED lighting	DL-C203V, DL-C303V, DL-C503V, DL-C603V, DL-C601V, DL-JA3BL, DL-JA4AN, DL-CB2AV, DL-CB3AV, DL-CB5AV
		Mobile phone	006SH, 007SH, 008SH, 009SH, 101SH, 103SH, 104SH, 105SH, DM011SH, DM012SH, SH-02D, SH-03D, SH-05D, IS11SH, IS12SH, IS13SH, IS14SH
		Phone	JD-V35CL
		Facsimile	UX-310CL, UX-600CL, UX-900CL

SGP	Japan	Electronic cash register	XE-A270BT
		Media tablet	RW-T107
		Handy data terminal	RZ-F301
		Digital MFP	MX-M264FP
		LCD monitor	PN-V602, PN-A601, PN-E602, PN-E702, PN-L602B, PN-L702B, PN-L802B
		Solar module	NQ-135AA, NQ-190AA, NQ-134LW, NQ-209LW, NQ-260LW, ND-163AA, ND-165AA, ND-170AA, ND-160BA, ND-114CA, ND-061LA

		Product	Model
SGP	Europe	LCD TV	LC-40LE830E, LC-40LE831E, LC-40LE831S, LC-40LE924E, LC-40LE924RU, LC-46LE814E, LC-46LX814E
	North America	LCD TV	LC-52LE830U, LC-60LE632U, LC-70LE732U, PRO-60X5FD, PRO-70X5FD
	Australia	LCD TV	LC-40LE835X, LC-46LE835X, LC-52LE835X, LC-60LE835X
	Malaysia	LCD TV	LC-22LE520M
AGP	Europe	LCD TV	LC-40LE814E, LC-40LX814E, LC-40LE824E, LC-46LE824E, LC-40LU824E, LC-46LU824E, LC-46LE833E, LC-46LE925E
		Digital MFP	MX-2610N, MX-3110N, MX-3610N, MX-4110N, MX-4111N, MX-5110N, MX-5111N, MX-4112N, MX-5112N, MX-M182D, MX-M202D, MX-M232D, MX-M264N, MX-M314N, MX-M354N
		Solar module	ND-R240A2
	North America	Digital MFP	MX-4110N, MX-4111N, MX-5110N, MX-5111N, MX-M232D, MX-M264N, MX-M314N, MX-M354N
Malaysia	LCD TV	LC-19LE520M	

Number of Environmental Label Products in Fiscal 2011

International ENERGY STAR® Program*1	LCD TV	Blu-ray Disc recorder	Audio	MFP
	45	3	4	69
	Printer	LCD monitor	Facsimile	Air conditioner
	3	29	10	6
Eco Mark*2	MFP	Calculator	Printer	
	11	1	1	
EU Eco Label*3	LCD TV			
	5			
Nordic Swan*4	MFP	Blue Angel*5	MFP	
	6		9	

Canada EcoLogo Program	MFP		Hong Kong Energy-Saving Label	MFP
	9			9
Thai Green Label	MFP	Air conditioner	China Environmental Labeling	MFP
	4	12		19
Taiwan Green Mark	MFP		Taiwan Energy-Saving Label	MFP
	8			7
Energy Conservation Certification*6	LCD TV		Projector	
	3		13	
	MFP		LCD monitor	
	20		7	

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

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 fiscal 2003, Sharp investigated chemical substance content, as stipulated by the Japan Green Procurement Survey Standardization Initiative (JGPSSI)\*1, and took measures toward eliminating RoHS\*\*2-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 comply with registration obligations under the REACH\*\*3 regulations in fiscal 2008 and completed pre-registration 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. Throughout fiscal 2010, Sharp conducted surveys on chemical substances contained in procured parts and materials, and it built a system to comply with notification obligations under the REACH regulations. It completely fulfilled its notification obligations by June 1, 2011.

\*1 A council that aims to standardize research on chemical substances in parts and materials, comprising one organization and 49 companies, mainly electronics manufacturers including Sharp Corporation.

\*\*2 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.

\*\*3 REACH is a new regulation on the Registration, Evaluation, and Authorization of Chemicals produced in and imported into the EU.

### 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.

In fiscal 2011, Sharp revised its Green Procurement Guidelines so that it could evaluate the biodiversity protection efforts of its suppliers.

Sharp has also been gradually implementing the Global Green Supply Chain (GGSC), a scheme to improve the gathering and disclosure of information throughout the supply chain.

### Reducing VOCs in Products

Sharp is working to make products that are safer and that offer greater peace of mind by reducing their VOC\*\*4 emissions.

In fiscal 2011, Sharp conducted measurements of VOCs in 48 models 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 to the 10 engineers who are responsible for the development of those products (since fiscal 2007, such training has been provided to 150 people).

Sharp plans to continue pushing ahead with the development of low-VOC products, aiming to make its home appliances even more user friendly.

\*\*4 VOCs (volatile organic compounds) are assumed to be one of the causes of multiple chemical sensitivity and/or sick building syndrome.

### Close-Up

## Establishing a Global Green Supply Chain

In recent years, laws and regulations concerning chemical substances and other environmental concerns have become increasingly strict worldwide, and together with this there has been an increasing call for greater management and detailed information disclosure with regard to the overall supply chain—from raw materials to parts procurement. In response to this, Sharp instituted its new Global Green Supply Chain (GGSC) in fiscal 2010 in order to better oversee the entire supply chain by securing accurate and timely information from suppliers about chemicals and other items.

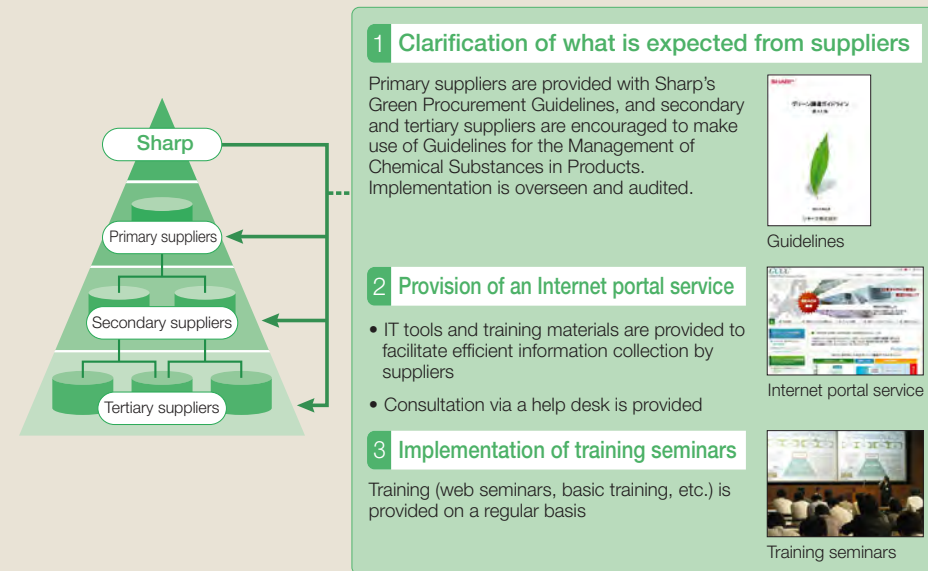
The GGSC specifies items that are expected of suppliers at all levels and, in addition to providing auditing oversight, ensures suppliers are provided with IT tools and training materials via an Internet (cloud) portal service. Furthermore, Sharp's comprehensive support for its suppliers is augmented with various, regular training seminars.

The GGSC was introduced into China in fiscal 2010. Since then, it has provided strengthened support—including consulting—for suppliers in China and it has improved the level of supply-chain management taking place.

In fiscal 2011, the GGSC was extended to Japanese suppliers, and thus far 46 training sessions and seminars have been held.

In fiscal 2012, Sharp plans to ensure that the GGSC is firmly established in China and Japan and also intends to expand it into Southeast Asia.

### Global Green Supply Chain (GGSC)



# 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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012	Objectives for Fiscal 2015
<ul style="list-style-type: none"> <li>Enhance and improve recycling system</li> <li>Construct operational system to accommodate rapidly decreasing number of CRT TVs collected</li> </ul>	<ul style="list-style-type: none"> <li>Shifted employee work hours and expanded number of collected parts by introducing manual disassembly to accommodate decreasing number of used appliances collected due to the end of Eco-Point system*1 and analog broadcasts in Japan</li> </ul>	<ul style="list-style-type: none"> <li>Implement high-value-added recycling of recovered components and materials</li> </ul>	<ul style="list-style-type: none"> <li>Increase recycling efficiency of used LCD TVs to accommodate increasing number of products collected</li> <li>Formulate collection scheme for used solar panels</li> </ul>

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

As a member of the B Group\*2 for home appliance recycling, Sharp has constructed and is operating a highly efficient recycling system based on 18 recycling plants in Japan.

In fiscal 2011, Sharp collected about 2.25 million units of the four types of appliances covered by the Home Appliance Recycling Law. This figure represents a significant decrease to 61% of the previous year's level, reflecting the impact of reduced replacement demand due to the end of the Eco-Point system\*1 on March 31, 2011 and the cessation of analog TV broadcasting in July 2011.

The approximate breakdown of recycled appliances was as follows: 190,000 air conditioners (down 30%), 1.09 million CRT TVs (down 54%), 240,000 flat-panel TVs (down 15%), 360,000 refrigerators (down 15%), and 350,000 washing machines (no change), with percentage changes 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 26.3 million units (down 24% from 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.

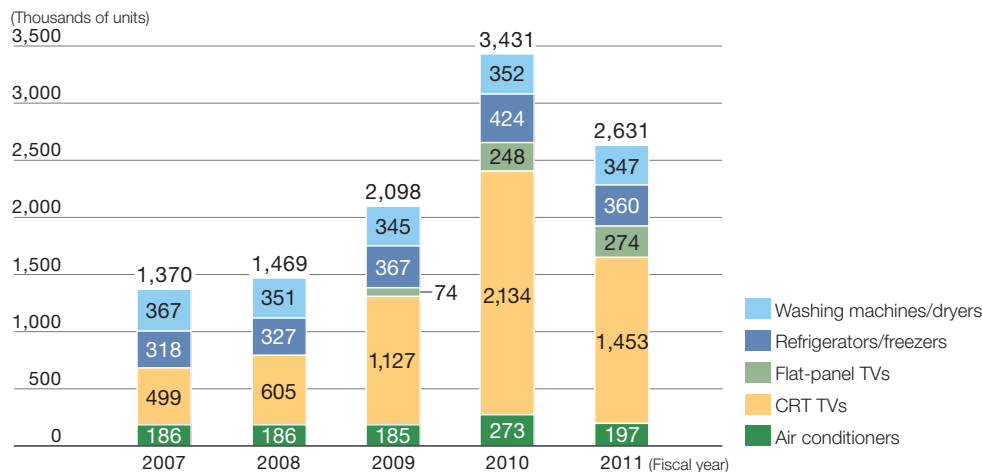
\*1 Designed to stimulate consumption and promote the use of environmentally friendly products, this Japanese government program allowed buyers of certain types of energy-efficient air conditioners, refrigerators, and TVs to earn "eco points" that could be exchanged at a later time for other goods.

\*2 The B Group consists of Sharp Corporation, Sony Corporation, Hitachi Appliances, Inc., Fujitsu General Ltd., Mitsubishi Electric Corporation, and other companies.

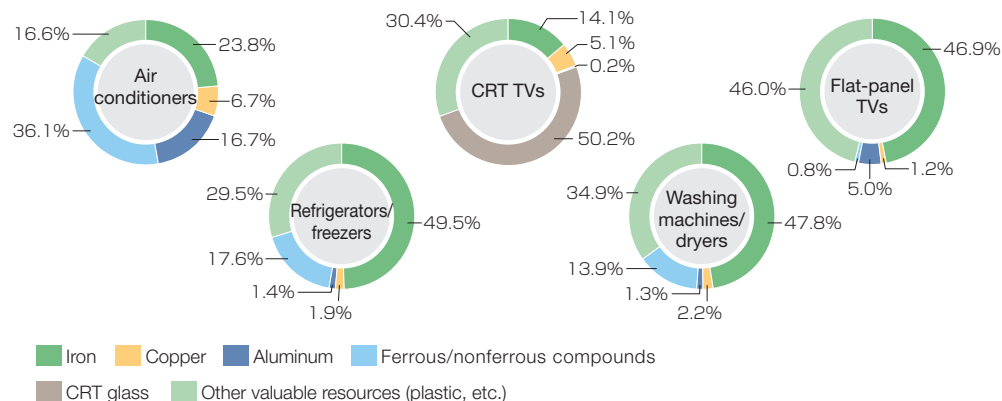
### Sharp Corporation's Processing and Recycling Status of the Four Home Appliances in Japan (Fiscal 2011)

	Unit	Air conditioners	CRT TVs	Flat-panel TVs	Refrigerators/freezers	Washing machines/dryers	Total
Units collected from designated collection sites	Thousand units	197	1,096	243	362	358	2,256
Processed and recycled units	Thousand units	197	1,453	274	360	347	2,631
Processed and recycled weight	Tons	8,059	37,664	3,914	21,933	11,811	83,381
Recycled weight	Tons	7,438	29,626	3,337	17,468	10,758	68,627
Recycling rate	%	92	78	85	79	91	—
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





## Kansai Recycling Systems Surpasses 10 Million Mark for Used Home Appliance Recycling

Kansai Recycling Systems Co., Ltd. (KRSC)\*, which works in conjunction with Sharp to develop various recycling technologies, has now recycled more than 10 million used home appliances since the enactment of the Home Appliance Recycling Law (official name: Law for Recycling of Specified Kinds of Home Appliances) in April 2001.

KRSC carries out careful separation and recovery following the maxim, “If it’s mixed together, it’ll become trash; if it can be separated, it’s a resource.” They are particularly focused on recovery of plastics such as polypropylene and polystyrene. Thanks to Sharp’s proprietary closed-loop material-recycling technology, these plastics can now be reused as parts for refrigerators and washing machines.

In fiscal 2011, in response to increasing calls for energy conservation, KRSC installed at its main plant a 155 kW solar power system, which utilizes Sharp’s high-efficiency monocrystalline solar cells. Thanks to this system, energy consumption at KRSC’s main plant has been cut by roughly 10%. Operational efficiency has also been markedly improved thanks to such factors as process improvement in the refrigerator and flat-panel TV recycling lines.

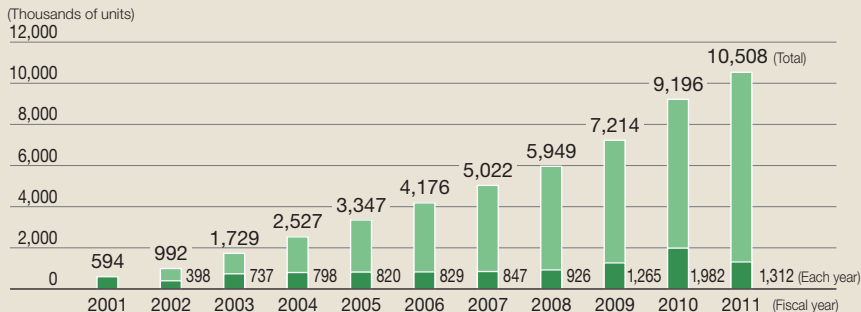
Sharp and KRSC will continue to work together to develop safe and reliable recycling technologies that contribute to the creation of a sustainable, recycling-based society.

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



Solar power system installed on the roof of KRSC's main plant

### ■ Growth in the Number of Used Home Appliances Recycled by KRSC



## 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 2011, 43 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. The design-related issues experienced during this training are reflected in the planning and design of 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.

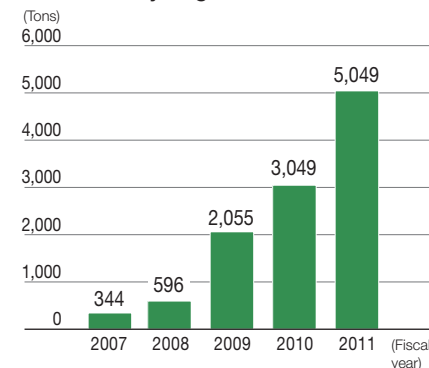


Hands-on training in dismantling used home appliances

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

In September 2007, SEC—Sharp’s manufacturing and 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. Tasked with recycling audio-visual products, especially TVs, the MRM program has since expanded nationwide to offer recycling opportunities at approximately 1,450 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 2011, approximately 5,000 tons of used consumer electronics were recycled.

### ■ SEC's Recycling Amount



## Reusing and Recycling Copiers in Japan

Sharp is reusing and recycling copiers collected both through Sharp distribution channels and through common industry channels. In fiscal 2011, approximately 26,000 used copiers were collected for either reuse or recycling. The company is also collecting used toner cartridges and remanufacturing them, assuring customers the same quality as new products. Sharp designs its toner cartridges to be easy to reuse and recycle: this reduces the number of new ones that need to be manufactured and reduces the amount of time needed to reprocess used cartridges, and it reduces impact on the environment since more and more cartridges are being used repeatedly.

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

# Promoting Solar Power Business

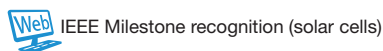
Sharp is working to develop a global total-solutions business for solar power that covers every part of the value chain, including development and production of solar cells and modules; system design; construction of mega solar power plants; and power plant operation. The aim of this total-solutions business is to make renewable energy usage more widespread and thereby contribute to global environmental conservation.

## Half a Century in Solar Power

Sharp began research into solar power in 1959. In the years since, Sharp has worked to prove the reliability of its solar cells under extreme conditions, such as those endured by lighthouses and satellites, and it has built up a reputation of trust in the process. Sharp's solar power technology has been incorporated into countless residential and industrial applications. The company's efforts in the commercialization and industrialization of solar cells has been highly lauded: in 2010, for example, Sharp's achievements were recognized with a prestigious IEEE Milestone from the IEEE, the world's largest academic society for electrical, electronics, information, and telecommunications engineering.

By the end of 2011, Sharp's total solar cell production volume reached 5.5 GW, putting it in the No.1\*1 position worldwide. This is equivalent to a 4 kW residential system for more than 1.3 million homes.

\*1 1985 to 2011. Based on data collected by PV News and Sharp.



## Construction and Maintenance of a Mega Solar Plant (Thailand)



73 MW mega solar plant, one of the largest in the world (Lop Buri Province, Thailand)

Sharp received an order from NED, one of Thailand's independent power producers, to build one of the world's largest mega solar power plants with a capacity of 73 MW. Sharp collaborated on the construction with ITD and ITE, two of the largest construction companies in Thailand, and work was completed in March of this year. Sharp supplied thin-film solar modules and peripheral systems for the plant and was involved in the plant's design and

construction. Sharp was also asked to provide maintenance services, which have been undertaken by Sharp Solar Maintenance Asia Co., Ltd. (SSMA)\*2. SSMA is developing plans to expand maintenance operations to other areas in Asia where the number of mega solar projects is expected to grow.

\*2 SSMA was established in March 21, 2011 to provide maintenance to mega solar projects in Asia.

## Start of Operation at a Thin-film Solar Cell Plant (Italy)

In December 2011, a state-of-the-art thin-film solar cell plant operated by 3Sun S.r.l., a joint venture of Sharp Corporation, Enel Green Power\*3 (EGP), and STMicroelectronics\*4, went online. With an annual production capacity of 160 MW, this plant is the largest thin-film solar cell plant in Italy and one of the largest in Europe.



State-of-the-art thin-film solar cell plant (Catania, Italy)

\*3 EGP is a group company of Enel, Italy's largest power utility. It develops renewable energy power projects in Italy and worldwide.

\*4 Europe's leading semiconductor manufacturer, established in 1987.

## Promoting Solar Power Business (Italy)



Mega solar power plant (Calabria, Italy)

Enel Green Power & Sharp Solar Energy S.r.l. (ESSE) is a solar IPP\*5 jointly established by Sharp and EGP. By the end of March 2012, ESSE constructed and began producing power at six mega solar plants throughout Italy. The capacity of the installed solar cells totals roughly 20 MW, and the expected annual output will be enough for approximately 10,000 Italian households.

ESSE has plans to construct multiple mega solar plants with a total capacity of at least 500 MW by the end of 2016 and will expand its operations into the rest of Europe, the Middle East, and Africa.

\*5 An IPP (independent power producer) owns facilities to generate electric power for sale to utilities and end users.

## Promoting Mega Solar Business (United States)

Recurrent Energy, LLC, a Sharp subsidiary in the US, is a leading developer of distributed solar projects in that country. It works with power utilities to develop mega solar projects and provide solar-generated electricity. In fiscal 2011, the company was involved in the development of mega solar plants at various sites in North America, including a 19.5 MW facility in Arizona, an 88 MW facility in California, and a 100 MW facility in Ontario, Canada. In addition, Recurrent Energy is expanding its business into Europe and other locations.

## Expanding Mega Solar Business in Japan

Mega solar projects are becoming more widely adopted within Japan due to the renewable energy buyback program, which began in July of this year. Sharp is planning mega solar installations for a number of sites throughout Japan. The company is constructing the facilities and supplying the panels for a 2.4 MW installation in Gunma, and it will own and operate a 2 MW installation in Tochigi, a 2 MW installation in Osaka, and a 9.2 MW installation in Nagano.

Japan's energy self-sufficiency stands at a mere 4%\*6. The country is dependent on energy imports from overseas, with nearly all of that coming in the form of oil, coal, natural gas, and other fossil fuels. Sharp is working to improve Japan's level of energy self-sufficiency and help curb global warming by facilitating more widespread adoption of solar power.

\*6 The percentage of Japan's domestic energy usage covered by domestic resources. Nuclear energy is excluded.

# Promoting an Environmental Management System

Sharp operates an environmental management system (EMS) and provides environmental education to strengthen environmental sustainability management and to improve the environmental awareness of employees. The company is reviewing and restructuring the underlying framework of this system—including its rules and operational structure—in order to further improve the efficacy of the EMS as it is variously implemented at plants and offices.

Objectives for Fiscal 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012	Objectives for Fiscal 2015
<ul style="list-style-type: none"> <li>Restructure EMS promotion system at plants</li> </ul>	<ul style="list-style-type: none"> <li>Plants in Japan : Restructure IMS promotion system</li> </ul>	—	—
<ul style="list-style-type: none"> <li>Offices in Japan:                             <ul style="list-style-type: none"> <li>Transition to corporate unit-centered EMS promotion system</li> <li>Implement EMS training for auditors under new system</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Offices in Japan:                             <ul style="list-style-type: none"> <li>Transitioned to corporate unit-centered EMS promotion system</li> <li>Prepared EMS e-learning for auditors</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Offices in Japan:                             <ul style="list-style-type: none"> <li>Ensure that corporate unit-centered EMS promotion system is firmly established</li> <li>Systematize corporate-unit EMS training</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Offices in Japan:                             <ul style="list-style-type: none"> <li>Establish corporate-unit EMS promotion system</li> </ul> </li> </ul>

## Developing the Sharp Environmental Management System

Sharp began working to acquire ISO 14001 environmental management system certification in 1995 and has used it as a management tool for continuously reducing the environmental burden of its business activities. In the years since, certification has been attained by Sharp Corporation, by its consolidated subsidiaries in Japan and overseas, and by the plants of its non-consolidated subsidiaries and affiliates. Furthermore, in fiscal 2002, Sharp formulated the S-EMS (Sharp Environmental Management System) standards, which are based on ISO 14001 and which include an additional 49 original management criteria. S-EMS aims to ensure an even greater degree of environmental compliance and activity on the part of Sharp, and it has subsequently been introduced into Sharp's Japanese offices and plants worldwide.

In fiscal 2006, with Sharp's strategic management system (eS-SEM\*) as a base, S-EMS was integrated with Sharp's quality management system (QMS) to create the integrated management system (IMS), which was then introduced and tailored to the characteristics of Sharp's plants worldwide. Since fiscal 2010, the 11 companies operating within GREEN FRONT SAKAI (Sakai City, Osaka Prefecture) have jointly acquired ISO 14001 certification, which contains additional assessment of their degree of advancement.

In fiscal 2010, Sharp restructured the S-EMS and EMS promotion system and completed a revision of S-EMS regulations and the EMS promotion system for Japanese offices.

In fiscal 2011, Sharp restructured the IMS promotion system at its Japanese plants and transitioned to a corporate unit-centered EMS promotion system at its Japanese offices, so as to ensure better effectiveness and efficiency.

In the future, Sharp will work for a more effective implementation of EMS in accordance with the characteristics of each individual plant and office.

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

## Stepping Up Environmental Education

Sharp systematically implements employee environmental education, assigning employees to either an "Expert" or "General" level course depending on the degree to which their duties are connected with the environment.

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

The General course is intended to help all employees master basic environmental knowledge and improve their environmental awareness.



## Environment-Related Accidents or Violations of Laws

In fiscal 2011, the Sharp Group was subject to no environment-related lawsuits or fines. There were also no serious environment-related accidents.



## Environmental Education Case Studies

### Environmental Seminars by Visiting Lecturers (Mie Plant and Tenri Plant)

As part of the environmental training provided to employees, Sharp invites lecturers active in environment-related fields to come and hold seminars.

The Mie Plant holds environmental seminars three times a year. At the second seminar for fiscal 2011, the guest lecturer was Seiko Tamori, a weatherperson on Mie Television who spoke on the topic of environmental issues and disaster prevention in light of recent weather phenomena. The seminar was attended by 60 employees.

Ms. Tamori, using photographs to illustrate her points, talked about the flooding in Thailand and about Tropical Storm Talas, which caused serious damage on the Kii Peninsula in Japan in 2011. She explained the causes of these weather phenomena, how to interpret weather forecasts, and the importance of disaster preparedness. The participants listened attentively to her accessible talk, which used a disaster that occurred in Mie Prefecture (Tropical Storm Talas) as an example.



Environmental seminar at the Mie Plant

The Tenri Plant (Advanced Development and Planning Center) also hosts annual seminars by visiting lecturers. In fiscal 2011, Kyoto University Environment Preservation Research Center Assistant Professor Misuzu Asari was invited to give a seminar on waste issues and the three Rs. This seminar provided participants with information about the current waste situation in Japan, basic facts about household waste, and other essential waste-related knowledge. She emphasized the particular importance of the first two Rs: to reduce and reuse waste.

This accessible, easy-to-understand talk provided significant motivation to the 100 participants in attendance to re-examine their behavior when it comes to waste issues.



Seminar on waste issues and the three Rs at the Tenri Plant

### Training for General Employees on Sharp's Environmental Efforts (Ichigaya)

Training was provided to general employees (primarily sales staff) at Sharp's Ichigaya Office on the future outlook for solar power generation. The lecture was conducted by CS and Environmental Promotion Group Deputy General Manager Muramatsu and focused on the company's environmental initiatives based on its vision to be an Eco-Positive Company. Mr. Muramatsu also explained how Sharp's solar power business can contribute to global environmental preservation.

Over 200 people attended the seminar, which served to reaffirm the importance of preserving the environment and renew enthusiasm for contributing to the growth of Sharp's solar power business.



Environmental training at the Ichigaya Office

### Environmental Kaizen Competition (SSI, Indonesia)

SSI, Sharp's manufacturing subsidiary located in Karawang, Indonesia, held an environmental kaizen competition under the theme of finding ways of cutting down on CO<sub>2</sub> emissions and waste. Suppliers, subcontractors, and company staff presented their ideas for reducing environmental burden. The aim of the competition was to have participating teams exchange know-how and learn from one another as well as to increase environmental awareness among SSI employees and business partners alike.

After all the entries were presented, the judges chose the winning team for its project on reducing the amount of solder dross.



Participants gather for a group photo following the presentations



# Raising the Level of Environmental Performance in Factories

Sharp is working to raise the level of environmental performance at its factories through the use of its own assessment and certification system. Although all of its factories around the world have already achieved Green Factory status, Sharp is implementing further environmental performance-boosting initiatives so as to elevate all of its plants to the level of Super Green Factory.

Objectives for Fiscal 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012	Objectives for Fiscal 2015
<ul style="list-style-type: none"> <li>11 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>10 plants SGF II Grade A or higher (8 plants SGF II Grade S)</li> </ul>	<ul style="list-style-type: none"> <li>All plants SGF II Grade S</li> </ul>	Develop new SGF measures taking into account characteristics of each plant and region
<ul style="list-style-type: none"> <li>5 Japanese plants (consolidated subsidiaries):                             <ul style="list-style-type: none"> <li>Implement SGF II at 3 SGF</li> <li>Certify remaining 2 GF as SGF</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Implemented SGF II at 3 SGF</li> <li>Certified 1 GF as SGF</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>15 overseas plants (consolidated subsidiaries):                             <ul style="list-style-type: none"> <li>Implement SGF II at 14 SGF</li> <li>Certify remaining 1 GF as SGF</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Implemented SGF II at 14 SGF</li> <li>Certified 1 GF as SGF</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 once 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 All Factories Green Factories

In order to strengthen the environmental friendliness of its factories, Sharp established a “Green Factory” (GF) category, which would apply to factories meeting certain high standards of environmental consciousness. GF Guidelines, which bring together basic policies and operational know-how based on 10 concepts, were drawn up in fiscal 1999 and introduced at factories worldwide. With construction in fiscal 2003 of the Kameyama Plant (Kameyama City, Mie Prefecture), which incorporated state-of-the-art green technologies, Sharp established its own criteria for assessing the environmental friendliness of factories and instituted an internal certification system for designating its plants as GF or Super Green Factory (SGF). Quantitative values were assigned for a wide range of environmental performance items. In the assessment process, a plant would have to score 70 or more points out of 100 to earn GF certification and 90 points or more to achieve SGF certification. The Kameyama Plant was the first plant to be certified an SGF (in fiscal 2003). Following this, Sharp plants worldwide competed to outdo one another in terms of environmental initiatives, and by the end of fiscal 2007, the medium-term goal of getting all Sharp plants worldwide certified as GF and all Sharp Corporation plants certified as SGF was achieved.

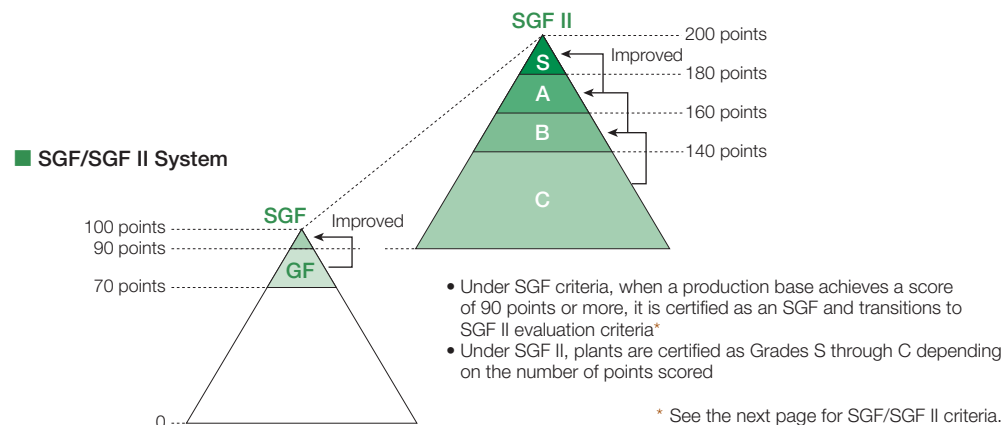
### Green Factory Concepts

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

## Making Super Green Factories Greener

Beginning in fiscal 2008, Sharp launched SGF II, a new initiative for plants 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 “soft” aspects in evaluation points, such as the know-how to maintain and manage environmental equipment to ensure operation at full performance. SGF II has evolved into a mechanism for assessing overall performance on criteria such as emission reductions. Also included in the new evaluation system were assessments of risk preparedness, including operational safety and emergency response measures.

Sharp has set a goal and is carrying out global initiatives for getting all factories worldwide to SGF II Grade B or higher in fiscal 2012.



SGF/SGF II Quantified Environmental Performance Criteria

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	
		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	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 PFCs 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	200 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		

Characteristic Initiatives of SGF II

Previously, the main focus for plants in Japan has been to reduce the environmental burden created by their utility equipment, such as power sources and air conditioning equipment. Now, however, this focus is expanding to include production systems, which play a significant part in the environmental burden created by the plant's emissions. Sharp's environmental management divisions are working with production engineering divisions and production divisions to find ways of reducing the environmental burden of production systems without compromising production quality or productivity.

At overseas production facilities, Eco Best Practice Forums are used as an initiative to improve the "soft" aspects (i.e., equipment and systems operation and management know-how) of environmental performance prioritized under SGF II. These forums are linked by videoconference as a way of facilitating mutual learning where valuable environmental protection know-how is shared between locations. Sharp will continue to hold these forums on a regular basis for locations in North America, Europe, Asia and China.



Eco Best Practice Forum held by Chinese bases

Close-Up SEID in Indonesia Achieves SGF Status

SEID, Sharp's manufacturing and sales subsidiary in Indonesia, is actively engaged in environmental social contribution efforts aimed at reducing the environmental impact of the company's business activities as well as fostering greater environmental awareness amongst employees.

Energy-efficient LED lighting has been installed in the production facilities along with roofing that takes in natural light. Fluorescent ballast has also been replaced with more energy-efficient electronic ballast. And solar power systems have also been introduced at several locations throughout the plant site.

Employees are working with a local plant preservation center and a botanical garden to plant rare plant species in areas near the company. They are also using fallen leaves, weeds, and other such natural resources to create fertilizer.

Thanks to these various initiatives, SEID achieved SGF status in fiscal 2011. And at the new plant currently under construction (scheduled to go online in 2013), an even greater level of environmental friendliness will be incorporated.



Roofing that lets in natural light



Tree planting



Solar power system installed on plant grounds



Conceptual drawing of the new plant when completed

Words from a Manager

SEID maintains an extremely high level of environmental awareness and is actively working to strengthen the environmental friendliness of our production facilities as well as contribute to the protection of the local environment.

We will continue our efforts to help protect and improve the global environment.



Suanda Sumanta  
Department General Manager  
Administrative Department II  
SEID

## Certified Plants

		Country	Fiscal 2003	Fiscal 2004	Fiscal 2005	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011		
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	Grade S		
	Yao Plant			GF	GF	SGF	SGF			Grade A	Grade S		
	Hiroshima Plant			GF	GF	SGF	SGF			Grade A	Grade A		
	Nara Plant			GF	GF	SGF	SGF			Grade S	Grade S		
	Katsuragi Plant			GF	GF	GF	SGF			Grade A	Grade A		
	Fukuyama Plant			GF	GF	GF	SGF			Grade S	Grade S		
	Mie Plant			SGF	SGF	SGF	SGF			Grade S	Grade S		
	Tenri Plant			GF	GF	GF	SGF			Grade A	Grade S		
	Mihara Plant			GF	GF	GF	SGF			Grade A	Grade S		
	Kameyama Plant			SGF	SGF	SGF	SGF			Grade S	Grade S		
	GREEN FRONT SAKAI solar cell plant											SGF	Introduce SGF II
Sharp Manufacturing Systems Corporation				GF	GF	GF	SGF	Introduce SGF II	Introduce SGF II	Grade A			
Sharp Yonago Corporation					GF	GF	SGF			Grade A			
Sharp Niigata Electronics Corporation					GF	GF	GF	GF	GF	SGF			
Sharp Mie Corporation				GF	GF	GF	GF	GF	GF	GF			
Sharp Display Products Corporation									SGF	Grade S			
SEMEX	Mexico			GF	GF	GF	SGF	Introduce SGF II	Equivalent to SGF II grade A or higher (based on self-evaluation)				
SUKM*1	UK			GF	GF	GF	SGF						
SMF	France			SGF	SGF	SGF	SGF						
SOCC	China			GF	SGF	SGF	SGF						
NSEC				GF	GF	SGF	SGF						
SMM	Malaysia			GF	GF	GF	SGF						
SMTL	Thailand				GF	SGF	SGF						
SMCA*2	US					GF	GF					GF	SGF
SMPL	Poland											GF	SGF
SSEC	China			GF	GF	GF	GF					SGF	Introduce SGF II
WSEC					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	SGF			

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

## SGF Certified Plants Worldwide

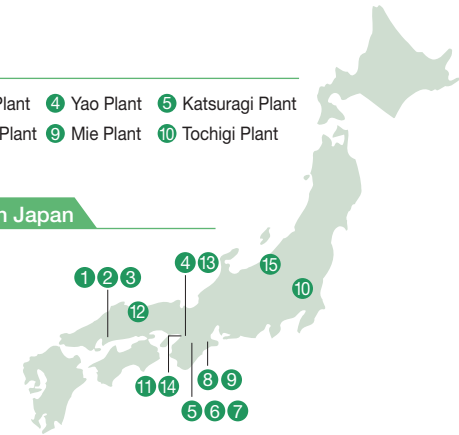
### Sharp Corporation

- 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 Sharp Display Products Corporation
- ⑮ Sharp Niigata Electronics Corporation

● SGF in Japan: 15

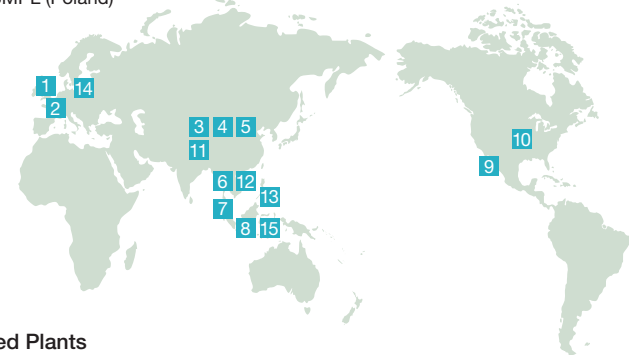


### Subsidiaries and Affiliated Companies Overseas

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

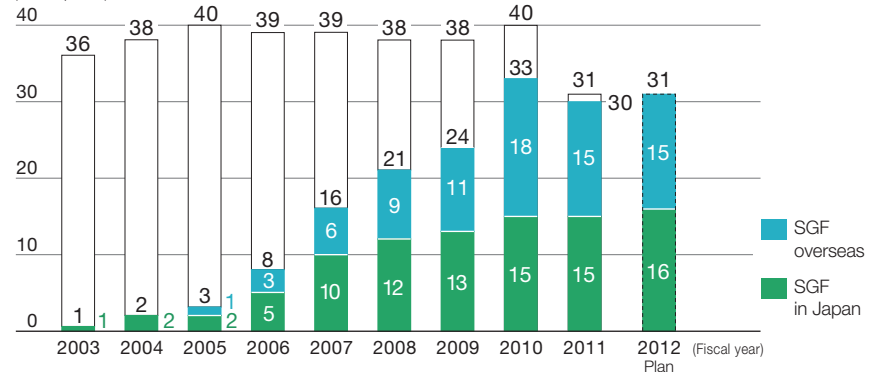
■ SGF overseas: 15

Note: Underlined plants achieved SGF status in fiscal 2011



## Number of SGF Certified Plants

(No. of plants)



# Improving the Level of Environmental Performance of Offices

Sharp has maintained a Green Office certification system since fiscal 2007 in Japan (and since fiscal 2009 overseas) as an initiative to increase the level of environmental performance at its offices. This system assesses and certifies offices according to Green Office standards established by Sharp.

Now that this certification system is well established, Sharp will shift to a framework in which each office conducts Green Office activities on their own initiative, capitalizing on the know-how accumulated thus far.

Objectives for Fiscal 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012	Objectives for Fiscal 2015
<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: Introduced new organizational structure at 21 offices</li> <li>Overseas: Held Green Office study sessions on a regional basis</li> <li>Green Office certification Japan: 21 out of the total 21 offices Overseas: 20 out of the total 20 offices</li> </ul>	<ul style="list-style-type: none"> <li>Transition from evaluation/certification to mutual learning</li> <li>Issue Green Office Guidelines</li> <li>Overseas: Hold Green Office study sessions on a regional basis</li> </ul>	<ul style="list-style-type: none"> <li>Firmly establish voluntary Green Office activities at each office</li> </ul>

## Green Office Initiatives in Japan

Starting in fiscal 2007, Sharp established the Green Office self-certification system as an initiative to increase the level of environmental performance at its Head Office and 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 in eight fields (see table at right). In fiscal 2009 and 2010, all target offices attained Green Office certification.

In line with a revamping of the EMS system in fiscal 2011, the number of target offices was adjusted to 21. The certification standards were also revised, with the addition of assessment items for energy-saving measures undertaken company-wide after the Great East Japan Earthquake. All 21 offices were able to secure Green Office certification.

After five years of the Green Office certification system, green initiatives have taken root at offices. Thus from fiscal 2012, Sharp will encourage each office to adopt its own, independent initiatives. The primary focus will now transition to information sharing and mutual learning, which Sharp will promote through such measures as issuing Green Office Guidelines that summarize the best green practices used thus far.

## 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 “common” performance-evaluation criteria that all offices must address and “optional” criteria that are specific to the characteristics of each individual region. In fiscal 2010, 19 of the 20 offices attained Green Office certification; in fiscal 2011, voluntary targets to be taken by each office were incorporated as indices, and all 20 offices attained certification.

Sharp’s focus on information sharing and mutual learning extends to overseas offices as well. As the first phase of this, Green Office study sessions via videoconference were held in fiscal 2011 for each region. Green Office initiatives will be further stimulated through the establishment of voluntary targets at each office and information sharing and mutual learning between offices.

### Green Office Certification Standards (Japan, Fiscal 2011)

Field	Key Evaluation Indicators (number of items)
Compliance with environmental laws	Compliance in waste management, 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 (1)
Prevention of global warming	Energy-saving measures, electricity demand monitoring, reduction of electricity use, other measures (4)
Waste management	Reduction of total emissions, recycling of waste as valuable resources, other measures (4)
Environmental efforts in the office	Use of recycled copier paper, use of videoconference systems, other measures (2)
Environmental management	Progress management in line with ISO 14001, other measures (2)
Environmental education, etc.	Eco Test certification acquisition ratio, environmental auditor training, other measures (3)
Environmental social action programs	Community activities, other measures (2)

### Green Office Certification Standards (Overseas, Fiscal 2011)

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)

Voluntary targets: Providing environmental education classes at elementary schools, active use of videoconference systems, others

# 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\*1 by installing abatement systems and adopting replacement gases with lower global warming potential.

Objectives for Fiscal 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012	Objectives for Fiscal 2015
<ul style="list-style-type: none"> <li>Production-based CO<sub>2</sub> emissions for the 10 Sharp Corporation plants*2                             <ul style="list-style-type: none"> <li>Reduce to below fiscal 2007 levels</li> <li>Reduce by 3% compared to BAU*3</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Reduced by 40.2% from fiscal 2007 levels</li> <li>Reduced by 3% compared to BAU</li> </ul>	<ul style="list-style-type: none"> <li>Reduce to below fiscal 2007 levels</li> <li>Reduce by 3% compared to BAU</li> </ul>	<ul style="list-style-type: none"> <li>All 11 Sharp Corporation plants                             <ul style="list-style-type: none"> <li>Reduce production-based CO<sub>2</sub> emissions by 3% compared to BAU every fiscal year</li> <li>Improve specific energy consumption rate by average 1% each year (from fiscal 2013 to 2020)</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Production-based CO<sub>2</sub> emissions per adjusted production unit*4 for all 11 Sharp Corporation plants                             <ul style="list-style-type: none"> <li>Reduce by 35% from fiscal 1990 levels (average for fiscal 2008 to 2011)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Reduced by 42.2% 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*5 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>Increased by 8.2% from previous fiscal year (CO<sub>2</sub> emissions reduced by 7%)</li> </ul>	<ul style="list-style-type: none"> <li>Reduce by 2% from previous fiscal year</li> </ul>	<ul style="list-style-type: none"> <li>CO<sub>2</sub> emissions for overseas plants                             <ul style="list-style-type: none"> <li>Reduce by 3% compared to BAU every fiscal year</li> </ul> </li> </ul>

\*1 HFCs, PFCs, sulfur hexafluoride, nitrogen trifluoride, HCFCs

\*2 The 10 plants of Sharp Corporation, excluding the solar cell plant at GREEN FRONT SAKAI (see page 64).

\*3 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.

\*4 Per adjusted production unit (tons CO<sub>2</sub>/100 million yen) = CO<sub>2</sub> emissions (tons CO<sub>2</sub>) ÷ production output (100 million yen) × domestic corporate goods price index 0.385 (scope: electric and electronic equipment, base fiscal year: 1990) determined by the Bank of Japan

\*5 Per production unit (tons CO<sub>2</sub>/100 million yen) = CO<sub>2</sub> emissions (tons 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 2011 decreased by 13.5% compared to the previous fiscal year, with decreases being seen in offices and plants in Japan and overseas and in PFCs (1).

For the 10 factories of Sharp Corporation, CO<sub>2</sub> emissions were reduced by 12.9% compared to the previous fiscal year, and by 40.2% (2) compared to fiscal 2007 levels. They were also reduced by 3% of baseline (BAU emissions) (3). While these results are due in part to decreased production, they also represent stronger green initiatives on the part of Sharp in its utility, production, and other systems as a result of a plan to reduce CO<sub>2</sub> emissions from their fiscal 2007 peak.

In addition, the average for CO<sub>2</sub> emissions per adjusted production unit for all 11 Sharp Corporation plants from fiscal 2008 through 2011 were reduced by 42.2% from fiscal 1990 levels (4).

At the same time, CO<sub>2</sub> emissions at production facilities abroad decreased by 7% compared to the previous fiscal year, while CO<sub>2</sub> emissions per production unit increased by 8.2% compared to the previous fiscal year (5). This increase in CO<sub>2</sub> emissions per production unit is the result of a downturn in production due to drops in product prices and a worsening market situation.

In addition to deploying energy-saving measures, Sharp will continue its efforts to curb greenhouse gas emissions by ensuring the optimal operation of abatement systems on all PFCs 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.

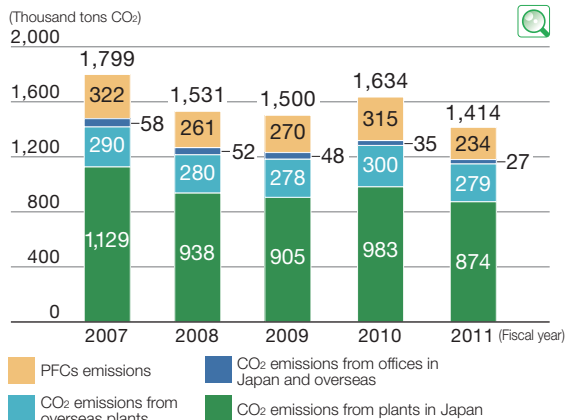
## Promoting Private Power Generation

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

	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011
Self-generated electricity output (millions of kWh)*7	287	261	285	220	227

\*7 Electricity generated by on-site cogeneration systems, solar power generation systems, and fuel cell systems.

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

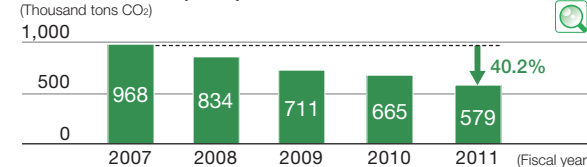


- CO<sub>2</sub> emissions for the Sharp Group as a whole, not taking into account inputs from purchases of Green Power Certificates (renewable energy certificates), were 1,417 thousand tons CO<sub>2</sub>; for overseas plants, 279 thousand tons CO<sub>2</sub>; and for offices in Japan and overseas, 30 thousand tons CO<sub>2</sub>.
- For fiscal 2011 and later results, the following changes to coefficients (electricity) and site coverage will apply.
  - (1) Electricity coefficients: See page 66
  - (2) Site coverage: Sharp Corporation and consolidated subsidiaries (see page 64)
- Fiscal 2011 CO<sub>2</sub> emissions for the Sharp Group as a whole, when the same coefficients and site coverage as fiscal 2010 were applied, were 1,453 thousand tons CO<sub>2</sub>; for Japanese plants, 895 thousand tons CO<sub>2</sub>; and for overseas plants, 293 thousand tons CO<sub>2</sub>.

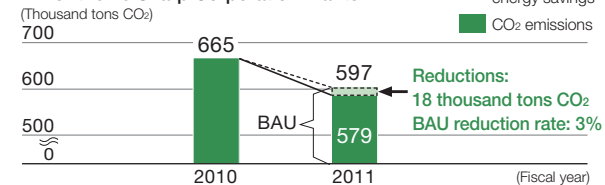
### 4 Production-Based CO<sub>2</sub> Emissions per Adjusted Production Unit for All 11 Sharp Corporation Plants

Fiscal 1990	Average for fiscal 2008 to 2011
32.2	18.6 (down 42.2% from fiscal 1990 levels)

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



### 3 Reduction Rate\*6 of CO<sub>2</sub> Emissions from BAU for the 10 Sharp Corporation Plants



\*6 Reduction rate from BAU (%) = Reductions/BAU × 100

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

Fiscal 2010	Fiscal 2011
25.7	27.8 (up 8.2% over the previous fiscal year)

- Fiscal 2011 CO<sub>2</sub> emissions per production unit, when the same coefficients and site coverage as fiscal 2010 were applied, were 28.1 tons CO<sub>2</sub>/100 million yen (up 9.3% over the previous fiscal year).

Close-Up

## Energy-Saving Initiatives in Japan

As a result of power shortages arising from the shutting down of nuclear power plants, the Japanese government issued an ordinance in the summer of 2011, based on Article 27 of the Electricity Business Act, which called for a 15% mandatory reduction in power usage within the areas serviced by Tokyo Electric Power Company and Tohoku Electric Power Company, and which requested a 10% reduction in the areas serviced by Kansai Electric Power Company. And again in winter, a request was made for a 10% reduction in the areas serviced by Kansai Electric Power Company and a 5% reduction in the areas serviced by Kyushu Electric Power Company.

Although Sharp already had various energy-saving measures in place, meeting the government's demands was made a priority issue company-wide. A special task team headed by an Executive Vice President (Chief Officer, General Administration) was put together to find ways of cutting down on power usage as much as possible without affecting the manufacture and supply of products and components. The initiatives that were undertaken as a result will be continued company-wide in fiscal 2012.

### Main Energy-Saving Initiatives

- In-house energy-saving guidelines instituted throughout the company
- Energy-saving measures, in addition to the above guidelines, tailored to the energy-usage situations at each office/plant
- Energy conservation channel on the company intranet to raise employee awareness about energy-saving initiatives. Contents include the daily energy-consumption situation, power demand forecasts by each power company, and ways that households can cut down on electricity usage
- Integrated Head Office management of the power usage situation at each office/plant

### Energy-Saving Measures Implemented at Offices Company-Wide

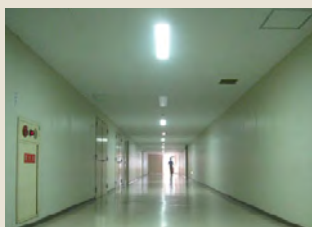
- Turning off neon signs; turning off air conditioners during breaks; keeping air conditioner cooling at 28°C and heating at 18°C; consolidating meeting rooms; reducing the number of lighting units; limiting elevator usage; cutting back on the number of vending machines; consolidating the number of MFPs through shared usage; introducing LED lighting; etc.

### Examples of Initiatives at Plants

- Use of cogeneration systems (Kameyama and Tenri Plants)
- Cultivation of "green curtains" (shade-producing foliage) (Mie and Tenri Plants)
- Creating original T-shirts as part of the summer dress code (Sharp Manufacturing Systems Corporation)



Energy conservation channel on the intranet



The number of lights was reduced and remaining lights were replaced with LED lighting in employee passageways



Green curtain (Mie Plant)

## Case Study 1 Saving Energy

### First-Ever Energy Management System Certification in the Chinese Home Appliance Industry (SSEC, China)

At SSEC, a manufacturing subsidiary in Shanghai, China, the production divisions and environment division are working together to save energy in its production facilities.

On the washing machine molding line, an insulation cover was placed on the heat sleeve for the 17 plastic molding machines so that heat would not escape when the plastic melted in the plastic sleeve. This modification has saved approximately 158 tons CO<sub>2</sub> per year. Other modifications, such as updating the electrical transformer and introducing 200 LED lighting units, saved approximately 413 tons CO<sub>2</sub> in fiscal 2011.

In recognition of these initiatives, SSEC became the first Chinese home appliance manufacturer to attain third-party certification under the GB/T23331-2009 Energy Management System Requirements standard.



Energy savings achieved through the collaboration of production and environment divisions



Certificate

## Case Study 2 Saving Energy

### Development and Introduction of In-House LED Lighting (SSI, Indonesia)

Sharp promotes the introduction of energy-efficient LED lighting at its group company locations worldwide. At SSI, a manufacturing subsidiary in Karawang, Indonesia, in-house LED lighting was developed. Four varieties of in-house LED lighting—an LED microscope lamp for use in electronic component manufacturing processes; an LED light bulb for use in the lobby and other rooms; a straight-tube LED for meeting rooms; and an LED street light for parking areas—were developed and installed.

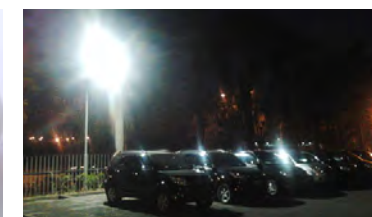
By switching its 101 lights to LED in fiscal 2011, SSI was able to reduce CO<sub>2</sub> emissions by approximately 4 tons CO<sub>2</sub> per year.



LED microscope lamp



LED light bulb



LED street light

# 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 have continuously achieved zero discharge to landfill\*1 since fiscal 2001, and the percentage of valuable resources recovered\*2 is also increasing. As well, overseas plants are working to reduce the level of waste, etc. discharged\*3. Sharp will continue its efforts to make the most effective use of resources at its worldwide production facilities.

Objectives for Fiscal 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012	Objectives for Fiscal 2015
<ul style="list-style-type: none"> <li>Amount of waste discharged*4 at the 10 Sharp Corporation plants*5</li> <li>Reduce to below fiscal 2007 levels</li> <li>Reduce by 6% compared to BAU*6</li> </ul>	<ul style="list-style-type: none"> <li>Reduced by 76.5% from fiscal 2007 levels</li> <li>Reduced by 14.9% compared to BAU</li> </ul>	<ul style="list-style-type: none"> <li>Reduce to below fiscal 2007 levels</li> <li>Reduce by 6% compared to BAU</li> </ul>	<ul style="list-style-type: none"> <li>Amount of waste discharged at all 11 Sharp Corporation plants</li> <li>Reduce by 6% compared to BAU every fiscal year</li> </ul>
<ul style="list-style-type: none"> <li>Amount of waste, etc. discharged per production unit*7 at overseas plants</li> <li>Reduce by 2% from previous fiscal year</li> </ul>	<ul style="list-style-type: none"> <li>Increased by 6.7% from previous fiscal year (waste, etc. reduced by 8.6%)</li> </ul>	<ul style="list-style-type: none"> <li>Reduce by 2% from previous fiscal year</li> </ul>	<ul style="list-style-type: none"> <li>Reduce by 6% compared to BAU every fiscal year</li> </ul>

\*1 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 recovered) x 100.  
 \*2 Percentage of valuable resources recovered (%) = Amount of valuable resources recovered / amount of waste, etc. discharged x 100  
 \*3 Amount of waste, etc. discharged = Waste discharged + valuable resources recovered  
 \*4 Amount of waste discharged = Industrial waste discharged + general waste from business activities

\*5 The 10 plants of Sharp Corporation excluding the solar cell plant at GREEN FRONT SAKAI (see page 64).  
 \*6 Business As Usual: Amount estimated to be discharged, relative to discharge levels in the preceding fiscal year, assuming no reduction measures are implemented.  
 \*7 Per production unit (tons/100 million yen) = Amount of waste, etc. discharged / production output (100 million yen)

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

In fiscal 2011, waste, etc. (waste and valuable resources recovered from waste) discharged by the Sharp Group decreased by 31.1%, falling below levels of the previous fiscal year both in Japan and overseas (1).

The 10 Sharp Corporation plants reduced waste discharge by 50.6% compared to the previous fiscal year and 76.5% compared to fiscal 2007. These reductions were due in part to decreased production. The percentage of valuable resources recovered rose to 45.2% as a result of recycling efforts. This is a 13.3-point increase compared to the previous fiscal year and a significant 31.1-point increase compared with fiscal 2007 (2).

As a result of these efforts, fiscal 2011 was the 11th consecutive year for Sharp production plants in Japan to achieve zero discharge to landfill (3).

In addition, waste discharges were reduced by 14.9% compared to baseline levels (BAU emissions), which was significantly better than the goal of reducing discharges by 6% of baseline (BAU emissions) each year, taking fiscal 2007 as the peak year for such discharges (4).

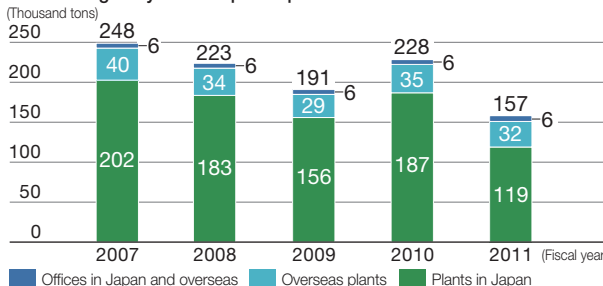
Meanwhile, total waste, etc. discharged at production facilities abroad decreased by 8.6% compared to the previous fiscal year, while, as a result of decreased production, waste, etc. discharged per production unit increased by 6.7% compared to the previous fiscal year (5).

Sharp will continue to curb emissions and strive for the effective utilization of resources.

## Appropriate Storage and Treatment of PCB Wastes in Japan

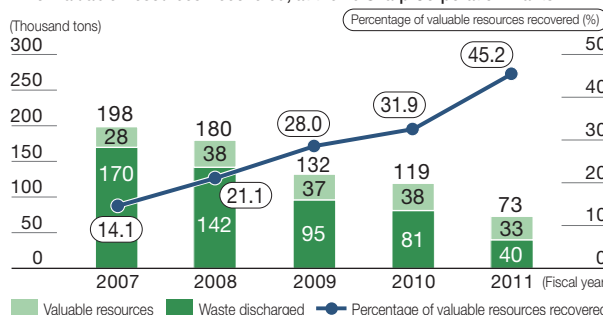
Each Sharp plant properly manages and stores waste PCB (polychlorinated biphenyls) and fulfills reporting requirements to the government. In addition, Sharp has registered with the appropriate disposal certification authority and is on track to finish treating PCB waste to make it harmless by the July 2016 deadline set by the government. Sharp currently uses no 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



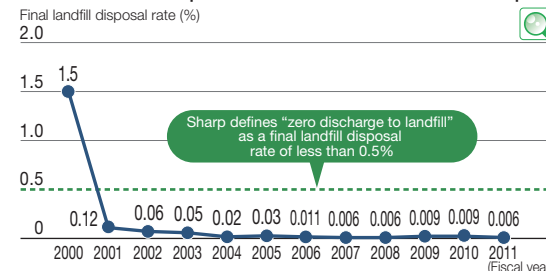
• Fiscal 2011 waste, etc., discharged by the Sharp Group as a whole, when the same site coverage as fiscal 2010 was applied, was 158 thousand tons; for Japanese plants, 120 thousand tons; and for overseas plants, 33 thousand tons.

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



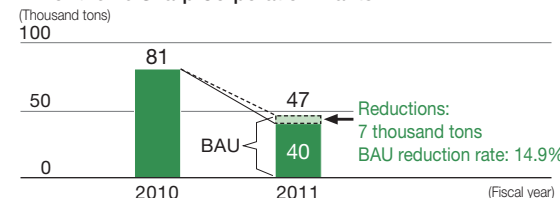
• Waste discharge since fiscal 2010 is the sum total of discharges subject to administrative reporting requirements excluding the amount discharged by subcontractors on the premises of the Kameyama Plant and Mie Plant (fiscal 2010: 11 thousand tons, fiscal 2011: 26 thousand tons).

3 Final Landfill Disposal Rate of Waste from Plants in Japan



• Fiscal 2011 final landfill disposal rate, when the same site coverage as fiscal 2010 was applied, was 0.008%.

4 Reduction Rate of Waste Discharge from BAU for the 10 Sharp Corporation Plants\*8



\*8 Reduction rate from BAU (%) = Reductions/BAU x 100

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

Fiscal year	Waste, etc. Discharged per Production Unit (ton/100 million yen)
Fiscal 2010	3.0
Fiscal 2011	3.2 (down 6.7% compared to the previous fiscal year)

• Results for fiscal 2011, when the same site coverage as fiscal 2010 was applied, were too small to affect reported values.

## Case Study 1 Reducing Waste

### Material-Specific Recycling of Crystalline Solar Modules (Katsuragi Plant)

At the Katsuragi Plant (Katsuragi City, Nara Prefecture), efforts are being undertaken to recycle used crystalline solar modules.

In the past, development prototypes and modules used for product evaluation had their aluminum frames sold as valuable resources with the rest being incinerated as industrial waste. The cinders were then melted, cooled, and solidified into slag to be used in paving materials. A more effective recycling method—i.e., recycling the individual materials by type—is now being undertaken.

First, the aluminum frame is removed and the module pulverized. Pneumatic (blown air) separation, color separation, and other processes are applied to divide the module into its cell, inter-connector, and glass components, each of which is then recycled as a valuable resource. In fiscal 2011, this material-specific recycling approach was used to process 17.4 tons of crystalline solar modules.



Glass after blown air separation

#### Examples of Products Utilizing Recycled Glass



Foamed glass tile



Wire glass

## Case Study 2 Reducing Waste

### Recycling 99% of Waste from the Production Process (SMCA, US)

SMCA, the Tennessee-based manufacturing division of SEC, is reducing the waste it generates during production. In order to improve on its 49% recycling rate\*1 in fiscal 2010, SMCA used a variety of approaches to boost its levels of reuse and recycling; for example, greater use was made of reusable pallets and packaging materials.

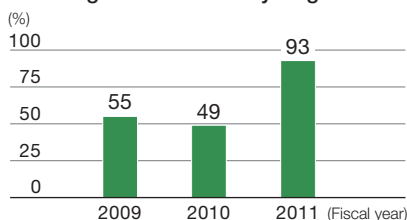
SMCA targeted a recycling rate of 90%, thoroughly communicated this target to employees, and held waste-separation training sessions. The result was a recycling rate of over 99%, surpassing the original target. SMCA's aim for fiscal 2012 is to achieve a 100% recycling rate through the promotion of a "zero waste emission" campaign.

\*1 The percentage of waste generated during the manufacturing process that is reused or recycled.



Reusable wooden pallets

#### Change in SMCA's Recycling Rate



## TOPICS

### Mie and Fukuyama Plants Receive 2011 Reduce, Reuse, Recycle Promotion Achievement Awards\*2

The Mie Plant (Taki District, Mie Prefecture) was awarded a Reduce, Reuse, Recycle Promotion Association Chairman's Prize for reducing waste generated during effluent treatment, while the Fukuyama Plant (Fukuyama City, Hiroshima Prefecture) won the same award for reducing chemical use in semiconductor production.

\*2 An award system sponsored by the Reduce, Reuse, Recycle Promotion Association in Japan to recognize organizations achieving progressive, ongoing results in the 3Rs.

#### Initiatives at the Mie Plant

The Mie Plant is working to reduce the amount of chemical waste produced from the LCD panel production process. Employing oxalic acid in place of the conventional hydrochloric acid and ferric chloride mixture enables chemical substances filtered out of industrial effluent to undergo microbial treatment instead of chemical treatment, thereby greatly reducing the amount of alkaline effluent and sludge produced. Also, the Mie Plant has successfully developed and practically applied a collection system for hydrofluoric acid—which produces a tremendous environmental burden—along with technology for reusing waste developer. As a result of these efforts, the Mie Plant reduced its waste output by a total of 4,653 tons during the three-year period from fiscal 2008 to 2010.

#### Inorganic Effluent Treatment (Pre-upgrade: hydrochloric acid/ferric chloride mixture effluent treatment)



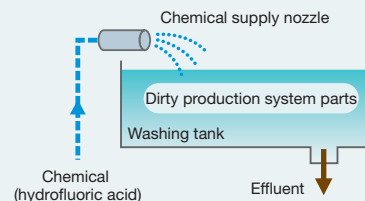
#### Organic Effluent Treatment (Post-upgrade: oxalic acid effluent treatment)



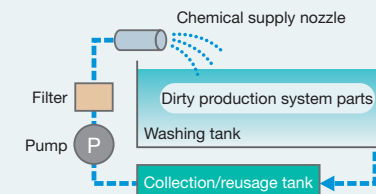
#### Initiatives at the Fukuyama Plant

The Fukuyama Plant has greatly reduced the amount of sludge it produces during effluent treatment by upgrading its cleaning equipment and reusing the hydrofluoric acid used in equipment maintenance (parts cleaning, etc.). In 2010, chemicals discarded after each parts cleaning were reused on average 11 times at the Fukuyama Plant, leading to a reduction of hydrofluoric acid usage of 63% per unit compared to previous levels. In addition, the amount of sludge produced from the treatment of fluorine effluent was reduced by 568 tons.

#### Pre-upgrade: Chemical Discarded after Single Use



#### Post-upgrade: Chemical Reused





# 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.

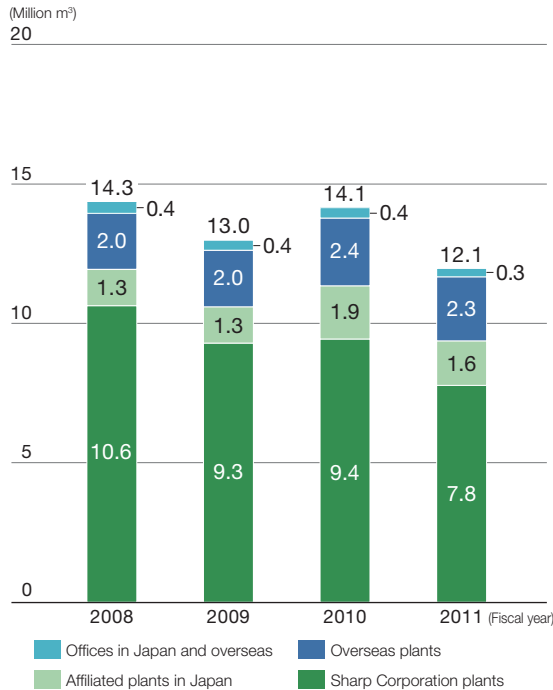
## Effectively Using Water Resources

Sharp is striving to make effective use of water resources by reducing the amount of new water (i.e., water from the water supply system) it uses and by expanding the use of recycled water. Also, as water recycling requires a great deal of energy, Sharp is working to reduce the amount of water it uses in total so as to be more energy-efficient (3, 4).

The volume of new water used by the Sharp Group in fiscal 2011 decreased by 14% (1); the volume of recycled water also decreased (9%) compared to the previous fiscal year (2).

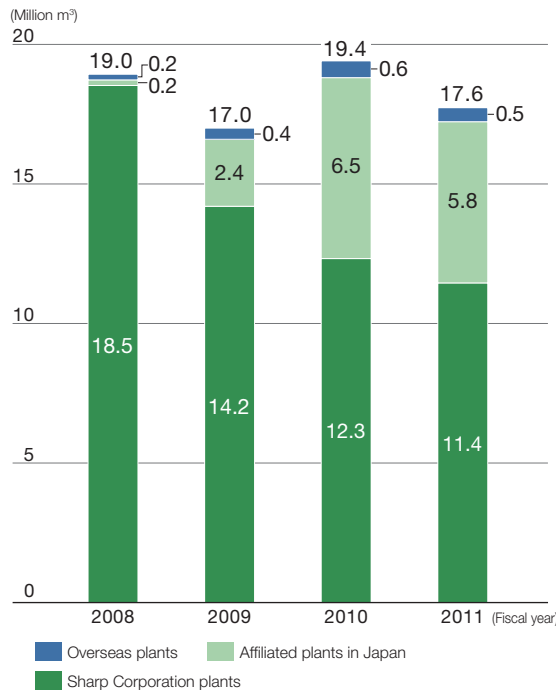
Sharp will continue its efforts to reduce the volume of water it uses, with an eye towards making effective use of water resources and being energy-efficient.

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



• Fiscal 2011 new water used by the Sharp Group as a whole, when the same site coverage as fiscal 2010 was applied, was 12.4 million m<sup>3</sup>; for Japanese affiliated plants, 1.8 million m<sup>3</sup>; and for overseas plants, 2.4 million m<sup>3</sup>.

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



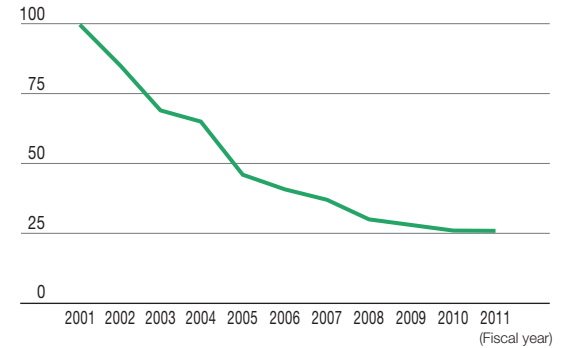
• Fiscal 2011 water reused by the Sharp Group as a whole, when the same site coverage as fiscal 2010 was applied, was 17.7 million m<sup>3</sup>; for Japanese affiliated plants, 5.9 million m<sup>3</sup>; and for overseas plants, 0.5 million m<sup>3</sup>.

## 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 2011 was approximately 25% of that used in fiscal 2001.

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

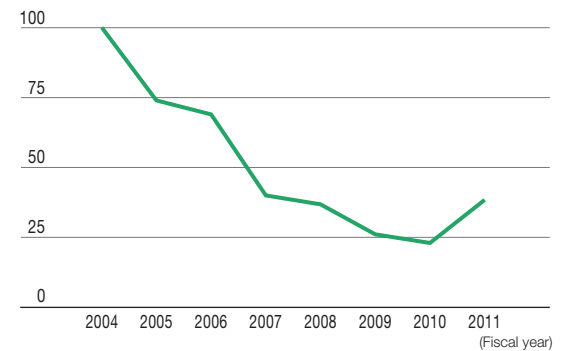


## Reducing the Volume of Water Used

Since it first went on line, the Kameyama Plant (Kameyama City, Mie Prefecture) has recycled 100% of the drainage from the production process; however, the plant is making efforts to reduce the volume of water it uses from an energy-saving viewpoint.

Due to the startup of a new production line and other factors, the volume of water used per unit produced in fiscal 2011 increased compared with fiscal 2010 but was approximately 40% 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, 17 were handled in quantities of 500 kg or more by one or more plants in Japan during fiscal 2011. New processes implemented at the plants were accompanied by a drop in the volume of PRTR-designated substances used. Compared with the previous year, Sharp newly used three substances over the 500 kg threshold and reduced use of three other substances below that threshold. The total amount of these chemicals handled in Japan was reduced to approximately 8,508 tons, down 19% from the previous fiscal year's 10,503 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.

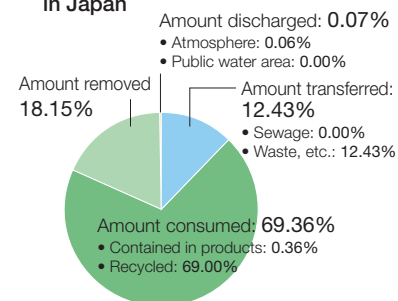
### Fiscal 2011 PRTR Data (Japan)

Chemical	Amount handled	Amount discharged		Amount transferred		Amount consumed		Amount removed
		Into atmosphere	Into public water area	Into sewage	Into waste, etc.	Contained in products	Recycled	
2-Aminoethanol	7,260,006	1,640	227	0	392,768	0	5,764,727	1,100,644
Indium and its compounds	28,867	0	0	0	6,325	866	21,679	0
Ethyl benzene	576	17	0	0	231	0	0	328
Ferric chloride	121,034	0	0	0	0	0	75,636	45,398
Xylene	2,358	71	0	0	943	0	0	1,344
Silver and its water-soluble compounds	34,184	0	0	0	0	28,643	5,541	0
N, N-dimethyl-formamide (DMF)	16,491	0	0	0	0	0	0	16,491
Copper salts (water-soluble, except complex salts)	28,557	0	0	0	28,557	0	0	0
1, 3, 5-Trimethylbenzene	555	16	0	0	222	0	0	317
Lead compounds	591	0	0	0	35	555	1	0
Arsenic and its inorganic compounds	1,001	0	0	0	965	18	17	0
Pyrocatechol (also known as catechol)	3,020	0	0	0	3,020	0	0	0
4-Tertiary butylphenol	2,611	38	0	0	2,573	0	0	0
Hydrogen fluoride and its water-soluble salts	998,299	3,508	0	0	615,537	0	0	379,253
Boron compounds	4,546	9	0	0	4,418	0	118	0
Polyoxyethylene alkyl ether	1,430	0	3	0	1,321	0	0	106
Molybdenum and its compounds	3,662	0	30	0	809	260	2,563	0
Total	8,507,788	5,299	260	0	1,057,724	30,342	5,870,282	1,543,881

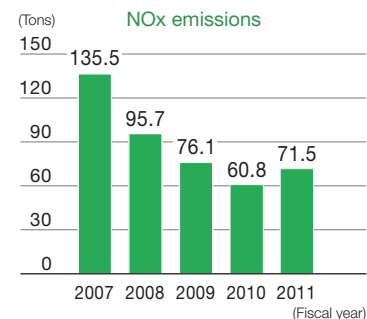
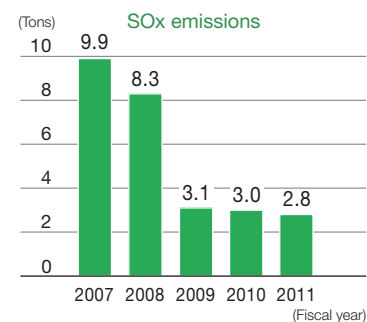
• For fiscal 2011 results, when the same site coverage (including affiliated companies) as fiscal 2010 was applied, the PRTR substances handled by affiliated companies were all less than 500 kg. Therefore those values do not affect the reported values.

 Fiscal 2011 PRTR data (overseas)

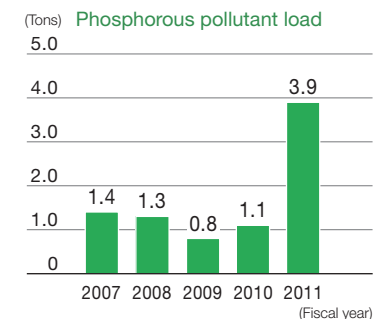
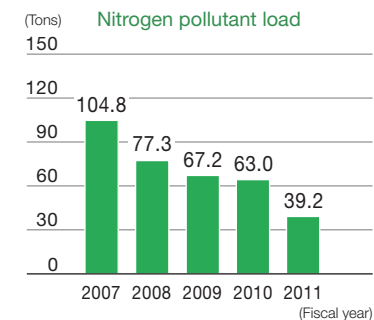
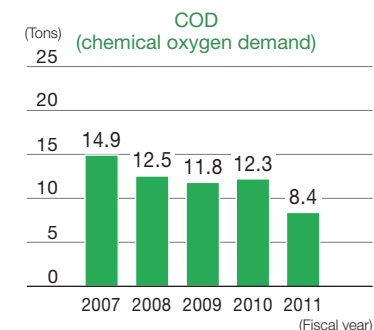
### Destinations of PRTR-Listed Chemical Substances in Japan



### Atmosphere Emissions in Japan



### Pollutant Loads of Public Water Areas in Japan



• Results for fiscal 2011 show an increase in the phosphorous pollutant load due to a change in production chemicals at Sharp Yonago Corporation; however, it is still below the maximum level allowed by law.

### 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)

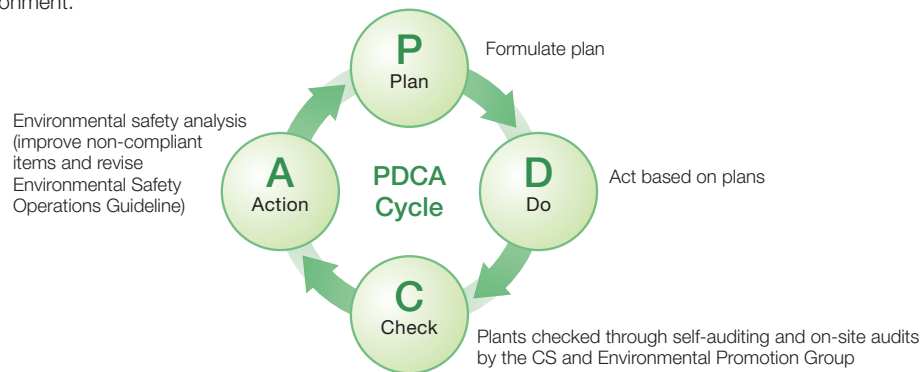
- ① Pollution prevention
- ② Waste processing
- ③ Operations safety management\*1
- ④ Emergency response
- ⑤ Special safety management\*2
- ⑥ Energy Conservation Law/Act on Promotion of Global Warming Countermeasures
- ⑦ SGF promotion
- ⑧ Human resource development
- ⑨ On-site facility management

\*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 for each of 237 items and audited on site. Based on the results of this audit, improvement and corrective actions are taken to reduce any further risk to the safety of the environment.



TOPICS

#### Sharp Receives Encouragement Award from the ChemoBio Integrated Management Society

In September 2011, Sharp was given the Encouragement Award: ChemoBio Integrated Management Society 2011. This award was granted by the ChemoBio Integrated Management Society (CBIMS) of Japan after it assessed the integrated management of chemical substances in Sharp's products and production facilities.

Sharp maintains a variety of mechanisms and structures for scrupulously conducting appropriate management of chemical substances used in products and at plants. When assessed according to the CBIMS evaluation indicators for corporate activities in the integrated management of chemical substances, these efforts were given high marks in all areas, including risk management, putting Sharp in the No. 1 position amongst all electrical and electronic manufacturers surveyed.



### Chemical Substance Management Training for Employees (SSI, Indonesia)

Systematic environmental training is an ongoing initiative at SSI, Sharp's manufacturing subsidiary in Karawang, Indonesia, with the aim being to raise environmental awareness, knowledge, and skills amongst employees. In fiscal 2011, chemical substance management training was held a total of eight times and was attended by 81 employees. This training seeks to ensure that employees have a thorough understanding and awareness of appropriate chemical substance management as well as environmental laws and regulations.

A test is given at the beginning and the end of training in order to motivate employees to remember what they learn and to gauge the effectiveness of training.



### 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 various meetings.



#### Public Meeting (Mie Plant)

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.



#### Three-Party Wastewater Sampling and Analysis (Fukuyama Plant)

At the Fukuyama Plant (Fukuyama City, Hiroshima Prefecture), Sharp personnel, local residents, and the local municipal government separately collect and analyze wastewater samples twice 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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012	Objectives for Fiscal 2015
<ul style="list-style-type: none"> <li>CO<sub>2</sub> emissions per shipping volume*1 by Sharp Group in Japan</li> <li>Reduce by average 1% each year for the most recent 5 years (fiscal 2007 to 2011)</li> </ul>	<ul style="list-style-type: none"> <li>Reduced by average 2% each year</li> </ul>	<ul style="list-style-type: none"> <li>Reduce by average 1% each year for the most recent 5 years</li> </ul>	<ul style="list-style-type: none"> <li>Every fiscal year: Reduce by average 1% each year for the most recent 5 years</li> </ul>

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

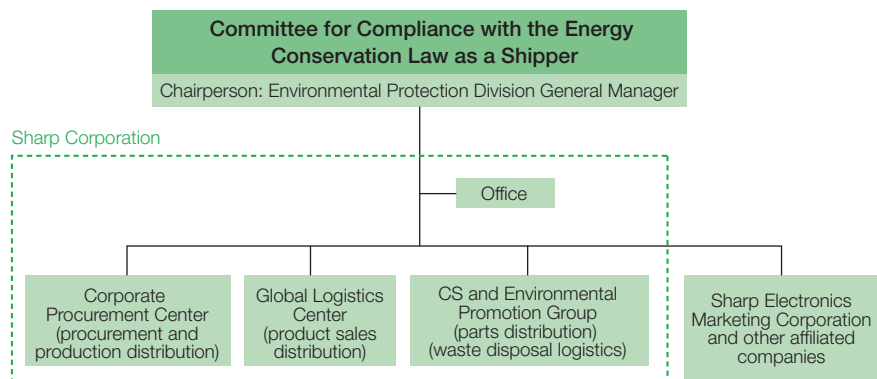
## Promoting Measures to Reduce Environmental Impacts in Each Area of Distribution

In Japan, 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\*2, 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. This is a legal mandate for specified shippers that applies to all members of the Sharp Group in Japan. Also, Sharp is promoting energy-saving efforts such as shifting to environmentally friendly modes of transport (modal shift) and improving transport and load efficiencies.

In fiscal 2011, Sharp Group CO<sub>2</sub> emissions from shipping activities in Japan were 37 thousand tons CO<sub>2</sub> (down 25% from the previous fiscal year and down 13% from fiscal 2007). Emissions per shipping volume were 0.21 tons CO<sub>2</sub>/thousand ton-km, an average annual reduction of 2% for the most recent five years.

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

### System to Promote Energy Savings in Distribution



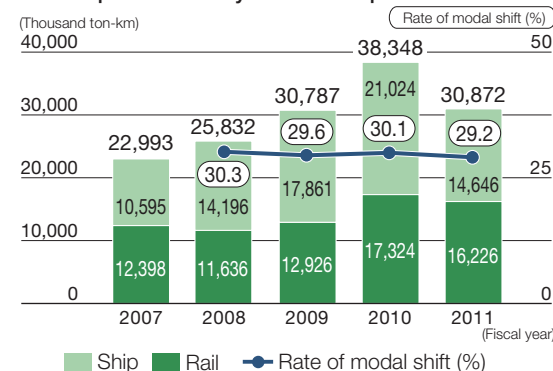
## Modal Shift in Japan

In Japan, Sharp is shifting from conventional trucking to more environmentally friendly modes of transport, such as rail and shipping (modal shift).

In fiscal 2011, the volume of shift in transport modes decreased as a result of an overall decrease in the volume of goods and materials shipped; however the rate of modal shift was almost the same as that for the previous fiscal year.

Sharp will continue expanding modal shift.

### Transport Volume by Rail and Ship



## Case Study: Promoting Modal Shift

### 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\*3 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 2011, 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.



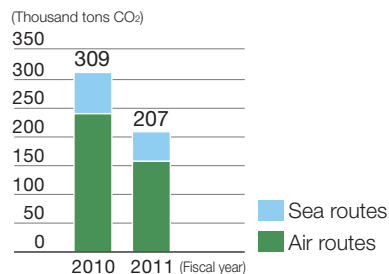
Eco Rail Mark authorized company certificate

### Reducing the Environmental Burden of International Distribution

Sharp is working to reduce the amount of CO<sub>2</sub> that is emitted as a result of international and intraregional shipping. A wide array of initiatives are being undertaken; in addition to reducing air freight and improving load efficiency, marine shipping routes are also being revised, such as by choosing the optimal harbors for discharging freight and using shipping companies that are actively engaged in environmental protection.

In fiscal 2011, the CO<sub>2</sub> emissions from internationally transporting products and devices that were produced by domestic and overseas Sharp Group production companies and shipped to Sharp Group companies outside Japan came to approximately 207 thousand tons CO<sub>2</sub>; this is 67% as much CO<sub>2</sub> as was produced in the previous fiscal year (see graph at right). Also in fiscal 2011, environmental load-reducing best practices employed in intraregional shipping overseas were collected and shared among Sharp bases.

For the mutual benefit of Sharp bases, information will continue to be shared about initiatives that reduce the global environmental load of logistics activities.



### Case Studies: Overseas Logistics

#### Indonesia

At SSI, an electronic components manufacturing subsidiary in Karawang, the Mile Reduction Activity is being undertaken to reduce the environmental burden created by logistics. In addition to establishing administrative rules limiting company vehicle usage, other initiatives are being carried out, such as schedule management to minimize the number of trips that need to be made by trucks between the airport and the plant in order to deliver export products and pick up imported parts and materials. Also, whereas SSI traditionally received almost all of the parts and materials it used from Japan, it is now switching over to domestic procurement or procurement from suppliers in neighboring countries as a way of lessening the environmental impact and costs of logistics, as well as contributing to the local economy. In fiscal 2011, SSI switched to local procurement for 59 parts and materials. All of these efforts have had the combined effect of reducing SSI's emissions by 57 tons CO<sub>2</sub> a year.

#### France

At SMF, a manufacturing subsidiary in Soultz, some of the shipments arriving from China to the Port of Rotterdam in the Netherlands are being shipped from the port to SMF by barge. Although shipping by barge takes longer than shipping by truck, it reduces CO<sub>2</sub> emissions to roughly a quarter.

SMF set a target for fiscal 2011 to switch 30% of total shipping to barges; in fact, SMF was able to switch 39% of its incoming shipments to barges, thereby reducing emissions by 118 tons CO<sub>2</sub>.



Barge shipping on the Rhine

#### China

In China, where shipping volume is increasing due to an expansion in business, active efforts are underway to introduce modal shift.

##### Initiatives for Shipping between Japan and China

Typically, airplanes have been used to ship Sharp LCD panels made in Japan to China; however, sea shipping is being increasingly used, as airfreight emits 38 times as much CO<sub>2</sub> as sea freight. In fiscal 2011, thanks to initiatives intended to expand the use of ferries and RoRo boats\*<sup>1</sup>, 46% of LCD panel shipments to China were done by sea. CO<sub>2</sub> emissions were reduced 15 tons per container.

##### Initiatives within China

SESC, a sales subsidiary in Shanghai that maintains a nationwide sales network, has partnered with Nanjing-based manufacturing subsidiary NSEC to reduce the environmental impact of logistics.

When LCD TVs produced in Nanjing are shipped to northern China (Shenyang) or southern China (Guangzhou), they are typically sent by truck, but initiatives are underway to utilize boats instead. By switching over 40% of these shipments from trucks to boats, annual CO<sub>2</sub> emissions are cut by roughly 1,000 tons.

\*<sup>1</sup> RoRo (roll-on/roll-off) boat. A gate connecting the boat with the pier allows freight trucks to drive right onto the boat; thus, there is no need for unloading and then reloading cargo.



### Case Study: Reducing the Environmental Burden of Packaging

#### Using Pulp Yarn in Packaging Joints

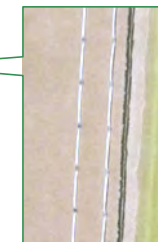
The metallic staples used at the joints of cardboard refrigerator\*<sup>2</sup> boxes have been switched to pulp yarn made of the same material as the cardboard. This makes it easier to separate materials when the boxes are recycled and reduces the amount of CO<sub>2</sub> produced. Moving away from metallic staples has the added benefit of reducing the chance that other packaging materials will be damaged.



Metallic staples at joints



Pulp yarn



\*<sup>2</sup> For model SJ-PW31W

# Promoting Environmental Communication

To provide environmental communication for its wide range of stakeholders worldwide, 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 CSR. To meet the diverse needs of stakeholders, this report is issued in two forms: a detailed version for professionals and specialists and a simplified version for the general public (both available as PDFs). At the 15th Green Reporting Awards jointly sponsored by Toyo Keizai Inc. and the Green Reporting Forum, Sharp's 2011 edition was awarded the New Energy Policy Category Award (15th anniversary Toyo Keizai special encouragement award). The 2012 edition and all subsequent editions will be renamed "Sustainability Report."

Sharp's website features annual reports on environmental and social activities and is updated with detailed information on environmental social action programs being actively undertaken at Sharp bases worldwide.

In addition, environmental reports and site reports have been issued at plants in Japan and overseas. Copies of these reports are distributed to local residents and to visitors to the facilities in order to deepen their understanding of the environmental protection initiatives being undertaken.



Sharp Environmental and Social Report 2011 (Japanese, English, and Chinese editions)



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



Katsuragi Plant Site Report

## Exhibitions

Sharp introduces its environmental activities to the public by taking part in trade fairs and exhibitions worldwide. At Eco-Products 2011, one of Japan's largest environmental fairs, Sharp took part using the slogan "Sharp, an eco-positive company—Opening a new era in renewable energy with solar power generation."

On stage and at its booth, Sharp showcased its total solar power solutions and its Eco House concept as well as other distinctive Sharp initiatives, such as energy-efficient AQUOS LCD TVs and LED lighting, eco-office ideas centered on the touchscreen LCD monitor, and proprietary closed-loop plastic recycling technology.



Eco-Products 2011

## Environmental Forums

To more widely disseminate information on its initiatives on behalf of the environment, Sharp holds environmental forums in Japan and other countries for government officials, journalists, and the general public.

In fiscal 2011, Sharp held one of these forums in Jakarta, Indonesia. It was the third such forum to be held there, following forums in 2008 and 2010. Around 120 people attended, including students as well as members of the Indonesian Institute of Sciences, NGOs, the press, and education-related organizations. Sharp clearly laid out the targets and specific initiatives involved in its Eco-Positive Company corporate vision and Eco-Positive Strategy. Afterwards, attendees took part in a variety of environmental awareness-raising activities, such as planting trees and releasing fish.



Environmental forum held in Jakarta, Indonesia

## Factory Tours and Community Exchanges

To enhance communication with its wide range of stakeholders, Sharp conducts factory tours, exchange conferences, and other events. Sharp Corporation holds public festivals at its factories, where employees host their families and local residents and where participants enjoy eco-related games and events. At the same time, Sharp personnel help their guests learn about the factories' environmental protection activities and promote a greater understanding of the environment.

SUKM, the Wrexham, Wales-based manufacturing division of sales subsidiary SUK, took part in a program sponsored by the Business in the Community NPO headed by Prince Charles. As part of this program, SUKM hosted an event focused on initiatives being undertaken in Wales to combat climate change, and SUKM used this opportunity to showcase its environmental initiatives.



Environmental event held by SUKM

# 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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012	Objectives for Fiscal 2015
<ul style="list-style-type: none"> <li>Develop Sharp Biodiversity Initiative</li> <li>Increase rate of progress set out in Sharp Biodiversity Initiative by 3 points from previous fiscal year</li> </ul>	<ul style="list-style-type: none"> <li>Increase rate of progress set out in Sharp Biodiversity Initiative by 8 points from previous fiscal year</li> <li>58% of target bases achieved Grade A* set out in progress management tool</li> </ul>	<ul style="list-style-type: none"> <li>Increase rate of progress set out in Sharp Biodiversity Initiative by 5 points from previous fiscal year</li> <li>70% or more of target bases achieve Grade A</li> </ul>	<ul style="list-style-type: none"> <li>All bases in Japan and overseas achieve Grade A</li> </ul>

\* Grade A is defined as attaining a progress rate that is at least 20% higher than the average rate of all Sharp bases in fiscal 2009.

## ■ 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).

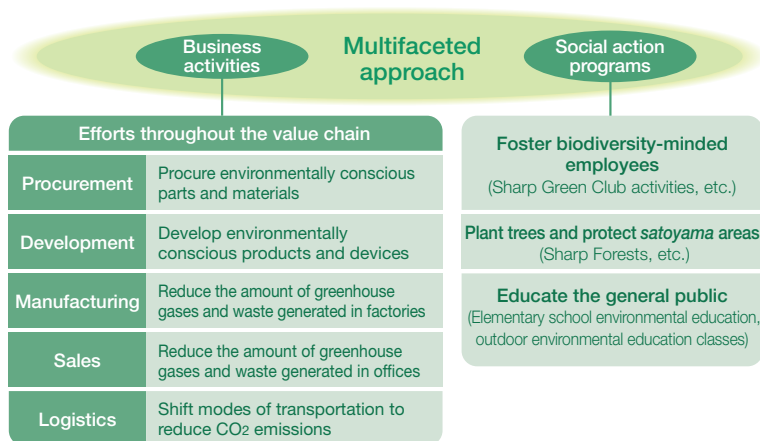
### 3. Objective: Reduce Impact on Biodiversity

Try to reduce the negative impact of business activities on biodiversity with an eye to conservation and sustainable support.

### 4. Promotion Structure

Sharp’s CS and Environmental Promotion Group and CSR Promotion Division are in charge of promoting company-wide activities pertaining to biodiversity.

## ■ Sharp’s Efforts for Protecting Biodiversity



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

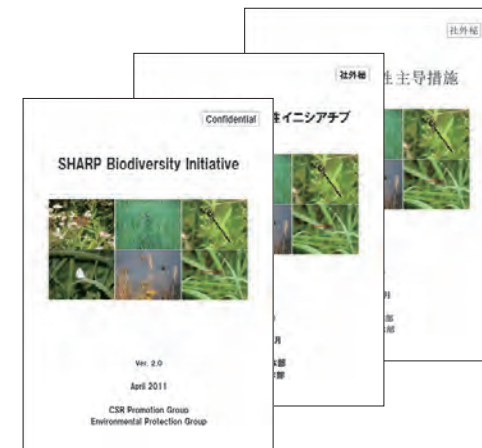
Biodiversity refers to the existence of a variety of ecosystems, species, and genes. With the modern world’s environmental pollution, more and more species are becoming extinct and ecosystems are in danger.

In light of the fact that Sharp both impacts and benefits from biodiversity in a variety of environments, it formulated the Sharp Group Policy on the Sustainable Support of Biodiversity (at left). Based on the detailed measures summarized in the Sharp Biodiversity Initiative, Sharp undertakes business activities and social action programs that take account of the importance of biodiversity.

The Sharp Biodiversity Initiative explains the importance of biodiversity, looks at trends in international biodiversity-related efforts, and examines the connection with Sharp’s corporate activities. In addition, it specifically lays out the policies and measures involved in Sharp’s efforts.

Sharp employs measures in each step of the value chain for ensuring that business activities exert minimal impact on biodiversity. When it comes to social action programs, Sharp supplements direct conservation activities like those in *satoyama* (areas between foothills and arable land) with measures aimed at cultivating a biodiversity-positive mindset among employees and the public.

## ■ Sharp Biodiversity Initiative (English, Japanese, and Chinese)



### Global Deployment and Progress Management of 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 overseeing the progress of its efforts to protect biodiversity. Using a 29-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. The list of monitoring items is revised each year, and in fiscal 2011, an item relating to greening efforts on factory premises was added to the list of items in the area of manufacturing, and the weight of social action program-related items was increased.

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 and undertake contributive efforts in a way that is mindful of the need to protect biodiversity.

The simultaneous implementation of this management tool at all Sharp bases worldwide has enabled Sharp to centrally monitor the progress of efforts made at all its bases and to rank those bases into three levels, from A to C. Grade A is allocated to those bases whose rate of progress is at least 20% greater than the fiscal 2009 average for all bases, based on the Sharp Biodiversity Initiative. Sharp aims to have all bases worldwide achieve Grade A by 2015.

In order to achieve this target, Sharp began issuing the “Good Examples towards Biodiversity Conservation and Sustainable Use” in fiscal 2010. Produced in English, Japanese, and Chinese, this resource introduces successful biodiversity initiatives undertaken at various bases. Increasing understanding and sharing information about each base’s activities serves to lift the level of the whole Sharp Group. Sharp will continue to globally deploy biodiversity protection initiatives through social action programs and business activities.

#### Good Examples towards Biodiversity Conservation and Sustainable Use (English, Japanese, and Chinese)



## Biodiversity Protection on the Kameyama Plant Premises



At the Kameyama Plant, biodiversity protection efforts are carried out in tandem with efforts to raise employee awareness and equip them with relevant know-how, such as seminars featuring visiting outside experts.

Based on the advice gleaned from these experts, employees carry out surveys of the flora and fauna found on plant grounds. Thus far, roughly 70 species of plants, insects, and animals have been identified, and an illustrated guide has been put together.

#### Examples of Plants, Trees, and Wildlife Identified at the Kameyama Plant



Japanese camellia

Southern cattail

True frog

Scarlet skimmer

Based on the advice of members from the Morinokaze NPO, Sharp is carrying out sapling cultivation, grass cutting, sapling planting, and other activities in order to create a greener environment where an abundance of plants and wildlife can thrive.

By having employees carry out these activities, it is hoped that a greater environmental awareness will be cultivated amongst them. In addition, Eco Spots (biotopes) that recreate rich ecosystems, are being developed which, when completed, will serve as locations where local children can learn more about the environment. The Kameyama Plant will continue to promote and engage in biodiversity protection with the aim of existing in harmony with the local ecosystem.



Masaru Shirataki  
Supervisor  
Kameyama Environmental & Industrial Safety Center  
Display Device Business Group  
Sharp Corporation

#### Words from a Manager

The Kameyama Plant is surrounded by a rich natural environment. Up to now, however, this natural environment has been underappreciated by those of us at the plant. As awareness increases of the importance of protecting biodiversity, it is my hope that having employees work by hand to green the empty land on the west side of the plant will lead to the creation of a treasured space where people can relax—a place that will serve as a biotope existing in harmony with the surrounding natural environment.



## ■ Boundary of Environmental Performance Data

Sharp Corporation and consolidated subsidiaries

Plants: 32 plants/22 companies (16 plants/6 companies in Japan, 16 plants/16 companies overseas)

Offices: 78 offices/32 companies (54 offices/8 companies in Japan, 24 offices/24 companies overseas)

As of March 31, 2012

### 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
		Sharp Manufacturing Systems Corporation
		Sharp Niigata Electronics Corporation
		Sharp Mie Corporation
Sharp Yonago Corporation		
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.	

### North America

Plants	Sharp Manufacturing Company of America (SMCA)*1	US	Tennessee
	Sharp Electrónica Mexico S.A. de C.V. (SEMEX)	Mexico	Baja California
Offices	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	Sharp Manufacturing Company of U.K. (SUKM)*2	UK	Wrexham, North Wales
	Sharp Manufacturing France S.A. (SMF)	France	Soultz
	Sharp Manufacturing Poland sp. z o.o. (SMPL)	Poland	Torun
Offices	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 Electrónica España S.A. (SEES)*3	Spain	Barcelona
	Sharp Electronics Russia LLC (SER)	Russia	Moscow

\*2 Manufacturing division of SUK \*3 Was a plant until September 2011

### Asia, Middle East, Oceania

Plants	Shanghai Sharp Electronics Co., Ltd. (SSEC)	China	Shanghai	
	Sharp Office Equipments (Changshu) Co., Ltd. (SOCC)		Changshu	
	Wuxi Sharp Electronic Components Co., Ltd. (WSEC)		Wuxi	
	Sharp Technical Components (Wuxi) Co., Ltd. (STW)		Nanjing	
	Nanjing Sharp Electronics Co., Ltd. (NSEC)	Thailand	Chachoengsao	
	Sharp Appliances (Thailand) Ltd. (SATL)		Nakornpathom	
	Sharp Manufacturing (Thailand) Co., Ltd. (SMTL)		Johor	
	Sharp Manufacturing Corporation (M) Sdn. Bhd. (SMM)	Malaysia	Manila	
	Sharp (Philis.) Corporation (SPC)	Philippines	Indonesia	Karawang
	PT. Sharp Semiconductor Indonesia (SSI)	Jakarta		
PT. Sharp Electronics Indonesia (SEID)	China	Shanghai		
Sharp Electronics (Shanghai) Co., Ltd. (SES)		Taiwan	Taipei	
Sharp Electronics Sales (China) Co., Ltd. (SESC)	Taiwan	Taipei		
Sharp Electronic Components (Taiwan) Corporation (SECT)	Taiwan	Taipei		
Sharp Electronics (Malaysia) Sdn. Bhd. (SEM)	Malaysia	Selangor		
Offices	Sharp-Roxy Sales (Singapore) Pte., Ltd. (SRS)	Singapore		
	Sharp Electronics (Singapore) Pte., Ltd. (SESL)			
	Sharp Software Development India Pvt. Ltd. (SSDI)	India	Bangalore	
	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 Indicators

[1] Period covered: April 1, 2011 to March 31, 2012

[2] Organizations covered: Sharp Corporation and consolidated subsidiaries (see page 64)

[3] Calculation method: Environmental Reporting Guidelines (2007 Version) published by the Japanese Ministry of the Environment were used as reference.

Environmental performance indicators		Unit	Calculation method				
TCPT Manufacture	Energy consumption	TJ	$\sum \{(\text{Electricity purchased annually} + \text{alternative energy}) \times \text{heat input per unit}^{*1} + \sum (\text{Annual consumption of each fuel} \times \text{heat value per unit}^{*2})\}$ <p>*1 Based on regulations of the Law Concerning the Rational Use of Energy (enforced April 1, 2006):</p> <ul style="list-style-type: none"> <li>Daytime electricity 9.97 MJ/kWh</li> <li>Nighttime electricity 9.28 MJ/kWh</li> </ul> <p>*2 Based on the heat value per unit per energy source used by the Agency for Natural Resources and Energy (February 2002):</p> <ul style="list-style-type: none"> <li>City gas                             <table border="1" style="margin-left: 20px;"> <tr> <td>Japan</td> <td>Figure individually confirmed for each gas provider:                                      • Tokyo Gas/Osaka Gas: 45.0 GJ/thousand m<sup>3</sup> • Fukuyama Gas: 46.0 GJ/thousand m<sup>3</sup> • Toho Gas/Hiroshima Gas: 46.04655 GJ/thousand m<sup>3</sup> • Hokkaido Gas: 46.05 GJ/thousand m<sup>3</sup> </td> </tr> <tr> <td>Overseas</td> <td>Highest figure from among those known in Japan:                                      • 46.05 GJ/thousand m<sup>3</sup> </td> </tr> </table> </li> <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 (Makuhari: 0.841 GJ/GJ)</li> </ul>	Japan	Figure individually confirmed for each gas provider: • Tokyo Gas/Osaka Gas: 45.0 GJ/thousand m <sup>3</sup> • Fukuyama Gas: 46.0 GJ/thousand m <sup>3</sup> • Toho Gas/Hiroshima Gas: 46.04655 GJ/thousand m <sup>3</sup> • Hokkaido Gas: 46.05 GJ/thousand m <sup>3</sup>	Overseas	Highest figure from among those known in Japan: • 46.05 GJ/thousand m <sup>3</sup>
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	Overseas	Highest figure from among those known in Japan: • 46.05 GJ/thousand m <sup>3</sup>					
	Electricity	Million kWh	Electricity purchased annually				
	City gas	Thousand 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	Tons	PFCs (HFCs, PFCs, sulfur hexafluoride, nitrogen trifluoride, and HFCs) purchased annually				
	Chemical substances (PRTR) handled	Tons	Among the substances covered under the PRTR Law <sup>*3</sup> , the total amount of substances handled in quantities 500 kg or more annually at each plant				
Water consumed	Thousand m <sup>3</sup>	Annual consumption of water supply, well water, and water for industrial use					
Resources consumed	Thousand tons	Total weight of products in the 15 major categories sold in fiscal 2011 (estimate), plus waste, etc. generated					
Packaging materials used	Thousand tons	Packaging materials consumed annually					
Logistics	Energy consumption	TJ	Revised ton-km method				
Product use	Energy consumption	TJ (million kWh)	Estimate of annual energy used by products in the 13 major categories sold in fiscal 2011. Calculation based on each product's annual energy consumption rate (using a heat input per unit of 9.97 MJ/kWh).				
Recycling	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 indicators		Unit	Calculation method																
O U T P U T	Manufacture	CO <sub>2</sub> emissions	<p>Thousand tons CO<sub>2</sub></p> <p><math>\Sigma \{(\text{Electricity purchased annually} \times \text{CO}_2 \text{ emission coefficient}) + \Sigma (\text{annual consumption of each fuel} \times \text{CO}_2 \text{ emission coefficient for each})\}</math></p> <p>CO<sub>2</sub> emission coefficient</p> <ul style="list-style-type: none"> <li>Electricity</li> </ul> <table border="1"> <tr> <td rowspan="2">Japan</td> <td>Fiscal year</td> <td>2007</td> <td>2008</td> <td>2009</td> <td>2010</td> <td>2011</td> </tr> <tr> <td>CO<sub>2</sub> emission coefficient (tons CO<sub>2</sub>/MWh)</td> <td>0.453</td> <td>0.373*1</td> <td>0.351*1</td> <td>0.351*1</td> <td>0.350*1</td> </tr> </table> <p>Overseas GHG Protocol calculation tools (GHG emissions from purchased electricity ver. 4.3, August 2011) However, 0.539 tons CO<sub>2</sub>/MWh was used for SUKM and 0.541 tons CO<sub>2</sub>/MWh was used for SUK and SLE.</p> <p>*1 Based on the values officially announced by the Federation of Electric Power Companies of Japan (after reflecting the Kyoto Mechanism credit.)</p> <ul style="list-style-type: none"> <li>City gas</li> </ul> <table border="1"> <tr> <td rowspan="2">Japan</td> <td>Calculated by multiplying the standard calorific value (GJ/thousand m<sup>3</sup>) individually confirmed for each gas provider × carbon conversion factor (0.0136 tons C) × 44/12 (tons CO<sub>2</sub>/ton C)</td> </tr> <tr> <td>• Tokyo Gas/Osaka Gas: 2.244 tons CO<sub>2</sub>/thousand m<sup>3</sup> • Fukuyama Gas: 2.294 tons CO<sub>2</sub>/thousand m<sup>3</sup> • Toho Gas/Hiroshima Gas/Hokkaido Gas: 2.296 tons CO<sub>2</sub>/thousand m<sup>3</sup></td> </tr> </table> <p>Overseas Highest figure from among those known in Japan: • 2.296 tons CO<sub>2</sub>/thousand m<sup>3</sup></p> <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 tons CO<sub>2</sub>/ton • Heavy oil: 2.710 tons CO<sub>2</sub>/kl • Kerosene: 2.489 tons CO<sub>2</sub>/kl • Gasoline: 2.322 tons CO<sub>2</sub>/kl • Gas oil: 2.585 tons CO<sub>2</sub>/kl</li> <li>Steam: (SSEC) 0.166 tons CO<sub>2</sub>/ton, (WSEC) 0.158 tons CO<sub>2</sub>/ton, (NSEC) 0.159 tons CO<sub>2</sub>/ton</li> <li>Heating/cooling: Figure individually confirmed for each gas provider (Makuhari: 0.032 tons CO<sub>2</sub>/GJ)</li> </ul>	Japan	Fiscal year	2007	2008	2009	2010	2011	CO <sub>2</sub> emission coefficient (tons CO <sub>2</sub> /MWh)	0.453	0.373*1	0.351*1	0.351*1	0.350*1	Japan	Calculated by multiplying the standard calorific value (GJ/thousand m <sup>3</sup> ) individually confirmed for each gas provider × carbon conversion factor (0.0136 tons C) × 44/12 (tons CO <sub>2</sub> /ton C)	• Tokyo Gas/Osaka Gas: 2.244 tons CO <sub>2</sub> /thousand m <sup>3</sup> • Fukuyama Gas: 2.294 tons CO <sub>2</sub> /thousand m <sup>3</sup> • Toho Gas/Hiroshima Gas/Hokkaido Gas: 2.296 tons CO <sub>2</sub> /thousand m <sup>3</sup>
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		PFCs emissions	<p>Tons</p> <p>Annual PFCs emissions</p>																
			<p>Thousand tons CO<sub>2</sub>e</p> <p><math>\Sigma [ \text{Annual emissions of each PFC gas}^{*2} (\text{tons}) \times \text{global warming potential of each PFC gas}^{*3} ]</math></p> <p>*2 HFCs, PFCs, sulfur hexafluoride, nitrogen trifluoride, HCFCs    *3 Based on the IPCC's Third Assessment Report: • Sulfur hexafluoride: 22,200 • The coefficient corresponding to segmentalized gas is used for HFC and PFC</p>																
		SOx emissions	<p>Tons</p> <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. (2) When a liquid fuel is burnt: Amount of sulfur contained in fuel (kg/year)/32(kilograms S) × (32+16×2) (kilograms SO<sub>2</sub>)/1,000</p>																
		NOx emissions	<p>Tons</p> <p>(1) When a gaseous fuel is burnt: Fuel consumption per year (Nm<sup>3</sup>/year) × dry base combustion gas (Nm<sup>3</sup>/Nm<sup>3</sup>) × concentration of released NOx (ppm) × 10<sup>-6</sup> × (14+16×2) (kilograms NO<sub>2</sub>) / 22.4 (Nm<sup>3</sup>)/1,000 (2) When a liquid fuel is burnt: Fuel consumption per year (liters/year) × fuel specific gravity (kg/liter) × dry base combustion gas (Nm<sup>3</sup>/kg) × concentration of released NOx (ppm) × 10<sup>-6</sup> × (14+16×2) (kilograms NO<sub>2</sub>) / 22.4 (Nm<sup>3</sup>)/1,000</p>																
		Drainage	<p>Thousand m<sup>3</sup></p> <p>Annual drainage into public body of water and sewer system</p>																
COD (chemical oxygen demand)	<p>Tons</p> <p>COD concentration (mg/l) × drainage into public body of water (m<sup>3</sup>) × 10<sup>-6</sup></p>																		
Nitrogen pollutant load	<p>Tons</p> <p>Nitrogen concentration (mg/l) × drainage into public body of water (m<sup>3</sup>) × 10<sup>-6</sup></p>																		
Phosphorus pollutant load	<p>Tons</p> <p>Phosphorus concentration (mg/l) × drainage into public body of water (m<sup>3</sup>) × 10<sup>-6</sup></p>																		
Final landfill disposal	<p>Tons</p> <p>Final landfill disposal of industrial waste + final landfill disposal of general waste discharged from business activities</p>																		
Chemical substances (PRTR) released and transferred	<p>Tons</p> <p>Among the substances covered under the PRTR Law, the amount of substances, which are handled in quantities 500 kg or more annually at one or more plant, released and transferred</p>																		
Logistics	CO <sub>2</sub> emissions	<p>Thousand tons CO<sub>2</sub></p> <p>Revised ton-km method</p>																	
	Transport volume	<p>Thousand ton-km</p> <p>Revised ton-km method</p>																	
Product use	Product shipments	<p>Thousand tons</p> <p>Total weight of products in the 13 major categories sold in fiscal 2011 (estimate)</p>																	
	CO <sub>2</sub> emissions	<p>Thousand tons CO<sub>2</sub></p> <p>Estimate of annual energy used and amount of CO<sub>2</sub> emitted by products in the 13 major categories sold in fiscal 2011. Calculation based on each product's annual energy consumption rate.</p>																	
	CO <sub>2</sub> reductions	<p>Thousand tons CO<sub>2</sub></p> <p>Amount of electricity generated annually by Sharp solar cells shipped in fiscal 2011, plus CO<sub>2</sub> emissions reduction</p>																	
Recycling	<p>Weight of that which was not recycled into new products or materials, or reused</p>	<p>Tons</p> <p>Weight of four kinds of home appliances, PCs, and copiers collected – Weight recycled into new products or materials, or reused</p>																	

# 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 themes 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." To put this business philosophy into practice, Sharp makes efforts to communicate with its various 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 2011

In fiscal 2011, for the third consecutive year, Sharp after-sales service received high ratings for having made improvements in service quality from the perspective of the customer. Achievements in other areas include developing global personnel with an emphasis on diversity and conducting environmental education at schools in Japan and abroad.

In response to the Great East Japan Earthquake, Sharp has been involved in a wide variety of ongoing efforts, including providing assistance to the affected areas.

The results of Sharp's special efforts such as these can be seen in the Topics and Close-Up sections on pages categorized by type of stakeholder.

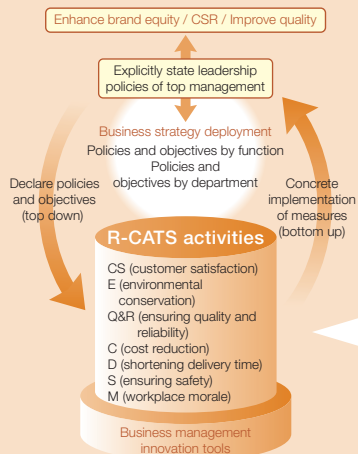
## R-CATS\* Small-Group Activities with a CSR Perspective

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. Through group activities, these teams confront the challenges of improving the quality of their work and build new systems and methods to carry out job-related tasks from the perspective of stakeholders.

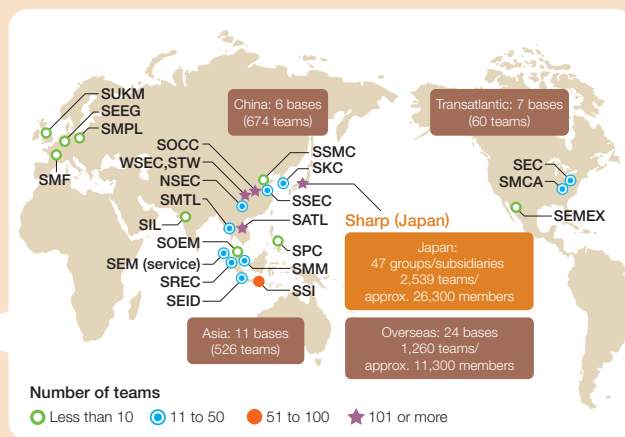
In fiscal 2011, approximately 37,000 employees worldwide participated in R-CATS activities. In Japan, activities to improve work quality and methods from a customer perspective were carried out as part of the 'Be Sincere' campaign aimed at ensuring that a corporate culture of "Sincerity" — part of Sharp's business creed — is firmly established.

\* R-CATS: Revolution-Creative Action Teams

### ■ Status of Activities



### ■ Activity Teams and Participants Around the World



## TOPICS

### Starting R-CATS Activities at a Sales Subsidiary in China

In April 2011, a team from the SESC sales subsidiary in Shanghai began conducting R-CATS activities. Although production bases in China were already carrying out R-CATS activities at the time, the SESC team was the first from an administrative department of an overseas sales subsidiary to do so. The SESC team is working to solve job-related problems by applying wisdom collected from colleagues in the workplace.



SESC's Sunflower Team won top prize at the All-Sharp R-CATS Convention

### Presentation at the International Convention on Quality Control Circles

About 200 teams from companies and organizations around the world participated in the International Convention on Quality Control Circles in Yokohama hosted by the Union of Japanese Scientists and Engineers. Two teams from Sharp won Gold Excellent Awards: the Creating Sincerity team from the East Japan Customer Assistance Center for its presentation on eliminating assistance complaints and the Mega team from SMM, a Malaysia-based subsidiary, for its presentation on improving the manufacturing productivity of small LCD panels. Sharp will continue to actively participate in events at external presentation venues and improve the level of its activities.



SMM Mega team won a Gold Excellent Award

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

Field (Stakeholders)	Important Themes	Achievements for Fiscal 2011		Self Evaluation	Objectives for Fiscal 2012	See page(s)
For Customers	Secure quality and safety	Objectives	<ul style="list-style-type: none"> <li>Advance global efforts on measures to improve quality and customer satisfaction</li> </ul>	○	<ul style="list-style-type: none"> <li>Implement various measures for improving global quality and customer satisfaction</li> <li>Expand global knowledge system at overseas bases</li> <li>Extend global quality human resource education system to all overseas bases</li> </ul>	70, 71, 74, website
		Achievements	<ul style="list-style-type: none"> <li>Implemented global knowledge system in call centers in overseas bases (Indonesia)</li> <li>Developed global quality human resource education system and began implementing the program at Chinese design and production bases</li> </ul>			
	Create products that are easier to use	Objectives	<ul style="list-style-type: none"> <li>Improve products by taking on customer's point of view</li> </ul>	○	<ul style="list-style-type: none"> <li>Improve products by taking on customer's point of view</li> <li>Further develop and continue activities to improve products by taking on customer's point of view</li> <li>Continue expanding the VOC (Voice of the Customer) program throughout overseas bases</li> </ul>	72, 73
		Achievements	<ul style="list-style-type: none"> <li>Continued improving products by taking on customer's point of view</li> <li>Developed VOCS (Voice of the Customer and Service Staff) program in China, following programs in North America and Germany, to incorporate customer feedback in product design</li> </ul>			
	Improve customer satisfaction	Objectives	<ul style="list-style-type: none"> <li>Implement Japanese-style training systems for service staff in China to improve quality of service</li> </ul>	○	<ul style="list-style-type: none"> <li>Increase customer satisfaction by strengthening service system</li> <li>Increase service capabilities at overseas bases</li> <li>Provide training to improve customer response skills</li> </ul>	74, 75
		Achievements	<ul style="list-style-type: none"> <li>Introduced Japanese-style training systems for service staff and implemented the systems sequentially in each Chinese base</li> <li>As part of activities to expand Japanese-style training systems for service staff globally, provided training courses on customer response manners for service agencies across China</li> </ul>			
For Business Partners	Promote CSR across entire supply chain	Objectives	<ul style="list-style-type: none"> <li>Build CSR audit system based on CSR audit trials</li> </ul>	△	<ul style="list-style-type: none"> <li>Train auditors and conduct audits using CSR auditing tools</li> <li>Extend revised Basic Parts Purchase Agreement to overseas suppliers</li> </ul>	76-79, website
		Achievements	<ul style="list-style-type: none"> <li>Reviewed and revised CSR auditing tools (manuals, checklists, etc.)</li> <li>Revised Basic Parts Purchase Agreement by adding article on CSR initiatives</li> </ul>			
For Shareholders and Investors	Improve communication with shareholders and investors	Objectives	<ul style="list-style-type: none"> <li>Continue improving information disclosure and strengthen information transmission for shareholders and investors</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue improving information disclosure to shareholders and investors and hold various IR events in order to improve communication</li> </ul>	80, 81, website
		Achievements	<ul style="list-style-type: none"> <li>Held factory tours for shareholders</li> <li>Increased amount of information available on website</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>Hold human rights training sessions at overseas bases</li> </ul>	82
		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>Upgrade programs in the 4 G training system to foster negotiation skills and the ability to adapt to different cultures, primarily in emerging market countries</li> <li>Expand technical e-learning and manufacturing leader training to overseas bases</li> <li>Expand e-learning for thorough understanding of Sharp business philosophy and business creed to overseas bases</li> <li>Expand project creation and process management training to overseas bases to foster local sales managers</li> </ul>	83, 84
		Achievements	<ul style="list-style-type: none"> <li>Actively trained global personnel (about 660 participants) through the 4 G (GATE/G-BANK/GRID/GOAL) personnel, education, and training system</li> <li>Expanded technical e-learning system to China and other Asian regions with about 550 participants. Provided global manufacturing leader training for about 40 production personnel</li> <li>Provided overseas training in newly emerging economies as one measure to develop executive management personnel (about 40 participants)</li> </ul>			
	Development of company-wide diversity management (strategy for utilizing employee diversity)	Objectives	<ul style="list-style-type: none"> <li>Take diversity programs company-wide</li> <li>Hold activities to raise awareness about diversity inclusion</li> </ul>	○	<ul style="list-style-type: none"> <li>Develop new diversity programs</li> <li>Implement Corporate Affirmative Action for Women Strategy Program II</li> <li>Implement Corporate Affirmative Action for Non-Japanese Employees in Japan Program</li> <li>Improve environment for diversity inclusion</li> </ul>	85-87
		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>Planned and implemented Corporate Affirmative Action for non-Japanese Employees in Japan Program</li> <li>Took diversity training company-wide</li> </ul>			

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

Field (Stakeholders)	Important Themes	Achievements for Fiscal 2011		Self Evaluation	Objectives for Fiscal 2012	See page(s)
For Employees	Promote occupational safety and health	Objectives	<ul style="list-style-type: none"> <li>Continue strengthening global safety and health management and activities to reduce and remove industrial accident risks</li> </ul>	◎	<ul style="list-style-type: none"> <li>Continue strengthening global safety and health management and activities to reduce and remove industrial accident risks</li> <li>Implement in-house occupational safety and health management system covering non-production sites and affiliates</li> <li>Uniformly increase the level of occupational safety and health management systems at production sites</li> <li>Systematically introduce occupational safety and health management system at overseas production sites</li> </ul>	88
		Achievements	<ul style="list-style-type: none"> <li>Implemented risk assessment and measures to reduce and remove risks by implementing occupational safety and health management system at 11 production sites in Japan</li> <li>Formulated global Sharp Group Basic Policies on Safety and Health</li> </ul>			
		Objectives	<ul style="list-style-type: none"> <li>Continue strengthening measures for primary prevention of mental illnesses (illness prevention and health promotion)</li> </ul>	○	<ul style="list-style-type: none"> <li>Enhance comprehensive mental health measures for primary, secondary, and tertiary prevention of mental illness</li> <li>Improve knowledge of mental health-related issues by mental health group work training and encouraging acquisition of third-party certification in mental health management</li> <li>Enhance support for each mental illness case by improving support system for employees returning from medical leave</li> </ul>	89
		Achievements	<ul style="list-style-type: none"> <li>Held mental health group work training with approximately 13,600 taking part</li> <li>Raised knowledge on mental health by having employees take third-party certification course (in fiscal 2011, approximately 570 people passed the exam for level II and III of the Mental Health Management certification program)</li> </ul>			
		Objectives	<ul style="list-style-type: none"> <li>Implement active measures for employee health promotion</li> </ul>	○	<ul style="list-style-type: none"> <li>As part of efforts to improve health and one event to celebrate the 100th year of Sharp's founding, hold company-wide sports festivals with futsal, softball, and bowling competitions to further improve communication among employees</li> <li>Enhance measures to prevent lifestyle diseases through active promotion of checkups and health guidance focused on metabolic syndrome</li> </ul>	89
		Achievements	<ul style="list-style-type: none"> <li>Based on requests from workplaces, provided mini on-site workshops given by industrial physicians and industrial healthcare staff through Shoku.com (workplace meetings)</li> <li>Centered around Sharp No-Smoking Day, carried out comprehensive company-wide no-smoking campaigns that included activities such as providing education using posters and the website and offering free provisions of smoking-cessation aids</li> </ul>			
For Local Communities	Expand and diversify social contribution activities	Objectives	<ul style="list-style-type: none"> <li>Hold community-based Sharp Forest activities that lead to the protection of biodiversity</li> </ul>	○	<ul style="list-style-type: none"> <li>Actively expand and enhance environmental and biodiversity protection activities in Sharp Forests and Ramsar Convention wetlands</li> </ul>	
		Achievements	<ul style="list-style-type: none"> <li>Held Sharp Forest activities 46 times with a total of about 1,700 employees participating</li> </ul>			
		Objectives	<ul style="list-style-type: none"> <li>Provide environmental education at 500 elementary schools</li> <li>Continue educational support for persons with disabilities at special-needs schools)</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue environmental education at 500 elementary schools</li> <li>Expand and enhance educational support activities for persons with disabilities; expand the range of participants</li> </ul>	
		Achievements	<ul style="list-style-type: none"> <li>Provided environmental education at 500 elementary schools (including 30 special-needs schools for the hearing impaired)</li> </ul>			
		Objectives	<ul style="list-style-type: none"> <li>Provide craftsmanship education at 100 elementary schools; continue educational programs that combine factory tours, visits to the Sharp Technology Hall, and environment/craftsmanship classes</li> </ul>	△	<ul style="list-style-type: none"> <li>Continue craftsmanship education at 100 elementary schools; continue educational programs that combine factory tours and visits to the Sharp Technology Hall</li> </ul>	
		Achievements	<ul style="list-style-type: none"> <li>Provided craftsmanship education at 83 elementary schools; provided programs that combine factory tours and environment/craftsmanship classes at 33 schools</li> </ul>			
		Objectives	<ul style="list-style-type: none"> <li>Continue local social contribution activities at all Sharp sales and service bases in Japan</li> <li>Encourage volunteering among employees, with a goal of having 30,000 employees volunteer</li> </ul>	○	<ul style="list-style-type: none"> <li>Carry out local social contribution activities at all sales and service bases centered around the month Sharp was founded (September)</li> <li>Encourage volunteering among employees (55,000 participants from all Sharp Group companies including overseas subsidiaries)</li> </ul>	90-95
		Achievements	<ul style="list-style-type: none"> <li>A total of about 33,000 employees participated in volunteer activities, with about 12,000 participants from Sharp sales and service bases in Japan and about 21,000 participants from all Sharp offices and bases</li> </ul>			
		Objectives	<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>	○	<ul style="list-style-type: none"> <li>Continue activities centered on Sharp Charity Foundation in China</li> <li>Continue expanding educational support activities, such as environmental education in overseas regions</li> <li>Continue promoting environmental and biodiversity protection activities and other social action programs in overseas regions</li> </ul>	
Achievements	<ul style="list-style-type: none"> <li>In China, donated humidifying air purifiers, provided scholarships, carried out beautification campaigns in areas near Sharp bases, conducted tree-planting activities, etc.</li> <li>Expanded environmental education activities to ASEAN regions with programs held at a total of 75 schools</li> <li>In overseas regions, carried out activities linked to protection of the environment and biodiversity as well as social welfare activities</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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>Advance global efforts on measures to improve quality and customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>Implemented global knowledge system in call centers in overseas bases (Indonesia)</li> <li>Developed global quality human resource education system and began implementing the program at Chinese design and production bases</li> </ul>	<ul style="list-style-type: none"> <li>Implement various measures for improving global quality and customer satisfaction</li> <li>Expand global knowledge system at overseas bases</li> <li>Extend global quality human resource education system to all overseas bases</li> </ul>
<ul style="list-style-type: none"> <li>Improve products by taking on customer's point of view</li> </ul>	<ul style="list-style-type: none"> <li>Continued improving products by taking on customer's point of view</li> <li>Developed VOCS (Voice of the Customer and Service Staff) program in China, following programs in North America and Germany, to incorporate customer feedback in product design</li> </ul>	<ul style="list-style-type: none"> <li>Improve products by taking on customer's point of view</li> <li>Further develop and continue activities to improve products by taking on customer's point of view</li> <li>Continue expanding the VOC (Voice of the Customer) program throughout overseas bases</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>	<ul style="list-style-type: none"> <li>Introduced Japanese-style training systems for service staff and implemented the systems sequentially in each Chinese base</li> <li>As part of activities to expand Japanese-style training systems for service staff globally, provided training courses on customer response manners for service agencies across China</li> </ul>	<ul style="list-style-type: none"> <li>Increase customer satisfaction by strengthening service system</li> <li>Increase service capabilities at overseas bases</li> <li>Provide training to improve customer response skills</li> </ul>

## Basic Stance and Vision on Customer Satisfaction (CS) and Quality

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.



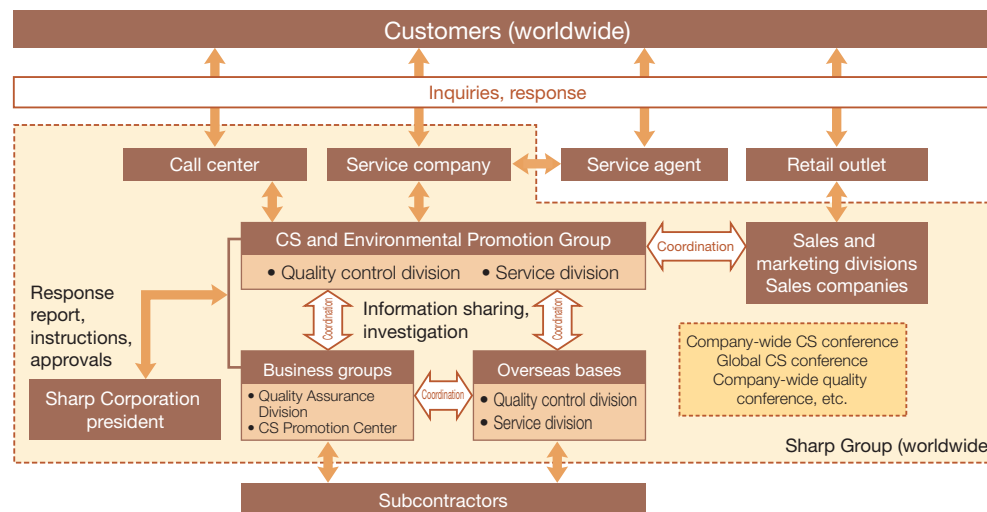
## Customer Satisfaction and Quality Promotion System

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 and Environmental 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 for building relations of trust with customers by providing safe, high-quality products and service.

In fiscal 2011, to cope with expanding business in China, Sharp established an Analysis Evaluation Technology Center in Wuxi, China that gives support for selecting locally procured parts and materials, establishes a defect analysis system, and analyzes and takes appropriate measures for environmental toxins. Moving forward, the Center will undertake the construction of a quality and environmental assurance system for products that are designed, developed, and produced in China.

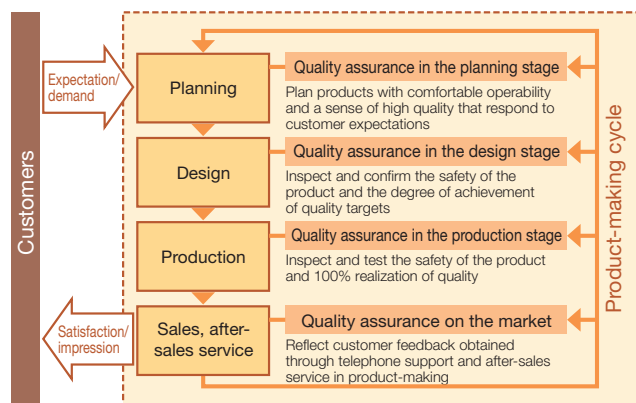
### Quality and CS System



### 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 Sharp 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 has built a 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.

### 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.

To prevent customers from experiencing unexpected disadvantage from unsuitable methods of use or installation locations, Sharp posts advice for safe usage on its website and actively provides information.



Web page showing advice for safe usage

### 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 2011, 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

- **Refrigerator/Freezer for Japan (April 2012)**  
In response to the risk of smoke generation or ignition 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.
- **Sharp-Manufactured GE Air Conditioner for North America (US and Canada) (May 2011)**  
In response to the risk of smoke generation or ignition in some products when running the heating function due to a loose connection caused by poor soldering, Sharp conducted free inspections and parts replacement.



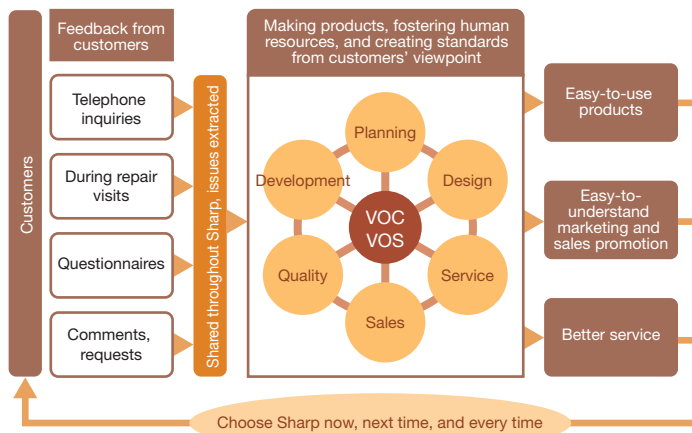
### Applying Customer Feedback to the Making of Products

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.

Feedback received from customers during telephone assistance at the Customer Assistance Center, during repair service visits, and in Web-based questionnaires is shared throughout the company while protecting the anonymity of the customer. The feedback is used to extract challenges from the user's point of view in planning, design, development, quality, sales, service, and other areas.

With a focus on issues extracted through customer feedback, the customer service departments and the development, quality, and sales departments work together to consider ideas for improvement and exchange opinions in order to create products that are even more appealing and easier to use and even better services.

In addition to activities to improve products, Sharp also actively fosters human resources through training and creates assessment standards for supporting manufacturing from the user's point of view in order to conduct user-oriented manufacturing, sales, and service.



### 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 9241-210 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 in Japan, Sharp uses field research, surveys, and usability tests (observing how customers actually use Sharp products) to collect information on how customers interact with products. That information is compiled and analyzed to create products that are appealing from three perspectives: products that customers want to use, products that are easy to use, and products that customers will want to continue using for a long time.

Sharp also promotes the manufacture of products that take into consideration universal design, so many more customers can comfortably use its products. As of December 2011, 91 models of 15 products had been recognized as universal design home appliances by the Association for Electric Home Appliances in Japan.

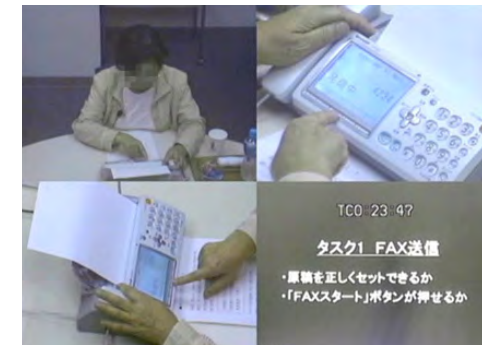
Through activities such as these, Sharp is raising the appeal of its products.

#### Field Research



Conducting research at a customer's home

#### Usability Tests



A customer tries out a product

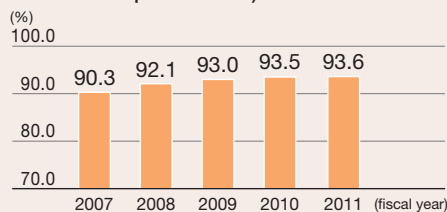
### TOPICS

#### Customer Questionnaires

Sharp in Japan administers questionnaires to customers who receive repair visits that ask for feedback on all steps of the assistance from reception to repair completion. In one year, Sharp receives over 300,000 invaluable responses from customers.

The opinions received are passed on as feedback to the staff members involved in the case and are also subjected to detailed analysis for use in service policies.

#### Percentage of "Good" Ratings for Service Personnel (based on replies to customer questionnaire)



Case Study Product Improvements

Humidifying Air Purifier (KC-A70/A50)



KC-A70

Water tank is easy to fill and easy to clean

Wheels with stoppers enable easy movement during housecleaning



Digital MFP (MX-5111FN)

A design that delivers ease of use



Easy-grip handles make it easy to open/close paper drawers

Touchscreen control panel can be tilted to the user's preferred angle



Control panel can be switched to a large font mode



AQUOS LCD TV (LCD-LX 330A Series and other models for the Chinese market)

- On the previous model's remote control, the timer button (with a timer-off function) was placed next to the channel up/down button. The timer button was moved to a new location to prevent accidentally setting the timer-off function when changing channels.
- The button names were also changed so that they are easier to understand.



LCD-40LX330A



### Customer Service That Exceeds Expectations

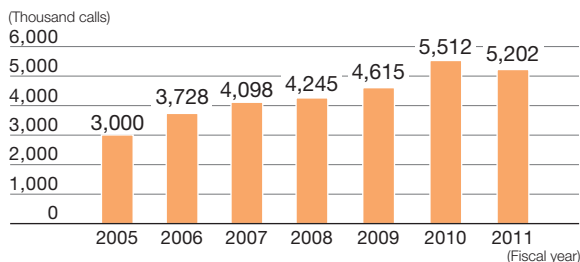
From the moment a customer first considers buying a Sharp product, Sharp's Customer Assistance Center in Japan always aims to meet or exceed customer expectations.

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 2011, Sharp took steps to ensure that customers do not have to wait on the phone when calling with inquiries. It also enhanced the support section of its website so that customers can solve problems without calling the Customer Assistance Center. The website provides customer-oriented services that include Fault Diagnosis Navigation, where customers themselves diagnose the symptoms and solve problems by following instructions on the screen (for eight product categories including LCD TVs, Blu-ray Disc recorders, washing machines, air conditioners, and refrigerators), and a section titled "Smart Use of Consumer Electronics," which explains how to maintain products and ways to save energy.

The Customer Assistance Center has recently started a toll-free number that gives automated responses to help callers solve the most common issues. This is extremely convenient since customers can phone, for example, late at night when no agents are available and get their queries answered and problems solved.

■ Number of Calls Received at the Customer Assistance Center (Japan)



Sharp has upgraded the Customer Assistance Center twice, in October 2006 and October 2011. Also over the years, Sharp has responded to changing needs by constantly improving the center's abilities to efficiently answer customer calls and keep callers waiting for the minimal time; for example, during the increased market demand resulting from Japan's Eco-Point system for consumer electronics.

### Service Support in Response to the Great East Japan Earthquake

Since the March 2011 Great East Japan Earthquake, Sharp has provided 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.

Following the unprecedented damage caused by the earthquake and tsunami, Sharp employees went to service the products of customers who had to move out of Tohoku, the region hardest hit by the disaster, and customers living in temporary housing facilities. Sharp's service area has thus changed since the disaster, and the company is in the process of remapping the service areas so that it can provide customers with the product assistance they require.

### Case Study Efforts in After-Sales Service in Japan

#### No. 1 in After-Sales Service Satisfaction in 4 Product Categories for 3 Years Running

Sharp was selected as the top brand in four product categories—flat-screen TV, DVD/HDD recorder, washing machine/dryer, and air conditioner—in the 2011 After-Sales Service Satisfaction Ranking survey published in the July 25, 2011 issue of the *Nikkei Business* magazine, following the same achievement in 2009 and 2010. This year Sharp was also selected as the top brand in the smartphone product category for the first time.

In fiscal 2011, there was a jump in sales of flat-screen TVs and Blu-ray/HDD recorders because of the Eco-Point system and the termination of terrestrial analog broadcasting. As a result, there was also an increase in repair requests. Sharp was recognized for its implementation of new initiatives for which all departments involved with customer service, including service companies, the Customer Assistance Center, and parts supply centers, worked together. These initiatives include a "time concierge" service in which service staff visit the customer and complete the repairs at the requested time, strengthening of the system to allow immediate advance orders of parts required for the repair, and use of tablet terminals to provide easy-to-understand explanations to customers on the content of the repairs. In addition, Sharp was also evaluated highly for swift and flexible response to inquiries and requests for repairs required due to the Great East Japan Earthquake.

Sharp will continue to improve its communication and technical skills of employees involved in after-sales service to retain its top-brand status. Sharp will also continue to provide the kind of high-quality service that increases the loyalty of customers so they will choose Sharp again.

#### Words from a Service Employee

Sharp has achieved the No. 1 position for the third year in a row. Customer expectations will continue to increase and we must straighten up to the task. We must remain humble and continue providing prompt and reliable after-sales service. We must continue providing services with high added quality to ensure all customers are satisfied even when they experience problems related to products so that they choose Sharp now, next time, and every time.

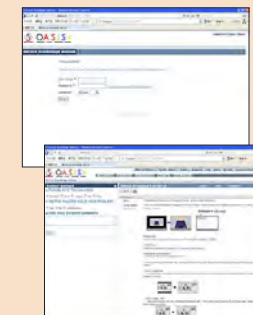


**Jun Iwai**  
Koto Service Station  
Greater Tokyo Area Customer Service Department  
Sharp Engineering Corporation

#### Introducing a Global Knowledge System

The Customer Assistance Center in Japan has begun using the knowledge system database to assist its staff in responding to questions from customers and performing fault diagnosis. This system increases the uniformity and efficiency of Sharp's customer assistance. In order to apply this knowledge system throughout the world, Sharp officially established the OASIS\* global knowledge system in Indonesia in May 2012. OASIS allows universally applicable content to be translated into English and region-specific content to be created in local languages. Going forward, Sharp will expand the use of this system to call centers in other countries with the goal of top customer service in each region.

\* OASIS: Operator Assist Intelligent System



### Global Customer Support System

Sharp call centers are the control tower for all after-sales service activities, listening to customers' problems and questions, and if necessary sending a service person or the needed replacement parts. Sharp has call centers in the five major regions of the world. Through these centers, Sharp strives to boost customer satisfaction by carrying out locally rooted, prompt and exacting servicing, building a network of service agents, and improving the technical and communication skills of call center agents and service technicians. Sharp will continue to offer peace of mind to customers around the world through trusted service that satisfies needs.

#### Sharp Call Centers around the World



No.	Region	Call center locations (country and city)	No. of calls handled (2011)
1	North America	US (Chicago), Jamaica (Kingston)	880,000
2	China	China (Shanghai, Hong Kong)	1,740,000
3	Europe	Germany (Dortmund), The Netherlands (Maastricht), France (Orleans)	100,000
4	Asia	Indonesia (Jakarta)	300,000
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

#### Call Center Awards

In an effort to improve the quality of assistance from call center staff, each year Sharp holds Call Center Awards to recognize outstanding call center staff.

These awards further increase the motivation of call center staff and help raise the quality of their assistance. Sharp will continue aiming to consistently provide prompt, reliable, and friendly response to customer inquiries and strive to improve its brand image.



Europe (Germany)



North America (United States)



China (Hong Kong)



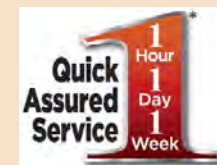
Asia (Indonesia)



China (Shanghai)

#### Building a Speedy Service System in India

In order to ensure prompt and reliable after-sales service, sales subsidiary SBI in India implements the "Only One, One & One" service at its roughly 20 locations and 200 service agents.



Only One, One & One service logo

The following targets are set for repair requests from customers:

- One: Dispatch service staff within one hour
- One: Conduct repair visits within one day
- One: Complete repairs within one week

By achieving these targets, prompt provision of customer service is attained in India.



Press release



# Mutual Prosperity with Suppliers and Dealers

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. Sharp conducts its business activities on the basis of fair evaluation, ensuring that all companies are provided with equal opportunities.

Objectives for Fiscal 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>• Build CSR audit system based on CSR audit trials</li> </ul>	<ul style="list-style-type: none"> <li>• Reviewed and revised CSR auditing tools (manuals, checklists, etc.)</li> <li>• Revised Basic Parts Purchase Agreement by adding article on CSR initiatives (Japan)</li> </ul>	<ul style="list-style-type: none"> <li>• Train auditors and conduct audits using CSR auditing tools</li> <li>• Extend revised Basic Parts Purchase Agreement to overseas suppliers</li> </ul>

## Determining Procurement Based on Providing Equal Opportunity and Fair Evaluation

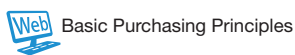
Sharp has production activities around the world and it chooses who it will procure local parts, materials, and equipment from by providing all Japanese and overseas suppliers with an equal opportunity to do business with Sharp. This opportunity includes a fair evaluation of whether a supplier's procurement 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 acts

## Example of Overseas Supplier Meeting

SEID, Sharp's sales and manufacturing subsidiary in Indonesia, holds a supplier meeting in each half of the fiscal year, gathering about 100 of its suppliers of parts and materials to communicate closely with them and promote mutual understanding.

The meetings begin with SEID making sure its suppliers are all on the same page by explaining business plans including the number of products manufactured and future prospects, as well as the Sharp Basic Purchasing Principles and trends and issues in supply chain CSR.

SEID will continue to communicate closely with business partners and ensure they understand the Basic Purchasing Principles so that both sides can maintain the smooth business dealings they have enjoyed so far.



Supplier meeting at SEID in Indonesia

### Promoting CSR Measures Throughout the Supply Chain

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).

From fiscal 2007 and on, Sharp has been increasing common understanding about CSR in the supply chain by having its suppliers fill out CSR procurement surveys based on this guidebook.

Furthermore, in May 2011, Sharp added an article on CSR initiatives that requests adherence to the policies stipulated in the guidebook to the Basic Parts Purchase Agreement signed with partners in Japan and is steadily working to reenter these agreements.

In the future, Sharp plans to make similar revisions in its agreements for international transactions and one by one reenter agreements with overseas suppliers.

### CSR Procurement Survey Status

Since fiscal 2007, Sharp has been implementing 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.

Sharp requests improvement of CSR initiatives from suppliers who have ranked D in their results for a particular survey area—or who have ranked C or below for two years in a row—by having them prepare and submit a corrective action plan.

In fiscal 2011, Sharp conducted a fourth survey of suppliers in Japan, a third survey of suppliers in China and Malaysia, and a second survey of suppliers throughout the Asian region as well as in Europe and North America. To date, the surveys have been completed by approximately 2,500 suppliers (approximately 4,700 sites) worldwide.

As a result of surveys carried out to date and requests for improved initiatives, the number of A-ranked suppliers is increasing each year. Moving forward, Sharp will continue administering surveys once a year, in principle. By requesting improvements as needed and providing supportive measures, Sharp will use these surveys as an opportunity to improve communication with suppliers, thereby continuously raising the level of CSR initiatives throughout the entire supply chain.

### 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

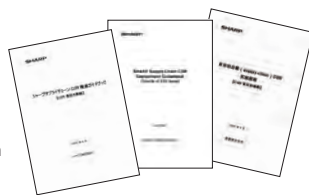
- Establish and apply a quality management system • Ensure product safety

#### 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

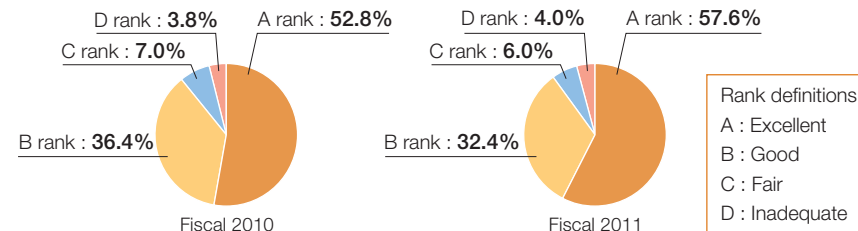
- Contribute to society and community



Sharp Supply-Chain CSR Deployment Guidebook (Japanese, English, and Chinese editions)

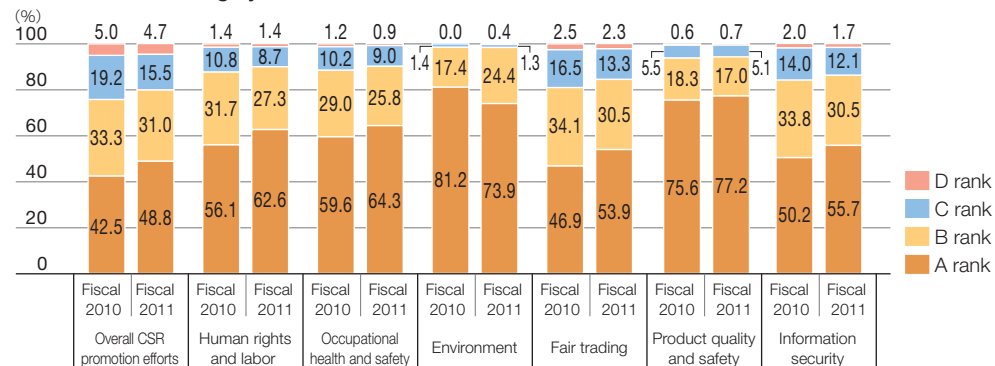
### Status of Supplier Self-Evaluations in the CSR Procurement Survey\*

#### 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 and fiscal 2011.

Close-Up

## Working Continuously with Suppliers to Improve Their 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. At the same time, there is a need to address an ever-diversifying range of complex social challenges related to the supply chain. These challenges include ensuring compliance with laws relating to human rights and labor standards as well as laws governing the control and management of chemical substances (e.g. the European REACH regulations\*).

In this light, Sharp is committed to implementing measures on a global basis to fulfill its corporate social responsibility, working in collaboration with suppliers based on the Sharp Supply-Chain CSR Deployment Guidebook and Green Procurement Guidelines.

Sharp is constructing a CSR auditing framework under which company representatives visit the production sites of suppliers and verify their performance in relation to answers submitted on CSR procurement surveys. Starting in fiscal 2010, Sharp suppliers in Japan and China underwent CSR audits on a trial basis.

In fiscal 2011, Sharp continued trial audits in Japan. The company also reviewed and revised its CSR auditing tools—including manuals, checklists, and other materials—in line with changes and progress in global supply-chain CSR standards. The revision took account of factors such as the conflict mineral issue (see page 79) and the full implementation of ISO 26000.

For fiscal 2012, Sharp plans to move forward with full-scale implementation of CSR audits. The company will expand and improve its auditing system through methods such as training CSR auditors in the use of auditing tools.

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.

\* REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) is 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.

Related information Page 42: Managing Chemical Substances in Products

### Production and Procurement Bases That Conducted CSR Procurement Surveys and Audits in and before Fiscal 2011



### Words from a Procurement Manager at an Overseas Base

The SEM Hong Kong Branch is the core base for supplying parts to customers across China. I actively conduct CSR procurement surveys of our suppliers in an effort to improve supply-chain CSR.

At first, many suppliers focused primarily on prices, supply volume, optimizing the delivery time, and other profit-related aspects and were hesitant to take on CSR initiatives.

However, I persistently explained the importance of CSR to our suppliers and encouraged them to widen their perspective to include environmental and social aspects in addition to financial aspects (i.e., the triple bottom line). They came to understand that it is the companies that voluntarily undertake CSR initiatives that are fulfilling their role as a global corporation.

Although only a few years have passed since we began our supply-chain CSR initiatives, I believe that we are making great progress as our suppliers are actively making sincere efforts to shift their focus on CSR. From here on as well, we will work together with our suppliers to face the same goals and promote CSR activities as a global procurement division.



Victor Ip  
SEM Hong Kong Branch

## 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.”

With the establishment of the conflict minerals provision of the Dodd-Frank Wall Street Reform and Consumer Protection Act in the US in July 2010 and the declaration of the Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas by the OECD, companies that use these minerals for the manufacture or functionality of their products are being strongly urged to conduct their procurement activities appropriately in an effort to cut off funding to such armed forces.

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.

These minerals are also used in Sharp products; tin, for example, is a component of solder. 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.

Sharp has sent out a questionnaire to its suppliers in order to ascertain whether or not the four minerals in question are contained in products and materials supplied to Sharp, and, if so, to confirm their country and smelter of origin. Replies have been received from about 90% of its suppliers.

The supply chain leading back to the country and mine where the minerals were produced has many links, making it very difficult to determine the origin of the minerals contained in each and every part and product purchased. However, over 80% of suppliers from whom Sharp purchases parts and products that contain the minerals in question responded that they do not use minerals from the DRC or adjoining countries. For suppliers that responded that they are uncertain whether or not they are using minerals from prohibited countries, Sharp is continuing to request that they refrain from using illegally mined minerals.

Sharp will take swift and appropriate action against this problem by participating in the Responsible Minerals Trade Working Group of the Japan Electronics and Information Technology Industries Association (JEITA) as well as through other forums. And while doing so, Sharp will always take into account the latest circumstances, such as enforcement of the rules set out in the Dodd-Frank Wall Street Reform and Consumer Protection Act.

## 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 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.

In fiscal 2011, Sharp's Legal Affairs Division and Corporate Procurement Center provided training workshops on the Subcontract Act for business groups, Head Office groups, and domestic affiliates. In addition, in fiscal 2012, Sharp plans to conduct focused field audits on business groups.

## Working Together with Dealers in Their Efforts Toward CSR

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, which is promoted as a way of helping employees acquire knowledge about environmental issues.

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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>Continue improving information disclosure and strengthen information transmission for shareholders and investors</li> </ul>	<ul style="list-style-type: none"> <li>Held factory tours for shareholders</li> <li>Increased amount of information available on website</li> </ul>	<ul style="list-style-type: none"> <li>Continue improving information disclosure to shareholders and investors and hold various IR events in order to improve communication</li> </ul>

## Basic Policies Concerning Profit Sharing

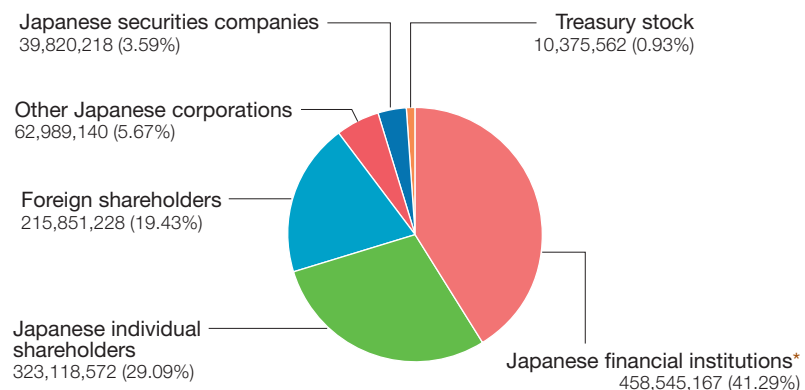
Sharp considers distributing profits to shareholders to be one of the most important management issues. While maintaining consistently stable dividend payouts, and while considering its consolidated business performance, financial situation, and future business development in a careful and comprehensive manner, Sharp implements a set of measures to return profits to its shareholders.

For fiscal 2011, Sharp distributed a year-end dividend of 5 yen per share. The total annual dividend was 10 yen per share.

### Net Income per Share (Consolidated) and Cash Dividends per Share

Fiscal year	2007	2008	2009	2010	2011
Net income (yen)	93.17	▲114.33	4.00	17.63	▲341.78
Cash dividends (yen)	28	21	17	17	10

### Share Distribution (as of March 31, 2012)



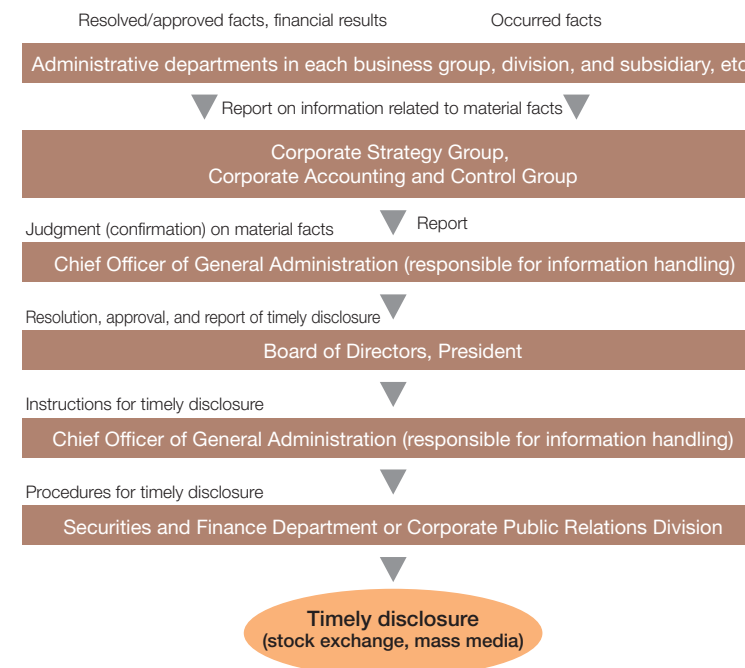
\* A total of 51,582,000 shares (4.65%) in investment trusts and pension trust funds are included in shares held by Japanese financial institutions.

## 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.

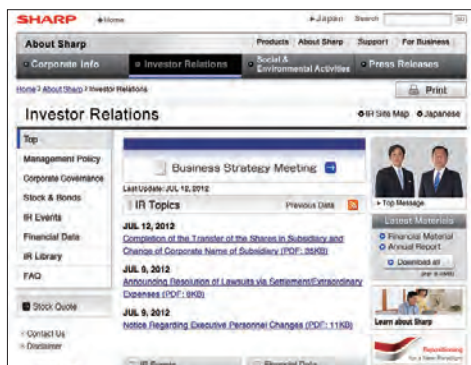
## IR Activities Designed to Meet the Diversifying Needs of Investors

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



2011 Annual Report



## Communication with Shareholders and Investors

Major activities in fiscal 2011 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, with the president and other executives visiting influential institutional investors in the US and Asia.

Sharp also participated in securities company-sponsored conferences for domestic and overseas investors, where Sharp outlined its financial highlights and explained the progress of its business restructuring efforts, particularly, concerning LCDs.

Through future IR activities, Sharp will continue to make sure a broad range of investors fully understand the condition of the company's business and business strategies.

## SRI (Socially Responsible Investment)\*

As of March 2012, 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)
- 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 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012
<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</li> <li>Continue human rights training sessions at business sites and affiliates in Japan</li> <li>Hold human rights training sessions at overseas bases</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>Actively trained global personnel (about 660 participants) through the 4 G (GATE/G-BANK/GRID/GOAL) personnel, education, and training system</li> <li>Expanded technical e-learning system to China and other Asian regions with about 550 participants. Provided global manufacturing leader training for about 40 production personnel</li> <li>Provided overseas training in newly emerging economies as one measure to develop executive management personnel (about 40 participants)</li> </ul>	<ul style="list-style-type: none"> <li>Continue training to support development of global business</li> <li>Upgrade programs in the 4 G training system to foster negotiation skills and the ability to adapt to different cultures, primarily in emerging market countries</li> <li>Expand technical e-learning and manufacturing leader training to overseas bases</li> <li>Expand e-learning for thorough understanding of Sharp business philosophy and business creed to overseas bases</li> <li>Expand project creation and process management training to overseas bases to foster local sales managers</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> </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>Planned and implemented Corporate Affirmative Action for non-Japanese Employees in Japan Program</li> <li>Took diversity training company-wide</li> </ul>	<ul style="list-style-type: none"> <li>Develop new diversity programs</li> <li>Implement Corporate Affirmative Action for Women Strategy Program II</li> <li>Implement Corporate Affirmative Action for Non-Japanese Employees in Japan Program</li> <li>Improve environment for diversity inclusion</li> </ul>
<ul style="list-style-type: none"> <li>Continue strengthening global safety and health management and activities to reduce and remove industrial accident risks</li> </ul>	<ul style="list-style-type: none"> <li>Implemented risk assessment and measures to reduce and remove risks by implementing occupational safety and health management system at 11 production sites in Japan</li> <li>Formulated global Sharp Group Basic Policies on Safety and Health</li> </ul>	<ul style="list-style-type: none"> <li>Continue strengthening global safety and health management and activities to reduce and remove industrial accident risks</li> <li>Implement in-house occupational safety and health management system covering non-production sites and affiliates</li> <li>Uniformly increase the level of occupational safety and health management systems at production sites</li> <li>Systematically introduce occupational safety and health management system at overseas production sites</li> </ul>
<ul style="list-style-type: none"> <li>Continue strengthening 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 13,600 taking part</li> <li>Raised knowledge on mental health by having employees take third-party certification course (in fiscal 2011, approximately 570 people passed the exam for level II and III of the Mental Health Management certification program)</li> </ul>	<ul style="list-style-type: none"> <li>Enhance comprehensive mental health measures for primary, secondary, and tertiary prevention of mental illness</li> <li>Improve knowledge of mental health-related issues by mental health group work training and encouraging acquisition of third-party certification in mental health management</li> <li>Enhance support for each mental illness case by improving support system for employees returning from medical leave</li> </ul>
<ul style="list-style-type: none"> <li>Implement active measures for employee health promotion</li> </ul>	<ul style="list-style-type: none"> <li>Based on requests from workplaces, provided mini on-site workshops given by industrial physicians and industrial healthcare staff through Shoku.com (workplace meetings)</li> <li>Centered around Sharp No-Smoking Day, carried out comprehensive company-wide no-smoking campaigns that included activities such as providing education using posters and the website and offering free provisions of smoking-cessation aids</li> </ul>	<ul style="list-style-type: none"> <li>As part of efforts to improve health and one event to celebrate the 100th year of Sharp's founding, hold company-wide sports festivals with futsal, softball, and bowling competitions to further improve communication among employees</li> <li>Enhance measures to prevent lifestyle diseases through active promotion of checkups and health guidance focused on metabolic syndrome</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 observing basic human rights and personal dignity, prohibiting discrimination and human rights violations, and prohibiting both child and forced labor.

In Japan, Sharp carries out human rights education activities, such as annually conducting human rights training at each site (a total of approximately 60 sessions in fiscal 2011). Sharp also gives newly appointed heads of overseas bases booklets covering topics like respect for human rights. Overseas, Sharp strives to prevent human rights violations in line with local laws. The company supervises human rights training that reflects the progress in human rights protection occurring at each site.

## 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 and affiliate, where opinions are exchanged on the business environment and labor-management issues.

In Europe, Sharp holds European Works Council meetings 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 cooperative labor-management relationship as an even better partner.

## Personnel, Education, and Training Systems That Respect Employee Initiative and Diversity

Based on the belief that human resources are the most important asset for a corporation, Sharp has implemented a variety of personnel, education, and training systems that respect initiative and diversity and that are designed to bring out the character, motivation, and creativity of each employee. As Sharp strives to expand its business in rapidly emerging markets, it focuses efforts on developing personnel that can play an active role in the global field.

### Next-Generation Human Resource Development Systems

#### Next-Generation Executive Management Personnel, Global Personnel, and Expert Training; Job-Level-Specific Personnel Training

The Sharp Leadership Program targets younger employees in semi-managerial or supervisory positions, with the objective of systematically nurturing executive management personnel. The Challenge Course, for younger employees in semi-managerial positions, is intended to enable early promotion of younger personnel.

For developing personnel that can play an active role in global markets, Sharp has global training programs\* such as GATE and G-BANK.

In addition to Global Manufacturing Leader Training to develop manufacturing personnel throughout the globe, Sharp also provides Expert Training to develop technical and sales experts and Job-Level-Specific Personnel Training to give systematic training for the knowledge, skills, and management techniques required at each stage after joining the company.

\* See Close-Up on page 84.

## Talent Development and Motivation-Boosting Programs

### Open Recruitment System

Sharp implements the Open Recruitment System in Japan to solicit applicants—once every quarter—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, and developing new technologies and products. In fiscal 2011, jobs were offered in approximately 70 topic areas, and about 80 employees were assigned a new position.

### Personnel Declaration/Career Development System, Career Development Rotation

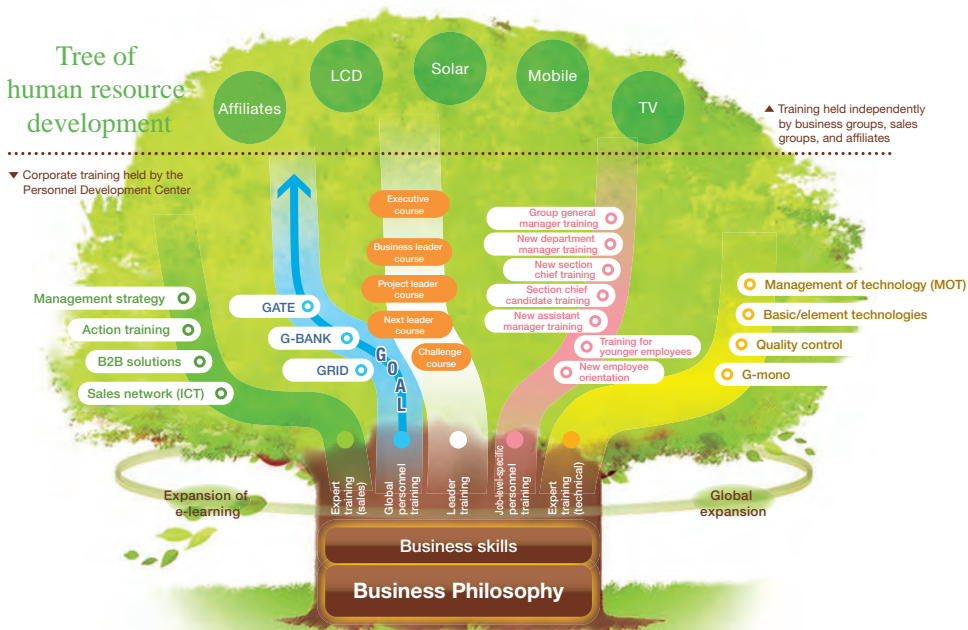
Under Sharp's Personnel Declaration/Career Development System, once a year all employees in Japan document a career development plan and their job aptitude. Sharp then uses the information to develop skills and organize job rotations. Sharp also implements a Career Development Rotation to give mainly 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.

### Step-Up Campaign (Qualification Acquisition Encouragement Plan)

Supporting self-development for employees, Sharp offers monetary rewards to employees who have acquired qualifications, with the amount depending on the difficulty in acquiring the qualification. This plan covers 242 qualifications, including some for field-specific techniques and skills, some directly related to daily duties, and some for language skills—essential in the development of global employees.

### Commendation System

Sharp annually honors domestic and overseas employees and divisions/departments that have achieved outstanding performance. In fiscal 2011, approximately 120 awards were presented to about 5,400 employees.



## TOPICS

### China Human Resources Development Center Supports 'Local Production for Local Consumption' Strategy

The China Human Resources Development Center at SCIC (Sharp's Chinese headquarters) carries out various educational measures in an effort to promote the growth of employees who will drive Sharp's 'local production for local consumption' strategy. It applies a total human affairs policy in which growth of employees who are conscious of their own career plan links to development of the company as a whole. In line with this concept, it offers job-level-specific management training (CMP: China Management Program) and SLP-C (Sharp Leadership Program China) to train executive management candidates, among others. In addition, as Sharp develops its value chain globally, it also makes efforts to train manufacturing and technical experts.

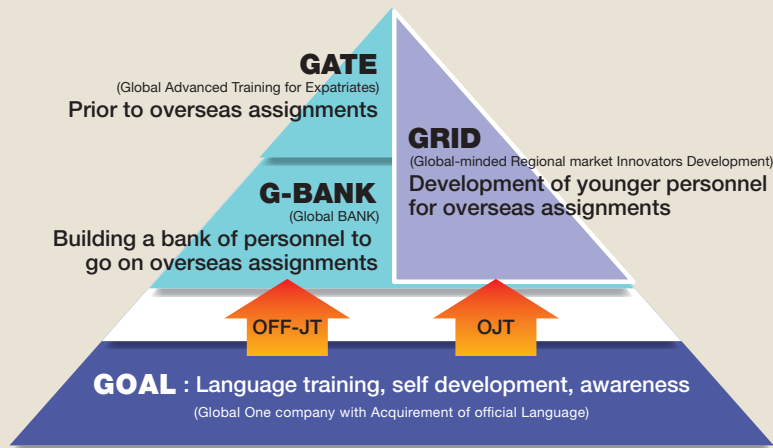


SLP-C training

Close-Up

## Developing Global Personnel through the 4G System

As management becomes more globalized, it becomes increasingly necessary to foster personnel that can actively communicate with people of different cultures and values as well as exploit those differences. In an effort to develop personnel that can work actively in the global field while making the most of diversity, Sharp has established a human resource and education system based on the 4Gs (Global formation)—GATE, G-BANK, GRID, and GOAL.



Name of system	Details of activities
GATE	Enables employees scheduled for immediate overseas assignment to systematically acquire knowledge and practical communication skills required to carry out duties smoothly overseas. <ul style="list-style-type: none"> <li>Approximately 190 participants in fiscal 2011; the cumulative total for the four years since fiscal 2008 is approximately 500.</li> </ul>
G-BANK	Enables employees scheduled for overseas assignments within three years to acquire basic knowledge and language proficiency required for working in a global setting and fosters personnel for future overseas assignments. <ul style="list-style-type: none"> <li>Approximately 70 participants in fiscal 2011; the cumulative total for the four years since fiscal 2008 is approximately 650.</li> </ul>
GRID	A program for young employees who will be involved in developing Sharp's future overseas business that fosters personnel to be strategically dispatched to newly emerging economies and work actively in those countries and regions. <ul style="list-style-type: none"> <li>The program started in April 2011 and plans are for approximately 200 participants over three years</li> </ul>
GOAL	A program for all employees to increase their language competency, a basic skill required for pursuing global business.

### Case Study

#### GOAL: Language Learning Support and Awareness Activities

##### (1) Intensive language training for global workplaces

- Workplaces where foreign languages such as English and Chinese are necessary are registered as "global workplaces." Initiatives are taken to improve the language skills of staff at these workplaces and globalize workplace activities (such as carrying out written communication, phone calls, and meetings in English or Chinese).
- All employees at global workplaces must be sufficiently able to communicate in English (or Chinese). Employees that do not meet the criteria are given language proficiency training.

##### (2) Support to improve language skills for all employees

- Initiatives include English study method seminars to increase motivation to learn English, a system to give partial financial support for completing company-designated educational materials within a designated period, and monetary incentives given to employees who improve their TOEIC scores or pass the Chinese Proficiency Test.



English study method seminar

##### (3) Expansion of awareness activities within the company

- As awareness activities aimed at increasing language proficiency, messages from the management are transmitted throughout the company and awareness posters are put up in all workplaces.
- The GOAL website (intranet) aimed at increasing language proficiency provides various types of information, such as language study methods, pre-test strategies, and features on employees who have increased their TOEIC scores.

#### Words from a GRID Participant

In October 2011, I went to Tunisia to take part in the GRID Next Advance Unit Program. French is widely spoken in Tunisia, not only in business settings, but also in the streets. I plan to acquire French that can be used in conducting business and complete my language training, then take a year of sales training at a local agency. In the future, I hope to use the language skills and knowledge of the local culture that I acquired during my training to develop new markets in African regions in the fields of health and the environment, where future growth is anticipated.

In recent years, Tunisia has also been enhancing its initiatives in the environmental field, for example by promoting the use of solar power systems. At the same time, lifestyle diseases are becoming a more serious issue, and the public's interest in health is also growing year by year.

By providing products and services for which the local culture and communities have a real need in a timely manner, I hope to greatly contribute to the financial and social development of regions in Africa.



Keisuke Takagi  
GRID Next-Tunisia  
Sharp Corporation

### Efforts Towards Diversity

Sharp initiated the Corporate Affirmative Action for Women Strategy Program in fiscal 2005. In 2009, it began promoting total diversity management\*, including fostering and utilizing the skills and talents of non-Japanese employees in Japan, promoting the employment of the physically or mentally challenged, and reemploying retirees who have reached mandatory retirement age. Sharp's approach to diversity is based on its business philosophy, that is, "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." By respecting each other's differences, Sharp aims to generate new value, develop unique products, propose new services, and improve customer service.

A Diversity Development Team was established within the Human Resources Group, which is responsible for planning and promoting affirmative action programs. The team shares information on problems with the managers who are responsible for promoting diversity in each group and exchanges views on policies. The aim of the team is to foster mutual cooperation while promoting diversity in a consistent manner.

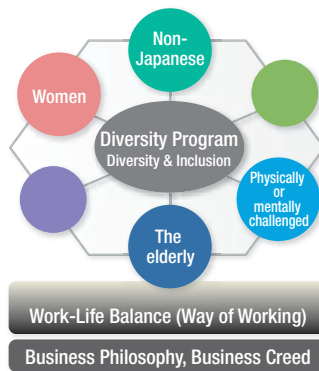
These efforts have earned high appraisal from outside the company, with Sharp receiving a special award at the 4th Diversity Management Awards sponsored by Toyo Keizai Inc. in April 2011. It also won a Minister's Prize in the Family-Friendly Enterprise category and an award from the Osaka Labour Bureau Director in the Equality Promotion Enterprise category at the Fiscal 2011 Equal Employment/Work-Family Balance Corporation Awards sponsored by the Ministry of Health, Labour and Welfare.



Receiving an award from the Minister of Health, Labour and Welfare

#### 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.



\* 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 well, Sharp is striving to build a foundation of diversity inclusion. From fiscal 2011, it began holding company-wide Shoku.com (workplace meetings) workshops in each workplace in an aim to create a workplace environment that fosters mutual understanding of different values and that enables all personnel, regardless of gender, age, or nationality, to take an active part in business.

### Case Studies

#### Win-Win Network

Sharp posts information on its intranet Win-Win Network that disseminates information on work-life balance and diversity as a measure to raise awareness in all employees.

Sharp also uses its Win-Win Network to post information about initiatives carried out by the various groups for the diversity program, to introduce role models, and to provide information on various programs.



Win-Win Network information site

#### Participation in External Networks

In 2010, Sharp signed the Women's Empowerment Principles, collaboratively created by UN Women and the UN Global Compact and is carrying out activities as an approved company.

With the aim of empowering women and energizing the company, Sharp participates as an organizing corporation in the Women's Networking Forum (about 60 corporations/organizations and 500 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.



Women's Networking Forum (Top: general assembly, bottom: section meeting)

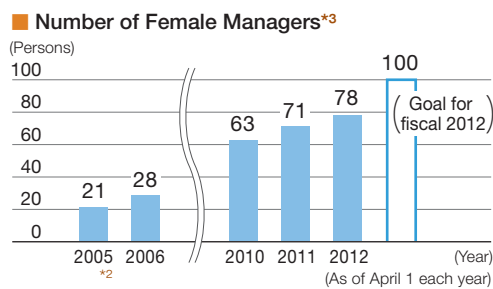
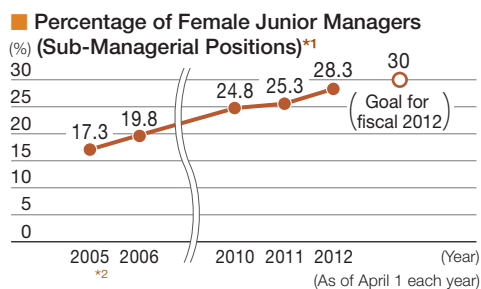
## Taking Diversity Programs Company-Wide

### Promoting Activities of Female Employees (Corporate Affirmative Action for Women Strategy Program)

Since fiscal 2005, Sharp has been promoting 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.

Specifically, measures include a female leader candidate development program and stepping up training of female managers. In fiscal 2011, Sharp's first-ever female executive officer was appointed.

Sharp has also initiated the Corporate Affirmative Action for Women Strategy Program II to enhance previous initiatives. Sharp will continue striving to achieve its year-end targets for fiscal 2012 (increase the ratio of junior managers to all female employees to 30% and expand the number of female managers to 100).



\*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 Foreign Executive Officer

It is with great pride that I accepted the position of CEO for the European operation on October 1st 2011.

Europe is a region with many different countries, cultures, languages and behaviour. Our task within Europe is to celebrate this diversity and harness it to optimise the overall performance within the region. This means we have to create a people-centric organisation that promotes the development and inclusion of all of our employees in a consistent manner.

We believe the strength of the region in the future will come from our people and we have to ensure there is the right platform to give them a voice and a role in the creation of a sustainable Europe. This is a key task of the leadership team within Europe, to create an environment that optimises the skills and abilities of all employees as a strategic resource.

My personal challenge is to create an organisational culture that delivers this and starts to create order out of complexity through the inclusion of diverse individuals within an overall team.



**Paul Molyneux**  
Executive Officer  
Group General Manager, Europe Group,  
Sharp Corporation  
President, Sharp Electronics (Europe) GmbH

### Sharp Corporation Personnel Composition

(As of April 1, 2012)

	Male	Female	Total (persons)
Directors, executive officers, auditors	36	1	37
Employees	Managers	68	3,080
	Sub-managers	606	8,097
	General staff (fiscal 2012 new employees)	1,469 (42)	10,307 (196)
	Subtotal	2,143	21,484
Total	19,377	2,144	21,521
Ratio (%)	90.0	10.0	100.0

### Personnel by Gender at Major Overseas Subsidiaries

(As of April 1, 2012)

Base		Directors/managers		Non-supervisory employees (permanent employees)		Total	
		Male (%)	Female (%)	Male (%)	Female (%)	Male (%)	Female (%)
SEC (US)	Sales	81.5	18.5	65.4	34.6	68.9	31.1
SMCA (US)	Manufacturing	81.6	18.4	42.0	58.0	45.4	54.6
SEMEX (Mexico)	Manufacturing	85.1	14.9	54.0	46.0	55.0	45.0
SEEG (Germany)	Sales	92.1	7.9	61.2	38.8	66.8	33.2
SUK (UK)	Sales	76.9	23.1	68.6	31.4	71.2	28.8
SUKM (UK)	Manufacturing	95.8	4.2	66.6	33.4	68.3	31.7
SMPL (Poland)	Manufacturing	93.1	6.9	31.1	68.9	32.2	67.8
SEID (Indonesia)	Manufacturing/sales	82.1	17.9	62.2	37.8	63.5	36.5
SATL (Thailand)	Manufacturing	81.4	18.6	27.8	72.2	30.1	69.9
SMM (Malaysia)	Manufacturing	72.5	27.5	34.5	65.5	40.0	60.0
SESC (China)	Sales	80.4	19.6	59.7	40.3	61.8	38.2
SOCC (China)	Manufacturing	91.8	8.2	31.4	68.6	33.5	66.5
NSEC (China)	Manufacturing	65.8	34.2	62.4	37.6	62.8	37.2
WSEC (China)	Manufacturing	66.8	33.2	39.1	60.9	41.3	58.7

### Expanding Opportunities for Non-Japanese Employees in Japan

With the globalization of business, Sharp is working globally to secure and systematically train human resources who match the needs of each workplace. In addition to promoting greater employment of international students and people of other nationalities residing in Japan, Sharp has also launched a program to enhance the training of non-Japanese employees working in Japan. Called the Corporate Affirmative Action for Non-Japanese Employees in Japan Program, surveys are conducted with employees and their superiors to investigate their approaches to career development. Career development worksheets are also created for each individual based on the survey results.

To support this program, Sharp carries out additional initiatives to build a rewarding workplace environment that include considerations when taking promotional exams, consultation services in each office, establishment of communities, and others.

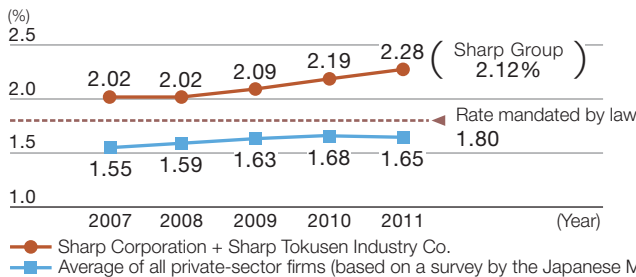
### Promoting the Employment of the Physically or Mentally Challenged

Since its establishment, Sharp has been actively involved in social service and welfare. The entire Sharp Group makes efforts to promote the employment of the physically or mentally challenged and create a better work environment for these employees.

Specifically, Sharp launched a website addressing the employment of physically or mentally challenged people; the website contains information on initiatives to hire such individuals in the Sharp Group. Sharp is also striving 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.

The ratio of physically or mentally challenged employees in the Sharp Group (including affiliated companies) is 2.12%, exceeding the rate mandated by law (1.8%) as stated in the Act for Employment Promotion etc. of Persons with Disabilities.

#### Physically or Mentally Challenged Employment Rate in Japan



Sharp Tokusen Industry's current office building

### 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 where blinded WWII veterans worked, 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 its operations to fit the development of Sharp Corporation's electronics business and contributed to the expansion of business as a member of the Sharp Group. Sharp Tokusen Industry will continue to proactively expand employment of persons with a disability and will further develop its areas of business.

Related information Page 93: Social Welfare Activities in Japan

### Reemployment of Seniors, Life Planning Support

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.

In addition, Sharp holds life-planning seminars for 45- and 55-year-old employees and their spouses so that after retirement they can enjoy their new life with peace of mind. About 900 employees attended the seminars in fiscal 2011.

### 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.

Specifically, Sharp is expanding support programs focusing on childcare and nursing care and distributing guidebooks and providing other information to promote use of the programs. In addition, 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.



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

#### Work-Life Balance Support Programs (Main Programs and Participation at Sharp Corporation)

Program name	Description	Participation (year and no. of persons)		
		2009	2010	2011
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 2009–2010, 98.5% 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).	109 (Men 54)	288 (211)	334 (273)
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.	72	62	58
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.	389	428	449
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	9	12
Nursing Care Support Work Program	Allows flexible work schedules (work day start and end times) for nursing care, as needed. Employee can shorten working hours in one-hour units up to an average of three hours per day.	9	9	6

**Other Programs** Reduced-Hours Employment for Nursing Care, Reemployment after 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)



## Sharp Group Basic Policies on Safety and Health

### Basic Philosophy

The Sharp Group regards protecting the safety, security, and health of employees all over the world as indispensable to its business activities, and is dedicating appropriate management resources in a spirit of Sincerity and Creativity, in order to achieve a safe and pleasant working environment.

### Basic Policy

#### 1. Legislative Compliance

In addition to strict compliance with legislation related to safety and health in each country and region, all Group companies must comply with in-house standards established in line with the standard Group policy, with the aim of improving levels of safety and health.

#### 2. Establishment of Management Organization

The Sharp Group has established a management organization to deal with safety and health, with clearly delineated roles, authority, and responsibilities, and is promoting activities at the structural level.

#### 3. Establishment and Operation of Management System

The Sharp Group has established an occupational safety and health management system, and is engaged in continuous evaluation and improvement of its activities, with a view to eliminating potential hazards and risks to safety and health in the workplace.

#### 4. Implementation of Education and Training

The Sharp Group is endeavoring to raise awareness of safety and health and to promote voluntary activities by implementing for all employees the education and training required to improve safety and health.

#### 5. Setting Targets and Full Employee Participation in Practical Activities

The Sharp Group sets targets for preventing accidents and improving employees' health, and is striving to meet these targets by means of practical activities in which all employees participate.

## Aiming for a Secure, Safe, and Healthy Workplace

Sharp Corporation holds periodic Central Safety and Health Committee Meetings that bring the company and the labor union together to confirm the status of company-wide safety and health efforts and share valuable information. It has also organized a team consisting of Central Safety and Health Committee members to conduct safety and health inspections at each site.

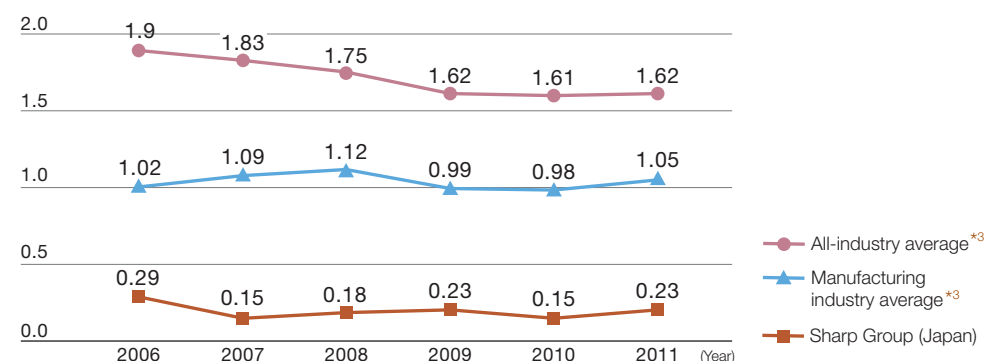
Moreover, a Safety and Health Committee consisting of labor and management representatives at each business location holds a monthly meeting to report and discuss safety and health activities and decide on improvement measures. A Safety and Health Council at each business location holds meetings in which subcontractors who are permanently stationed within Sharp sites also take part. Participants discuss liaison and coordination among related work projects and share information in an attempt to improve the safety and health management system for the entire business location.

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 2011 was 0.23. 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 Group (Japan) Annual Industrial Accident Rates (Frequency Rate of Lost-Worktime Industrial Accidents)



\*3 Averages for all industries and the manufacturing industry are based on a survey by the Japanese Ministry of Health, Labour and Welfare.

## Promoting the Introduction of the Occupational Safety and Health Management System

Sharp is promoting the introduction of an occupational safety and health 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>\*4</sup>. In order to implement preventive safety measures in line with those employed at Sharp Corporation's production sites, the company's non-production sites and affiliates are formulating standards for an original occupational safety and health management system.

In addition, to raise the standard of its occupational safety and health management globally, Sharp is also making continued efforts to acquire OHSAS 18001 or certification for occupational safety and health management system standards in each country<sup>\*5</sup> for its overseas manufacturing bases.

\*4 One of the occupational safety and health management system certification standards; it is the most widely used standard around the world today.

\*5 For example, manufacturing subsidiary SATL in Thailand acquired TIS 18001 Thai occupational safety and health certification in August 2007.

### ■ OHSAS 18001-Certified Sites and Overseas Bases

Japan	Tochigi, Kameyama, Mie, Yao, Sakai, Nara, Katsuragi, Toyama, Mihara, Fukuyama, Hiroshima
Overseas	SMPL (Poland), SSI, (Indonesia), WSEC (China)

## 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 in Japan has a 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 to deepen employees' knowledge of mental health care and to have them acquire methods for dealing with mental health.

Also, as part of periodic health checkups, Sharp carries out mental stress checkups on all employees by self-diagnosis (99.0% participation rate in fiscal 2011). For employees who are diagnosed with high stress levels, Sharp gives one-on-one counseling through industrial physicians or counselors.

In fiscal 2011, Sharp strengthened cooperation among its staff (General Affairs Department, industrial physicians, Healthcare Division, union chapters, counselors, etc.) at Sharp sites and affiliates. It also (1) conducted mental health group work training, (2) raised knowledge of mental health-related issues by encouraging employees to acquire third-party certification in mental health management, and (3) encouraged the use of counseling resources both inside and outside the company. Sharp will continue to expand and improve measures such as these to enhance mental health care.

### Programs for Mental Health Care

Sharp carries out initiatives from the three perspectives of illness prevention and health promotion; early detection and treatment; and returning to work and preventing recurrence.

#### Primary prevention

#### Illness prevention and health promotion

- Educating employees through job-level-specific mental health group work training
- Distributing a Workplace Mental Health Handbook to all employees
- Holding certification tests for mental health management at the company

#### Secondary prevention

#### Early detection and treatment

- 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

#### Tertiary prevention

#### Returning to work and preventing recurrence

- 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
- Enhance support for each mental illness case by improving the support system for employees returning from medical leave

## Getting and Keeping Employees in Shape

Sharp in Japan has achieved a participation rate for lifestyle disease checkups (periodic health checkups) of 99.99%.

Sharp also provides active one-on-one health guidance to improve employees' lifestyles and holds small group workshops as a population approach\* to improving health. Other initiatives to improve the health of employees include holding team walking events—in which 17,300 employees participated last year—and expanding the company-wide no-smoking campaign aimed at reducing smoking rates.

Long working hours and other hard labor can increase risk factors that can lead to health problems such as cerebrovascular disorders, heart diseases, and mental illness. Sharp strives to prevent health problems by having industrial physicians give face-to-face guidance to employees working long hours using criteria that surpass legal standards.

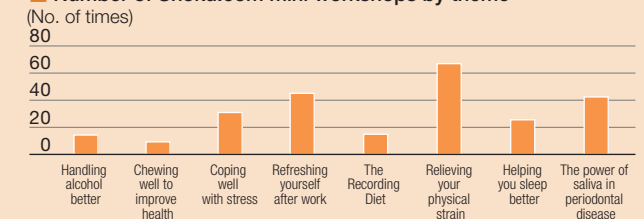
\* This approach works to prevent lifestyle diseases and reduce health risks in all of Sharp by helping individual employees exercise regularly and eat properly.

## Case Studies

### Holding Mini Workshops in the Workplace

Upon requests from Shoku.com workplace meetings held at each workplace, industrial physicians, health nurses, nurses, and dental hygienists visited the location and provided 30-minute-long workshops based on themes such as "Relieving your physical strain," "Refreshing yourself after work," "Coping well with stress," and "The secret power of saliva." About 270 of these useful workshops have been held at different locations with a total of about 4,000 employees participating.

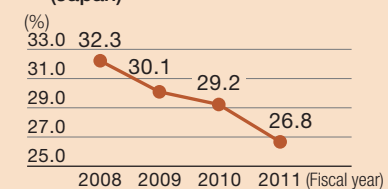
Number of Shoku.com mini workshops by theme



### Company-Wide No-Smoking Campaign

Sharp No-Smoking Day, during which employees are asked to refrain from smoking for an entire day, was held for the first time in fiscal 2010. Stimulated by the cigarette tax hike adopted in October 2011, the smoking rate among Sharp employees dropped from 29.2% to 26.8% in fiscal 2011. In addition to maintaining a strong support system provided by doctors and industrial healthcare staff who provide nicotine patches and oral medicine prescribed by the Healthcare Division, the entire company makes efforts to reduce the smoking rate that include posting hand-made no-smoking posters created each season throughout the company and posting no-smoking support stories in the no-smoking column on the Sharp Health Insurance Association's website.

Smoking rate among employees (Japan)



# Social Contribution Activities as a Corporate Citizen

As Sharp approaches the 100th year of its founding, the company is undertaking social contribution activities that show its gratitude towards society in an effort to carry on the sentiment of its founder. 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—recognizing the environment, education, and social welfare as priority fields—and conducts community-based social contribution activities, aiming for a harmonious coexistence with society.

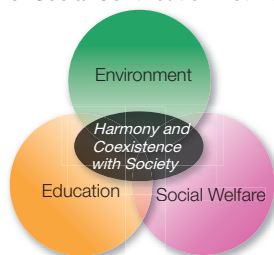
Objectives for Fiscal 2011	Achievements for Fiscal 2011	Objectives for Fiscal 2012
<ul style="list-style-type: none"> <li>Hold community-based Sharp Forest activities that lead to the protection of biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>Held Sharp Forest activities 46 times with a total of about 1,700 employees participating</li> </ul>	<ul style="list-style-type: none"> <li>Actively expand and enhance environmental and biodiversity protection activities in Sharp Forests and Ramsar Convention wetlands</li> </ul>
<ul style="list-style-type: none"> <li>Provide environmental education at 500 elementary schools</li> <li>Continue educational support for persons with disabilities at special-needs schools)</li> </ul>	<ul style="list-style-type: none"> <li>Provided environmental education at 500 elementary schools (including 30 special-needs schools for the hearing impaired)</li> </ul>	<ul style="list-style-type: none"> <li>Continue environmental education at 500 elementary schools</li> <li>Expand and enhance educational support activities for persons with disabilities; expand the range of participants</li> </ul>
<ul style="list-style-type: none"> <li>Provide craftsmanship education at 100 elementary schools; provide programs that combine factory tours, visits to the Sharp Technology Hall, and environment/craftsmanship classes</li> </ul>	<ul style="list-style-type: none"> <li>Provided craftsmanship education at 83 elementary schools; provided programs that combine factory tours and environment/craftsmanship classes at 33 schools</li> </ul>	<ul style="list-style-type: none"> <li>Continue craftsmanship education at 100 elementary schools; continue educational programs that combine factory tours and visits to the Sharp Technology Hall</li> </ul>
<ul style="list-style-type: none"> <li>Continue local social contribution activities at all Sharp sales and service bases in Japan</li> <li>Encourage volunteering among employees, with a goal of having 30,000 employees volunteer</li> </ul>	<ul style="list-style-type: none"> <li>A total of about 33,000 employees participated in volunteer activities, with about 12,000 participants from Sharp sales and service bases in Japan and about 21,000 participants from all Sharp offices and bases</li> </ul>	<ul style="list-style-type: none"> <li>Carry out local social contribution activities at all sales and service bases centered around the month Sharp was founded (September)</li> <li>Encourage volunteering among employees (55,000 participants from all Sharp Group companies including overseas subsidiaries)</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>	<ul style="list-style-type: none"> <li>In China, donated humidifying air purifiers, provided scholarships, carried out beautification campaigns in areas near Sharp bases, conducted tree-planting activities, etc.</li> <li>Expanded environmental education activities to ASEAN regions with programs held at a total of 75 schools</li> <li>In overseas regions, carried out activities linked to protection of the environment and biodiversity as well as social welfare activities</li> </ul>	<ul style="list-style-type: none"> <li>Continue activities centered on Sharp Charity Foundation in China</li> <li>Continue expanding educational support activities, such as environmental education in overseas regions</li> <li>Continue promoting environmental and biodiversity 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’s Head Office 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 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 to volunteer and 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.

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.

## Progress in Social Contribution Activities

In fiscal 2011, Sharp continued carrying out global and local community-based social contribution activities centered on the three fields of the environment, education, and social welfare.

To assist in reconstruction efforts after the Great East Japan Earthquake that caused enormous damage, particularly in the Tohoku region, Sharp provided monetary aid and various products. It also harnessed its resources—including employee volunteers—to assist with reconstruction activities such as educational support programs for elementary schools in disaster areas.

These efforts earned Sharp social recognition, with the company receiving letters of appreciation from local governments and prestigious awards.

In fiscal 2012, Sharp will step up its social contribution activities as it reaches its 100th year, based on the sentiment of gratitude held by its founder.

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, Ramsar Convention wetland protection activities, cleanup campaigns, and greening activities at all production sites and sales and service bases. Forest preservation work, biodiversity protection campaigns, and other environmental conservation activities are also conducted continuously at bases outside of Japan, in a manner rooted in local lifestyles and social climates.

Related information Page 62 & 63: Protecting Biodiversity

Environmental Conservation Activities in Japan

Sharp is developing 12 Sharp Forests as an initiative to protect biodiversity and regenerate the area between the foot of a mountain and arable land, known in Japan as *satoyama*. In addition, the company is also carrying out conservation activities in 10 Ramsar Convention\* wetlands. In particular, Sharp launched a new initiative under the Sharp Forests banner to “create forests where owls can live.” The aim of the initiative is to promote forests with even richer ecosystems.

Sharp promotes cleanup campaigns, greening activities, and other biodiversity protection activities in areas and communities near its production sites and offices. The Sendai Building received a letter of appreciation from the city of Sendai for its successful cleanup campaigns following the Great East Japan Earthquake.

In fiscal 2011, a total of approximately 21,000 employees participated in approximately 800 campaigns. Sharp will continue to expand its community-based activities and contribute to local communities.

\* A convention to protect internationally important wetlands as a habitat for waterfowl and to protect the wildlife inhabiting those wetlands.



Cleanup Campaign at Manko in Okinawa Prefecture

In December 2011, 34 people—including employees and their family members—carried out a cleanup campaign in the Manko tidal flat, a Ramsar Convention wetlands. The group worked to clear the mud flats, which serve as a feeding ground for waterfowl.



Filling Sharp Forests with Owls

From 2011, numerous employees and their family members have been carrying out preservation activities in I & I Land Sharp Forest in Shijonawate and Konoyama Sharp Forest in Kishiwada, Osaka Prefecture. Efforts include periodically thinning trees and installing nesting boxes to create forests where owls—a symbol of rich biodiversity—can live.

Owls are a symbol of *satoyama* habitats. They cannot live in forests with insufficient biodiversity. I hope we can continue carrying out activities such as tree-thinning at I & I Land Sharp Forest in Shijonawate, Osaka Prefecture to create a brighter and richer ecosystem in the forest.



Katsunori Kubo  
Representative  
NPO Satoyama Salon

A wonderful part of the activities being carried out at Konoyama Sharp Forest in Kishiwada, Osaka Prefecture, is that participants enjoy their work as they try to turn the entire forest into a good habitat for owls. I hope the activities will keep going for a long time.



Miho Kazama  
Kishiwada Board of Education  
Natural History Museum  
Kishiwada City

Overseas Environmental Conservation Activities

As a corporate citizen, Sharp is proactively undertaking environmental conservation activities—such as planting and nurturing trees and releasing juvenile fish into water areas—that lead to biodiversity protection. Through such efforts that target various environmental social issues at local bases around the world, Sharp aims to develop environmental awareness among its employees, while at the same time contributing to the global environment.

Sharp will continue developing community-based environmental conservation activities while further cooperating with local organizations.



Setting up Honeybee Hives in the UK

In June 2011, UK-based sales subsidiary SUK set up beehives on the roof of its building as the first step to preserving honeybees—species whose decreasing populations are a global concern.



Biodiversity Learning Session in Taiwan

In June 2011, 44 people including employees of Taiwan-based sales subsidiary SECT and their family members took part in a biodiversity learning session and carried out a local cleanup campaign.



Tree Planting in Canada

In October 2011, 15 employees of Canada-based sales subsidiary SECL planted 250 indigenous tree seedlings along a local river.

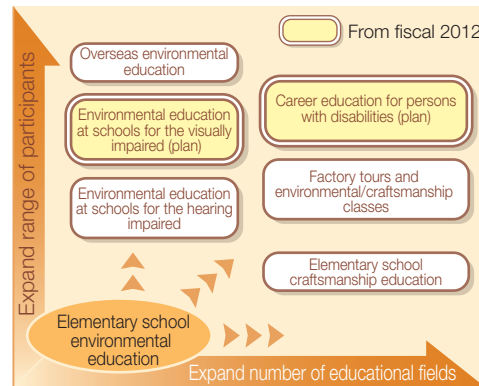
Case Studies Education

Sharp is undertaking educational support 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 fiscal 2011, various classes were held at approximately 690 schools in Japan and overseas (for about 36,500 children) that were well received by the schools and children. Sharp also earned high praise from communities for these activities, receiving an award from the Minister of Education, Culture, Sports, Science and Technology three consecutive years in a prestigious commendation system. Sharp is expanding its activities throughout the globe, including North America, China, and ASEAN regions. By the end of December 2011, classroom presentations had been given to a total of approximately 3,000 schools around the world, reaching roughly 190,000 children.

Educational Activities in Japan

Since October 2006, Sharp has been conducting environmental education activities at elementary schools in collaboration with the Weathercaster Network (WCN) and with the cooperation of the Asaza Fund. The aim of the classes is to foster concern for the global environment in children by conveying to them the global warming problem in easy-to-understand lessons, leading them to save power, practice the 3Rs, and carry out other specific eco-friendly actions. Another aim is to increase children's interest in science through experiments and other methods. Based on advice and requests received from teachers at the schools while implementing these programs, the fields and range of participants is being expanded to include education for hearing-impaired children and for children overseas. In addition, Sharp is also developing activities such as craftsmanship education, factory tours and environmental/craftsmanship classes that lead to solving various social issues in the future. Plans are also in motion to expand and improve educational support activities for persons with disabilities. Such activities will include holding environmental education classes at schools for the visually impaired and providing career education for hearing-impaired children by having Sharp employees visit schools and conduct classes.

Future direction of Sharp's educational support activities



Elementary school environmental education



Sharp won the Award from the Minister of Education, Culture, Sports, Science and Technology at the 2011 Reduce, Reuse, Recycle Promotion Achievement Commendations for its elementary school environmental education program

Words from an Elementary School Environmental Education Instructor

By giving these classes, I've increased my own environmental awareness. I've also become aware of various things I hadn't noticed before in my life.



**Masanori Unoki**  
Junior Manager  
Shizuoka Branch  
Sharp Electronics  
Marketing Corporation

Words from an Educational and Administrative Authority

Increasing mutual understanding, collaboration, and cooperation between corporations and educators is absolutely essential for improving education throughout society as a whole. Sharp's educational support initiatives, which involve programs such as environmental education and craftsmanship education, do precisely that. I want to thank Sharp again for providing an initiative that greatly increases children's motivation to learn by raising awareness in the classroom of day-to-day environmental issues and by fostering a greater curiosity about everyday products.

Hiroshi Yamashita

Director, Office for Supporting Regional and School Education  
Social Education Division, Lifelong Learning Policy Bureau  
Ministry of Education, Culture, Sports, Science and Technology

The classes have a great balance between offering a place for students to learn about environmental issues and a place for them to get hands-on experience through experimentation. I also feel that the learning program excels from the viewpoint of career education by giving children the opportunity to watch weather casters and Sharp employees up close teach classes with great passion.



**Keiko Morikawa**  
Education Supervisor, School Planning Division  
School Education Department, Sakai City Board of Education

Overseas Environmental Education

Overseas environmental education began in fiscal 2008, starting in the United States and China, and has since expanded to ASEAN countries and Europe where community-based activities are held. For example, Sharp began holding environmental classes focusing on solar power in Indonesia. In fiscal 2011, approximately 7,500 students in 75 elementary schools overseas learned about the environment.



Classes at Canada-based sales subsidiary SECL



Classes at Indonesia-based manufacturing and sales subsidiary SEID



Classes at China-based manufacturing subsidiary SSEC

Case Studies Social Welfare

In the field of social welfare, Sharp focuses on providing support for the physically or mentally challenged. Activities include employment for disabled persons at a special Sharp subsidiary; job assistance for the physically or mentally challenged, in the form of sales opportunities through vocational training centers; and environmental education classes for children with disabilities in Japan. Sharp also undertakes support activities, such as donations to welfare facilities and charities overseas, to combat various social issues in an effort to improve the social welfare of local communities.

Social Welfare Activities in Japan

Efforts for the Employment of the Disabled

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.

Sharp Tokusen Industry also actively fulfills requests for work experience from special-needs schools and other schools. In fiscal 2011, 143 students participated in the work experience program and found it a useful experience for their future careers.



Work experience training

Related information Page 87: 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 2011, sales took place at 13 locations throughout Japan, with a total of about 11,000 employees buying. There are plans to expand sales to other sites in the future.

\* A workplace for the physically or mentally challenged



Selling vocational training center products

Environmental Education at Special-Needs Schools

Sharp conducts environmental education lessons at approximately 30 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' environmental awareness and interest in science.



Environmental education at a special-needs school

Words from a Cooperating Support Group

Every month, our organization uses Sharp's facilities to support physically or mentally challenged people by selling bread and other products they make at vocational training centers. Everyone who is involved in the project is very pleased that our products are bought by many employees and that the project has not only provided support to physically or mentally challenged individuals, but has even led to greater harmonious coexistence. We are undertaking this initiative jointly with Sakai City, as part of an Osaka Prefecture-sponsored trial program that supports people with disabilities through collaborations with corporations. We will continue to expand the scope of this initiative.



Katsura Chujo  
Chairman  
NPO Together

Overseas Social Welfare Activities

As a corporate citizen, Sharp is targeting priority issues in social welfare even at local bases around the world. The company focuses on undertaking donation and charity activities for facilities and schools for the physically or mentally challenged and the elderly.

These activities lead to an improved social awareness in Sharp employees, while at the same time contributing to local society.

Sharp will continue actively developing community-based social action programs.



Donating School Bags in Malaysia

In February 2012, employees of Malaysia-based manufacturing subsidiary SOEM visited an elementary school and donated 100 school bags to the children there.



Volunteer House Building in the US

In September 2011, employees of US-based sales subsidiary SEC worked together with an NPO to build homes for impoverished people in the local area.



Supporting Victims of the Thailand Floods

In October 2011, Thailand-based sales subsidiary STCL worked together with a local company to donate relief supplies to people whose homes were destroyed in the massive flood.

Case Studies Employee Volunteer Activities and Others

In an effort to pass on the gratitude of its founder, Sharp actively encourages its employees to take part in volunteer activities to give back to local communities. These locally rooted activities aimed at resolving social issues lead to greater social awareness in employees and foster a volunteer spirit at the company.

Employee Volunteers

Sharp works to create an environment where each and every employee can actively participate in community-based social action programs and volunteer activities based on three points: developing volunteer leave and other company systems, developing the volunteer organization Sharp Green Club (SGC) as a joint effort between labor and management, and providing employees opportunities to participate in volunteer activities together with NPOs and other third-party organizations. Sharp uses these community-based volunteer activities as a way to foster a volunteer spirit at the company and enhance social awareness among its employees.



Sharp continues to provide its employees with opportunities to take part in disaster area reconstruction assistance activities that are still greatly needed, in an effort to help reconstruct the areas as soon as possible



Employees increase their understanding of persons with disabilities by taking part in support activities at welfare facilities

Related information Page 95: Reconstruction Efforts to Support Areas Devastated by the Great East Japan Earthquake

Environmental Volunteer Activities Held Jointly by Labor and Management

The volunteer organization Sharp Green Club (SGC) is a joint effort between labor and management that was launched in June 2003. The aim of this project is to foster awareness of environmental protection among employees and give back to local communities by having each and every employee take part in community-based social action programs.

Sharp carried out environmental and biodiversity protection activities in fiscal 2011 as well. Included were such activities as community cleanup campaigns, tree planting, forest cultivating activities, and efforts to protect rare flora and fauna. About 21,000 employees took part in these volunteer activities.

These activities have earned high praise. The Sendai Building and Tokyo Chuo Building received letters of appreciation from local governments in fiscal 2011 for their activities. In particular, the Sendai Building received great praise for continuing its cleanup campaign—carried out for some time under the cooperation of labor and management—even after it was affected by the earthquake.

In fiscal 2012, SGC set its action plan as “contribute to local communities by stepping up community-based environmental and biodiversity protection activities.” We will continue to further our collaboration with local governments and NPOs to undertake even more effective activities.



Yoshihide Sakai  
SGC Chief Secretariat  
Social Contribution Promotion  
Department  
CSR Promotion Division  
Legal Group  
Sharp Corporation

TOPICS

Sharp Charity Foundation in China Actively Helps Out the Community in Fiscal 2011 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 2011, Sharp donated 88 humidifying air purifiers to 15 hospitals and 10 child welfare facilities and provided about 200 scholarships to students at 11 universities.



Donating to the Shanghai Charity Foundation (August 2011)



Scholarships were given to 35 students at Wuxi Jiangnan University (December 2011)

Close-Up

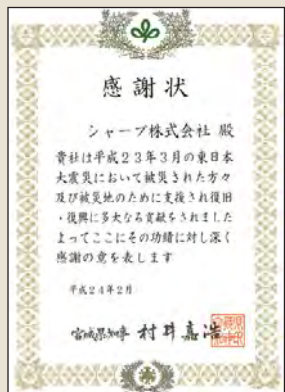
## Reconstruction Efforts to Support Areas Devastated by the Great East Japan Earthquake

Sharp's Great East Japan Earthquake reconstruction support initially involved providing about 140 million yen in company and employee donations and about 1,900 Sharp products (such as home appliances and solar power systems) to assist in reconstruction efforts. Following that, Sharp then launched ongoing support activities, such as educational support activities to cheer up children in devastated areas (a Ministry of Education, Culture, Sports, Science and Technology Reconstruction Partner Enterprise project) and volunteer reconstruction activities by employees.

Various activities are also being undertaken outside the devastated areas that include purchasing products made in vocational aid centers in devastated areas and participating in events such as the "3.11 from KANSAI" event held in the Kansai region to support afflicted areas.

Sharp has received many letters of appreciation from administrative organizations and local governments of Miyagi Prefecture and other devastated areas.

Ongoing support is still greatly needed in devastated areas. Sharp will continue efforts to contribute to the earliest possible reconstruction through educational support activities and volunteer reconstruction efforts.



Letter of appreciation from the Miyagi prefectural governor



Volunteer reconstruction activities by employees

### Words from Certified NPO Japan Platform with Whom Sharp Collaborated to Supply Products to Devastated Areas



Naoya Hirano  
Certified NPO  
Japan Platform

Japan Platform is an organization that works with NGOs, the business community, and the government to provide humanitarian assistance. As part of Great East Japan Earthquake reconstruction effort, Japan Platform matched NGOs that needed certain supplies in devastated areas with the corporations that could provide those supplies. When we called on companies with requests for support, we were met with a swift response from Sharp. Sharp did not stop at simply providing solar power systems and home appliances, but even went so far as to provide product explanations, responding with a sense of responsibility. After seeing how useful Sharp technology was in devastated areas, for example air purifiers helping to improve the environment in emergency shelters with closed windows, I am very glad we are collaborating with the company.

### A Message from the Minamisanriku Town Reconstruction Support Ambassador



Anji Hino  
(former Takarazuka Review member)  
Minamisanriku Town Reconstruction Support Ambassador

Minamisanriku Town suffered extensive damage in the earthquake. We are hosting Minamisanriku Town volunteer tours as an effort to reconstruct the town. Numerous Sharp employees come out for each tour and are actively involved in the activities.

Sharp also kindly fulfilled our request and donated a 3D LCD TV to put in the community center for the people of Minamisanriku Town. The people of the town are overjoyed by the TV.

One year has passed since the Great East Japan Earthquake. As support activities are slowly waning, we are exceptionally grateful to Sharp for actively continuing to provide us with support.

### Words from Employees Who Participated in Volunteer Reconstruction Activities



Kenji Sunahara  
Junior Manager  
Quality Assurance Department  
Health and Environmental Systems Group  
Sharp Corporation

Despite ongoing reconstruction efforts in disaster-stricken areas, there is still a great need for volunteers. I hope many people will go to these areas to carry out activities and get a real sense of the current situation there. I also want to continue helping as

much as I can and never forget the lessons we learned in this disaster.

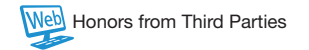


Megumi Ohgiya  
No. 3 Laboratory  
Energy Technology Laboratories  
Corporate Research and Development Group  
Sharp Corporation

As a native of Sendai, I wanted to do something to help my hometown and so I volunteered for the "3.11 from KANSAI" reconstruction support event in Osaka. At the event, I distributed newspapers for organizations working in disaster-stricken areas and helped put up photo panels of the disaster-stricken areas. I hope to continue taking part in reconstruction support activities here in Kansai.



Since Fiscal 2011



## Efforts

Year	Month	Award	Sponsor	Winner
2012	5	SQ Golden Award (home entertainment and home appliances), Indonesian Service Quality Awards 2012	Carre-CCSL (Carre-Center for Customer Satisfaction and Loyalty), <i>Marketing</i> magazine (Indonesia)	PT. Sharp Electronics Indonesia
	3	Fortune China CSR Ranking 2012; top 25 foreign companies	<i>Fortune China</i> magazine, InnoCSR	Sharp (China) Investment Co., Ltd.
		New Energy Policy Category Award; 15th Green Reporting Awards and Sustainability Reporting Awards	Toyo Keizai Inc. (Japan)	Sharp Corporation
		China's No. 1 flat-panel TV; 2011 China High-Efficiency and Energy-Saving Product Leader Company	China Standard Certification Center	Nanjing Sharp Electronics Co., Ltd. (China)
1	Minister of Economy, Trade and Industry Prize (top prize); Widespread Career Education Model category; 2nd Career Education Awards	Ministry of Economy, Trade and Industry (Japan)	Sharp Corporation	
	ENERGY STAR® Award for Excellence 2012	Environmental Protection Agency, Department of Energy (US)	Sharp Electronics Corporation (US)	
2011	12	2011 China Best CSR Award	21st Century Business Herald (China)	Sharp Electronics Sales (China) Co., Ltd.
		2011 Outstanding CSR Award	China Business News	Sharp Electronics Sales (China) Co., Ltd.
	11	Excellent Company Award; 2011 Internet IR Best Company Awards	Daiwa Investor Relations Co., Ltd. (Japan)	Sharp Corporation
2011	10	Green Management Prize; 2011 China Business News Green Love Eco-Series Green Awards	China Business News	Sharp Electronics Sales (China) Co., Ltd.
		Clean Japan Center Chairman's Prize; 2011 Resource Recycling Technologies and Systems Commendation	Clean Japan Center	Sharp Corporation (for development of closed-loop recyclable bioplastic)
		Award from the Minister of Education, Culture, Sports, Science and Technology; 2011 Reduce, Reuse, Recycle Promotion Achievement Commendations	Reduce, Reuse, Recycle Promotion Association (Japan)	Sharp Corporation, Weathercaster Network (for elementary school environmental education)
	9	Award from the Reduce, Reuse, Recycle Promotion Association Chairman; 2011 Reduce, Reuse, Recycle Promotion Achievement Commendations	Reduce, Reuse, Recycle Promotion Association (Japan)	Sharp Corporation Mie Plant (for reducing waste fluid) Sharp Corporation Fukuyama Plant (for reducing chemical use in semiconductor production)
		Minister of Health, Labour and Welfare Prize, Family-Friendly Enterprise category; Osaka Labour Bureau Director's Prize, Equality Promotion Enterprise category; 2011 Equal Employment/Work-Family Balance Corporation Awards	Ministry of Health, Labour and Welfare (Japan)	Sharp Corporation
	7	Award for Encouragement: ChemoBio Integrated Management Society 2011	ChemoBio Integrated Management Society (Japan)	Sharp Corporation
	5	No. 1 in five categories of the After-Sales Service Satisfaction Ranking (flat-screen TV, DVD/HDD recorder, washing machine/dryer, air conditioner, smartphone)	Nikkei BP Marketing, Inc. (Japan)	Sharp Corporation
2011	4	Letter of appreciation from the Governor of Osaka Prefecture	Osaka Prefecture	Sharp Green Club (for Konoyama Sharp Forest)
		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)

## Products

2012	4	Award of Merit, 2012 (61st) Electrical Technology Achievement Awards	JEMA (Japan Electrical Manufacturers' Association)	Development of top-loading washing machine/dryer pulsator modeled on a dolphin's tail fin and skin wrinkles for high washing power and water savings
		Award of Encouragement, 2012 (61st) Electrical Technology Achievement Awards	JEMA (Japan Electrical Manufacturers' Association)	Development of dust-compression blade in a cyclonic vacuum cleaner modeled on the surface structure of a cat's tongue
	3	China's No. 1 flat-panel TV; 2011 China High-Efficiency Leader Products	China Standard Certification Center	LCD-70X55A LCD TV
	1	Minister of Economy, Trade and Industry Prize; Energy Conservation Grand Prize	Energy Conservation Center, Japan	AQUOS L5 Series
Energy Conservation Center Chairman's Prize; Energy Conservation Grand Prize		Energy Conservation Center, Japan	PN-V602 LCD monitor	
2011	11	Grand Prize, 2011 (54th) 10 Best New Products Awards	Nikkan Kogyo Shimbun, Ltd. (Japan)	Practical application and sales of protein analysis equipment
		2011 Good Design Gold Award	Japan Institute of Design Promotion	NS-F135G5 thin-film solar module
	5	Winner (Best Home Appliance category), Mother's Selection, 4th Best Mother Awards 2011	Japan Mothers Society	Plasmacluster air purifiers, ion generators
	4	Award of Merit, 2010 (60th) Electrical Technology Achievement Awards	JEMA (Japan Electrical Manufacturers' Association)	Development of highly efficient, lightweight air conditioner indoor unit cross-flow fan modeled on the shape of a dragonfly wing
Award of Encouragement, 2010 (60th) Electrical Technology Achievement Awards		JEMA (Japan Electrical Manufacturers' Association)	Development of energy-efficient SJ-XW44T and X Series odor-absorbing Plasmacluster refrigerators	

Sharp's business activities comprise "Consumer/Information Products" (i.e., end-user consumer electronics and information products) and "Electronic Components" (i.e., key components of electronic products). By undertaking the development both of key devices based on proprietary technologies and of products in which these devices and technologies are applied, Sharp aims to inspire and impress its customers. The company is working actively to develop its business by pioneering new markets and by bringing forth never-before-seen, one-of-a-kind products and devices.

## 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, Nagaïke-cho, Abeno-ku, Osaka 545-8522, Japan	Capital Stock*	204,675 million yen (rounded down to the nearest million)
Representative	Takashi Okuda, President	Number of Employees*	Consolidated: 56,756 Entire Sharp Group: 64,429 (30,889 in Japan; 33,540 overseas)
Founded	September 15, 1912		

\* As of March 31, 2012

## Main Products

### Audio-Visual and Communication Equipment



AQUOS Quattron 3D



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



Robotic cleaning appliance



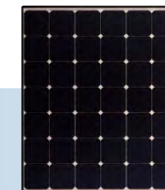
Plasmacluster slim ion fan



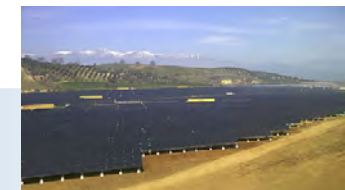
LED ceiling light

Refrigerators, superheated steam ovens, microwave ovens, air conditioners, washing machines, vacuum cleaners, air purifiers, dehumidifiers, humidifiers, electric heaters, small cooking appliances, beauty appliances, Plasmacluster ion generators, LED lights, solar-powered LED lights, network control units

### Solar Cells



Residential-use high-efficiency monocrystalline solar module



Solar power plant in southern Italy

Crystalline solar cells, thin-film solar cells

### Information Equipment



Touchscreen LCD monitor



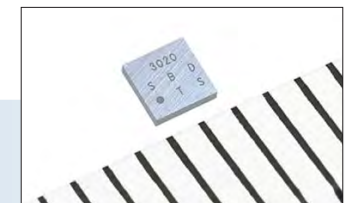
Digital full-color MFP

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



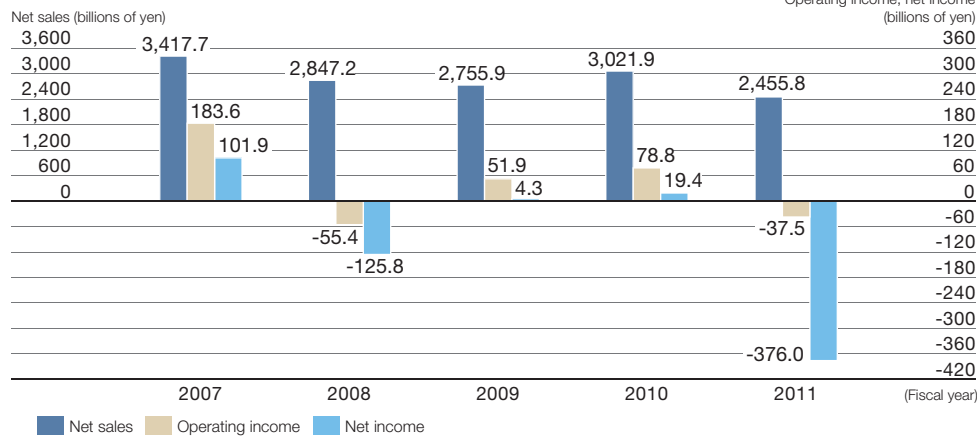
Digital signage player module



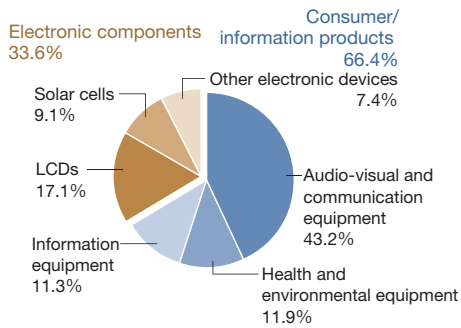
LED driver for flashlights

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

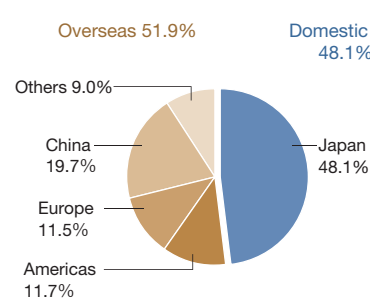
## Net Sales, Operating Income, and Net Income (Consolidated)



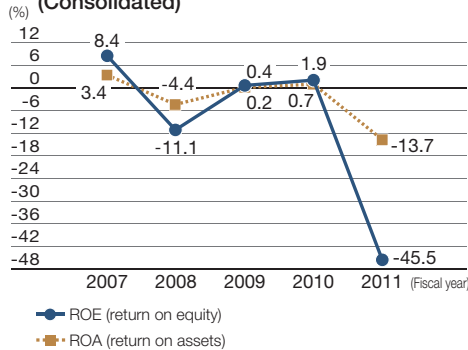
## Fiscal 2011 Net Sales Component Ratio by Product Group (Consolidated)



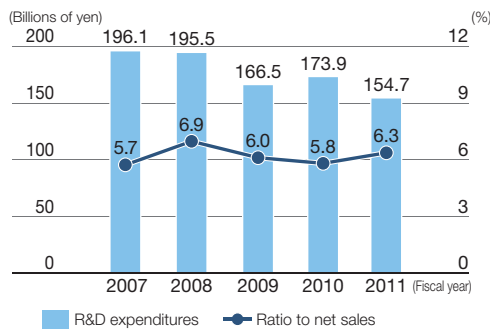
## Fiscal 2011 Net Sales Component Ratio by Region (Consolidated)



## Principal Financial Performance Indicators (Consolidated)



## R&D Expenditures (Consolidated)

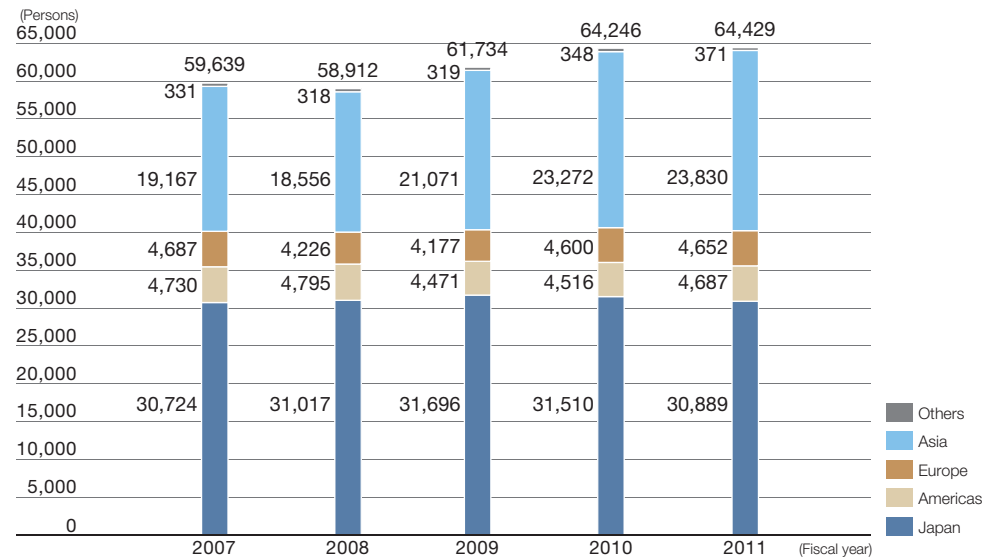


## The Sharp Group at a Glance (as of March 31, 2012)

- Consolidated subsidiaries: 78 (17 in Japan, 61 overseas)
- Overseas structure

Category	Count
Regional headquarters	1 company in 1 country/region
Sales subsidiaries	30 companies in 26 countries/regions
Manufacturing bases	21 companies in 13 countries/regions
R&D bases	7 companies in 5 countries/regions
R&D company and parts supplier	1 company in 1 country/region
Solar power bases	3 companies in 3 countries/regions
Finance company	1 company in 1 country/region
<b>Total</b>	<b>64 companies in 27 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).



## Independent Assurance Report

To the President of Sharp Corporation

### Purpose and Scope

We were engaged by Sharp Corporation (the "Company") to provide limited assurance on its Sustainability Report 2012 (the "Report") for the fiscal year ended March 31, 2012. The purpose of our assurance engagement was to express our conclusion, based on our assurance procedures, on whether the environmental performance indicators marked with  (the "Indicators") for the period from April 1, 2011 to March 31, 2012 included in the Report 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 a limited assurance engagement and to express our conclusion based on the work performed.

### Criteria

The Company applies its own reporting criteria as described in the Report. These are derived, among others, from the Sustainability Reporting Guidelines version 3.1 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.
- Visit to the Company's domestic factory selected on the basis of a risk analysis.
- 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.

*KPMG AZSA Sustainability Co., Ltd.*

KPMG AZSA Sustainability Co., Ltd.

Osaka, Japan

August 10, 2012

Sharp Sustainability Report 2012

**Third-Party Opinion****Katsuhiko Kokubu**

Professor  
Graduate School of Business Administration  
Kobe University

**Career Overview**

Graduated from Graduate School/Faculty of Business,  
Osaka City University  
Doctor of Business Administration  
Assistant Professor at Osaka City University and Kobe  
University until 2001  
Specialized fields: Social and environmental accounting,  
environmental management, CSR management

Director, IEMA (Institute for Environmental Management  
Accounting)  
Chairman, MFCA (Material Cost Flow Accounting) Forum  
Japan; Chairman, MFCA's ISO/TC207/WG8  
Chairman, Material Cost Flow Accounting Development  
and Dissemination Committee, Ministry of Economy, Trade  
and Industry  
Chairman, Committee for Evaluation of Projects to Save  
Resources in the Supply Chain, Ministry of Economy,  
Trade and Industry  
Member, Committee for the Revision of the Environmental  
Reporting Guidelines, Ministry of the Environment  
Other posts

Books authored:  
*Material Cost Flow Accounting*, Nikkei Publishing Inc.  
*Environmental Management and Accounting*, Yuhikaku  
Publishing Co., Ltd.

**World-Class Report**

I found Sharp's 2012 Sustainability Report to be world class both in quality and quantity. I applaud Sharp for conducting measures to deal directly with issues in management, environment, and society, and for giving a detailed report on the results of these measures. In particular, I like how the report opens with fiscal 2011 objectives and achievements, fiscal 2012 objectives, and environmental objectives all the way up to fiscal 2015. This shows that Sharp works to ensure sustainability with thorough PDCA, and it makes this report a model for other companies.

**Eco-Positive Company**

Sharp has for years worked towards its corporate vision of becoming an 'Eco-Positive Company'. It is great that Sharp goes beyond simply reducing CO<sub>2</sub> emissions from its business activities; it has come up with the idea of 'size of contribution to CO<sub>2</sub> emission reductions' as it strives to do its part to help society as a whole reduce its carbon footprint. Sharp's sustainability report details the company's concrete environmental targets, as well as its substantial achievements. Sharp has also devised various ways to make use of the latest trends in environmental accounting; for example, by incorporating the Connected Reporting Framework for environmental accounting and disclosing information based on the GHG Protocol Scope 3 reporting standard.

**Active Efforts in the Social Area of CSR**

In addition to its environmental efforts, Sharp proactively carries out various activities addressing a wide range of social issues. And although the company's sustainability report makes somewhat extensive use of qualitative language, it also provides a sincere, honest, and detailed account of both the goals set by Sharp for each social issue and the results of its efforts. It's important to note how Sharp makes observing antitrust laws a priority in its approach to compliance, and how it strives to carry out CSR throughout the entire supply chain. In the way of improvement, I would like to see Sharp engage in more interactive communication, including more dialog with stakeholders, using a variety of media.

**Creating New Shared Value**

Overall, I think Sharp is doing a wonderful job in its sustainability activities. However, the company is facing an extremely tough business environment at the moment. But reading this report shows me that Sharp is providing significant value to local communities and society as a whole. This value is shared by the company and society, and society's recognition of the significance of this value is the source of the company's competitive strength. The pursuit of sustainability creates shared value, and I believe that it will also help Sharp weather the current economic storm and achieve further growth.

**Sharp's Response**

This year marks the 100th anniversary of Sharp, and the start of another century based on our corporate roots: the Sharp business philosophy and the business creed of 'Sincerity and Creativity'. I am extremely grateful that Professor Kokubu has praised Sharp's approach, particularly the way we adhere to our business creed while dealing directly with CSR issues, disclose information honestly and sincerely, and pursue our Eco-Positive Company vision and other efforts.

Companies are under increasing scrutiny for their contributions to social sustainability. Professor Kokubu has suggested we conduct more extensive dialog with stakeholders and that through our pursuit of sustainability, we create value that is shared by the company and society. We will strive to reflect these opinions in our efforts to continuously improve sustainability in society and at Sharp.



**Noriaki Matsumoto**  
General Manager  
CSR Promotion Division  
Legal Group  
Sharp Corporation

**SHARP**

**SHARP CORPORATION**

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