

**For discussion on
24 March 2014**

Legislative Council Panel on Environmental Affairs

Matters on Hong Kong's Municipal Solid Waste Recovery Rate and Handling of Imported Waste

The Legislative Council Panel on Environmental Affairs held a special meeting on 26 July 2013 to discuss the above issue. This paper aims to provide the latest position of the issue.

ESTIMATION OF MUNICIPAL SOLID WASTE (MSW) RECOVERY RATE

Result of the Study by an Independent Consultant

2. The formula adopted in estimating the MSW recovery rate is as follows:

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

This formula has been in use for many years and is commonly adopted internationally. The data are mainly derived from the figures of waste treatment facilities and recyclers, export statistics of recyclables and results of interview surveys, etc. The quantity of recyclables recovered is estimated mainly based on “domestic export” statistics.

3. In view of the unusual substantial fluctuation in “domestic export” figures on waste plastics in recent years, the Environmental Protection Department (EPD) commissioned an independent consultant in late 2012 to conduct a detailed study to ascertain the conditions of generation, recovery and disposal of waste plastics in Hong Kong and to examine whether the method currently used to estimate the quantity of waste recovered is appropriate.

4. The study found that there was in general a substantial difference among practitioners who are engaged in recovering or handling waste plastics or are conducting trading of related goods in their interpretation of “domestic export” of waste plastics under the Import and Export (Registration) Regulations. Therefore, waste plastics that should belong to the “re-export” category might have been mixed up with those belonging to the “domestic

export” category during customs declaration, thereby affecting the accuracy of estimation on the quantity of waste plastics recovered in Hong Kong.

5. When trading activities on import and export are busy due to external economic factors (as seen between 2005 and 2010), the “domestic export” figures of waste plastics would be easily affected by the above cause and fluctuate significantly. However, since 2011, the trading activities on import and export of waste plastics have seen a substantial decrease. The import of waste plastics and its effect on the statistics of “domestic export” have therefore reduced accordingly. The study pointed out that the quantity of waste plastics recovered in 2012 estimated by the above method has largely reflected the real situation of the industry. For the quantity of disposal and recovery of MSW and waste plastics in the past, please refer to **Annex 1**.

6. The study also pointed out that among different recyclables, only waste plastics showed significant fluctuation in recovery quantity during the above period which resembles the pattern of changes in MSW recovery rate in Hong Kong. This indicated that the large fluctuation in recovery rate in the past was due to the unusual phenomenon in waste plastics recovery. As for other recyclables, such as waste paper and waste metal, large fluctuation as described above was not seen.

7. Although the estimated overall recovery rate has dropped in the past two years, the actual quantity of waste disposal has remained steady in the past few years without any significant increase. Therefore, the reduction in the estimated overall 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.

8. Upon review on the consultant’s study report, we considered that the existing methodology for the estimation of recovery rate could still be used. However, appropriate measures could be adopted in the collection of data so that they could better reflect the actual situation. Such measures include:

- (i) preparing additional guidelines and arranging regular thematic workshops for recyclers and exporters so that trade declarants can clearly understand and comply with the declaration requirements under the definition of “domestic export” and “re-export” of goods;
- (ii) reinforcing the audit of relevant statistical figures; and

- (iii) conducting surveys with waste exporters who make domestic export declarations to collect additional information with a view to enhancing the recovery rate estimation.

LATEST POSITION OF IMPORT AND EXPORT OF RECYCLABLES IN HONG KONG

Implementation of Operation Green Fence in the Mainland

9. Between February and November 2013, a dedicated project called Operation Green Fence (OGF) was launched to tighten the inspection of imported waste and recyclables at all ports across the country. The Mainland law enforcement agencies have, pursuant to the existing national legislation regarding the control over the import and export of waste, stepped up the interception of unlawfully imported waste which may pollute the environment. To strictly implement the relevant national standards, they have also tightened the inspection of imported recyclables. It is understood that the interception of imported waste and substandard recyclables will continue as a way to combat unlawful and smuggling activities and to protect the environment.

10. During the implementation of OGF, there were cases in which recyclables generated locally in Hong Kong or originated from overseas and re-exported via Hong Kong to the Mainland had been returned for non-compliance with the national standards, yet these were minority cases. Specifically speaking, during the OGF actions, the Mainland authorities have notified Hong Kong of a total of 265 rejected containers, which was a very small percentage as compared with the total quantity of recyclables being exported to the Mainland in the year 2013 (about 4 million tonnes). Recyclable materials such as metal, plastic and paper were carried in these rejected containers. With the assistance of the Customs and Excise Department (C&ED), the EPD followed up on the handling of these containers, with contacts to responsible persons upon their arrival and inspections conducted to ascertain the type of recyclables being carried and monitor the whereabouts of returned containers until they were shipped out of Hong Kong. As at December 2013, all of the 265 containers had been shipped out of Hong Kong. Relevant information is at **Annex 2**.

Import and export of plastic recyclables

11. Plastic recyclables can be classified into two major categories, namely, (i) recyclable plastics bought from overseas and re-exported to the Mainland, and (ii) recyclable plastics collected locally in Hong Kong. Good quality recyclable plastics, being commodities with commercial value, are actively traded in the international market. They can be recycled

or reused as raw materials for production, thus conducive to the circular economy, waste reduction and sustainability development.

12. Local traders have all along been very active in the import of the first category of recyclable plastics. There has been a large volume of recyclable plastics imported and re-exported into the Mainland or other places through Hong Kong. According to the statistics of 2013, recyclable plastics imported and re-exported to other places averaged about 200 000 tonnes per month (please refer to **Annex 3** on the quantities of recyclables imported and exported in the past five years). Re-export of recyclables has recently become stable. As containers of these recyclables stop only briefly in Hong Kong before being re-exported to the Mainland or other places, they will not cause problems of storage or waste requiring disposal. In the past three years, the EPD inspected more than 1 800 containers of different types of recyclables imported into Hong Kong but no contaminated recyclable plastics were spotted.

13. To prevent imported waste from being stranded in Hong Kong, the EPD has strengthened container checks on imported recyclables with the C&ED. Between mid-August and mid-November of 2013, a special “Operation Green Shield”¹ was launched. During the operation, a total of 304 containers declared to be carrying imported waste plastics were inspected, which was about 40% more than that of the normal container inspections. No unlawful import of contaminated plastic waste was spotted. Throughout 2013, the EPD has inspected a total of 706 containers, an increase of 22% when compared to that of 2012. Again, no unlawful import of contaminated plastic waste was spotted.

14. The import or re-export of recyclables for recycling and recovery purposes is allowed under the Waste Disposal Ordinance of Hong Kong. When the EPD and C&ED conduct random check on containers of imported plastic recyclables, they will also request importers to provide information to ascertain the content of containers and their transshipment or export arrangements for ensuring that no imported recyclables will be disposed of locally. As for containers of imported plastic recyclables under inspection, the EPD will contact responsible persons upon the arrival of the containers to ascertain the type of recyclables being carried and monitor the whereabouts of containers until they were shipped out of Hong Kong.

¹ In the “Operation Green Shield”, eight cases of unlawful import of waste televisions, waste computer monitors and waste batteries were found. All containers carrying unlawful imported waste were shipped back to the original export countries. And the EPD has made notification to the law enforcement agencies of these countries. The EPD will carry out investigations and initiate prosecution against the law breakers.

15. The EPD has been strictly monitoring and inspecting waste delivered to landfills and refuse transfer stations (RTSs). In addition, the EPD and the C&ED also conduct random check on imported goods on the basis of risk assessment. This dual arrangement aims to monitor and prevent the disposal of imported recyclables locally.

16. The second category of plastic recyclables, i.e. those collected locally, is of varying quality. Since the implementation of the OGF in the Mainland, the local recycling trade is modifying their mode of operations regarding plastic recyclables which fail to meet the imported standard of the Mainland. Some recyclers have introduced waste sorting processes (such as shredding machines and washing machines) to upgrade their waste treatment capabilities and at the same time explored other export outlets of the recyclables.

17. The EPD has been monitoring vehicles carrying waste plastics to landfills and RTSs. The EPD has launched a “Disposal Arrangement of Locally Generated Waste Plastics” in June 2013 to help recyclers to assess the condition of such recyclables and identify recycling outlets as far as possible. It is our objective to “maximise recycling and avoid disposal”².

PROMOTING THE DEVELOPMENT OF RECYCLING INDUSTRY

18. The Government has established the Steering Committee to Promote the Sustainable Development of the Recycling Industry (“the Steering Committee”) in August 2013. Chaired by the Chief Secretary for Administration, the Steering Committee aims to step up concerted efforts in reducing waste at source and promote the development of the recycling industry. Duties of the Steering Committee include reviewing the current local situation of collection and disposal of recyclables and related policies and support measures, as well as identifying proactive approaches to facilitate development of the recycling industry.

19. The Steering Committee held two meetings with stakeholders in late 2013 to listen to the recycling trade, green groups, non-government organisations, community groups, academics, and representatives from councils and committees on ways to promote the sustainable development of Hong Kong’s recycling industry and support recycling operations. In the months ahead, the Government will liaise with the trade and relevant stakeholders to study in depth the structure of recycling operations for different types of recyclables and

² From June to December 2013, the EPD processed 3 applications under this arrangement. In 1 case, the recycler, under the arrangement of the EPD, delivered about 3 tonnes of locally-generated plastic recyclables to the EcoPark for disposal. For the other 2 cases, the recyclers were arranged to deliver about 35 tonnes of locally-generated waste plastics to landfills for disposal.

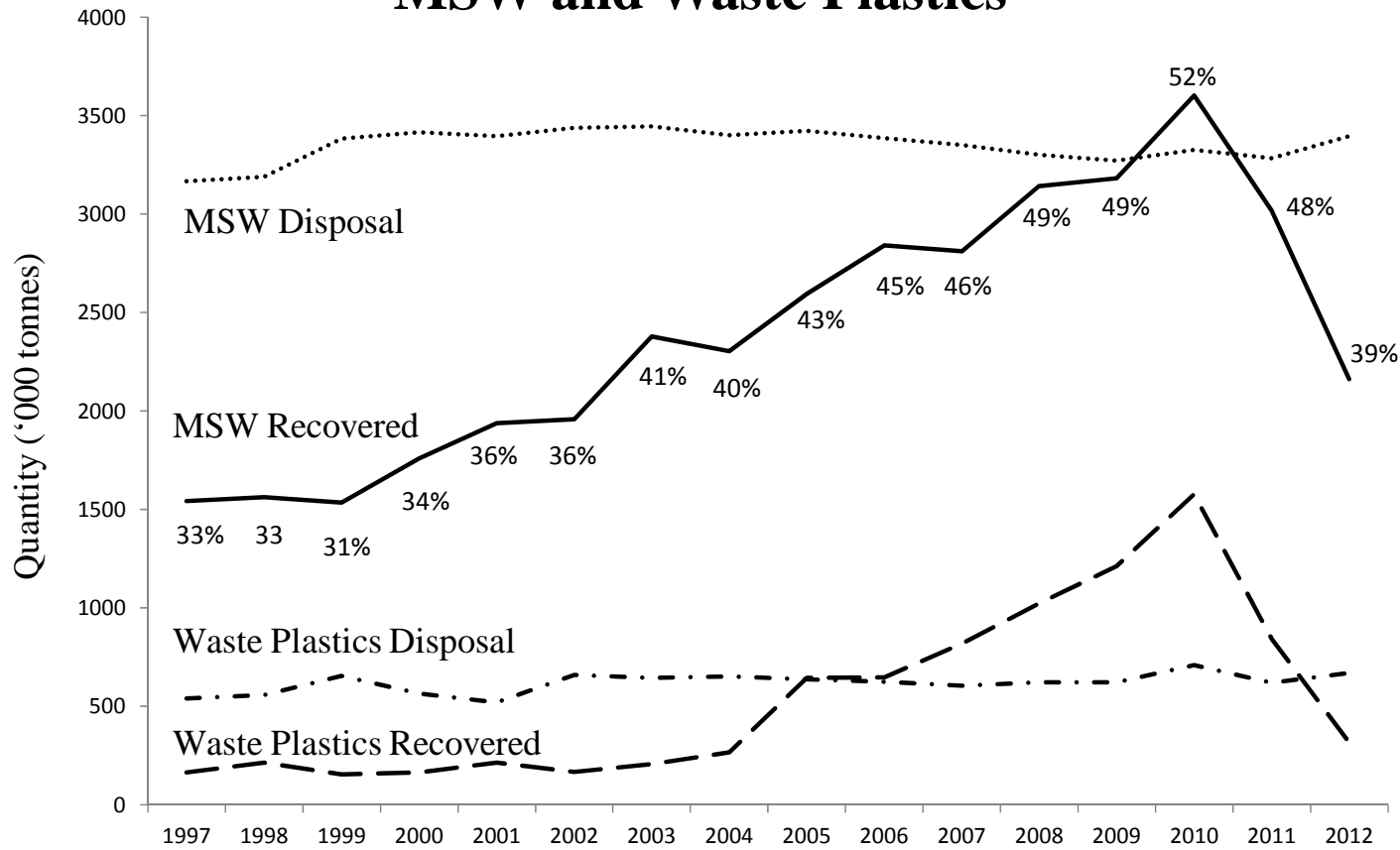
formulate tailored support programmes and measures for each recyclable type. The Government announced in the latest Policy Address that \$1 billion had been earmarked to set up a “Recycling Fund” in support of the sustainable development of the recycling industry.

CONCLUSION

20. The EPD will continue to maintain contacts with the recycling trade and closely monitor the situation. At the same time, we will also step up publicity efforts to educate the public on proper waste separation and to further promote the habit of clean recycling to avoid contamination and the mixing of recyclables with wastes, so as to improve the quality of recyclables collected, thus lessening the burden of subsequent treatment.

Environment Bureau
Environmental Protection Department
March 2014

Disposal and Recovered Quantities of MSW and Waste Plastics



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

Information about the Rejected Containers Notified by the Mainland under “Operation Green Fence”

Type of recyclables	Number of containers
Metal	64
Plastics	160
Paper	41
Total ³	265

Destination of the containers after being shipped out of Hong Kong	Number of containers
Mainland ⁴	133
Malaysia	40
Vietnam	39
India	30
United Kingdom	15
Thailand	4
United States of America	1
Singapore	1
Australia	1
Latvia	1
Total	265

³ For the 5 containers carrying waste batteries mentioned in paragraph 7 of the discussion paper of the Legislative Council Panel on Environmental Affairs dated 26 July 2013, further information revealed that these 5 containers had been rejected from the Mainland to Honduras, the exporting country, en-route Hong Kong for sea transshipment, instead of being rejected to Hong Kong. Therefore, they are no longer included in the data on rejected containers.

⁴ The containers will be handled in Hong Kong with proper customs declaration documents according to the requirements set by the Mainland authorities when rejected before being imported again to the Mainland.

Quantity of Imported and Exported Recyclables in the past 5 years

Quantity of Exported Recyclables⁵ (by type) (2009 - 2013) (in '000 tonnes)

Type of recyclables	2009	2010	2011	2012	2013
Ferrous metal	1,183	1,012	1,136	1,098	1,193
Non-ferrous metal	206	251	190	197	157
Paper	1,036	1,200	1,287	1,171	1,036
Plastics	4,127	4,223	3,453	3,237	2,415
Others	170	179	180	143	149
Total	6,722	6,865	6,246	5,846	4,950

Quantity of Imported Recyclables (by type) (2009 - 2013) (in '000 tonnes)

Type of recyclables	2009	2010	2011	2012	2013
Ferrous metal	402	353	319	319	299
Non-ferrous metal	245	210	194	167	147
Paper	122	187	215	103	18
Plastics	4,696	4,799	3,962	3,200	2,508
Others	137	171	146	137	155
Total	5,602	5,720	4,836	3,926	3,127

⁵ Quantity of Exported Recyclables includes domestic exports and re-exports.