

Municipal Solid Waste Charging

Purpose

This paper provides background information on Municipal Solid Waste (MSW) Charging.

Objectives of MSW Charging

2. Currently disposal of MSW (i.e., domestic waste and commercial and industrial wastes) at landfills in Hong Kong is free of charge¹. This is not in line with the polluter pays principle. It also indirectly encourages indiscriminate disposal of waste.
3. A charging scheme for disposal of MSW is considered necessary to implement the polluter pays principle and to create economic incentives for waste producers to avoid and reduce, and recover and recycle waste. In order to minimize the disposal charge required, people will be more motivated to avoid and reduce waste in the first place and thus lowering the total amount of waste generated.
4. People will also be more willing to recover recyclables and to engage recyclers. The increased volume of recyclables would facilitate the development of recycling industry in Hong Kong. Waste will be diverted from landfills and other waste treatment facilities to other outlets, such as recyclers. An MSW disposal charging scheme would form an integral part of a comprehensive sustainable waste management strategy.
5. The costs of MSW management include the cost for waste collection and the cost of various waste management facilities, such as the refuse transfer stations and landfills. Waste collection is one of the municipal services provided by the government. Its costs are historically covered by the rates. Nevertheless, the rates have become

¹ For construction waste, a scheme to introduce a charge for its disposal at various government facilities will be introduced later this year.

part of the general revenue of the government.

Types of charging scheme

6. MSW disposal charging schemes implemented in different economies vary. (A summary of overseas experience in applying charging scheme is at Annex I.) Broadly speaking these schemes can be categorized into two types: flat rate and variable rate.

7. While flat rate is commonly adopted in densely populated and metropolitan cities as it is relatively simpler in terms of implementation and administration, a strict flat rate approach is not recommended as it is contrary to the polluter pays principle and is unable to create any incentive for waste producers to reduce and recover waste. A variable rate scheme in which the level of charges is related to the amount of waste generated is considered more appropriate. A summary of the Taipei and Korea variable rate systems is attached at Annex II for reference.

Issues to be considered

8. In order for it to be implemented efficiently and effectively, the MSW disposal charging scheme should be widely accepted, easily understood and followed by the public and simple to administer. It should bring about minimal disruption to the existing waste collection system and is enforceable.

9. Variable rate system is not commonly adopted in densely populated and large urban cities. The problem of anonymity makes it difficult to implement such a scheme. In the case of Hong Kong, most households living live in high rise buildings. The design of a variable rate system that will suit Hong Kong situation would be a big challenge. It is imperative to involve all stakeholders in the process of planning and implementing the charging scheme.

Advice Sought

10. Members are invited to advise on the proposal of introducing a charge on MSW disposal and adopting the variable rate system in Hong Kong.

Environmental Protection Department
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Annex I

MSW Charging - Overseas Experience

Country/ City	Arrangements
Asia	
1. Taipei	<ul style="list-style-type: none"> • Charge according to water consumption since 1991 before the Bag system • Bag system started in 2000 • Free collection for recyclables • Renowned for their “膠袋不落地” (No plastic bags on the street) arrangement for which residents carry their bags and line up on street every night to wait for the garbage trucks to arrive and pick up their waste. • Further investigation is required as the Bag system seems only to apply to the low-rise areas and not multi-storey buildings
2. Korea	<ul style="list-style-type: none"> • Flat rate before 1995 • Bag system after 1995 • Waste generation reduced by 16.6% and recycling rate increased from 15.7% to 43% in 8 years from 1994 to 2001.
3 Beijing	<ul style="list-style-type: none"> • Flat rate • Urban households living under the poverty line are exempted from the fee
4. Singapore	<ul style="list-style-type: none"> • Flat Rate • Bulky waste disposal are arranged separately.
5. Japan	<ul style="list-style-type: none"> • Waste collection systems vary from place to place • Tokyo collects household waste <u>for free in general</u> while waste separation is encouraged (no information on latest development). • Some places charge according to quantity, some adopt a fixed rate approach and some adopt a mixed approach.
North America	
1. New York City	<ul style="list-style-type: none"> • Hidden charge through <u>local property tax</u> • Incorrectly sorted waste will not be collected
2. Seattle	<ul style="list-style-type: none"> • For low-density apartments, households are charged based on their <u>bin</u> size (Bin system). • In the case of high-density apartments, different arrangement is made and the building owners are charged
3. San Francisco	<ul style="list-style-type: none"> • Buildings with 5 or fewer units (50% of residential units) under the PAYT (pay as you throw) bin programme • Bin system is <u>not</u> applied to residential buildings with large number of households.

4. Vancouver /Canada	<ul style="list-style-type: none"> Flat rate (for fixed number of bins or bags) plus charge for additional arrangement.
Europe	
1. The Netherlands	<ul style="list-style-type: none"> Flat rate, bag system, and charging by actual weight are all used Some municipalities collect municipal waste charge on the size of the household or frequency of collection, some use the “pay by bag” system and one or two by weight Different nature and set-up of the local community and accommodation may require different charging arrangements
2. Milan	<ul style="list-style-type: none"> Combined flat rate and waste weight A fixed charge based on the type and size of the property and a variable charge based on the amount of the waste collected from each household
3. Sweden	<ul style="list-style-type: none"> Bin system Households are charged on their utilities bill on the size of the bins
Australia & New Zealand	
1. Sydney	<ul style="list-style-type: none"> Bin system A base fee for a standard set bins and additional charge for extra bins for each household
2. Christchurch/ New Zealand	<ul style="list-style-type: none"> Bag system Each property is allocated with 52 rated-funded bags each year with extra bag at \$5 each.

Taipei --- Per bag Trash Collection Fee Policy (PBTCF)

Overview

- Waste disposal charge was calculated based on the tap water used per household since 1991.
- The ‘Per Bag Trash Collection Fee’ (PBTCF) system implemented in 2000.
- Households are required to purchase designated bags for disposal of waste.
- Recyclables and bulky waste are collected free of charge.

Distribution of Bags and Charges

- Plastic bags are sold at local grocery stores, convenience stores and other markets easily accessible to the public.
- Bags are available at NT\$0.5 per litre originally, reflecting government costs for waste treatment. The price was later lowered to NT\$0.45. .

Waste Disposal and Collection

- Waste collection trucks travel around the city according to designated route and timetable. Residents need to take their wastes to the truck at the specific time.

Illegal Activities and Enforcement

- An enforcement team comprising members from the Taipei Department of Environmental Protection and Cleansing Department (1405 persons), Police (1000 persons), volunteers from schools, community based organization etc (2000 persons) and others such as park keepers (1315 persons) was formed.
- A reward system for reporting unlawful activities was also introduced. Anyone who reports unlawful activities is paid 20% of the fine charged to the violator.