

November 13, 2012

Asian Network of Major Cities 21

Promotion of Environmentally Sound Waste
Management and Resource Recycling

Solid Waste Reduction Efforts in Hachioji

Shota Fuku

Environment Division

Introduction of Hachioji



About Hachioji

Tokyo

Hachioji

Japan

Hachioji City

- Population: 560,000
- Land area: 186 km²



About Hachioji



Tokyo Kokeshi Dolls



Hachioji Festival



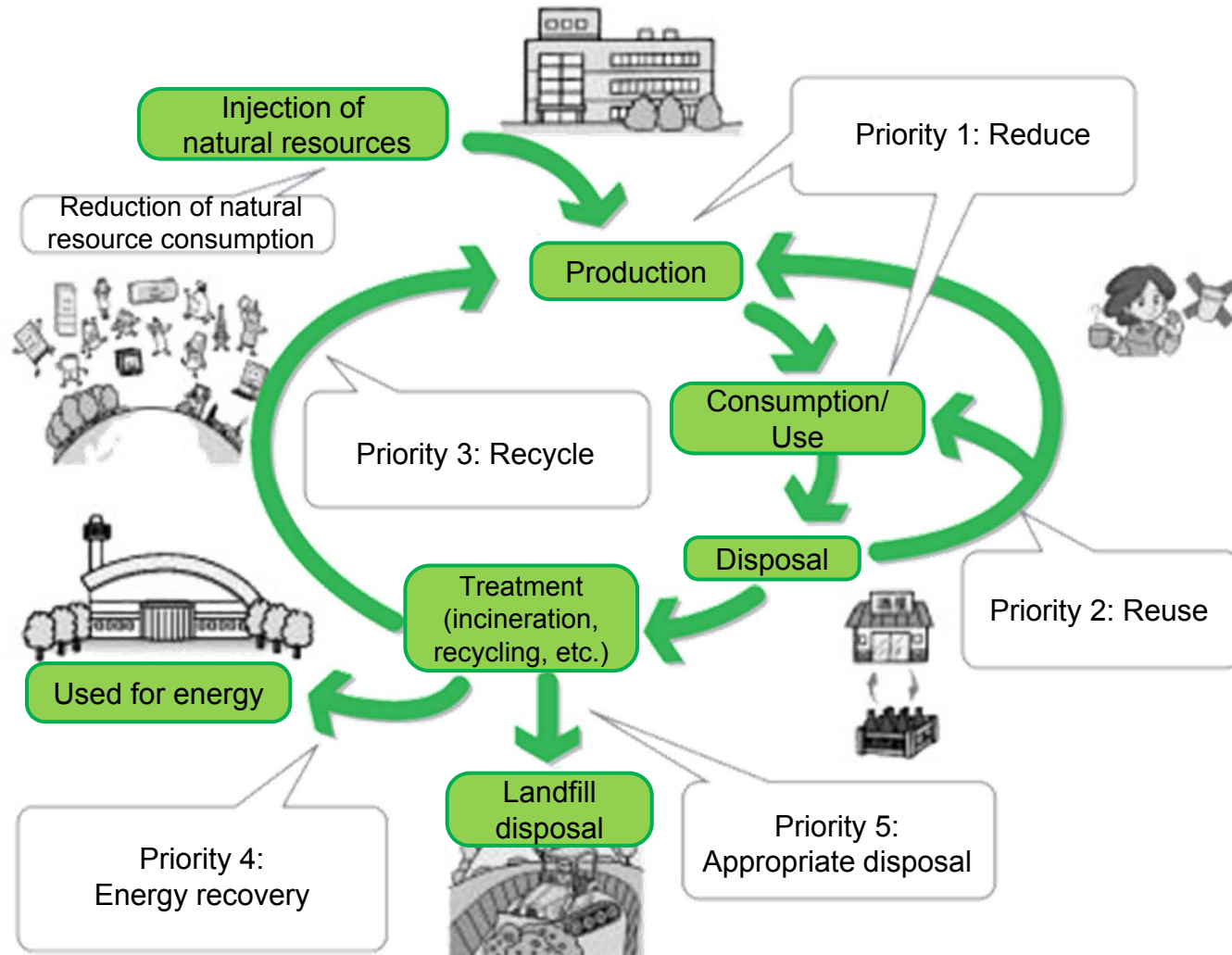
Hachioji Weaving



Mt. Takao

Basic Objective ⇒ Recycling-based City – Hachioji

- Conceptual image of a recycling-based city

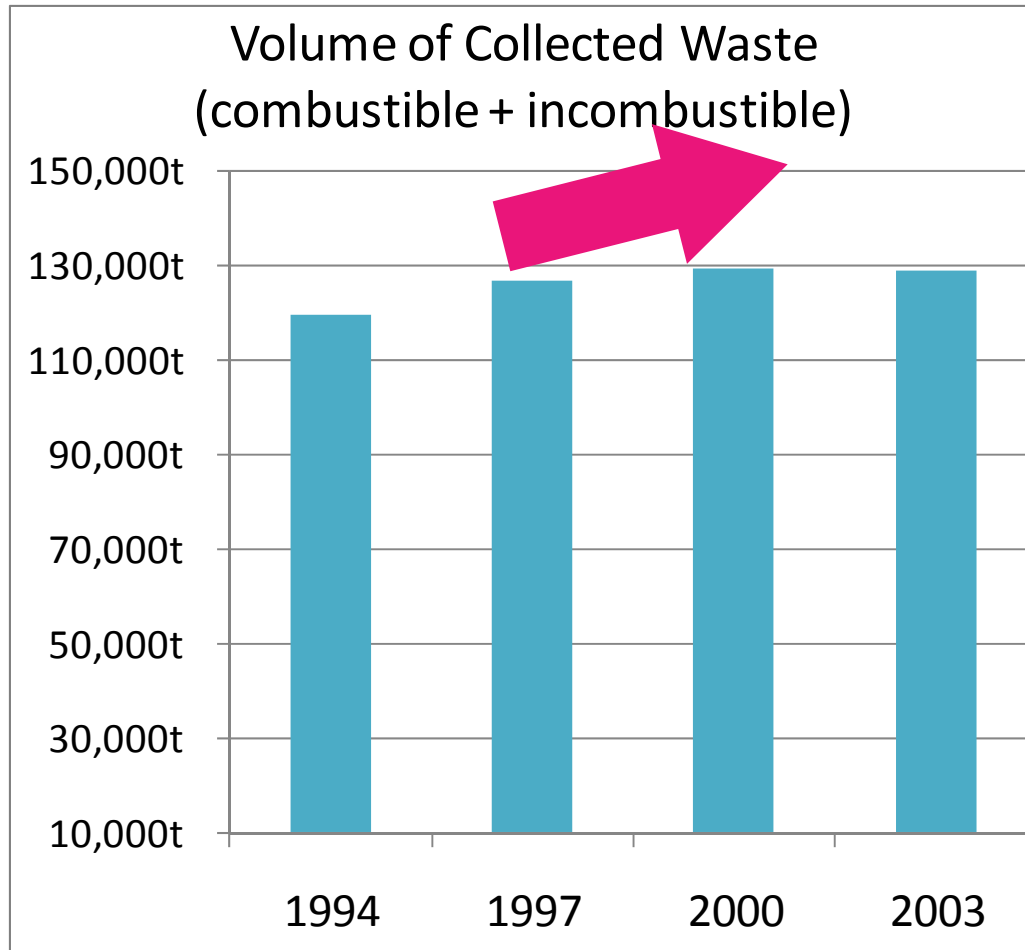


1. Charging of fees for waste services and door-to-door waste collection.

2. Expansion of plastic recycling and door-to-door collection of recyclables.



Solid waste conditions prior to implementation of fees



⇒ Volume of waste trending upward.



Solid waste conditions prior to implementation of fees

- Final disposal site problems

	① Yatozawa Landfill		② Futatsuzuka Landfill		③ ????
Landfilling begun	1994	⇒	1998	⇒	A site for the next landfill cannot be located.
Landfilling ended	1998		2014 (planned)		



Futatsuzuka Final Disposal Site



Current disposal sites must be used for as long as possible.



In order to reduce waste

① Implementation of fees for waste services

⇒ Increases awareness in reducing waste.

② Door-to-door waste collection

⇒ Accountability for people generating waste.



① Implementing fees for waste (designated collection bag system)

- Waste must be put out in specially designated bags (that must be purchased).

- Fees increase with more waste.

- For 1 bag $¥37 \times 1 \text{ bag} = ¥37$

- For 2 bags $¥37 \times 2 \text{ bags} = ¥74$

- For 3 bags $¥37 \times 3 \text{ bags} = ¥111$



- In order to pay lower fees, people are more conscious of reducing waste.

Cost of trash bags			
5-liter	10-liter	20-liter	40-liter
¥9	¥18	¥37	¥75



Designated collection bag
(for combustibles)



② Door-to-door waste collection

- Effect ⇒ Accountability for people generating waste

Old system
Drop-off points
<ul style="list-style-type: none">• Impossible to know who put out trash.• Increase in trash rule violations.



New system
Door-to-door collection
<ul style="list-style-type: none">• Can see who put out trash.• People are conscious of others seeing their trash.• More awareness in separating trash.



Citizens' opinions prior to implementation

Won't there be an increase in trash violations?

What will you do with trash that is not put out in the designated bags?

What will you do with the income earned from fees?

What will happen for trash from businesses?

Opinions from citizens

Won't illegal dumping increase?

Why are you charging for something that has always been free?

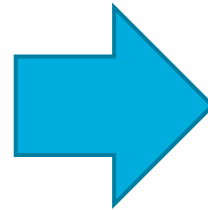
Preparations for implementation

- To gain the understanding of citizens:
 - A total of 1,700 information sessions held.
 - Questionnaires given.
- To sell the designated trash bags:
 - Requests made to stores in the city.
- To create collection routes:
 - Confirmed where each household puts out trash.



Post-implementation conditions

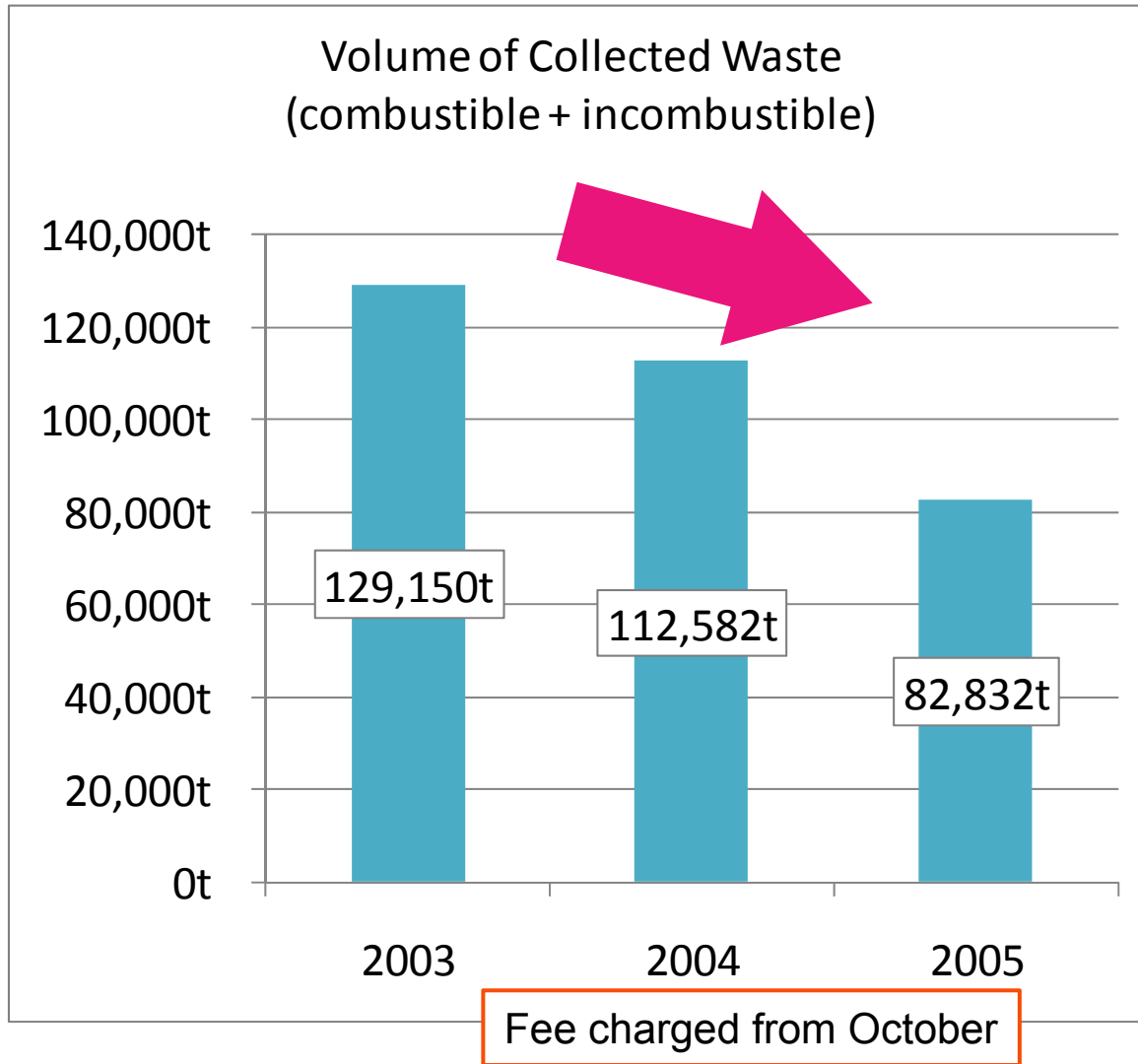
- Frequent trash rule violations
- Increased illegal dumping
- Delay in collection time
- Forgotten collections



- To garner understanding:
 - Visits to each household to give explanations.
 - Cooperation with superintendent/ caretaker of apartment buildings.



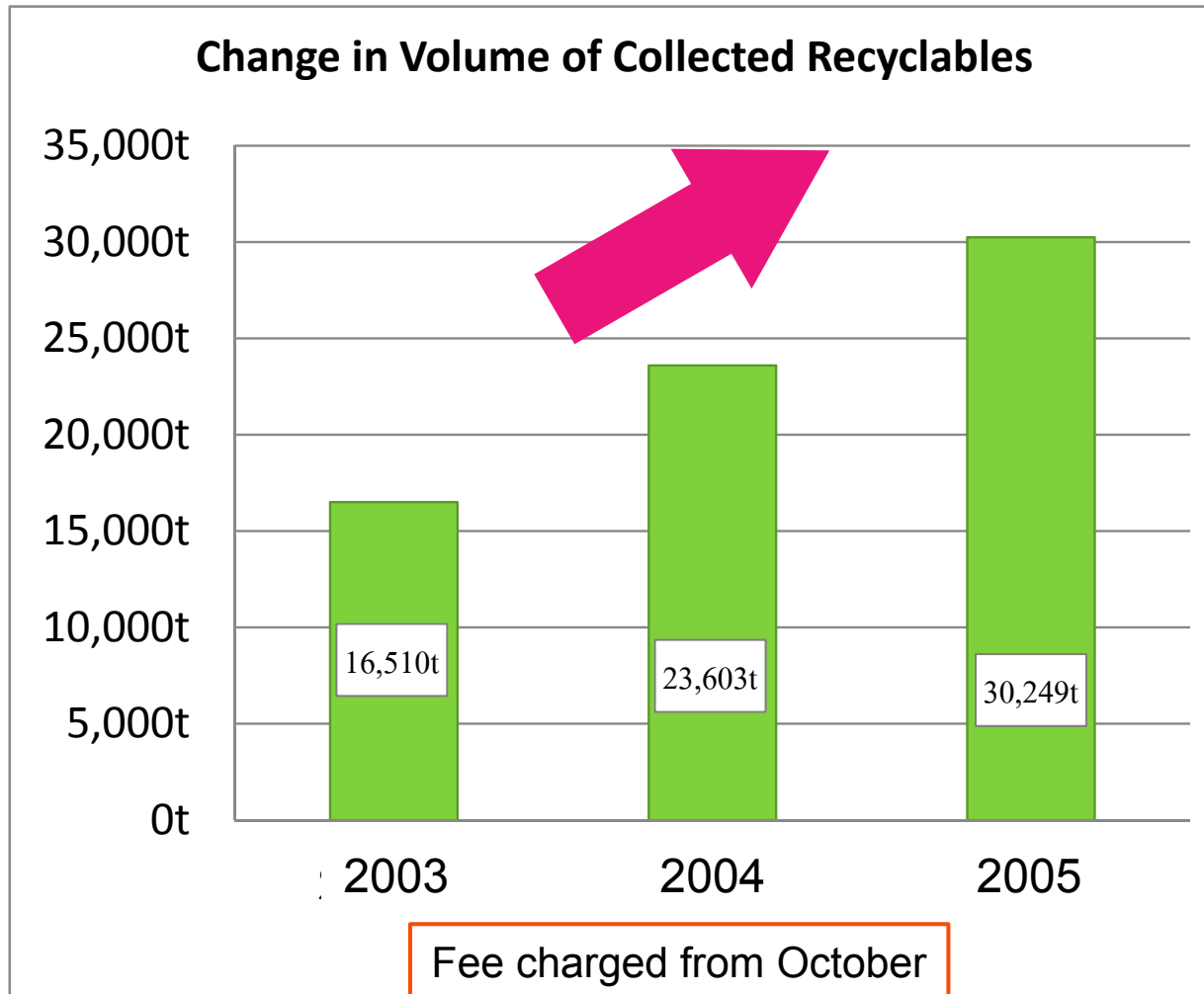
Implementation results



⇒ Approx. 30%
reduction in waste
volume.



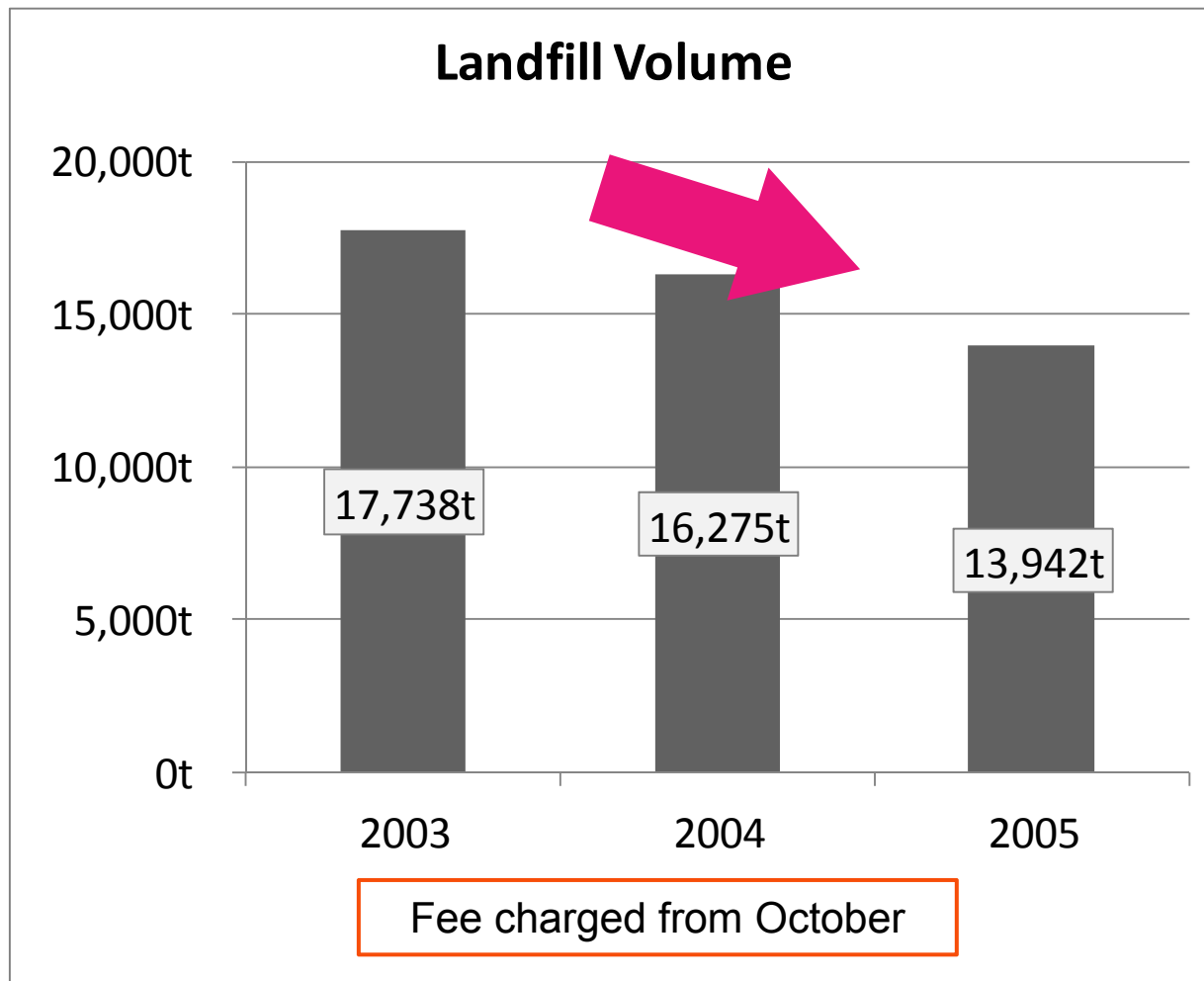
Implementation results



⇒ Volume of
recyclables
doubled.



Implementation results



⇒ Landfill volume reduction

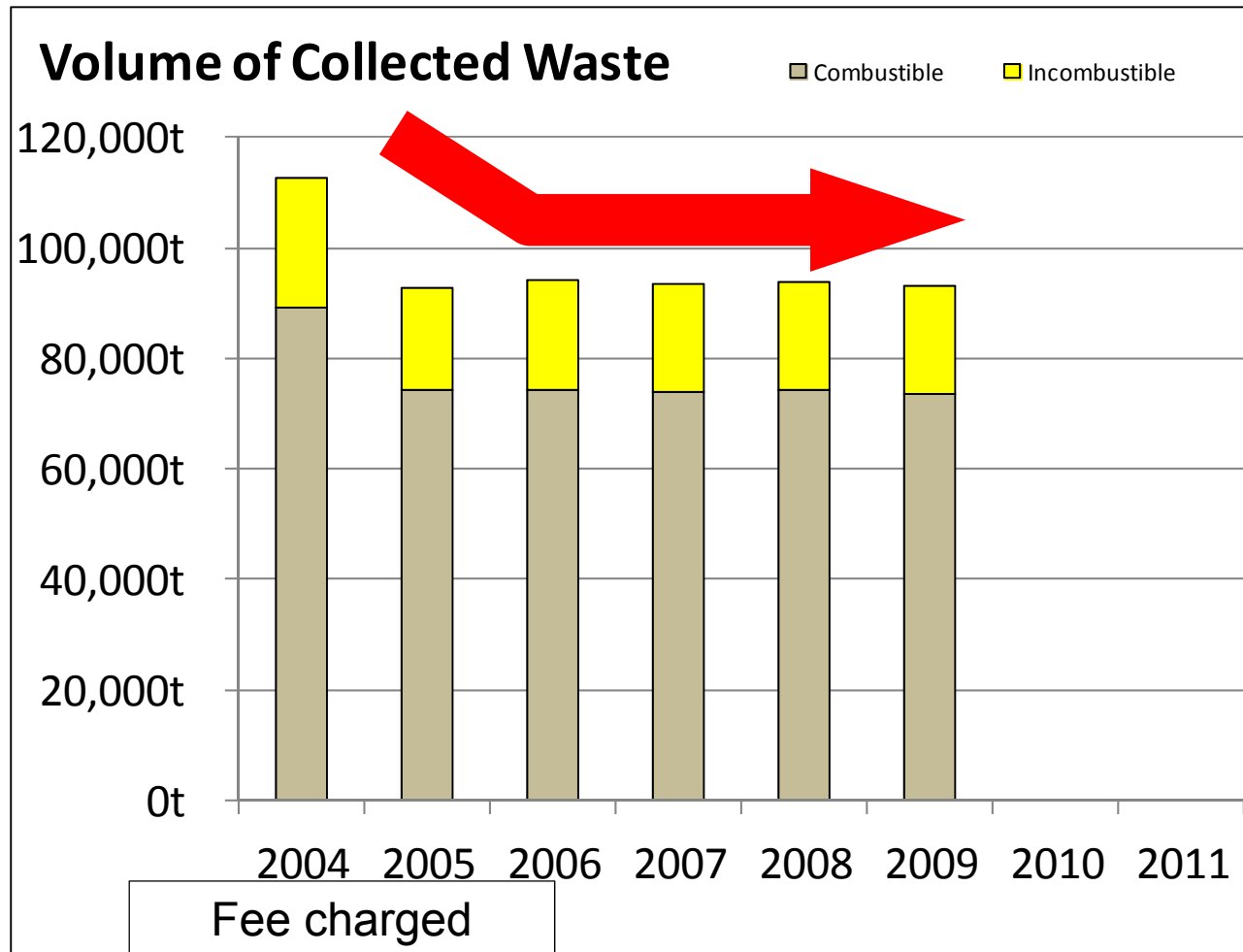


1. Charging of fees for waste services and door-to-door waste collection.

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Conditions prior to implementation



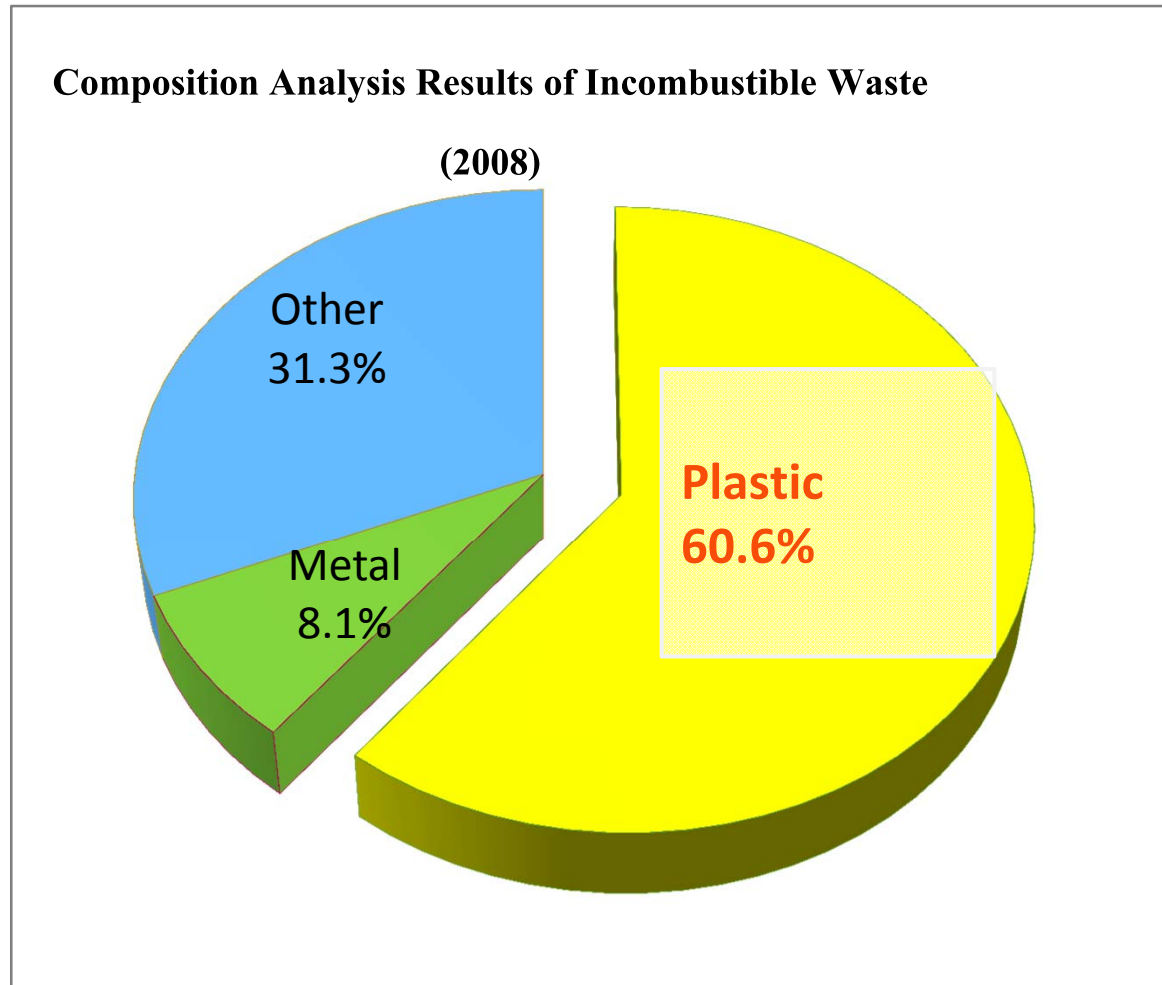
○ Waste volume remains level.



○ Volume must be reduced further.



Conditions prior to implementation



⇒ Reducing the amount of plastic is an issue.



To further reduce waste

① **Expansion of plastic recycling**

⇒ Increases the volume of plastic recycling.

② **Door-to-door collection of recyclables**

⇒ Facilitates putting out recyclables.



① Expansion of plastic recycling

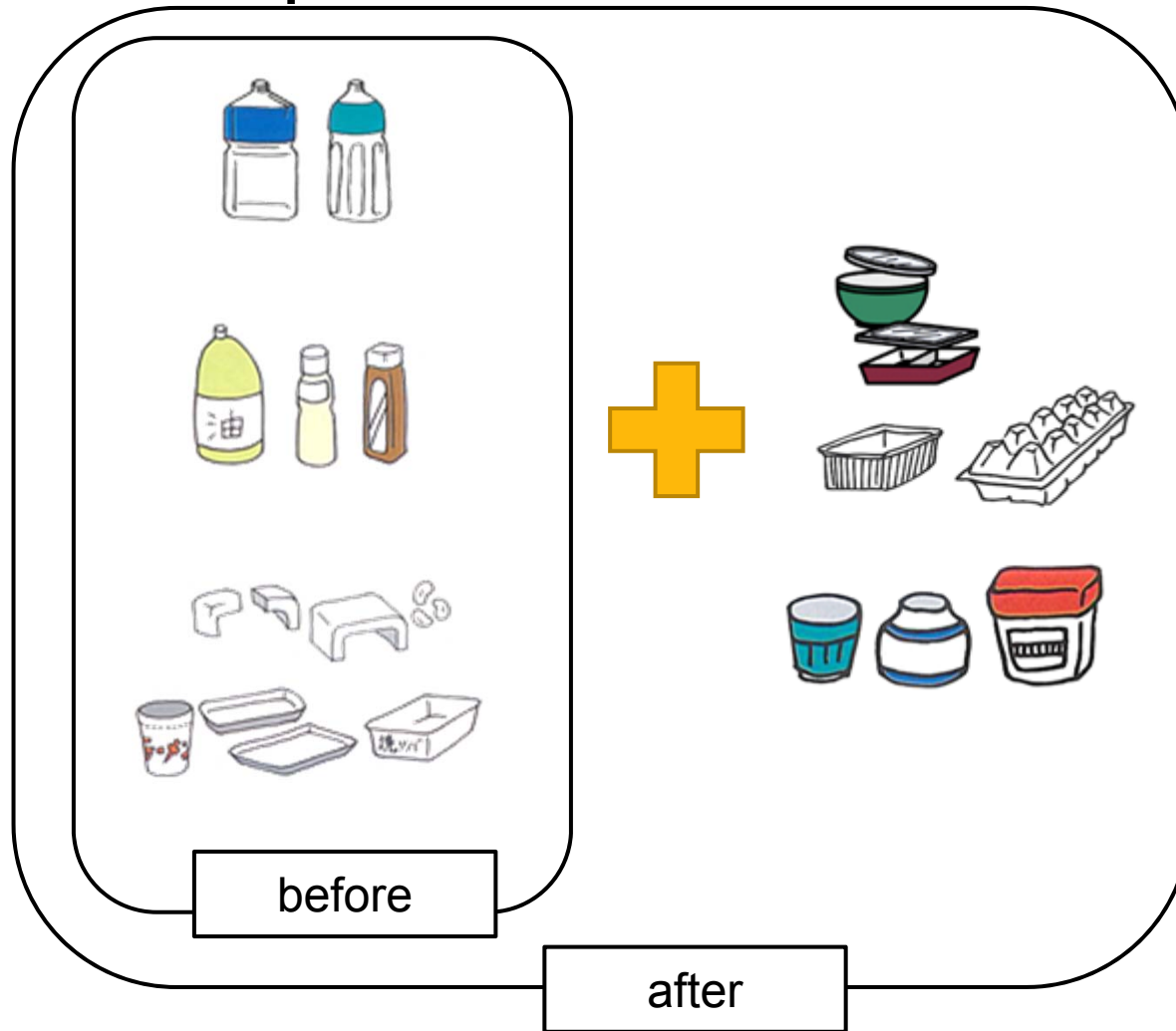
- Establishment of plastic recycling center

Treatment capacity: 40t of plastic/day and 12t of PET bottles/day



① Expansion of plastic recycling

Increasing the types of collected plastic items



So that more plastic can be recycled.



② Door-to-door collection of recyclables

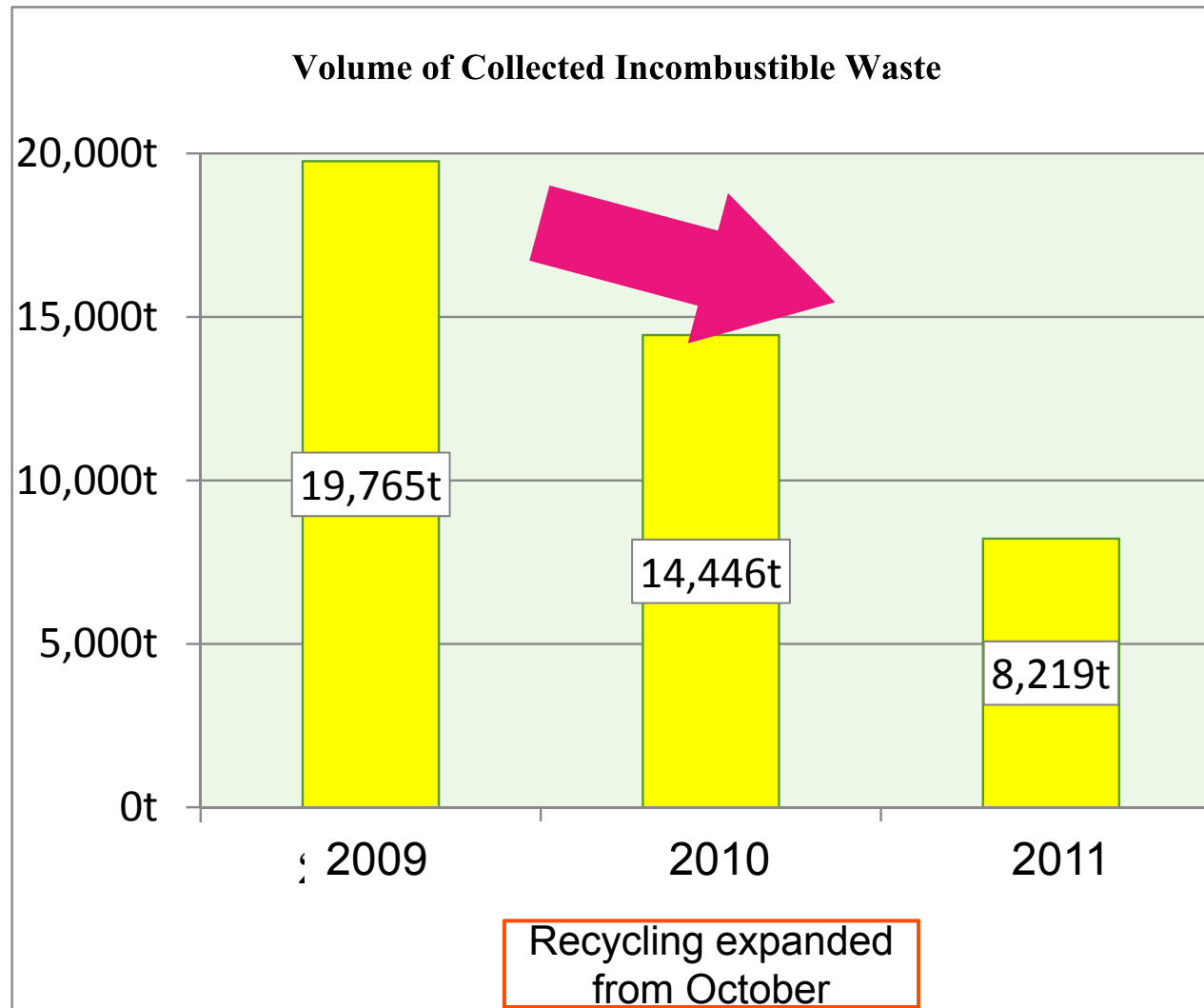
Old system
Drop-off points
<ul style="list-style-type: none">• Impossible to know who put out trash.• Must transport to a distant location.• Contributes to illegal dumping.

⇒

New system
Door-to-door collection
<ul style="list-style-type: none">• Can see who put out items.• Easy to put out.• Decrease in illegal dumping.



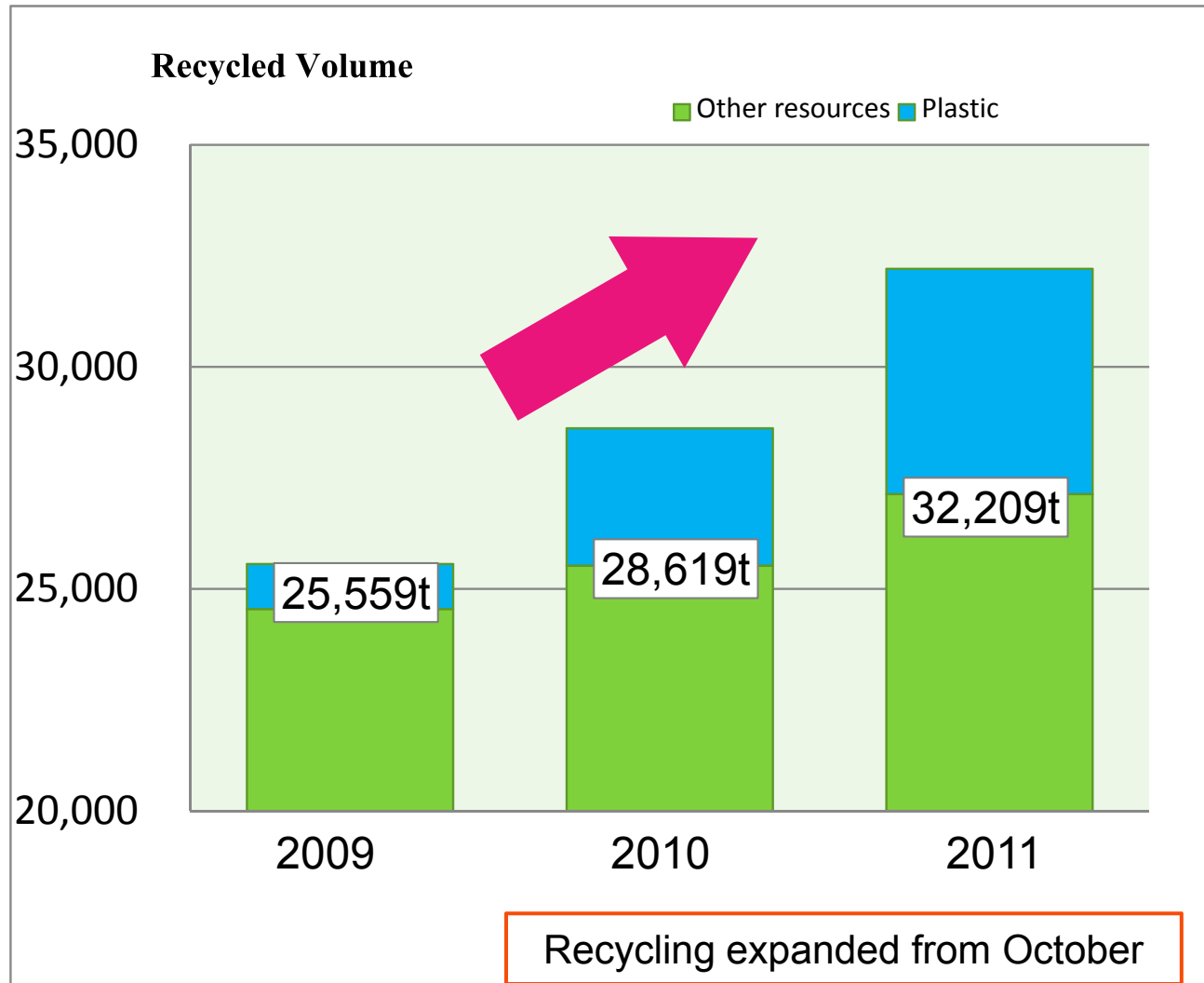
Implementation results



- Incombustible waste reduced by half.



Implementation results



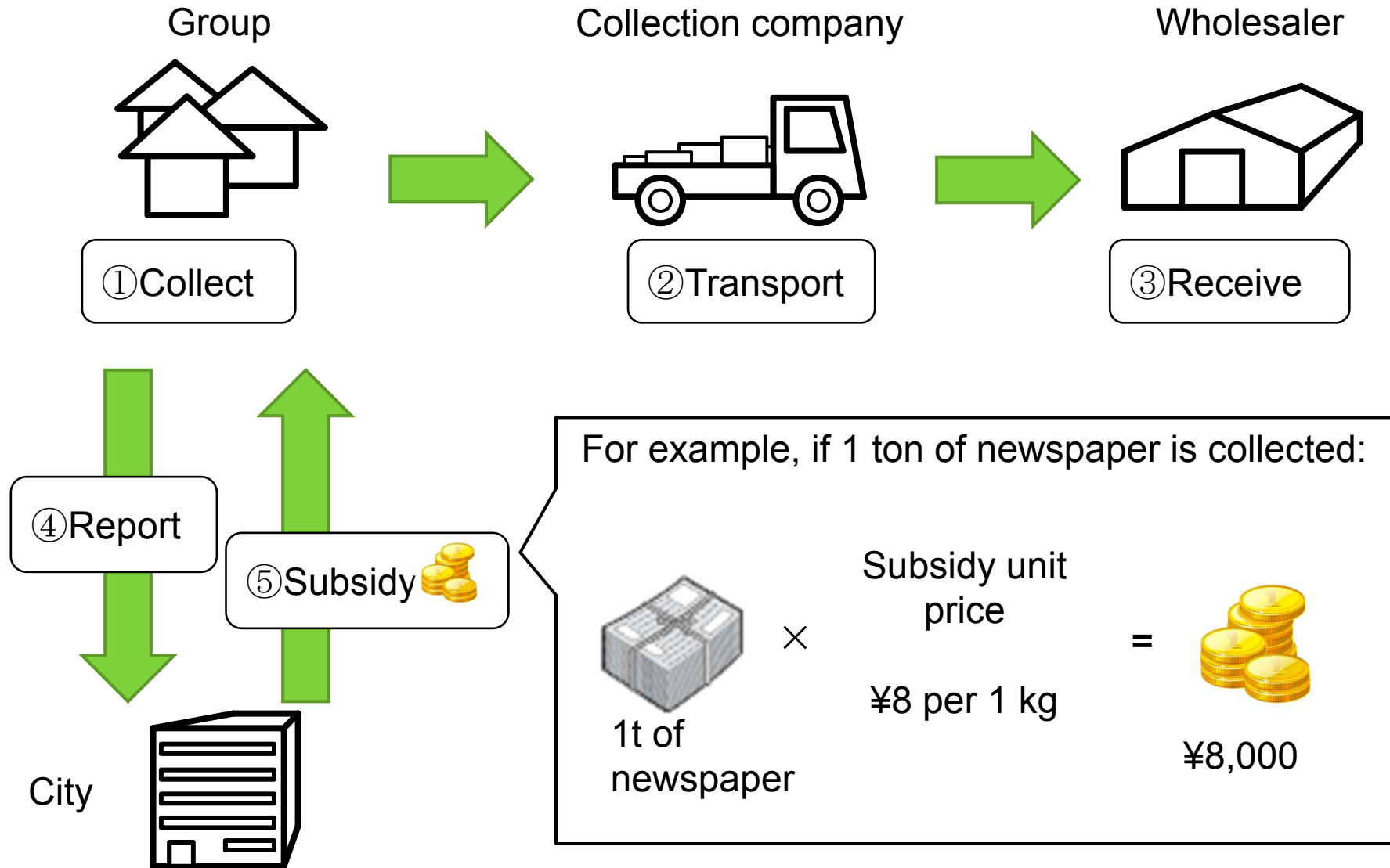
- Recyclables increased by 30%.



Collection by Community Groups



Flow of collection by groups



Effects of group collection

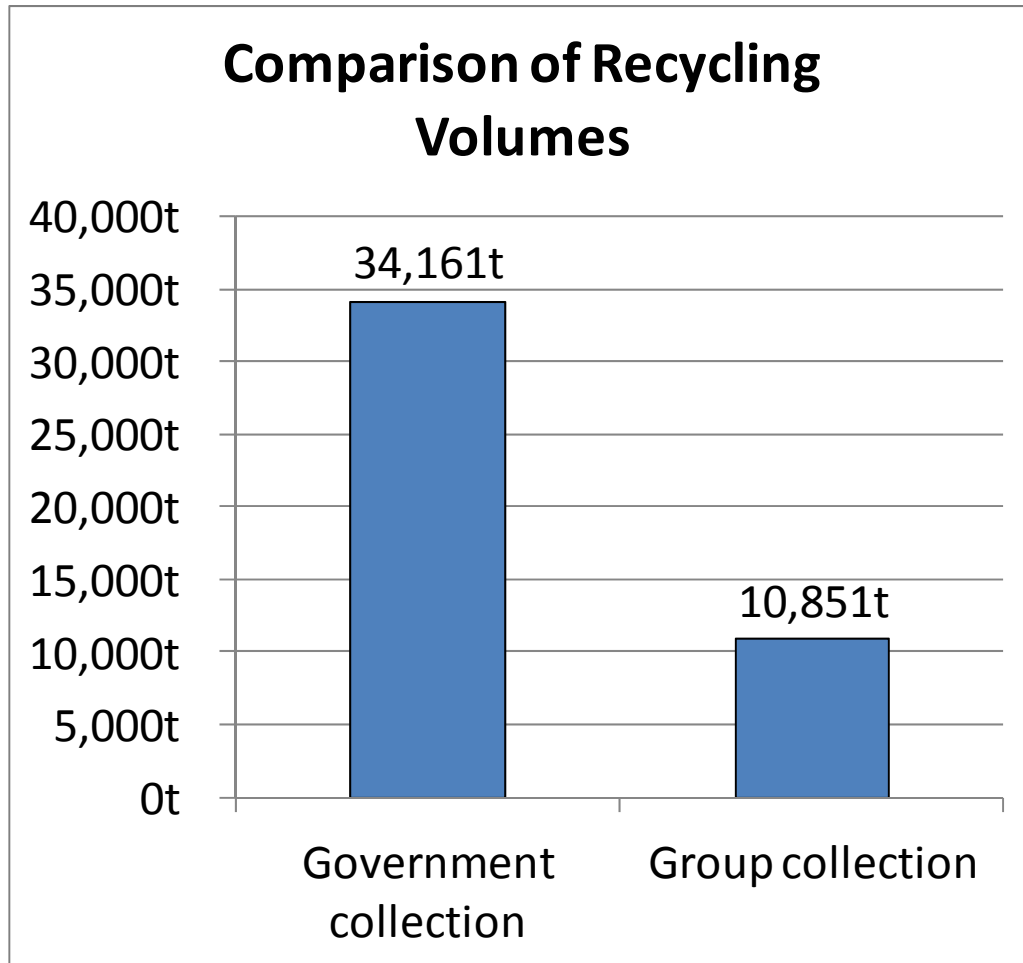
- Through activities, bonds within the group grow stronger.
- Since the groups collect waste on their own, there is more awareness about separating trash.



Photo provided by Japan Steel Can Recycling Association



Volume of recyclables from group collection



- Accounts for 24% of overall resource recycling volume.
- Contributes greatly to recycling.



Awareness-raising Activities



Separation handbook and collection calendar



Separation Handbook
This handbook describes trash separation methods and the proper way to put out trash. It is distributed to each household in Hachioji.

Collection Calendar

Dividing the city into 19 districts, the collection dates for each district are shown on this calendar.



Educational books for children and public information newsletters



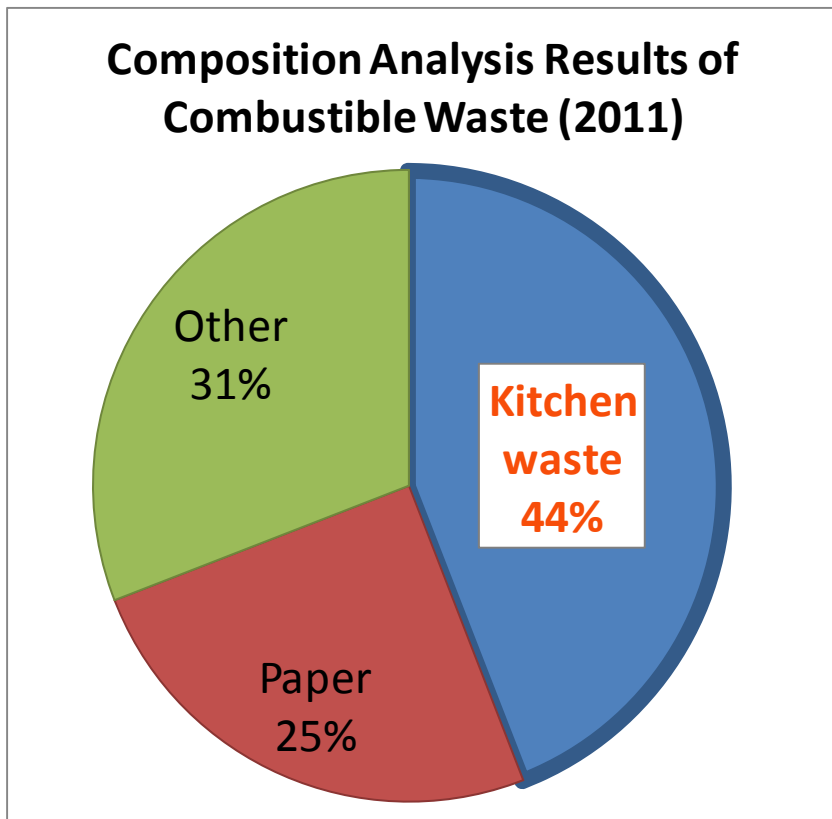
Little Shuta the Garbage Truck
Used at preschools and elementary schools in the city for environmental education.

Special Issue for Reducing Waste
Awareness on trash separation and reduction is encouraged through city public relations.

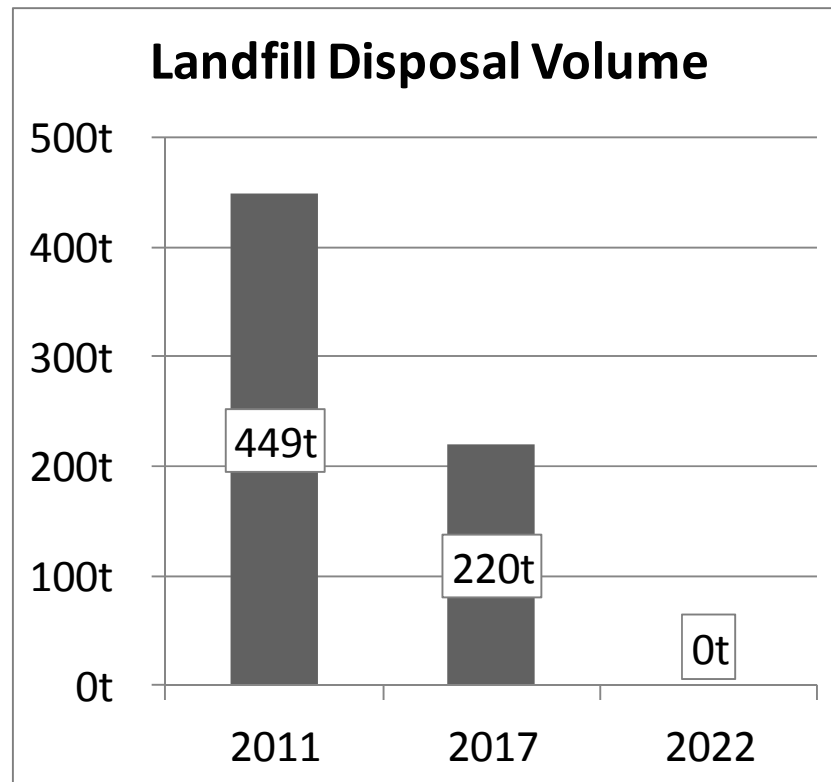


Future issues

1. Reduction and recycling of kitchen waste



2. Complete elimination of landfill disposal waste



Thank you for your attention.

