

# Environmental Initiatives

## The SHARP Eco Vision 2050, Our Long-Term Environmental Vision

Global environmental issues such as climate change, resource depletion, and the problems presented by plastic waste are becoming more serious and are recognized as important issues among the international community. Under these circumstances, global movements aimed at resolving social issues are accelerating, such those designed to respond to Sustainable Development Goals (SDGs) and Paris Agreement\*<sup>1</sup>, as well as initiatives to realize a *circular economy*\*<sup>2</sup>.

In 2019, Sharp established its long-term environmental vision SHARP Eco Vision 2050 based on its principal environmental philosophy of "Creating an Environmentally Conscious Company with Sincerity and Creativity", which was established in 1992. Our aim is to realize a sustainable global environment by setting long-term goals for 2050 in the three areas of climate change, resource recycling,

and safety and security.

Furthermore, in order to realize our long-term environmental vision, we are formulating "medium-term environmental goals" that set specific initiatives and quantitative goals for each area.

Sharp is engaged in initiatives to solve social issues and sustainably raise corporate value. We are doing so by working more closely with our stakeholders through corporate and environmental conservation activities aimed at realizing our long-term environmental vision.

\*1 An international framework for the prevention of global warming, ratified at the 21st Conference of the Parties of the UNFCCC (COP21), held in Paris in 2015.

\*2 An economic system in which discarded products and raw materials are considered as new resources and in which resources are circulated without generating waste products.

### Long-Term Environmental Targets

Toward achieving the SHARP Eco Vision 2050, we have defined long term goals in the three following areas to generate clean energy in excess of energy consumed and minimize the environmental impact of corporate activities on the global environment.

#### Climate Change



Throughout our history, Sharp has endeavored to reduce the energy we use as an organization, while making more energy-efficiency products to help reduce the amount of energy consumed in the home and by society.

As our founder, Tokuji Hayakawa, said, "Everything we produce uses electricity. As we become a bigger company, we will be responsible for using more electricity, so I propose that we also begin making electricity." Following this course, Sharp began development of solar batteries, striving to popularize solar energy for more than 50 years.

**As a company that makes products that use electricity, we must take responsibility for the environmental impact of this electricity usage.**

Sharp set two goals to achieve by the year 2050 as we strive further to reduce energy consumption and generate clean energy, contributing to a carbon-free society.

#### Goals

- Generate clean energy in excess of the energy consumed throughout our supply chain
- Achieve net zero CO<sub>2</sub> emissions due to our own business activities

#### Resource Recycling



Sharp has created new products that offer a variety of value to the world. At the same time, we have used many of the world's resources.

**Our desire is to continue to offer a variety of value to our stakeholders amid the constraints of limited resources.**

Sharp intends to reach new levels of effective resource use, maximizing value from minimal resources and constructing a circular economy. We have defined two goals to achieve by the year 2050 in efforts to create a recycling-oriented society.

#### Goals

- Eliminate the use of new mined resources\* in products
- Eliminate final disposal of waste products generated through our business activities

\*Excludes those items not suitable for recycling from an environmental standpoint

#### Safety and Security



Sharp factories use a variety of chemical substances in the product manufacturing process. Our products also contain a variety of chemical substances. Chemical substances include substances that have a negative impact on the human body, the environment, and ecosystems. Accordingly, these chemicals must be managed in a careful and detailed manner.

**Sharp corporate activities must not do harm to human health, the global environment, or ecosystems.**

Sharp follows current international standards, as well as our own standards oriented toward the future, for the strict management of these relevant chemical substances. We are striving to eliminate any chemicals that harm human health, the global environment, or ecosystems.

#### Goals

- Conduct proper management of chemical substances to protect human health, the global environment, and ecosystems

## Environmental Initiatives

### Disclosure of Information regarding Climate Change

Sharp will expand its disclosure of information regarding climate change in accordance with the TCFD\* framework.

#### 1. Governance

Sharp established the Sharp Global SER Committee as an organization dedicated to promoting company-wide initiatives such as those related to climate change. This committee works to promote specific initiatives as well as introduce further improvements and new measures.

#### 2. Strategy

We recognize the risks and opportunities presented by climate change to Sharp's business are as follows.

Type		Relation to Sharp's business	
Risks	Transition	Policies/regulations	Increased business costs and workloads due to policy changes, stricter regulations (such as large increases in carbon tax rates), or stricter energy-saving standards imposed on products. [Countermeasures] We will constantly strive to understand regulatory trends while thoroughly complying with existing regulations and standards, as well as participate in policy making opportunities, etc.
	Physical change	Acute	Business continuity risks caused by production delays and losses in sales opportunities due to stoppages of production site operations or disruptions in material procurement resulting from increased/intensified natural disasters such as typhoons and flooding. [Countermeasures] Reinforcements will be carried out at sites where the risk of flood damage exists. Measures will also be taken to secure multiple suppliers and prepare disaster response manuals.
Opportunities	Transition	Products/services	Expand use of solar power generation systems and storage battery systems that assist in mitigating and adapting to climate change. Expand business for AIoT technology, devices and related products to meet increased demand for energy-saving products.
	Physical change	Products/services	As a measure for responding to natural disasters, expand socially innovative businesses that enable efficient management of energy conservation and energy creation through combinations with AIoT technology.

#### 3. Risk management

Based on the Business Risk Management Guidelines which defines the basic concept of business risk management, Sharp manages and assesses climate-related risks by positioning them as "specific risks" which have an especially large impact on management.

#### 4. Indicators/goals

In our long-term environmental vision for 2050 entitled "SHARP Eco Vision 2050," we have set long-term goals to reduce greenhouse gas emissions, particularly in the area of climate change. These goals include "achieving net zero CO<sub>2</sub> emissions due to our own business activities" and "generating clean energy in excess of the energy consumed throughout our supply chain."

\*Climate-related financial disclosure task force formed by the Financial Stability Board (international body that works toward financial systems stability) in 2017.

### Suppress Greenhouse Gas Emissions Associated with Business Activities

Sharp suppresses greenhouse gas emissions associated with our business activities, contributing to a carbon-free society. Greenhouse gas emission levels from Sharp Group business activities in fiscal 2019 decreased by 9.6% from the previous year to 974,000 t-CO<sub>2</sub> by transferring production to more efficient factories and consolidating production sites. Our improvement rate of energy intensity was 18% compared to a fiscal 2012 baseline\*.

\*Please refer to P.2, Greenhouse gas emissions.

## Social Initiatives

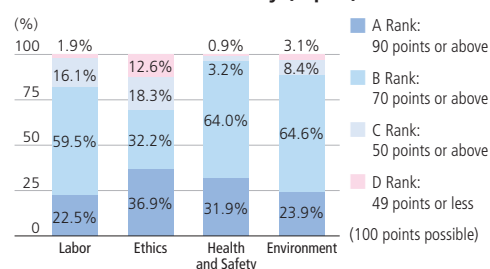
### Promoting CSR across the Entire Supply Chain -Fair and Impartial Procurement Activities-

Sharp has created and published our Sharp Supply-Chain CSR Deployment Guidebook, which conforms to the RBA Code of Conduct. Our Basic Parts Purchase Agreement also includes articles requiring suppliers to comply with CSR initiatives based on our guidebook.

Sharp conducts a CSR/green procurement survey, which is based on a format conforming to the RBA self-assessment questionnaire. Manufacturing facilities receiving low scores are asked to submit an improvement plan. Through communications of this type and others with suppliers, Sharp strives to raise the level of CSR engagement throughout our supply chain.

Sharp will continue to be active in pursuing CSR initiatives throughout our global entire supply chain.

#### Assessment Distribution of CSR/ Green Procurement Survey (Japan)



#### Number of Factories Responding to CSR Survey (Cumulative since fiscal 2017)

Country/Region	No. of Factories
Japan	1,438
Korea	37
China	157
Hong Kong	39
Thailand	263
Indonesia	233
Malaysia	329
Philippines	72
Vietnam	4
Total	2,572

### Ensuring Quality and Safety

To gain customer trust and improve satisfaction, Sharp responds to customer needs and demands, offering high-quality products and services that are safe, reliable, and environmentally conscious.

#### Quality Assurance System

Sharp specifies the quality levels we promise to customers, thereby ensuring all employees in every department involved in product planning, design, production, sales, and after-sales service continue to strive for improved quality.

