

Voluntary Action Plan
for Establishing a Sound Material-Cycle Society
— Results of Fiscal 2019 Follow-up —
(including “Industry-Specific Plastic-Related Targets”)
<Summary>

March 17, 2020
Keidanren (Japan Business Federation)

1. Efforts under the Voluntary Action Plan for Establishing a Sound Material-Cycle Society

Keidanren formulated the Voluntary Action Plan for Establishing a Sound Material-Cycle Society (“Voluntary Action Plan”) to promote voluntary efforts on the part of Japan’s business community. Every year, it conducts and publishes a follow-up survey with cooperation of participating industries (refer to Reference 1 & 2 for details on its background). This fiscal year, with two industries having newly joined the 43 participating industries, a total of 45 industries conducted follow-up surveys.

Under the Voluntary Action Plan, each participating industry takes measures to achieve three types of targets: (1) reductions in the final disposal volume of industrial waste; (2) other industry-specific targets; and (3) industry-specific plastic-related targets.

In terms of reducing the final disposal volume of industrial waste, in addition to achieving industry-specific targets, the Japanese business community as a whole “aims to reduce by fiscal 2020, the final disposal volume of appropriately treated industrial waste by 70% from the actual performance level in fiscal 2000 with consideration of the achievement of a low-carbon society” (Fourth Target, revised in March 2016), in order not to increase the final disposal volume of industrial waste from the current level.

In addition, based on industry-specific characteristics and circumstances, with a view to improving the quality of resource circulation, each industry has set up individual targets, including target recycling rates for byproducts produced during manufacturing processes and targets for reducing municipal solid waste from business activities.

Furthermore, from fiscal 2019, given rising domestic and global concerns regarding marine plastic litter issues, Keidanren has set up “industry-specific plastic-related targets” based on its Keidanren Policy Proposal “Opinion on formulating the “Japan’s Resource Circulation Strategy for Plastics” (November 2018) in order to promote measures to deal with plastic issues and to widely communicate the efforts made by Japan’s business community.

We have compiled the fiscal 2019 results by surveying the performance achieved in fiscal 2018 and compiling the progress made toward meeting the economy-wide target and industry-specific targets, as well as the specific efforts dedicated to achieving these targets. We have also included an enhanced description of the “industry-specific plastic-

related targets” newly introduced in the previous fiscal year.

This Voluntary Action Plan is also included in the Government’s Fundamental Plan for Establishing a Sound Material-Cycle Society (Cabinet Decision of June 2018).

*Industries participating in the Fiscal 2019 Voluntary Action Plan for Establishing a Sound Material-Cycle Society (45 industries)

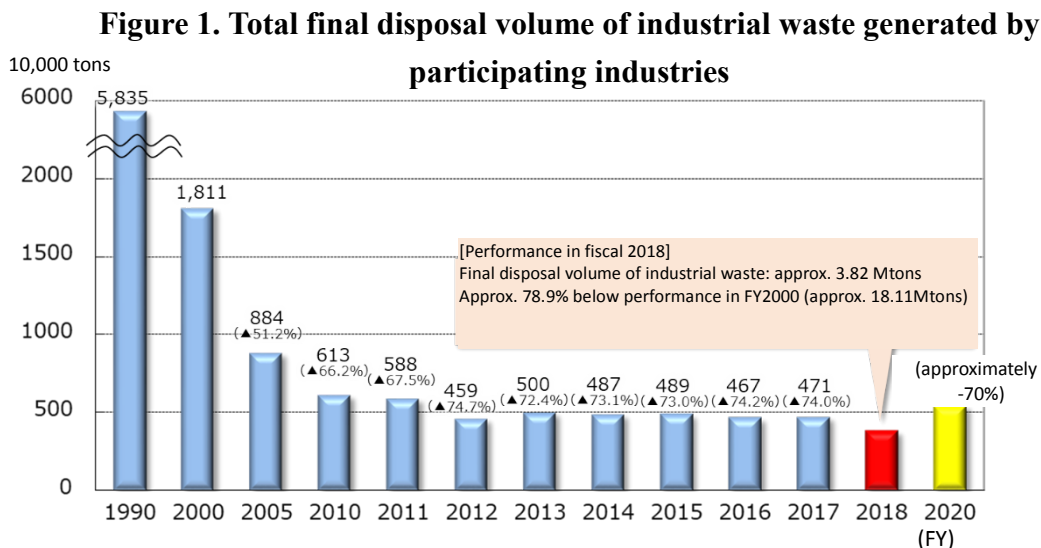
Electric power, gas, petroleum, iron and steel, non-ferrous metals, aluminum, brass, electric cable and wire, rubber, flat glass, cement, chemical, pharmaceuticals, pulp and paper, electrical and electronics, industrial machinery, bearing, automobiles, auto parts, auto-body, industrial vehicles, rolling stock, shipbuilding, flour, sugar, milk and dairy products, beverages, beer, construction, aviation, telecommunications, printing (The above 32 industries are counted when calculating the industry-wide industrial waste final disposal volume.); housing (Waste from the housing industry is included in that from the construction industry, and therefore is not added to total in order to avoid double-counting.), real estate, machine tools, trade, department stores, railway, maritime transport, banking, nonlife insurance, securities, life insurance, convenience stores (newly added), chain stores (newly added).

2. Result of efforts in fiscal 2018

(1) Reduction target for final disposal volume of industrial waste

In fiscal 2018, the final disposal volume of industrial waste (32 industries) was approximately 3.82 million tons, approximately 78.9% below the performance level (approximately 18.11 million tons) in fiscal 2000, the baseline year (approximately 93.5% below the fiscal 1990 level), thus overachieving the Plan’s target (cf. Figure 1.).

The final disposal volume of industrial waste marked a decrease of approximately 0.89 million tons (approximately 18.9%) below the previous year (fiscal 2017 performance). This is assumed to have resulted from advancements in the promotion of reduced industrial waste volume in each industry and in industrial efforts to promote the 3Rs (reduce, reuse and recycle), owing in particular, to reductions in the final disposal volume of construction material waste, caused by improved recycling rates due to the promotion of waste segregation based on the Construction Material Recycling Law and institutional revisions made in relation to reducing the volume of construction debris disposals in the ocean.



*1: The rate (%) of reduction from final disposal volume of industrial waste in fiscal 2000 (baseline year) is provided in round brackets.

*2: Total final disposal volume of industrial waste in 32 industries out of the 45 industries participating in the Plan. The sum has been recalculated for the fiscal years before 2016 to accommodate changes made in the figures reported by some industries.

*3: The figure provided for performance in fiscal 1990 does not include the cement, bearing, shipbuilding, aviation and printing industries. The figure provided for performance in fiscal 2000 does not include figures for the cement and printing industries, and includes a sum of figures from past reports for the rubber industry. The five industries mentioned above collectively account for approximately 0.6% of performance in fiscal 2018.

*4: The final disposal volume of industrial waste recorded in fiscal 2018 amounted to approximately 3.82 million tons, accounting for around 39.4% of total nationwide final disposal volume of industrial waste, which was approximately 9.70 million tons (according to Ministry of the Environment survey). Industrial waste from organizations and companies that are not included in the Keidanren survey include for example, industrial waste (mainly sludge) from water and sewage works and the ceramics industry and industrial waste (animal and plant residue and animal feces) from the agricultural sector, etc.

(2) Industry-specific targets

Industries set up individual targets accommodating industrial-specific characteristics and circumstances and engaged in efforts to achieve them. The targets and performance in fiscal 2018 for each industry are presented in Table 1 [List of industry-specific targets]. (Details can be found in the “Industry-specific targets” section of the Industry-specific Report (Japanese version only). Keidanren will continue to encourage industries to set up industry-specific targets that will contribute to improving resource circulation.

Table 1. List of industry-specific targets

[Explanation of targets]

○: Quantitative targets

□: Qualitative targets

[*] : Overachieved targets

※Targets are for industrial waste unless otherwise indicated.

Electric power	<ul style="list-style-type: none"> ○ Make efforts to achieve recycling rate of 95% in fiscal 2020 <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 97% [*]
Gas	<ul style="list-style-type: none"> ○ Maintain volume of industrial waste generated at city gas manufacturing plants at levels not exceeding 1,000 tons through fiscal 2020 (79% below fiscal 2000 level). <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 1,000 tons [*] ○ Reduce drilling mud from city gas conduit construction by no less than 17%, using an integrated indicator that combines drilling mud reduction and recycling. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 17.0%

Petroleum	<ul style="list-style-type: none"> ○ Maintain and continue zero emission (final disposal rate of no more than 1%) through fiscal 2020. ➤ Performance in fiscal 2018: 0.1% [*]
Iron and steel	<ul style="list-style-type: none"> ○ Achieve steel can recycling rate of at least 90% ➤ Performance in fiscal 2018: 92.0% [*]
Aluminum	<ul style="list-style-type: none"> ○ Maintain aluminum dross recycling rate of no less than 99% in fiscal 2020. ➤ Performance in fiscal 2018: 99.9%
Brass	<ul style="list-style-type: none"> ○ Maintain recycling rate of no less than 90% in fiscal 2020. ➤ Performance in fiscal 2018: 93.1% [*]
Electric cable and wire	<ul style="list-style-type: none"> ○ Make efforts to maintain a recycling rate of no less than 95% in fiscal 2020. ➤ Performance in fiscal 2018: 94.4% [*]
Rubber	<ul style="list-style-type: none"> ○ Achieve a recycling rate of no less than 70% in fiscal 2020. ➤ Performance in fiscal 2018: 80.3% [*]
Flat glass	<ul style="list-style-type: none"> ○ Achieve recycling rate of no less than 95%. ➤ Performance in fiscal 2018: 91.2%
Cement	<ul style="list-style-type: none"> □ Receives a large volumes of waste and byproducts accepted by other industries and utilizes them in cement production.
Chemicals	<ul style="list-style-type: none"> ○ Achieve recycling rate of no less than 65% in fiscal 2020. ➤ Performance in fiscal 2018: 68% [*]
Pharmaceuticals	<ul style="list-style-type: none"> ○ Achieve recycling rate of no less than 55% in fiscal 2020. ➤ Performance in fiscal 2018: 64.2% [*] ○ Improve waste generation intensity in fiscal 2020 to 50% of the fiscal 2000 level. (Achieve a level of no more than 2.2 tons/0.1 billion yen.) ➤ Performance in fiscal 2018: 1.9 tons/0.1 billion yen [*]
Pulp and paper	<ul style="list-style-type: none"> ○ Make efforts to maintain current level (97%) of effective utilization. ➤ Performance in fiscal 2018: 98.3% [*]
Electrical and electronics	<ul style="list-style-type: none"> ○ Reduce the final disposal rate to no more than 1.8% in fiscal 2020. ➤ Performance in fiscal 2018: 2.8%
Industrial machinery	<ul style="list-style-type: none"> ○ Make efforts to achieve recycling rate of no less than 90%. ➤ Performance in fiscal 2018: 90.6% [*]
Bearing	<ul style="list-style-type: none"> ○ Make efforts to achieve recycling rate of no less than 96% in fiscal 2020. ➤ Performance in fiscal 2018: 96.0% [*]
Automobile	<ul style="list-style-type: none"> ○ Maintain recycling rate of no less than 99% in fiscal 2020. ➤ Performance in fiscal 2018: 99.9% [*]
Auto parts	<ul style="list-style-type: none"> ○ Achieve recycling rate of no less than 85% in fiscal 2020. ➤ Performance in fiscal 2018: 96.6% [*]
Auto-body	<ul style="list-style-type: none"> ○ Achieve industry participation rate of no less than 95% in terms of sales (ratio of companies of the industry participating in the Voluntary Action Plan). ➤ Performance in fiscal 2018: 98.3% [*]
Industrial vehicles	<ul style="list-style-type: none"> ○ Make efforts to maintain recycling rate of no less than 90% for industrial waste generated during the manufacturing process. ➤ Performance in fiscal 2018: 90.1% [*]
Rolling stock	<ul style="list-style-type: none"> ○ Achieve recycling rate of no less than 99% in fiscal 2020 and make efforts to come as close to 100% as possible. ➤ Performance in fiscal 2018: 99.9% [*]
Shipbuilding	<ul style="list-style-type: none"> ○ Make efforts to achieve recycling rate of around 86% at the manufacturing phase of shipbuilding in fiscal 2020. ➤ Performance in fiscal 2018: 78.51%

Flour	<ul style="list-style-type: none"> ○ Achieve recycling rate of no less than 90% in fiscal 2020. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 96.2% [*]
Sugar	<ul style="list-style-type: none"> ○ Achieve recycling rate of no less than 98% in fiscal 2020. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 97.6%
Milk and dairy products	<ul style="list-style-type: none"> ○ Achieve recycling rate of no less than 97% in fiscal 2020. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 94.82%
Soft drinks	<ul style="list-style-type: none"> ○ Maintain a recycling rate of no less than 99%. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 98.9%
Beer	<ul style="list-style-type: none"> ○ Maintain 100% recycling rate. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 100% [*]
Construction	<ul style="list-style-type: none"> ○ Achieve construction sludge recycling rate of no less than 90% in fiscal 2020. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 88% ○ Achieve a mixed construction waste recycling rate of no less than 60% in 2020. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 59.0%
Aviation	<ul style="list-style-type: none"> ○ Aim to achieve final disposal rate of no less than 2.4% in fiscal 2020. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 5.1%
Telecommunications	<ul style="list-style-type: none"> ○ Achieve zero emissions (final disposal rate of no more than 1%) for waste from telecommunications facilities. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 0.17% [*]
Printing	<ul style="list-style-type: none"> ○ Achieve recycling rate of no more than 95% in fiscal 2020. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 99.1% [*]
Housing	<ul style="list-style-type: none"> ○ Aim to achieve the following category-specific recycling rates: Concrete: 96 % ; wood: 70 % ; steel: 92 % (weighted average of three categories: 90.4%) <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 87.0% (weighted average)
Real estate	<ul style="list-style-type: none"> ○ Aim to achieve paper recycling rate of no less than 85%. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 85.3% ○ Make efforts to maintain recycling rate of 100% for glass bottles, cans and PET bottles. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: glass bottles 100% [*] ; cans 99.5%: PET bottles 99.5% <input type="checkbox"/> Improve purchasing rate of recycled paper. <input type="checkbox"/> Improve green procurement rate.
Machine tools	<ul style="list-style-type: none"> ○ Achieve recycling rate of no less than 90% in fiscal 2020. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 91.1% [*]
Trade	<ul style="list-style-type: none"> ○ Reduce disposal volume of municipal solid waste from business activities by 86% from fiscal 2000 level in fiscal 2010. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 85.1% ○ Reduce volume of municipal solid waste from business activities to no more than 4,000 tons in fiscal 2020 (reduce by 55% from fiscal 2000). <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 4,000 tons [*]
Department stores	<ul style="list-style-type: none"> ○ Aim to reduce final disposal volume of waste generated in stores by 60% from year 2000 level (per 1m²) in 2030. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 43.7% reduction ○ Reduce intensity (volume used per unit sales) of paper containers and packaging (wrapping paper, carrier bags, paper bags, paper boxes) use by 50% relative to year 2000 levels in 2030. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 40.0% reduction

Railway	<ul style="list-style-type: none"> ○ Achieve recycling rate of 94% for waste from stations and railcars. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 93% ○ Achieve recycling rate of 96% for waste generated at General Rolling Stock Centers, etc. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 96% [*] ○ Achieve recycling rate of 96% for waste generated in facility construction. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 94%
Maritime transport	<ul style="list-style-type: none"> <input type="checkbox"/> Appropriately manage waste in accordance with international standards. <input type="checkbox"/> Make efforts to control waste generation.
Banking	<ul style="list-style-type: none"> ○ Achieve paper recycling rate of no less than 90% in fiscal 2020. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 89.5% ○ Increase purchasing rate of recycled paper and environment-friendly paper to no less than 75% in fiscal 2020. <ul style="list-style-type: none"> ➤ Performance in fiscal 2018: 78.1%
Non-life insurance	<ul style="list-style-type: none"> <input type="checkbox"/> At individual insurance companies, <ol style="list-style-type: none"> 1. Establish a corporate waste management scheme to promote reductions in municipal solid waste from business activities generated at offices and collaborate with waste collection companies to ensure segregated collection and improve recycling rate. 2. Make efforts to purchase office supplies that contribute to increasing the utilization rate of environment-friendly products. 3. Reduce OA paper use through efforts made toward achieving corporate targets including the active utilization of two-sided copying, 2in1 copying, tablet devices, etc. <input type="checkbox"/> Reach out to society through automobile insurance (promote use of recycled auto parts).
Securities	<ul style="list-style-type: none"> <input type="checkbox"/> Make efforts to reduce paper use by utilizing two-sided copying and 2in1 copying and promoting paperless operations by digitalizing documents.
Life insurance	<ul style="list-style-type: none"> <input type="checkbox"/> Make efforts to reduce paper use by promoting paperless practices. <input type="checkbox"/> Make efforts to engage in green procurement of paper and office supplies. <input type="checkbox"/> Make efforts to engage in fully segregated waste collection. <input type="checkbox"/> Make efforts that will lead to the reuse of paper and other resources.

【Reference】

Furthermore, given the announcement of the Keidanren Proposal “Toward the Establishment of an Effective Recycling System for Containers and Packaging” (October 2005), in March 2006, the Liaison Committee of Associations Promoting 3R, comprising eight containers and packaging recycling organizations, formulated the “Voluntary Action Plan for Promoting the 3Rs in Containers and Packaging.” Under the Plan, the Liaison Committee has set up individual targets for each material type of container or packaging and conducts annual follow-up surveys, renewing target levels, as required.

According to the “Voluntary Action Plan for Promoting the 3Rs in Containers and Packaging 2020 Follow-Up Results (Performance in fiscal 2018)” (December 2019), the recycling and collection rates of steel cans, aluminum cans and cardboard boxes have remained above 90%, thus steadily achieving success. (see Table 2.)¹.

Regarding plastics, a recycling rate of approximately 85% PET bottles were achieved for PET bottles, which have become 23.6% lighter per bottle compared to fiscal 2004 levels. The 3Rs are also being promoted for plastic resources, succeeding in cumulative reductions of plastic packaging and containers by 17.0 % from fiscal 2005 levels (see Figure 2.).

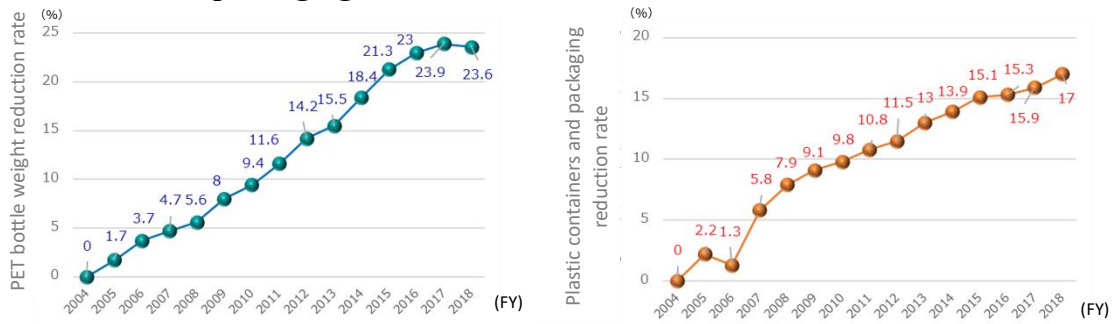
Table 2. Status of recycling targets

Material	Indicator	Fiscal 2020 target	Fiscal 2018 performance	<Reference> Fiscal 2017 performance
Glass bottles	Recycling rate	No less than 70%	68.9%	(69.2%)
PET bottles		No less than 85%	84.6%	(84.9%)
Steel cans		No less than 90%	92.0%	(93.4%)
Aluminum cans		No less than 90%	93.6%	(92.5%)
Plastic containers and packaging	Recycling rate	No less than 46%	45.4%	(46.3%)
Paper containers and packaging	Collection rate	No less than 28%	27.0%	(24.5%)
Paper containers for beverages		No less than 50%	42.5%	(43.4%)
Cardboard boxes		No less than 95%	96.1%	(96.1%)

<Source: Liaison Committee of Associations Promoting 3R>

¹Refer to the Liaison Committee of Associations Promoting 3R website for details: <http://www.3r-suishin.jp>

Figure 2. Weight reduction rate of PET bottles and reduction rate of plastic containers and packaging



<Source: compiled by Keidanren based on figures published by the Liaison Committee of Associations Promoting 3R>

(3) Industry-specific plastic-related targets and other efforts

In August 2018, Keidanren compiled and announced “Opinion on formulating ‘Japan’s Resource Circulation Strategy for Plastics’” (see Appendix 1), covering the Japanese business community’s basic approach and views on future measures regarding marine plastic litter issues faced at the global level and domestic plastic resource circulation¹. In the Opinion, we included our intentions to “discuss how to enhance the Keidanren Voluntary Action Plan for Establishing a Sound Material-Cycle Society in a more plastic-conscious way.”

Based on the Keidanren Opinion, organizations and companies participating in the Keidanren Voluntary Action Plan for Establishing a Sound Material-Cycle Society considered targets that would contribute to resolving marine plastic litter issues and promote plastic resource circulation from the perspective of deepening voluntary approaches by the business community and expanding the horizons of such efforts. As a result, in April 2019, 43 “industry-specific plastic-related targets” were announced by 20 industries².

In fiscal 2019, industries continued discussions on enhancing their targets. As a result, as indicated in Table 4. [Industry-specific plastic-related targets], a total of 83 targets were announced by a total of 39 industries, or almost twice the number of industries compared to the previous year. Various types of targets have been set up, as presented in Table 3, which offers a breakdown of industry-specific plastic-related targets.

Table 3. [Breakdown of industry-specific plastic-related targets]

Plastic-related quantitative targets (33 targets)
<ul style="list-style-type: none">• Quantitative targets, including target recycling rates and effective utilization rates (18 targets)• Quantitative reduction targets, including targets to reduce weight and volume of use (6 targets)• Quantitative targets regarding the reduction of final disposal volumes (3 targets)• Quantitative targets regarding the implementation rate of measures taken by member companies (6 targets)
Plastic-related qualitative targets (50 targets)
<ul style="list-style-type: none">• Targets regarding reuse and recycling efforts and the promotion of activities (16 targets)• Targets regarding the promotion of reduction measures (8 targets)• Targets regarding the promotion of beautification activities in communities, rivers and beaches (3 targets)• Targets regarding educational and awareness-raising activities targeting member

¹For details, see: <http://www.keidanren.or.jp/en/policy/2018/098.html>

²For details, see: <http://www.keidanren.or.jp/en/policy/2019/032.html>

companies and customers (12 targets)			
• Targets regarding the development of new technologies, including biomass technologies and recycling technologies (9 targets)			
• Targets regarding the proactive purchasing of environment-friendly products and support for environmentally advanced companies (2 targets)			
Changes in the number of targets from the previous fiscal year			
	Existing	Revised	New
Quantitative targets	13 targets	2 targets	18 targets
Qualitative targets	25 targets	0 targets	25 target
Subtotal	38 targets	2 targets	43 targets
Total	83 targets		

Industries have also been engaged in efforts that have not been listed as targets, such as beach and river cleanups, outreach efforts using workshops and posters, promoting the use of alternative materials, and distributing reusable shopping bags. (For details, see the “Industry-specific Report.”)

With a view to the growing global importance of marine plastic litter issues and the challenges related to promoting plastic resource circulation, Keidanren will seek to further enhance targets as well as to promote understanding for the efforts made by the Japanese business community by widely communicating the voluntary approaches taken by these industries both domestically and overseas.

Table 4. Industry-specific plastic-related targets

<p>[Explanation of targets] 【Quan○】 : Quantitative target 【Qual○】 : Qualitative target 【*】 : Overachieved targets ※For details, see the “Industry-specific Report.”</p>

Electric power	【Qual①】 【Qual②】	Promote recycling of materials, including plastic wastes Promote beautification and cleanup activities	Existing
Gas	【Quan①】	Aim for 100% effective utilization of used polyethylene gas pipes, including thermal recovery by fiscal 2030 >98.9% (Fiscal 2018)	Existing
Petroleum	【Quan①】 【Qual①】	Achieve 100% implementation rate of systems ensuring segregated waste collection at each company (office) in fiscal 2020 >51% (fiscal 2018) Proactively engage in litter cleanup activities, including cleanups of plastic litter, in public spaces (roads, beaches)	New

Iron and steel	【Quan①】	<p>Assuming that a legal system that further promotes the formulation of a sound material-cycle society will have been established and that a collection system will have been established under Government leadership, make efforts with an aim to use 1 Mt waste plastics annually.</p> <p>Note: revision of Commitment to a Low Carbon Society Phase 1 (2020 target) (from Iron and Steel WG Report on February 17, 2017)</p> <ul style="list-style-type: none"> • The Association had aimed to reduce emissions by 2 Mt-CO₂ by expanding feedstock recycling of waste plastics at steel plants (utilization of 1 million tons), assuming that a collection system would be established under Government leadership. • In the May 2016 “Report on Evaluation and Study of the Implementation Status of the Containers and Packaging Recycling System,” the Association decided to “maintain by 50% prioritization of material recycling” and to conduct a review “in around 5 years.” • Given that it has become extremely difficult to increase the utilization of waste plastics to 1 Mt in 2020, considering the current circumstances, the newly decided policy will count as reduced volumes only increased volumes of waste plastics, etc, collected relative to fiscal 2005 levels. <p>➢410,000 tons (fiscal 2018)</p>	Existing
Non-ferrous metals	【Qual①】	Reduce plastic wastes and promote recycling	New
Aluminum	【Quan①】	Maintain current plastic waste recycling rate through fiscal 2030 and aim to achieve higher rates.	New
Brass	【Quan①】	Maintain plastic waste recycling rate of no less than 85%through fiscal 2030. ➢89.9% (fiscal 2018)	New
Electric cable and wire	【Quan①】 【Qual①】	Limit final waste disposal volumes of plastic and rubber wastes to below current levels (baseline year: fiscal 2019) Enhance information-sharing among members	New
Rubber	【Quan①】	Maintain plastic waste recycling rate of no less than 85% through fiscal 2030.	New
Cement	【Qual①】	Increase receipt and treatment of plastic wastes	Existing

Chemical	【Quan①】	[JPIF] Encourage a wider range of companies to take measures to prevent resin pellet spill	Revised
	【Quan②】	[JPIF] Increase the number of companies and organizations participating in the campaign to announce declarations towards resolving marine plastic litter issues ➤ Currently, 41 companies and 3 organizations have declared measures	Revised
	【Qual①】	[JPIF] Awareness-raising campaigns regarding marine plastic litter issues (host lectures, send lecturers)	New
	【Qual②】	[JPIF: Coordinate academic research on marine plastic litter issues	New
	【Qual③】	[JCIA LRI] Evaluate exposure or risk of environmental organisms to chemical substances absorbed by microplastics	Existing
	【Qual④】	[JCIA LRI] Clarify the mechanism of microplastics generation	Existing
	【Qual⑤】	[JaIME (Japan Initiative for Marine Environment)] Organize training seminars for dissemination in Asia	Existing
	【Qual⑥】	[JaIME (Japan Initiative for Marine Environment)] Verify the effectiveness of energy recovery	New
Pharmaceuticals	【Quan①】	Achieve plastic waste recycling rate of 65% by fiscal 2030. ➤ 58.7% (fiscal 2018)	New
	【Qual①】	Develop and supply biodegradable materials from paper pulp	Existing
Pulp and paper	【Qual②】	Accelerate the replacement of plastics by improving the functionality of existing paper products.	
	Electrical and electronics	【Qual①】	Promote lifecycle design and material circulation measures of products and packaging considering the 3Rs.
【Qual②】		Promote the 3Rs of plastic wastes in production.	
【Qual③】		Implement measures, including cleanups, addressing marine plastic litter issues that contribute to biodiversity.	
Bearing	【Quan①】	Make efforts to achieve recycling rate of no less than 96% for waste, including plastic waste in fiscal 2030. ➤ 96.0% (fiscal 2018) [*]	New

Automobiles	<p>【Quan①】</p> <p>【Quan②】</p>	<p>Maintain recycling rate of no less than 99% for all industrial waste generated at factories through fiscal 2020.</p> <p>➢99.9% (fiscal 2018) [*]</p> <p>Continues and maintain recycling rate of no less than 90% for automobile shredder residue through fiscal 2030.</p> <p>➢ 95+% at each company (fiscal 2018) [*]</p>	Existing
Auto parts	<p>【Quan①】</p> <p>【Quan②】</p> <p>【Qual①】</p> <p>【Qual②】</p>	<p>Achieve final disposal volume of 45,000 t or less for industrial waste in fiscal 2020. (equivalent to 68% reduction from fiscal 2000 level)</p> <p>➢34,000 tons (fiscal 2018) [*]</p> <p>Achieve recycling rate of no less than 85% for all byproducts (industrial waste, valuable waste) generated at factories, etc. in fiscal 2020.</p> <p>➢96.6%(fiscal 2018) [*]</p> <p>Make efforts to promote the development and design of automobile parts with a view to improving the recyclability of disused automobiles and to improve the quality of 3R activities, including resource circulation</p> <p>Collect corporate waste reduction cases from member companies and share information to promote waste reduction</p>	New
Auto-body	<p>【Quan①】</p>	<p>Reduce final disposal volume of industrial waste by 89% relative to the fiscal 2000 level in fiscal 2020.</p> <p>➢90% reduction (fiscal 2018) [*]</p>	Existing
Rolling stock	<p>【Quan①】</p> <p>【Qual①】</p> <p>【Qual②】</p>	<p>Achieve recycling rate of no less than 99% for industrial waste (including plastics) in 2020 and make efforts to come as close as possible to reaching 100%.</p> <p>➢99.9% (fiscal 2018) [*]</p> <p>Promote proper treatment of plastic waste in business operations</p> <p>Change cushioning material from plastic to other materials</p>	New

Shipbuilding	【Qual①】	<p>The shipbuilding industry appropriately treats all plastic waste (packing material, blue tarps, PET bottles, hoses, etc.) generated from business operations. The industry will continue proper waste treatment and take the following measures with a view to make further improvements:</p> <ul style="list-style-type: none"> • Encourage member companies to perform outreach on environmental conservation and plastic waste-related activities. • Collect case studies of environmental conservation efforts, including cleanups and workshops, made by each company and share them outside the industry. • Introduce new trends regarding plastic wastes at the Environmental Task Force, joined by member companies, and exchange information regarding advanced measures taken in other industries and individual corporate efforts through site visits and various meetings. 	New
Flour	<p>【Quan①】</p> <p>【Quan②】</p>	<p>Achieve plastic waste recycling rate of no less than 90% in fiscal 2030.</p> <p>➢84.8% (average for fiscal 2013~2018)</p> <p>Reduce final waste disposal volume of plastic waste to below 65 tons</p> <p>➢68.5 tons (average for fiscal 2013~2018)</p>	New
Sugar	【Quan①】	<p>Achieve plastic waste recycling rate of no less than 99% (for small package products) in fiscal 2030. ➢99.9% (fiscal 2018) [*]</p>	New
Milk and dairy products	<p>【Qual①】</p> <p>【Qual②】</p> <p>【Qual③】</p>	<p>Design products to minimize the use of plastic in containers and packaging.</p> <p>Promote the use of environment-friendly materials as raw material for plastics used in containers and packaging.</p> <p>Facilitate the recycling of waste plastics generated from manufacturing processes by using recycling operators.</p>	Existing

Soft drinks	<p>【Quan①】</p> <p>【Quan②】</p> <p>【Quan③】</p> <p>【Qual①】</p> <p>【Qual②】</p> <p>【Qual③】</p>	<p>PET bottle weight reduction rate of no less than 25% in fiscal 2030 (baseline year: fiscal 2004)</p> <p>➢23.6% (fiscal 2018)</p> <p>PET bottle recycling rate of no less than 85% in fiscal 2030</p> <p>➢84.6% (fiscal 2018)</p> <p>PET bottle effective utilization rate of 100% in fiscal 2030</p> <p>➢98% (fiscal 2018)</p> <p>The Soft Drink Industry’s Plastic Resource Circulation Declaration</p> <p>Awareness-raising campaigns against littering of containers</p> <p>Establish an effective collection system to achieve a collection rate of 100%</p>	Existing
Beer	<p>【Quan①】</p> <p>【Qual①】</p>	<p>Effectively utilize 100% of all used plastics generated during production (or final disposal volume of 0 tons), as a part of efforts to achieve a recycling rate of 100% for all byproducts and waste generated during the production of beer, etc. at all beer factories of the five member beer companies of the Brewers Association of Japan in fiscal 2030.</p> <p>➢All byproducts and waste is 100% recycled (fiscal 2000-2018) [*]</p> <p>Support the promotion of Town Beautification and Adopt-program activities and awareness-raising campaigns for litter prevention through the Beverage Industry Environment Beautification Association.</p>	<p>Existing</p> <p>New</p>
Construction	<p>【Qual①】</p> <p>【Qual②】</p>	<p>Implement promotional and outreach campaigns, including making posters describing how to segregate waste, in order to ensure implementation of measures to address plastic waste issue at construction sites.</p> <p>Survey the types and ratio of plastic waste generated in the construction of new buildings and consider effective measures to reduce waste generation.</p>	New
Aviation	<p>【Qual①】</p> <p>【Qual②】</p> <p>【Qual③】</p>	<p>Promote the segregation of plastic waste at offices and airports</p> <p>Reuse and reduce plastic products used on flights and at airports.</p> <p>Replace plastic products used on flights and at airports with environment-friendly materials.</p>	New
Telecommunications	<p>【Qual①】</p>	<p>Promote the utilization of used plastics from removed telecommunication facilities</p>	New

Printing	<p>【Qual①】</p> <p>【Qual②】</p>	<p>Further promote waste reduction of single-use containers and packaging in the near-term through collaboration with upstream and downstream industries of the supply chain. Aim to design plastic containers and packaging that are technically easy to segregate as well as reusable or recyclable, while also ensuring their functionality.</p>	Existing
Real estate	<p>【Quan①】</p> <p>【Qual①】</p>	<p>Maintain a recycling rate of 100% for plastic waste generated at buildings used for the industry's own business operations through fiscal 2030. >98.6% (fiscal 2018)</p> <p>Improve the green procurement rate of products purchased in buildings used for the industry's business operations.</p>	Existing
Trade	【Quan①】	<p>Aim for 100% segregated disposal of PET bottles at each office at the end of fiscal 2020. >100% implementation rate (fiscal 2018) [*]</p>	Existing
	【Qual①】	<p>Make industry-wide efforts to promote handling products and business that contribute to the reduction, reuse and recycling of plastics.</p>	Existing
	【Qual②】	<p>Organize an annual forum for member companies to exchange information on corporate efforts addressing plastic-related issues and make an effort to expand measures.</p>	Existing
	【Qual③】	<p>Ensure the promotion of the 3Rs (reuse, reduce, recycle) of plastics used in the cafeterias at each corporate location.</p>	New
Department stores	【Quan①】	<p>Aim to reduce the volume of plastic containers and packaging used by 50% in terms of intensity (volume of use per unit sales) in 2030 relative to the 2000 baseline level. >33.7% reduction (fiscal 2018)</p>	Existing
Convenience stores	【Quan①】	<p>Aim to achieve “shopping bag refusal rate of no less than 30%” by fiscal 2020.</p>	New
Chain stores	【Quan①】	<p>Aim to achieve plastic shopping bag refusal rate of no less than 80%” by fiscal 2030. >54.63% (March 2019)</p>	New

Railway	【Quan①】	Replace plastic shopping bags (240 million bags used in fiscal 2018) with bags made from biomass material at JR East Group companies that offer customers plastic shopping bags.	New
	【Quan②】	Replace plastic straws (30 million straws used in fiscal 2018) with straws made from biodegradable material at JR East Group companies that offer customers plastic straws.	New
	【Qual①】	Promote recycling by installing segregated garbage bins at stations and separately collect PET bottles with the cooperation of customers.	Existing
	【Qual②】	Promote customer understanding of the measures taken by the JR East Group and wide public awareness of plastic issues. (posters, POP advertising, and videos)	New
Banks	【Quan①】	Engage in segregated collection of used PET bottles at 100% of member banks in fiscal 2030. ➢92% (fiscal 2018)	Existing
	【Quan②】	Engage in clean-ups and other measures to reduce marine plastic litter at 100% of member banks in fiscal 2030. ➢35% (fiscal 2018)	
	【Qual①】	The bank industry will engage in the effective use of resources and waste reduction.	
	【Qual②】	The bank industry will actively support companies that take measures to address plastic-related issues in line with government policy.	
Nonlife insurance	【Qual①】	Encourage employees to bring their own bags and drink bottles.	New
	【Qual②】	Prohibit the use of plastic cups and straws in employee cafeterias or replace them with paper products.	
Securities	【Qual①】	Promote the use of paper manufactured in ways that reduce environmental burden, while making efforts to reduce environmental burden and reuse resources by ensuring the segregated collection of waste, etc. with a view to plastic resource circulation and measures to prevent the outflow of plastics into the ocean	Existing
Life insurance	【Qual①】	Make efforts to reduce environmental burden by reducing the amount of resources, including plastic resources, required to perform business operations, as well as promoting the recycling of resources.	New
【Reference】 Plastic Containers and Packaging	【Quan①】	Weight reduction rate of plastic containers and packaging: 16% (cumulative) ➢17.0% (cumulative, fiscal 2018) [*]	Existing
	【Quan②】	Recycling rate of plastic containers and packaging: 46% ➢46.3% (fiscal 2018) [*]	

(4) Other efforts towards establishing a sound material-cycle society

In addition to efforts under self-determined industry-specific targets, industries are engaged in efforts exemplified in Table 5. (For details, “Efforts towards establishing a sound material-cycle society” in the Industry-specific Report (Japanese version only).)

Table 5. Examples of efforts towards establishing a sound material-cycle society

Efforts to reduce environmental burden through product life cycles	
<ul style="list-style-type: none"> • Effective use of waste and byproducts (use as raw materials, etc.) • Effective use of used products (reuse, recycle, etc.) • Design products that are easy to recycle • Visualize environmental effects by implementing product LCA • Jointly develop recycling technologies with other industries • Introduce in-house certification programs for products featuring reduced environmental burden • Improve resource utilization efficiency by streamlining manufacturing processes • Promote the appropriate implementation of various recycling laws • Introduce maintenance-free and simplified products • Consider labelling programs for environment-friendly products • Recover rare metals from electronics 	<ul style="list-style-type: none"> • Effective utilization of packing material • Establish recycling routes through collaboration across the supply chain • Promote the utilization of recycled products • Receive and treat waste from other industries and contribute to reducing final disposal volumes • Appropriately select waste treatment businesses • Formulate and implement product assessment manuals • Produce smaller, more lightweight and longer lifetime products • Omit and simplify packing and introduce returnable packing material • Proactively utilize certified paper and certified products • Adopt buildings with high efficiency, including high insulation
Development of new technologies and products	
<ul style="list-style-type: none"> • Develop technologies to improve the efficiency of large-scale construction works • Develop and utilize cogeneration technologies • Establish material circulation systems • Develop products free of harmful substances • Develop technologies to recycle used lithium-ion batteries • Develop dechlorination technologies for products with high chloride concentration • Develop efficient waste treatment equipment • Develop recyclability assessment methods • Develop cellulose nanofiber technologies • Conserve water by using remotely monitored toilets 	<ul style="list-style-type: none"> • Develop technologies to utilize biomass • Develop technologies to recover energy from waste • Develop new recycling processes • Generate biogas from waste • Develop CFRP recycling technologies • Develop lightweight containers and packaging material and utilized recycled material • Develop recyclable containers and packaging • Develop technologies to utilize used oil • Develop CFC-free technologies • Develop and utilize image-based consolidated management systems for waste treatment processes

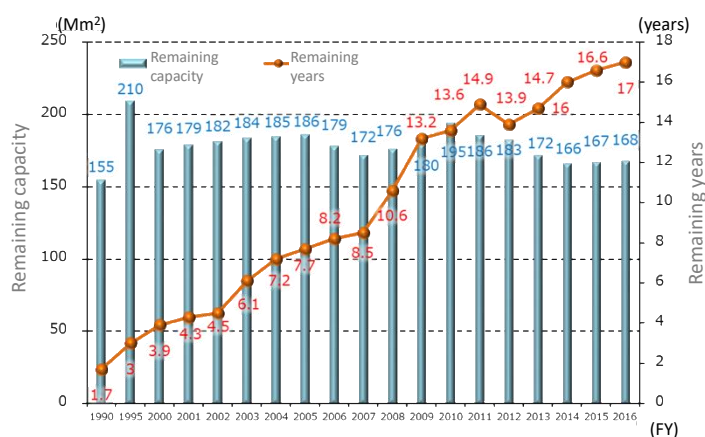
International contribution / overseas activities	
<ul style="list-style-type: none"> • Promote export of waste-utilizing products • Support introduction of recycling systems • Conduct training programs on waste treatment for overseas trainees • Conduct waste management education at overseas corporate locations • Provide biomass power generation boilers to Southeast Asia, etc. • Consider local tax systems and green procurement 	<ul style="list-style-type: none"> • Support overseas application of JIS standards • Develop returnable packing for overseas shipping • Cooperate in JICA group training programs • Implement overseas CO₂ reduction support projects • Perform environmental education at elementary schools in Southeast Asia, etc. • Engage in overseas tree-planting activities
Other	
<ul style="list-style-type: none"> • Beautification and cleanup activities in rivers, beaches and road • Promote paperless operation through digitization • Receive RPF from other industries • Conduct composting of food waste from cafeterias • Create valuable resources by shredding confidential documents • Promote waste segregation at the office • Reduce paper use by duplex copying and microcopying 	<ul style="list-style-type: none"> • Standardize waste-utilizing products (develop JIS standards) • Cooperate in treating disaster-related waste treatment • Reuse paper and cardboard boxes • Review the packing of procured parts • Communicate environment-related information on websites, etc. • Participate in environment-related events • Conduct segregated collection of PET bottles

3. Challenges to be addressed in the near future for establishing a Sound Material-Cycle Society

(1) Potential for reducing final disposal volumes of industrial waste

As aforementioned, efforts by individual industries have led to the achievement of reductions in the final disposal volume of industrial waste by approximately 93.5% relative to the fiscal 1990 level. As a result, the years of remaining capacity at final disposal sites improved from 1.7 years in fiscal 1990 to 17.0 years in 2016 (see Figure 3).

Figure 3. Trends in the years of remaining capacity at final disposal sites for industrial waste



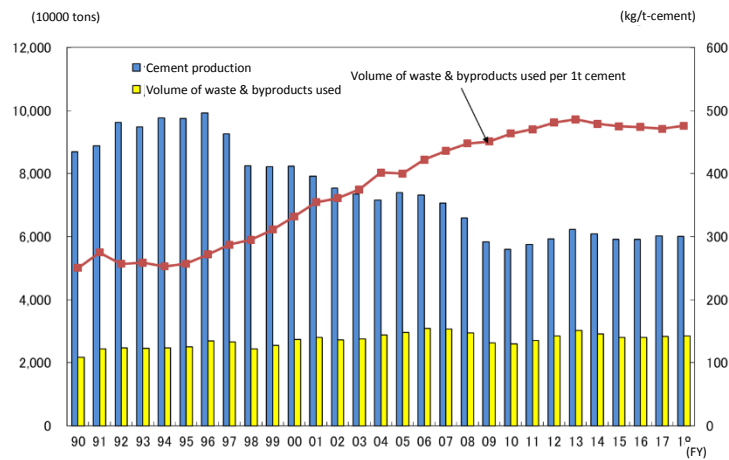
<Source: Ministry of the Environment>

In fiscal 2018, the final disposal volume of industrial waste was reduced by 18.9% on a year to year basis. This is inferred mainly to be a result of the steady progress made in the measures taken by industries towards achieving resource circulation.

However, some industries have already achieved recycling rates close to 100% for industrial waste in their resource circulation efforts and some industries embrace wastes that are difficult to recycle. Further reductions would require consideration of other factors, including increased energy consumption caused by recycling. Moreover, we must also pay attention to the potential drivers of increases in final disposal volumes of various industrial waste, including potential increases in construction works for disaster prevention and reduction and aging infrastructure.

Furthermore, in the cement industry, which contributes to the reduction of final waste disposal by utilizing waste and byproducts from other industries in cement production, the volume of waste and byproducts accepted by the cement industry has remained stagnant in recent years (see Figure 4.).

Figure 4. Trends in the utilization of waste and byproducts in the cement industry



<Source: Japan Cement Association>

(2) Challenges to be addressed in the near future

The promotion of measures towards a sound material-cycle society has become increasingly important not only in Japan, with limited domestic resource availability, but also worldwide, as growing resource constraints are forecasted on a global scale due to increased population and economic growth.

Japan has been very successful in its endeavors, with the enactment of various recycling laws, such as the Basic Act on Establishing a Sound Material-Cycle Society, supported by active public cooperation, as well as the efforts of stakeholders, including the national government, local governments, the business community and non-profit organizations.

The Japanese Government implemented various domestic measures with a view to the G20 summit meeting that it chaired in June 2019. One of such measures was Japan's Resource Circulation Strategy for Plastics, which acknowledges the social importance of plastics and at the same time promotes the 3Rs and facilitating replacement with recyclable resources.

Furthermore, at the G20 Summit, governments reached agreement on the G20 Implementation Framework for Actions on Marine Plastics Litter and shared the Osaka Blue Ocean Vision under the leadership of the Japanese Government. Both documents do not prohibit the use of particular plastic products, but take a life cycle approach based on encouragement of the smart use of plastics and controlling the outflow of plastic waste into the ocean.

Marine plastic litter issues are global issues that need to be resolved by promoting the 3Rs by securing the proper treatment of waste, preventing the outflow of waste plastics

into the oceans and avoiding their landfilling. Acknowledging the above, Japan can contribute to solving global plastic resource circulation issues by engaging in international cooperation, drawing upon its outstanding efforts, including the data, technologies and knowhow accumulated through its experiences to date, and contributing to proper waste treatment and the promotion of the 3Rs in developing countries.

On the other hand, given the recent implementation and strengthening of import restrictions on plastic waste in China and other emerging countries, ways of plastic resource circulation are being addressed globally. Affected by these import restrictions, Japan is also challenged with the increased distribution of waste plastics, which are overloading relevant facilities. In the follow-up survey results this fiscal year, some relevant industries reported that because recycling business operators have stopped fee-based acceptance of waste, reduced the amount of waste accepted, or raised waste treatment fees, industries had no choice but to increase final disposal volumes of industrial waste. Japan is challenged with the urgent need to re-establish its plastic resource circulation system.

In light of these circumstances, Keidanren will by actively and voluntarily engage in the promotion of the 3Rs through continued efforts to promote the Voluntary Action Plan for Establishing a Sound Material-Cycle Society and to reduce the final disposal volume of industrial waste, as well as to enhance industry-specific targets other than those for industrial waste final disposal volumes that aim to improve the quality of the material-cycle and to improve industry-specific plastic-related targets.

To this end, roles must be appropriately shared among not only the business community but also various actors including national and local governments, business operators, NPOs and citizens, and it is important that each actor fulfills its role in partnership with other actors. In particular, in light of the fact that the further promotion of the 3Rs approaching its limits under current technological levels and legal system, it is essential that the Government improves and reviews the administration of the regulatory framework and offers policy support (see Appendix 2 “Main requests from individual industries to the national and local governments).

Guided by the basic principle of “delivering on the SDGs through the Realization of Society 5.0., Keidanren will continue to engage in a wide range of innovations, including not only technological innovations, such as developing new feasible low-cost technologies but also lifestyle transformations through collaboration and cooperation among various sectors and strata of society. Furthermore, we will promote “Integrated Environmental Corporate Management,” addressing climate change countermeasures and biodiversity conservation activities, as well as resource circulation measures, as critical business management issues in performing business operations.

Outline of Opinion on formulating “Japan’s Resource Circulation Strategy for Plastics”

1. Basic Approach

(1) Contributing to multiple SDGs

- ① Global efforts to address ocean plastic issues and plastic resource circulation contribute to Goal 12 (Responsible consumption and production), Goal 14 (Life below water), and Goal 17 (Partnerships for the goals).
- ② There is a global call for preventing plastic waste flows into the oceans, minimizing final disposal in landfills, and ensuring appropriate treatment the implementation of the 3Rs. Heat and energy recovery are also effective choices.
- ③ Japan should continue to promote appropriate waste treatment and the 3Rs and deploy its excellent technologies and knowhow in developing countries through partnership and cooperation among Government, local governments, business operators, consumers, and NGOs.

(2) “Responsible consumption and production” of plastic products

- ① Plastic material has contributed to solving many societal issues through its physical properties and technological improvements.
- ② Promote a correct understanding of plastic among the wide general public.
- ③ It is critical for business operators and consumers to wisely produce, consume, and treat plastics, bearing in mind environmental burden reduction, technological feasibility, and economic efficiency.
- ④ Global ocean plastic issues and domestic plastic resource circulation issues are not necessarily equivalent issues. Level-headed and appropriate consideration of measures in line with policy objectives is called for.

2. Toward solving global ocean plastic issues

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

- ① It is imperative that each country appropriately manages and treats domestic plastic waste and prevents it from flowing out to the oceans.
- ② Measures accommodating country-specific circumstances are called for.
- ③ In Japan, secure public understanding that littering and illegal dumping are unlawful and enhance measures to eradicate such acts.

(2) Importance of technological development

- ① Promote product design that facilitates collection or recycling and develop recycling technologies that can reduce recycled material costs and improve quality
- ② 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. Accumulation of scientific knowledge is also important.

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

- ① Export or technology transfer to developing countries as packaged systems, the waste collection system and waste treatment and recycling technologies. Lead the world in addressing plastic issues.
- ② Careful support is needed not only in terms of hard infrastructure but also soft aspects, such as maintaining and managing facilities and awareness-raising and environmental education.

3. Toward further promotion of resource circulation in Japan

(1) Efforts to date

- ① **An enhanced law system and voluntary approaches by business operators**
 - ◇ Enactment of the Basic Act on Establishing a Sound Material-Cycle Society, Containers and Packaging Recycling Law and other recycling laws
 - ◇ Promotion of “Keidanren Voluntary Action Plan for Establishing a Sound Material-Cycle Society” and the “Voluntary Action Plan for the Promotion of the 3Rs in Containers and Packaging”
 - ※23% reduction in the average weight of P E T bottles; 15% reduction in plastic containers and packaging (FY2006→FY2016)
- ② **Improving the effective utilization rate of used plastics** around 46% (2000)→ around 84% (2016)
(total of 30 countries, including EU: around 73% in 2016)

(2) Future measures, etc.

- ① **Continuing and enhancing voluntary approaches by the business community**
 - ◇ Recently compiled a collection of case studies: Contributing to the UN SDGs through Measures Addressing Plastic Waste Issues.
 - ◇ Considering a plastic-conscious enhancement of the Keidanren Voluntary Action Plan for Establishing a Sound Material-Cycle Society.
- ② **Improving the effective utilization rate of used plastics**
 - ◇ Optimally use material recycling, feedstock recycling and heat and energy recovery to maximize the effective utilization rate of resources and to minimize costs.
 - ◇ Enhance the competitiveness and sophistication of resource circulation industries.
- ③ **Promoting technology development, including recycled material and biomass plastics**
 - ◇ Product design facilitating collection and recycling
 - ◇ Technological development for recycled materials and alternative materials
 - ※ Important to ensure quality and economic rationality, technological feasibility and supply stability
- ④ **Approaches toward reducing plastic shopping bags (compulsory charge on plastic bags, etc.)**
 - ◇ Major retailers are already voluntarily charging customers for plastic shopping bags to reduce plastic shopping bags
 - ◇ In order to let these campaigns take root among the general public, the Government must lead efforts to foster public understanding.
 - When implementing a compulsory charge on plastic shopping bags (abolition of free distribution), legislative measures to create a nationwide system is required so that a sense of unfairness does not prevail among business operators and there is no confusion among consumers.
- ⑤ **Ambitious “milestones” defining the direction in which we should be headed**
 - ◇ Extremely ambitious “milestones” exceeding the quantitative targets set out in the G7 Ocean Plastic Charter
 - ◇ Indicate the “direction in which we should be headed through increased understanding and partnership/cooperation among the general public, all industries and all levels” and are not mandatory targets for business operators and consumers to achieve.
 - ◇ The business community will engage in the 3Rs to the furthest extent possible toward achieving these milestones, thus contributing to a sustainable society.

Background of the Voluntary Action Plan for Establishing a Sound Material-Cycle Society

1. Formulating the Voluntary Action Plan on the Environment (Section on Waste Disposal Measures) and setting up an economy-wide target (first target).

In April 1991, Keidanren compiled the Keidanren Global Environment Charter in which it declared that it would promote voluntary and active efforts for environmental conservation. Based on this Charter, in 1997, Keidanren formulated the Voluntary Action Plan on the Environment to address waste disposal issues with the participation of 35 industries and incorporated industry-specific quantitative targets and concrete measures for the achievement of targets. Keidanren has followed up on the progress achieved in each industry every fiscal year thenceforth.

In December 1999, it set up a target covering the entire business community to enhance voluntary industrial efforts: 75% below the fiscal 1990 performance level of final disposal volume of industrial waste in fiscal 2010 (First Target)

2. Upgrading to “Section on the Establishment of a Sound Material-Cycle Society” and renewing the economy-wide target (March 2007)

The business community continued to achieve its economy-wide fiscal 2010 target set up in 1999 for four consecutive years from fiscal 2002 to fiscal 2005 prior to the target year. Therefore, in March 2007, Keidanren revised the Voluntary Action Plan on the Environment (Section on Waste Disposal Measures) to the Voluntary Action Plan on the Environment (Section on the Establishment of a Sound Material-Cycle Society), which aimed to promote a wide range of efforts reaching beyond waste disposal measures toward a sound material-cycle society. This was accompanied by a renewal of targets:

(1) Reviewing the economy-wide target (reduction target for final disposal volume of industrial waste)

The economy-wide target was renewed to: 86% below the fiscal 1990 performance level of final disposal volume of industrial waste in fiscal 2010 (Second Target). Keidanren decided to continue to call for reductions in the final disposal volume of industrial waste in each industry, setting up the abovementioned target for the entire business community and engage in efforts to further promote the 3Rs.

(2) Setting up industry-specific targets

Each industry newly set up individual targets using indicators other than the final disposal volume of industrial waste, further enhancing voluntary approaches to the establishment of a sound material-cycle society. Industry-specific targets include improved recycling rates, reduced waste generation and increased use of waste from other industrial processes.

3. Formulating the post-fiscal 2010 Voluntary Action Plan on the Environment
(Section on the Establishment of a Sound Material-Cycle Society)
(December 2010)

The second target for reducing final disposal volumes of industrial waste had established fiscal 2010 as its “target fiscal year.” In December 2010, for the continued voluntary and active promotion of the 3Rs beyond fiscal 2010, Keidanren formulated a renewed Plan embracing the two following pillars and scheduled follow-up surveys: 1) setting up the Third Target for reductions in the final disposal volume of industrial waste across the entire business community with fiscal 2015 as the target year: 65% below the fiscal 2000 performance level of final disposal volume of industrial waste in fiscal 2015 (third target); and 2) establishing industry-specific targets accommodating industrial features.

4. Formulating the post-fiscal 2015 Voluntary Action Plan for Establishing a Sound Material-Cycle Society (March 2016)

Welcoming the “target fiscal year” for the Third Target in March 2016, with a view to continuing voluntary and active promotion of the 3Rs, Keidanren formulated a new post-fiscal 2015 Plan, which would be subject to annual follow-up surveys. The new targets are provided below (see Attachment 2 for details):

(1) Fourth target for economy-wide reductions in final disposal volume of industrial waste

Aim to reduce by fiscal 2020, the final disposal volume of industrial waste appropriately treated with consideration of the achievement of a low-carbon society by around 70% from the actual performance level in fiscal 2000.

(2) Enhancing industry-specific targets to improve quality of resource circulation

5. Setting up industry-specific plastic-related targets (April 2019)

From April 2019, organizations and companies participating in the Keidanren Voluntary Action Plan for Establishing a Sound Material-Cycle Society considered targets that would contribute to resolving marine plastic litter issues and promote plastic resource circulation (industry-specific plastic-related targets) from the perspective of deepening voluntary approaches by the business community.

Formulating the Voluntary Action Plan for Establishing a Sound Material-Cycle Society for fiscal years beyond 2015 (March 2016)

March 15, 2016
Keidanren (Japan Business Federation)

1. Continuing and renaming the Voluntary Action Plan on the Environment

The Keidanren Voluntary Action Plan on the Environment (Section on the Establishment of a Sound Material-Cycle Society) has endeavored to meet the economy-wide target to "reduce the final disposal volume of industrial waste in fiscal 2015 by 65% from the fiscal 2000 performance level" (third target) with the participation of 41 industries.

Given the need for ongoing efforts toward establishing a sound material-cycle society, the business community will engage in voluntary efforts beyond fiscal 2015 and seek to communicate industrial efforts to the public at large by continuing the voluntary approach under a renewed name: the Voluntary Action Plan for Establishing a Sound Material-Cycle Society*.

* Since 1997, the Keidanren Voluntary Action Plan on the Environment comprised the Section on Global Warming Measures and the Section on the Establishment of a Sound Material-Cycle Society. Given the reorganization of the Section on Global Warming Measures into the Keidanren Commitment to a Low Carbon Society in January 2013, the Section on the Establishment of a Sound Material-Cycle Society will also change its name.

2. Outline of post-2015 Voluntary Action Plan

(1) Economy-wide target for continued efforts to reduce final disposal volume of industrial waste

- ① The Voluntary Action Plan set up an economy-wide target to reduce the final disposal volume of industrial waste. The target was renewed three times in order to pursue higher targets and as a result, the final disposal volume in fiscal 2014 marked a reduction of 73% from the fiscal 2000 level (91% reduction from the fiscal 1990 level). Through such efforts, the Plan has contributed to improving the pressing situation regarding the availability of final disposal sites that had challenged Japan in the 1990s (the years of remaining industrial waste final disposal capacity increased from just two years in the 1990s to approximately 14 years in fiscal 2012).
- ② In recent years, efforts by business operators to further reductions in the final disposal volume of industrial waste have been approaching their limits; and therefore the pace of reductions has slowed down. It has been pointed out that with the Tokyo Olympics and Paralympics Games to be hosted in Japan, the final disposal volume of industrial waste is likely to increase.

- ③ Amid such circumstances, the Japanese business community has set up the following economy-wide target under the idea that it “will not increase the final disposal amount of industrial waste above the current level” to continue to engage in reduction efforts.

Aim to reduce by fiscal 2020, the final disposal volume of appropriately treated industrial waste by 70% from the actual performance level in fiscal 2000 with consideration of the achievement of a low-carbon society*

- * Some industries point out that further reductions in the final disposal volume may increase energy use and in turn cause regression in the achievement of a low-carbon society or increase waste requiring final disposal as a result of tightened environmental regulations. Under such restrictions, it was decided that it should be indicated that efforts to reduce final disposal volume would be continued with consideration of reducing environmental burden by providing for “the final disposal volume of industrial waste appropriately treated with consideration of the achievement of a low-carbon society.”
- * In case of large changes in the socioeconomic situation, the target will be reviewed as required after fiscal 2016.

(2) Industry-specific targets with a view to improving the quality of resource circulation

- ① Given their differences in industrial characteristics and circumstances, industries are quite varied in their approaches, including the 3Rs, toward establishing a sound material-cycle society; and therefore it is difficult to determine an economy-wide target other than reductions in final disposal volume. Therefore, under the Keidanren Voluntary Action Plan on the Environment, industrial organizations have set up “industry-specific targets” since fiscal 2006 to voluntarily engage in establishing a sound material-cycle society.

In the medium- to long-term, amid global constraints on resource availability, Japan, with very limited natural resources, is particularly challenged with resource issues in its endeavors to achieve sustainable socioeconomic development. We need to promote measures focused on the quality of resource circulation for the efficient use of limited resources. A few examples of such measures are curbing the consumption of natural resources and reducing environmental burden.

- ② Therefore, in the post-fiscal 2015 Voluntary Action Plan, we will set up appropriate industry-specific targets accommodating industrial characteristics and circumstances, in addition to the final disposal volume target. We will consider shifting to quantitative targets aiming to improve the quality of resource circulation, to the furthest extent possible. When it is difficult to set up a qualitative target, we will set up qualitative targets that will serve the purpose of improving the material cycle and report the progress achieved in the annual *Industry-specific Report*.
- ③ Industries have set up individual targets as indicated in the appendix (omitted) to improve the quality of resource circulation. Some examples are: pursuing added-value through the use of byproducts generated in the manufacturing process as raw

materials, promoting the use of high-performance recycling facilities with high recycling rates and waste reduction rates, and reducing the amount of industrial waste generated by reducing construction material input at the planning stage.

- ④ Some industries have yet to determine an industry-specific target. We are determined to present a clearer view of our concept of improving the quality of resource circulation and continue our endeavors to enhance industry-specific targets that will serve this purpose.