

# Chapter Two

## Life-Enriching “Environmental Spirit”

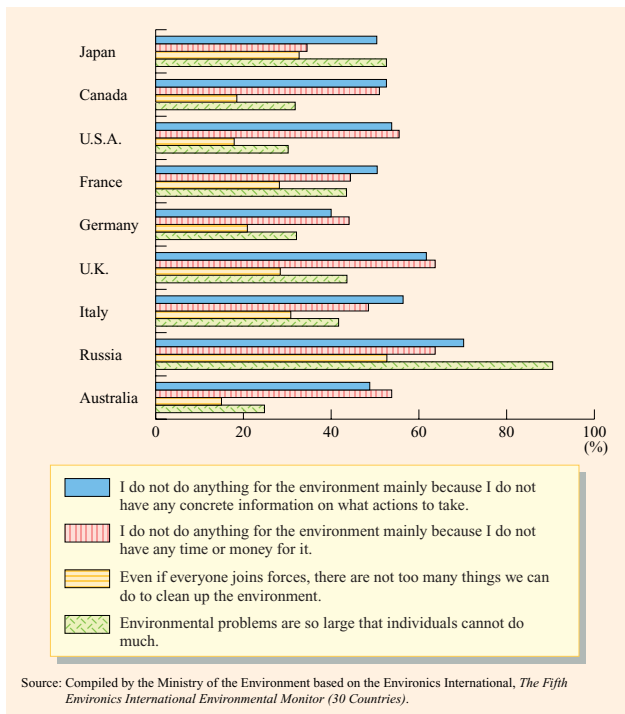
### <Summary of Chapter Two>

Only when individuals, who consume and invest through their daily lives, support and guide businesses that develop “environmental techniques,” and only when the two parties support each other can “environmental techniques” be fully utilized. This chapter focuses on “environmental spirit,” the awareness that leads to such behavior, and looks at “environmental spirit” in the society and introduces actual examples in communities.

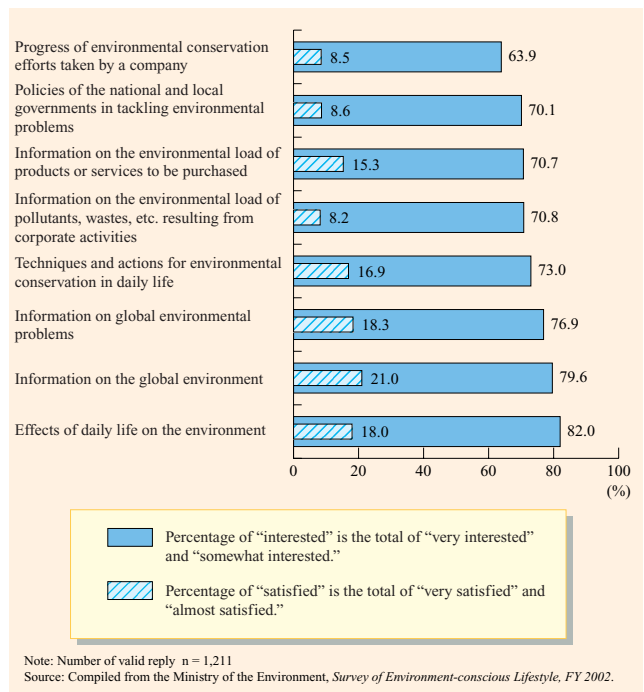
### Section 1: “Environmental Spirit” Nurtured in the Society

In comparison to other countries, a greater number of people in Japan quoted “lack of information” as a reason for not actively trying to tackle environmental problems. Although it can be said that the interest in environmental information is high, only a few answered “satisfactory” to all items in terms of the level of satisfaction.

**International Comparison of Environmental Awareness**



**Interest in Environmental Information and Level of Satisfaction**



The gap in the level of interest in environmental information and the level of satisfaction indicates a need for the government, businesses, and civil organizations to make further efforts in the future to enrich easy-to-understand information. However, even if an individual has access to every environmental information and knows that certain efforts he/she makes can contribute to environmental conservation, the individual still tends to think that “a single person will not make any difference,” and thus chooses the comfort of everyday life. To avoid such a social dilemma, it is necessary to ensure that an individual’s efforts can also bring benefits to that person. At the same time, it is also important for every individual to respect the society as a whole and cultivate the “environmental spirit” that appreciates and gives consideration to the environment. The feeling of camaraderie peculiar to Japan, such as “*minnade* (Let’s do it together.)” or “*otagaisama* (Let’s share the inconvenience with each other.),” and an understanding of interdependent relationships can help overcome feelings generated by the social dilemma and encourage most suitable practices in the long run

in general. It is imperative to make connections between individuals so that related parties can share their concerns of the problems and cooperate in efforts to better the environment.

To reflect on the “environmental spirit” Japan has possessed since ancient times, to participate in international discussions on the sustainability of the commons, the Earth, and to nurture an “environmental spirit” that befits the 21st century are efforts that Japan needs to make in the future.

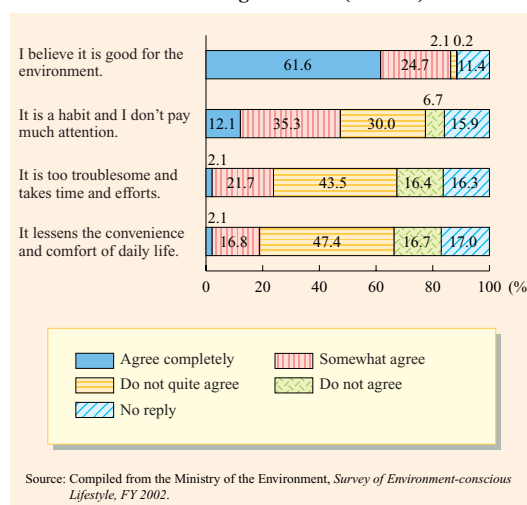
## Section 2: Consumption and Investment Supporting “Environmental Techniques”

In our involvement with businesses as consumers and investors, we can advance environmental conservation through our “environmental spirit.”

Selecting and buying environmentally conscious products and services are known as “green purchasing.” Green purchasing is an approach that enables consumers to appeal, through the market, to businesses to take measures to lower environmental load and at the same time, to support businesses that are proactive in taking environmental measures.

More people believe that paying attention to the environment when making purchasing decisions is good. On the other hand, the green purchasing activities of individuals is low compared to energy-related environmentally conscious activities. While 36.4% of respondents answered they “did not feel any barriers” in green purchasing, among those who found barriers, 25.9% answered they “could not judge because of the lack of relevant information” and 16.5% answered “the price is higher compared to conventional products.” This shows that information availability and economic concerns are the main obstacles to green purchasing. To facilitate assessment of the environmental consciousness of businesses and products, the government and businesses must provide consumers with appropriate environmental information about business activities, products, and services. Environmental labels play an important role as a means for providing such environmental information.

**Environmental Consideration when Making Purchase (Overall)**



### Implementation of Environmental Conservation Activities




Due to the higher level of environmental conservation awareness among individuals in recent years, environment-related financial products have drawn attention. Socially responsible investment (SRI) means to invest in businesses not only from the financial aspect of profitability but also according to efforts made by such businesses to tackle environmental and social problems. Among the socially responsible investment products, the ecofund is an investment trust that focuses on the environment and actively invests in businesses that undertake good environmental measures or have high environmental performance.

Japan's history of SRI is short compared to countries in Europe and the US. At one time, the asset value of the ecofund had reached an amount that exceeded 200 billion yen. Since then, due to a downturn in the stock market and other factors, the amount has shrunk to below 100 billion yen today.

Investors who have already made socially responsible investments, such as in the ecofund, account for only 0.4% in Japan as a whole. Many said that they do not have enough information on SRI. Providing the public with information on the contents and concept of SRI, preparing informative investment reports, and training sales people to become knowledgeable about such products, are effective measures for generating actual investment activities in the future.



### Major Environmental Labels

(1) Environmental labels certified by a third party (Type I: ISO 14024)




Mark and name	Certifying body	Summary
 Eco Mark	Japan Environment Association	It is a product certification system that contributes to environmental conservation by taking into account the product's lifecycle as a whole. The system is applicable to a wide range of products and certification standards are set up for each type of products. This is the only Type I environmental labeling system in Japan that is in line with the ISO Standard (ISO 14024). It is operated by a committee, with wide representation of stakeholders, in Japan Environment Association under jurisdiction of the Ministry of the Environment.

(2) Environmental labels certified by a third-party or industrial association

[Energy-saving related]


Mark and name	Certifying body	Summary
 International Energy Star Program	Ministry of Economy, Trade and Industry	This mark is for office equipment, such as personal computers, that fulfills the standard of power consumption in standby mode. It is an international system implemented with the cooperation of the U.S., Japan, etc.
 Environment/Energy Excellent Architecture Certification Mark System	Institute for Building Environment and Energy Conservation	This mark is for buildings that have a certain level of energy saving function while maintaining the level of indoor environment. Display of the mark can improve the image of a company by showing that it is taking environmental and energy measures. It also provides guidance to the public for choosing offices, stores, accommodation facilities, etc.

[Recycling-related]

Mark and name	Certifying body	Summary
 R Mark	Zero Waste Partnership Conference	This mark is used voluntarily to show the percentage of recycled pulp content in paper. This system was established by an NPO, Zero Waste Partnership Conference (formerly known as National Conference for Promoting Waste Reduction) founded to reduce waste.
 Green Mark	Paper Recycling Promotion Center	This system aims to promote paper recycling by increasing the use of recycled pulp in paper. This mark is for a product made with a certain percentage or more of recycled pulp as raw material.
 PET Bottle Recycling Recommendation Mark	The Council for PET Bottle Recycling	The mark is used on products made with recycled PET bottles. It is a system operated by The Council for PET Bottle Recycling, an industrial association consisted of PET bottle manufacturers and raw resin manufacturers.

(3) Voluntary environmental claims by businesses (Type II: ISO 14021)

(4) Indication of the environmental load of products using quantitative data (Type III: ISO 14025)

Mark and name	Certifying body	Summary
 Eco Leaf	Japan Environmental Management Association for Industry	This environmental label is used to accomplish the following: (i) provide quantitative environmental information of product using the LCA method and disclose it to the public using the Internet, etc. in order to assist label users in making green purchasing and procurement decisions, and (ii) give incentive to manufacturers to develop, manufacture, and sell products that place less load on the environment. In ISO classification, the label is categorized as Type III Environmental Label, which was determined to be an international standard in November 2002.

Source: Ministry of the Environment

## Section 3: Environmental Conservation in Daily Life

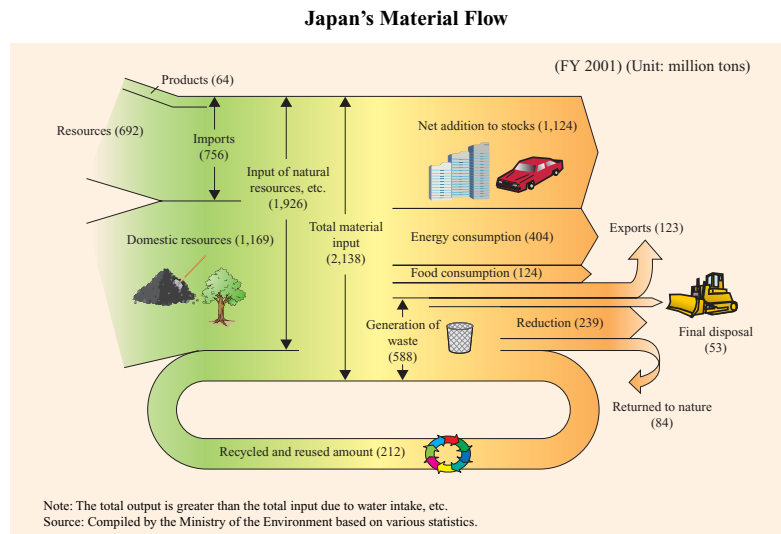
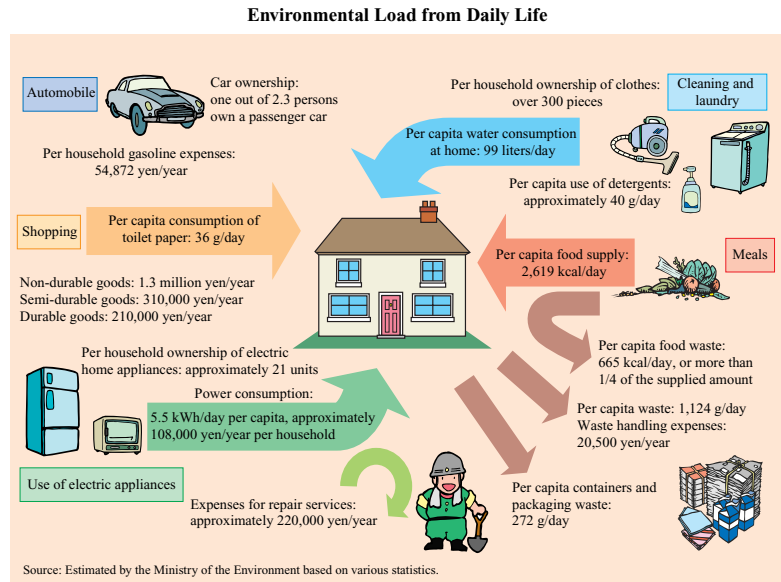
Other than taking actions as consumers and investors, we can also take measures to lower environmental load and to protect and create a rich environment through our daily lives.

Our everyday living places a load on the environment, through various stages of the products we use, from the gathering of resources, to manufacturing, use, and disposal, and also in all stages of our daily lives through food, clothing, and shelter. As a result, approximately 588 million tons of waste is generated and about 404 million tons of energy consumed.

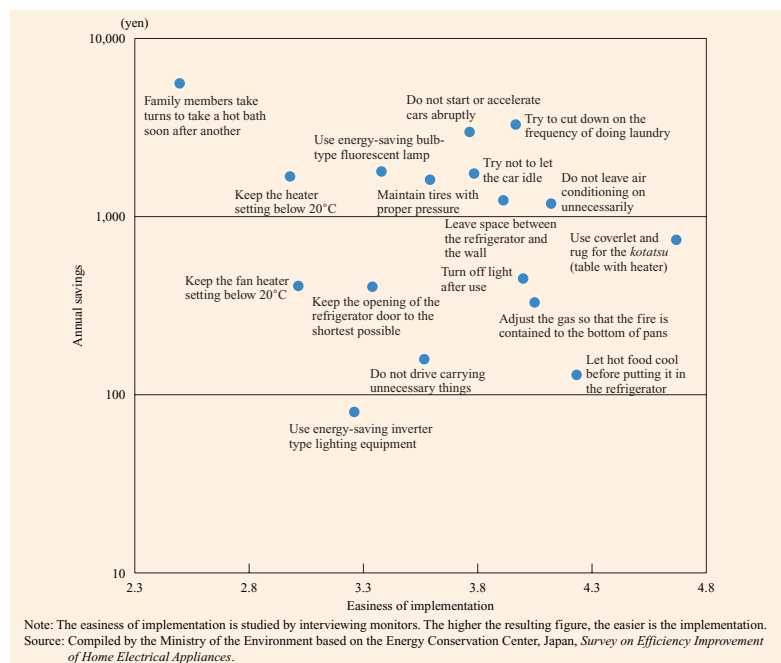
Besides green purchasing such as buying environment-friendly home electrical appliances, making efforts to switch off lights and reducing standby mode consumption by turning off the main power can also save energy. For example, being careful in the way we use appliances, such as “not leaving the air conditioner on all the time,” can have a tremendous effect on energy conservation, with relatively little discomfort. Cutting down on the frequency of doing laundry and opening the refrigerator door can also help reduce environmental load.

Recently, plant husbandry in heated facilities such as vinyl greenhouses has increased. These facilities made it possible for consumers to obtain a wide variety of produce irrespective of the season. However, temperature-regulated plant husbandry uses energy and increases carbon dioxide emissions. Eating foods that are in season can not only revive the vanishing sense of the seasons but can also contribute to environmental conservation.

Today, the diffusion rate of air conditioning and heating equipment has exceeded 100% of households. Just raising 1°C from the preset temperature of 27°C in the summer and lowering 1°C from the preset temperature of 21°C in the winter can lower carbon dioxide emissions from one air condi-



### Scattergram of Easiness of Energy Saving Efforts and Annual Savings

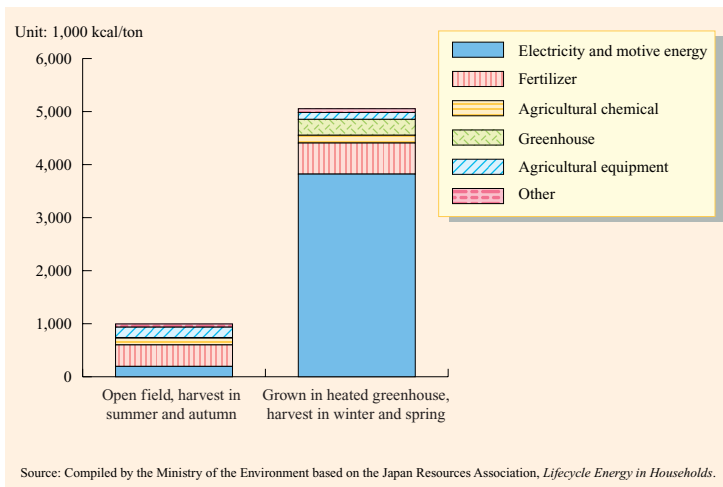


tioner by 5.9 kg and 25.7 kg per year, respectively. Changing clothing to adjust to temperature is the first step in curbing carbon dioxide emissions. Some workplaces encourage moderate air conditioning in the summer and light clothing by promoting the mindset that “casual clothing in the summer is not disrespectful to others. It is energy-saving, environmentally friendly, and makes good sense in a country like Japan that is blessed with four seasons.”

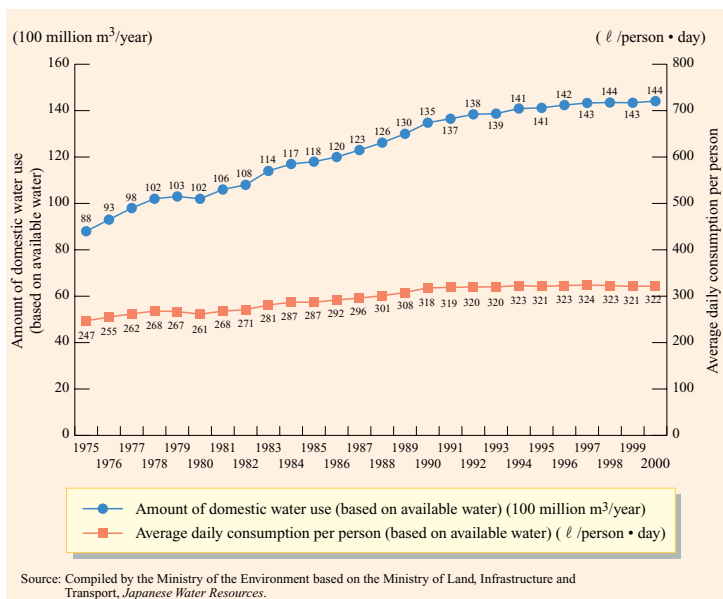
Having greenery on the rooftop or the walls can keep room temperatures down in the summer, saving energy from air conditioning. Greenery is also useful in reducing noise, protecting the buildings, purifying the air, and improving the heat island phenomena in urban areas.

In terms of biochemical oxygen demand (BOD), which indicates the load of domestic effluent on the environment, effluent from the kitchen exceeds 40% of the total environmental load. It is important to count not only on the development of domestic effluent treatment facilities, but to reduce environmental load at the source. Making efforts to reduce environmental load at households as much as possible by, for example, cooking only enough *miso* soup to avoid having leftovers or treating used cooking oil properly can help preserve the water quality of rivers, oceans, lakes, and marshes.

Amount of Energy Used for Growing Cucumbers (1990)



Changes in Domestic Water Use



How Much BOD and from What?

	BOD per 1 ℓ (mg/ℓ)	If drain away the following amount (mℓ)	Total BOD (g) would be
Water from washing rice (3 cups)			
When washed 4 times	2,400	3,500	8
Water after first wash	12,000	500	6
Miso soup (potato)	37,000	180	7
Water from boiling spaghetti	5,400	2,000	11
Oden broth	100,000	500	50
Cooking liquid of meat and potato	52,000	100	5
Corn soup	130,000	180	23
Ramen broth	27,000	300	8
Tempura oil	1,500,000	500	750
Coffee	6,000	180	1.1
Juice	77,000	180	14
Beer	81,000	180	15
Green tea	300	180	0.05
Milk	78,000	180	14
Synthetic detergent (appropriate amount: 1.3 g/ℓ)	180	30,000	5
Soap powder (appropriate amount: 1.7 g/ℓ)	1,250	30,000	38
Dish detergent (appropriate amount: 1.5 mℓ/ℓ)	300	3,000	1

Source: Compiled from the Ministry of the Environment, Guidelines for the Promotion of Measures against Household Effluents, 1988.

## Section 4: Environmentally Friendly Community Planning

Developing regions and communities by adopting an environmental point of view and utilizing local features has drawn attention. In this section, we will look at local initiatives that have utilized and integrated the “environmental spirit” described in this chapter.

In the Yusuhara Town, Kochi Prefecture, environmental conservation measures using mainly wind power are being undertaken (“Let the wind blow. Let us develop our town.”). Electricity is produced using wind power to help reduce carbon dioxide emissions. Profits from electricity sales are used to set up an environmental fund to help finance photovoltaic power generation facilities for housing and to carry out thinning to pursue sound forest development. Furthermore, community-based environmental conservation activities, such as the Thousand Rice Fields Ownership System, are being carried out.

(<http://www.town.yusuhara.kochi.jp/>)

People of Toyooka City, Hyogo Prefecture, are working together to “build a city that can coexist with the stork.” Residents, businesses, and the local government have all joined forces to promote the “15 Menus to Become Healthy.” Farmers build “Rice Field Biotopes” and adopt the “Pesticide-free Duck Farming Method.” And citizens hold the “Stork Thanksgiving Festival.” In April 2000, the “Toyooka City Stork Fund” was set up to support activities to make rice paddies in Toyooka a habitat for stork. Such activities have paid off. In 2002, a stork flew from the Asian mainland and made Toyooka its home.

(<http://www.city.toyooka.hyogo.jp/>)

Citizens and city government officials in Hino City, Tokyo, formed partnerships to tackle environmental problems in their community. First of all, they proposed through direct petition to draw up the city’s Fundamental Environment Ordinance. The Basic Environment Plan was formulated with the participation of citizens through public invitation. Then in the year 2000, to “create a zero-waste city” with its citizens, the city government explained to about 30,000 residents the need for a “Waste Revolution.” Sorted waste is collected from each household and dust boxes were removed. Thanks to these activities, Hino City was successful in reducing waste by about 50% in a year’s time.

It helped extend the useful life of final landfill sites. (<http://www.city.hino.tokyo.jp/info/>)

Such improvements to the environment can invigorate the economy and a revitalized economy can, in turn, better the environment. To develop this kind of relationship in communities (a virtuous circle for environment and economy), the Ministry of the Environment has started “A Community Model Project of a Virtuous Circle for Environment and Economy” (“*Heisei Mahoroba* (Utopia)” Community Creation Project) since 2004. This project gathers ideas for protecting the environment, such as reduction of carbon dioxide emissions, and for revitalizing the economy from cities and towns nationwide. It commissions cities and towns that are successful in obtaining a wide participation of businesses and citizens through inventive ideas that utilize regional characteristics to carry out environmental conservation activities, and also subsidizes the establishment of facilities. It is hoped that models such as these will bring results, and community creation aimed at creating a virtuous circle for environment and economy will further spread.

(<http://www.chie-no-wa.com/>)



Primary school students visiting a wind power plant  
(Courtesy of Yusuhara Town, Kochi Prefecture)



Rice field biotope  
(Courtesy of Toyooka City, Hyogo Prefecture)



Lecture on waste revolution for citizens  
(Courtesy of Hino City, Tokyo)