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Panel on Environmental Affairs

Meeting on 25 May 2020

Background brief on management of waste plastics prepared by the Legislative Council Secretariat

Purpose

This paper provides background information on management of waste plastics in Hong Kong. It also gives a brief account of the views and concerns expressed by Members when the subject was discussed by relevant committees of the Legislative Council ("LegCo").

Background

2. In May 2013, the Environment Bureau published the "Hong Kong Blueprint for Sustainable Use of Resources 2013–2022" which sets out a 10-year waste management plan as well as the target to reduce the per capita disposal rate of municipal solid waste ("MSW") by 40% by 2022. With a share of about 21% (i.e. a daily disposal quantity of 2 343 tonnes) in 2018, waste plastics is the third largest constituent of MSW, after food and paper.

3. Given the high costs for the collection, separation, storage and transportation of waste plastics, its economic value and recycling performance have been rather low. In 2018, more than 850 000 tonnes of waste plastics were disposed of at landfills while only about 65 000 tonnes were recovered. Concurrently, the Mainland authorities have been tightening the requirements for imported recyclables (including waste plastics) from early 2018.¹ Further,

¹ In Hong Kong, over 90% of locally generated waste paper and waste plastics are exported to the Mainland for recycling. The Mainland authorities have phased in more stringent requirements on the import of recyclables (such as banning the import of household waste plastics) since January 2018 according to the Implementation Plan on Advancing Reform of the Administration System on Import of Solid Wastes through Prohibiting Import of Foreign Rubbish promulgated in July 2017.

according to the latest resolution made in May 2019 at the Conference of the Parties to the Basel Convention, contaminated or mixed waste plastics will be subject to transboundary movement control similar to hazardous waste from 1 January 2021 and local recyclables not meeting the import standards can no longer enter such places for further processing.² In the light of the above developments, the local waste recovery industry has been expanding local recycling, with the quantity of plastic recyclables recycled locally increased by threefold from 13 700 tonnes in 2017 to 55 800 tonnes in 2018.

4. Environmental pollution by plastic products and marine pollution by microplastics have been topics of concern in recent years.³ To alleviate the impacts on ecology and environment, the Administration has introduced/will introduce a series of initiatives to reduce the use of disposable plastics as well as create a circular economy for these materials. The major initiatives include:

- (a) implementation of relevant producer responsibility schemes ("PRs");
- (b) provision of free collection service in respect of waste plastics from non-commercial and non-industrial ("non-C&I") sources;
- (c) launch of a voluntary scheme for phasing out personal care and cosmetic products ("PCCPs") containing microbeads; and
- (d) enhancement measures to support plastic waste reduction and recycling at community level.

Producer Responsibility Schemes

Plastic Shopping Bag Charging Scheme

5. The Plastic Shopping Bag ("PSB") Charging Scheme commenced on 7 July 2009 as the first mandatory PRS under the Product Eco-responsibility

² According to the resolution, prior consent from the states of import is required for exporting contaminated or mixed plastic waste. Free trading of 17 types of uncontaminated plastic waste almost exclusively consisting of one polymer destined for recycling will continue to be allowed.

³ Microplastics refer to plastics that are less than 5 mm in size, including microbeads and microfibers, and can be categorized as "primary" or "secondary" according to their sources. Primary microplastics such as plastic raw materials or microbeads are products intentionally manufactured through industrial process, while secondary microplastics are generally break-down products of abandoned plastics and refuse degraded after entering the environment.

Ordinance (Cap. 603).⁴ It aims to reduce the excessive use of PSBs by imposing on consumers a mandatory charge for PSBs as a direct economic disincentive. Free PSB distribution at all points of retail sales in the territory is banned (with exemptions on PSB used for food hygiene reasons) and retailers should charge at least 50 cents for each PSB provided to customers.⁵

Producer Responsibility Scheme on plastic beverage containers

6. The Administration commissioned a consultancy study in October 2017 to explore the feasibility of introducing a PRS targeting plastic containers for beverage and personal care products. The consultant affirmed the feasibility to introduce a PRS on plastic beverage containers and considered the Government should give priority to a PRS targeting these containers which accounted for 60% of the overall waste plastic container disposal in Hong Kong.⁶ The Government plans to consult the public on the recommendations of the consultancy study in the second half of 2020.

7. To further enhance the recovery efficiency of plastic beverage containers, the Administration plans to launch a pilot scheme on reverse vending machines ("RVMs") with a view to assessing the feasibility and cost-effectiveness of the application of RVMs in collecting waste plastic beverage containers. 60 RVMs will be placed at different locations, primarily at public places with higher foot traffic or suitable government facilities. The pilot scheme is expected to be rolled out in the second half of 2020.

Provision of free collection service in respect of waste plastics from non-commercial and non-industrial sources

8. Since authorities in nearby cities and countries have been tightening their import control regimes in recent years, the previous mode for local waste plastic recycling (i.e. collect, bale and export) cannot sustain anymore. In view of the challenges faced by local plastic recycling, the Administration is committed to

⁴ The Product Eco-responsibility Ordinance (Cap. 603) was enacted in July 2008. It is a piece of "umbrella" legislation which provides the shared core elements of all PRSs and the fundamental regulatory requirements in respect of individual types of product, with operational details to be set out in the Ordinance and its subsidiary legislation.

⁵ The first phase of the PSB Charging Scheme was implemented between 7 July 2009 and 31 March 2015, covering some 3 000 retail outlets which were mostly large supermarkets, convenience stores and medicare and cosmetics stores. Full implementation of the Scheme to cover all retail outlets territory-wide had taken effect since 1 April 2015.

⁶ According to the report on "Monitoring of Solid Waste in Hong Kong 2018", among the waste plastics disposed of at landfills in 2018, about 9% are plastic containers, of which 60% were used as beverage containers.

subsidizing the collection of waste plastic generated from domestic sources, with a view to enhancing the recovery rate of waste plastic as well as encouraging public participation in waste separation and recycling. In line with this direction, the Administration has launched a two-year pilot scheme to provide free collection service for waste plastics from non-C&I sources.⁷

9. Under the pilot scheme, the Administration will hire contractors to collect all types of waste plastics, such as plastic bottles, containers and utensils, packaging materials and polyfoam, directly from non-C&I premises in the districts, including public and private housing estates, schools, public institutions, as well as Community Green Stations ("CGSs") and Community Recycling Centres ("CRCs") under the management of the Environmental Protection Department, for further treatment to produce recycled raw materials or products for local or external markets. In addition, the contractors will conduct regular publicity and promotional activities and set up mobile collection points so as to educate the public on proper recycling while collecting waste plastics.

Voluntary scheme for phasing out personal care and cosmetic products containing microbeads

10. In April 2018, the Administration commissioned a consultancy study to review the international trend of regulating PCCPs containing microbeads, collect and analyze relevant local market information, and suggest a regulatory approach applicable to Hong Kong.⁸ The study has been completed and the Administration plans to launch a two-year voluntary scheme for phasing out PCCPs containing microbeads, with a view to encouraging the trade to stop manufacturing, importing or selling these products, and assisting consumers in choosing microbead-free products. The initial plan is to establish a "Microbead-free Charter" that participants, taking due consideration of their operational conditions, can set their own targets and timetables for reducing or ceasing the production, importation and sale of PCCPs containing microbeads and strive to achieve the targets within the set timeframe. The Administration also plans to publicize the list of merchants that have joined the "Microbead-free Charter"

⁷ The contract for Eastern District is the first contract awarded, and the free collection service has commenced on 20 January 2020. The services in Kwun Tong and Sha Tin are expected to be commenced in the second quarter of 2020.

⁸ The scope of the consultancy study includes (a) the potential impact of microbeads on Hong Kong's environment; (b) the approaches taken in the international arena to control products containing microbeads and the implementation details; and (c) local stakeholders' views on the proposal to regulate products containing microbeads.

and provide the public with a list of microbead-free products and information on microbeads alternatives.

Enhancement measures for reducing and recycling waste plastics at community level

11. To strengthen on-site support to recycling, the Administration started to establish outreaching teams in late 2018 to collaborate closely with community partners to educate the public on the importance of waste reduction at source and assist them to practice proper waste separation at source and clean recycling, and to identify proper outlets for recyclables.⁹ In parallel, the Administration continues to take forward the development of the network of CGSs to render support for waste reduction and recycling as well as environmental education at the district level.¹⁰ In addition, the Administration will regularize the funding support for engaging eligible non-profit making organizations under contracts to expand the operation of CRCs to all 18 districts across the territory from 2020-2021, so as to provide outreaching recyclable collection services at the neighbourhood level.

Major views and concerns expressed by Members

12. Issues relating to management of waste plastics were brought up at various meetings of the Panel on Environmental Affairs ("EA Panel") in the Sixth LegCo. Relevant issues were also raised at the meetings of the Bills Committee on Waste Disposal (Charging for Municipal Solid Waste) (Amendment) Bill 2018 and during the examination of the Estimates of Expenditure in recent years. Members' major views and concerns are summarized in the ensuing paragraphs.

Reducing the use of disposable plastic products

Disposable plastic tableware

13. Members observed that most measures introduced by the Administration on reducing waste plastics were voluntary in nature including those aiming at

⁹ The outreaching teams have kick-started pilot outreaching services in Eastern District, Kwun Tong and Sha Tin. As at the end of 2019, the outreaching teams have conducted about 4 600 visits, covering about 4 000 public and private residential buildings and 45 villages.

¹⁰ As at the end of 2019, eight CGSs have been in operation, covering Sha Tin, Eastern District, Kwun Tong, Yuen Long, Sham Shui Po, Tuen Mun, Kwai Tsing and Tai Po. The Islands CGS will commence operation in 2020.

reducing the use of plastic packaging materials and single-use plastic items. They queried about the effectiveness of such measures in influencing producers/suppliers' business decisions and changing consumer behaviours. Members also expressed disappointment that Hong Kong lagged behind some other places in Asia, such as Taiwan, in setting a clear target and timetable for phasing out disposable plastic tableware. They enquired about the legislative timetable, if any, for banning the use of disposable plastic tableware.

14. The Administration advised that it had commissioned a consultancy study to explore the necessity and feasibility of controlling or banning disposable plastic tableware, and the scope, regulatory mechanism and applicable substitutes concerned should such control or ban was deemed necessary and feasible. The study was scheduled for completion in 2020. Starting from January 2019, the Administration had taken the lead in banning plastic straws and polyfoam food containers in premises and canteens mainly serving government staff. Relevant departments, when inviting tenders for new contracts and renewing existing contracts, would also require restaurant operators in suitable government venues to avoid using disposable plastic tableware.

Plastic beverage containers

15. Members sought information on the progress of the implementation of a PRS on plastic beverage containers and asked about the targets set by the Administration on the disposal quantity and recycling rate of waste plastic bottles. Some Members enquired whether the Administration would enact legislation to ban the sale of drinks in plastic bottles.

16. The Administration advised that it had taken the lead in reducing the use of plastic bottles. For instance, the sale of plastic bottled drinking water of one litre or less in the automatic vending machines in government venues had stopped progressively from February 2018. The Administration would also install additional water dispensers in suitable government venues. The initial target was to install 500 more water dispensers so that the number of water dispensers could be increased to about 3 200 units by 2022 for public use in government venues.

17. According to the Administration, the recovery volume of plastic bottles could be greatly increased with a PRS on plastic beverage containers in place. A similar arrangement for the "deposit-refund system" implemented in other jurisdictions would be considered to provide economic incentives to encourage the public to return used plastic beverage containers for recycling. Moreover, the Administration had been conducting a trial on RVMs with a view to working out the technical details for the pilot scheme on RVMs to be launched later.

18. As regards banning the sale of plastic bottle beverages through legislation, the Administration advised that most countries did not head towards a total ban. In considering whether and how to ban the sale of plastic bottle beverages through legislation, a prudent balance had to be struck among various considerations, including a consensus at the community level. At this stage, the Administration had no plan to ban the sale of plastic bottle beverages.

Review of the Plastic Shopping Bag Charging Scheme

19. Given that the PSB Charging Scheme has been in operation for a decade, Members considered that it was an opportune time for reviewing the operation of the Scheme.

20. The Administration advised that after launching the first phase of the PSB Charging Scheme, the amount of PSBs distributed by registered retailers had reduced by around 80% to 90%. A further reduction of some 20% to 30% in the amount of PSBs distributed was achieved after the Scheme had been extended to all retail sales. Considering that the current minimum charge of 50 cents per PSB had remained unchanged for over 10 years and there were views that the current exemption over PSB used for food hygiene purposes (especially the use of PSB to carry frozen or chilled foodstuff) might need to be tightened, the Administration was reviewing the operation and effectiveness of the PSB Charging Scheme along these directions. The Administration planned to consult the public on the outcome of the review in 2020.

Free collection service for waste plastics

21. Members expressed concern about the limited scale of the pilot scheme on free collection service for waste plastics from non-C&I sources. Some Members suggested that the pilot scheme should be conducted in public rental housing estates first through collaboration with the Hong Kong Housing Authority.

22. The Administration responded that the pilot scheme was intended to enable the Administration to gain experience and feedback on the free collection service for waste plastics, which would facilitate consideration on whether and how to expand the service at a later stage. As at the end of February 2020, about 65 premises, including housing estates and buildings, had registered to participate in the pilot scheme for the Eastern District. The Administration hoped that the service could be expanded progressively to all 18 districts. The Administration would review the operation of the free collection service for waste plastics from non-C&I sources and the outreaching services within a timeframe of five or six years.

Recycling of waste plastics

23. Members were concerned that the recycling capacity for waste plastics processed by approved projects under the Recycling Fund could not meet the demand, given a daily disposal quantity of about 2 000 tonnes of such waste in Hong Kong. They urged the Administration to introduce more support measures dedicated for promoting recycling of waste plastics. Besides, some waste plastics recyclers were unable to apply for funding support under the Recycling Fund because their operations were inconsistent with the planned use of the land. There were also many complaints about the environmental nuisances arising from plastic recycling operations near residential areas, making it difficult for the operators concerned to obtain relevant waivers of lease conditions from the Lands Department. They asked if the Administration could strengthen coordination with the Lands Department and proactively assist Recycling Fund applicants if necessary in applying for waivers of lease conditions as well as allocate suitable sites (such as restored landfills) for the formation of an industrial cluster for plastic recycling.

24. The Administration explained that the recovery rate of waste plastics was low mainly due to the high transportation costs involved. As such, recyclers were encouraged to purchase equipment to reduce the operating costs of waste plastics recycling through obtaining funding from the Standard Projects programme under the Recycling Fund. To further increase the recovery rate of waste plastics, the Administration planned to install RVMs under the pilot scheme to collect plastic beverage containers, and provide free collection service for waste plastics from non-C&I sources.

25. The Administration advised that grantees of the Recycling Fund were required to comply with relevant legal requirements, including land lease conditions. If there were public complaints about the recycling operations, it would be difficult for the recyclers concerned to obtain waivers of lease conditions from the Lands Department. A more practical and efficient approach was to encourage such recyclers to relocate their operations to suitable places. Accordingly, a new measure was introduced in January 2019 under the Recycling Fund such that eligible applicants would be offered subsidies for relocating their operations, such as from recycling sites in non-industrial zones to industrial buildings or land zoned for industrial purpose. The limit of such subsidies was 50% of market rent as assessed by the Rating and Valuation Department.

Potential impacts of microplastics on environment and human health

26. Members expressed concerns about the potential impacts of microplastics on environment and human health. They pointed out that

microplastics were commonly present in potable water of a number of countries and the toxic substances that had adhered to and accumulated on the surface of microplastics might find their way into the human body through the food chain, thus posing health hazards. They suggested that a legislative approach should be taken in regulating products containing microplastics.

27. The Administration advised that according to relevant overseas literature and scientific research findings, there was no evidence showing that microplastics had significant impacts on the environment, ecology and public health. While some overseas jurisdictions had prohibited the sale of PCCPs containing microbeads by legislative means, some others (such as Australia and the Netherlands) had taken a voluntary approach. As observed, with the introduction of a voluntary phase-out programme in 2017, currently about 97% of PCCPs in the Australian market were free of microbeads. The Administration planned to launch a voluntary phase-out scheme for microbead-containing products in the second half of 2020 and would review the effectiveness of the scheme two years after its launch so as to assess whether legislative control over products containing microbeads should be adopted in Hong Kong.

Council questions

28. Members raised questions about management of waste plastics at various Council meetings in the Sixth LegCo. The questions and the Administration's replies are hyperlinked in the **Appendix**.

Latest development

29. At the meeting on 25 May 2020, the Administration will brief EA Panel on the progress of its work on the management of waste plastics, which includes taking forward relevant PRSs, reducing the use of disposable plastic products, enhancing support for recycling plastics, phasing out microbead-containing products, and relevant public education and publicity work.

Relevant papers

30. A list of relevant papers is set out in the **Appendix**.

Management of waste plastics

List of relevant papers

Date of meeting	Event	Paper
30 October 2017	Policy briefing cum meeting of the Panel on Environmental Affairs ("EA Panel")	<p>Administration's paper on "2017 Policy Address - Policy initiatives of Environment Bureau: Environmental protection" (LC Paper No. CB(1)75/17-18(01))</p> <p>Administration's paper on "Implementation of municipal solid waste charging" (LC Paper No. CB(1)126/17-18(02))</p> <p>Updated background brief on "Introduction of municipal solid waste charging in Hong Kong" prepared by the Legislative Council Secretariat (LC Paper No. CB(1)126/17-18(03))</p> <p>Minutes of meeting (LC Paper No. CB(1)399/17-18)</p>
19 December 2017	Meeting of EA Panel	<p>Administration's paper on "Addressing Mainland's tightening requirements on imports of recyclables" (LC Paper No. CB(1)233/17-18(04))</p> <p>Background brief on "Support for local recycling industry" prepared by the Legislative Council Secretariat (LC Paper No. CB(1)233/17-18(05))</p> <p>Minutes of meeting (LC Paper No. CB(1)557/17-18)</p> <p>Letter dated 24 November 2017 from Hon KWOK Wai-keung on the regulation of the manufacturing and sale of products containing microplastics in Hong Kong (Chinese version only) (LC Paper No. CB(1)281/17-18(01))</p> <p>Administration's response to the letter from Hon KWOK Wai-keung on the regulation of the manufacturing and sale of products containing microplastics in Hong Kong (LC Paper No. CB(1)360/17-18(01))</p>

Date of meeting	Event	Paper
17 April 2018	Special meeting of the Finance Committee ("FC") for examination of Estimates of Expenditure 2018-2019	Written questions raised by Members and the Administration's replies (Reply serial numbers: ENB054, 058, 067, 095, 098, 099, 100, 112, 113, 115, 119, 120, 121, 122, 127, 136, 147, 149, 169, 179, 184, 236, 241, 264, 298)
June 2018	Letter from Hon HUI Chi-fung on the regulation of single-use plastic products	Letter dated 6 June 2018 from Hon HUI Chi-fung on the regulation of single-use plastic products (Chinese version only) (LC Paper No. CB(1)1084/17-18(01))
22 October 2018	Policy briefing	Administration's paper on "2018 Policy Address - Policy initiatives of Environment Bureau: Environmental protection" (LC Paper No. CB(1)10/18-19(01)) Minutes of meeting (LC Paper No. CB(1)276/18-19)
26 November 2018	Meeting of EA Panel	Legislative Council Brief on Waste Disposal (Charging for Municipal Solid Waste) (Amendment) Bill 2018 (File Ref: EP CR/9/65/3) Background brief on "Complementary measures in relation to municipal solid waste charging" prepared by the Legislative Council Secretariat (LC Paper No. CB(1)189/18-19(05)) Administration's follow-up paper (LC Paper No. CB(1)571/18-19(02)) Minutes of meeting (LC Paper No. CB(1)595/18-19)

Date of meeting	Event	Paper
5 December 2018	Meeting of the Bills Committee on Waste Disposal (Charging for Municipal Solid Waste) (Amendment) Bill 2018 ("Bills Committee")	Administration's follow-up paper (LC Paper No. CB(1)563/18-19(01)) Minutes of meeting (LC Paper No. CB(1)530/18-19)
7 January 2019	Meeting of Bills Committee	Administration's follow-up paper (LC Paper No. CB(1)396/18-19(03)) Minutes of meeting (LC Paper No. CB(1)682/18-19)
18 February 2019	Meeting of Bills Committee	Administration's follow-up paper (LC Paper No. CB(1)737/18-19(04)) Minutes of meeting (LC Paper No. CB(1)870/18-19)
25 February 2019	Meeting of EA Panel	Administration's paper on " Staffing proposal to take forward Municipal Solid Waste Charging and complementary waste reduction and recycling initiatives" (LC Paper No. CB(1)596/18-19(04)) Updated background brief on "Municipal solid waste charging" prepared by the Legislative Council Secretariat (LC Paper No. CB(1)596/18-19(05)) Administration's follow-up paper (LC Paper No. CB(1)974/18-19(02)) Minutes of meeting (LC Paper No. CB(1)981/18-19)

Date of meeting	Event	Paper
26 March 2019	Meeting of Bills Committee	<p>Letter dated 21 March 2019 from Hon CHU Hoi-dick (Chinese version only) (LC Paper No. CB(1)757/18-19(01))</p> <p>Administration's follow-up paper (LC Paper No. CB(1)737/18-19(02))</p> <p>Minutes of meeting (LC Paper No. CB(1)939/18-19)</p>
9 April 2019	Special meeting of FC for examination of Estimates of Expenditure 2019-2020	<p>Written questions raised by Members and the Administration's replies (Reply serial numbers: ENB050, 051, 060, 067, 079, 084, 088, 092, 093, 099, 102, 103, 115, 119, 120, 124, 141, 148, 164, 228, 234, 237, 265, 275, 276, 290, 293, 296, 318, 336, 338, 341)</p>
15 April 2019	Meeting of Bills Committee	<p>Administration's follow-up paper (LC Paper No. CB(1)875/18-19(02))</p> <p>Minutes of meeting (LC Paper No. CB(1)1162/18-19)</p>
29 April 2019	Meeting of EA Panel	<p>Administration's paper on "Proposed enhancement measures to the Recycling Fund" (LC Paper No. CB(1)922/18-19(03))</p> <p>Updated background brief on "Recycling Fund" prepared by the Legislative Council Secretariat (LC Paper No. CB(1)922/18-19(04))</p> <p>Minutes of meeting (LC Paper No. CB(1)1191/18-19)</p>
7 May 2019	Meeting of Bills Committee	<p>Minutes of meeting (LC Paper No. CB(1)1324/18-19)</p>

Date of meeting	Event	Paper
28 October 2019	Policy briefing cum meeting of EA Panel	Administration's paper on "2019 Policy Address - Policy initiatives of Environment Bureau: Environmental protection" (LC Paper No. CB(1)31/19-20(03)) Minutes of meeting (LC Paper No. CB(1)251/19-20)
6 April 2020	Special meeting of FC for examination of Estimates of Expenditure 2020-2021	Written questions raised by Members and the Administration's replies Reply serial numbers: ENB037, 038, 054, 058, 060, 079, 082, 083, 095, 097, 098, 101, 114, 115, 118, 125, 140, 141

Other relevant documents:

Government bureau	Document
The Environment Bureau	<p>Progress report – Motion debate on “Fully transforming into a green and low-carbon smart society and economy, and proactively alleviating and coping with global climate change” at Legislative Council Meeting of 12 December 2018</p> <p>Pilot Scheme on Collection of Waste Plastics (English version only) (ACE-WM Paper 2/2020)</p>

Hyperlinks to relevant Council questions:

Date	Council Question
14 December 2016	Press release on Council question (written) raised by Hon KWOK Ka-ki
25 October 2017	Press release on Council question (oral) raised by Hon Kenneth LEUNG Press release on Council question (written) raised by Hon Martin LIAO
22 November 2017	Press release on Council question (oral) raised by Hon Kenneth LEUNG
24 January 2018	Press release on Council question (written) raised by Hon KWOK Wai-keung
9 May 2018	Press release on Council question (written) raised by Hon Paul TSE
30 May 2018	Press release on Council question (oral) raised by Hon CHAN Hak-kan
6 June 2018	Press release on Council question (written) raised by Hon Kenneth LEUNG
13 June 2018	Press release on Council question (oral) raised by Hon CHAN Hak-kan
5 December 2018	Press release on Council question (written) raised by Hon CHAN Hak-kan
17 April 2019	Press release on Council question (written) raised by Hon Elizabeth QUAT
8 May 2019	Press release on Council question (written) raised by Hon CHAN Hak-kan
13 November 2019	Press release on Council question (written) raised by Hon Kenneth LEUNG
11 December 2019	Press release on Council question (written) raised by Hon Kenneth LEUNG