National Level Waste Data Management in Japan

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Nobuyuki Konuma

Office for Promotion of Sound Material-Cycle Society, Environmental Regeneration and Material Cycles Bureau
Ministry of the Environment, Japan
Governments’ Role in Municipal Waste Management

**Government**  
- Basic policy formulation  
- Setting of management standards, facility standards, etc.  
- Emergency measures, etc.

**Municipalities**  
- General waste management plans  
- Waste management in the region in accordance with waste management standards.

**Prefectures**  
- General waste management facilities  
- Installation, transfer permits, etc.

**Management responsibilities**  
- General waste management contractors  
- Business permits  
- Observation of general waste management standards, etc.
Putting the waste out

Put the waste out on the allocated day for each waste type, at the appointed collecting places set as,

A. Per several to dozens of households
B. Per door
C. Station per region

Collection

Collection vehicles of each municipality (or its contractor) collect waste from the stations

Collected waste is transported to a disposal plant established in each municipality

Residue from intermediate treatment (e.g. incineration ash) is landfilled

Landfill

Intermediate treatment & Recycling

※Reference: Websites of Waste disposal of TOKYO 23 Cities, Kitakyushu City, and Kumamoto City
The waste statistics is prepared annually in collaboration with MOEJ and local governments.

Waste statistics data are used for policy plan making and monitoring progresses of these policies.

For example, municipal governments formulates “municipal waste management plan” based on statistics data. MOEJ also formulates “waste treatment facilities development plan” every five years and provides municipal governments with subsidy for construction of waste facilities.

These waste statistics data are also used for external policy review for policies on sound material cycle society.
Collecting Data – Waste Analysis

Example 1:
Conducting a Waste Analysis and Characterization Study (WACS)

Household Waste Composition

- Kitchen Waste
- Paper
- Plastics
- Cloth
- Others
Municipal waste treatment flow (FY2011)

- **Total volume of waste generated**: 45.39 million t
  - Domestic self disposal: 40,000 t (30,000 t)
- **Planned treatment**: 42.73 million t
- **Direct recycling**: 2.14 million t (5.0%)
  - Reduction: 31.37 million t (73.2%)
- **Intermediate treatment**: 40.1 million t (93.6%)
- **Total Treatment**: 42.84 million t
- **Treatment residue**: 8.73 million t (20.4%)
- **Reclamation after treatment**: 4.5 million t (10.5%)
- **Final disposal after treatment**: 4.23 million t (9.9%)
- **Direct final disposal**: 590,000 t (1.4%)
  - Final disposal: 4.82 million t (11.3%)
  - Recycled: 4.64 million t (11.3%)
- **Total volume of recycling**: 9.3 million t
  - (5.45 million t)

Figures in square brackets are results for FY2010.
- Sums of figures may not match the total volume of waste processed (same with figures for FY2010).

**Note 1:** Due to an error in planning or other factors, the volume of planned treatment does not equal the total volume of waste treated (=volume of intermediate treatment + volume of direct final disposal + volume of direct recycling).

2: **Processing reduction rate (%)** = [Intermediate treatment + Direct recycling] / Total Treatment x 100

3: “Direct recycling” refers to waste that is received directly by reclaiming operators and not through facilities for recycling; this item was newly established in the fiscal year 1998 survey, and until fiscal year 1997 it would seem to have been recorded in the “Intermediate treatment, e.g. recycling” category.

Source: MOE, Environmental White Paper
The generation of municipal waste continues to decrease after recording a peak of 548.3 million tons in 2000. The amount of final disposal tends to decrease along with progress in recycling and reduction of waste generation.

*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)

[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.
Support from National Government

Subsidy from Ministry of the Environment to local governments

Ministry 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
Targets and Indicators for progress monitoring

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

FY2025 target: 490,000 JPY/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
### Main Achievements in Japan (FY2000 vs. FY2015)

<table>
<thead>
<tr>
<th>Category</th>
<th>FY2000</th>
<th>FY2015</th>
<th>Improvement Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste generation (MSW)</td>
<td>55</td>
<td>44</td>
<td>↓ 20 %</td>
</tr>
<tr>
<td>Final disposal (MSW + Industrial Waste)</td>
<td>56</td>
<td>14</td>
<td>↓ 75 %</td>
</tr>
<tr>
<td>Resource productivity</td>
<td>242,000</td>
<td>382,000</td>
<td>↑ 58 %</td>
</tr>
<tr>
<td>Cyclical use rate (resource base)</td>
<td>10 %</td>
<td>16 %</td>
<td>↑ 60 %</td>
</tr>
<tr>
<td>Cyclical use rate (waste base)</td>
<td>35.8 %</td>
<td>44 %</td>
<td>↑ 23 %</td>
</tr>
</tbody>
</table>

- **Improvement Rate**:
  - Waste generation: ↓ 20%
  - Final disposal: ↓ 75%
  - Resource productivity: ↑ 58%
  - Cyclical use rate (resource base): ↑ 60%
  - Cyclical use rate (waste base): ↑ 23%
Thank you for your Attention