Keidanren
Policy & Action

Opinion on formulating the "Resource Circulation Strategy for Plastics (tentative translation)": Toward promoting resource circulation and solving marine plastic litter issues

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Keidanren

Introduction

Marine plastic litter issues have recently become a growing global interest. There are concerns that the massive disposal of used plastic material into the ocean will cause animals to eat the plastics, and therefore affect ecosystems. Furthermore, plastics washed up on the beach and riverside damage the landscape and may inhibit town beautification efforts and tourism promotion. Marine plastic litter issues were also included in the agenda of the G7 Charlevoix Summit held in June 2018, and Canada and EU countries approved the Ocean Plastics Charter, which includes quantitative targets. Japan joined the US in not endorsing the Charter, but Prime Minister Shinzo Abe has announced that this issue would be addressed at the G20 Summit to be held in Osaka in June 2019. This stance is based on the acknowledgment that we need to involve developing countries in our efforts to reduce ocean plastic on a global scale, and we support this.

On the other hand, in the Fourth Fundamental Plan for Establishing a Sound Material-Cycle Society (Cabinet Decision of June 2018), the Japanese government set out that it would formulate the Resource Recycling Strategy for Plastics, mainly from the perspective of building a domestic framework for resource circulation. Given these two developments, the Government has established the Subcommittee for the Resource Recycling Strategy for Plastics, which is currently engaged in intensive discussion to formulate the Resource Recycling Strategy for Plastics covering marine plastic litter issues before the G20 meeting next year.

Against this backdrop, we will provide our opinions on behalf of the business community regarding the basic approach toward ocean plastic issues, which we are challenged with on a global scale, and the domestic framework for resource circulation of plastics, as well as prospective measures to address them.

1. Basic Approach

(1) Contributing to multiple SDGs

Global efforts to address marine plastic litter issues and recycling plastic resources contribute to the achievement of multiple Sustainable Development Goals (SDGs), adopted by the UN in September 2015. Such efforts not only contribute to Goal 12 (Responsible consumption and production), which aims to efficiently use natural resources and substantially reduce waste and Goal 14 (Life below water), which seeks to sustainably develop and use the oceans and marine resources, but are also related to Goal 17 (Partnerships for the goals) as these issues cannot be solved without efforts on the part of various actors, including government, local government, business operators, consumers and NGOs.

From the period of high economic growth to the 1990s, Japan became increasingly challenged with serious social issues associated with waste from households and business operations, including a shortage of waste treatment facilities and massive illegal dumping. Given these circumstances, the Government, local governments, business operators, consumers and NGOs made dedicated efforts to strengthen the Waste Management and Public Cleansing Act in multiple phases, enact the Basic Act for Establishing a Sound Material-Cycle Society, and implement the Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging ("Containers and Packaging Recycling Law")and product-specific recycling laws, including those for automobiles and household appliances. This led to significant improvements of the situation, through advancements in the proper treatment of waste and the 3Rs (reduce, reuse and recycle).

Since 1997, Keidanren has achieved substantial reductions in the final disposal volume of industrial waste[1] through the Voluntary Action Plan on the Environment, in

[1] The final disposal volume of industrial waste in fiscal 2016 was approximately 90 percent below fiscal 1990 levels and approximately 70 percent below fiscal 2000 levels 〔"Keidanren Voluntary Action Plan for Establishing a Sound Material-Cycle Society: Results of Fiscal 2017 Follow-up," March, 2018〕

which approximately forty industries participated. In addition, Keidanren has voluntarily and proactively promoted the 3Rs, tailored to the characteristics of individual industries, towards the establishment of a sound material-cycle society.[2]

Japan has proactively invited the international community to promote the 3Rs. For example, at the G8 Summit in 2004, Japan proposed the "3R Initiative," which aimed to establish a sound material-cycle society through the 3Rs.

It is important that in Japan, actors continue to collaborate and join forces in ensuring appropriate waste treatment and promoting the 3Rs. At the same time, Japan should contribute to solving global marine plastic litter issues and achieving a sound material-cycle society by extending its experiences, technologies, knowhow and legal systems among developing countries. This will also contribute to achieving the SDGs.

The world seeks to prevent plastic waste flows into the oceans and to minimize amounts winding up in landfills, and ensure that they are appropriately treated, and the that the 3Rs are realized on a global scale. Furthermore, from the perspective of reducing ocean plastic and addressing global warming issues in a way that both environmental and economic goals are met, thermal and energy recovery should also be promoted as effective choices.

(2) "Responsible consumption and production" of plastic products

We should not forget plastics have contributed to solving many issues challenging society through its physical properties and technological improvements. Light and durable, and easily reshaped, plastic is widely used as a material that allows us to enjoy safety, reassurance and convenience in our daily lives. In particular, Japanese companies have taken in the initiative in technological developments, successfully developing high-performance plastics, including plastic compounds, which can meet the weight, intensity and stiffness required in individual applications. As a result of technological

[2] Keidanren has encouraged industries to individually set up industry-specific targets taking into account industrial characteristics, as well as taking leadership in formulating the "Voluntary Action Plan for the Promotion of the 3Rs in Containers and Packaging."

development, plastic has contributed to solving food, environment and energy issues through reducing food loss and improving energy efficiency[3].

In order to enjoy the benefits of plastic while also taking sustainability into account, it is important to promote a correct understanding of plastic among the wide general public, instead of needlessly banning its use. It is critical for business operators and consumers to wisely produce, consume, and treat plastics, thus introducing resource circulation, bearing in mind, the reduction of environmental burden, technological feasibility, and economic efficiency.

It should be noted, however, that global marine plastic litter issues and domestic plastic resource circulation issues are not necessarily equivalent issues. Therefore, the formulation of a Resource Recycling Strategy for Plastics and future policy developments will require a level-headed and appropriate consideration of measures in line with policy objectives.

2. Toward solving global ocean plastic issues

(1) Appropriate management and treatment of plastic waste and preventing the flow of plastics into the ocean

Marine plastic litter issues challenge the entire world. It is imperative that each country appropriately manages and treats domestic plastic waste and prevents it from flowing out to the oceans. Furthermore, in order to set an accurate agenda, we must gain an understanding of the actual state of plastic waste entering the ocean, as well as scientifically reveal how ocean plastic impacts ecosystems and human bodies.

Developing countries in Asia and other regions are said to be responsible for

[3] Using plastic food containers and packaging for fresh foods reduces food loss by at least 10% compared with using containers and packaging made from other materials〔The impact of plastic packaging on life cycle energy consumption and greenhouse gas emissions in Europe/denkstatt〕. Moreover, replacing plastic with other materials will increase greenhouse gas emissions by more 50% or more and energy consumption by 46%〔Plastics' contribution to climate protection Summary/PlasticsEurope〕. Furthermore, there have been reports that replacing conventional soy sauce containers with plastic pouches has resulted in sixfold increases in freshness-keeping and anti-oxidation effects, that the development of a special film has enabled the longer preservation and reduced waste and loss of cooked foods〔Ministry of Agriculture, Forestry and Fisheries "Case studies on high-function containers and packages contributing to food loss reduction"〕.

massive disposal of plastic waste into the oceans[4]. The status of waste treatment and resource circulation measures is varied among different countries, and therefore countries are required to take measures that accommodate country-specific circumstances. For example, it has been pointed out that in the Pacific States, where people's lives used to be based on natural foods and products, people are accustomed to throwing their household waste in their yards and ocean; and therefore, they do not have a sufficient waste collection system that separates plastics from other waste. It is urgent for such countries to start with establishing systems that promote segregated waste collection and treatment and to familiarize the public with such systems.

As aforementioned, Japan has promoted segregated disposal and collection of household waste since its period of high economic growth and has also implemented measures to eradicate illegal dumping of industrial waste; and both campaigns have been successful. However, given the recent spotlight on waste issues challenging Japan's rivers and oceans, Japan must first renew public understanding that littering and illegal dumping are unlawful[5] and enhance measures to eradicate such acts. Since local governments are responsible for the treatment of municipal solidwaste, it is important that local governments enhance measures to ensure the collection and treatment of municipal solid waste, prevent littering, and promote town beatification efforts. Furthermore, we must discuss ways to appropriately install litter boxes in public spaces, taking into account anti-terrorist measures.

Keidanren has emphasized to member companies and organizations the importance of fulfilling their responsibilities as polluters, encouraging them to engage in waste governance, including the selection of and commissioning to high-performance waste management businesses, and to ensure that industrial waste is appropriately

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[4] The countries are said to be responsible for the largest amount of plastic waste inputs from land into the ocean are China, Indonesia, the Philippines, Vietnam and Sri Lanka, in the order of attributable amounts (2010 estimates). Japan ranks thirtieth 〔"Plastic waste inputs from land into the ocean," *Science*, February 13, 2015〕.

[5] Such acts violate the Waste Management and Public Cleansing Act, Article 16 "No person shall unnecessarily dump waste."

treated. Keidanren has also supported a fund for eliminating impediments to conserving the living environment caused by illegal dumping from the viewpoint of contributing to society. We will continue our efforts to eradicate illegal dumping and ensure appropriate waste management.

(2) Importance of technological development

In order to solve ocean plastic issues, it is important that we continue to promote product design that facilitates collection or recycling (Design for Environment), and that we develop recycling technologies that can reduce recycled material costs and improve quality.

It is essential that when we develop and deploy alternative materials, such as biodegradable plastics, we do not undermine the inherent functions of products, containers and packaging and we achieve economic rationality and technological feasibility. While biodegradable plastics promise to potentially contribute to improving ocean plastic issues, they require a long period of time before they are fully decomposed in the ocean, and thus it has been pointed out that microplastics may be generated in the course of decomposition and may remain in the ocean. Therefore, we should continue our efforts to accumulate scientific knowledge on the matter. It is also important to clarify the issues that need to be addressed, such as the rate of decomposition and the mechanism of decomposition in the ocean, when we advance the development of alternative materials. Furthermore, given indications that the utilization of biodegradable plastics may encourage littering, proper waste management is essential and a concise explanation to the general public on appropriate use is called for.

(3) Drawing on Japan's experiences, technology and knowhow to promote international cooperation

Japan should lead the world in addressing plastic issues by exporting or transferring to developing countries as packaged systems, the waste collection system and waste treatment and recycling technologies that it has compiled based on experience, thus contributing to the appropriate treatment of waste and promotion of the 3Rs in such countries. It is important that careful and continued support is provided not only in terms

of hard infrastructure but also soft dimensions, such as the maintenance and management of facilities and awareness-raising among the general public.

3. Toward further promotion of resource circulation in Japan

(1) Efforts to date

① An enhanced law system and voluntary approaches by business operators

Japan has enacted many laws to promote resource circulation, beginning with the Containers and Packaging Recycling Law in the 1990s, followed by consecutive implementation of the Basic Act on Establishing a Sound Material-Cycle Society and various recycling laws after 2000, which was referred to as the "dawn of the sound material-cycle society." In response to such trends, the business community has voluntarily and proactively promoted the 3Rs by formulating the "Keidanren Voluntary Action Plan for Establishing a Sound Material-Cycle Society" with around forty participating industries and the "Voluntary Action Plan for the Promotion of the 3Rs in Containers and Packaging" led by the Eight Container & Packaging Recycling Organizations. These efforts have proven to be successful.

For example, under the Voluntary Action Plan for the Promotion of the 3Rs in Containers and Packaging, the Japanese business community has focused its efforts in reducing and recycling PET bottles and other plastic containers and packaging, as well as in promoting environmental education among consumers. As a result, the average weight of one PET bottle was reduced by 23% in fiscal 2016 relative to fiscal 2004 levels, and other plastic containers and packaging were reduced by 15.6% in fiscal 2016 compared to fiscal 2004 levels[6]. Moreover, the automobile industry has achieved a weight-based recycling rate of approximately 99%[7] as a part of its plastic waste recycling efforts. It has also established the Japan Foundation for Advanced Auto

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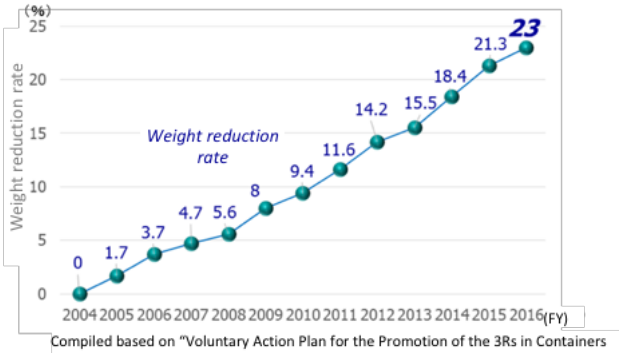
[6] Voluntary Action Plan for the Promotion of the 3Rs in Containers and Packaging 2020 Follow-up Report (Performance in fiscal 2016)

[7] For example, by utilizing waste plastics in automotive shredder residue as fuel.

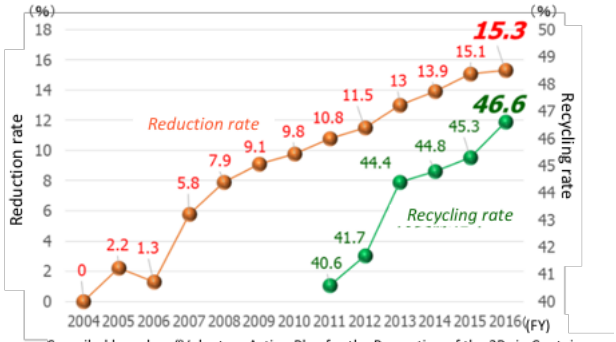
Recycling in 2017 to proactively promote resin recycling.

Figure 1. Trends in PET bottle weight reduction



Compiled based on "Voluntary Action Plan for the Promotion of the 3Rs in Containers and Packaging 2020 Follow-up Report: Performance in fiscal 2016 (Eight Container & Packaging Recycling Organizations)

Figure 2. Trends in the reduction rate and recycling rate of plastic containers and packaging



Compiled based on "Voluntary Action Plan for the Promotion of the 3Rs in Containers and Packaging 2020 Follow-up Report: Performance in fiscal 2016 (Eight Container & Packaging Recycling Organizations)

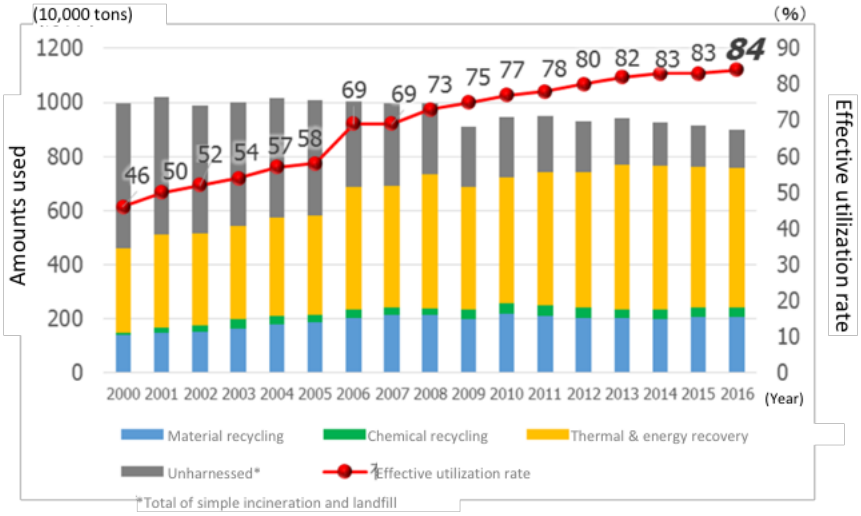
② Effective utilization rate of plastic waste

The effective utilization rate of plastic waste in Japan, including thermal and energy recovery has steadily improved from 46% in 2000 to 84% in 2016[8]. Although differences in statistical methods make it difficult to perform simple international comparisons, taking into account the fact that the collective effective utilization rate of plastic waste covering a total of thirty countries, including EU members countries, Norway and Switzerland, was 72.7%[9], plastic is already used by the Japanese public as a highly recyclable resource, including thermal and energy recovery.

[8] Plastic Waste Management Institute. "An Introduction to Plastic Recycling 2018"

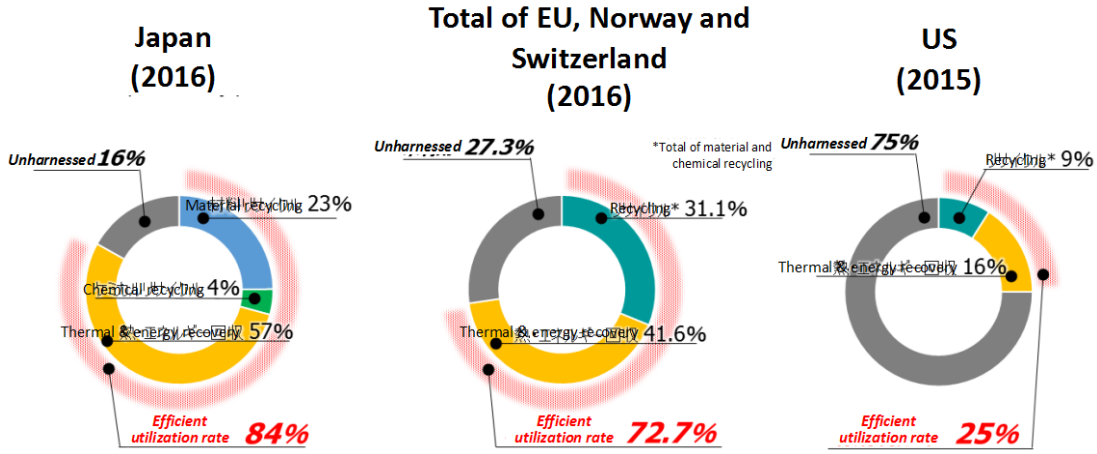
[9] PlasticsEurope. "Plastics - the Facts 2017" It should be noted that figures tend to be higher than Japanese data, as the figures indicate the share against recovered plastics.

Figure 3. Trends in effective utilization rate of plastic waste in Japan



Compiled based on:
An introduction to plastic recycling in Japan 2018 (Plastic Waste Management Institute)

Figure 4. International comparison of plastic waste treatment status



Compiled based on: *An introduction to plastic recycling in Japan 2018* (Plastic Waste Management Institute); *Plastics – the Facts 2017* (Plastics Europe); and *Plastics: Material-Specific Data* (EPA)

(2) Future measures, etc.

① Continuing and enhancing voluntary approaches by the business community

From the viewpoint of further enhancing plastic resource circulation and contributing to marine plastic litter issues, Keidanren collected case studies of efforts made by member companies and organizations and has compiled them in "Contributing to the UN SDGs through Measures Addressing Plastic Waste Issues: Efforts toward a positive future for plastics."[10] As indicated by these case studies, various 3R efforts are currently being made by a broad range of companies and organizations. We will also endeavor to promote new approaches that retain the functional aspects of products and containers and packages, such as their safety and convenience, while considering their economic efficiency and technological feasibility. Furthermore, Keidanren will discuss how to enhance the Keidanren Voluntary Action Plan for Establishing a Sound Material-Cycle Society in a more plastic-conscious way.

② Improving the effective utilization rate of used plastics

When considering the resource circulation of plastics, further improvement of the effective utilization rate of used plastics is an important issue. By nature, plastic is degraded by repeated use[11]; and therefore, we should give further thought to effective and efficient ways of resource circulation that accommodate the properties of plastic material, acknowledging the effectiveness of not only material recycling, but also feedstock recycling and thermal and energy recovery, and optimally using such methods in order to maximize the effective utilization rate of resources and to minimize costs.

As a part of such efforts, we should review the current situation regarding recycling methods under the Containers and Packaging Recycling Law where material recycling methods are given priority in biddings among recycling business operators.

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[10] This collection will be enhanced before the B20 meeting in March 2019.

[11] The physical property of plastic is degraded due to the heat history of reprocessing plastic (relaxation in heat processing). Compound material made from multiple plastics is sometime used to enhance product functions.

The increased utilization of feedstock recycling methods is required from a global warming perspective as well[12].

Furthermore, the addition of items such as plastic products as regulated items under the Containers and Packaging Recycling program require extremely careful consideration, given strong concerns that such additions will lead to fundamental changes to the current scheme, significantly affecting business operations and thus provoking confusion. If we are to review our recycling-based system from an Extended Producer Responsibility perspective, based on developments observed in the EU's Circular Economy Strategy, we should consider fundamentally amending Japan's unique Waste Management and Public Cleansing Act.

Furthermore, with a view to various issues, such as depopulation, rural exodus and import control on plastics in China, we need to enhance the competitiveness and sophistication of resource circulation industries that play an important role in a Sound Material-Cycle Society, by promoting wide-area waste processing, encouraging efficient and effective resource circulation, including using existing incinerators to recover heat and energy, and improving productivity by harnessing IoT and AI, etc.

③ Promoting technology development, including recycled material and bio-based plastics

Japanese companies have successfully taken the initiative in developing technologies for for lightweight and high-performance plastics. There is a need to continue promoting product design that facilitates collection and recycling (Design for Environment) and the development of various recycling technologies. It is also important to promote the use of recycled materials and to develop technologies for alternatives to plastics, such as bio-based plastics and paper. We should aim to deploy these materials in a way that does not undermine the original function of products and containers and packaging and that achieves economic rationality, technological feasibility and stability of supply at the same time. While bio-based plastics use plant-

[12] Utilization of chemical recycling methods is contained in the Keidanren Commitment to a Low Carbon Society and contributed to CO2 emission reductions in the iron and steel industry. The commercialization of chemical recycling technologies is more advanced in Japan compared to the EU and the US.

derived raw materials and can potentially contribute to departures from dependency on oil resources from a resource issue perspective, as well as to solving global warming issues by being carbon neutral, we also need to consider issues such as supply stability, ensuring economic rationality and food issues.

It is important for us to promote the development, commercialization and international deployment of these technologies, and proactively contribute to solving resource circulation and ocean plastic issues on a global scale.

④ Approaches toward reducing plastic shopping bags (compulsory charge on plastic bags, etc.)

Major retailers have already led efforts to promote the 3Rs in reducing plastic shopping bags by voluntarily charging customers for plastic shopping bags and encouraging consumers to bring their own bags. In order to let these campaigns take root among the general public, measures must be proactively taken by the Government and local governments.

If the Government is to take the initiative in implementing a compulsory charge on plastic shopping bags (abolition of free distribution), the Government and local governments must lead efforts to foster public understanding and take legislative measures to create a nationwide system by explicitly defining a "plastic shopping bag," for example, so that a sense of unfairness does not prevail among business operators and there is no confusion among consumers.

While some countries are abolishing the use of some plastic products, market regulations should be introduced based on extremely careful judgment with regard to policy aims and the actual situation in other countries, as well as the potential impacts on people's lives and business operations, and therefore should not be introduced unnecessarily.

⑤ Ambitious "milestones" defining the direction in which we should be headed

The "Resource Recycling Strategy for Plastics (proposed draft)" (Central Environment Council, October 19, 2018) indicates "milestones" exceeding the quantitative targets set out in the G7 Ocean Plastic Charter as the "direction in which we should be headed." We recognize that these milestones are extremely ambitious for the business community, which already proactively promotes the 3Rs.

The utilization of recycled plastics and bio-based plastics, in particular, must be premised on their feasibility in terms of quality and cost, and the promotion of understanding among users is indispensable[13]. Milestones should be determined based on scientific and economic foundations. It is important that "reduction" standards are set up in a way that Japan is given credit for its past efforts. Furthermore, when promoting the effective use of used plastics, government support and measures to install thermal and energy recovery equipment in incinerating facilities, enlarge recycling and waste treatment facilities by promoting wide-area waste processing, and address remote island issues are essential.

We wish to confirm that as indicated in the proposed Strategy, these milestones define the "direction in which we should be headed through increased understanding and partnership/cooperation among the general public and all industries at levels" and do not in effect implement policy measures, such as allocating quantitative targets by industry or product items, or obligate business operators and consumers to achieve them. The business community will engage in the 3Rs to the furthest extent possible toward achieving these milestones.

Conclusion

Japan's declining the approval of the "Ocean Plastic Charter" at the G7 Charlevoix Summit has been received by some parties as an indication of Japan's delayed resource circulation efforts. However, as described above, Japan is not internationally slow in

[13] It has been pointed out that there is resistance against using recycled products. The use of plant-derived resources as raw material requires wide public understanding, including among public administration.

implementing measures, but instead has already established an advanced Sound Material-Cycle society under the partnership of Government, local governments, business operators, consumers and NPOs. We hope that the “Resource Recycling Strategy for Plastics” to be formulated will continue to lead global approaches to plastic issues through facilitating efficient and effective resource circulation, as well as extensively promoting the “3R Initiative” launched by Japan and transferring our technology and knowhow in both hard and soft aspects.

The “Resource Recycling Strategy for Plastics” to be formulated by the Government will indicate the direction in which measures should be taken, and concrete programs and measures based on the Strategy will be considered in Council meetings. Keidanren is determined to take part in these discussions and contribute to the achievement of a sustainable society.