

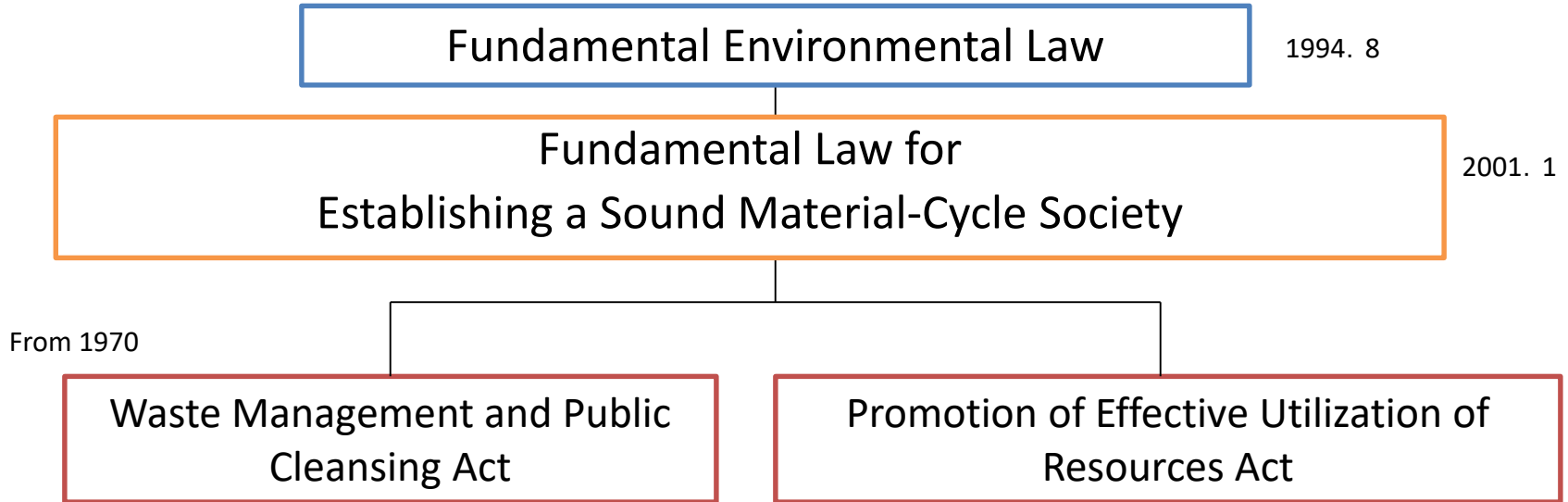
Japan's Policy toward Sound Material-Cycle Society and Plastic Waste Reduction

23rd January 2020

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1. Policy toward Sound Material-Cycle Society



Recycling Laws

Container and Packaging Recycling Act



2000. 4

Home Appliances Recycling Act



2001. 4

Construction Materials Recycling Act



2002. 5

Food Wastes Recycling Act



2001. 5

End-of-life Vehicles Recycling Act



2005. 1

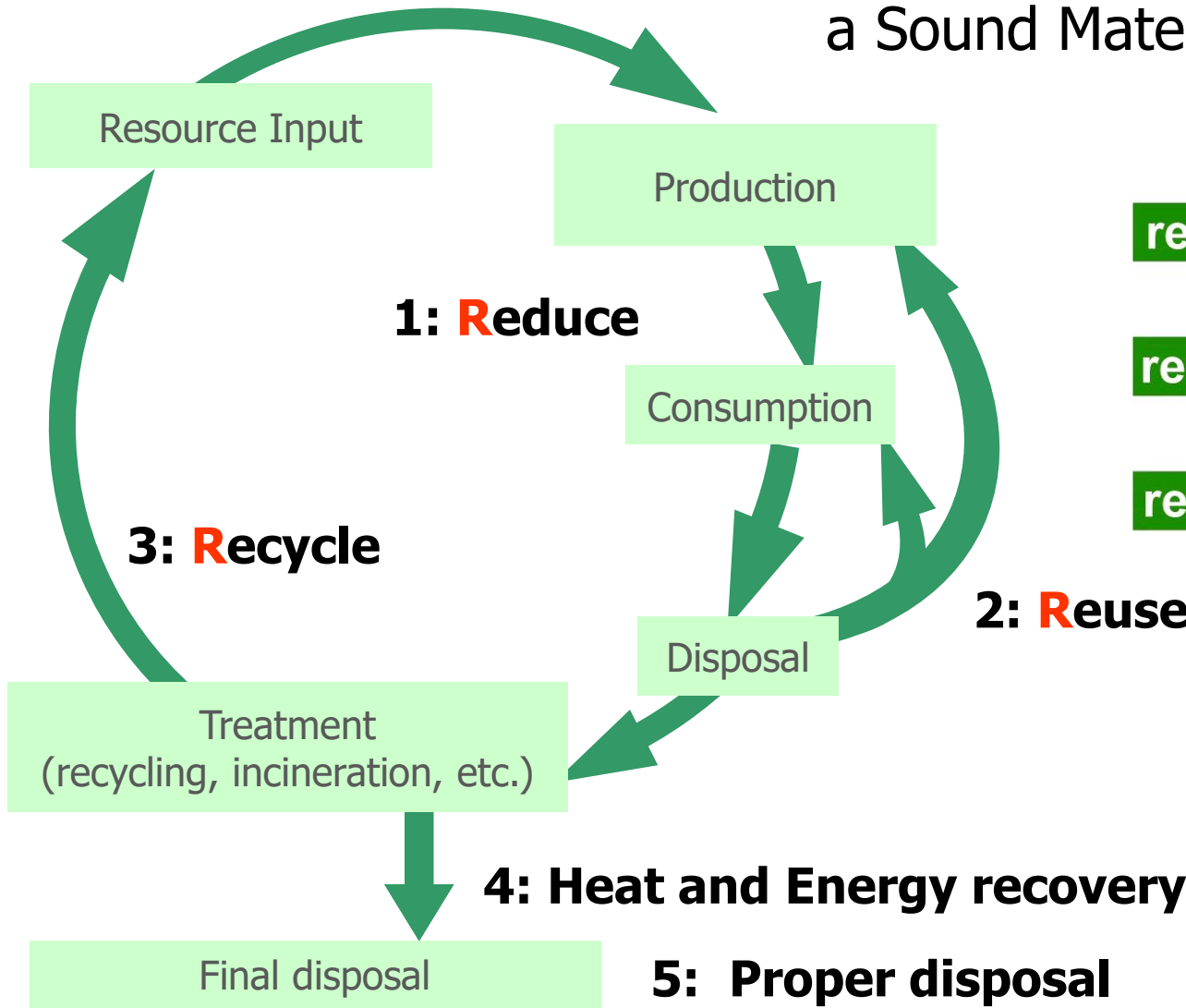
Small Home Appliance Recycling Act



20012. 8

Law on Promoting Green Procurement

Fundamental Law for Establishing a Sound Material-Cycle Society



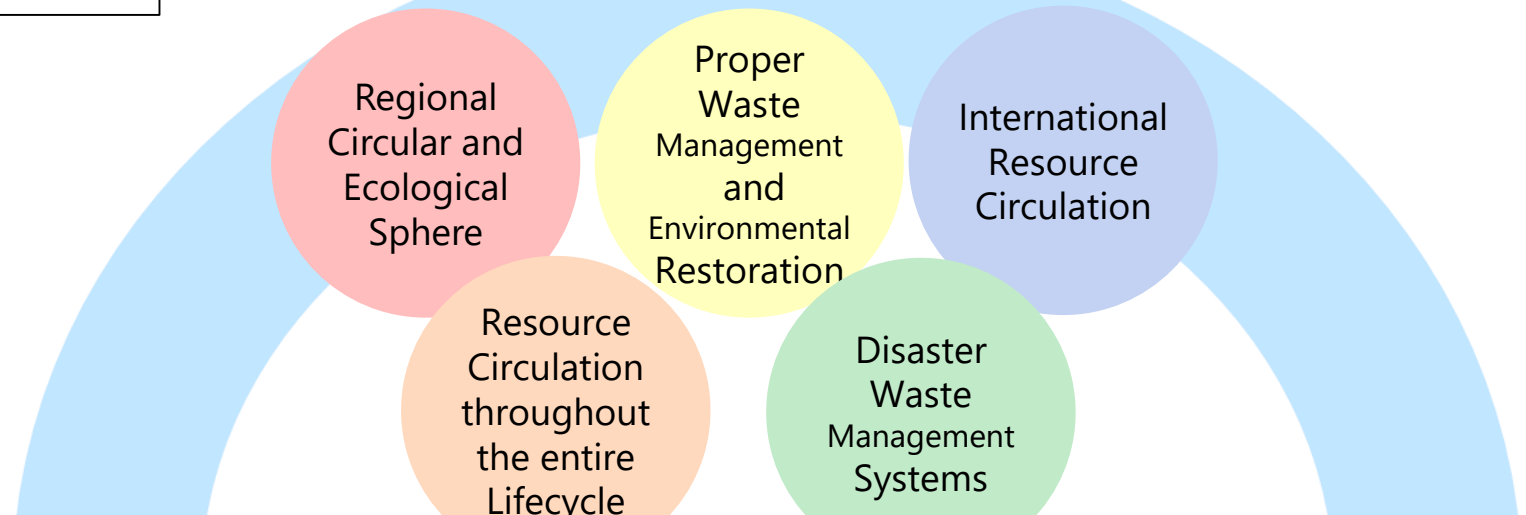
The Fundamental Plan

- The Plan is formulated based on the Basic Act on Establishing a Sound Material-Cycle Society 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 19th, 2018, indicates measures to be implemented in a strategic manner.

Pillars of the Strategy

Integrated measures toward a sustainable society

Integrated improvements on the environment, economy and society



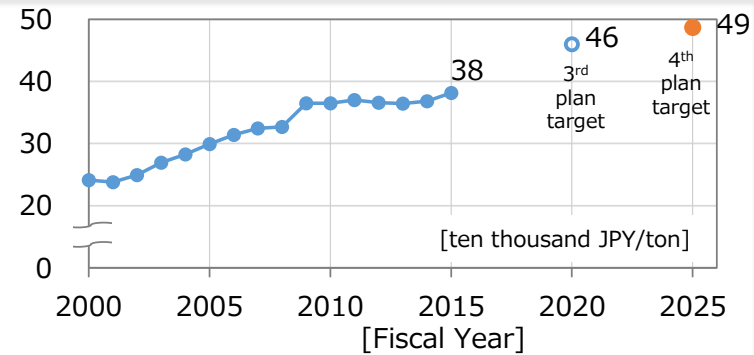
Sustaining fundamentals for 3Rs and waste management

Technologies, Human Resources and Awareness Raising, and Information and Databases

Resource productivity = GDP/ Input of natural resources, etc.

FY2025 target: 490,000JPY/ton = approx. double from FY2000

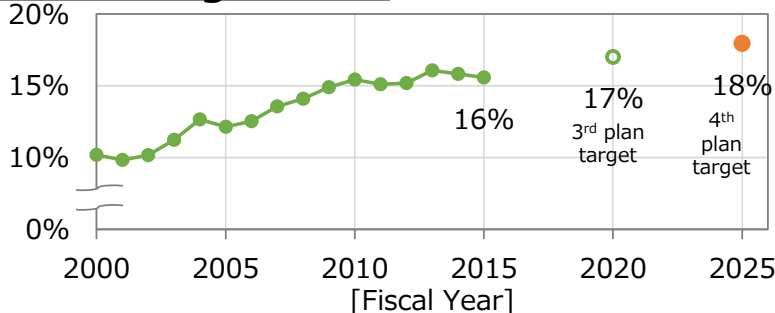
- An indicator that comprehensively represents how effectively materials are used in industrial activities and people's daily lives, in terms of creating more wealth using fewer resources.
- The indicator was first adopted in a national-level plan in Japan.



Cyclical use rate (resource base)

= Amount of cyclical use / (Amount of cyclical use + Input of natural resources, etc.)

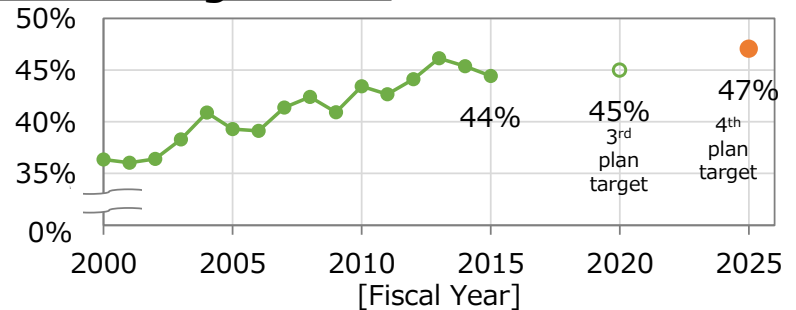
FY2025 target: 18% = approx. 80% increase from FY2000



Cyclical use rate (waste base)

= Amount of cyclical use/ Generation of waste, etc.

FY2025 target: 47% = approx. 30% increase from FY2000

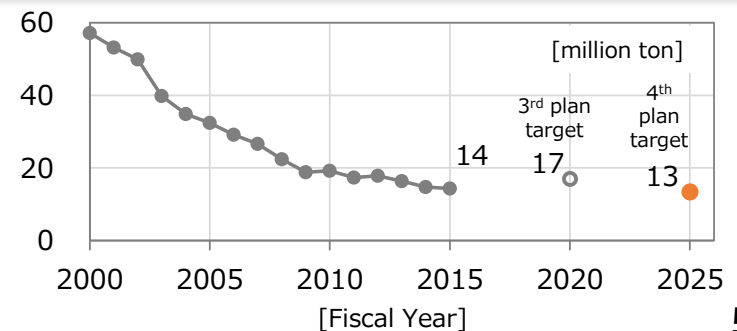


Final disposal amount

FY2025 target: 13 million ton = 77% cut from FY2000

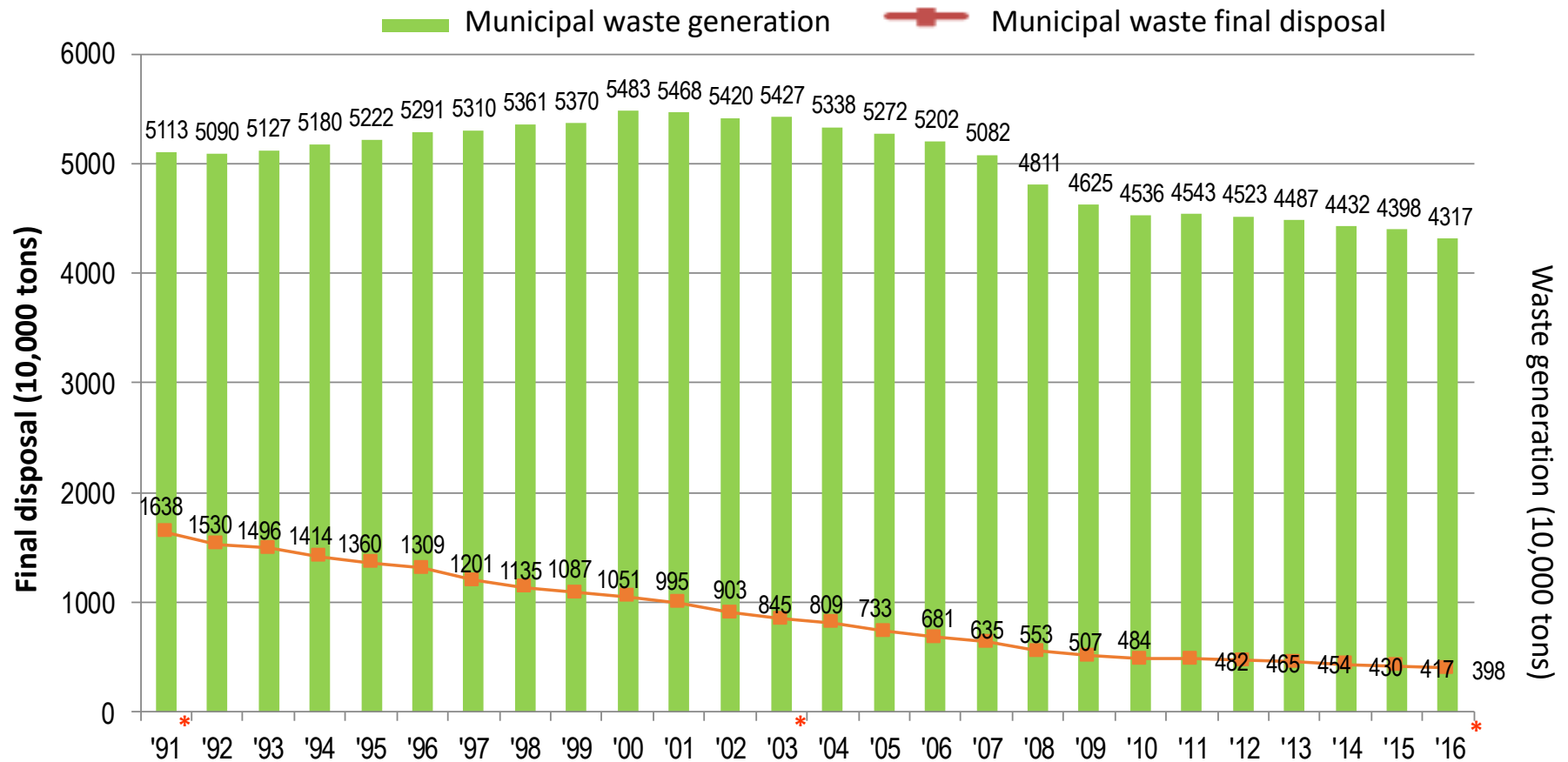
[Municipal solid waste] 1 million ton in FY2025 = 70% cut from FY2000

[Industrial waste] 10 million ton in FY2025 = 77% cut from FY2000



Changes in municipal waste generation and final disposal

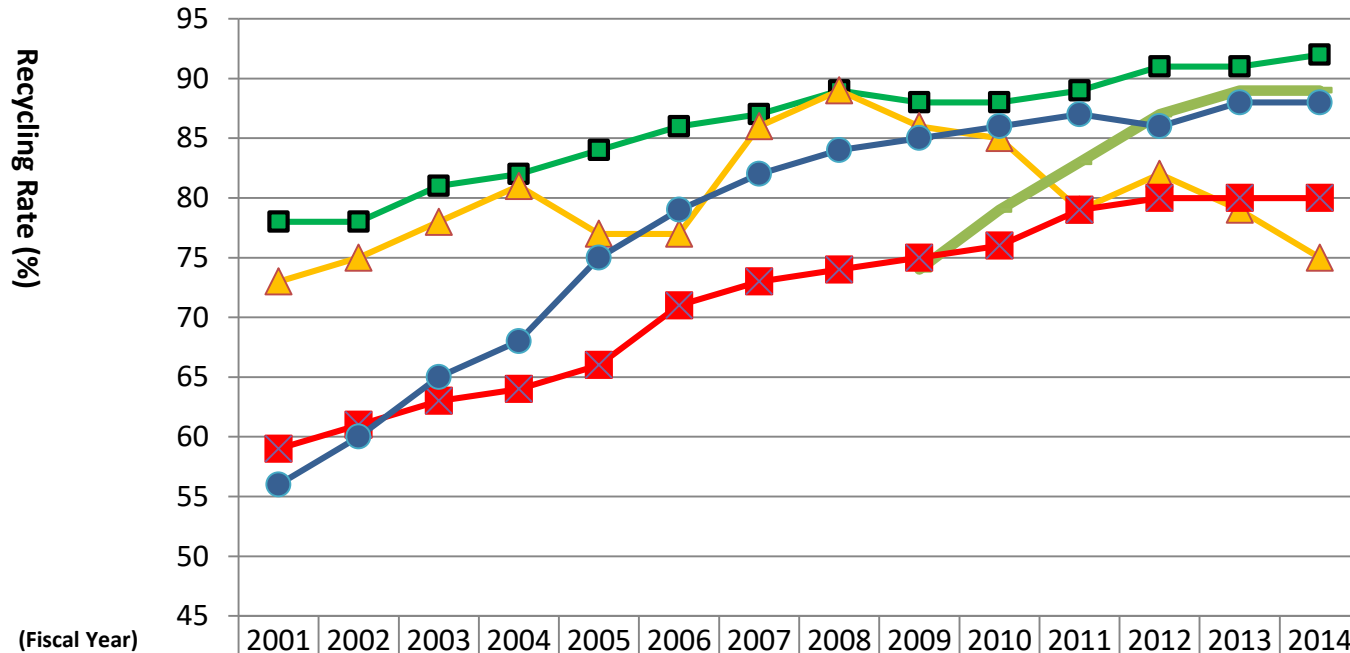
- Generation of **municipal waste continues to decrease after a peak of 55 million tons in 2000**
- The amount of final disposal continues to decrease along with progress in promoting 3R



* Waste generation per day per head (g/person-day)

- 1991	1,118	(g/person-day)
- 2000	1,185	(g/person-day)
- 2010	976	(g/person-day)

Improvement of Recycling Rate (Home Appliance)



(Recycling Rate Criteria)

■ Air Cinditioner	78	78	81	82	84	86	87	89	88	88	89	91	91	92	60%(-2008),70%(2009-)
▲ CRT TV	73	75	78	81	77	77	86	89	86	85	79	82	79	75	55%
● Liquid Crystal/Plasma TV									74	79	83	87	89	89	50%(2009-)
■ Refridgerator/Freezer	59	61	63	64	66	71	73	74	75	76	79	80	80	80	50%(-2008),60%(2009-)
● Washing machine/Clothes dryer	56	60	65	68	75	79	82	84	85	86	87	86	88	88	50%(-2008),65%(2009-)

[Note1] Liquid crystal / Plasma TV and Clothes dryers were added in 2009.

[Note2] There was a temporary decrease in the recycling rate of CRT TV between FY2009 and FY2011.

This was because collecting some of the CRT glass became more expensive than recycling them.

Subsidy from Ministry of the Environment to local governments

Subsidy: 1/3 or 1/2 to waste management facilities including WtE plants

- In line with government's policy and plan
- Meet the requirements of "Waste Management Facility Performance Guidelines"
- Comply with relevant regulations



2. Outcome of the G20 Summit on Marine Plastic Litter

Beach litter along the coastline



Tobishima, Sakata, Yamagata



Tsushima, Nagasaki

*Samples of drifted wastes



Plastic container



Fishing gear



Detergent container

Negative impacts

- Concerns regarding marine life
- Obstruction for ship sailing
- Impacts on tourism and fishery
- Impacts on the residential environment along the coast

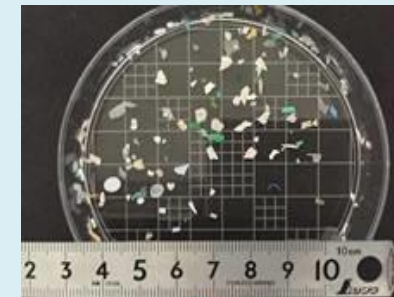


Source: UN World Oceans Day



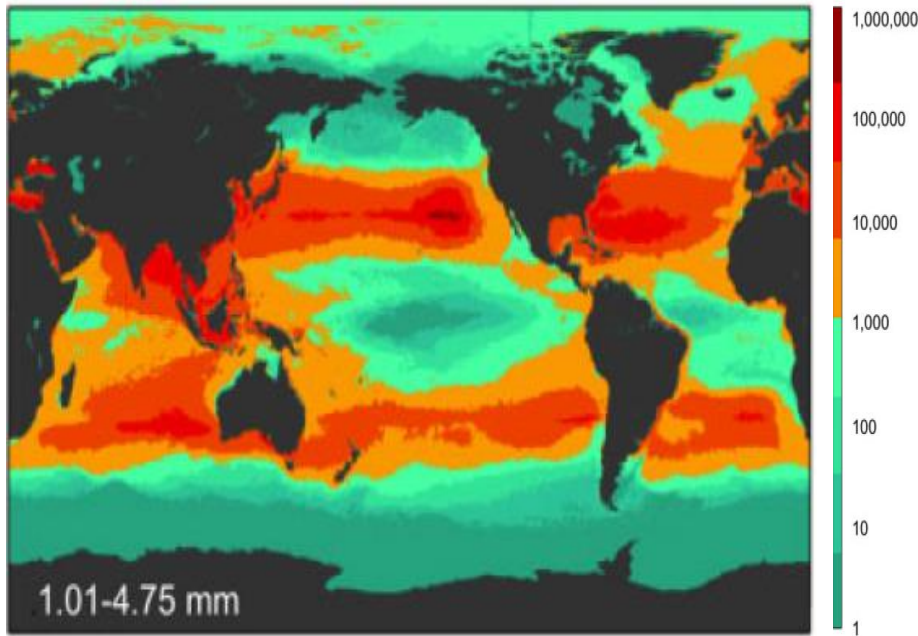
A whale has died after swallowing more than 80 plastic bags

Source: Ministry of Natural Resources and Environment, Thailand



Small plastic fragments
Source: Isobe lab, Kyusyu university

<Global Marine Plastic Pollution>



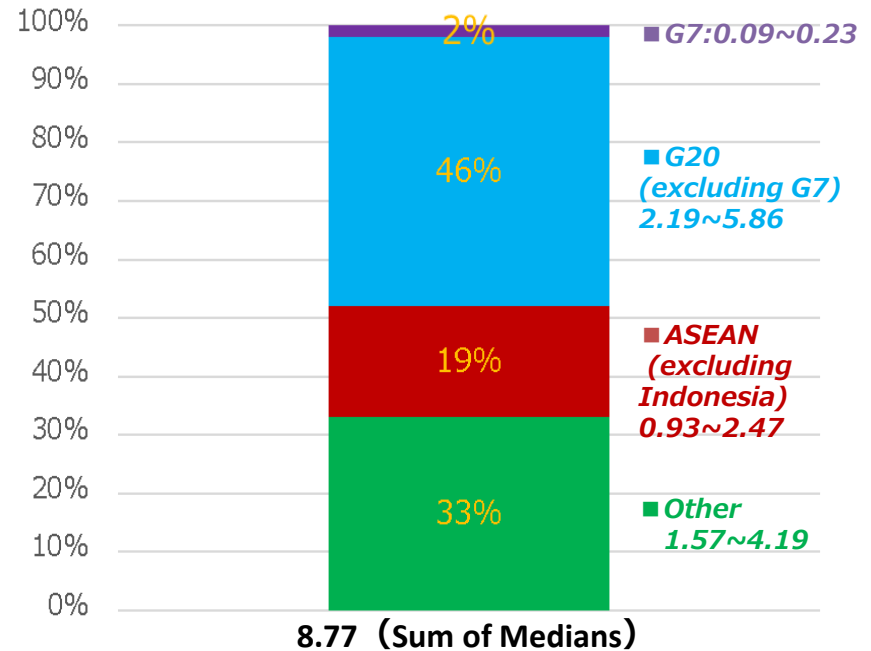
Distribution Density of microplastics (1~4.75mm)
(model projection)

(Source) Erikson et al. : (2014), "Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea", PLoS One 9 (12), doi:10.1371/journal.pone.0111913

Color bar
(Unit: pieces km⁻²)
Yellow: 1,000-10,000
Orange: 10,000-100,000
Red: 100,000-1,000,000

<Marine Plastic Litter by Region>

(Unit: million tons /year)



(Note) The ratio is calculated by using medians of respective estimates.

(Source) Jambeck et al. : Plastic waste inputs from land into the ocean, Science (2015)

- ◆ Estimation by a researcher based on population density, economic status, and etc.
- ◆ There is no agreed international statistics on Marine Plastic Litter.

Osaka Blue Ocean Vision

- G20 leaders shared the Osaka Blue Ocean Vision **as a common global vision**
- They also called on other members of the international community to also share this vision for protecting the world's oceans



"We **aim to reduce additional pollution by marine plastic litter to zero by 2050** through a comprehensive life-cycle approach that includes reducing the discharge of mismanaged plastic litter by improved waste management and innovative solutions while recognizing the important role of plastics for society."

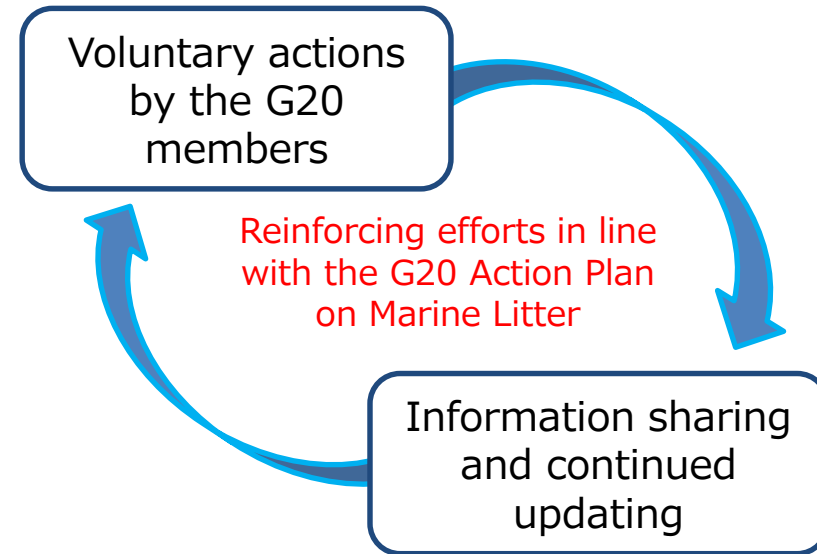
G20 Implementation Framework

- Adopted on G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth
- Also endorsed by G20 Osaka Summit

"We also endorse the G20 Implementation Framework for Actions on Marine Plastic Litter. "

Facilitating the Effective Implementation

- **Promoting a life-cycle approach** including sound waste management, marine litter cleaned up, promotion and deployment of innovative solutions, and international cooperation in order to support each countries in strengthening their capacity.
- Sharing and updating information on relevant policies, plans and measures. **Utilizing opportunities of G20 Resource Efficiency Dialogue for the first info sharing.**



Collaboration among G20 members and outreach activities

- Promotion of international cooperation
- Promotion of innovative solutions
- Sharing scientific information and knowledge
- Multi-stakeholder involvement and awareness raising



Date and Location: 8-11th October 2019, Tokyo/Japan

Organizers: MOEJ (METI, UNU-IAS, IGES)

Participants: G20 and Outreach countries
International Organizations, Academia
(app. 100 participants)



- **Prepared G20 Report on Actions against MPL**, based on information provided from G20 members, for initial information sharing and peer learning in accordance with the G20 Implementation Framework.
- **Developed a Roadmap for G20 Resource Efficiency Dialogue** by consensus as a guidance to effectively promote the future activities of the G20 RE Dialogue.
- **Joint initiatives of MOEJ, EU DG Environment and USEPA** to voluntarily take a lead in further elaborating key issues (such as ‘sources, pathways and impacts’ by EU DG Environment; ‘harmonized monitoring and data compilation’ by MOEJ; ‘innovative solutions’ by USEPA) by holding workshops.
- **Contribution of relevant international organizations** to advance their work relevant to the Osaka Blue Ocean Vision and the G20 Implementation Framework.

“3R + Renewable”

Reduce

- Reduce the use of single-use plastics (add “value” such as through mandating payment for plastic bags)

Recycle

- Easy to understand and effective sorted collection and recycling of plastic resources
- Development of a domestic resource circulation system given the embargoes of Asian countries

Recycled plastics / Bio-plastics

- Support technical innovation and infrastructure development
- Government procurement

[Milestones]

<Reduce>

- ① Cumulative suppression of **25%** of single-use plastics by **2030**

<Reuse/Recycle>

- ② Reusable/recyclable design by **2025**
- ③ Reuse/recycle **60%** of containers and packaging by **2030**
- ④ Effective use of **100%** of used plastics by **2035** by reuse and recycling etc.

<Recycling and Biomass Plastics>

- ⑤ **Double** recycling by **2030**
- ⑥ Introduce about **2 million** tons of biomass plastics by **2030**

Countermeasures

- ① Promotion of proper waste management system
- ② Prevention of littering, illegal dumping and unintentional leakage of waste into the oceans
- ③ Collection of scattered waste on land
- ④ Recovery of plastic litter in the oceans
- ⑤ Innovation in development of alternative materials and conversion to those
- ⑥ Collaboration with stakeholders
- ⑦ International cooperation for promoting measures in developing countries
- ⑧ Survey on actual situations and accumulation of scientific knowledge

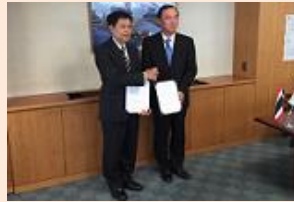


While sharing Japanese best practices (experience, knowledge and technology) internationally, the Japanese government will take the lead in addressing the issue of marine plastic litter effectively to realize a world without additional pollution by plastic litter.

Contribution through exporting a package of waste management technologies, systems, and capacity building

Bilateral cooperation: Support for system development

- Thailand: Memorandum of Cooperation on industrial waste management
- Vietnam: assistance for national 3R strategy development
- Philippines: support to form the waste-to-energy guideline



Multilateral cooperation: Regional 3R Forum in Asia Pacific

- More than 500 participants including Ministers from Asia-Pacific countries
- 10th Forum will be held in Russia, Autumn 2020

Ongoing projects in Asia-Pacific

- Introduction of waste to energy plant in Yangon, Myanmar
- F/S for waste-to-energy facility construction in Davao, Philippines
- Comprehensive support program for introducing waste-to-energy technology to Indonesia



WtE plant completed in April 2017 in Yangon

- **Regional 3R Forum in Asia and the Pacific** was established in 2009, with the aim of promoting high-level policy dialogue for 3R and resource efficiency policies in the Asia-Pacific region.
- **African Clean Cities Platform (ACCP)** was established in 2017, with the aim of contributing to capacity building and sharing experiences on municipal waste management in Africa.
- **World Circular Economy Forum (WCEF)** is a forum for all entities to share good practices toward transition to a circular economy, and 2nd Forum was held in Japan in 2018.





Thank you for
your Attention

