

**Enhancing the Collection of Data for Estimating Hong Kong's  
Municipal Solid Waste Recovery Rate**

**PURPOSE**

This paper seeks Members' views on the measures being undertaken by the Government in enhancing the collection of data for estimating Hong Kong's Municipal Solid Waste (MSW) Recovery Rate.

**BACKGROUND**

2. The Environmental Protection Department (EPD) has been using for many years an internationally commonly adopted formula for estimating the MSW recovery rate of Hong Kong. The formula is as follows:

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

The waste disposal data used for estimation are mainly derived from administrative records of waste treatment facilities, and the waste recovery data are mainly estimated from domestic export statistics of recyclable wastes and from surveys on local recyclers.

3. In view of the unusual substantial fluctuations in domestic exports of waste plastics in recent years, which led to substantial fluctuations in the recovered quantity of waste plastics and hence the MSW recovery rate, the EPD had commissioned a consultancy study (the Study) in late 2012 to ascertain the latest situations of generation, recovery and disposal of waste plastics in Hong Kong. The fluctuations in the disposal and recovered quantities of waste plastics and MSW are shown in **Annex 1**. The study also reviewed the current methodology of

estimating the waste recovery data from domestic exports statistics with a view to recommending the appropriate method to be used.

4. The Study was completed in early 2014 and the findings and recommendations had been reported to the Legislative Council Panel of Environmental Affairs (EA Panel) in March 2014. The Study revealed that practitioners who are engaged in recovery or recycling of waste plastics, or are involved in external trading of waste plastics and related goods, generally have substantial differences in their interpretation of ‘domestic exports’ of waste plastics under the Import and Export (Registration) Regulations.

5. The Study concluded that, for the purpose of lodging customs declarations, declarants of waste plastics might have mixed up ‘re-exports’ with ‘domestic exports’, thereby affecting the accuracy of estimating the recovery of waste plastics using domestic exports statistics.

6. From **Annex 1**, it can be seen that the quantity of recovered waste plastics fluctuated upward significantly between 2005 and 2010. During this period, the import and re-export activities of waste plastics in Hong Kong were relatively buoyant due to favorable external market situations. The large volume of re-exports of waste plastics could have therefore easily affected domestic exports of waste plastics significantly if traders of waste plastics had mixed them up when lodging customs declarations.

7. In 2011, the import and re-export activities of waste plastics had drastically reduced and their effects on domestic exports of waste plastics had also been reduced accordingly. Upon a detailed review, the Study also pointed out that in 2012, the recovery quantity of waste plastics estimated by using the current methodology should have largely reflected the real situation of the industry.

8. The Study indicated that among different recyclable waste materials, only waste plastics showed significant fluctuations in recovery quantity during the above period which resemble the pattern of changes in MSW recovery rate in Hong Kong. Therefore, it indicated that the large and unusual fluctuation in MSW recovery rate during this period

could have been due to the unusual fluctuation in the recovery quantity of waste plastics since such fluctuation was not observed for other major recyclable waste materials such as waste paper and waste metal.

9. It is important to point out that the drop in the MSW recovery rate in 2011 and 2012 had not led to a corresponding increase in waste disposal in landfills. From **Annex 1**, it can be seen that the actual quantity of waste disposal had remained steady during these 2 years without any significant increase. This indicated that the decrease in MSW recovery rate did not have any significant impact on the burden of landfills and the actual effectiveness of waste recovery work has not been compromised.

10. We therefore considered that, upon review on the Study report, the existing methodology for the estimation of MSW recovery rate is appropriate and could still be adopted. Nevertheless, appropriate enhancement measures should be adopted in the collection of data on domestic exports of recyclable waste materials to ensure that they reflect the actual amount of local waste materials exported for recycling.

## **ENHANCEMENT MEASURES ON COLLECTION OF DATA**

11. The following enhancement measures on collection of data for estimating MSW recovery rate have been implemented by the Government:

***(a) To provide additional guidelines to, and organize thematic workshops for, traders of recyclable wastes***

In order to address the confusion among traders and recyclers on the definitions of domestic exports and re-exports, additional guidelines on the requirements of customs declarations on recyclable wastes with a focus on waste plastics had been prepared and distributed to relevant traders and recyclers.

The guidelines clearly elaborate and explain the principles and rules on reporting the correct ‘country of origin’ of the recyclable waste materials, and the correct classifications for declarations of

recyclable waste and recycled products, with a focus on waste plastics.

Traders of recyclable wastes, in particular exporters and recyclers of waste plastics, had also been invited to attend thematic workshops organized by the Government in April and May 2014 for deeper exchanges on the relevant requirements of customs declarations. Traders were asked to check and make sure that the relevant rules of reporting are closely followed when they declare the 'country of origin' as Hong Kong for their exports shipments of recyclable wastes i.e. as domestic exports of Hong Kong.

The thematic workshops would be organized regularly in future and the latest rounds had been conducted in September 2014.

**(b) *To strengthen the audit of exports declarations of waste plastics***

Auditing procedures are put in place to safeguard the domestic exports statistics of waste plastics from being disrupted by including a large volume of re-exports wrongly declared as domestic exports.

The top 10 trade declarants of export declarations of waste plastics (engaged in domestic exports and/or re-exports), which together accounted for more than 80 percent of the total, had been identified. For each of these frequent traders/recyclers, the historical pattern of the export declarations, in terms of the proportion between domestic exports and re-exports in a statistical month, is continually monitored. Usually these proportions would only change gradually over time within a range.

If for a statistical month there is an abrupt change in this proportion so that it falls outside the historical range, telephone clarifications will be made with the company concerned to make sure that there is no mix up between domestic exports and re-exports of waste plastics.

(c) *To collect additional data on the sources (recovered locally or imported recycled waste) of waste plastics declared as domestic exports*

Domestic exports of waste plastics may legitimately come from two sources: (i) recovered locally and (ii) imported from overseas but shredded (or processed) in Hong Kong (to an extent changing the ‘country of origin’ to Hong Kong).

Given the relatively high cost of shredding in Hong Kong, it is expected that the bulk of waste plastics in domestic exports statistics is recovered locally.

For estimating the recovery quantity of waste plastics exported for recycling, only the portion of domestic exports statistics covering waste plastics recovered locally should be used. In order to enhance the estimation of the recovery quantity of waste plastics and hence the MSW recovery rate, it is necessary to collect additional data for delineating the sources of waste plastics for domestic export.

The Government has set up procedures to collect from relevant exports declarants of waste plastics, on a sampling basis, detailed information on country of origin and on the recycling processes conducted in Hong Kong, from which the required additional data can be compiled. Since these procedures are taken as enhanced steps of the normal quality check on customs declarations (to confirm correctness of country of origin and commodity code reported on customs declarations), the response rate is sufficiently high for the purpose of statistical compilation.

## **ADVICE SOUGHT**

12. Members are invited to comment on the measures being undertaken by the Government in enhancing the collection of data for estimating Hong Kong’s MSW Recovery Rate.

**Environmental Protection Department**  
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