

Estimation of Municipal Solid Waste Recovery Rate

Purpose

This paper aims to brief Members on the findings of a study on the estimation of municipal solid waste (MSW) recovery rate.

Background

2. The Environmental Protection Department (EPD) estimates the MSW recovery rate in Hong Kong by the following formula:

$$\frac{\text{MSW recovered}}{(\text{MSW recovered} + \text{MSW disposed})}$$

This formula has been adopted for many years and is commonly used internationally. The data used are mainly sourced from the records of waste management facilities and recyclers, export statistics of recyclables, results of interviews and surveys, etc. The quantity of recyclables recovered is estimated based mainly on “Domestic Export” figures published by the Census and Statistics Department.

3. Based on the established method of compilation, the disposal and recovered quantities of MSW and waste plastics and the MSW recovery rates in past years are shown in **Annex 1**. Noting the abnormal substantial fluctuation in “Domestic Export” figures on waste plastics in recent years, the EPD commissioned an independent consultant to conduct a detailed study in end-2012 to ascertain the production, recovery and disposal of waste plastics in Hong Kong and to review whether the present approach of estimating the MSW recovery rate is appropriate.

Study Findings

4. The study revealed that, among the waste recyclers and the traders, there is some difference in the understanding of the definition of the term

“Domestic Export” under the “Import and Export (Registration) Regulations” when it is applied to waste plastics. During declaration, some waste plastics, which should have belonged to the “Re-export” category, may have mixed up with those of “Domestic Export”, and thereby affecting the accuracy of the estimation of the quantity of waste plastics recovered in Hong Kong.

5. During the period from 2005 to 2010, when import and export trade activities become more frequent due to external economic environment factors, the “Domestic Export” figures of waste plastics were significantly affected and hence fluctuated vigorously. However, since 2011, the import and export of waste plastics trade activities have dropped noticeably, thus the quantity of imported waste plastics and its impact on the “Domestic Export” on waste plastics have also been reduced. The study concluded that the quantity of waste plastics recovered in 2012 estimated in accordance with the present approach should reflect the actual situation of the plastics recycling trade in Hong Kong.

6. The study also revealed that, amongst different recyclables, only the recovered quantity of waste plastics shows substantial fluctuation and the pattern of its fluctuation largely matched with that of the MSW recovery rate during the period. The study therefore concluded that the substantial fluctuation of the MSW recovery rate in the past is due to the anomalies of the quantity of waste plastics recovered. With respect to other recyclables such as waste paper and waste metals, there was no similar pattern of substantial fluctuation during that period.

7. Although the MSW recovery rate has decreased in the past two years from 52% to 39%, it is important to note that the quantities of MSW disposed of at landfills remained stable without any noticeable increase. This further substantiated that the decrease in the estimated MSW recovery rate is largely a data problem which has no significant impact on the actual burden on landfills and the effectiveness of our work on waste recovery and recycling has not been undermined.

Way Forward

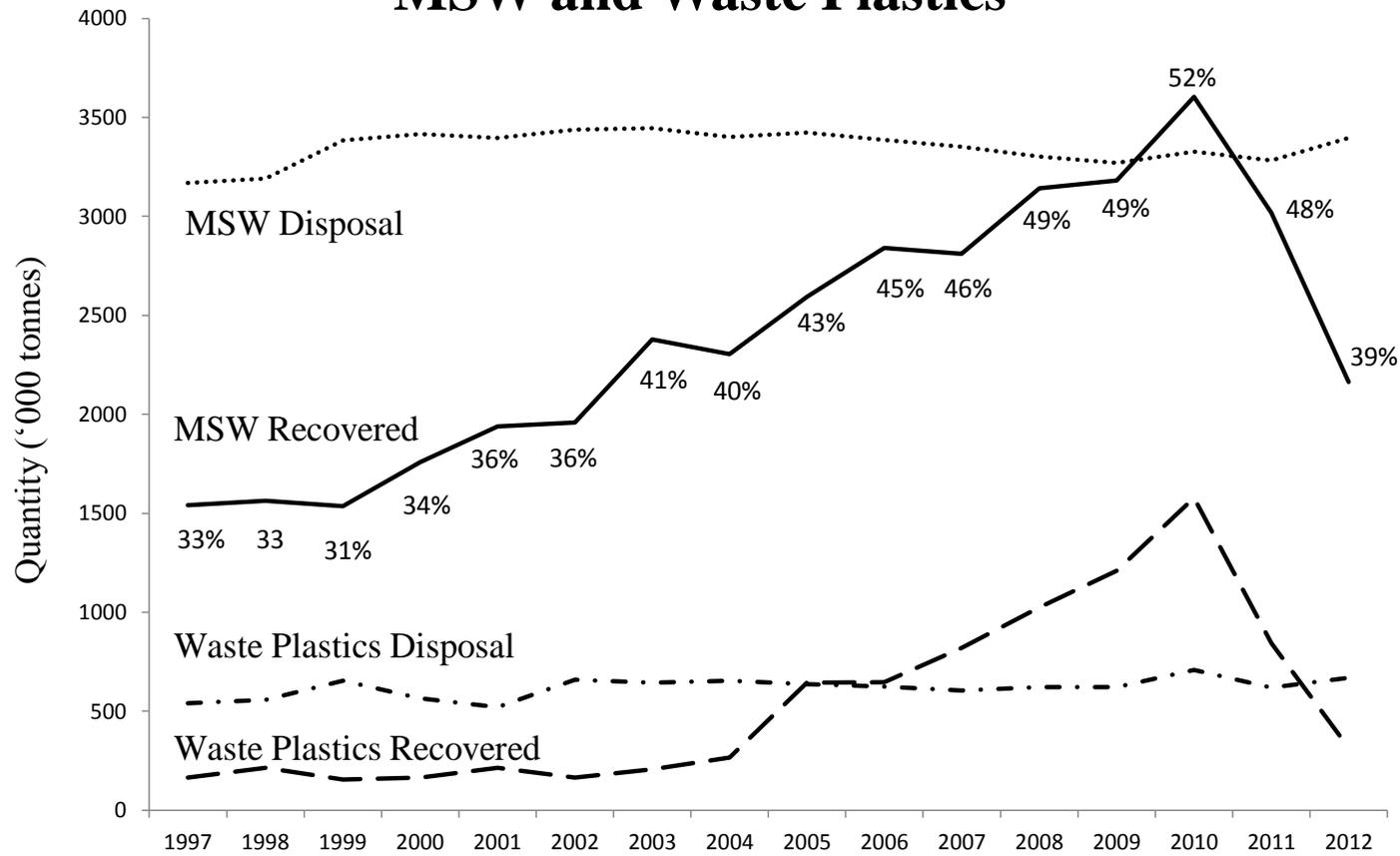
8. Taking into account the findings of the consultancy study, the EPD has concluded that the present approach of estimating the MSW recovery rate can continue to be used. However, in order to ensure that the relevant statistics can better reflect the actual situation, the Government will implement appropriate measures in data collection as follows:

- (a) Prepare additional guidelines and arrange regular workshops for the trade, including recyclers and exporters so that trade declarants can clearly understand and comply with the relevant statutory declaration requirements;
- (b) Reinforce the auditing of the relevant statistical figures; and
- (c) Conduct surveys with waste plastics exporters who make declarations regarding domestic exports to collect supplementary information with a view to enhancing the MSW recovery rate estimation.

9. The EPD, Census and Statistics Department and Customs and Excise Department have jointly established a taskforce to formulate and implement the appropriate measures with a view to estimating a more representative MSW recovery rate.

Environmental Protection Department
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Disposal and Recovered Quantities of MSW and Waste Plastics



Remark: Figure in % denotes the MSW Recovery Rate of the year