



3Rs and Waste Management in TOKYO

History of waste problems in Tokyo

An Asian metropolis, Tokyo is one of the most beautiful cities in the world. However, even Tokyo has faced serious waste problems associated with rapid economic growth in the past. Those problems were: lack of facilities to treat the increasing amounts of waste, odor and pests generated at landfill sites, traffic jams caused by collection vehicles carrying the waste, opposition movements to incineration plant construction, and incomplete source separation.

Tokyo has overcome those waste problems one by one. However, we are now facing new challenges such as the reduction of greenhouse gas emissions and promotion of the 3Rs.

In order to share these experiences and technologies with cities in Asia and to encourage cooperation among those cities to tackle the global scale waste and environmental problems we face, the Tokyo Metropolitan Government is starting 2 new programs with the cooperation of local governments and businesses.

Program ① Sharing the experience and technology for overcoming waste problems with Asian cities

Program ② Coordinating site tours for the 3Rs and waste management

We sincerely hope to contribute toward solving the problems that Asian cities face.

History

1955



Waste collection with large two-wheeled wagons

1957



Fly problem / Scorched earth strategy / Landfill site

1965



Traffic jams caused by collection vehicles

1971

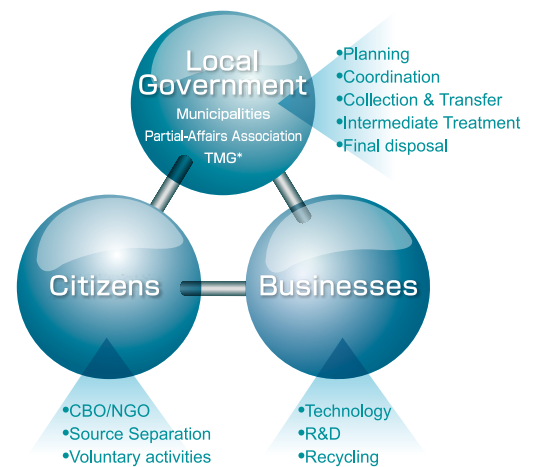


Citizens' convention for opposing waste pollution

Key Concept of Tokyo's Waste Management

Partnership with citizens and businesses

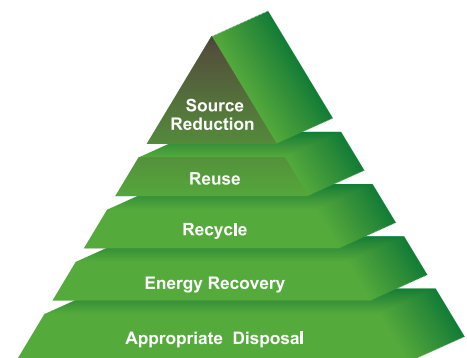
Although it is the responsibility of local governments to manage waste, the cooperation from people who dispose of the waste is necessary in order for the local government to manage the waste properly. Technologies and management know-how of private waste management contractors are also necessary for recycling and appropriate disposal. In order to construct facilities for the appropriate disposal of waste, understanding and cooperation from local citizens are necessary. Tokyo has been overcoming waste problems with the cooperation of citizens and businesses. Cooperation of citizens and businesses is the key concept of waste management that we value.



*TMG: Tokyo Metropolitan Government

Waste Management Hierarchy

In order to establish a sound material cycle society in Japan, a hierarchy for waste management has been determined in the Basic Act on Establishing a Sound Material-Cycle Society. When doing so, it is the first priority to ensure public sanitation to protect citizens' wellbeing. As the next step, it is important to tackle the tasks of reduce, reuse, recycle, and heat recovery while considering sociological, economical, and technical conditions. Ensuring "appropriate disposal" is the base for "Waste Management Hierarchy". It is the viewpoint of waste disposal that we value.



Household waste disposal and the 3Rs

The collection and transportation of household waste is operated by municipalities, which are the closest local government to citizens.

Responsible Organization



*Tokyo Tama Regional Association for Waste Management and Resource Recycling

Coordinating site tours for waste management and recycling technologies

Tokyo is the center of government, economy and culture of Japan, where government offices and headquarters of large companies are located, as well as being a city of 13 million residents. In order to process huge amounts of household waste efficiently and effectively, incineration plants and recycling facilities with the most advanced technologies are located in a small area. If you contact us with a list of the facilities and technologies that you wish to observe, we will make all the necessary arrangements.

Incineration Plants

(Responsible Organization) Clean Association of TOKYO 23



There are 21 incineration plants located in the 23 wards of Tokyo, which has an area of about 622km². Incineration plants are located not only in the waterfront area, but also in residential areas, business districts, and even in front of train stations. All incineration plants generate electricity, and pollution prevention facilities and stable operation management are implemented.

In order to build trusting relationships with local residents, operation councils with participation from representatives of local residents, municipality, and Clean Association of TOKYO 23 are held periodically to discuss the operation of incineration plants. Moreover, thorough disclosure of important information is made.

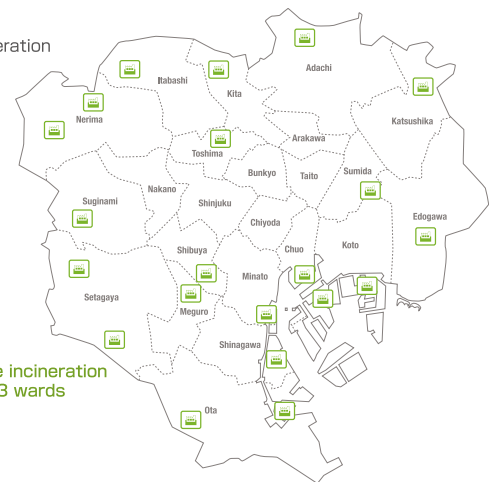
Since April-2011, the Clean Association of TOKYO 23 is promoting international cooperation activities by setting up International Cooperation Division of Waste Management.



A plant close to the station



Environmentally harmonized design



Location map of the incineration plants in Tokyo's 23 wards

Ash Recycling

(Responsible Organization)

Clean Association of TOKYO 23 / Tokyo Tama Regional Association for Waste Management and Resource Recycling



Incineration ash is recycled in two ways in Tokyo.

- Ash melting (Making slag from melting the ash and using it as roadbed)
- Eco-cement (Making cement with ash and using it as a construction material)

Ash recycling contributes greatly to prolonging the life of landfill sites.



Eco-cement facility



Example of Eco-cement usage (Interlocking block)



Usage of slag (asphalt pavement)

Tokyo Super Eco-Town

(Responsible Organization) Businesses / TMG



TMG is operating "Tokyo Super Eco-Town project," which implements the most advanced and reliable waste disposal and recycling facilities in order to raise the capacity of waste disposal within Tokyo and prolong the life of landfill sites. The most advanced and highly technological waste disposal and recycling facilities are concentrated in the Tokyo Bay area.

- Facility for biogas power generation from food waste
- Recycling facility for E-waste



Facility for biogas power generation



Recycling facility for E-waste

Sharing the experience and technology for overcoming waste problems with Asian cities

There have been many waste problems in Tokyo, and each time, it was solved through the cooperation of national and local governments, citizens, businesses, and waste management contractors by sharing their ideas.

Promotion of thorough source separation and voluntary recycling activities by residents
Consultation for maximizing the reutilization of sorted waste with recyclables collectors and manufacturers which utilize the recyclables
Promotion of citizens' environmental consciousness through discussion with citizens and other various mediums
Environmental education in primary schools in order to form a sound material cycle society for the present and future
Consensus building with residents in the area when building waste treatment facilities such as an incineration plant
For complete pollution prevention, implementing appropriate operation and management at incineration plants and facilities for preventing pollution

We would like to share Tokyo's experiences, laws and systems for promoting appropriate disposal and recycling to contribute to solving the waste problems that Asian cities are facing. Time and content for information sharing and opinion exchange will be set up after individual consulting.

Source Separation

Citizens In order to promote the 3Rs and dispose of waste appropriately, source separation is vital.

- Setup of the appropriate separation categories for reducing the landfill amount
- Public relations to heighten citizens' environmental awareness and implement the source separation thoroughly
- Construction of facilities for the processing of separated waste and recyclables, and detailed consultation with related industries
- Efficient collection and transport for separated waste



Voluntary recycling activities by residents

Citizens Community based organizations (CBOs) collect the recyclables voluntarily and systematically, and sell them to recyclables collectors. The activities of CBOs are subsidized by municipalities.

Voluntary recycling activities have some advantages for municipalities:

- the cost of recyclable collection is reduced:
- vitalization of local communities is promoted.



Environmental Education

Citizens In order for citizens to understand waste problems and the efficient use of resources, environmental education is commonplace in Tokyo. It is especially important for children who will be in charge of the future of the city to think about waste problems and approach the problems. There are over 100,000 students from primary schools and secondary schools who visit and observe incineration plants and landfill sites in the 23 wards of Tokyo. Municipal officials often give lectures at schools and public facilities about the system of waste disposal and recycling, and how to separate resources and waste.

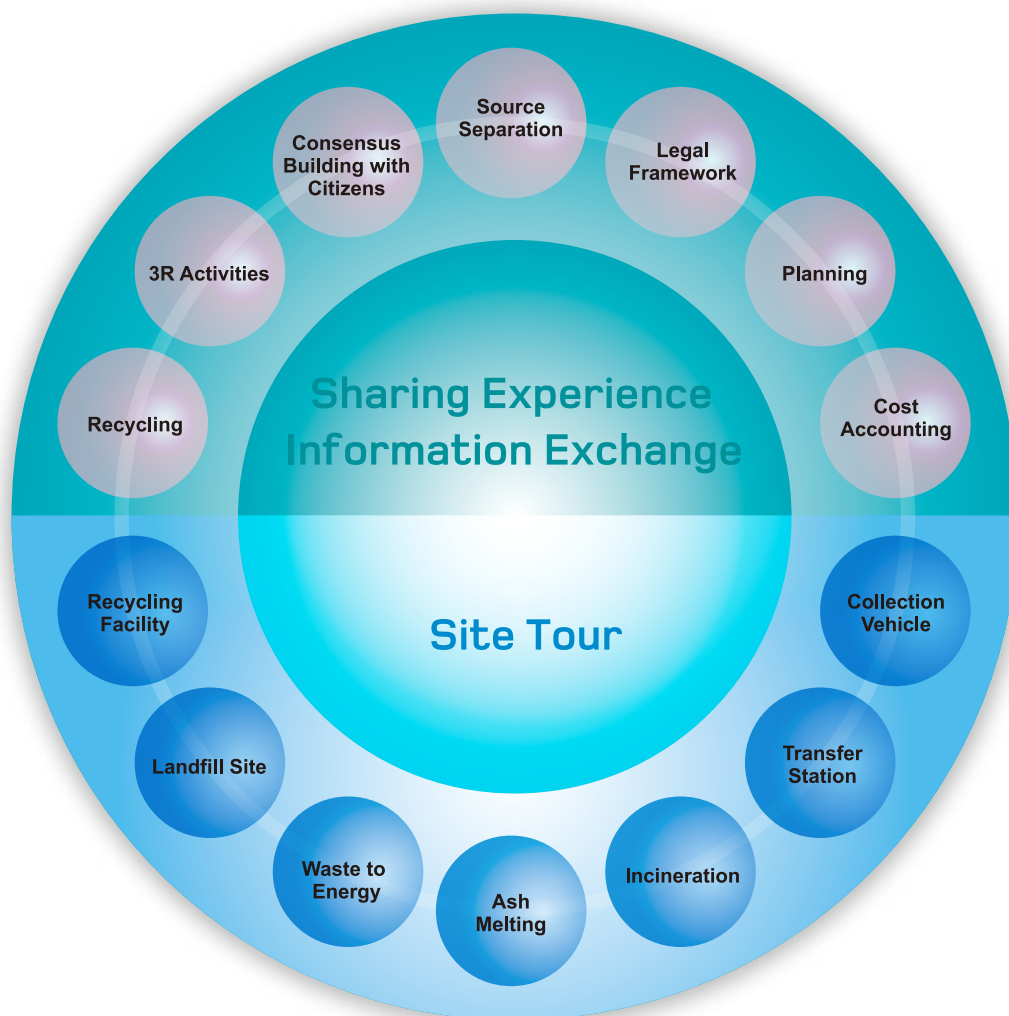


Providing One-Stop Service

We can arrange “Program① Sharing the experience and technology for overcoming waste problems with Asian cities” and “Program② Coordinating site tours for the 3Rs and waste management” in a One-Stop Service for you by contacting Tokyo Environmental Public Service Corporation. After consultation, we can also customize the contents and program according to your interests. “3Rs and Waste Management” is an important task that we have in common. We hope to exchange our honest opinions on the current conditions, challenges and future goals and build a better partnership.

※Tokyo Environmental Public Service Corporation is an organization founded only with funds from TMG. We are operating businesses to protect the environment relating to global warming prevention and waste disposal by cooperating with the environmental measures of TMG and its municipalities. Tokyo Environmental Public Service Corporation is a secretariat for international cooperation in the field of waste disposal conducted by TMG.

Sharing Experiences and Site Tours



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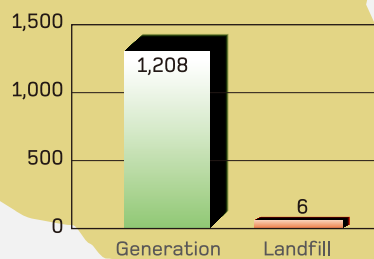
Tokyo's Performance

The most challenging problem for Tokyo is to find a new landfill site because of a lack of available land and the concentration of urban functions. We are putting our best efforts into reducing the amount of landfill in order to use the landfill site for as long as possible.

Amount of household waste and landfill

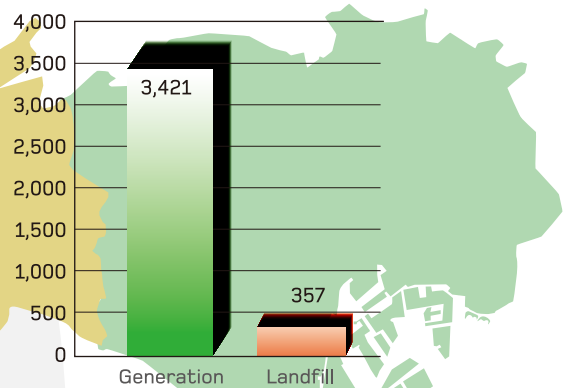
Due to efforts aimed at reducing the amount of landfill, a significant reduction has been accomplished in both the 23 wards and Tama area (in 2010).

Tama area (population about 4 million)



Amount of household waste and landfill in the Tama area
(Unit: thousand ton)

23 wards (population about 9 million)



Amount of household waste and landfill in the 23 wards
(Unit: thousand ton)

Today



Waste collection scene



Incineration plant



Eco-cement plant



Landfill Site

