

**Voluntary Action Plan  
for Establishing a Sound Material-Cycle Society  
—Results of Fiscal 2021 Follow-up—  
<Summary>**

March 15, 2022  
Keidanren (Japan Business Federation)

**1. Efforts made 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 (see Reference 1 & 2 for details on its background).

Under the Voluntary Action Plan, each of the 45 participating industries take 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 addition to achieving industry-specific targets for reducing the final disposal volume of industrial waste, with a view to not increasing the final disposal volume of industrial waste from the current level, “the Japanese business community as a whole seeks aims to reduce by fiscal 2020, the final disposal volume of industrial waste appropriately treated with consideration for achieving a low-carbon society by 70% from the actual performance level in fiscal 2000” (Fourth Target, revised in March 2016).

Industry-specific targets have been individually set up by each industry based on industry-specific characteristics and circumstances and from the perspective of improving the quality of resource circulation. These include target recycling rates for byproducts produced during manufacturing processes and targets for reducing municipal solid waste from business activities.

Industry-specific plastic-related targets have been set up in order to promote measures to deal with plastic issues and to widely communicate the efforts made by Japan’s business community. These include targets that contribute to solving marine plastic issues and promoting plastic resource circulation.

We conducted a survey on the performance achieved in fiscal 2020 with regard to the progress made toward meeting the economy-wide and industry-specific targets, the specific initiatives taken to achieve these targets, and industry-specific plastic-related targets. The survey results have been compiled as the results of the fiscal 2021 follow-up. The survey results include the status of achievement of the economy-wide target of “reducing the final disposal volume of industrial waste (Fourth Target),” for which fiscal

2020 was the target year.

The policy of the Voluntary Action Plan for fiscal 2021 and beyond, as well as the new industry-specific targets are provided in the appendix. (See Appendix 1 “Policy for the Voluntary Action Plan for Establishing a Sound Material-Cycle Society from Fiscal 2021”.)

\*Industries participating in the Fiscal 2020 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, chain stores, convenience stores, railway, maritime transport, banking, nonlife insurance, securities, life insurance

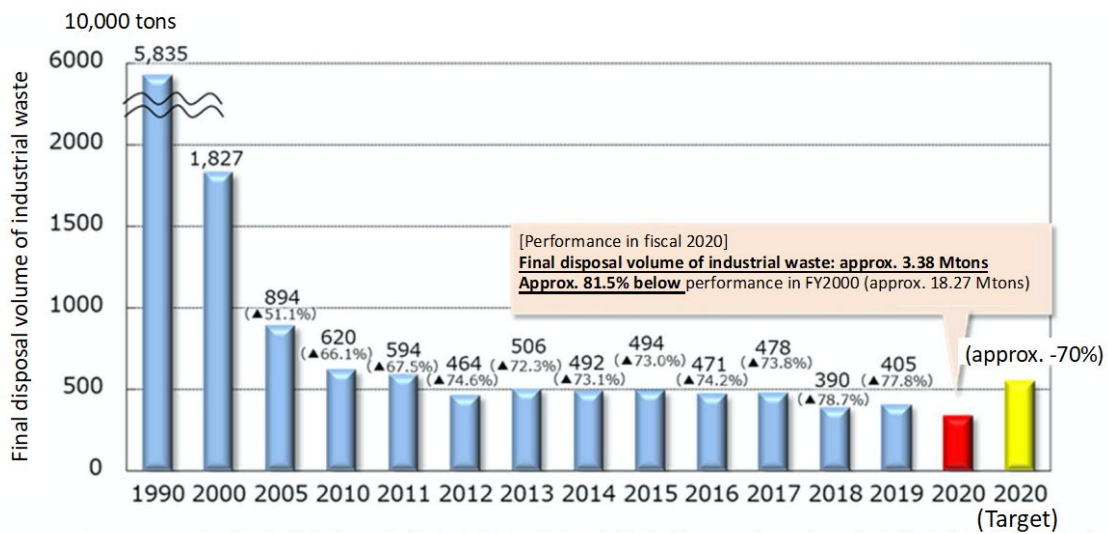
## **2. Results of efforts made in fiscal 2020**

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

In fiscal 2020, the final disposal volume of industrial waste (32 industries) was approximately 3.38 million tons, approximately 81.5% below the performance level in fiscal 2000 (approximately 18.27 million tons), the baseline year (approximately 94.3% below the fiscal 1990 level), thus overachieving the Plan’s target (See Figure 1.).

In fiscal 2020, the final disposal volume of industrial waste marked a decrease of approximately 0.67 million tons (approximately 16.5%) relative to the previous fiscal year (fiscal 2019 performance). By industry, 20 industries out of the 32 industries with final disposal targets saw reductions. This can be attributed to reduced construction work compared to the previous fiscal year and stagnated economic activities due to the spread of COVID-19, as well as to the firm progress made by each industry to reduce industrial waste and promote the 3Rs (reduce, reuse, and recycle).

**Figure 1. Total final disposal volume of industrial waste generated by participating industries**



\*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.

\*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 0.5% of performance in fiscal 2019.

\*4: The final disposal volume of industrial waste recorded in fiscal 2020 amounted to approximately 3.38 million tons, accounting for around 36.9% of total nationwide final disposal volume of industrial waste, which was approximately 9.15 million tons (fiscal 2019, 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 industry-specific characteristics and circumstances and engaged in efforts to achieve them. The targets and performance in fiscal 2020 for each industry are presented in Table 1. (Details can be found in 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	○ Make efforts to achieve recycling rate of 95% in fiscal 2020 ➤ Performance in fiscal 2020: 98% [*]
Gas	○ 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). ➤ Performance in fiscal 2020: 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. ➤ Performance in fiscal 2020: 16.2% [*]
Petroleum	○ Maintain and continue zero emission (final disposal rate of no more than 1%) through fiscal 2020. ➤ Performance in fiscal 2020: 0.04% [*]
Iron and steel	○ Achieve steel can recycling rate of at least 90% ➤ Performance in fiscal 2020: 94.0% [*]
Aluminum	○ Maintain aluminum dross recycling rate of no less than 99% in fiscal 2020. ➤ Performance in fiscal 2020: 99.2% [*]
Brass	○ Achieve recycling rate of no less than 90% in fiscal 2020. ➤ Performance in fiscal 2020: 93.2% [*]
Electric cable and wire	○ Make efforts to maintain a recycling rate of no less than 95% in fiscal 2020. ➤ Performance in fiscal 2020: 94.4%
Rubber	○ Achieve a recycling rate of no less than 70% in fiscal 2020. ➤ Performance in fiscal 2020: 91.1% [*]
Flat glass	○ Achieve recycling rate of no less than 95%. ➤ Performance in fiscal 2020: 84.7%
Cement	□ Receives large volumes of waste and byproducts accepted by other industries and utilizes them in cement production.
Chemicals	○ Achieve recycling rate of no less than 65% in fiscal 2020. ➤ Performance in fiscal 2020: 71% [*]
Pharmaceuticals	○ Achieve recycling rate of no less than 55% in fiscal 2020. ➤ Performance in fiscal 2020: 63.8% [*] ○ Improve waste generation intensity in fiscal 2020 to 50% relative to the fiscal 2000 level. (Reduce to a level of no more than 2.2 tons/0.1 billion yen.) ➤ Performance in fiscal 2020: 1.9 tons/0.1 billion yen [*]
Pulp and paper	○ Make efforts to maintain current level (97%) of effective utilization. ➤ Performance in fiscal 2020: 98.4% [*]

Electrical and electronics	<ul style="list-style-type: none"> <li>○ Reduce the final disposal rate to no more than 1.8% in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 2.6%</li> </ul>
Industrial machinery	<ul style="list-style-type: none"> <li>○ Make efforts to achieve recycling rate of no less than 90%.</li> <li>➤ Performance in fiscal 2020: 91.1% [*]</li> </ul>
Bearing	<ul style="list-style-type: none"> <li>○ Make efforts to achieve recycling rate of no less than 96% in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 96% [*]</li> </ul>
Automobile	<ul style="list-style-type: none"> <li>○ Maintain recycling rate of no less than 99% in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 99.9% [*]</li> </ul>
Auto parts	<ul style="list-style-type: none"> <li>○ Achieve recycling rate of no less than 85% in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 92.4% [*]</li> </ul>
Auto-body	<ul style="list-style-type: none"> <li>○ 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).</li> <li>➤ Performance in fiscal 2020: 98.1% [*]</li> </ul>
Industrial vehicles	<ul style="list-style-type: none"> <li>○ Make efforts to maintain recycling rate of no less than 90% for industrial waste generated during the manufacturing process.</li> <li>➤ Performance in fiscal 2020: 92% [*]</li> </ul>
Rolling stock	<ul style="list-style-type: none"> <li>○ Achieve recycling rate of no less than 99% in fiscal 2020 and make efforts to come as close to 100% as possible.</li> <li>➤ Performance in fiscal 2020: 99.9% [*]</li> </ul>
Shipbuilding	<ul style="list-style-type: none"> <li>○ Make efforts to achieve recycling rate of around 86% at the manufacturing phase of shipbuilding in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 77.8%</li> </ul>
Flour	<ul style="list-style-type: none"> <li>○ Achieve recycling rate of no less than 90% in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 93.9% [*]</li> </ul>
Sugar	<ul style="list-style-type: none"> <li>○ Achieve recycling rate of no less than 98% in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 95.0%</li> </ul>
Milk and dairy products	<ul style="list-style-type: none"> <li>○ Achieve recycling rate of no less than 97% in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 98% [*]</li> </ul>
Soft drinks	<ul style="list-style-type: none"> <li>○ Maintain a recycling rate of no less than 99%.</li> <li>➤ Performance in fiscal 2020: 99% [*]</li> </ul>
Beer	<ul style="list-style-type: none"> <li>○ Maintain 100% recycling rate in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 100% [*]</li> </ul>
Construction	<ul style="list-style-type: none"> <li>○ Achieve construction sludge recycling rate of no less than 90% in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 94.6% [*]</li> <li>○ Achieve a mixed construction waste recycling rate of no less than 60% in 2020.</li> <li>➤ Performance in fiscal 2020: 63.2% [*]</li> </ul>
Aviation	<ul style="list-style-type: none"> <li>○ Aim to achieve final disposal rate of no less than 2.4% in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 5.8%</li> </ul>
Telecommunications	<ul style="list-style-type: none"> <li>○ Achieve zero emissions (final disposal rate of no more than 1%) for waste from telecommunications facilities.</li> <li>➤ Performance in fiscal 2020: 0.2% [*]</li> </ul>
Printing	<ul style="list-style-type: none"> <li>○ Achieve recycling rate of no more than 95% in fiscal 2020.</li> <li>➤ Performance in fiscal 2020: 97.7% [*]</li> </ul>
Housing	<ul style="list-style-type: none"> <li>○ Aim to achieve the following category-specific recycling rates in fiscal 2015 and beyond: Concrete: 96%; wood: 70%; steel: 92%</li> <li>➤ Performance in fiscal 2020: 87.0% (weighted average of the 3 categories)</li> </ul>

Real estate	<ul style="list-style-type: none"> <li>○ Aim to achieve paper recycling rate of no less than 85% in fiscal 2020. Make efforts to maintain recycling rate of 100% for glass bottles, cans and PET bottles. <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: paper 86.4% [*] ; glass bottles 100% [*] ; cans 100% [*] ; PET bottles 94%</li> </ul> </li> <li>□ Improve purchasing rate of recycled paper.</li> <li>□ Improve green procurement rate.</li> </ul>
Machine tools	<ul style="list-style-type: none"> <li>➤ Achieve recycling rate of no less than 90% in fiscal 2020. <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: 90% [*]</li> </ul> </li> </ul>
Trade	<ul style="list-style-type: none"> <li>➤ Reduce disposal volume of municipal solid waste from business activities by 86% in fiscal 2020. <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: 83.6%</li> </ul> </li> <li>➤ Reduce volume of municipal solid waste from business activities by 55% from fiscal 2000 level (to no more than 4,000 tons). <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: 2,700 tons [*]</li> </ul> </li> </ul>
Department stores	<ul style="list-style-type: none"> <li>➤ Aim to reduce final disposal volume (per 1m<sup>2</sup>) of waste generated in stores by 60% from year 2000 level in 2030. <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: 55.8% reduction</li> </ul> </li> <li>➤ 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"> <li>➤ Performance in fiscal 2020: 49.4% reduction</li> </ul> </li> </ul>
Railway	<ul style="list-style-type: none"> <li>➤ Achieve recycling rate of 94% for waste from stations and railcars. <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: 93%</li> </ul> </li> <li>➤ Achieve recycling rate of 96% for waste generated at General Rolling Stock Centers, etc. <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: 94%</li> </ul> </li> <li>➤ Achieve recycling rate of 96% for waste generated in facility construction. <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: 85%</li> </ul> </li> </ul>
Maritime transport	<ul style="list-style-type: none"> <li>□ Appropriately manage waste in accordance with international standards.</li> <li>□ Make efforts to control waste generation.</li> </ul>
Banking	<ul style="list-style-type: none"> <li>➤ Achieve paper recycling rate of no less than 90% in fiscal 2020 and fiscal 2025. <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: 88.6%</li> </ul> </li> <li>➤ Achieve purchasing rate of recycled paper and environment-friendly paper to no less than 75% in fiscal 2020 and fiscal 2025. <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: 76.4% [*]</li> </ul> </li> <li>➤ Achieve ratio of no less than 80% for number of member banks that offer no-passbook deposit product against total membership in fiscal 2025. <ul style="list-style-type: none"> <li>➤ Performance in fiscal 2020: 84% [*]</li> </ul> </li> </ul>

Non-life insurance	<input type="checkbox"/> At individual insurance companies, 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	<input type="checkbox"/> Make efforts to reduce paper use and thus promote resource conservation measures by utilizing two-sided copying and 2 in1 copying and promoting paperless operations by digitalizing documents. <input type="checkbox"/> Make efforts to reduce environmental burden and to recycle resources by promoting the use of paper manufactured in processes that reduce environmental burden and ensuring segregated waste collection.
Life insurance	<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】**

In March 2006, given the announcement of the Keidanren Proposal “Toward the Establishment of an Effective Recycling System for Containers and Packaging” (October 2005), the Liaison Committee of Associations Promoting 3R<sup>1</sup>, comprising eight containers and packaging recycling organizations, formulated the “Voluntary Action Plan for Promoting the 3Rs in Containers and Packaging,” which is annually followed up upon.

In fiscal 2021 a follow-up survey was conducted for the final year of the Voluntary Action Plan (performance in fiscal 2020) and compiled the outcomes of the efforts made across five years.

For “reduce” and “recycle,” targets were set up for eight materials. “Reduce” targets were achieved for 6 materials, and “recycle” targets, for 5 materials (See Tables 2 and 3).<sup>2</sup>

For plastics, a recycling rate of approximately 88.5% were achieved for PET bottles, which have become 25.3% lighter per bottle compared to fiscal 2004 levels. The 3Rs have also been successfully promoted for plastic resources, overachieving the target with a recycling rate of 46.5% and cumulatively reducing plastic packaging and containers by 19.2 % relative to fiscal 2005 levels.

The Liaison Committee of Associations Promoting 3R has already announced the “Voluntary Action Plan for Promoting the 3Rs in Containers and Packaging 2025”<sup>3</sup> and has expressed its determination to continue its efforts to promote the 3Rs in containers and packaging.

**Table 2. Reduction targets and performance status**

	FY2020 target (relative to FY2004)	2016	2017	2018	2019	2020	Notes	Approach taken in setting target
<b>Glass bottles</b>	1.5% lighter	1.5%	2.2%	1.2%	1.7%	2.2%		Reduction targets for average weight per bottle/can
<b>PET bottles</b>	25% lighter	23.0%	23.9%	23.6%	23.8%	25.3%	Upward revision of target (20%->25%)	
<b>Steel cans</b>	8% lighter	7.7%	7.8%	7.3%	8.1%	8.6%	Upward revision of target (7%->8%)	
<b>Aluminum cans</b>	5.5% lighter	5.1%	5.3%	5.3%	5.4%	5.8%	Changed calculation method from FY2016	Reduction targets for average weight
<b>Plastic</b>	3% lighter in terms of 500ml	2.5%	2.9%	2.9%	2.9%	2.5%		

<sup>1</sup> For details, see Liaison Committee of Associations Promoting 3R website: <http://www.3r-suishin.jp/>

<sup>2</sup> For details, see: [http://www.3r-suishin.jp/PDF/2021Report/Followup\\_Report2021\\_all.pdf](http://www.3r-suishin.jp/PDF/2021Report/Followup_Report2021_all.pdf)

<sup>3</sup> For details, see: [http://3r-suishin.jp/PDF/3R\\_Actionplan2025.pdf](http://3r-suishin.jp/PDF/3R_Actionplan2025.pdf)

<b>containers and packaging</b>	milk cartons							per m <sup>2</sup>
<b>Paper containers and packaging</b>	6.5% lighter in terms of average weight per m <sup>2</sup>	5.2%	5.1%	5.1%	5.5%	6.1%		
<b>Paper containers for beverages</b>	Reduction rate of 14%	11.5%	11.2%	10.7%	13.1%	23.5%	Upward revision of target (12%→14%)	Reduction target for total weight
<b>Cardboard boxes</b>	Reduction rate of 16%	15.3%	15.9%	17.0%	17.6%	19.2%	Upward revision of target (15%→16%)	Targets determined based on reductions calculated by each industry to which corporate users of containers and packaging

<Source: Liaison Committee of Associations Promoting 3R>

**Table 3. Recycling targets and performance status**

Material	Index	FY 2020 target	Performance				
			2016	2017	2018	2019	2020
<b>Glass bottles</b>	Recycling rate	70%+	71.0%	69.2%	68.9%	67.6%	69.0%
<b>PET bottles</b>		85%+	84.0%	84.9%	84.6%	85.9%	88.5%
<b>Steel cans</b>		90%+	93.9%	93.4%	93.2%	93.3%	94.0%
<b>Aluminum cans</b>		90%+	92.4%	92.5%	93.6%	97.9%	94.0%
<b>Plastic containers and packaging</b>	Recycling rate (material recycling rate)	46%+	46.6%	46.3%	45.4%	46.6%	46.5%
<b>Paper containers and packaging</b>	Collection rate	28%+	25.1%	24.5%	27.0%	26.6%	25.1%
<b>Paper containers for beverages</b>		50%+	44.3%	43.4%	42.5%	41.4%	38.8%
<b>Cardboard boxes</b>		95%+	96.6%	96.1%	96.1%	94.6%	96.1%

<Source: Liaison Committee of Associations Promoting 3R>

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

In August 2018, Keidanren compiled and published “Opinion on formulating ‘Japan’s Resource Circulation Strategy for Plastics,’” 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 circulation<sup>4</sup>. In the Keidanren 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 solving 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, each industry set up “industry-specific plastic-related targets.” In fiscal 2021, 40 industries announced a total of 83 diverse targets as given in Table 5 and a follow-up survey was conducted against these targets.

Furthermore, 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 and the follow-up results, see the “Industry-specific Report.”)

In April 2022, the Plastic Resource Circulation Act will be enacted, calling for the enhanced promotion of plastic resource circulation with the cooperation of consumers and other actors concerned. Keidanren will also seek to further enhance targets, promoting understanding for the efforts made by the Japanese business community by widely communicating these voluntary approaches both domestically and overseas, while also working vigorously to facilitate the circulation of plastic resources.

**Table 4. Industry-specific plastic-related targets**

[Explanation of targets] 【Quan○】 : Quantitative target [[Qual○]] : Qualitative target [*] : Overachieved targets ※For details, see the “Industry-specific Report.”
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<sup>4</sup>For details, see: [https://www.keidanren.or.jp/en/policy/2018/098\\_proposal.html](https://www.keidanren.or.jp/en/policy/2018/098_proposal.html)

Electric power	【Qual①】 【Qual②】	Promote recycling of materials, including plastic wastes Promote beautification and cleanup activities
Gas	【Quan①】	Aim for 100% effective utilization of used polyethylene gas pipes, including thermal recovery by fiscal 2030 ➢98.7% (fiscal 2020)
Petroleum	【Quan①】  【Qual①】	Achieve 100% implementation rate of systems ensuring segregated waste collection at each company (office) in fiscal 2020 ➢100% (fiscal 2020) [*] Proactively engage in litter cleanup activities, including cleanups of plastic litter, in public spaces (roads, beaches, etc.)
Iron and steel	【Quan①】	Assuming that a legal system that further promotes the formulation of a sound material-cycle society will be established and that a collection system will be established under Government leadership, make efforts with an aim to use 1 Mt waste plastics annually. Note: revision of Commitment to a Low Carbon Society Phase 1 (2020 target) (from Iron and Steel WG Report on February 17, 2017) • The Association has aimed to reduce emissions by 2 Mt-CO <sub>2</sub> 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 “continue to prioritize recycling for 50% of material” and to conduct a review “in around 5 years.” • Given that the newly decided policy has made it extremely difficult to increase the utilization of waste plastics to 1 Mt in fiscal 2020 under the current circumstances, only increases in the volume of collected waste plastics, etc, relative to fiscal 2005 levels will be counted as reductions. ➢370,000 tons (fiscal 2020)
Non-ferrous metals	【Qual①】	Reduce plastic wastes and promote recycling
Aluminum	【Quan①】	Maintain current plastic waste material recycling rate through fiscal 2030 and aim to achieve higher rates.
Brass	【Quan①】	Maintain plastic waste material recycling rate of no less than 85% through fiscal 2030. ➢93.4% (fiscal 2020) [*]
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
Rubber	【Quan①】	Maintain plastic waste recycling rate of no less than 85% through fiscal 2030.
Cement	【Qual①】	Increase receipt and treatment of plastic wastes

Chemical	【Quan①】	[JPIF] Encourage a wider range of companies to take measures to prevent resin pellet spill
	【Quan②】	[JPIF] Increase the number of companies and organizations participating in the campaign to announce declarations towards resolving marine plastic litter issues > Currently, 57 companies and 18 organizations have declared measures.
	【Qual①】	[JPIF] Conduct awareness-raising campaigns regarding marine plastic litter issues (host lectures, send lecturers)
	【Qual②】	[JPIF] Coordinate academic research on marine plastic litter issues
	【Qual③】	[JCIA LRI] Evaluate exposure or risk of environmental organisms to chemical substances absorbed by microplastics
	【Qual④】	[JCIA LRI] Clarify the mechanism of microplastics generation
	【Qual⑤】	[JaME (Japan Initiative for Marine Environment)] Organize training seminars for dissemination in Asia
	【Qual⑥】	[JaME (Japan Initiative for Marine Environment)] Verify the effectiveness of energy recovery
	【Qual⑦】	[JaME (Japan Initiative for Marine Environment)] Conduct domestic awareness-raising campaigns: Widespread and deepened awareness that plastic is made from limited resources and thus bear value, will lead to the prevention of littering.
Pharmaceuticals	【Quan①】	Achieve plastic waste recycling rate of 65% in fiscal 2030. > 60.7% (fiscal 2020)
Pulp and paper	【Qual①】	Develop and supply biodegradable materials from paper pulp
	【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% (fiscal 2020) [ * ]
Automobiles	【Quan①】	Maintain recycling rate of no less than 99% for all industrial waste generated at factories through fiscal 2020. > 99.9% (fiscal 2019) [ * ]
	【Quan②】	Continue and maintain recycling rate of no less than 90% for automobile shredder residue through fiscal 2030. > 95+% at each company (fiscal 2020) [ * ]

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>➢21,000 tons (fiscal 2020) [ * ]</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>➢92.4% (fiscal 2020) [ * ]</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>
Auto-body	【Quan①】	<p>Reduce final disposal volume of industrial waste by 89% relative to the fiscal 2000 level in fiscal 2020.</p> <p>➢89% reduction (fiscal 2020) [ * ]</p>
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 2020) [ * ]</p> <p>Promote proper treatment of plastic waste in business operations</p> <p>Change cushioning material from plastic to other materials</p>
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"> <li>• Encourage member companies to perform outreach on environmental conservation and plastic waste-related activities.</li> <li>• Collect case studies of environmental conservation efforts, including cleanups and workshops, made by each company and share them outside the industry.</li> <li>• 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.</li> </ul>
Flour	<p>【Quan①】</p> <p>【Quan②】</p>	<p>Achieve plastic waste recycling rate of no less than 90% in fiscal 2030.</p> <p>➢85.7% (fiscal 2020)</p> <p>Reduce final waste disposal volume of plastic waste to below 65 tons</p> <p>➢85.8 tons (fiscal 2020)</p>
Sugar	【Quan①】	<p>Achieve plastic waste recycling rate of no less than 99% (for small package products) in fiscal 2030.</p> <p>➢99.8% (fiscal 2020) [ * ]</p>

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 plastic feedstock for containers and packaging.</p> <p>Facilitate the material recycling of waste plastics generated from manufacturing processes by using recycling operators.</p>
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)  &gt;25.3% (fiscal 2020) [*]</p> <p>PET bottle recycling rate of no less than 85% in fiscal 2030  &gt;88.5% (fiscal 2020) [*]</p> <p>PET bottle effective utilization rate of 100% in fiscal 2030  &gt;98% (fiscal 2020)</p> <p>The Soft Drink Industry's Plastic Resource Circulation Declaration</p> <p>Awareness-raising campaigns against littering of containers</p> <p>Establishing an effective collection system to achieve a collection rate of 100%</p>
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 companies of the Brewers Association of Japan in fiscal 2030.</p> <p>&gt;All byproducts and waste are 100% recycled (fiscal 2000-2020) [*]</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>
Construction	<p>【Qual①】</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>
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>
Telecommunications	<p>【Qual①】</p>	<p>Promote the utilization of used plastics from removed telecommunication facilities</p>
Printing	<p>【Quan①】</p> <p>【Qual①】</p> <p>【Qual②】</p>	<p>Aim to maintain a final disposal rate of 0.9% (actual performance in fiscal 2019) against total amount of waste plastics generated in fiscal 2025</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.</p> <p>Aim to design plastic containers and packaging that are technically easy to segregate and at the same time reusable or recyclable, while also ensuring their functionality.</p>

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.</p> <p>➢ 100% (fiscal 2020) [ * ]</p> <p>Improve the green procurement rate of products purchased in buildings used for the industry's business operations.</p>
Trade	<p>【Quan①】</p> <p>【Qual①】</p> <p>【Qual②】</p> <p>【Qual③】</p>	<p>Aim to achieve 100% segregated disposal of PET bottles at each office at the end of fiscal 2020.</p> <p>➢ 100% implementation rate (fiscal 2020) [ * ]</p> <p>Make industry-wide efforts to handle products and promote business that contribute to the reduction, reuse, and recycling of plastics.</p> <p>Organize an annual forum for member companies to exchange information on corporate initiatives addressing plastic-related issues and make an effort to expand initiatives.</p> <p>Ensure the promotion of the 3Rs (reuse, reduce, and recycle) of plastics used in the cafeterias at each corporate location.</p>
Department stores	<p>【Quan①】</p>	<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.</p> <p>➢ 53.3% reduction (fiscal 2020) [ * ]</p>
Chain stores	<p>【Quan①】</p>	<p>Aim to achieve plastic shopping bag refusal rate of no less than 80% by fiscal 2030.</p> <p>➢ 75.33% reduction (fiscal 2020)</p>
Convenience stores	<p>【Quan①】</p>	<p>Aim to achieve "shopping bag refusal rate of no less than 60%" by fiscal 2030.</p> <p>➢ 74.6% (fiscal 2020)</p> <p>*Shopping bag refusal rate for fiscal 2020 represents figure for period after mandatory charging for shopping bags (July 2020 – February 2021)</p> <p>*Shopping bag refusal rate (March-June 2020): 28.3%</p>
Railway	<p>【Quan①】</p> <p>【Qual①】</p> <p>【Qual②】</p>	<p>Replace plastic shopping bags (around 240 million bags used annually) with bags made from biomass-based material at retail stores directly managed by relevant JR East Group companies that offer customers plastic shopping bags.</p> <p>➢ Completed by September 2020 [ * ]</p> <p>Promote recycling by installing segregated garbage bins at stations and separately collect PET bottles with the cooperation of customers.</p> <p>Promote customer understanding of the measures taken by the JR East Group to reduce plastics and encourage behavioral change of customers themselves.</p>



Banking	<p>【Quan①】</p> <p>【Quan②】</p> <p>【Qual①】</p> <p>【Qual②】</p>	<p>Engage in segregated collection of used PET bottles at 100% of member banks in fiscal 2030.          &gt;98% (fiscal 2029)</p> <p>Engage in clean-ups and other measures to reduce marine plastic litter at 100% of member banks in fiscal 2030.          &gt;77% (fiscal 2020)</p> <p>The banking industry will engage in the effective use of resources and waste reduction.</p> <p>The banking industry will actively support companies that take measures to address plastic-related issues in line with government policy.</p>
Nonlife insurance	<p>【Qual①】</p> <p>【Qual②】</p>	<p>Encourage employees to bring their own bags and drink bottles.</p> <p>Prohibit the use of plastic cups and straws at employee cafeterias or replace them with paper products.</p>
Securities	<p>【Qual①】</p>	<p>With a view to achieving plastic resource circulation and implementing measures to prevent the outflow of plastics into the ocean, make efforts to reduce environmental burden and to reuse resources by ensuring the segregated collection of waste, etc.</p>
Life insurance	<p>【Qual①】</p>	<p>Make efforts to reduce environmental burden by reducing the quantity of resources, including plastic resources, required to perform business operations, as well as by promoting the recycling of resources.</p>

#### (4) Other efforts toward 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, see “Specific efforts toward achieving the 3Rs or a circular economy” 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"> <li>• Effective utilization of waste and byproducts (use as feedstock, etc.)</li> <li>• Effective utilization of used products (reuse, recycle, etc.)</li> <li>• Design products that are easy to recycle</li> <li>• Visualize environmental effects by implementing product LCA</li> <li>• Jointly develop recycling technologies with other industries</li> <li>• Introduce in-house certification programs for products featuring reduced environmental burden</li> <li>• Improve resource utilization efficiency by streamlining manufacturing processes</li> <li>• Promote the proper implementation of various recycling laws</li> <li>• Introduce maintenance-free and simplified products</li> <li>• Recover rare metals from electronics</li> </ul>	<ul style="list-style-type: none"> <li>• Effective utilization of packing material</li> <li>• Establish recycling routes through collaboration across the supply chain</li> <li>• Promote the utilization of recycled products</li> <li>• Receive and treat waste from other industries and contribute to reducing final disposal volumes</li> <li>• Formulate and implement product assessment manuals</li> <li>• Produce smaller, more lightweight and longer lifetime products</li> <li>• Omit and simplify packing and introduce returnable packing material</li> <li>• Proactively utilize certified paper and certified products</li> <li>• Adopt buildings with high efficiency, including high insulation</li> </ul>
Technology development	
<ul style="list-style-type: none"> <li>• Develop technologies to streamline large-scale construction works</li> <li>• Develop and utilize cogeneration technologies</li> <li>• Develop dechlorination technologies for products with high chloride concentration</li> <li>• Develop cellulose nanofiber technologies</li> <li>• Develop new materials</li> <li>• Develop CFC-free technologies</li> </ul>	<ul style="list-style-type: none"> <li>• Develop technologies to utilize biomass</li> <li>• Develop technologies to recover energy from waste</li> <li>• Develop CFRP recycling technologies</li> <li>• Develop technologies to utilize used oil</li> <li>• Develop and utilize image-based consolidated management systems for waste treatment processes</li> </ul>
Provision of new products and services	

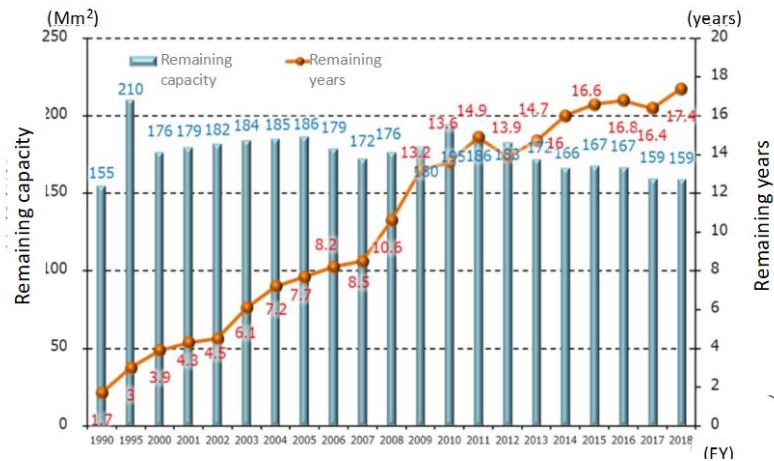
<ul style="list-style-type: none"> <li>• Develop and provide products using circular materials</li> <li>• Develop technologies to recycle used lithium-ion batteries</li> <li>• Establish resource circulation systems</li> <li>• Develop products free of harmful substances</li> <li>• Develop efficient waste treatment equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Develop new recycling processes</li> <li>• Generate power using biogas from waste</li> <li>• Develop lightweight containers and packaging material and utilize recycled material</li> <li>• Develop recyclable containers and packaging</li> <li>• Develop recyclability assessment methods</li> <li>• Conserve water by using remotely monitored toilets</li> </ul>
<b>International contribution / overseas activities</b>	
<ul style="list-style-type: none"> <li>• Promote export of waste-utilizing products</li> <li>• Support introduction of recycling systems</li> <li>• Conduct waste management education at overseas corporate locations</li> <li>• Provide biomass power generation boilers in Southeast Asia, etc.</li> <li>• Consider local tax systems and green procurement</li> </ul>	<ul style="list-style-type: none"> <li>• Support overseas application of JIS standards</li> <li>• Develop returnable packing for overseas shipping</li> <li>• Cooperate with JICA group training programs</li> <li>• Implement overseas CO<sub>2</sub> reduction support projects</li> <li>• Perform environmental education at elementary schools in Southeast Asia, etc.</li> <li>• Engage in overseas tree-planting activities</li> </ul>
<b>Other</b>	
<ul style="list-style-type: none"> <li>• Engage in beautification and cleanup activities in rivers, beaches, roads, etc.</li> <li>• Promote paperless operations through digitization</li> <li>• Receive RPF from other industries</li> <li>• Conduct composting of food waste from cafeterias</li> <li>• Create valuable resources by shredding confidential documents</li> <li>• Promote waste segregation at the office</li> </ul>	<ul style="list-style-type: none"> <li>• Standardize waste-utilizing products (develop JIS standards)</li> <li>• Cooperate in disaster-related waste treatment</li> <li>• Reuse paper and cardboard boxes</li> <li>• Communicate environment-related information on websites, etc.</li> <li>• Participate in environment-related events</li> <li>• Conduct segregated collection of PET bottles</li> </ul>

### **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 94.3% 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 17.4 years in 2018 (see Figure 2).

**Figure 2. Trends in the years of remaining capacity at final disposal sites for industrial waste**

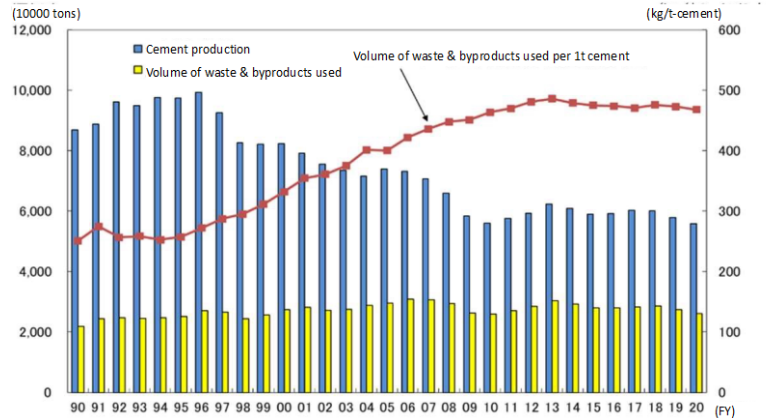


<Source: Ministry of the Environment>

However, in recent years, the potential for reducing final disposal volumes of industrial waste is nearing its limits and the rate of reduction is slowing down. 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 a consideration of other factors, including increased energy consumption caused by recycling. Moreover, we must also pay attention to the various potential drivers of future increases in final disposal volumes of various industrial waste, including increases in construction works for enhanced disaster prevention and addressing 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 3.).

**Figure 3. 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.

In April, the Plastic Resource Circulation Act, which promotes resource circulation with a focus on plastic as a “material,” will be enacted, calling for the further facilitation of plastic resource circulation.

Marine plastic litter issues are a global challenge. Solving this problem requires promoting the 3Rs by ensuring the proper treatment of waste, preventing the outflow of waste plastics into the ocean and avoiding to the maximum extent possible their landfilling. Based on this acknowledgement, Japan can contribute to solving global plastic resource circulation issues through engagement in international cooperation, drawing upon its outstanding efforts, including the data, technologies and knowhow accumulated through its experiences to date, and contribution to proper waste treatment and promoting the 3Rs in developing countries.

Internationally, there is growing interest in a transition from the conventional linear economy characterized by mass production, mass consumption and mass disposal to a circular economy. This approach seeks to achieve economic growth by integrating the entire cycle of procurement, feedstock input, production/distribution, consumption/use,

and collection/recycling into our socioeconomic activities and effectively utilizing resources, thus creating new businesses. It follows the same path as the approach that Japan has taken to date toward achieving a sound material-cycle society.

With this acknowledgement, Keidanren will continue to firmly pursue this Plan in fiscal 2021 and beyond. It will not only vigorously work to reduce final disposal volumes of industrial waste, but also enhance industry-specific plastic-related targets as well as self-determined industry-specific targets that seek to improve the quality of resource circulation; and thus, it will contribute to resolving tight landfill space issues and marine plastic litter issues while proactively seeking transition to a circular economy. (For details, see Appendix 1 “Policy for the Voluntary Action Plan for Establishing a Sound Material-Cycle Society from Fiscal 2021”)

This will indispensably require government-led operational improvements in and review of the legal system (see Appendix 1 “Main requests from individual industries to the national and local governments”).

Guided by the basic philosophy of making every possible effort to achieve a sustainable and rich future society governed by sustainable capitalism, Keidanren will engage in a wide range of innovations, including not only technological innovations, such as developing new socially implementable 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 challenges.

#### **4. [Reference] Initiatives taken by Keidanren in fiscal 2021**

##### **(1) Initiatives for the circular economy**

In March 2021, Keidanren, jointly with the Ministry of the Environment and the Ministry of Economy, Trade and Industry, launched the Japan Partnership for Circular Economy (J4CE, to be read out as “J-force”). J4CE aims to enhance public-private partnership with a view to foster further understanding for a circular economy.<sup>5</sup> The Partnership engages in activities under its pillars of activity: 1) Collecting and communicating to domestic and overseas audiences, examples of Japan’s advanced initiatives related to circular economy; 2) sharing information and building networks on circular economy; 3) setting fora for dialogue toward promoting circular economy.

As a result, in September, we launched the J4CE website, on which we introduced more than 130 examples of initiatives taken by participating companies and organizations and published a “Noteworthy Cases” brochure.

Both arterial and venous industries covering a wide range of sectors have joined the public-private dialogue and engage in discussions, seeking to map out the challenges in promoting the transition to circular economy in Japan. In addition, an opportunity for dialogue with investors was also arranged for an exchange of views among public and private sectors on how to disclose information in a way that efforts to address circular economy will be properly evaluated.

J4CE’s activities will continue in fiscal 2022. We plan to continue to engage in activities that will contribute to fostering further understanding for circular economy and promoting efforts among a wide range of stakeholders by, for example, continuing public-private dialogue and organizing opportunities for exchange among participating companies and organizations.



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<sup>5</sup> Qualifications for participation include: 1) membership with Keidanren; or 2) a company or organization that is not a member of Keidanren who supports the aims of J4CE, wishes to participate, and has acquired the approval of the co-founders (the Ministry of the Environment, Ministry of Economy, Trade and Industry, and Keidanren). As on December 1, 2021, 121 companies and 14 organizations have joined J4CE.

## **(2) Approach to plastic resource circulation**

In June 2021, the Act on Promotion of Resource Circulation for Plastics (Plastic Resource Circulation Act) was promulgated. This Act stipulates measures to be taken by various actors to promote efforts to circulate plastic resources (3Rs + Renewables) at each phase from the designing phase of products using plastic to the treatment of plastic waste.

From August through November, Keidanren attended the joint meeting of the Central Environment Council and the Industrial Structure Council, held for the purpose of considering cabinet orders and ministerial ordinances in relation to the Act as well as its announcement, and advocated the development of a scheme that would support voluntary approaches taken by the business community.

The Act provides for the further promotion of environment-friendly design by manufacturers, the rationalized use of single-use plastics by retailers and service providers, the collection of plastic resources by local authorities, the voluntary recovery of products, etc. by manufacturing and sales operators, measures to promote efforts to reduce disposal and material recycling by waste generators.

Given the momentum of the enactment of the Act, Keidanren is determined to further promote voluntary approaches taken by the business community and engage in the enhanced sophistication of plastic resource circulation.



**Policy for the Voluntary Action Plan for Establishing a Sound Material-Cycle Society from 2021 and beyond**

March 16, 2021

Keidanren (Japan Business Federation)

1. Overview of the Voluntary Action Plan

Initiatives taken toward establishing a sound material-cycle society are not only important for Japan, in light of its limited domestic resources, but promise to become increasingly important globally, given looming resource constraints due to a growing population.

With a view to promote proactive initiatives by the Japanese business community toward establishing a sound material-cycle society, Keidanren has formulated a voluntary action plan embracing industry-specific targets and concrete measures to achieve them. Every fiscal year, it has conducted a follow-up survey.

Currently, Keidanren implements the Establishing a Sound Material-Cycle Society **with the cooperation of 45 participating industries** that have each set up three types of individual targets: (1) reduction targets for the final disposal volume of industrial waste; (2) other industry-specific targets; and (3) industry-specific plastic-related targets.

Faced with new challenges, including marine plastic litter issues and waste import restrictions adopted by other countries, **the Japanese business community will continue to engage in voluntary approaches in 2021 and beyond,** seeking to create and promote innovation.

2. Reduction target for the final disposal volume of industrial waste

Keidanren has addressed the issue of reducing the final disposal volume of industry waste by setting up a target for the entire business community and renewing it in depth four times. As a result, **in fiscal 2019, it successfully reduced the final disposal volume of industrial waste by approximately 77.8% below the fiscal 2000 level (approximately 93.0% below the fiscal 1990 level).** This has led to improvements in the final disposal site shortage issue that was a serious challenge faced by Japan in the 1990s. The Voluntary Action Plan has played a significant role in this achievement. (The years of remaining capacity at final disposal sites have increased from only a little over 2 years in the 1990s to **16.4 years in fiscal 2017.**)

However, some industries have already achieved recycling rates close to 100% for industrial waste and other industries handle wastes that are difficult to recycle. Hence, the final disposal volume has remained almost unchanged since 2010. Furthermore, some have pointed out that additional reductions in the final disposal volume could increase energy consumption, and thus reverse trends towards achieving a low carbon society.

Moreover, other various potential drivers of an increase in the final disposal volume of industrial waste have been pointed out. These include the possible increase in final disposal volumes that need to be treated as a result of tightened import restrictions on waste in other countries and increased construction works for disaster prevention and reduction and those dealing with aging infrastructure.

In addition, there are many uncertain factors, such as how the spread of COVID-19 infections will impact economic activity and how increasing disasters will affect industrial waste treatment.

Amid these circumstances, the business community will continue to engage in reductions by **setting up industry-specific targets**, with a view to **not increasing from current levels the “final disposal volume of industrial waste,”** which is the most important industrial index in the context of a sound material-cycle society.

【Business community-wide reduction target for the total final disposal volume of industrial waste】

“Aim to reduce by fiscal 2025, the final disposal volume of industrial waste appropriately treated with consideration for achieving a low-carbon society by around 75% from the actual performance level in fiscal 2000.”

〈Approach〉

- **The aim is to achieve reductions by 75% (4.59 million tons) relative to the average for the past five years (fiscal 2014-2018)** when final disposal volumes have remained at the same level, and to continue efforts to maintain this level across the following five years.
- We will continue to explicitly use the phrase, “the final disposal volume of industrial waste that has been appropriately treated with consideration for achieving a low-carbon society,” in order to indicate that the business community will continue its efforts to reduce final disposal volumes from a comprehensive perspective, even under various constraints, such as the need to consider energy consumption and to fully engage in appropriate treatment.

\*This target shall be reviewed as required, in the event that new factors of increased final disposal volumes of industrial waste emerge in fiscal 2021 and beyond.

### 3. Industry-specific targets

Given the different initiatives, including promoting the 3Rs (reduce, reuse, and recycle), taken toward a sound material-cycle society in each industry or business category, it is difficult to set up common indices across all industries to determine an business community-wide target. Therefore, since fiscal 2006, each industry association has set up “industry-specific targets” in addition to the reduction target for the total final disposal volume of industrial waste.

With resource constraints highlighted on a global scale, the efficient utilization of our limited resources is important for the sustainable development of society and economy. Hence, efforts focused on improving the quality of resource circulation will be continued to be called for.

Therefore, in the Voluntary Action Plan to be implemented in fiscal 2021 and beyond, too, industries will **set up on a voluntary basis “industry-specific targets” that will contribute to improving resource circulation, accommodating industry-specific characteristics and circumstances.**

### 4. Industry-specific plastic-related targets

In August 2018, Keidanren compiled and published “Opinion on Formulating ‘Japan’s Resource Circulation Strategy for Plastics,’” covering the Japanese business community’s basic approach and views on future measures regarding marine plastic litter issues faced by the international community and domestic plastic resource circulation. In the Keidanren 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 solving 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 fiscal 2020, 40 industries announced a total of 85 targets.**

Marine plastic litter issues and the challenges concerning the promotion of plastic resource circulation cannot be solved through tentative efforts and require international collaboration. Therefore, Keidanren **will continue to engage in “industry-specific**

**plastic-related targets” in fiscal 2021 and beyond** with a view to further enhancing targets and widely communicating both domestically and overseas the approaches taken by these industries.

**【List of industry-specific targets from fiscal 2021】**

\*updated on Jan. 28, 2022

[Explanation of targets]  
 ○: Quantitative targets  
 □: Qualitative targets  
 ※Targets are for industrial waste unless otherwise indicated.

Electric power	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <p>The volume of waste generated from electric power business operations is affected by the amount of power generated; and therefore, the target has always been calculated by estimating the final disposal volume of industrial waste by multiplying the volume of waste generated in the target fiscal year (forecasted based on the electric supply plan announced annually) by the target recycling rate. However, because an electric power supply plan reflecting prospects of restarting nuclear power plants cannot be formulated at present, the final disposal volume is yet to be calculated for the target fiscal year.</p> <p>[Industry-specific target]</p> <p>○ Make efforts to achieve recycling rate of 95% in fiscal 2025</p> <p>[Industry-specific plastic-related target]</p> <p>□ Promote recycling of materials, including reusing plastic waste</p> <p>□ Promote beautification and cleanup activities</p>
Gas	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <p>○ 50 tons (94% reduction from actual performance in fiscal 2000, or 80 tons)</p> <p>[Industry-specific target]</p> <p>○ 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).</p> <p>[Industry-specific plastic-related target]</p> <p>○ Aim for 100% effective utilization of used polyethylene gas pipes, including thermal recovery by fiscal 2030</p>
Petroleum	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <p>○ 1,000 tons (96% reduction from actual performance in fiscal 2000, or 28,000 tons)</p> <p>[Industry-specific target]</p> <p>○ Maintain and continue zero emissions (final disposal rate of no more than 1%) in fiscal 2021 and beyond, as achieved in fiscal 2020</p> <p>[Industry-specific plastic-related targets]</p> <p>○ The target index is represented by the implementation rate of systems ensuring segregated waste collection at each company (office). A 100% implementation rate will be achieved in fiscal 2021 and beyond.</p> <p>□ Proactively engage in litter cleanup activities, including cleanups of plastic litter, in public spaces (roads, beaches, etc.). In prevention of COVID-19 infections, careful consideration will be made with regard to cleanup activity procedures that require participants to wear masks and avoid close contact, avoiding directly touching waste and how to appropriately store it.</p>

Iron and steel	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <p><input type="checkbox"/> Maintain a recycling rate of 99%. Also, engage in reduction efforts to achieve a level of 320,000 tons in final disposal volume (86% reduction relative to fiscal 1990 levels).</p> <p>[Industry-specific target]</p> <p><input type="radio"/> Make efforts to maintain a steel can recycling rate of at least 90% Also, seek to quantitatively identify steel cans that are collected and recycled but not counted in the statistics and include them in the recycling rate.</p> <p>[Industry-specific plastic-related target]</p> <p><input type="checkbox"/> Aim to reduce 2 Mt-CO<sub>2</sub> by fiscal 2030 by increased use of waste plastics including waste tires</p> <p>*However, the results of the government review of the containers and packaging plastic recycling system will be assessed, and if an increase cannot be expected in the volume treatable by the iron and steel industry in fiscal 2030 relative to actual performance in fiscal 2005, then a revision (lowering) of the target will be considered.</p> <p>Source: The Japan Iron and Steel Federation “Commitment to a Low Carbon Society Phase II”</p>
Non-ferrous metals	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <p><input type="radio"/> 320,000 tons (48% reduction from actual performance in fiscal 2000, 660,000 tons)</p> <p>[Industry-specific plastic-related target]</p> <p><input type="checkbox"/> Reduce plastic waste and promote recycling.</p>
Aluminum	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <p><input type="radio"/> 4,000 tons (76% reduction from actual performance in fiscal 2000, or 170,000 tons)</p> <p>[Industry-specific target]</p> <p><input type="radio"/> Material recycling rate: maintain aluminum dross recycling rate of at least 99% in fiscal 2025. (Fiscal 2000: 95.9%)</p> <p>[Industry-specific plastic-related target]</p> <p><input type="checkbox"/> Maintain current plastic waste material recycling rate and aim to achieve higher rates. (Target fiscal year: 2030)</p>
Brass	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <p><input type="radio"/> 1,500 tons (75% reduction from actual performance in fiscal 2000, or 6,100 tons)</p> <p>[Industry-specific target]</p> <p><input type="radio"/> Maintain material recycling rate of at least 93% in fiscal 2025.</p> <p>[Industry-specific plastic-related target]</p> <p><input type="radio"/> Maintain plastic material recycling rate of no less than 85% in fiscal 2030.</p>
Electric cable and wire	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <p><input type="radio"/> 5,500 tons (83% reduction from actual performance in fiscal 2000, or 33,100 tons)</p> <p>[Industry-specific target]</p> <p><input type="radio"/> Make efforts to maintain waste recycling rate of around 95% in fiscal 2025.</p> <p>[Industry-specific plastic-related target]</p> <p><input type="radio"/> Limit final waste disposal volumes of “plastic and rubber wastes” to below current levels (1000 tons/decade)</p>

Rubber	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ Maintain level of 2,300 tons or less. (Maintain more than 95% reduction from actual performance in fiscal 2001, or 46,000 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Maintain waste recycling rate of at least 85% through fiscal 2025, as a measure to improve the quality of material circulation.</li> </ul> <p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>○ Fiscal 2030 target: Maintain plastic waste material recycling rate of no less than 85%.</li> </ul>
Flat glass	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 300 tons (99% reduction from actual performance in fiscal 2000, or 24,500 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Recycling rate: Achieve recycling rate of at least 95% in fiscal 2025. (Fiscal 2000: 79.7%)</li> </ul> <p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>□ Engage in clean-up activities for plastic waste, etc. on roads and beaches.</li> </ul>
Cement	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ Limit final disposal volume of industrial waste generated at cement plants to 500t or less.</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>□ While quantitative targets have not been set up, the industry receives large volumes of waste and byproducts generated by other industries and utilizes them in cement production.</li> </ul> <p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>□ Increase receipt and treatment of plastic waste.</li> </ul>
Chemicals	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 170,000 tons or less</li> </ul> <p>[Industry-specific targets]</p> <ul style="list-style-type: none"> <li>○ Reduce final disposal (landfill) volume to 170,000 tons or less by fiscal 2025.</li> <li>○ Maintain material recycling rate of at least 65% through fiscal 2025.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>□ Encourage a wider range of companies to take measures to prevent resin pellet spill</li> <li>□ Coordinate academic research on marine plastic litter issues</li> <li>□ Evaluate exposure or risk of environmental organisms to chemical substances adsorbed by microplastics</li> <li>□ Clarify the mechanism of microplastics generation</li> <li>□ Organize training seminars for dissemination in Asia</li> <li>□ Verify the effectiveness of energy recovery</li> <li>□ Conduct domestic awareness-raising campaigns</li> </ul>
Pharmaceuticals	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 7,400 tons (75% reduction from actual performance in fiscal 2000, or 29,400 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Achieve waste material recycling rate of at least 60% by fiscal 2025.</li> </ul> <p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>○ Achieve plastic waste material recycling rate of at least 65% by fiscal 2030.</li> </ul>

Pulp and Paper	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ Reduce final disposal volume of industrial waste to 60,000 tons (wet weight)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Make efforts to maintain current level (actual performance in fiscal 2019: 98.4%) of effective utilization.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Develop and supply biodegradable materials from paper pulp</li> <li><input type="checkbox"/> Accelerate the replacement of plastics by improving the functionality of existing paper products.</li> </ul>
Electrical and electronics	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ Approximately 35,000 tons (75% reduction from actual performance in fiscal 2000, or 140,000 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Maintain material recycling rate of around 90%.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> [Target for products and packaging] Promote lifecycle design and material circulation efforts considering the 3Rs in products and packaging.</li> <li><input type="checkbox"/> [Target for waste from business establishments] Promote the 3Rs of plastic wastes in production.</li> <li><input type="checkbox"/> [Target for other activities] Implement measures, including cleanups, addressing marine plastic litter issues that contribute to biodiversity conservation.</li> </ul>
Industrial machinery	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 8,768 tons (around 90% reduction from actual performance in fiscal 2000, or 87,682 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Recycling rate of at least 90% in fiscal 2025.</li> </ul>
Bearing	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ Approximately 2,000 tons (Make efforts to achieve 92% reduction from actual performance in fiscal 2000, or 22,000 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Make efforts to achieve material recycling rate of at least 96% for waste, including plastic waste in fiscal 2030.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Make efforts to achieve material recycling rate of at least 96% for waste, including plastic waste in fiscal 2030.</li> </ul>
Automobiles	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ Approximately 1,000 tons (98% reduction from actual performance in fiscal 2005, or 51,000 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Maintain recycling rate of at least 99% in fiscal 2025.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Continue and maintain recycling rate of at least 90% for automobile shredder residue through fiscal 2030. (Fiscal 2005: 62%)</li> </ul>



Auto parts	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ Seek to maintain level of 36,000 tons or less (75% reduction from actual performance in fiscal 2000, or 14,300 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Seek to achieve material recycling rate of at least 85% in fiscal 2025.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Fiscal 2025 target: Attempt to achieve final disposal volume of 36,000 t or less (75% reduction from actual performance in fiscal 2000, or 143,000 tons)</li> <li>○ Attempt to achieve material recycling rate of at least 85%.</li> <li>○ 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.</li> <li>○ Make efforts to solve marine plastic litter issues and to promote plastic material circulation through the effective use of plastic waste, commitment to proper treatment, reduction of single-use plastics consumption, and awareness-raising through environmental education.</li> </ul>
Auto-body	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 2,940 tons or less (89% reduction from actual performance in fiscal 2000, or 26,500 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Industry participation rate of at least 95% in terms of sales</li> </ul> <p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>○ 89% reduction relative to fiscal 2000 level</li> </ul>
Industrial vehicles	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 25 tons (97.2% reduction from actual performance in fiscal 2000, or 880 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Make efforts to maintain material recycling rate of at least 90% for industrial waste generated during manufacturing processes.</li> </ul> <p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>○ Make efforts to reduce final disposal of industrial waste generated during manufacturing processes by 97.2% relative to fiscal 2000 level in fiscal 2025. *included in overall target (target includes plastic waste)</li> </ul>
Rolling stock	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 98% reduction from actual performance in fiscal 2000 (1,510 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Achieve recycling rate of at least 99% in fiscal 2025 and make efforts to come as close to 100% as possible.</li> </ul> <p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>○ Achieve recycling rate of at least 99% for industrial waste (including plastics) in 2025 and make efforts to come as close as possible to reaching 100%.</li> <li>○ Promote proper treatment of plastic waste in business operations.</li> <li>○ Change cushioning material from plastic to other materials.</li> </ul>

Shipbuilding	<p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Make efforts to achieve material recycling rate of around 80% at the manufacturing phase of shipbuilding.</li> </ul> <p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>□ The shipbuilding industry currently properly treats all plastic waste (packing material, blue tarps, PET bottles, hoses, etc.) generated from business operations. The industry seeks to continue treating waste properly and make further improvements.</li> </ul>
Flour	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 190 tons (89% reduction from actual performance in fiscal 2000, or 1,796 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Reduce final disposal volume to 190 tons by fiscal 2025.</li> <li>○ Achieve material recycling rate of at least 95% by 2025.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <p>Make efforts to achieve material recycling rate of no less than 96% for waste, including plastic waste in fiscal 2030.</p>
Sugar	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 1,100 tons (93% reduction from actual performance in fiscal 2000, or 14,900 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Achieve material recycling rate of at least 97% by fiscal 2025.</li> </ul> <p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>○ Achieve plastic waste recycling rate of at least 99% (for small package products) by fiscal 2025.</li> </ul>
Milk and dairy products	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ Maintain level of at least 97% reduction relative to fiscal 2000 level.</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ [Material recycling rate] Seek to achieve recycling rate of at least 97% in fiscal 2025.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Seek to achieve recycling rate of at least 97% for plastic waste generated during manufacturing processes.</li> <li>□ Design products to minimize the use of plastic in containers and packaging.</li> <li>□ Promote the use of environment-friendly materials as feedstock for plastics used in containers and packaging.</li> </ul>
Soft drinks	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 3,000 tons or less (around 74% reduction from actual performance in fiscal 2000, or 11,360 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Maintain material recycling rate of at least 99%</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>□ PET bottle weight reduction rate of at least 25% in fiscal 2025 relative to baseline year (fiscal 2004)</li> <li>□ Maintain PET bottle recycling rate of at least 85%.</li> <li>□ Seek to achieve effective utilization rate of 100% for PET bottles by fiscal 2030.</li> </ul>

Beer	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 0 tons (Maintain actual performance in fiscal 2000 of 0 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Maintain material recycling rate of for byproducts and waste generated during the production of beer, etc. (“beer,” “low-malt beer,” and “liqueurs (sparkling) ②” and “other fermented beverages (sparkling) ②” stipulated in Item 3, Paragraph 2, Article 23 of the Liquor Tax Act) at beer breweries of the member companies of the Brewers Association of Japan.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Effectively utilize 100% of all used plastics generated during production, as a part of efforts to achieve a material recycling rate of 100% for all byproducts and waste generated during the production of beer, etc. (“beer,” “low-malt beer,” and “liqueurs (sparkling) ②” and “other fermented beverages (sparkling) ②” stipulated in Item 3, Paragraph 2, Article 23 of the Liquor Tax Act) at beer breweries of the member companies of the Brewers Association of Japan.</li> <li>○ Support the promotion of Town Beautification and Adopt Program activities addressing plastic containers and awareness-raising campaigns for plastic litter prevention through the Beverage Industry Environment Beautification Association.</li> </ul>
Construction	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 2.3 million tons (82% reduction from actual performance in fiscal 2000, or 12.8 million tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Achieve construction waste recycling rate of no less than 98% based on the criteria provided for in the Construction Recycling Promotion Plan 2020 (Ministry of Land, Infrastructure, Transport and Tourism) .</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Consider measures to reduce plastic waste generated in the construction of new buildings.</li> <li><input type="checkbox"/> Consider how to efficiently and effectively recycle plastic waste generated at construction sites in collaboration with building material manufacturers and waste management operators.</li> </ul>
Aviation	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 219 tons (75% reduction from actual performance in fiscal 2000, or 878 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Aim to achieve final disposal rate of 2.4% or less for industrial waste by fiscal 2025.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Promote the segregation of plastic waste at offices and airports</li> <li>○ Reuse and reduce plastic products used on flights and at airports.</li> <li>○ Replace plastic products used on flights and at airports with environment-friendly materials.</li> </ul>
Telecommunications	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 8,000 tons (95% reduction from actual performance in fiscal 2000, or 165,000 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Achieve a zero-emission final disposal rate (final disposal rate of no more than 1%) for waste from telecommunications facilities.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Promote the effective utilization of used plastics from removed telecommunication facilities.</li> </ul>

Printing	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 1,500 tons (83.3% reduction from actual performance in fiscal 2000, or 9,000 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Aim to maintain the average material recycling rate for the past 5 years (97.9%) in fiscal 2025.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Aim to maintain a final disposal rate of 0.67% (actual performance in fiscal 2019) for plastic waste.</li> <li>○ 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.</li> <li>○ Aim to design plastic containers and packaging that are technically easy to segregate and at the same time reusable or recyclable, while also ensuring their functionality.</li> </ul>
Housing	<p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Final disposal rate of around 50% relative to fiscal 2000 level</li> <li>○ Material recycling rate of concrete: 99%</li> <li>○ Material recycling rate of wood generated in construction: 97%</li> <li>□ Promote the reduction of waste generated by reducing the initial input of construction material at the planning and designing stage.</li> <li>□ Promote the use of precut products and panelization and make efforts to reduce waste generation.</li> <li>□ Facilitate the reuse and recycling of construction waste in housing production and promote the use of recycling material</li> <li>□ Promote the diffusion of the housing demolition procedures indicated in the “Low-rise Housing Construction Waste Recycling and Treatment Guide” compiled by the Japan Federation of Housing Organizations.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>□ Seek to facilitate the reduced use and material recycling of plastics contained in parts and packaging material.</li> <li>□ Conduct research and studies for the promotion of creating a sound material-cycle society and gain a shared understanding of plastic issue trends at the Japan Federation of Housing Organizations’ Environmental Committee, which implements initiatives related to environmental improvement measures, and thus collaborate with member organizations and companies in information sharing and awareness-raising campaigns.</li> </ul>
Real estate	<p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Aim to achieve material recycling rate of at least 85% for paper in fiscal 2020. Seek to maintain recycling rate of 100% for glass bottles, cans and PET bottles.</li> <li>□ Seek to improve the recycled paper purchasing rate and green procurement rate.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Maintain a material recycling rate of 100% for plastic waste generated at buildings used for the industry’s own business operations through fiscal 2030.</li> <li>□ Seek to improve the green procurement rate of products purchased in buildings used for the industry’s own business operations.</li> </ul>
Machine tools	To be developed (scheduled for May 2022)

Trade	<p>[Fiscal 2025 target for final disposal volume of industrial waste]</p> <ul style="list-style-type: none"> <li>○ 600 tons (82% reduction from actual performance in fiscal 2000, or 3,400 tons)</li> </ul> <p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>□ Material recycling rate: Achieve at least 83% in fiscal 2025. (Fiscal 2000: 64%)</li> <li>□ Volume of generated waste: Achieve reductions of 62% in fiscal 2025 relative to fiscal 2000 level. (Reduce to 3,600 tons or less.)</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Aim to maintain 100% segregated disposal of PET bottles at each office (unit) in fiscal 2025.</li> <li>□ Make industry-wide efforts to handle products and promote business that contribute to the reduction, reuse, and recycling of plastics.</li> <li>□ Organize an annual forum for member companies to exchange information on corporate initiatives addressing plastic-related issues and make efforts to expand initiatives.</li> <li>□ Ensure the promotion of the 3Rs (reuse, reduce, recycle) of plastics used in the cafeterias and cafes at each corporate location.</li> </ul>
Department stores	<p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>○ Aim to reduce final disposal volume (per 1m<sup>2</sup>) of waste generated in stores by 60% from fiscal 2000 (baseline) level in 2030.</li> <li>○ Reduce plastic intensity (volume used per unit sales) of paper containers and packaging (wrapping paper, carrier bags, paper bags, paper boxes) use by 50% relative to fiscal 2000 (baseline) level in 2030.</li> </ul> <p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>○ Aim to reduce the volume of plastic containers and packaging used by 50% in terms of plastic intensity (volume of use per unit sales) in 2030 relative to fiscal 2000 (baseline year) level.</li> </ul>
Chain stores	<p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>○ Aim to achieve plastic shopping bag refusal rate of at least 80% by fiscal 2030.</li> </ul>
Convenience stores	<p>[Industry-specific plastic-related target]</p> <ul style="list-style-type: none"> <li>○ Aim to achieve shopping bag refusal rate of at least 60% by fiscal 2030.</li> </ul>
Railway	<p>[Industry-specific targets]</p> <ul style="list-style-type: none"> <li>○ Achieve recycling rate of 94% for waste from stations and railcars by fiscal 2030.</li> <li>○ Achieve recycling rate of 96% for waste generated at General Rolling Stock Centers, etc. by fiscal 2030.</li> <li>○ Achieve recycling rate of 96% for waste generated in facility construction by fiscal 2030.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Achieve recycling rate of 100% for PET bottles from stations and railcars by fiscal 2030.</li> <li>□ Promote recycling by installing segregated garbage bins at stations and separately collect PET bottles with the cooperation of customers.</li> </ul>
Maritime transport	<p>[Industry-specific target]</p> <ul style="list-style-type: none"> <li>□ Appropriately manage waste in accordance with international standards and take measures to reduce waste generation.</li> </ul>

Banking	<p>[Industry-specific targets]</p> <ul style="list-style-type: none"> <li>○ Achieve paper recycling rate of no less than 90% in fiscal 2025.</li> <li>○ Achieve purchasing rate of at least 75% for recycled paper and environment-friendly paper in fiscal 2025.</li> <li>○ Achieve at least 80% in the ratio of member banks that offer no passbook deposit products in fiscal 2025.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>○ Engage in segregated collection of used PET bottles at 100% of member banks. (Target year: fiscal 2030)</li> <li>○ Engage in clean-ups and other measures to reduce marine plastic litter at 100% of member banks. (Target year: fiscal 2030)</li> <li>□ The banking industry will engage in the effective use of resources and waste reduction.</li> <li>□ The banking industry will actively support companies that take measures to address plastic-related issues in line with government policy.</li> </ul>
Non-life insurance	<p>[Industry-specific targets]</p> <ul style="list-style-type: none"> <li>□ At individual insurance companies, <ul style="list-style-type: none"> <li>① Establish a corporate waste management scheme to promote reductions in municipal solid waste from business establishments and collaborate with waste collection operators to ensure segregated collection and improve the recycling rate.</li> <li>② Make efforts to purchase office supplies that contribute to increasing the utilization rate of environment-friendly products.</li> <li>③ Reduce OA paper use through efforts made toward achieving corporate targets, including the proactive utilization of two-sided copying, 2in1 copying, tablet devices, etc.</li> </ul> </li> <li>□ Reach out to society through automobile insurance. Promote use of recycled auto parts.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>□ Encourage employees to bring their own bags and drink bottles as a part of measures to address environmental pollution attributable to plastic waste.</li> </ul>
Securities	<p>[Industry-specific targets]</p> <ul style="list-style-type: none"> <li>□ Make efforts to reduce environmental burden and to reuse resources by promoting the use of paper manufactured using methods that reduce environmental burden and ensuring segregated waste collection with a view to plastic resource circulation and measures against ocean outflow.</li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li>□ Make efforts to reduce environmental burden and to reuse resources with a view to plastic resource circulation and measures against ocean outflow.</li> </ul>

<p>Life insurance</p>	<p>[Industry-specific targets]</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> With a view to creating a sound material-cycle society, aim to improve material circulation by making efforts to reduce environmental burden through environment-conscious business operations, collaborating with other companies and stakeholders:             <ol style="list-style-type: none"> <li>1. Make efforts to reduce paper use by promoting paperless practices.</li> <li>2. Make efforts to engage in green procurement of paper and office supplies.</li> <li>3. Make efforts to ensure fully segregated waste collection.</li> <li>4. Make efforts that will lead to the reuse of paper and other resources</li> </ol> </li> </ul> <p>[Industry-specific plastic-related targets]</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Make efforts to reduce environmental burden by reducing the amount of resources, including plastic resources, required to perform business operations, as well as by promoting the recycling of resources.</li> </ul>
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## **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 toward environmental conservation. Based on this Charter, in 1997, with the participation of 35 industries, Keidanren formulated the Voluntary Action Plan on the Environment to address waste disposal issues 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 henceforth.

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 upon each industry to reduce the final disposal volume of industrial waste, while setting the abovementioned target for the entire business community and engaging 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 following two pillars and decided to conduct 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: around 65% below the fiscal 2000 performance level of final disposal volume of industrial waste in fiscal 2015; and 2) establishing industry-specific targets accommodating industry-specific 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 the final disposal volume of industrial waste**

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

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

**5. Setting up “Industry-specific plastic-related targets” (April 2019-)**

In August 2018, Keidanren compiled and published “Opinion on Formulating ‘Japan’s Resource Circulation Strategy for Plastics,’” 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 circulation .

Based on the Keidanren Opinion, in April 2019, Keidanren decided to enhance voluntary approaches taken toward a sound material-cycle society by launching “industry-specific plastic-related targets.” These targets would contribute to solving 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.

## **6. Formulating the post-fiscal 2020 “Voluntary Action Plan for Establishing a Sound Material-Cycle Society” (March 2021)**

Given the conclusion of the target year of the Fourth Target for reducing the final disposal volume of industrial waste, Keidanren formulated a new plan setting fiscal 2025 as the final year. It aims to reduce the final disposal volume of industrial waste by around 75% relative to the fiscal 2000 level. Industry-specific plastic-related targets will also be adopted in fiscal 2021 and beyond, with a view to their further enhancement. The new targets are provided below (see Appendix 1 for details):

### **(1) Fifth Target for economy-wide reductions in the final disposal volume of industrial waste**

Aim to reduce by fiscal 2020, the final disposal volume of appropriately treated industrial waste by 75% from the actual performance level in fiscal 2050 with consideration for achieving a low-carbon society.

### **(2) Industry-specific targets**

With a view to improving the quality of resource circulation, industries set up individual targets other than the final disposal rate of industrial waste, accommodating industry-specific characteristics and circumstances.

### **(3) Industry-specific plastic-related targets**

Industries set up and seek to further enhance targets that will contribute to solving marine plastic litter issues and promoting plastic resource circulation.

## **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.