

3Rs & Waste Management in Tokyo



Sustainable Materials Management Division
Bureau of Environment
Tokyo Metropolitan Government



TOKYO
METROPOLITAN
GOVERNMENT

東京都

Japan

Area: 378,000 km²

0.28%/total global land

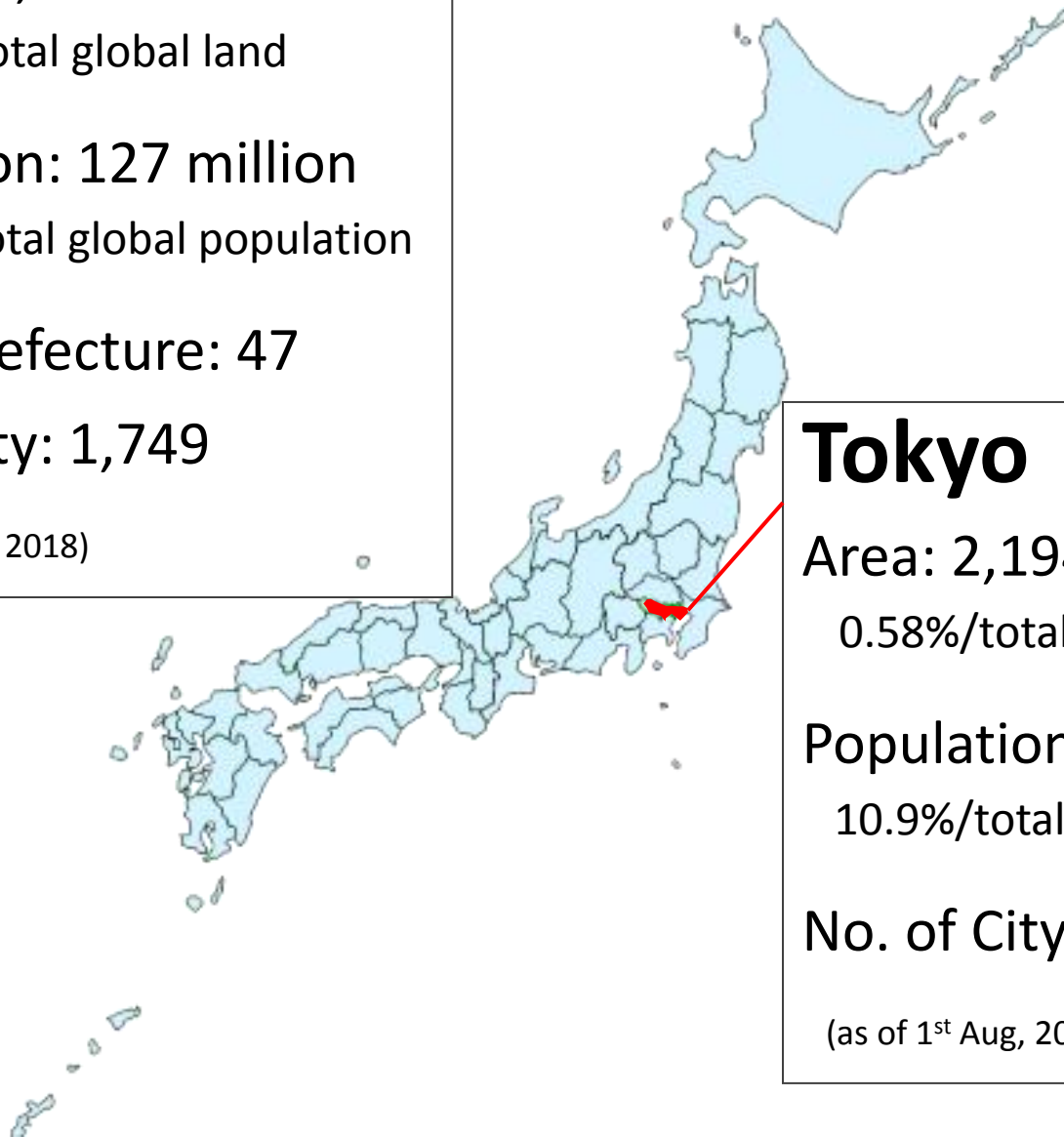
Population: 127 million

1.7%/total global population

No. of Prefecture: 47

No. of City: 1,749

(as of 1st Aug, 2018)



Tokyo

Area: 2,194 km²

0.58%/total land in Japan

Population: 13.8 million

10.9%/total population in Japan

No. of City: 62

(as of 1st Aug, 2018)

Tokyo

Suburban area “Tama area”

Area: 1,160 km²

Population: 4,261,789

No. of municipalities: 30

Central area “23-city area”

Area: 627 km²

Population: 9,544,164

No. of municipalities: 23



We are here.



Island area “Izu/Ogasawara islands”

Area: 404 km²

Population: 25,468

No. of municipalities: 9



National Legislation

Basic Act for the Sound Material-cycle Society



**Effective Resource
Utilization Act**

**Waste Management
Act**

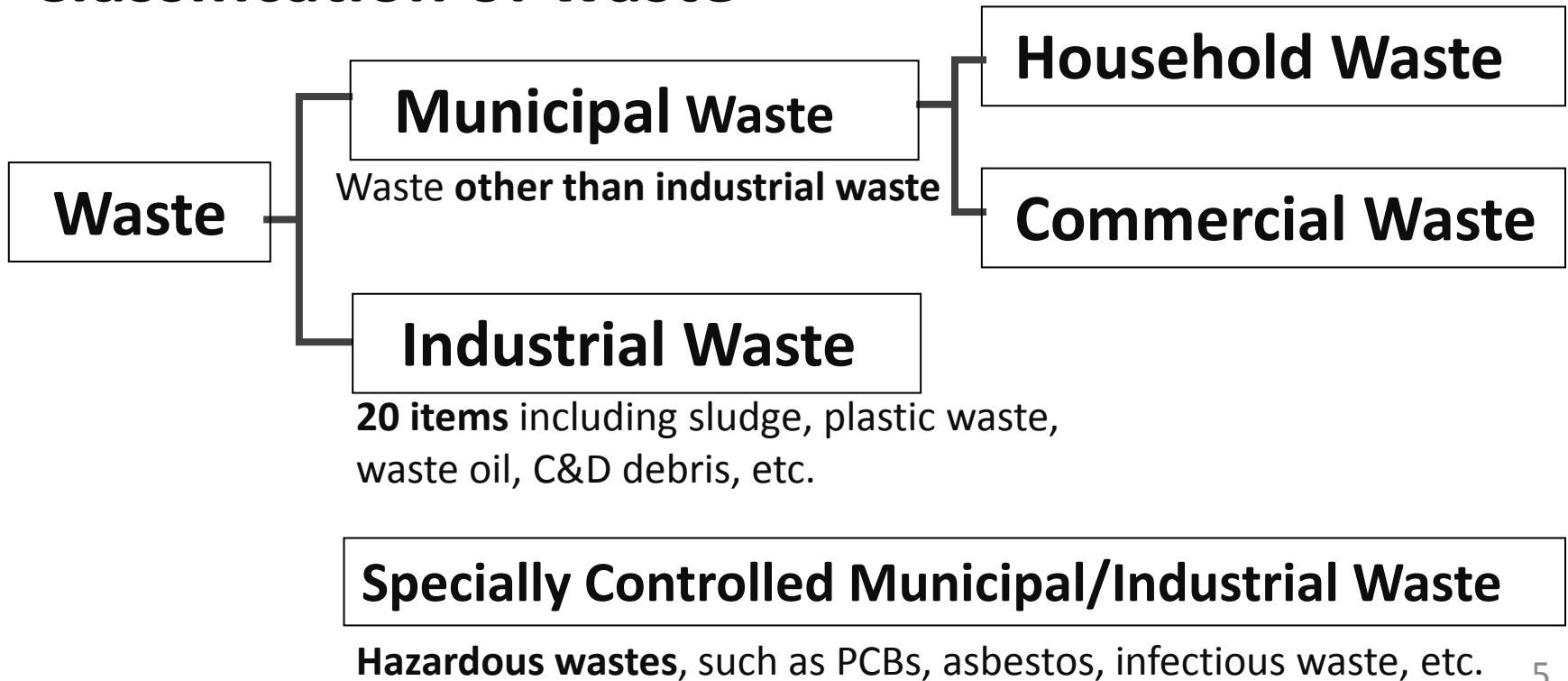
Containers & Packaging Recycling Act
Home Appliance Recycling Act
Construction & Demolition Waste Recycling Act
Food Waste Recycling Act
End-of-Life Vehicle Recycling Act
Small WEEEs Recycling Act

Waste Management Act

Definition of waste

Solid or liquid materials, useless for the owner and valueless in the market (Supreme Court decision)

Classification of waste



Waste Management Act

Roles of National and Local Governments

National Government

- Establish **basic policies**
- Formulate **waste disposal standards**
- Provide support to prefectures/municipalities, etc.

Prefectures

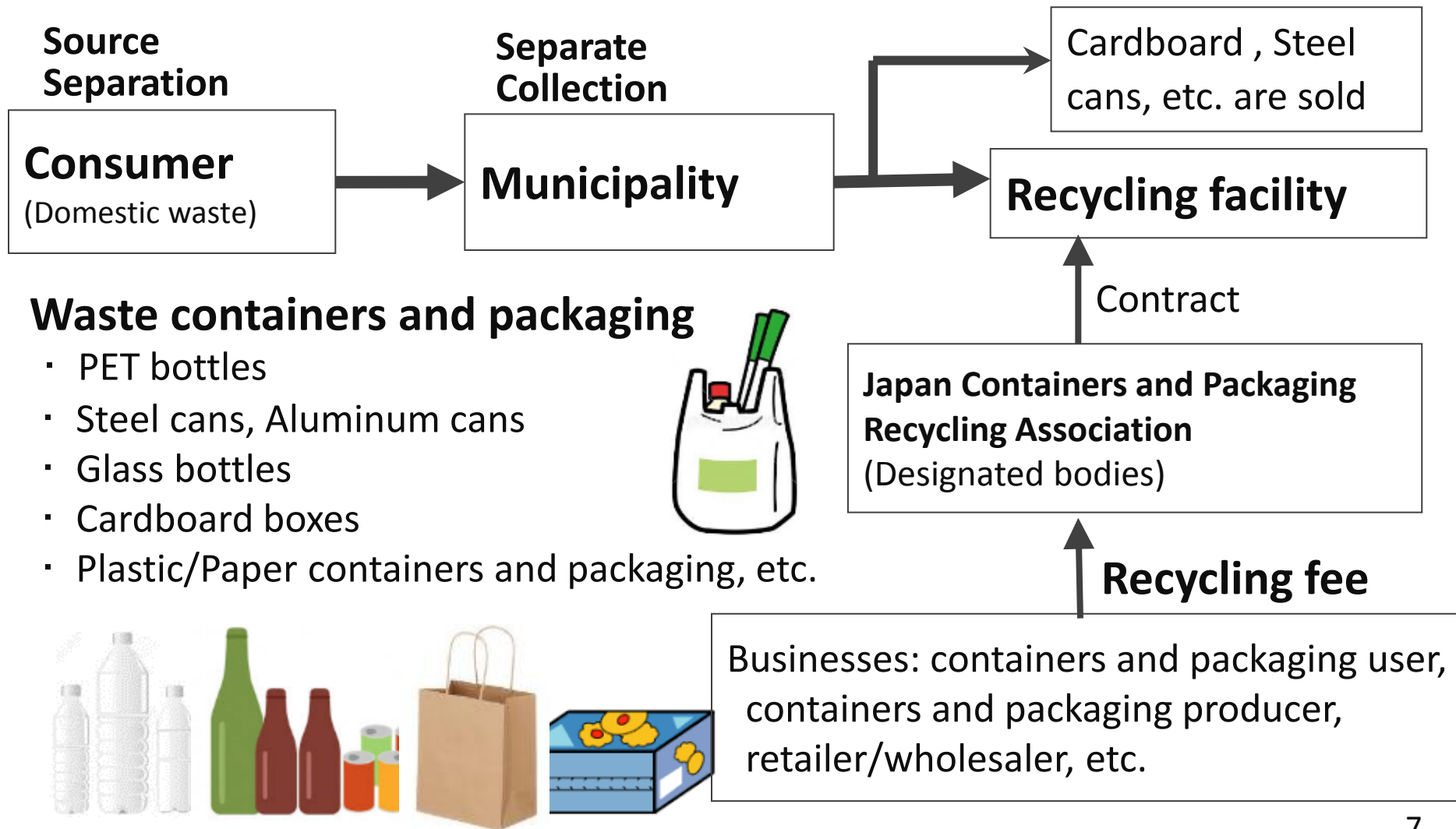
- Establish **waste management plan**
- Provide **control/guidance for appropriate disposal of industrial waste**
- **License industrial waste disposal companies** and approve construction of **waste management facilities**
- Provide support to municipalities etc.

Municipalities

- Establish **municipal waste management plan**
- **Treat municipal waste** according to the plan
- **License municipal waste disposal companies** etc.

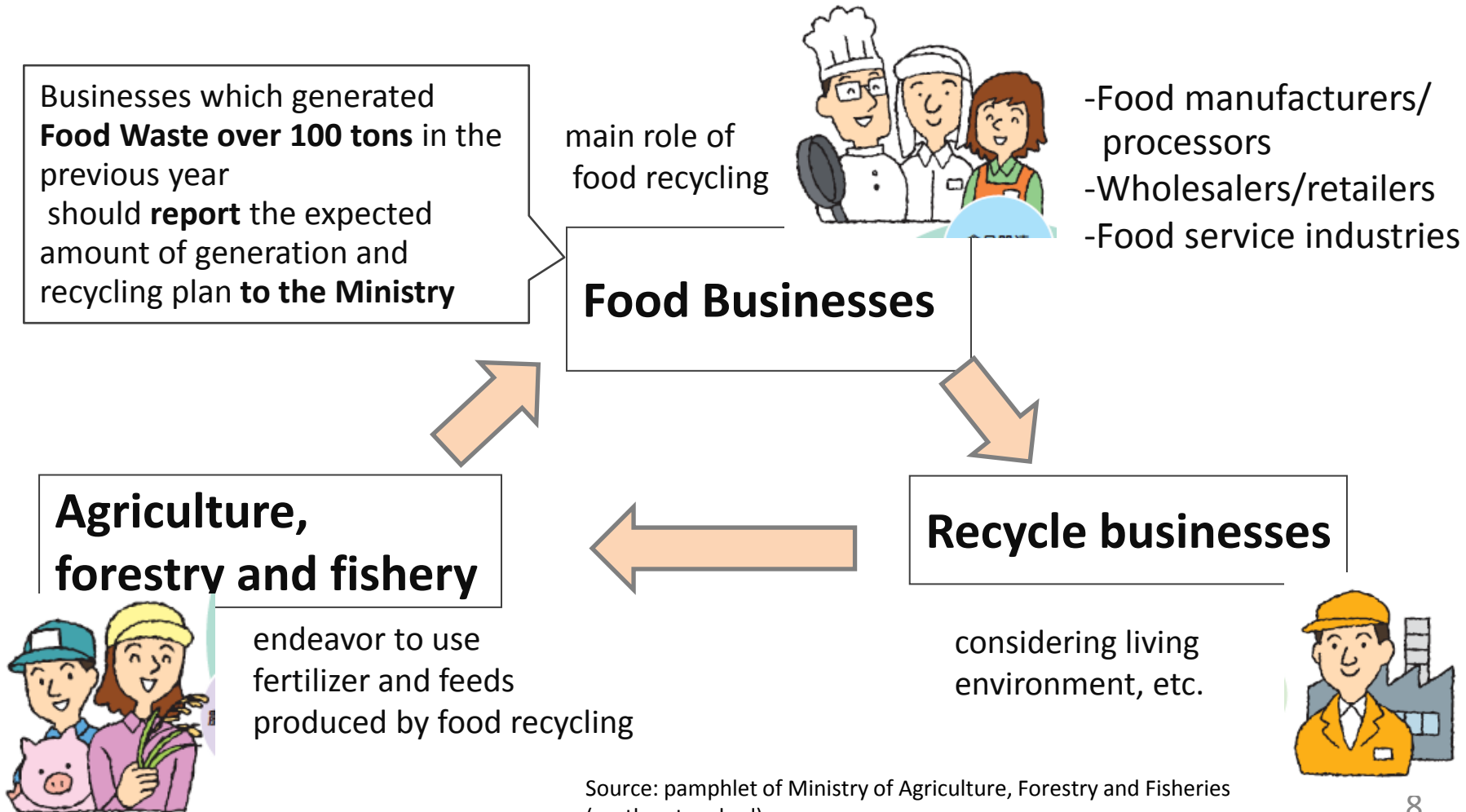
Containers and Packaging Recycling Act

- Purpose: Definition on the roles of consumer, municipality and businesses for Waste prevention and Recycling of C&P waste from household



Food Waste Recycling Act

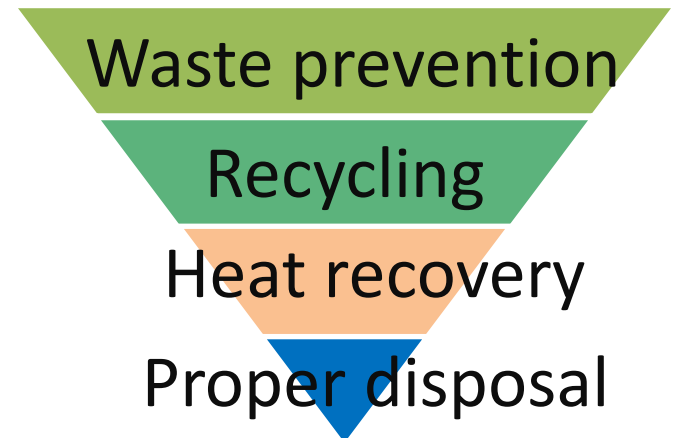
- Purpose: Waste prevention and Reduction of volume on food waste by food businesses to reduce final disposal volume
Promotion of Composting and producing animal feed by food waste for food resources circulation



Food Waste Recycling Act

	Amount of generation (k tons:FY2016)	Rate of recycling etc.(%) FY2016	Target rate of recycling etc.(%) by FY2019
Total of Food industries	19,700	85	-
Manufactures/ Processors	16,170	95	95
Wholesales	270	65	70
Retailers	1,270	49	55
Food service industries	1,990	23	50

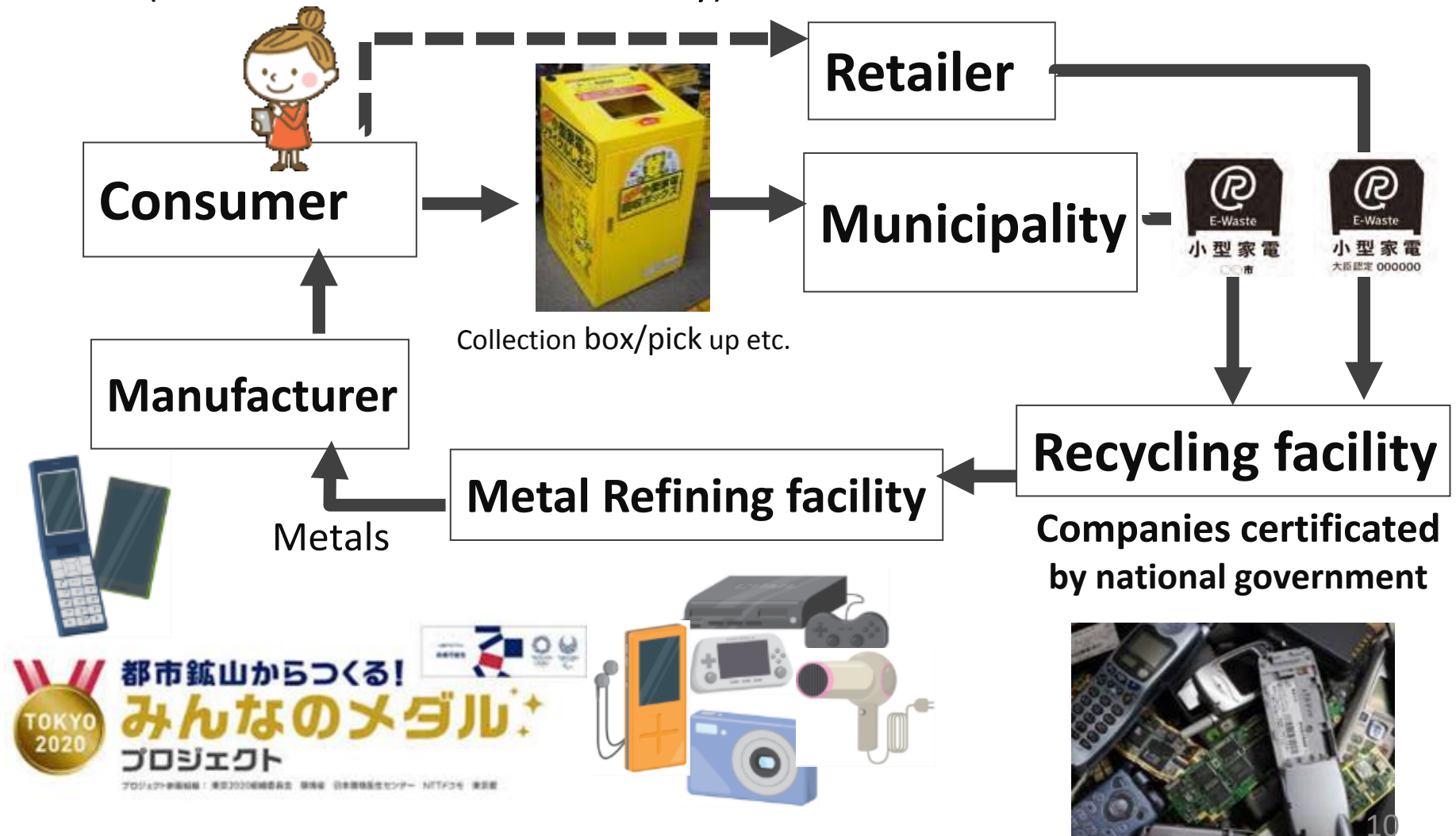
Food waste
 -Processing residue
 -unsold
 -Cooking scraps, uneaten



Small WEEEs Recycling act

From April 2013

- Purpose: To promote recycling of precious metals used in small electronic devices (but its scheme is not mandatory)



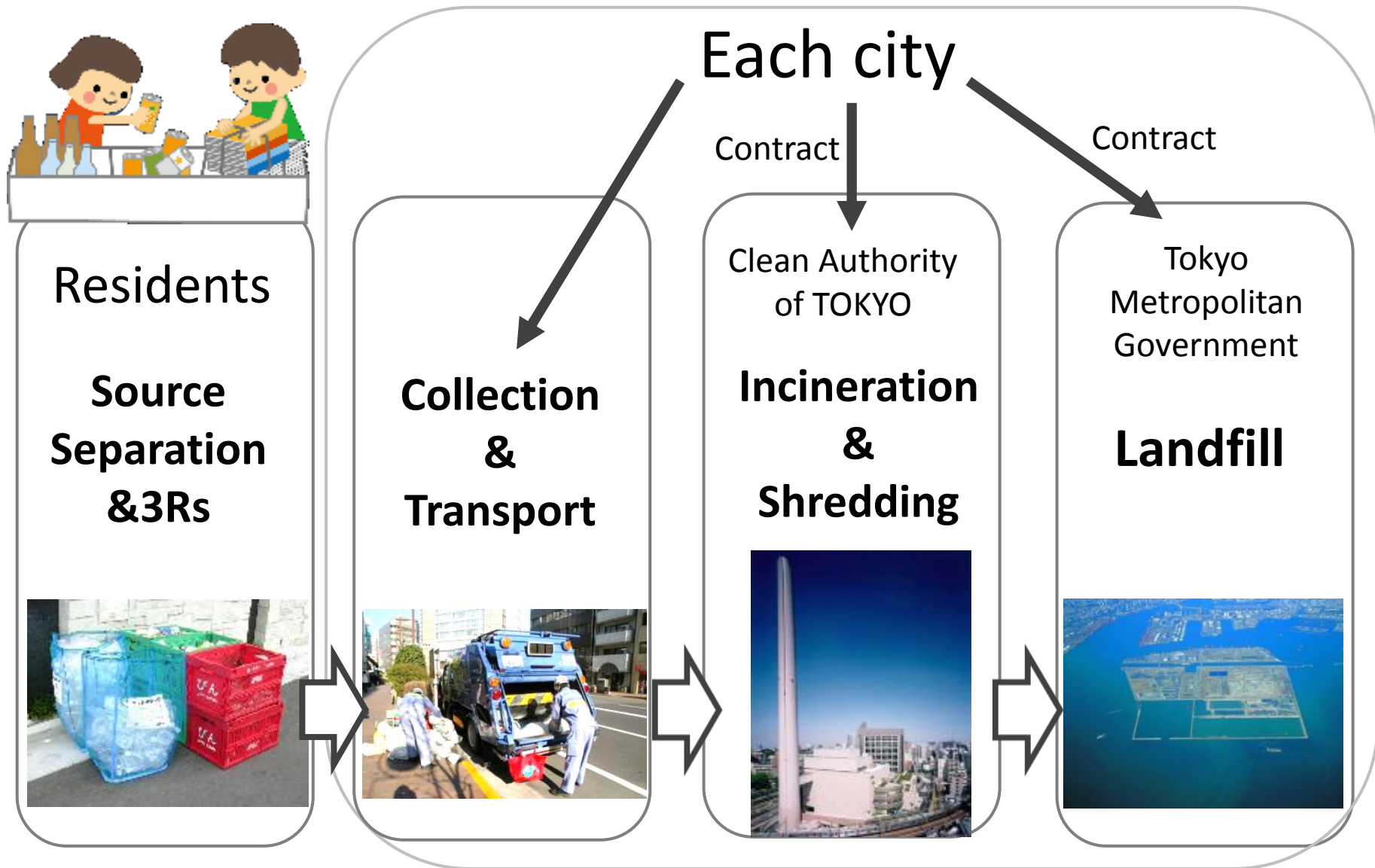
Tokyo 2020 Mobiles to Medals Project in Paris

2018.10.31～11.7 :
With the cooperation of
the City of Paris, collection
boxes are planned to be
installed around Paris to
promote this project.

* Outline of the project:
The Organizing Committee will **manufacture approximately 5,000 gold, silver and bronze medals** for the Olympic and Paralympic Games from consumer electronics such as used mobile phones.



The MSW Flow in Central Tokyo (23-city area)



Each city is responsible for Municipal Waste Management

Source Separation by Residents



Continuous Communication with residents

Meeting with residents



Guideline to separate and dispose garbage and recyclables in several languages

The infographic poster is titled "“不可燃垃圾”改名为“金属、陶器、玻璃垃圾”，每月收集2次。" (Non-combustible waste renamed "Metal, Ceramics, Glass Waste", collected twice a month). It is divided into several sections with icons and text:

- 金属、陶器、玻璃垃圾** (Metal, Ceramics, Glass Waste): Includes items like metal cans, glass bottles, and ceramic dishes. Collection frequency: 每周1次 (once a week).
- 易燃垃圾** (Combustible Waste): Includes items like paper, food waste, and plastic. Collection frequency: 每周1次 (once a week).
- 废旧纸张** (Waste Paper): Includes newspapers, magazines, and cardboard. Collection frequency: 每周1次 (once a week).
- 容器包装材料** (Container Packaging Materials): Includes plastic bottles, cans, and other containers. Collection frequency: 每周1次 (once a week).
- 瓶、罐、PET塑料瓶、矿泉水瓶和液化气瓶** (Bottles, Cans, PET Plastic Bottles, Mineral Water Bottles, and Liquefied Gas Cylinders): Includes various types of bottles and cans. Collection frequency: 每周1次 (once a week).

Additional text on the poster includes "请投放到收集地点" (Please dispose at collection points) and "请在指定投放日的上午9点之前将垃圾送至垃圾收集站。" (Please bring garbage to the collection station before 9 AM on the designated collection day).

Environmental Education

By collection workers



Waste Management Facilities in Tokyo

Highly efficient Waste-to-Energy



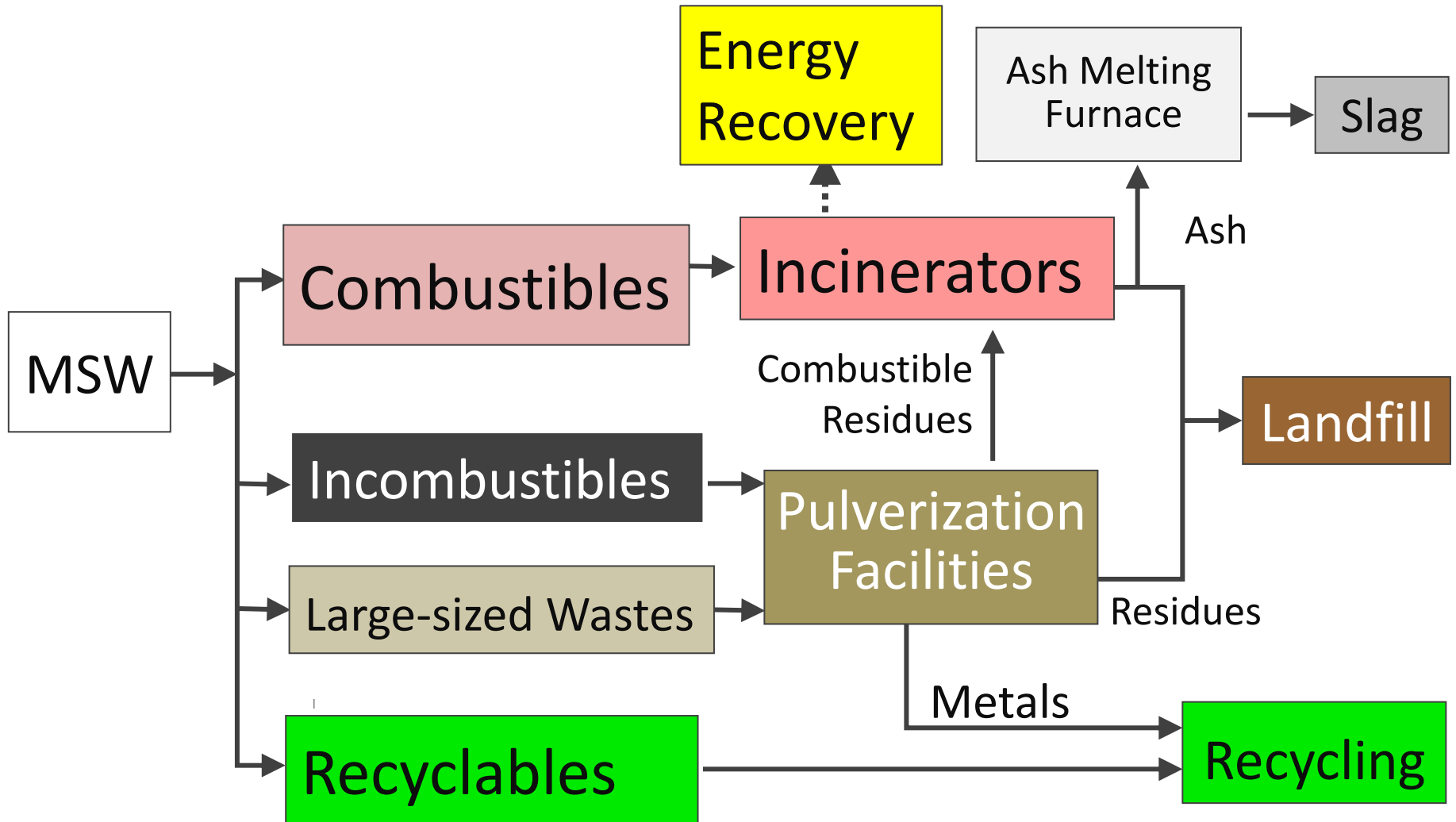
← Incineration plant
in Sugunami city

Minimizing the amount of landfill

Landfill In Tokyo Bay →



MSW Flow in Central Area (23-City area)



Landfill in Tokyo Bay

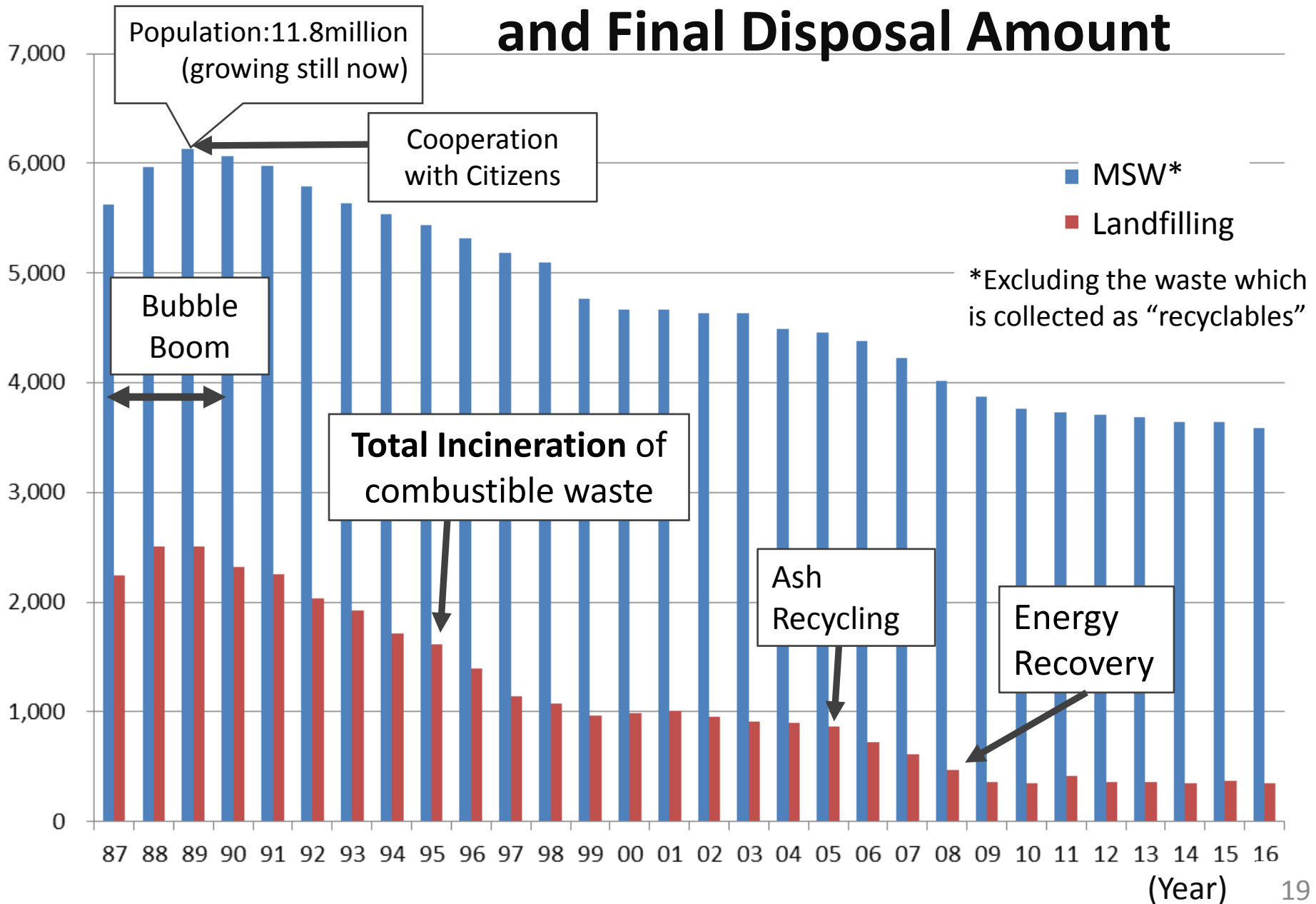
【Biggest Challenge】 Lack of land for landfill



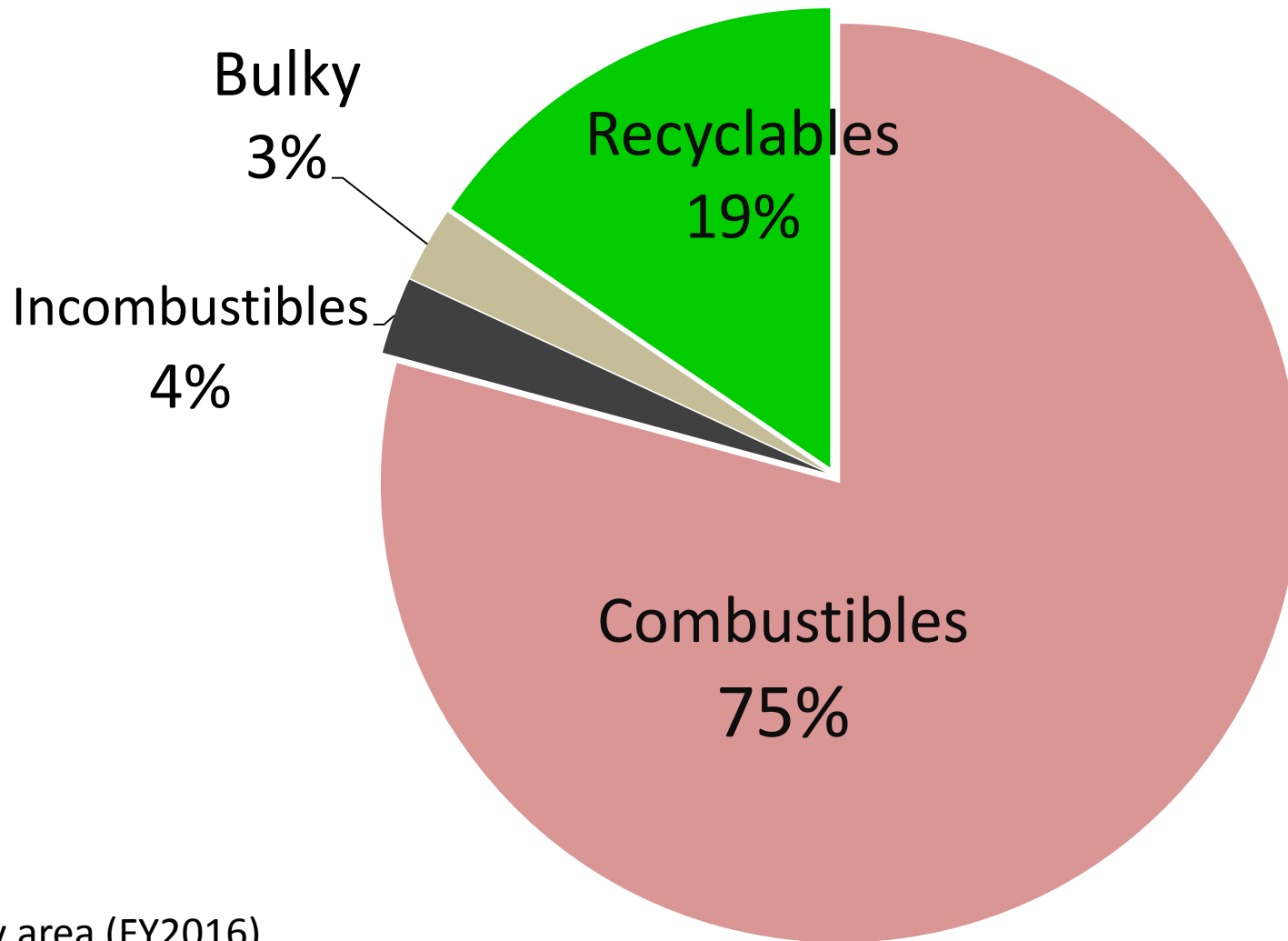
- ① 1927-1962
- ② 1957-1966
- ③ 1965-1974
- ④ 1973-1986
- ⑤ 1977-
- ⑥ 1984-1991
- ⑦ 1998-

Reduction of Waste Generation and Final Disposal Amount

(Thousand ton)



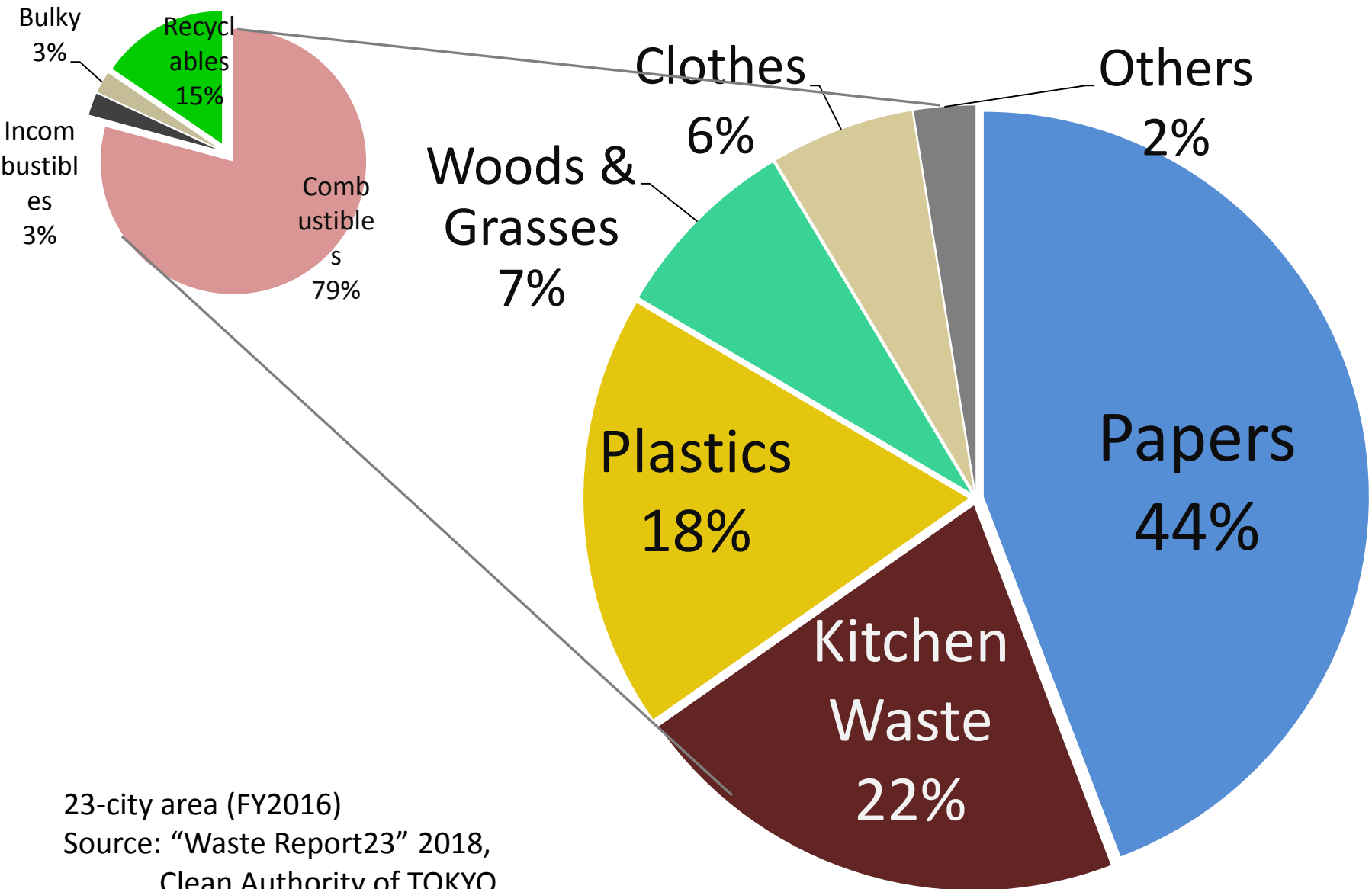
Ratio of MSW



23-city area (FY2016)

Source: Bureau of Environment,
Tokyo Metropolitan Government

Composition of combustible waste



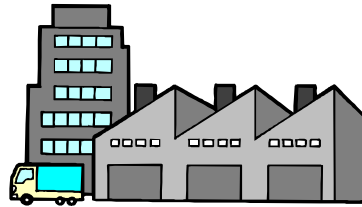
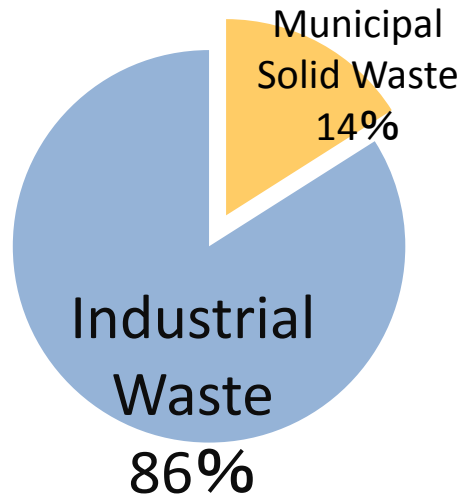
23-city area (FY2016)

Source: "Waste Report23" 2018,
Clean Authority of TOKYO

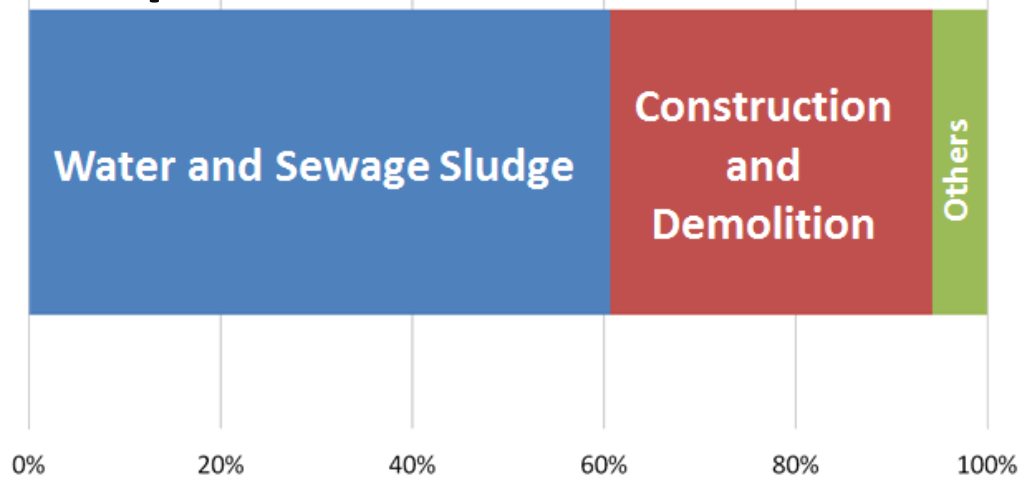
Industrial Waste in Tokyo

73,700t/d

Waste Generation in Tokyo

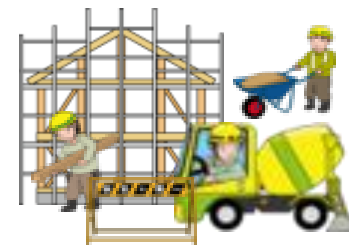


Composition of Industrial Waste

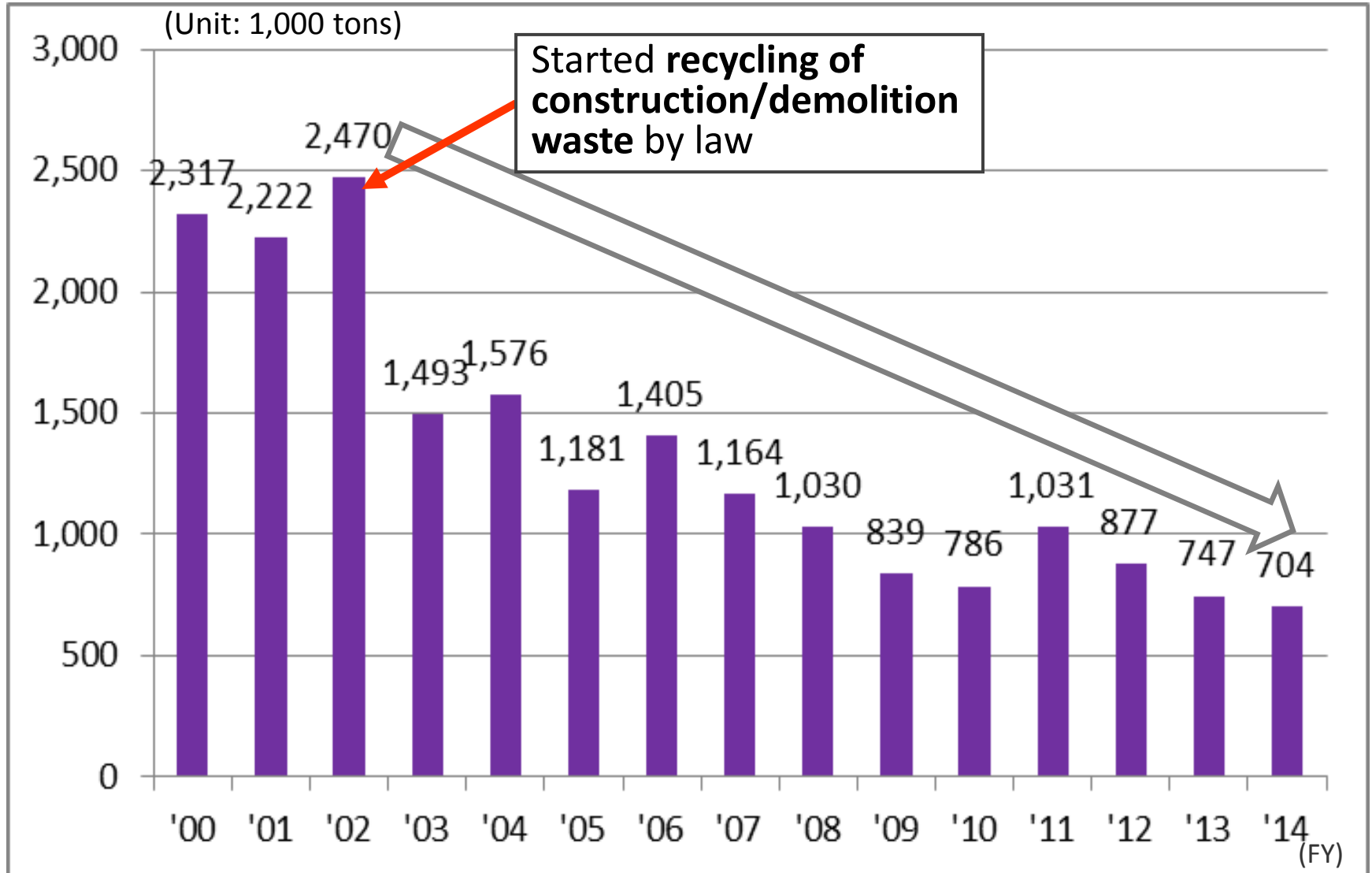


-**Generator has responsibility** for proper disposal

-Disposed by private sector licensed by Prefectural Government



Final Disposal Reduction of Industrial Waste



Tokyo Super Eco-Town

