

**Public Accounts Committee**

**Chapter 1 of the Director of Audit's Report No. 65  
Government's Efforts in Managing Municipal Solid Waste**

This note sets out the Government's response to the letter from the Clerk to the Public Accounts Committee dated 25 November 2015.

**(a) waste disposal and recycling statistics for 2014;**

2. Please refer to the report on monitoring of solid waste in Hong Kong 2014 available at <https://www.wastereduction.gov.hk/sites/default/files/msw2014.pdf>

**(b) according to paragraph 2.42 of the Audit Report, in May 2011, the Environmental Protection Department ("EPD") informed the Legislative Council that plastic shopping bags ("PSB") Phase 1 had been implemented successfully, and that based on two landfill surveys conducted in mid-2009 (before PSB Phase 1) and mid-2010 (after PSB Phase 1), the number of pertinent PSBs (which bore the features of supermarkets, convenience stores and personal-item stores) disposed of at the landfills had decreased from 657 million in 2009 to 153 million in 2010 (77% reduction). In this regard, please provide the following –**

**(i) method(s) used by EPD landfill contractors to estimate the number of pertinent PSBs disposed of at landfills in the landfill surveys;**

3. The two disposal surveys were conducted at landfills and refuse transfer stations ("RTSs") as part of EPD's annual waste composition surveys of municipal solid waste ("MSW"). In carrying out the surveys, a sampling plan was first drawn up in accordance with the established statistical principles such that the survey contractor would draw random samples from MSW transported by waste collection vehicles to the landfills or RTSs for disposal. Contents in each sample would then be manually sorted by waste types into different containers. For instance, PSBs found in a given sample would be put inside containers specifically used for plastic waste. Each container would be separately weighed for the purpose of compiling relevant waste composition statistics.

4. As the next step, PSBs would be further sorted manually. Field workers would by visual observation determine the category of retailer

outlets from which a bag was originated. There were ten broad categories namely: (i) supermarkets, (ii) convenience stores, (iii) personal items (e.g. medicare and cosmetic) stores, (iv) bakeries and cake shops, (v) department stores and home accessories shops, (vi) cooked food outlets, (vii) books, stationeries, gifts and novelties shops, (viii) fashion and footwear shops, (ix) electrical and telecom shops and (x) newspaper and magazine stores. PSBs that could not be sorted into these ten categories would be grouped under the “others” category. Please refer to the **Annex** for photos showing the manual sorting field work in a previous disposal survey.

5. Subsequently, for each category, the PSBs collected would be counted and their weight would be measured. Upon completion of the counting for all samples, the whole set of data would be used to estimate the total annual number of PSBs (with breakdown by retail category) disposed of at the landfills.

6. The above methodology has been consistently used in similar surveys conducted since 2009. The relevant LegCo Subcommittee was briefed on the survey methodology in 2009 during the scrutiny of the Product Eco-responsibility (Plastic Shopping Bags) Regulation. The Panel on Environmental Affairs (“EAP”) was also briefed on the same in April 2009. More recently, EAP Members were generally content after they visited an RTS and observed the carrying out of the field work of the disposal survey in 2013.

*(ii) guidelines(s) issued by EPD, if any, for its landfill contractors to follow in making the estimation in item (i) and above; and*

7. Detailed methodology concerning waste sampling, manual sorting, weighing and recording etc. were specified in the contract documents for the survey contractor who must follow such methodology as a mandatory contractual requirement. Appropriate training was provided to frontline field workers. Apart from briefing, real case examples were given to better illustrate how they were expected to categorize the PSBs by identification of their visible features. The survey contractor deployed supervisory staff to provide on-site guidance to the field workers and exercise quality control. EPD inspectorate staff were also present throughout the field work period to ensure that the surveying processes were properly carried out.

*(iii) the Administration's views on the accuracy of such data from the landfill surveys in reflecting the effectiveness of the first phase of the producer responsibility scheme on PSBs.*

8. On the whole, the disposal surveys were designed to meet an overall margin of error of around 10% at a 95% confidence level, which by professional statistical standards means that the survey results (including the total disposal of PSBs) are valid.

9. In the Audit Report, observations were made that the number of “pertinent PSBs” found at landfills from the disposal surveys was significantly greater than that of PSBs distributed by registered retailers at registered outlets based on their returns. In response to these observations, we have informed Director of Audit that a registered retailer under PSB Phase 1 must submit a quarterly return providing information on, amongst other things, the total number of PSBs provided directly or indirectly to customers in each of his registered retail outlets during the reporting period. However, for the reasons as set out in paragraph 2.50 of the Audit Report<sup>1</sup>, we are unable to compile statistics on the number of PSBs belonging to registered retail outlets from the disposal surveys. The Bills Committee for the Product Eco-responsibility (Amendment) Bill 2013 deliberated extensively on the limitations in making reference to the disposal surveys in assessing the number of PSBs being distributed at point of retail sales.

10. Notwithstanding the limitation as indicated in paragraph 9 above, we consider that the number of PSBs disposed of at the landfills is still the most relevant indicator on the effectiveness of the environmental levy in reducing the use of PSBs.

## **Environmental Protection Department December 2015**

---

<sup>1</sup> In gist –

- (a) some “pertinent PSBs” found in disposal surveys belonged to supermarkets, convenience stores or personal-item stores of non-registered retailers; and
- (b) “pertinent PSBs” found in disposal surveys might not be distributed by registered retail outlets because an outlet of a registered retailer, although carrying out related business, might not meet the requirements of a registered outlet.

**Field Work of Disposal Survey for Plastic Shopping Bags**



Workmen manually sorting PSBs from a randomly-drawn sample of MSW unloaded from a waste collection vehicle at the South East New Territories Landfill.