

Ninth Regional 3R Forum in Asia and the Pacific

“3R as a way for moving towards sufficiency economy – Implications for SDGs”

4-6 March 2019, Bangkok, Thailand

Country Report

(Draft)

<Japan>

This country report was prepared by the Government of Japan as an input for the Ninth Regional 3R Forum in Asia and the Pacific. The views expressed herein do not necessarily reflect the views of the United Nations.

Country 3R Progress Report

Name of the Country: Japan

Name, Designation and Organization Respondent: MOEJ

Other Ministries, Organizations, Agencies contributing to
Country Report:

Timeline of Submission: **31 January 2019** (Email:
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*Progress and achievements towards implementation of the Ha Noi 3R Declaration
-Sustainable 3R Goals for Asia and the Pacific (2013-2023)-*

With the objective of demonstrating renewed interests and commitments of Asia-Pacific countries towards realizing a resource efficient society, the Fourth Regional 3R Forum in Asia-Pacific in 2013 adopted the good-will and legally non-binding “***Ha Noi 3R Declaration – Sustainable 3R Goals for Asia and the Pacific 2013-23.***” The objective of the Country Reporting is to share among international community with various initiatives launched and efforts made (such as new policy instruments, legislations, regulations, institutional arrangements, investments or financing, technological innovation or intervention, partnership mechanisms, such as PPPs, etc.) by the member countries of the Forum in addressing each of the underlined goals of the Ha Noi 3R Declaration. This would help the member countries to share various best practices in 3R and resource efficiency areas across the region. In addition, it would also help bi-lateral and multi-lateral development agencies, donors, development banks in assessing the sustainable needs and challenges of those countries to better plan their existing as well as future capacity building programmes and technical assistance in the areas of 3Rs and sustainable waste management.

With the cooperation of other related ministries, organization and agencies, we request you to kindly fill in the below table as much as possible with relevant data/information. If additional spaces are required, separate sheets could be attached.

Thank you very much for your kind cooperation.

Secretariat of the Regional 3R Forum in Asia and the Pacific
United Nations Centre for Regional Development (UNCRD)
Email: 3R@uncrd.or.jp

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)

Goal 1	Significant reduction in the quantity of municipal solid waste generated, by instituting policies, programmes, and projects at national and local levels, encouraging both producers and consumers to reduce the waste through greening production, greening lifestyle, and sustainable consumption.
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Q-1 What specific 3R policies, programmes and projects, are implemented to reduce the quantity of municipal solid waste?

- Japan states that the government will strengthen efforts to further push 3Rs approach and Waste Management in the 4th Fundamental Plan for Establishing a Sound Material-Cycle Society (MOEJ, 2018).
- Japanese government launched a comprehensive waste reduction strategy in 1993 to promote local community-wide waste reduction and recycling by subsidizing sorted waste collection and group collection by resident groups in municipalities, and it provided subsidies for facilities that repair end-of-life products and put recycled products on display (recycling plazas) to encourage the development of such facilities.
- With a view to strongly promoting waste reduction initiatives in cooperation with consumers and business operators, the Japanese government held the First Waste Reduction Promotion National Conference in September 1992 to compare notes regarding waste reduction. In 1993, the government specified the week starting on May 30 as the Waste Reduction Promotion Week and took an active part in developing a variety of awareness-raising programs through TV broadcasting and other events (the week was renamed the Waste Reduction and Recycling Promotion Week in 1997).
- Many awareness-raising programs for waste reduction by local government initiatives such as “Sapporo waste reduction campaign”, “Sapporo slim Sunday”, “Shopping with your own bag” and so on.

Q-2 What is the level of participation of households in “source” segregation of municipal waste streams? (Please check the appropriate box)

- Very High (> 90%)
- High (>70%)
- Average (50~70%)
- Low or not satisfactory (< 50%)
- Does not exist

Q-3 Total annual government expenditure per capita (US\$ per capita) in municipal solid waste management in 2014-2015

143US\$ per capita (19,606 10⁸JPY / 1.26755 10⁸ person)

(Source: MOEj HP <https://www.env.go.jp/press/105322.html>)

一般廃棄物の排出及び処理状況等（平成 28 年度）について

- ・ ごみ処理事業経費 19,606 億円 (前年度 19,495 億円)
- (うち) 建設改良費 3,385 億円 (前年度 3,300 億円)
- 処理・維持管理費 15,048 億円 (前年度 15,095 億円)

平成 28 年度総人口は 1 億 2675 万 5 千人

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

- Strengthening linkages between production and consumption
- Transition of service provision systems to encourage SCP

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

We established “The 4th Fundamental Plan for Establishing a Sound Material-Cycle Society” in July 2018.

**Voluntary Progress/Achievements/Initiatives in
Implementing Ha Noi 3R Declaration (2013~2023)**

Country Name JAPAN

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)	
Goal 1	Significant reduction in the quantity of municipal solid waste generated, by instituting policies, programmes, and projects at national and local levels, encouraging both producers and consumers to reduce the waste through greening production, greening lifestyle, and sustainable consumption.
<p>For details, please refer to the attachment. Other attempts are as follows, ➤ Reduction of plastic shopping bags ➤ Reduction and recycling of food waste ➤ Promote the use of my bottle and etc.</p>	
<p><i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i> We established “The 4th Fundamental Plan for Establishing a Sound Material-Cycle Society” in July 2018. For details, please refer to the attachment</p>	
<p><i>Is this Goal relevant for your country?</i> <input checked="" type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all</p>	

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)	
Goal 2	Full-scale utilization of the organic component of municipal waste, including food waste, as a valuable resource, thereby achieving multiple benefits such as the reduction of waste flows to final disposal sites, reduction of GHG emission, improvement in resource efficiency, energy recovery, and employment creation.
Q-1 Does the central government have policies or support to utilize or reduce the organic waste such as composting, energy recovery and improving efficiency in food processing?	
<p>The Food Recycling Act was established in May, 2001, and revised twice in 2008 and in 2015. It focuses mainly on food waste generated by food related industries and businesses, and aims to (1) reduce food waste generation; and (2) promote recycling of food waste to feedings or organic fertilizers. As a result, the rate of recycling food waste generated by food related industries and businesses ((Controlled amount + recycled amount for use specified under the Food Recycling Act + amount of heat recovery × 0.95 + reduced amount) / (Controlled amount + annual amount of food waste generated)) increased from 37% in 2001, to 54% in 2007 and 85% in 2015.</p>	
Q-2 What is happening to country's organic waste? (Please check the appropriate box)	
<input type="checkbox"/> mostly landfilled <input checked="" type="checkbox"/> mostly incinerated <input type="checkbox"/> both landfilled and incinerated <input type="checkbox"/> mostly open dumped or open burned	
Challenges (policy/ institutional/ technological/ financial) faced in implementation:	
<ul style="list-style-type: none"> ➤ The utilization of the organic waste by household is quite low. ➤ Further efforts to systematically reduce and recycle food wastes are needed across all other stages in the food supply chain. 	
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant	
<ul style="list-style-type: none"> ➤ Recycling businesses registration system ➤ Recycling loop system ➤ Other measures such as “No-Foodloss Project”, “Eat-Up Movements (3010 campaign)”, and “Salvage Party” for food waste reduction. 	
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)	
<ul style="list-style-type: none"> ➤ The recycling targets for each category of business and industry were set to 85% for food manufacturers, 70% for wholesalers, 45% for retailers, and 40% for restaurants by 2012, but raised further to 95% for food manufacturers, 70% for wholesaler, 55% for retailer, and 50% for restaurants by March 2020. ➤ The government calculated the specific generation of food waste per volume of sales, production, etc. for each of the various business types to identify the most appropriate reduction/prevention target, which is called as “reference generation unit”. It has been applied as the target value for the control of food waste generation by a total of 26 industry groups for a period of five years from April 2014, increased to 31 groups in 2015. 	
Is this Goal relevant for your country? <input checked="" type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)

Goal 3 Achieve significant **increase in recycling rate** of recyclables (e.g., plastic, paper, metal, etc.), by introducing policies and measures, and by setting up financial mechanisms and institutional frameworks involving relevant stakeholders (e.g., producers, consumers, recycling industry, users of recycled materials, etc.) and development of modern recycling industry.

Q-1 What is the recycling rate of various recyclables? (Please check the appropriate cell & add more waste streams as relevant for the country)

Rate Type	Very High (>90%)	High (>70%)	Average (50~60%)	Poor (<50%)	Recycling does not exist	Definition of recycling rate*
Paper		✓ (80.4% in 2017)				Definition 1
Plastic		✓ (84% in 2016)				Definition 3
Metal (aluminum can)	✓ (93.9% in 2016)					Definition 3
Construction waste	✓ (92% in 2008)					Definition 1
e-waste (Braun tube televisions)		✓ (75% in 2014)				Definition 3
Others (Car)	✓ (95% in 2012)					Definition 3

*Note: Please specify in the cell which of the following definitions (ie., 1 or 2 or 3) is followed for recycling rate

Definition 1: (collected recyclable waste)/(estimated generation of waste)

Definition 2: (volume of utilized recyclable waste)/(volume of raw material)

Definition 3: (volume of utilized recyclable waste)/(volume of collected waste for recycling)

Q-2 What specific policies are introduced at local and national level for prevention or reduction of waste streams – paper, plastic, metal, construction waste, e-waste?

- Implementation of individual recycle acts (Containers and Packaging Recycling Act, Home Appliance Recycling Act, Small Appliance Recycling Act, Food Waste Recycling Act, Construction Waste Recycling Act)
- Municipal solid waste treatment facilities, such as recycle centers, are being developed in order to promote generation control, cyclical use and proper treatment of waste, through the Subsidy System for Promoting the Establishment of a Sound Material-Cycle Society.
- Reduction of plastic shopping bags and so on.

Q-3 What is the rate of resource recovery from various waste streams?

Type \ Rate	Very High (>90%)	High (>70%)	Average (50~60%)	Poor (<50%)	Recycling does not exist
Paper			✓ (64.2% in 2017)		
Plastic		✓ (84% in 2016)			
Metal (steel can)	✓ (93.9% in 2016)				
Construction waste	✓ (92% in 2008)				
e-waste (air conditioner)		✓ (89% in 2011)			

(Please check the appropriate cell & add more waste streams as relevant for the country)

Q-4 What is the level of existence of resource recovery facilities/ infrastructures in cities?

Type \ Level	Every Major City	Few Major Cities only	Does not exist	Supportive policy or programmes exists	No supportive policy or programmes
Paper	✓				
Plastic	✓				
Metal	✓				
Construction waste	✓				
e-waste	✓				

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)

Goal 3 Achieve significant **increase in recycling rate** of recyclables (e.g., plastic, paper, metal, etc.), by introducing policies and measures, and by setting up financial mechanisms and institutional frameworks involving relevant stakeholders (e.g., producers, consumers, recycling industry, users of recycled materials, etc.) and development of modern recycling industry.

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

- Strengthening efforts to reduce/reuse that have been delayed as compared to recycling

**Voluntary Progress/Achievements/Initiatives in
Implementing Ha Noi 3R Declaration (2013~2023)**

Country Name
JAPAN

➤ Strengthening efforts for material recovery

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Plastic Resource Circulation Strategy will be issued by June 2019.

It will include following targets

< Reduce >

- ① Reduce 25% of the accumulated volume of one way plastics by 2030

< Reuse / Recycle >

- ② Reuse / recyclable designs by 2025
③ 60% of packages / containers to be recycled or reused by 2030
④ 100% utilization of used plastics by 2035

< Recycled Plastics / Biomass Plastics >

- ⑤ Use recycled plastics volume to be doubled by 2030
⑥ Introduce 2 million tons of biomass plastics by 2030

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Targets of Material Flow of Third Fundamental Plan for
Establishing a Sound Material-Cycle Society

(USD1=JPY107)

For the comparison targets in the (), 2000

Source: Based on 'Outline of the Basic Plan for Establishing the Recycling-Oriented Society' (Ministry of the Environment)

Targets	FY2000	FY2010	FY2020	FY2025
Resource productivity	JPY250,000 /Ton (USD2337/Ton)	JPY 370,000 /Ton (USD 3459/Ton)	JPY 460,000 /Ton (USD 4300/Ton)	JPY490,000/Ton (USD 4579/Ton)
Cyclic usage rate (resource base)	10%	15%	17%	18%
Cyclic usage rate (waste base)	-	-	45%	47%
Final disposal quantity	56 Million Tons	19 Million Tons	17 Million Tons	13 Million Tons

Is this Goal relevant for your country? Highly Partially Not at all

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)	
Goal 4	Build sustainable cities /green cities by encouraging “zero waste” through sound policies, strategies, institutional mechanisms, and multi - stakeholder partnerships (giving specific importance to private sector involvement) with a primary goal of waste minimization
<i>Q-1 What specific waste management policies and programmes are introduced to encourage private sector participation in municipal waste management?</i> Eco-town programmes has been implemented under initiatives of Ministry of the Environment and other related ministries in several targeted cities since 1997. Eco-town programmes encourage local government to get information access, market creation and networking among related stakeholders, policy and strategy development, to achieve “zero waste” by combining regional industries and financial supports from central government.	
<i>Q-2 What are the major waste management areas that have strong involvement of private and business sector?</i> (Please check appropriate boxes and add other areas if not listed below) <input type="checkbox"/> waste collection <input type="checkbox"/> resource recovery <input checked="" type="checkbox"/> waste recycling <input checked="" type="checkbox"/> waste to energy, composting, etc. <input type="checkbox"/> PPP projects in waste sector	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i> Although biomass technology like a methane fermentation facility has been widely applied into society after FIT system development, the technology targets mainly on industrial organic waste with continuous same waste characteristic. For the implementation of this technology to target on municipal food waste from household, further political and technological improvement will be required. Due to the cost benefit for recycling in other countries, several resources are finally transported to foreign countries even after these materials are collected under official PRO routes. Education is a common keyword in waste and resource sectors for environmentally sound technology application with financially balanced material stream.	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i> For example, Eco-Town programme in Akita prefecture, development of collection system, investment on technological development and estimation of business profitability regarding to solar panels recycling has been conducted in collaboration with local government, private sectors and academic organizations. http://www.env.go.jp/recycle/ecotown/	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i> Measures aimed at the establishment of “Regional Circular and Ecological Spheres” to improve local resource efficiency and vitalize local economies based on an integrated approach toward circulation, low carbon, and harmony with nature, utilizing renewable resources, stock resources, and circulative resources.	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Not at all	

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)	
Goal 5	Encourage the private sector , including small-and medium-sized enterprises (SMEs) to implement measures to increase resource efficiency and productivity , creation of decent work and to improve environmentally-friendly practices through applying environmental standards, clean technologies, and cleaner production.
<i>Q-1 What are the major clean technology related policies aiming to increase energy and resource efficiency of SMEs?</i>	
<p>Recycling industry is an open market to any stakeholders; however, recycler needs to provide an application to local government or related organizations to join in bidding process for recycling and recovery business. In the application form recycler inform their recycling and recovery performance, and it has to meet requirement standards set by laws or guidelines specific to individual materials.</p> <p>To encourage SMEs to promote energy efficiency, Ministry of Economy, Trade and Industry provides subsidy program for the application of energy-efficient equipment and the improvement of operation, to increase productivity of SMEs.</p>	
<i>Q-2 What are the capacity building programmes currently in place to build the technical capacity of SMEs in 3R areas?</i>	
SMEs can access to all programmes initiated by central government, local administrative, other organizations.	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
To improve resource efficiency and productive, secure project finance is a common challenge among SMEs.	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
Installation of energy-efficient lightning, air-conditioner, heat pump, and boiler are good examples.	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<p><i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all</p>	

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)	
Goal 6	Promote the greening of the value chain by encouraging industries and associated suppliers and vendors in socially responsible and inclusive ways.
Q-1 What percent of companies and industries have introduced green accounting and voluntary environmental performance evaluation (Ref: ISO 14000)?	
<input checked="" type="checkbox"/> Very High (> 90%) <input type="checkbox"/> High (>70%) <input type="checkbox"/> Average (50~70%) <input type="checkbox"/> Low or not satisfactory (< 50%) <input type="checkbox"/> None	
Q-2 What percent of companies and industries have introduced social accounting (Ref: SA 8000) in consultation with their workers?	
<input type="checkbox"/> Very High (> 90%) <input type="checkbox"/> High (>70%) <input type="checkbox"/> Average (50~70%) <input checked="" type="checkbox"/> Low or not satisfactory (< 50%) <input type="checkbox"/> None	
Q 3 Does government have a programme for promoting greening of the value chain? What specific policies, programmes and incentives are introduced to promote greening of value chain?	
<p>The Basic Act for Establishing a Sound Material-Cycle Society stipulates the two concepts of the Polluter Pays Principle (PPP) and Extended Producer Responsibility (EPR) as fundamental principles for policy making.</p> <p>Act on Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities (Act on Promoting Green Procurement) has been established as one of individual laws under the Basic Act for Establishing a Sound Material-Cycle Society.</p>	
Challenges (policy/ institutional/ technological/ financial) faced in implementation:	
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant	
Home Appliance Recycling Act stipulates physical and financial responsibilities for customer, collector and manufacture (recycler) under the concept of EPR scheme.	
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)	
Is this Goal relevant for your country? <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)	
Goal 7	Promote industrial symbiosis (i.e., recycling of waste from one industry as a resource for another), by providing relevant incentives and support.
<i>Q-1 Does your government have policies and programmes promoting industrial symbiosis in industrial parks or zones? What specific policies, programmes and incentives are introduced to promote industrial symbiosis?</i>	
<ul style="list-style-type: none"> ● From 1997-2006, Ministry of Economy, Trade and Industry, and Ministry of the Environment of Japan, jointly promoted a policy programme called “Eco-Town Programme”. This policy was originally aiming to promote “Zero Emissions” by promoting effective use of by-products among different industries or “industrial symbiosis”. Japanese government provided financial support to construct recycling capacity in former industrial cities such as Kawasaki and Kitakyushu. Later it has become a policy to establish recycling facilities and networking of recycling businesses to establish national recycling capacity responding to Japan’s Sound Material Cycle policy. In addition, government had provided policy financial investment and some tax exemption for establishing new recycling capacity during that time period to facilitate private investment to establish such recycling capacity. ● Also, municipal solid waste treatment facilities, such as recycle centers, are being developed in order to promote generation control, cyclical use and proper treatment of waste, through the Grant for Promoting the Establishment of a Sound Material-Cycle Society which will support municipalities with Local Plan for Establishment of a Sound Material Cycle Society. <p>Wide-area treatment permit (Manufacturers, service providers, industrial waste treatment facilities, transporters). 'For those producers, service providers which decides to take back and treat their own products and services for proper treatment or recycling or repairing etc. and permitted for "wide area treatment", those producers does not need to get approval for waste treatment and transport from local government.</p> <p><i>Q-2 How many eco-industrial parks or zones or the like, which is supported by the government, are there in the country?</i></p> <p>26 areas were supported by this Eco-town programme from 1997-2006.</p> <p>Eco town policy received about 94.75 billion yen in total governmental expenditures (subsidies from 1997-2004, tax reductions & policy finance from 2000-2004) to generate an increase of 5.89 million tons in recycling capacity (METI’s ex post facto policy evaluation in March 2006). This corresponded to around 20% in average of annual increase in national recycling capacity.</p>	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
Original purpose to promote industrial symbiosis as well as environmental industry was not necessary achieved fully through this Eco-Town Programme. Rather it has later become a policy to establish recycling capacity to sustain Sound Material Cycle Policy of Japan.	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
Case-studies of eco-town in Japan by GEC and UNEP/IETC in 2005: http://www.unep.or.jp/ietc/Publications/spc/Eco_Towns_in_Japan.pdf	
Map of 26 approved eco-towns	

**Voluntary Progress/Achievements/Initiatives in
Implementing Ha Noi 3R Declaration (2013~2023)**

Country Name JAPAN

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)	
Goal 7	Promote industrial symbiosis (i.e., recycling of waste from one industry as a resource for another), by providing relevant incentives and support.
https://www.env.go.jp/en/recycle/manage/eco_town/map.pdf	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
N/A	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)	
Goal 8	Build local capacity of both current and future practitioners, to enable the private sector (including SMEs) to obtain the necessary knowledge and technical skills to foster green industry and create decent, productive work.
<i>Q-1 How many dedicated training facilities or centers are there to cater the needs of SMEs and practitioners in the areas of cleaner production, resource efficiency and environment-friendly technologies, etc.?</i> All training facilities and centers are open to SMEs.	
<i>Q-2 Please provide an indicative figure on annual government (US \$) expenditure on building technical capacity of SMEs and practitioners in the areas of cleaner production, resource efficiency and environment-friendly technologies, etc.?</i> There are several programmes supporting SMEs business, but it is difficult to count expenditure specific to the field of cleaner production, resource efficiency and environment-friendly technologies.	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i> Ministry of Economy, Trade and Industry provides subsidy program for the application of energy-efficient equipment such as energy-efficient lightning, air-conditioner, heat pump, and boiler.	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)

Goal 9 Develop proper **classification and inventory of hazardous waste** as a prerequisite towards sound management of such waste.

Q-1 *Is there a systematic classification of hazardous waste? If so, please attach.*

Yes No

Specially controlled waste

Category	Main Type	Summary	
Special management for general waste	Parts used in PCB	Parts of PCB of air conditioner, TV and Microwave	
	Dust	Amongst the garbage treatment facility, the things produced in incineration facility	
	Dust, ash, mud	Dioxin type things that are produced by burning general waste of special facility set according to Dioxin special measures law	
	Infectious municipal waste	There is a fear that infectious pathogen may have present or attached in/to general waste that is discharged from medical institutions.	
Special management for production waste	Waste oil	Volatile oil, Kerosene, diesel compounds (excluding flame-retardant tar pitch type)	
	Waste acid	Waste acid of pH less than 2.0 to have significant corrosive	
	Waste alkali	Waste alkali of pH more than 12.5 to have a significant corrosive	
	Infectious industrial waste	There is a fear that infectious pathogen may have present or attached in/to industrial waste that is discharged from medical institutions.	
	Certain hazardous industrial waste	Waste PCB	Waste oil having waste PCB and PCB
		PCB contamination	PCB with stains, PCB with stained waste paper, PCB having stained wood chips or fiber scraps, metal strap or plastic material with attached or enclosed PCB, ceramic waste or debris with attached PCB
		PCB treated things	PCB is included in the things that were processed in order to dispose of waste such as PCB or PCB contamination
		Specified sewage sludge	Sludge that is specified in Article 13 rule 4 of Sewerage Law Enforcement Ordinance
		Slag	Materials containing multiple metals with constant or higher concentration
		Waste asbestos etc.	The thing that is generated from the business place where special dust generation facility is installed as per Air Pollution Control Act, may be scattered or things related to asbestos building materials removal business.
		Ash	Ash of heavy metals or things that contains dioxins of certain concentration
		Dust	Heavy metals, 1,4-Dioxin, Dioxin type with constant or higher concentration
		Waste oil	Things that contains organic chlorine compounds
		Mud, waste acid, waste alkali	Heavy metals, PCB, organic chlorine compounds, pesticides, things having Dioxin type with constant or higher concentration

Source: [Law related to waste management and cleaning] as per the creation of Ministry of the Environment.

Q-2 *What specific rules and regulations are introduced to separate, store, treat, transportation and disposal of hazardous waste?*

- Waste Management and Public Cleaning Act
- Act for the Control of Export, Import and Others of Specified Hazardous Wastes and other Waste (Domestic Basel Act)
- Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

- To promote smooth and safe treatment of wastes, such as those which contain asbestos, or e-waste contaminated by trace amounts of PCB, and explore treatment technologies as well as promote detoxification treatment of such wastes based on a Toxicity Eliminating or Decomposing Treatment Certification System.
- Under the amended Domestic Basel Act,
 - (1) the route of mixed metal scrap in Japan, companies that engage in illegal collectors become object to the regulation;
 - (2) Japanese government simplifies the import procedure under Domestic Basel Act to import hazardous waste easily and speedy through the exemption printed-circuit board from the import procedure and the introduction of pre-consented mechanism.

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

MOEj HP <https://www.loc.gov/search/500/>; http://www.env.go.jp/recycle/yugai/basel_info/index.html

Important policies/programmes/projects/master plans the government plans to undertake

**Voluntary Progress/Achievements/Initiatives in
Implementing Ha Noi 3R Declaration (2013~2023)**

Country Name
JAPAN

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)	
Goal 9	Develop proper classification and inventory of hazardous waste as a prerequisite towards sound management of such waste.
<i>within next five years (2016~2021)</i>	
➤ Amended Domestic Basel Act	
Is this Goal relevant for your country? <input checked="" type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

II. 3R Goals in Rural Areas	
Goal 10	Reduce losses in the overall food supply chain (production, post harvesting and storage, processing and packaging, distribution), leading to reduction of waste while increasing the quantity and improving the quality of products reaching consumers.
<i>Q-1 What specific policies, rules and regulations, including awareness programmes, are introduced to minimize food or crop waste?</i>	
<ul style="list-style-type: none"> ➤ The Food Recycling Law 	
<i>Q-2 Is there any continuing education services or awareness programmes for the farmers or agricultural marketing associations on reduction of crop wastes for increased food security?</i>	
<ul style="list-style-type: none"> ➤ Act on the Promotion of Environmental Conservation Activities through Environmental Education ➤ Local Food Promotion: http://www.maff.go.jp/j/shokusan/gizyutu/tisan_tisyo/attach/pdf/index-14.pdf 	
<i>Q-3 What is the average wastage of crops or agricultural produce between farms to consumers, if there is a study in your country?</i>	
<input checked="" type="checkbox"/> Very High (> 20~ 30%) <input type="checkbox"/> High (10~20%) <input type="checkbox"/> Medium (5~10%) <input type="checkbox"/> Low (< 5%) <input type="checkbox"/> Negligible (<1%)	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<ul style="list-style-type: none"> ➤ Reduction of the food losses generated on farm and by the post harvesting stage. ➤ Further efforts to systematically reduce and recycle food wastes are needed across all other stages in the food supply chain. 	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
e.g. <ul style="list-style-type: none"> ➤ Changing the display method of “best-before date” ➤ Review of business practices: 35 companies’ experiment of extending delivery & sales deadlines 	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<ul style="list-style-type: none"> ➤ The recycling targets for each category of business and industry were set to 85% for food manufacturers, 70% for wholesalers, 45% for retailers, and 40% for restaurants by 2012, but raised further to 95% for food manufacturers, 70% for wholesaler, 55% for retailer, and 50% for restaurants by March 2020. ➤ The government calculated the specific generation of food waste per volume of sales, production, etc. for each of the various business types to identify the most appropriate reduction/prevention target, which is called as “reference generation unit”. It has been applied as the target value for the control of food waste generation by a total of 26 industry groups for a period of five years from April 2014, increased to 31 groups in 2015. 	
<i>Is this Goal relevant for your country?</i> <input checked="" type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

II. 3R Goals in Rural Areas

Goal 11 Promote full scale **use of agricultural biomass waste and livestock waste** through reuse and/or recycle measures as appropriate, to achieve a number of co - benefits including GHG emission reduction, energy security, sustainable livelihoods in rural areas and poverty reduction, among others.

Q-1 How much amount of – (a) agricultural biomass waste and (b) livestock waste are grossly generated per annum?

The Amount of Generation, Utilization Rate and Goal of Each Type of Biomass

Type of biomass	Amount generated in current year	Current utilization rate	Goal of FY 2020
Domestic animal wastes	Approximately 88 million tons	Approximately 90%	Approximately 90%
Sewage sludge	Approximately 78 million tons	Approximately 77%	Approximately 85%
Black liquor (*1)	Approximately 14 million tons (*2)	Approximately 100%	Approximately 100%
Paper	Approximately 27 million tons	Approximately 80%	Approximately 85%
Food waste	Approximately 19 million tons	Approximately 27%	Approximately 40%
Remainder material of saw mill etc.	Approximately 3.4 million tons (*2)	Approximately 95%	Approximately 95%
Construction generated wood	Approximately 4.1 million ton	Approximately 90%	Approximately 95%
Non-food part of agricultural crops	Approximately 14 million ton	Approximately 30% (Except plowing)	Approximately 45%
		Approximately 85% (Including plowing)	Approximately 90%
Remainder material of forest	Approximately 8 million tons (*2)	Almost unused	Approximately above 30%

*1: Black liquor is a resin in liquid form which comes out when extracting fiber from wood chip in the manufacturing process of wood pulp and is considered as a main ingredient.

*2: Dry weight for black liquor and sawmill open forest remainder. Other biomasses indicate wet weight.

Source: Basic Plan for Promotion of Utilization of Biomass

Q-2 How are most of the agricultural biomass wastes utilized or treated? (Please check all appropriate boxes)

- as secondary raw material input (for paper, bioplastic, furniture, etc.)
- biogas/electricity generation
- composts/fertilizers
- mostly left unutilized or open dumped
- mostly open burned

Q-3 What specific policies, guidelines, and technologies are introduced for efficient utilization of agricultural biomass waste and livestock waste as a secondary material inputs towards full scale economic benefits? Relevant websites could be shared for additional information.

- Basic Act for Promoting the Utilization of Biomass (2009)
- Basic Plan for Promoting the Utilization of Biomass (2009; amended in 2016)
- Feed-in tariff (FIT) scheme

II. 3R Goals in Rural Areas	
Goal 11	Promote full scale use of agricultural biomass waste and livestock waste through reuse and/or recycle measures as appropriate, to achieve a number of co - benefits including GHG emission reduction, energy security, sustainable livelihoods in rural areas and poverty reduction, among others.
Challenges (policy/ institutional/ technological/ financial) faced in implementation:	
➤ Promote efficient use of agricultural biomass waste and livestock waste within local areas	
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant	
MAFF HP: http://www.maff.go.jp/j/shokusan/biomass/	
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)	
Goals set to be achieved by 2020 (see the above table) include formulating a biomass utilization promotion plan for 600 municipalities, creating new industries of JPY500 billion which will use biomass and aiming to use 26 million tons of biomass yearly via carbon conversion.	
Is this Goal relevant for your country? <input checked="" type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

III. 3R Goals for New and Emerging Wastes	
Goal 12	Strengthen regional, national, and local efforts to address the issue of waste, in particular plastics in the marine and coastal environment.
<i>Q-1 What specific policies and regulations are in place to address the issue of plastic wastes in coastal and marine environment?</i>	
<p>In July 2009, the “Marine Litter Act” came into effect. Based on the provisions of this Act, a Coastal Drift Handling Measures Promotional Council has been set up for the respective administrative agencies to coordinate and carry out a comprehensive, effective and efficient promotion of coastal drift handling measures.</p>	
<i>Q-2 What extent issue of plastic waste is considered in integrated coastal zone management (ICZM)? (Please check the appropriate box)</i>	
<p><input checked="" type="checkbox"/> Very much <input type="checkbox"/> Somehow <input type="checkbox"/> Not at all</p>	
<i>Q-3 Please provide a list of centre of excellences or dedicated scientific and research programmes established to address the impacts of micro-plastic particulates (<5 mm) on coastal and marine species? If yes, please provide relevant websites.</i>	
<p>-Strategic Research Programme of Environment Research and Technology Development Fund “Research for advancing systematic analysis and measurement techniques of movement and environmental impacts of marine plastic wastes”. This research project is formed under collaborative project among Kyushu University (Prof. Atsuhiko Isobe), Tokyo University of Agriculture and Technology (Prof. Hideshige Takada), and Tokyo University of Marine Science and Technology (Prof. Tadashi Tokai).</p>	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<ul style="list-style-type: none"> ● Ministry of the Environment conducted a survey on marine litter in seven coastal areas across the country in the five-year period between FY2010 and FY2014. Looking at the five-year totals, considering individually, there was more plastics (Source: Material from the 6th Coastal Drift Handling Measures Promotional Council, wood, etc. accounted by weight in two sites, and plastics in other survey sites. On analyzing the bottles according to their country of manufacture, many of them originated in Japan on the Pacific side, with bottles originating from China and South Korea in the East China Sea and Sea of Japan. ● International collaboration for controlling coastal drift wastes. 	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
<ul style="list-style-type: none"> ● The quantity of coastal flotsam (quantity at the beginning of the year) in Japan is estimated by calculating the consumption rate based on the recovery performance by clean-up activities according to the study carried out by the Ministry of the Environment, the Secretariat at the Promotional Council ● Recovery is carried out by clean-up activities according to the study carried out by the Ministry of the Environment, the Secretariat at the Promotional Council. ● A symposium on marine litter was held in January 2016. http://www.env.go.jp/en/water/marine_litter/2016nys_r.html 	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
Basic Policy based on Marine Litter Act	

**Voluntary Progress/Achievements/Initiatives in
Implementing Ha Noi 3R Declaration (2013~2023)**

Country Name JAPAN

III. 3R Goals for New and Emerging Wastes

Goal 12	Strengthen regional, national, and local efforts to address the issue of waste, in particular plastics in the marine and coastal environment.
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<i>Is this Goal relevant for your country?</i>	<input checked="" type="checkbox"/> Highly	<input type="checkbox"/> Partially	<input type="checkbox"/> Not at all
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III. 3R Goals for New and Emerging Wastes

Goal 13 Ensure **environmentally-sound management of e-waste** at all stages, including collection, storage, transportation, recovery, recycling, treatment, and disposal with appropriate consideration for working conditions, including **health and safety aspects** of those involved.

Q-1 How do people usually recycle their e-waste (waste electrical and electronic equipment)?
(Please check the appropriate box in order of priority by filling in numbers like 1, 2, 3, 4,...etc., for example 1 => Highest priority)

Check if applicable	Number in priority order	
		Take to recycling center / resource recovery facilities
		Take to landfill
X	1	Take to the retailer (Take-back of old appliances by a retailer when they deliver new appliances for four home appliances under Home Appliance Recycling Act. Collected items by retailers will be brought to designated collection points and then to recycling center. For small home appliances, some municipalities in collaboration with retailers set collection points usually at the retailer or some shopping center under Small Home Appliance Recycling Act)
		Take to local charity for re-use
X	4	Take to second-hand shop for re-use
X	1	Ship back to the manufacturer (This will be applied to PC.)
X	2	Informal collector
X	3	Take back by moving company or home dismantling company.
		Recycle in another country
		Do not know how people dispose

Same estimate for specific home appliances controlled under Home Appliance Recycling Act estimates that, among end of life appliances emitted from household (this does not include domestic reuse), about 60% goes to official recycling route for specific home appliance recycling act, about 29% ended up as scrap exported outside of Japan, about 6% for domestic scrap recycling, and about 8-9% as exported as reusable equipment.

Source: Material 2 from the 36th Joint Committee of Home Appliance Recycling Mechanism Evaluation Committee of Central Environmental Council and EEE Recycling Working Group of Industrial Structural Committee (December 4th 2017)
<https://www.env.go.jp/council/03recycle/y032-36/mat02.pdf>

Q-2 What specific policies and regulations are in place to ensure health and safety aspects of those involved in e-waste management (handling/sorting/resource recovery/recycling)?

Normal health and safety as well as pollution control measures applied to the factories are applied to recycling facilities of e-waste. Health and safety guidelines applied to recycling facilities and waste management facilities are developed by Ministries as well as industrial associations.

Specific guidelines for collection, handling, recycling are developed by Ministries for specific home appliances and small home appliances under Home Appliance Recycling Act and Small Home Appliance Recycling Act.

III. 3R Goals for New and Emerging Wastes

Goal 13 Ensure **environmentally-sound management of e-waste** at all stages, including collection, storage, transportation, recovery, recycling, treatment, and disposal with appropriate consideration for working conditions, including **health and safety aspects** of those involved.

Q-3 How much amount of e-waste is generated and recycled per year?

Type of e-waste	Estimated total volume generated (ton/year)	% of collected by permitted recycler	% of volume recycled in collected
Television	4.24 million units	59.6% (unit base) 25,880 tones for CRT TV 28,650 tones for flat screen TV	
Computer	15.57 million units (estimation of 2010) Among which, 6.64 million units are for re-use market Thus, end of life PC is estimated about 8.93 million units	About 10% (estimation of 2010)	1) PC from household Desktop PC 75.9% Note PC: 58.6% CRT display 72.1% Flatscreen display 75.1% (data of 2016) 2) PC from office Desktop PC 84% Note PC 68.6% CRT display 70.2% Flatscreen Diesplay 80%
Mobile phone	30.68 million units (estimation of 2010)	About 37% in unit	
Refrigerators	4.12 million units	71.9% (unit base) 184,590 tones	80%
Washing machines	4.76 million units	73.5% (unit base) 136,623 tones	
Air conditioners	9.06 million units	31.6 % (unit base) 115,430 tones	92%
Compact rechargeable batteries		2597 tonnes in FY2013	1477 tonnes in FY 2013
Others...(small home appliance under small home appliance recycling at)	0.575 million tonnes (in 2016)	About 11-12%	0.575 million tonnes (in 2016)

http://www.meti.go.jp/shingikai/sankoshin/sangyo_gijutsu/haikibutsu_recycle/denki_wg/pdf/037_02_00.pdf

For the data of computer and mobile, Material 3 of 20th Joint of Home Appliance Recycling Mechanism Evaluation Committee of Central Environmental Council and EEE Recycling Working Group of Industrial Structural Committee (March 30, 2012)

http://www.meti.go.jp/committee/summary/0003198/020_03_00.pdf

III. 3R Goals for New and Emerging Wastes

Goal 13 Ensure **environmentally-sound management of e-waste** at all stages, including collection, storage, transportation, recovery, recycling, treatment, and disposal with appropriate consideration for working conditions, including **health and safety aspects** of those involved.

For % of volume recycled in collected for PC, data is from PC3R Promotion Association:

http://www.pc3r.jp/association/recycle_result.html

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

- Increase in collection rate
- Transparency in how recyclers and waste treatment businesses are actually treating these recyclables.
- Regulation of informal collectors in collaboration with municipalities

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

- Act for the Recycling of Specified Kinds of Home Appliances (Home Appliance Recycling Act)
- Act on Promotion of Recycling of Small Waste Electrical and Electronic Equipment (Small Home Appliances Recycling Act)

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Steady implementation and review of the progress of home appliance recycling act and small home appliance recycling act

III. 3R Goals for New and Emerging Wastes	
Goal 13	Ensure environmentally-sound management of e-waste at all stages, including collection, storage, transportation, recovery, recycling, treatment, and disposal with appropriate consideration for working conditions, including health and safety aspects of those involved.
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

III. 3R Goals for New and Emerging Wastes	
Goal 14	Effective enforcement of established mechanisms for preventing illegal and inappropriate export and import of waste, including transit trade, especially of hazardous waste and e-waste.
<i>Q-1 What specific policies and regulations are introduced to prevent illegal import and export of e-waste?</i>	
<ul style="list-style-type: none"> ● Waste Disposal and Public Cleansing Act (Waste Disposal Act) ● Act for the Control of Export, Import and Others of Specified Hazardous Wastes and Other Wastes <p>Started activities of “The Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Wastes”, organized annually by Ministry of the Environment from fiscal year 2004, for proper implementation of regulations regarding the import, export, etc., of hazardous wastes, implementing initiatives that facilitate dialogue and strengthen partnership between officers of Asian countries participating in the Basel Convention, customs officers and related international institutions. Also, financial and technological support was provided for projects implemented under the Basel Convention, such as the formulation of a framework regarding environmentally sound management of used computer equipment and other e-waste, as well as environmentally sound management of hazardous wastes in the Asia Pacific.</p>	
<i>Q-2 Do you have required number of well-trained custom or other officials (for airport, sea-port, land border control, etc.) to track illegal export and import of e-waste?</i>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Japan’s METI and Ministry of the Environment of Japan, and Japan’s Customs Office has a regular communication to identify items violating Basel Convention and related domestic laws.	
https://www.env.go.jp/en/recycle/asian_net/Annual_Workshops/2010_PDF/Session2/S2_04_Japan_Customs.pdf	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<ul style="list-style-type: none"> ● Illicit reporting of items for export such as waste contamination or hazardous substance mixture to mixed metal scraps 	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
<ul style="list-style-type: none"> ● Waste Disposal and Public Cleansing Act (Waste Disposal Act) ● Act for the Control of Export, Import and Others of Specified Hazardous Wastes and Other Wastes ● The Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Wastes”, 	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

III. 3R Goals for New and Emerging Wastes	
Goal 15	Progressive implementation of “ extended producer responsibility (EPR) ” by encouraging producers, importers, and retailers and other relevant stakeholders to fulfill their responsibilities for collecting, recycling, and disposal of new and emerging waste streams, in particular e-waste.
Q-1 What specific Extended Product Responsibility (EPR) policies are enacted or introduced? (If there is none, then skip Q-2 below)	
<ul style="list-style-type: none"> ● EPR principle is stated in Fundamental Act of Sound Material Cycle Society (framework policy for Japan’s Sound Material Cycle Society and the 3Rs). ● Packaging and containers recycling act (1995, revised in 2006) ● Home Appliance recycling act (1998) ● End of life vehicle recycling act (2002) ● Small home appliance recycling act (2012) ● Act on the Promotion of Effective Utilization of Resources (revised in 2000) 	
Q-2 Please provide a list of products and product groups targeted by EPR nationally?	
<ul style="list-style-type: none"> ● Packaging and containers(glass bottles, PET, paper containers and packaging, plastic containers and packaging. Aluminum cans, steel cans, paper carton/tetrapak style?, cardboard ● Automobiles ● 4 type of home appliances (TV, refrigerator, air-conditioner, washing machine, washing + dryer machine) ● Personal Computers under Act on the promotion of effective utilization of resources ● Compact researchable batteries under Act on the promotion of effective utilization of resources ● Small home appliances including PCs, mobile phones, small electronic devices <p>Various voluntary take-back schemes under Act on the Promotion of Effective Utilization of Resources</p>	
Challenges (policy/ institutional/ technological/ financial) faced in implementation:	
<ul style="list-style-type: none"> ● Increase in collection rate ● Transparency in how recyclers and waste treatment businesses are actually treating these recyclables. ● Regulation of informal collectors in collaboration with municipalities ● Increase in quality of material recycling 	
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant	
4 th Fundamental Plan for Establishing a Sound Material Cycle Society have issued in June 2018.	
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)	
4 th Fundamental Plan for Establishing a Sound Material Cycle Society have issued in June 2018.	
Is this Goal relevant for your country? <input checked="" type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

III. 3R Goals for New and Emerging Wastes	
Goal 16	Promote the 3R concept in health-care waste management.
<i>Q-1 What specific policies and regulations are in place for healthcare waste management?</i> Infection waste is designated under the Waste Disposal and Public Cleaning Act as a specially controlled waste to ensure that it is properly treated in order to conserve the living environment and improve public hygiene.	
<i>Q-2 What is the total annual government expenditure towards healthcare waste management (US\$ per year)?</i> The financial and physical responsibilities for healthcare waste management are on waste generator so that government expenditure is not directly used for its management.	
<i>Q-3 List the agencies or authorities responsible for healthcare waste management.</i> Local government has responsibility to manage/monitor waste generator to secure environment friendly waste management by checking report about waste information (waste category, amount, packaging, contract with transporter and disposer) provided by generator.	
<i>Q-4 What is the common practice for disposal of healthcare wastes?</i> (Please check the appropriate box and add if any other practice followed) <input type="checkbox"/> open dumping (untreated) <input type="checkbox"/> open burning (untreated) <input type="checkbox"/> ordinary landfilling (untreated) <input type="checkbox"/> sanitary landfilling (treated) <input type="checkbox"/> Low cost small scale incineration (do not meet air emission standards) <input checked="" type="checkbox"/> Highly controlled air incineration (dedicated/modern medical waste incinerators) <input type="checkbox"/> Other methods (please specify names: _____)	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i> Along with aging society, the amount of medical waste is increasing.	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i> Ministry of the Environment developed “Infected Waste management Guideline” to apply newly healthcare waste dispose technologies (High pressure steam sterilization, Microwave sterilization).	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 17	Improve resource efficiency and resource productivity by greening jobs nation - wide in all economic and development sectors.
<i>Q-1 What specific policies and guidelines are introduced for product standard (towards quality/durability, environment/eco-friendliness, labour standard)?</i>	
Based on the concept of the Act on Promoting Green Procurement, “Eco-Mark” a product standard system, has been applied to product with a small burden on environment in a supply chain, and it enables consumer to select environmentally-sound product and contributes producer continue to improve their product to be fitted into green society.	
<i>Q-2 What specific energy efficiency schemes are introduced for production, manufacturing and service sector?</i>	
The Top Runner Program is prescribed under the “Act Concerning the Rational Use of Energy (Energy Conservation Act)” and it imposes obligations on manufacture of targeted machinery and equipment to achieve judgement standards of energy consumption for their product. The program applies to several major items including automobiles, TV, window, motor and PC, and other appliances. The Energy Conservation Act obligates private sector with high energy demand (application not only to large manufacture company, but to service providers such as restaurant, hotel and hospital as well) to monitor energy consumption used for their business activities. Targeted private sector has to control their energy consumption and report it to government organizations. Further improvement will be required when energy consumption is evaluated to be high.	
<i>Q-3 What specific policies are introduced to create green jobs in product and waste sector?</i>	
Some recycling policies are based on the EPR concept, and it incentives producer and manufacture to take more consideration on Design of Environment. Subsidy programme from central or local government is provided into waste sector for their EPC and O&M, encourage them to keep environmentally friendly operation securing required environmental standards.	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 18	Maximize co-benefits from waste management technologies for local air, water, oceans, and soil pollution and global climate change.
<i>Q-1 Please share how climate mitigation is addressed in waste management policies and programmes for co-benefits?</i>	
<ul style="list-style-type: none"> ➤ Japan has a legal system for establishing a "Sound Material-Cycle Society", in which consumption of natural resources will be conserved and the environmental load will be reduced to the greatest extent. 	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<p>According the “The 4th Fundamental Plan for Establishing a Sound Material Cycle Society in Japan</p> <ul style="list-style-type: none"> ➤ Integrated measures towards a sustainable society; ➤ Regional vitalization based on regional circulation and harmony sphere; ➤ Resource circulation throughout the entire lifecycle; ➤ Promotion of appropriate treatment and restoration of environment; ➤ Creation disaster waste disposal system; ➤ creation of international resource recycling system and international expansion of material-cycle industries; ➤ and improved infrastructure for a sound material-cycle 	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
Measures aimed at the establishment of “Regional Circular and Ecological Spheres” to improve local resource efficiency and vitalize local economies based on an integrated approach toward circulation, low carbon, and harmony with nature, utilizing renewable resources, stock resources, and circulative resources.	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
4 th Fundamental Plan for Establishing a Sound Material Cycle Society have issued in June 2018.	
<i>Is this Goal relevant for your country?</i> <input checked="" type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 19	Enhance national and local knowledge base and research network on the 3Rs and resource efficiency , through facilitating effective and dynamic linkages among all stakeholders, including governments, municipalities, the private sector, and scientific communities.
Q-1 What specific policies are introduced to encourage triangular cooperation between government, scientific & research institutions and private/business sector in 3R areas?	
<ul style="list-style-type: none"> ● There is a specific category of research and development in relation to the 3Rs and waste management under research grant programme called Environment Research and Technology Development Fund as R&D budget managed by Ministry of the Environment. (about 800 million JPY a year) ● NEDO's R&D for Recycling Technology Development for Highly Efficient Resource Circulation System (About 700 million JPY a year) ● State of the 3Rs in Asia and the Pacific project to develop assessment report of 3R policy progress in the region, coordinated by UNCRD and Institute for Global Environmental Strategies (IGES), and financially supported by Ministry of the Environment of Japan. 	
Q-2 Please share the number and list of dedicated scientific institution, or coordinating centers in the areas of 3Rs (e.g., waste minimization technologies, eco-products, cleaner production, recycling technologies, industrial symbiosis, resource efficiency, etc.)?	
<p>There are many research institutes and research universities in Japan in this area. The followings are the examples of such research institutes/coordination bodies.</p> <ul style="list-style-type: none"> ● Japan Society of material Cycles and Waste Management ● Center for Material Cycles and Waste Management Research, National Institute of Environmental Studies (NIES) ● Institute for Global Environmental Strategies: 1) Sustainable Consumption and Production Area, 2) Center Collaborating UNEP on Environmental Technologies ● National Institute of Advanced Industrial Science and Technology (AIST) ● Japan Waste Research Foundation ● Japan Environmental Sanitation Centre (JESC) 	
Challenges (policy/ institutional/ technological/ financial) faced in implementation:	
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant	
4 th Fundamental Plan for Establishing a Sound Material Cycle Society have issued in June 2018	
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)	
4 th Fundamental Plan for Establishing a Sound Material Cycle Society have issued in June 2018	
Is this Goal relevant for your country? <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 20	Strengthen multi-stakeholder partnerships among governments, civil society, and the private sector in raising public awareness and advancing the 3Rs, sustainable consumption and production, and resource efficiency, leading to the behavioural change of the citizens and change in production patterns.
<p>Q-1 Does central government have official dialogue with multi-stakeholders in the process to formulate 3R-related policies and regulations? Which stakeholders are involved in the dialogue?(Please check all applicable)</p> <p> <input checked="" type="checkbox"/> NGOs <input type="checkbox"/> Industrial Association <input checked="" type="checkbox"/> Local Government <input type="checkbox"/> Academic Institution <input checked="" type="checkbox"/> Others, please add/specify (Media, associations of waste management businesses and recyclers, labor union) </p>	
<p>Q-2 What is the level of NGOs' involvement in 3R, sustainable production and consumption, resource efficiency related promotional activities? (Please check the appropriate box)</p> <p> <input checked="" type="checkbox"/> Very high <input type="checkbox"/> Moderate <input type="checkbox"/> Low <input type="checkbox"/> Almost Negligible </p>	
<p>Q-3 What is the level of citizens' awareness on beneficial aspects of 3R, sustainable production and consumption and resource efficiency. (Please check the appropriate box)</p> <p> <input checked="" type="checkbox"/> Very high <input type="checkbox"/> Moderate <input type="checkbox"/> Low <input type="checkbox"/> Almost Negligible </p>	
<p>Challenges (policy/ institutional/ technological/ financial) faced in implementation: How to shift high awareness of citizens into actual behavioral change.</p>	
<p>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</p> <ul style="list-style-type: none"> ● 3R meister scheme for those who can advise citizens for how to recycle containers and packaging ● Public campaign for food loss issue ● Making gold medal, silver and bronze medals from used small appliances under small home appliance recycling act. Etc. 	
<p>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021) 4th Fundamental Plan for Establishing a Sound Material Cycle Society have issued in June 2018</p>	
<p>Is this Goal relevant for your country? <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all</p>	

IV. 3R Goals for Cross-cutting Issues

Goal 21 **Integrate the 3Rs** in formal education at primary, secondary, and tertiary levels as well as non-formal education such as community learning and development, in accordance with Education for Sustainable Development.

Q-1 Provide a list of formal programmes that addresses areas of 3R and resource efficiency as part of the academic curriculum?

Mostly it is one of important contents in the curriculum of Environmental Science, Waste Management, Environmental Policy, Environmental Engineering, Resource Management, and so on.

Q-2 Please provide an overview of the Government policies and programmes to promote community learning and development (non-formal education) on 3R and sustainable waste management.

- 3Rs (Reduce, Reuse, and Recycle) Awards
The awards program has been held annually since 1992 to recognize individuals, groups, schools, enterprises, and other entities for their outstanding levels of unique, community-based, and pioneering contributions to promoting the 3Rs (Reduce, Reuse, and Recycle) , thereby encouraging the development of further activities to this end. The program is hosted by the 3Rs Promotion Council and supported by seven related ministries.
- 3R promotion month
To increase understanding and encourage participation in 3R-related activities, eight Japanese government ministries (Ministry of Finance; Ministry of Education, Culture, Sports, Science and Technology; Ministry of Health, Labour and Welfare; Ministry of Agriculture, Forestry and Fisheries; Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure and Transport; Ministry of the Environment; Consumer Affairs Agency) have designated the month of October as 3R promotion month. Each year, the ministries conduct a variety of activities to raise awareness and promote the concept of 3R nationwide.
- 3R Promotion National Convention (since 2006)
- 3R Promotion Meister system

Q-3 Please provide a list of academic and research institutions offering PhD programmes in the areas of 3Rs and resource efficiency?

There are many since there are considered as one of the basic concept for Environmental Science, Resource Management, Engineering and so on.

Q-4 Please provide a list of management institutions (offering BBA / MBA courses) which have integrated resource efficiency and life cycle assessment (LCA) as part of their curriculum or course development?

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

There are many: <http://www.3r-suishinkyogikai.jp/>

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Is this Goal relevant for your country? Highly Partially Not at all

**Voluntary Progress/Achievements/Initiatives in
Implementing Ha Noi 3R Declaration (2013~2023)**

Country Name JAPAN

IV. 3R Goals for Cross-cutting Issues	
Goal 22	Integrate the 3R concept in relevant policies and programmes, of key ministries and agencies such as Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries, Ministry of Industry, Ministry of Trade and Commerce, Ministry of Energy, Ministry of Water Resources, Ministry of Transport, Ministry of Health, Ministry of Construction, Ministry of Finance, Ministry of Labour, Ministry of Land and Urban Development, Ministry of Education, and other relevant ministries towards transitioning to a resource-efficient and zero waste society.
<i>Q-1 Please list the name of the Ministries and major Government Agencies which are promoting 3R and resource efficiency as part of their policy, planning and developmental activities at local and national level.</i>	
<ul style="list-style-type: none"> ● Ministry of the Environment of Japan (Major coordinating ministries in relation to sound material cycle society policy) ● Ministry of Economy, Trade and Industry ● Ministry of Agriculture, Forestry and Fisheries ● Ministry of Land, Infrastructure, Transport and Tourism ● Consumer Affairs Agency ● Other relevant ministries include Ministry of Foreign Affairs, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Health, Labor and Welfare, etc. 	
<i>Q-2 What type of coordination mechanism are there among ministries and agencies for a resource efficient economic development?</i>	
<p><input checked="" type="checkbox"/> Official regular coordination meeting among ministries and agencies Specific coordination meetings among relevant ministries especially for jointly administrated regulations such as home appliance recycling act, containers and packaging recycling act, food recycling act, end of life vehicle recycling act, etc.</p> <p><input checked="" type="checkbox"/> Official ad-hoc coordination meeting among ministries and agencies</p> <p><input checked="" type="checkbox"/> Informal meeting among ministries and agencies</p> <p><input type="checkbox"/> Other coordination mechanisms (please add/specify)</p>	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues

Goal 23	Promote green and socially responsible procurement at all levels, thereby creating and expanding 3R industries and markets for environmentally-friendly goods and products.
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Q-1 What specific policies are introduced to promote green and social responsible procurement?

Act on Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities (Act on Promoting Green Procurement) has been established as one of individual laws under the Basic Act for Establishing a Sound Material-Cycle Society to encourage the State, independent administrative institutions to procure eco-friendly goods and to provide information on eco-friendly goods, for the establishment of a society with sustainable development. Based on the concept of the Act on Promoting Green Procurement, Eco-Mark works as a judgement standard for procurement.

Q-2 Please provide details of eco-labelling schemes of your country.

Japan Environment Association assesses application proposed by manufacture whether their product meet the certification criteria that the association set to each types of products. As of June, 2003, 5,533 products categorized in 60 types have been certified as eco-mark products.

Q-3 Please provide a list of criteria for eco-labeled products and services in your country.

You can find the detail list in the following website of Japan Environment Association (English)
<https://www.ecomark.jp/english/nintei.html#101>

Q-4 Please provide the list of Ministries and major Government Agencies which have adopted green procurement policy.

In procuring goods and services, the State and Incorporated Administrative Agencies, etc. must endeavor to select Eco-Friendly Goods, etc., for the purpose of promoting a shift of demand to Eco-Friendly Goods, etc., while giving consideration to the proper use of the budget.

Local governments are to endeavor to implement measures aimed at a shift of demand to Eco-Friendly Goods, etc., in accordance with the natural and social conditions of their local areas.

In the case of purchasing or leasing goods, or receiving the provision of services, business operators and citizens are to endeavor to select Eco-Friendly Goods, etc., to the extent possible.

Q-5 What % of municipalities have adopted the green procurement policy?

Act on Promoting Green Procurement has been adopted to all municipalities in Japan, and according to questionnaire survey in 2015, 68.4% municipalities answered that they are systematically implementing green procurement.

Source: Survey on green procurement, environmentally friendly contract and promotion in 2015.

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Some municipalities report in the questionnaire survey that they feel difficulty to judge whether a product is green procure product or not.

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Yokohama city provided e-learning training program for the better understanding of green procurement system among administrative employees.

http://www.env.go.jp/policy/hozen/green/g-law/support_kako.html

**Voluntary Progress/Achievements/Initiatives in
Implementing Ha Noi 3R Declaration (2013~2023)**

Country Name
JAPAN

IV. 3R Goals for Cross-cutting Issues	
Goal 23	Promote green and socially responsible procurement at all levels, thereby creating and expanding 3R industries and markets for environmentally-friendly goods and products.
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 24	Phase out harmful subsidies that favour unsustainable use of resources (raw materials and water) and energy, and channel the freed funds in support of implementing the 3Rs and efforts to improve resource/energy efficiency.
<i>Q-1 Are there any government subsidy programmes that directly or indirectly favour unsustainable use of resources (raw materials, water, and energy)? If so, please provide a list of such programmes along with the responsible Ministry or Agency administering and implementing it.</i>	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues

Goal 25 **Protect public health and ecosystems, including freshwater and marine resources by eliminating illegal activities of open dumping, including dumping in the oceans, and controlling open burning in both urban and rural areas.**

Q-1 Is waste management a public health priority in your country?

- Waste Management and Public Cleansing Act

Q-2 What are the rules and regulations to prevent open dumping and open burning of waste?

- Waste Management and Public Cleansing Act

Q-3 Rank the five most important rivers in terms of water quality (BOD values) passing through major cities and urban areas?

(As of 2016)

Name of the river (Worst 5 polluted rivers)	Name of the prefecture	BOD (mg/L)	
		Average	75% value
Ayasegawa (Tonegawa river system)	Saitama, Tokyo	2.1	2.6
Nakagawa (Tonegawa river system)	Saitama, Tokyo	2.4	2.6
Yamatogawa (Yamatogawa river system)	Osaka, Nara	2.3	3.1
Inagawa (Yodogawa river system)	Osaka, Hyogo	3.4	3.6
Tsurumigawa (Tsurumigawa river system)	Kanagawa, Tokyo	6.0	4.0

(Source: MOEj Hp <http://www.env.go.jp/water/suiiki/h28/h28-3.pdf>; and
MLIT HP

http://www.mlit.go.jp/river/toukei_chousa/kankyo/kankyousuisitu/pdf/h28_suisitu/ref4.pdf)

Q-4 What are the specific laws, rules and regulations in place to prevent littering in river and water bodies?

- Government Ordinance for Enforcement of the River Act
- Waste Management and Public Cleansing Act

Q-5 What are the specific laws, rules and regulations in place to prevent marine littering?

- Marine Pollution Prevention Law
- Waste Management and Public Cleansing Act

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Continue proper operation of the laws, efforts on raising environment awareness, and strengthening cooperation with residents.

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Related information site: https://www.env.go.jp/recycle/ill_dum/index.html

As the case of Yokohama city: <http://www.city.yokohama.lg.jp/shigen/sub-shimin/bika/mac2.html>

**Voluntary Progress/Achievements/Initiatives in
Implementing Ha Noi 3R Declaration (2013~2023)**

Country Name
JAPAN

IV. 3R Goals for Cross-cutting Issues	
Goal 25	Protect public health and ecosystems, including freshwater and marine resources by eliminating illegal activities of open dumping, including dumping in the oceans, and controlling open burning in both urban and rural areas.
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i> MOEj HP: http://www.env.go.jp/water/marine_litter/index.html	
<i>Is this Goal relevant for your country?</i> <input checked="" type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 26	Facilitate the international circulation of re-usable and recyclable resources as well as remanufactured products as mutually agreed by countries and in accordance with international and national laws, especially the Basel Convention, which contributes to the reduction of negative environmental impacts and the effective management of resources.
Q-1 What are major recycling industries in your country? Recycling market for ferrous and non-ferrous metal, plastic, paper and other popular recyclable resources can be concluded domestically, and re-use market for automobile or household commodities are also developed as well.	
Q-2 Please specify the regulation on transboundary movement of hazardous waste. Basel Convention restricts transboundary movement of hazardous wastes aimed at recycling. The Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Wastes aims at facilitating the exchange and dissemination of information on transboundary movements of hazardous wastes and selected used/secondhand equipment among North-east and South-east Asian countries, and assists participating countries in formulating appropriate legislative response to such movements under each country's system, taking into consideration necessary procedures required by the Basel Convention.	
Q-3 If your government has restriction on import of non-hazardous waste or quality control of non-hazardous waste, please list it up. Japan accepts waste when proper treatment is difficult in other countries but is possible in Japan, to achieve the effective use of resources and contribute to reduce negative impacts on the environment and human health in other countries.	
Q-4 Does your government restrict import of remanufactured goods?	
Q-5 Does your government regard remanufactured goods as secondhand goods, and regulate it as secondhand goods?	
Challenges (policy/ institutional/ technological/ financial) faced in implementation: Although there are established domestic recycling routes, several resources are finally exported to foreign countries after collection or sorting out only valuable resources because of cost benefit for recycling process in other countries,	
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant	
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)	
Is this Goal relevant for your country? <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues

Goal 27 Promote data collection, compilation and sharing, public announcement and application of statistics on wastes and the 3Rs, to understand the state of waste management and resource efficiency.

Q-1 Please give an overview on availability of various data and information on material flow and waste management by checking (X or ✓) the appropriate boxes. (Please respond on both “Data Availability” and Monitoring Base”)

Data Type	Data Availability			Monitoring Base	
	Good	Very limited	No data exist	Good	Not good
Waste generation	✓			✓	
Material flow	✓			✓	
Cyclical use	✓			✓	
Amount of final disposal	✓			✓	
Disposal to land	✓			✓	
Direct disposal to water					
Import of waste	✓			✓	
Export of waste	✓			✓	
Total landfilled waste	✓			✓	
Import of recyclables	✓			✓	
Export of recyclables	✓ (sometimes limited)			✓ (sometimes limited)	
Hazardous waste generation (solid, liquid, sludge, etc.)	✓			✓	
e-waste generation	✓			✓	

(Please add any other data type relevant to your country)

Q-2 What are the current and planned government policies and programmes to strengthen data and information availability in waste sector?

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Comprehend the status of environmental and economic activities in the form of scientific statistical information, as well as comprehend the quantity of resources and energy flow among different industries in an objective and quantitative manner. Also, develop scientific, first-order statistical information on environmental, economic and social conditions, as well as the existence and distribution of natural resources. In addition, ensure the credibility and accuracy of environmental information in partnership with related entities, and work to enhance information archives of environmental policies.

**Voluntary Progress/Achievements/Initiatives in
Implementing Ha Noi 3R Declaration (2013~2023)**

Country Name JAPAN

IV. 3R Goals for Cross-cutting Issues	
Goal 27	Promote data collection, compilation and sharing, public announcement and application of statistics on wastes and the 3Rs, to understand the state of waste management and resource efficiency.
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
<ul style="list-style-type: none"> ● Basic Environmental Act ● Fundamental Basic Plan ● Annual report on environmental statistics http://www.env.go.jp/en/statistics/index.html	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 28	Promote heat recovery (waste-to-energy), in case wastes are not re-usable or recyclable and proper and sustainable management is secured.
<i>Q-1 What are the government policies and programmes, including incentives, for waste-to-energy programmes?</i>	
Government subsidy program can be applied to develop high-efficient energy recovery waste treatment facility, covering 1/2 or 1/3 of the total cost of the project. The development of FIT system enables to increase financial sustainability of operation and management of waste-to-energy facility.	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
As decrease of waste amount because of population decrease, reviewing current waste treatment flow heavily depending on waste incineration is one option to achieve more resource efficient society.	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
Following website explains the subsidy programme (Japanese) http://www.env.go.jp/recycle/waste/3r_network/	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 29	Promote overall regional cooperation and multi-stakeholder partnerships based on different levels of linkages such as government-to-government, municipality-to-municipality, industry-to-industry, (research) institute-to-institute, and NGO-to-NGO. Encourage technology transfer and technical and financial supports for 3Rs from developed countries to less developed countries.
<i>Q-1 Please provide a list of on-going bilateral/multi-lateral technical cooperation in 3R areas?</i>	
<ul style="list-style-type: none"> ● Regional 3R Forum in Asia and the Pacific ● African Clean City Platform (ACCP) ● Contributing to Climate and Clean Air Coalition/Municipal Solid Waste Initiative ● Contributing to G7 Alliance on Resource Efficiency ● Contributing to G20 Resource Efficiency Dialogue ● Contributing to OECD Working Party on Resource Productivity and Waste ● Contributing to UNEP International Resource Panel ● World Circular Economy Forum (October 2018) ● 3R Conference for Asian Local Governments ● Support in development of Waste to Energy guideline ● International Promotion of Circular Business 	
<i>Q-2 What actions are being taken to promote inter-municipal or regional cooperation in areas of waste exchanges, resource recovery, recycling, waste-to-energy and trade of recyclables?</i>	
<ul style="list-style-type: none"> ● Facilitate joint international cooperation among local governments and Japanese businesses for improving waste management and climate benefits in Asian countries 	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 30	Pay special attention to issues and challenges faced by developing countries including SIDS in achieving sustainable development.
<i>Q-1 Please describe any past and on-going cooperation with SIDS (Small Island Developing States) countries in 3R areas.</i>	
<ul style="list-style-type: none"> ● J-PRISM (2011-2016) (Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries) by JICA which supported 11 countries for capacity building of waste management in pacific island countries as well as assisted to formulate the Pacific Regional Solid Waste Management Strategy (2016-2025) ● J-PRISM phase two (2017-2022) to support and monitor implementation of the Pacific Regional Solid Waste Management Strategy. 	
<i>Q-2 Please list 3R related projects linked to climate change, biodiversity, disaster management and sustainable tourism. (This is <u>to be reported by SIDS countries only</u>)</i>	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 31	Promote 3R + “Return” concept which stands for Reduce, Reuse, Recycle and “Return” where recycling is difficult due to the absence of available recycling industries and limited scale of markets in SIDS, especially in the Pacific Region.
<i>Q-1 What specific policies, programme, including pilot projects, are implemented to promote 3R+ “Return” concept? (This is <u>to be reported by SIDS countries only</u>)</i>	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country? <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all</i>	

IV. 3R Goals for Cross-cutting Issues	
Goal 32	Complete elimination of illegal engagement of children in the informal waste sector and gradually improve the working conditions and livelihood security, including mandatory provision of health insurance , for all workers.
Q-1 What is the approximate market size (in US\$) of the informal waste sector? Market size is unknown, but illegal waste collector without official license is sometimes exposed.	
Q-2 Number of annual labor inspections in waste sector? Unknown	
Q-3 Is health insurance a mandatory to all informal workers in waste sector by law? Every individual in Japan is legally obligated to enroll in either Employee's Health Insurance or National Health Insurance.	
Q-4 What specific policies and enforcement mechanisms are in place to prevent illegal engagement of children in waste sector? Although it is not a specific matter to children, Waste Disposal and Public Cleaning Act prescribes penalties for illegal waste collection and treatment.	
Q-5 Number of landfill sites accessible to register waste pickers? All landfill sites are monitored by local authority or commissioned private sector thus no waste pickers available to access these sites.	
Q-6 Average life span of informal waste workers? Unknown	
Q-7 Any government vaccination programmes for informal waste workers? Total number of illegal dumping in 2018 was 131 in Japan. Ministry of the Environment continues to expand illegal dumping eradication campaign and strength monitoring, dispatch expert in waste regulations into local government for advising and consulting, in order to strength prevention of illegal waste activities.	
Q-8 Any public awareness programmes for informal waste workers on health and safety measures? Unknown	
Challenges (policy/ institutional/ technological/ financial) faced in implementation: Prevention of illegal waste collection, disposal and exportation	
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant Ministry of the Environment and local administrative caution on the website not to use illegal waste company without official license. http://www.env.go.jp/recycle/kaden/tv-recycle/qa.html	
Important policies/projects/master plans the government plans to undertake within next five years (2016~2021)	
Is this Goal relevant for your country? <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues	
Goal 33	Promote 3Rs taking into account gender considerations.
<i>Q-1 Please give a brief assessment on how the national, provincial and municipal governments incorporate gender considerations in waste reduction, reuse and recycle.</i>	
Few action by governments.	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i> With the working women increasing, waste separation at source need to match the new lifestyle.	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i> Nirasaki's case: ➤ https://www.city.nirasaki.lg.jp/docs/2017052600025/files/2p-5p.pdf	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Not at all	

Q- Please provide a brief comprehensive summary of important 3R and resource efficiency policies /programmes/ projects/ master plans of your country.
<p>The Basic Environmental Act (1993) and Plan (1994, revised in 2000, 2006, and 2012, 2018) Basic Environment Act in 1993 provides the overall framework for environmental policy including waste management and recycling. With enactment of this law, the emphasis of Japan's environmental policy has shifted from environmental pollution prevention to global environmental issues and sustainability issues. Some of the key principles of waste management such as Extended Producer Responsibility as well as Polluter Pays Principle are mentioned in the Basic Act as a responsibility of producers and businesses. Basic Environment Plan shows the basic direction of environmental policy and be revised every six years. The current plan was its 5th plan and developed in 2018. It emphasizes Regional Circular and Ecological Sphere (Regional CES) integrated approach toward circulation, low carbon, and harmony with nature, utilizing renewable resources, stock resources, and circulative resources.</p> <p>The Fundamental Act (2000) and Plan (2003, revised in 2008, 2013, 2018) for Establishing Sound Material Cycle Society The Fundamental Act for Establishing Sound Material Cycle Society is positioned as a law to supplement realization of the idea expressed in Basic Environmental Act in the area of waste management and recycling and resource-efficient society. A variety of existing and new measures were placed within the framework of the "Fundamental Act for Establishing a Sound Material-Cycle Society" (2000). Also, the Fundamental Plan for</p>

Establishing a Sound Material-Cycle Society establishes numerical targets based on material flow accounting (MFA)-based indicators, designates particular roles for stakeholders, and provides directions so that individual efforts will be consistent with the national goal of establishing a “sound material-cycle society”. Three major indicators and targets set by the Fundamental Plan are, resource productivity (GDP/resource input), cyclical use rate [cyclical use amount/(cyclical use amount+ natural resource input)], and amount of final treatment. As for the 4th Fundamental Plan, please refer to the attachment.

“Sound material-cycle society” is defined under the Fundamental Act for Sound Material-Cycle Society as “a society in which the consumption of natural resources is minimized and the environmental load is reduced as much as possible by preventing products, etc., from becoming wastes, etc., promoting appropriate recycling of products, etc., when they have become recyclable resources, and securing appropriate disposal (as wastes) those recyclable resources that are not recycled.”

Waste Management and Public Cleansing Act and Act for Promotion of Effective Utilization of Resources

Waste Management and Public Cleansing Act, enacted in 1971 replacing the earlier Public Cleansing Act, is at the core of the waste management policy and regulations. The law regulates proper treatment of two basic categories of wastes in Japan: municipal solid waste and industrial waste. In both categories of wastes, it provides basic regulation in the following issues of waste management; 1) putting reduction of waste generation as a principle, 2) promotion of proper treatment of waste (including recycling), 3) clarification of the responsibilities for waste management (municipalities for municipal waste and industry for industrial waste), 4) regulation for establishment of waste treatment facilities, 5) regulation for waste treatment operators, and 6) establishment of waste treatment standards.

On the other hand, Act for Promotion of Effective Utilization of Resources is to promote recycling as well as other 2Rs (reduce and reuse). It defines actual implementation of the 3Rs in specific industrial sectors as well as in the specific products and recyclables. It demands promotion of the 3Rs to the 10 different industrial sectors (such as pulp and paper industry, chemical industries, steel industries, non-ferrous metal industries, auto-mobile manufacturers) and 69 items (such as personal computers, small secondary batteries)..

“Various Recycling-related Acts” to sort, collect and treat specific types of recyclables

To realize the idea of Sound Material Cycle Society and to minimize waste generation, Japan introduced a series of specific recycling laws targeting specific product categories. These include, Containers and Packaging Recycling Act of 1995, Home Appliances Recycling Act of 1998, Food Waste Recycling Act of 2000, Construction Materials Recycling Act of 2000, End of Life Vehicles Recycling Act of 2002, and Small Home Appliance Recycling Act of 2012. For specific features of each law see chapter 3.2-3.6.

“Act on Promoting Green Purchasing” to build up a market

Original purpose of Green Purchasing Act in 2000 is to generate demands for products using recyclables. With specific recycling-related laws, Japan tried to establish collection and treatment systems for specific

recyclables. However, this is not enough to establish a material circulation in a society. Thus, green purchasing act was originally developed to build up a market for green products to close the loop. This law requires the national government, local governments, national institutes and agencies to promote the procurement of recycled products.

“Eco-town programme” to build up recycling infrastructure

The eco-town program was established in Japan in 1997 and continued until 2007 to create synergies between urban waste management and the promotion of recycling industries. One of its main goals was to realize “zero emissions”. This means to minimize waste by recycling all waste and by-products into materials and using those in other industries. Another goal was to help to revitalize the economies of local areas. Aiming at environmentally-sustainable local development, the Ministry of Economy, Trade and Industry (METI) claimed that this program would promote environmental industry, industrial and technological accumulation, and an environmentally-harmonized social system. The eco-town program sought to promote competition among local governments to promote environmental management projects. Under the plan, local governments would develop plans in conjunction with other stakeholders and apply for recognition as an eco-town. The accepted plans would be subsidized jointly by METI and MOEJ. The eco-town program subsidized both “hardware” projects, such as product recycling or renewable energy facilities, and “software” projects, such as feasibility studies and awareness building. Although the applicant should be a local government, the project proposals would not be approved unless they included cooperative efforts of both business and local government. The 26 eco-town projects (1997 to 2007) include Kawasaki City and Kita-Kyushu City. National eco-town projects were expected to contribute to the establishment of proper recycling capacity by constructing recycling facilities and to provide a solution to the shortage of recyclables by promoting networks of recyclers.

Governance for Policy Implementation

Basic environment plan, Fundamental Plan for Establishing Sound Material Cycle Society, and each product-specific recycling laws, will be reviewed periodically (every 5 years except 6 years for Basic Environment Plan). Therefore, every 5-6 years, different stakeholders should convey their opinions and messages to central government on policies. It is important for central government to reflect these opinions in the revision of recycling laws.

The 4th Fundamental Plan for Establishing a Sound Material-Cycle Society



Sustaining fundamentals for 3Rs and waste management

International resource circulation

Disaster waste management systems

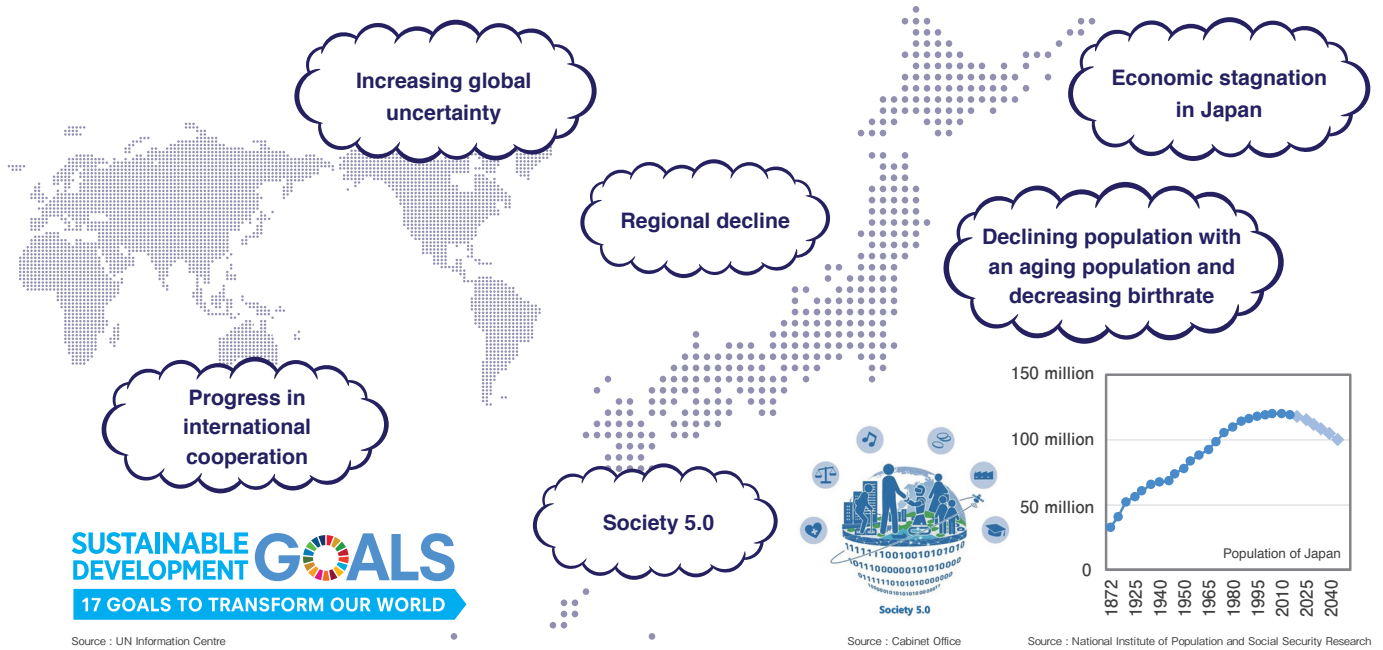
Proper waste management and
environmental restoration

Resource circulation throughout
the entire lifecycle

Regional circular and ecological sphere

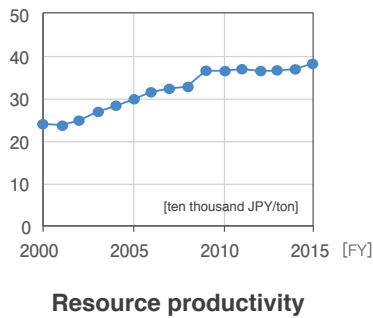
Integrated measures toward
a sustainable society





A Sound Material-Cycle Society

Current status



- Resource productivity has experienced major progress since FY2000, but has been leveling-off recently.

Resource productivity

- An indicator that comprehensively represents how effectively materials are used in industrial activities and people's daily lives, in terms of creating more wealth using fewer resources.
- The indicator was first adopted in a national-level plan in Japan.

Recent issues

- Restoration of the environment and reconstruction from radioactive contamination released by the nuclear accident
- Frequent occurrence of large-scale disasters and delays in responses
- Changes in people's perspective (from material wealth to spiritual wealth)
- Shortage of human resources for waste treatment and recycling



Issues surrounding plastic waste
Source : General Incorporated Association JEAN



Disaster waste in the aftermath of typhoons



Bike share
Source : Annual Report on the Environment, the Sound Material-Cycle Society and Biodiversity in Japan 2018



Mobile phones collected for the Tokyo 2020 Medal Project

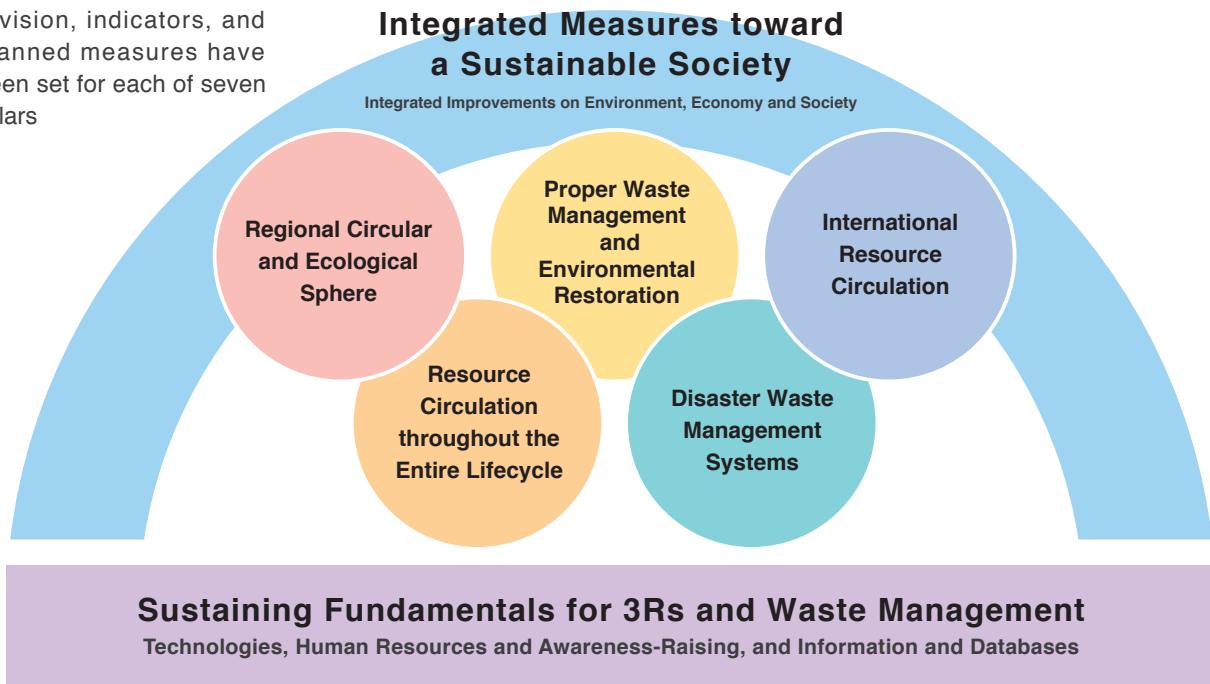
Pillars and targets of the plan

The Fundamental Plan for Establishing a Sound Material-Cycle Society

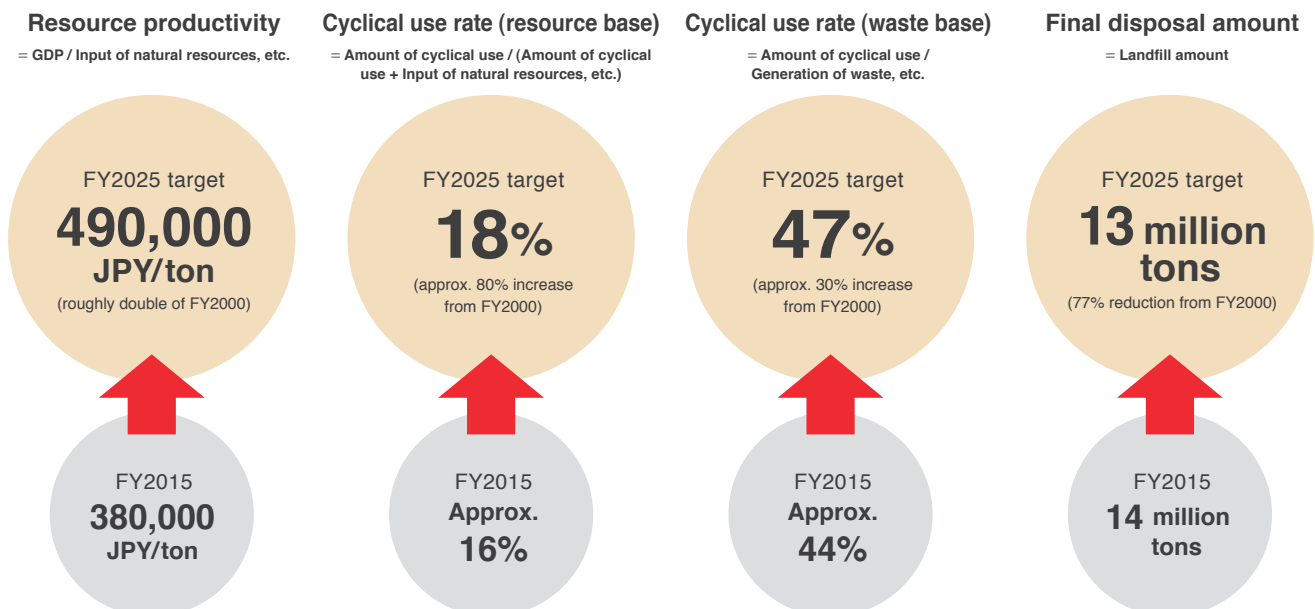
- The Plan is formulated based on the Basic Act on Establishing a Sound Material-Cycle Society (enacted in 2000), and sets a mid- to long-term direction for the establishment of a sound material-cycle society in Japan.
- The 4th Fundamental Plan, which was approved by the Cabinet on June 19, 2018, indicates measures to be implemented in a strategic manner.

Pillars of the 4th Fundamental Plan

- A vision, indicators, and planned measures have been set for each of seven pillars



Targets and indicators Four main indicators for monitoring progress





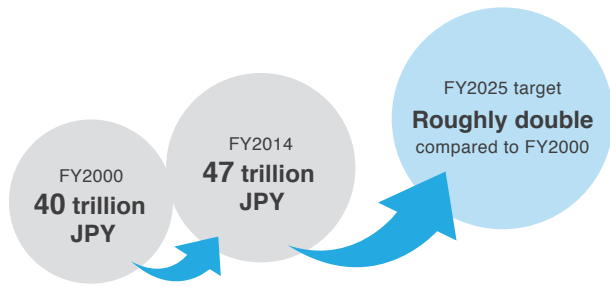
Integrated Measures toward a Sustainable Society

Vision

- A society where everyone can use natural resources in a sustainable manner
- Environmental loads restrained to within the Earth's capacity
- A safe and healthy life secured in conjunction with a rich ecosystem
- Integrated improvements on environment, economy and society

Indicators and targets

Market size of business related to a Sound Material-Cycle Society



Source : MOEJ, Results of the 3rd Progress Evaluation of the 3rd Fundamental Plan for Establishing a Sound Material-Cycle Society, 2017

SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD



Source : UN Information Centre

Planned measures

- Promotion and evaluation of 2R-related business, such as sharing
- National campaign towards halving food waste from households
- Waste management system corresponding to the aging society
- Further promotion of waste energy utilization

Note : 2R refers to "reduce and reuse" out of the 3Rs (reduce, reuse and recycle)



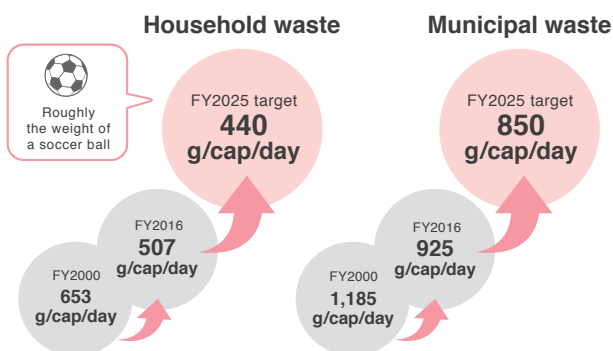
Regional Circular and Ecological Sphere (Regional CES)

Vision

- Improve local resource efficiency and vitalize local economies based on an integrated approach toward circulation, low carbon, and harmony with nature, utilizing renewable resources, stock resources, and circulative resources
- Resilient and compact city planning

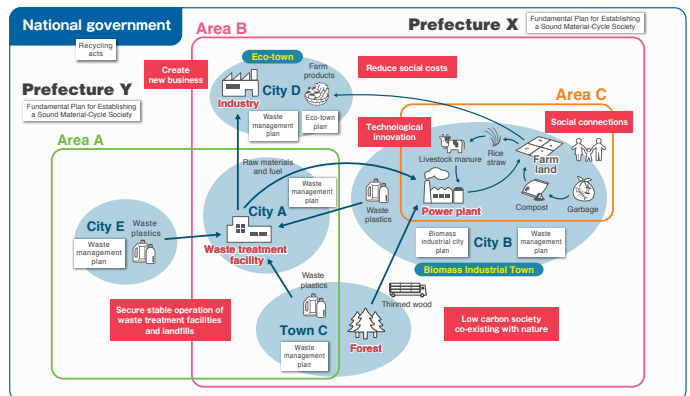
Indicators and targets

Household waste and municipal waste generation per capita per day



Source : MOEJ, 2018

Multi-layered resource circulation at an optimal scale, in consideration of regional characteristics and the nature of circulative resources



Source : MOEJ, 2016

Planned measures

- Measures aimed at the establishment of "Regional Circular and Ecological Spheres"
- Promote the local use of biomass

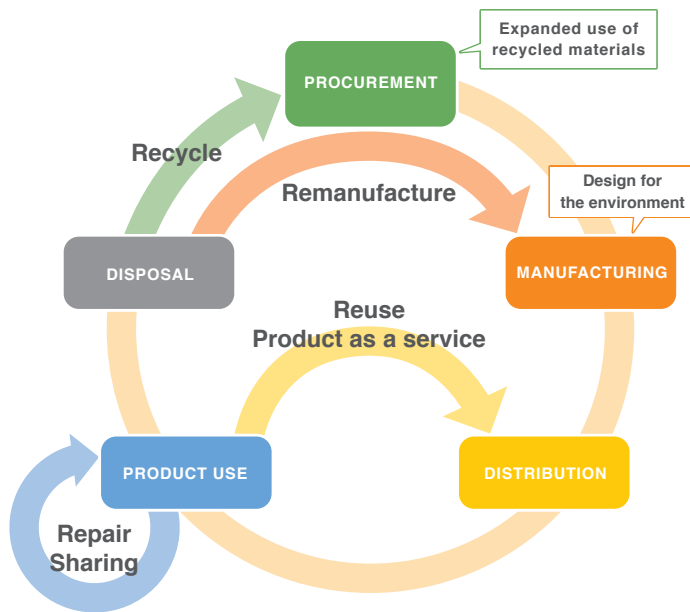
Note : Regional CES represents a self-reliant and decentralized society, making use of regional resources, and complementing and supporting one another according to unique characteristics of each region.



Resource Circulation Throughout the Entire Lifecycle

Vision

- Through the 4th Industrial Revolution, conduct resource circulation throughout the entire lifecycle by “providing the necessary products and services to the persons in need, when necessary, and in the necessary amounts.”



Planned measures

- **Strengthening upstream actions**
 - ▶ Expanded use of recycled materials, design for the environment, 3D modeling, etc.
- **Priority areas: Plastics, biomass, metals, stone/ construction materials, and recently spread products and materials.**
 - ▶ Establishment of a Plastic strategy and promotion of accompanying measures
 - ▶ National campaign to reduce food loss, measures against inappropriate recycling of food waste, and efforts toward food recycling
 - ▶ Promoting the collection and recycling of small home appliances, along with the Tokyo 2020 Medal Project
 - ▶ Reducing construction and demolition waste by strengthening buildings and prolonging their lifespan
 - ▶ Mandatory recycling system for solar power generation facilities
 - ▶ Diaper recycling

Plastic waste

Marine waste and the plastic strategy

Concerns regarding the impact of plastic pollution on ocean ecology, and a comprehensive strategy for reducing dependence on fossil resources

Global concerns regarding marine plastic pollution are rising. **Microplastics** are considered to be especially threatening, due to their potential impact on the ecosystem, as well as the fact that they are hard to collect, once released into the ocean.

Note : Microplastics are small plastic fragments with sizes smaller than 5 mm

Without significant action, by 2050 there may be more plastic than fish in the ocean, by weight

Source : The World Economic Forum, the Ellen MacArthur Foundation, and McKinsey & Company, "The New Plastics Economy: Rethinking the future of plastics," 2016.

Beach litter along the coastline

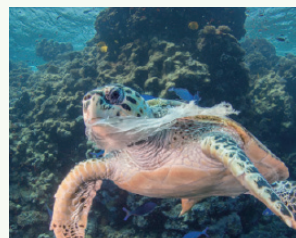


Iriomotejima, Okinawa
Source : General Incorporated Association JEAN



Goto, Nagasaki
Source : General Incorporated Association JEAN

Concerns regarding marine life



Source : UN World Oceans Day



A whale has died after swallowing more than 80 plastic bags
Source : Ministry of Natural Resources and Environment, Thailand

The plastic strategy

A comprehensive strategy for plastic material-cycling will be formulated by June 2019, for presentation at the G20 summit scheduled in Japan, and will be implemented. The following are some of the points to be covered in the strategy.

- 1 Reduce the use of plastics (e.g. single use plastic packaging) for lowering the environmental burden
- 2 Fully and efficiently collect and recycle disposed plastic resources and unused plastics
- 3 Improve and promote bioplastics to replace plastics made from fossil resources



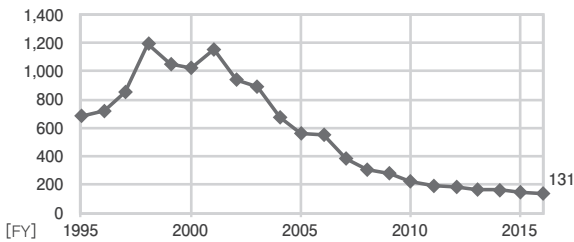
Proper Waste Management and Environmental Restoration

Vision

- A society with appropriate waste treatment systems and technologies
- A society in which the marine litter issue has been resolved, with no inappropriate disposal, and abandoned buildings properly demolished/removed
- Restoration of the environment in areas affected by the Great East Japan Earthquake, with future-oriented reconstruction

Indicators and targets

Number of illegal dumping incidents



Note : Includes incidents involving the dumping of industrial waste covered by prefectures and government ordinance cities with an amount of waste per incident larger than 10t (including all incidents with special controlled wastes). Cases involving sulfuric acid pitch and ferosilt were not included.

Source : MOEJ, 2017



Waste treatment facilities as local energy centers and emergency centers



Beach cleaning activities

Planned measures

- Stable and efficient waste treatment systems
- Strengthen measures against global warming and disaster on waste treatment systems
- Waste treatment facilities that creates added value for the local community
- Restore and advance the recycling industry
- Measures against marine litter, including microplastics



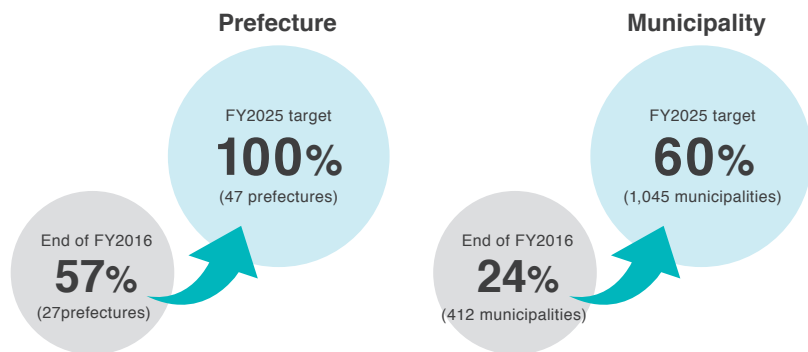
Disaster Waste Management Systems

Vision

- More resilient, multi-layered waste management systems on municipal, regional block, and nationwide levels
- Strengthen waste management systems during normal periods to enable the swift and proper treatment of waste in the event of disasters

Indicators and targets

Proportion of prefectures and municipalities with disaster waste management plans



Source : MOEJ, 2018



MOEJ on-site support team at a temporary sorting site



Disaster waste in the aftermath of typhoons and earthquakes

Planned measures

- Support communication between municipalities and citizens, in order to gain cooperation from residents in times of disaster
- Hold joint training sessions, and occasions for personnel exchanges and seminars at the regional block level
- Store actual treatment/disposal data on disaster waste, and operate and maintain an information platform at the national level



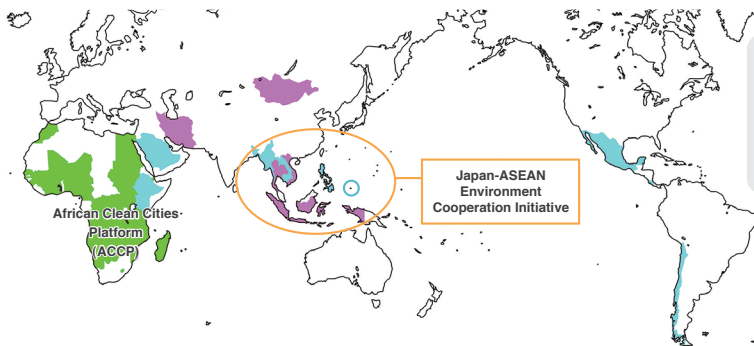
International Resource Circulation

Vision

- A resource efficient society, where a safe and healthy life as well as a rich ecosystem are secured through appropriate international resource circulation systems and international contribution of the resource circulation industries in Japan

Indicators and targets

Number of countries with a Memorandum of Cooperation on Environment Cooperation, including in the field of resource circulation



Number of member countries (as of June 2018)

- Memorandum of Cooperation on Environment Cooperation (MOC): 6
- Joint Crediting Mechanism (JCM): 17
- African Clean Cities Platform (ACCP): 31

Note : Kenya and Ethiopia are also the members of the ACCP



Shipped-back scrap materials



Waste-to-energy facility constructed by a Japanese firm in Yangon, Myanmar

Planned measures

- International expansion of high-quality environmental infrastructure through a package of outstanding environmental technologies, institutions, and systems from Japan
- Provide management know-how from Japan regarding disaster waste. Coordinated scheme with JICA to support disaster-affected countries



Sustaining Fundamentals for 3Rs and Waste Management

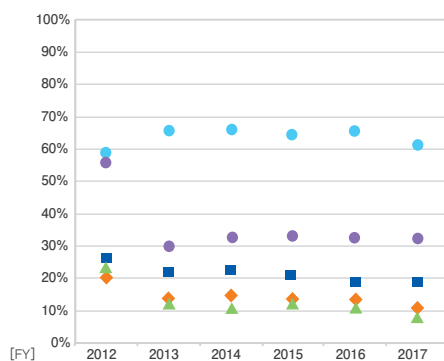
Vision

- Maintained and updated information infrastructure
- Necessary technology and human resources under continuous development
- Understanding of the role of all stakeholders in progress toward a Sound Material-Cycle Society

Indicators and targets

Implementation rate of specific 3R actions

FY2025 target: up roughly 20% from the FY2012 public opinion poll



Reduce

- Bringing a bag when shopping to avoid using plastic bags, or asking for simple packaging
- ◆ Choosing rental/leased products to avoid buying unnecessary products
- Trying to avoid wasting of food through Eco-friendly cooking or not throwing out food products that are past their expiration dates

Reuse

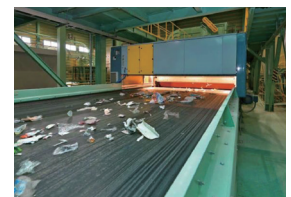
- ▲ Buying products (e.g. beer or milk) packed in reusable containers

Recycle

- Dropping unwanted small electronic devices (e.g. mobile phones) at collection points provided by cell phone retailers and home electric appliance stores

Note : Regarding the values from the FY2012 public opinion poll, although the questions and answer options for some items were not identical, comparisons were made for questions with identical or similar content.

Source : MOEJ, Questionnaire surveys on changes in thoughts and actions on establishing a Sound Material-Cycle society



Optical sorting device for waste plastics

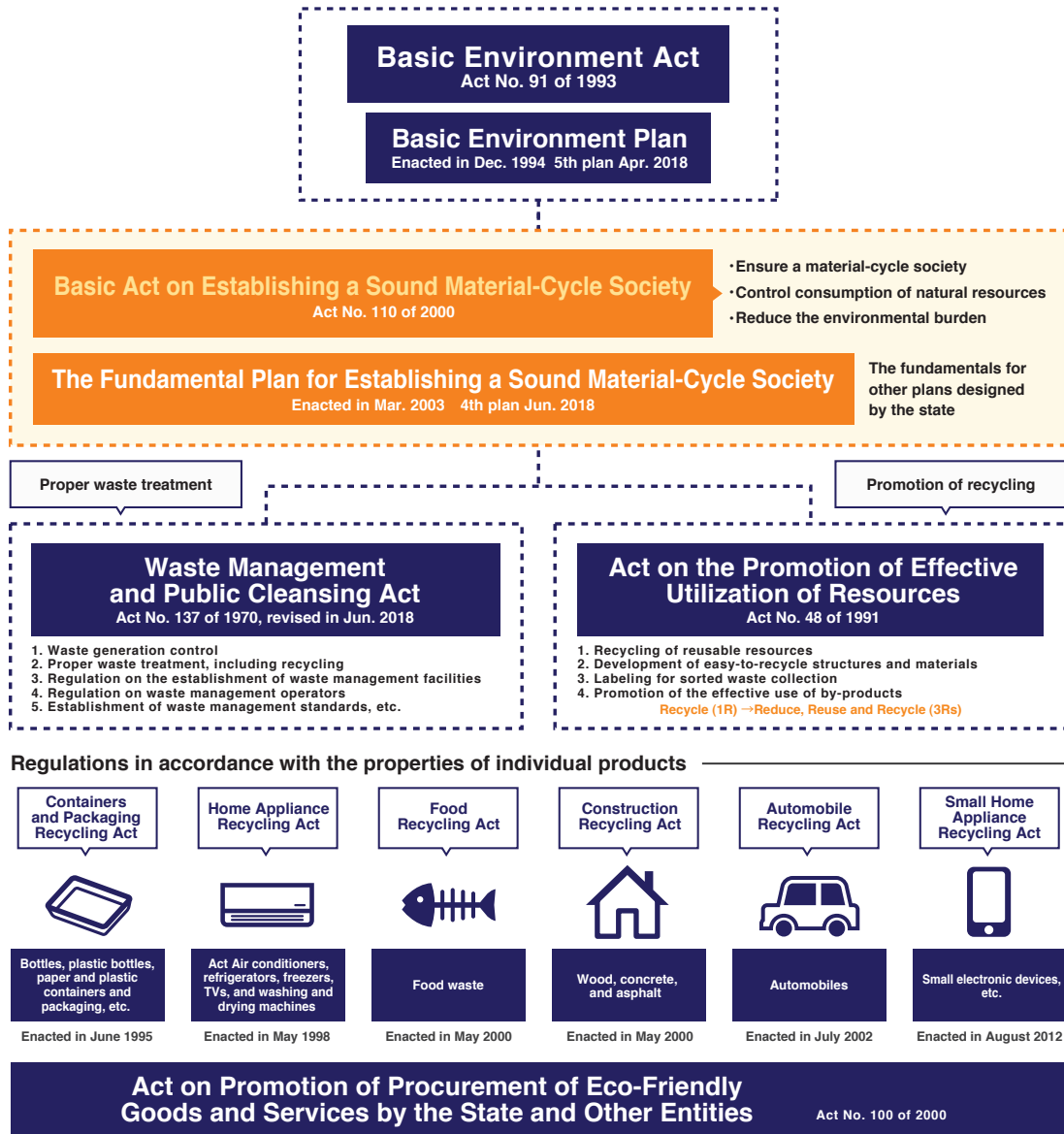


Re-style campaign



Planned measures

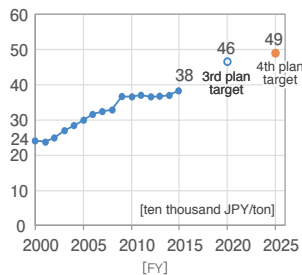
- Promotion of efficient waste collection and expanded use of advanced sorting technology
- Raise awareness and encourage the young generation to act through a "Re-Style" campaign linked to pop culture



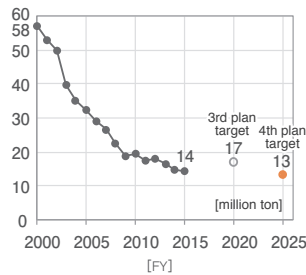
Achievements

Resource productivity up 58% and final disposal amount down 74% due to the 3Rs(reduce, reuse and recycle) during the FY2000-2015 period

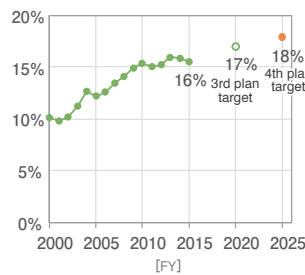
Resource productivity has increased, while the final disposal amount is on a downward trend, with industrial waste showing a significant drop. This change owes to the decrease in the input of natural resources in Japan, due primarily to a decrease in large-scale public works and changes in the industrial structure, as well as an increase in the amount of cyclical use thanks to the recycling acts.



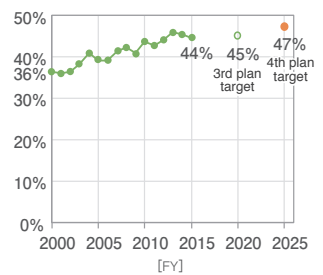
Resource productivity



Final disposal amount



Cyclical use rate (resource base)



Cyclical use rate (waste base)



[Contact]

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