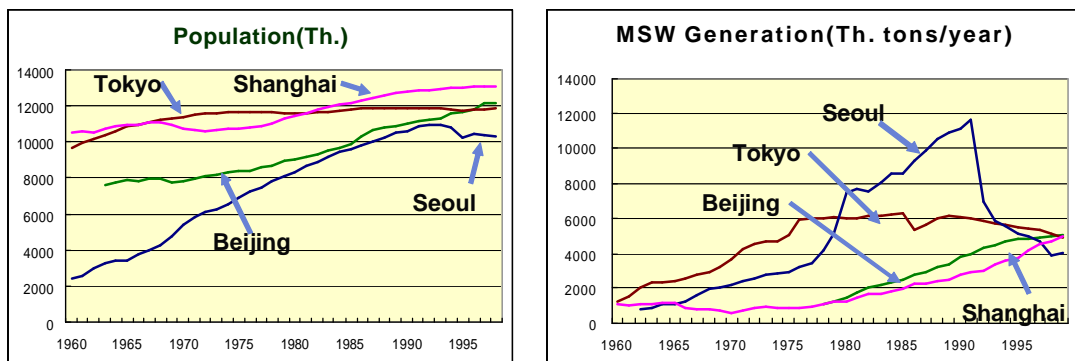


### 1.1.1. Municipal Solid Waste (MSW) Management Sector

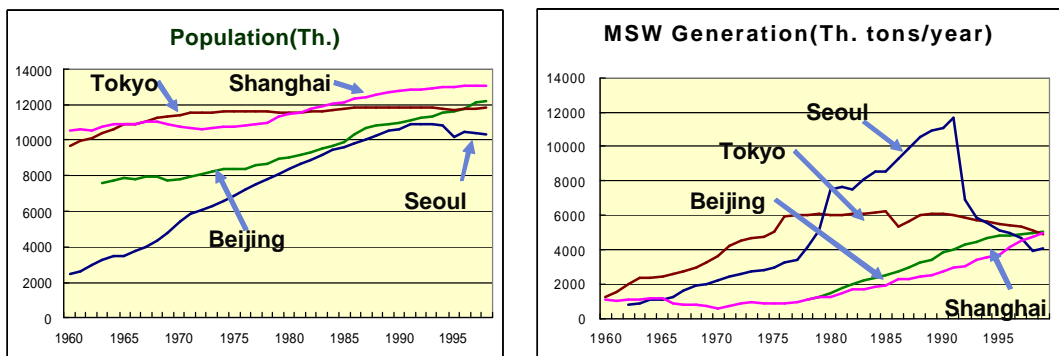
This study highlighted the lack of incineration facilities in Beijing and Shanghai in spite of increasing waste generation.

Tentative policy implications from this sub-sector study are following: to increase recycling/ reuse rate of MSW & to develop more effective policy strategies; and to reduce food waste generation & its utilization. In case of Beijing & Shanghai, need for new facilities, policy instruments, and citizen participation are emphasized. For Seoul, the suggestion are to increase the operation rate of incineration plants (current rates: 36%); and to benchmark the operation of Tokyo incineration plants.



Shanghai ('99) : 13.1 mil.  
 Beijing ('00) : 12.7 mil.  
 Tokyo ('00) : 12 mil.  
 Seoul ('00) : 10.3 mil.

Figure 1: Population & MSW Generation



Shanghai ('99) : 13.1 mil.  
 Beijing ('00) : 12.7 mil.  
 Tokyo ('00) : 12 mil.  
 Seoul ('00) : 10.3 mil.

Figure 2: MSW Generation per Capita

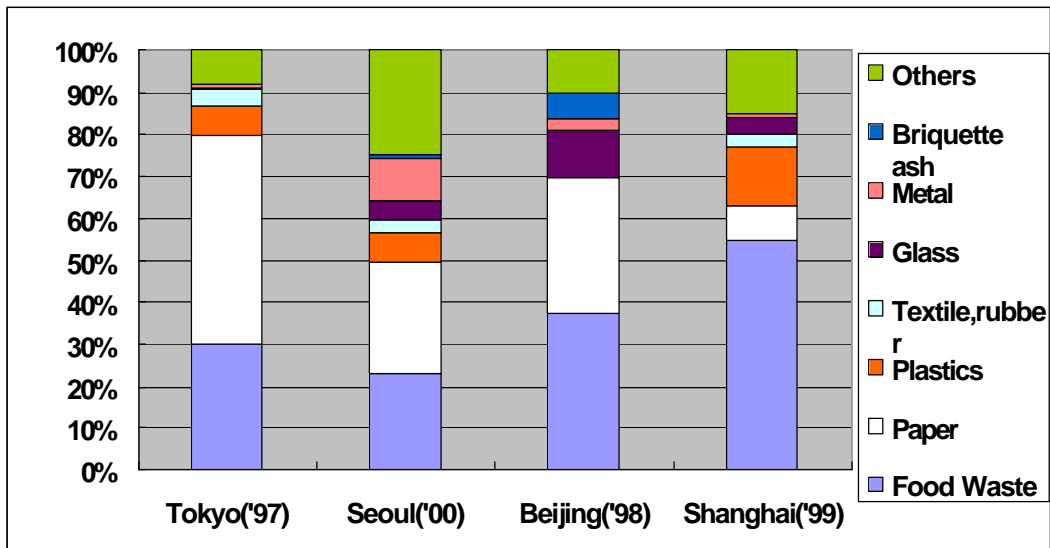
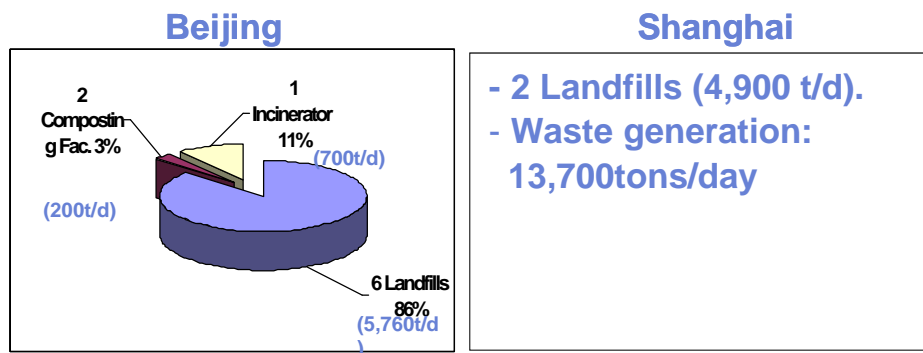


Figure 3: Comparison of MSW Composition



**Shanghai**

- 2 Landfills (4,900 t/d).
- Waste generation: 13,700 tons/day

**Both cities need more facilities & effective waste mgt. strategies to avoid waste problems faced by Tokyo & Seoul.**

Figure 4: Waste Treatment Capacity: Beijing & Shanghai

Table 1: Characteristics and Effective Policy Initiatives

<p><b>Tokyo:</b> “Tokyo Act for Waste Treatment and Recycling (1992)” “The TMG Basic Plan for Urban Waste Treatment: Tokyo Slim Plan 21” etc.</p>
<p><b>Seoul:</b> “Waste Management Act to Promote Recycling (1991)” “Volume-based Waste Collection Fee System (1995)” etc.</p>
<p><b>Beijing:</b> Still increasing in MSW generation.</p>
<p><b>Shanghai:</b> Growth in population and income level will make the increasing trend of MSW generation keep going.</p>

### **Policy Recommendation**

Due to the delay in data collection, the final report of the analysis of this sector has not been available at the time of writing this report. The data has already been obtained and the result of analysis using that data will be included in the final project report which will be published in FY2003.

Tentative policy recommendation from this sectors analysis are the following:

#### **All mega-cities:**

- To increase recycling/ reuse rate of MSW & to develop more effective policy strategies.
- To reduce food waste generation & its utilization.

#### **Beijing & Shanghai:**

- Need new facilities, policy instruments, & citizen participation.

#### **Seoul:**

- To increase the operation rate of incineration plants (current rates: 36%).
- To benchmark the operation of Tokyo incineration plants.

#### **Tokyo:**

- To refer to LFG utilization in Seoul.