

**For discussion on
25 April 2022**

**LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS
PROGRESS OF THE IMPLEMENTATION OF
WASTE BLUEPRINT FOR HONG KONG 2035**

PURPOSE

This paper reports the progress of major policy initiatives in the Waste Blueprint for Hong Kong 2035 (the Waste Blueprint) announced by the Environment Bureau (ENB) in February 2021.

**VISION AND GOALS OF WASTE MANAGEMENT STRATEGIES
FOR HONG KONG**

2. The Government announced the Waste Blueprint for Hong Kong 2035 (the Blueprint) on 8 February 2021, setting out the vision of “Waste Reduction • Resources Circulation • Zero Landfill”. The Blueprint outlines the strategies, goals and measures to tackle the challenge of waste management up to 2035. To achieve the above vision, the Government sets out two main goals under the Blueprint –

- (a) the medium-term goal is to gradually reduce the per capita Municipal Solid Waste (MSW) disposal rate by 40 to 45% through implementing MSW charging, together with the launch of other policies and legislation, waste reduction and recycling initiatives, as well as publicity and educational campaigns, and at the same time raise the recovery rate to about 55% by implementing multiple measures promoting waste separation and complementing with waste-to-energy (WtE)/ resources facilities¹; and
- (b) the long-term goal is to develop adequate WtE facilities, so as to move away from the reliance on landfills for MSW disposal and achieve “Zero Landfill” in around 2035. By then, there should

¹ The per capita daily disposal rate and recovery rate of MSW in 2019 were 1.47 kg and 29% respectively (i.e. the latest statistics available when the Waste Blueprint was announced). In 2020, the per capita daily disposal rate and recovery rate of MSW were 1.44 kg and 28% respectively.

only be limited non-incinerable and non-recyclable waste that requires direct disposal at landfills.

3. The Hong Kong's Climate Action Plan 2050 announced by ENB in October 2021 also sets out the target to achieve carbon neutrality before 2050. Greenhouse gas (GHG) would be emitted during the decomposition of MSW in landfills and as a result, waste management accounts for about 7% of the total GHG emissions in Hong Kong. Realising the vision and goals under the Waste Blueprint to move away from the reliance on landfills for handling of MSW could significantly reduce GHG emitted from landfills, and help reach our target to achieve carbon neutrality in waste management before 2050.

MAJOR POLICY INITIATIVES AND PROGRESS UPDATES

4. Since the announcement of the Waste Blueprint in February last year, ENB has adopted a multi-pronged approach by following the strategies set out in the Blueprint, and has proactively strengthened its efforts over the past year in three particular areas, i.e. waste reduction, waste recycling, and development of WtE facilities –

- (a) on waste reduction, continuously progressing towards the implementation of MSW charging, as the main driving force behind waste reduction, and at the same time progressively implementing various producer responsibility schemes (PRSs), as well as pushing forward the reduction in the use of plastic by exploring ways to expedite the control on single-use plastics;
- (b) on waste separation, implementing an array of measures at multiple levels, including strengthening our recyclables collection network at the community level, taking forward central collection and recycling services on major recyclables at the governmental level, and, at the industry level, providing support to the recycling trade through different policies, such as Recycling Fund, EcoPark, etc.; and
- (c) developing WtE facilities, in particular expediting the planning studies on new Integrated Waste Management Facilities.

Detailed progress updates of various measures in the aforesaid three areas are elaborated in the ensuing paragraphs.

Waste Reduction

MSW charging

5. MSW charging, as the main driving force behind waste reduction, will not only drive enterprises and the public to practise waste reduction and recycling, but also enhance the quality and quantity of recyclables collected, which in turn facilitates the sustainable development of related industries, gradual green recovery at the moment as well as and the creation of more and diversified green job opportunities. The bill of the Waste Disposal (Charging for Municipal Solid Waste) (Amendment) Ordinance 2021 (Amendment Ordinance) to implement MSW charging was passed by the Legislative Council (LegCo) on 26 August 2021. The preparatory period of 18 months as a basic arrangement has begun. We are now actively taking forward relevant preparatory work to enable the Government, various stakeholders and the public to prepare for the implementation of MSW charging. Latest progress of the preparatory work of MSW charging are as follows –

Distribution of Free Designated Bags (DBs) during the Initial Stage of Implementation

6. When scrutinising the relevant Bill on MSW charging, the Bills Committee of the last term of LegCo recommended that the Government should distribute additional free DBs to the general public during the initial stage of implementation of MSW charging to facilitate them to adapt to the charging arrangements. We are drawing up distribution proposals and initially recommend distributing free DBs to around 2.9 million residential households in Hong Kong for a short period of time shortly after the implementation of MSW charging. We will consult the Panel on Environmental Affairs and discuss the detailed arrangements with Members in due course.

Enhancing Stakeholder Engagement

7. Since August last year, the Environmental Protection Department (EPD) has conducted more than 40 physical or online meetings and briefings and we have reached out to about 2 000 stakeholders from various trade sectors, including property management and environmental hygiene trade associations, catering trade associations, hotel trade, recycling trade, owners' corporations, non-government organisations, chambers of commerce as well as

representatives of key establishments, etc. to introduce them the latest developments of MSW charging and listen to their concerns.

8. In addition, we have set up working groups with key stakeholders including representatives from the property management, environmental hygiene, recycling and security trades, to jointly draft the Best Practice Guidelines (BPGs). In January this year, a tripartite meeting hosted by EPD was held and consensus has been reached among the representatives of the property management and environmental hygiene trades on some important principles and issues in the BPGs, such as the contractual arrangements for cleansing and refuse collection services and handling of non-compliant situations, etc.. We will continue to collate views from the trades to further refine the BPGs and provide training to frontline staff in due course.

Establishment of the Manufacturing, Inventory and Distribution System of DBs and Designated Labels (DLs)

9. Prior to the implementation of MSW charging, EPD has to ensure appropriate supply of DBs and DLs in the market so that the public may purchase them at ease in the future. To this end, we will establish a comprehensive “Manufacturing, Inventory and Distribution System” (the MID System) and retail network for DBs and DLs. With regard to the establishment of the MID System, we are drafting tender documents with a view to inviting tender and conducting tender assessment exercise for several DBs manufacturing contracts, one DLs manufacturing contract and one warehouse and logistics coordination service contract progressively starting from the third quarter of this year. We target to gradually award all contracts from end this year to early next year.

10. For the sales of DBs and DLs, EPD will establish a retail network comprising a few thousand retail outlets covering supermarkets, convenience stores, pharmacies, post offices and online platforms. Meanwhile, we are also considering the setting up of vending machines at some of the public transport interchanges and ferry piers that connect to rural or remote areas. We have conducted a number of physical or online briefings for major retail chains, the Hong Kong General Chamber of Pharmacy Limited and its members, and invited them to express views and interests in selling DBs and DLs. As of now, we have received Express of Interest forms from 32 retail chains comprising around 2 900 retail outlets expressing their interests in providing relevant retail sales services at their retail stores and online

platforms. In addition, more than 100 small-to-medium sized pharmacies wish to receive support from wholesalers on the associated logistic and retail arrangements. EPD will discuss further with retail chains and pharmacies etc. and strive to finalise the cooperation details by end this year.

11. In order to achieve more effective management of the inventory and sales of DBs and DLs, we plan to develop a “Smart Inventory Management System” (the SIM System) and relevant mobile application. On one hand, the SIM System enables retailers to place order, monitor inventory levels and their monthly sales status conveniently. On the other hand, the mobile application will be incorporated with a search function to facilitate the public to instantly locate nearby retail outlets of DBs and DLs with updates on their stock levels as well. Moreover, members of the public can report MSW charging related non-compliant cases through the mobile application. We are now preparing for relevant tender exercise with a view to commencing the system development work in the third quarter of this year.

Trial Projects and Community Involvement Projects related to MSW charging

12. To encourage waste reduction and recycling and enable the community to prepare for the implementation of MSW charging, EPD has partnered with some 20 relevant departments and organisations to launch trial projects on MSW charging for participants to gain first-hand experience of the quantity-based charging arrangements. As of March this year, these trial projects have covered some 200 rural villages, 53 blocks in Public Rental Housing (PRH) estates, three joint-user government office buildings, two shopping malls, 16 restaurants and one government clinic. During the trial projects, EPD will provide dummy DBs of different capacities for participants to try out. Various publicity and public education activities are also organised to enrich participants’ understanding of the objectives of MSW charging and its implementation arrangements, and to encourage all sectors to value resources and reduce waste in order to achieve “Dump Less, Save More”. EPD originally planned to launch the third phase of the nine-month trial project², covering a total of 51 blocks in 11 PRH estates starting from January this year and it was suspended due to the severe epidemic situation in Hong Kong. EPD will maintain close communication with HD and re-launch the

² EPD and Housing Department (HD) have collaborated to launch trial projects in PRH estates in four phases to cover about 150 PRH blocks in Hong Kong since the end of 2018. The first and second phases have been concluded covering a total of 53 PRH blocks. The third and fourth phases were originally scheduled to commence in January and the fourth quarter of this year respectively.

trial project at appropriate juncture depending on the developments of epidemic situation.

13. Since 2015, EPD has launched the “Waste Separation Projects to Pave the Path for MSW Charging” funded by the Environment and Conservation Fund (ECF). The project allows non-profit making organisations and bodies to conduct waste separation projects in different types of premises so as to educate the public on the importance of reducing waste at source and promote the culture of “Use Less, Waste Less”, whilst enabling different stakeholders to try out MSW charging in actual settings and practice proper source separation of waste and clean recycling. So far, about 250 projects involving around 1 200 premises have been approved, covering 18 districts and five sectors including residential estates with property management companies, rural and other low-density residential buildings, single block buildings, commercial and industrial premises, and public institutions. The total funding approved is around \$210 million. To encourage more non-profit organisations and bodies to apply for and implement projects at “3-nil buildings”³, ECF has announced earlier that priority would be given to ECF applications involving “3-nil buildings” in the latest of applications, whilst EPD would provide additional support through the Community Recycling Network. The latest batch of application was closed in early-March this year. A total of about 160 applications were received in which about 60 of them involved “3-nil buildings”.

Follow-up legislative work

14. The Government will make five sets of subsidiary legislations under the Amendment Ordinance to specify the various details for implementing MSW charging, including –

- (i) the requirements such as design, sizes, etc. for DBs and DLs (**Annex A1**);
- (ii) the prescribed signs to be exhibited on various types of waste vehicles, refuse collection points (RCPs), and specified bins, as well as the ways of exhibition (**Annex A2**);

³ They refer to buildings without owners’ corporations or residents’ organisation of any kind, and without property management companies.

- (iii) the commencement date of the provisions relevant to various preparatory work in the Amendment Ordinance, such as establishing registration arrangements for charging by gate-fee (**Annex A3**);
- (iv) adjusting the charging level of construction waste disposal to align with that of MSW charging, so as to prevent any deliberate mixing of MSW and construction waste to avoid the difference in charges (**Annex A4**); and
- (v) the official commencement date of MSW charging (**Annex A5**). As for the legislative timetable, please refer to paragraph 16 below.

15. In addition, to complement the implementation of MSW charging, the Government proposes to amend Schedule 2⁴ of the Fixed Penalty (Public Cleanliness and Obstruction) Ordinance (Cap. 570), with a view to authorising relevant public officers of EPD to issue fixed penalty notices for the offence (dumping of litter in public places) created under section 4(1) of the Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK); as well as updating the list of relevant public officers under the authority of the Director of Environmental Protection. The draft of the proposed amendments to Schedule 2 of Cap. 570 is at **Annex B**, while the relevant legislative timetable for the amendments is in paragraph 16 below.

16. The five sets of subsidiary legislations related to MSW charging as mentioned above will be submitted to LegCo for approval by negative vetting. To tie in with the progress of the preparatory work, the subsidiary legislations are proposed to be made in phases. We propose to first make the subsidiary legislations involving the following matters: (i) the requirements such as design, sizes, etc. for DBs and DLs (**Annex A1**); (ii) the prescribed signs to be exhibited on various types of waste vehicles, RCPs, and specified bins, as well as the ways of exhibition (**Annex A2**); and (iii) the commencement date of the provisions relevant to various preparatory work in the Amendment Ordinance, such as establishing registration arrangements for charging by gate-fee (**Annex A3**). We plan to publish the abovementioned subsidiary legislations in gazette in end-May this year, and submit them to LegCo for scrutiny in

⁴ The Amendment Ordinance has included relevant amendments of adding offences under MSW charging to Schedule 2 of Cap. 570.

early-June, with a view to having them passed in end-July so as to facilitate timely commencement of the relevant preparatory work. As for the subsidiary legislations related to the commencement dates for amending the charging level of construction waste disposal (**Annex A4**) and implementing MSW charging (**Annex A5**), we will further consult the Panel on Environmental Affairs on the specific commencement dates depending on the progress of the trial projects and other complementary measures for MSW charging, as well as various aspects of the society. Depending on the progress of the relevant preparatory work and the latest epidemic situation, our current target is to implement MSW charging in the second half of 2023. For the subsidiary legislation amending Schedule 2 of the Fixed Penalty (Public Cleanliness and Obstruction) Ordinance (**Annex B**), we will publish that in gazette as appropriate upon consulting the Chief Executive in Council.

PRSS

17. PRS is one of the key policy tools in the waste management strategy in Hong Kong. Premising on the principle of “polluter pays” and the element of “eco-responsibility”, PRS requires relevant stakeholders to share the responsibility for the collection, recycling, treatment and disposal of end-of-life products with a view to achieving waste reduction at source, and avoiding and reducing the environmental impacts caused by such products at the post-consumer stage.

PRS on Waste Electrical and Electronic Equipment

18. The PRS on Waste Electrical and Electronic Equipment (WPRS) has been fully implemented since 2018, covering regulated electrical equipment (REE) including air-conditioners, refrigerators, washing machines, televisions, computers, printers, scanners and monitors. The Waste Electrical and Electronic Equipment Treatment and Recycling Facility (WEEE•PARK) developed by the Government, with a designed capacity of 30 000 tonnes per year, has also commenced full operation in March 2018 to underpin WPRS through its treatment and recycling process to turn the regulated waste electrical and electronic equipment (WEEE) into valuable secondary raw materials, including copper, aluminium, iron, plastic, etc. As at December 2021, more than 80 000 tonnes of regulated WEEE have been processed.

19. EPD has been reviewing the coverage and operational details of the WPRS from time to time. Taking into account factors including the actual implementation of WPRS, recycling and landfill disposal of such REEs, the

latest sales figures and development of the market and treatment technology etc., we propose to amend the Product Eco-responsibility Ordinance (Cap. 603) (PERO) to expand the coverage of three existing REE items, including (i) refrigerators (to cover those with larger capacity, by raising the cap of the rated storage volume from 500 litres to 900 litres); (ii) washing machines (to cover those with larger capacity, by raising the cap of the rated washing capacity from 10 kg to 15 kg; and to cover stand-alone clothes dryers); and (iii) air-conditioners (to cover dehumidifiers). Besides, according to existing provisions, registered suppliers and sellers have to provide recycling labels when distributing REE items; and the authority is required to serve payment and assessment notices only by post in the prescribed manner. Taking into account the actual implementation of WPRS, we propose to amend PERO by removing the requirements in relation to provision of recycling labels under the WPRS (but the requirement that sellers must include in the receipt the recycling levy payable for the REE items, when distributing REE items to consumers, should maintain). PERO will also be amended to allow the authority to serve payment and assessment notices to registered suppliers through electronic means, with a view to facilitating the WPRS process.

PRS on Glass Beverage Containers

20. Since the passage of the Promotion of Recycling and Proper Disposal (Product Container) (Amendment) Ordinance 2016 (the Amendment Ordinance) by LegCo in May 2016, EPD has been making arrangement to put in place the PRS on Glass Beverage Containers (GPRS) progressively⁵. EPD has appointed two glass management contractors to provide regional waste glass container collection and treatment services across the territory. Since 2018, around 60 000 tonnes of glass containers have been collected and treated for production of eco-pavers and cement, as fill materials for local works projects, or for export to overseas for recycling. To enhance GPRS, we recommend amending the Amendment Ordinance to streamline the arrangement for beverage suppliers of other places coming to Hong Kong for short-term exhibitions in promoting their businesses, such that these suppliers will not be subject to the full registration for providing small amount of glass-bottled beverages as gifts. However, these suppliers must give prior notification to the Director of Environmental Protection (or his/ her representative). In addition, we will also allow service of payment and assessment notices to registered suppliers by electronic means with a view to streamlining the relevant working arrangement.

21. For implementing the enhancement measures specified in paragraphs 18 to 20 above, we are preparing to draft the law (tentatively named as

⁵ EPD has completed the drafting of the relevant subsidiary legislation to provide for the operation details of the GPRS. We will submit the subsidiary legislation to LegCo for scrutiny in due course.

“Promotion of Eco-responsibility (Miscellaneous Amendments) Bill”), and plan to introduce the Bill to LegCo in 2022 the earliest.

Management of waste plastics

22. In line with the direction set out in the Waste Blueprint, EPD will continue to promote a "plastic-free" culture in Hong Kong. For mapping out a comprehensive plastic management strategy, the Government initiated three consultations/ engagement in 2021, including –

- (i) conducted the public consultation on the introduction of PRS on Plastic Beverage Containers (PPRS) from February to May;
- (ii) conducted the public consultation on the phased Scheme on Regulation of Disposable Plastic Tableware from July to September; and
- (iii) invited the Council for Sustainable Development (SDC) to conduct a public engagement, from September to December, on the control of single-use plastics.

PRS on Plastic Beverage Containers

23. EPD received over 4 600 submissions during the public consultation period. The community responded positively to the proposal in general. Having considered the views received and relevant experiences in other places, we are now refining the suitable regulatory framework for PPRS and examining the necessary legislative amendments, as well as consulting the relevant trades further on the regulatory details of PPRS. We will take into account the overall waste management development in finalizing the proposal with a view to utilizing the synergy with other waste management initiatives.

Phased Scheme on Regulation of Disposable Plastic Tableware (Regulation Scheme)

24. EPD received over 8 000 submissions during the consultation period, amongst which over 90% of the comments supported in principle the introduction of legislation to regulate disposable plastic tableware in phases. About 80% of the responses agreed that the Regulation Scheme should cover the proposed nine types of disposable plastic tableware (i.e. expanded polystyrene (EPS) tableware, straws, stirrers, cutlery (such as forks, knives and spoons), plates, cups, cup lids, food containers and food container covers),

and should first ban the local sale of disposable EPS tableware and its provision at catering premises, as well as the provision of disposable plastic tableware for dine-in customers in catering premises. Moreover, nearly 80% of the responses agreed that the types of disposable plastic tableware provided to takeaway customers should be regulated in two phases in a progressive manner (i.e. to first regulate disposable plastic tableware that is small in size and relatively difficult to be recycled or has proven alternatives (e.g. straws, stirrers, forks, knives, spoons, plates etc. in the first phase); followed by the full regulation of all types of disposable plastic tableware in the second phase).

25. As regards the implementation timetable of the scheme, there were quite some views that many places have already been strengthening the regulation of disposable plastic tableware through legislation or other measures in recent years. Also, during the epidemic, local citizens tend to use food delivery/ takeaway services more frequently, resulting in an increase in the use of disposable plastic tableware. Therefore, there were views suggesting that there should be room to advance the implementation of the first phase of the regulation before 2025 as suggested in the consultation document. We understand that, at present, different suppliers in the market are already able to provide various types of non-plastic alternatives to the types of takeaway disposable plastic tableware that are covered by the first phase of the regulation. Having considered the urgency of the problem arising from disposable plastic tableware and the overall positive feedbacks from the community on the proposed scheme, EPD is actively considering advancing the implementation of the first phase of regulation so as to reduce the disposal of disposable plastic tableware at source as soon as possible and help ease the burden on the environment.

Control of single-use plastics and enhancement of the Plastic Shopping Bag Charging Scheme

26. SDC submitted 24 recommendations to the Government (see **Annex C**) on 14 April 2022 on the types of single-use plastic products (excluding plastic beverage containers and disposable tableware provided by catering premises) to be tackled, the priority, the approach for managing them (such as voluntary measures or regulation) and the timeline. Amongst other recommendations, SDC recommended the Government to implement suitable control measures based on the characteristics of different single-use plastic products, including –

- (i) to ban the sale of single-use plastic products with readily available alternatives or products that are not essential, such as

disposable plastic tableware sold at retail outlets⁶, plastic stemmed cotton buds, cheer sticks and balloon sticks for parties/ celebrations, etc.;

- (ii) to ban the free distribution of single-use plastic products that are currently distributed to the public for free, such as umbrella bag and hotel toiletries, etc.; and
- (iii) to ban the manufacturing, sale and distribution of certain single-use plastic products, such as oxo-degradable plastic products and certain polyfoam products, etc.

SDC also recommended that the Government should, in consultation with the relevant trades, explore administrative and legislative measures to reduce the use of plastic (especially polyfoam) packaging. Furthermore, on top of those single-use plastic products mentioned in the public engagement, the Government should also explore the possibility of regulating other single-use plastic products more proactively. SDC also recommended that publicity and public education should be stepped up, green information should be made available to the trade and the public, and research and development on plastic alternatives should be supported.

27. SDC also collected public opinion on enhancement of the Plastic Shopping Bag (PSB) Charging Scheme in place. The PSB Charging Scheme, first launched in 2009 and extended to cover the entire retail sector in 2015, requires all retailers in Hong Kong, save for exemptions⁷, to charge at least 50 cents for each PSB provided to customers. As estimated from the landfill disposal survey, the total number of PSB disposed of in 2015 (i.e. within the first year of full implementation of the Scheme) reduced by 25%. However, a rebound of PSB disposal rate was observed in the following years, which calls for enhancement of the Scheme in order to maintain its effectiveness. The SDC public engagement reflected that a majority of the general public considered the Government should –

- (i) increase the present charging level of 50 cents per PSB, and the charging level of \$1 or \$2 is considered useful in driving behavioural change;
- (ii) remove the present exemptions for PSBs carrying frozen/

⁶ SDC noted the Government is planning to restrict the distribution of disposable plastic tableware at catering premises in phases, and considered imposing a similar ban on the sale of such single-use plastic items at retail outlets, with exclusions under special circumstances, will serve to strengthen the effectiveness of the control measure in reducing disposable plastic tableware.

⁷ Exemptions are provided for PSBs used for food hygiene reasons, plastic bags used for packaging, and plastic bags provided with services.

chilled foodstuff and foodstuff fully wrapped by non-airtight packaging; and

- (iii) limit the number of PSB to be distributed under exemption to one.

28. The Government welcomes the 24 recommendations of SDC detailed at Annex C.

29. The suggestions raised by different sectors of our society on the phased Regulation Scheme at paragraphs 24 and 25, as well as SDC's recommendations on control of single-use plastics at paragraph 26, will be suitably incorporated in the Promotion of Eco-responsibility (Miscellaneous Amendments) Bill mentioned in paragraph 21. Furthermore, in response to SDC's recommendations, we will consider expanding the coverage of control measures to certain single-use plastic products that were not mentioned in SDC's public engagement, for example, tablecloth, ear plugs, food stick, bubble wrap, gloves distributed to diners for free, etc. The relevant Amendment Bill is planned to be introduced to LegCo in 2022 the earliest.

30. On enhancing the PSB Charging Scheme, taking into account SDC's recommendations and the practice of other places in recent years, we recommend increasing the charging level from 50 cents to \$1 per PSB, as a start. We will also tighten the scope of exemption in line with the SDC's recommended approach (paragraph 27 (ii) and (iii) refers). That said, we are aware that most food and beverage (F&B) takeaway items are contained in non-airtight packaging. On practical front, unlike general foodstuffs that are fully wrapped in non-airtight packaging (say, fresh eggs in carton packs, blueberries contained in plastic boxes with air holes, bread in plastic bag sealed by plastic tape), there is a need to provide PSBs to customers for carrying the takeaway items easily and safely. We therefore recommend continuing to exempt PSBs carrying F&B takeaway items in non-airtight packaging (no matter whether the takeaway item is fully wrapped by the packaging or not) from charging. However, the number of exempted PSB would be limited to one.

31. For taking forward the enhancement measures illustrated in paragraph 30 above, it is our plan to submit the subsidiary legislations for amending PERO for LegCo's scrutiny by Q2 2022 the earliest. For ensuring smooth transition to the enhanced Scheme, we will allow a preparatory period before the commencement of relevant legislations, and put forward implementation guidelines to help the retail sector and the public to get prepared for the enhancement measures.

32. We will formulate a work plan on SDC's other recommendations as early as practicable.

Implement the latest requirements of the Basel Convention in Hong Kong

33. In May 2019, the Conference of the Parties to the Basel Convention agreed to enhance the control on the transboundary movement of plastic waste by adopting the Plastic Waste Amendments to the Basel Convention. According to the Amendments, transboundary movement of certain types of plastic waste including mixed or contaminated waste plastics, or waste plastics that cannot be recycled in an environmentally sound manner will be controlled under the Basel Convention and shall not proceed from 1 January 2021 unless the state of export, the state of import and all states of transit concerned have given their prior consents.

34. China is a Party to the Basel Convention and the Convention is applicable to Hong Kong. To enable Hong Kong to comply with the latest amendments to the Convention, amendments to the Waste Disposal Ordinance (Cap.354) (WDO) are necessary. In this connection, we plan to introduce the relevant amendment bill to LegCo in 2022 the earliest.

Waste Recycling

Strengthen recycling support at district level

35. Implementing MSW charging and strengthening community recycling go hand in hand. EPD has been expanding and upgrading the community recycling network GREEN@COMMUNITY, which comprises facilities at three levels – (i) Recycling Stations which provide both clean recycling and environmental education support to the community at district level, (ii) Recycling Stores which are mostly located near clusters of single block buildings (particularly 3-nil buildings) that are residential buildings with relatively limited conditions for setting up recycling facilities, and (iii) Recycling Spots which operate weekly at fixed locations and time.

36. There are currently 11 Recycling Stations in operation, the two new stations, namely GREEN@SAI KUNG and GREEN@WAN CHAI, have commenced operation in October 2021. Construction of the 12th Recycling Station, GREEN@WONG TAI SIN, will commence in mid-2022. Another Recycling Station will be located at Ap Lei Chau in the Southern District as one of the projects under the Invigorating Island South initiative.

37. For the first batch of 22 Recycling Stores which have commenced operation under a new “6” brand since late 2020, there have been notable increase in both patronage and recyclable quantity in 2021 - around three million visitors, with a wide age and social spectrum, made use of the new generation of community recycling facilities to practice clean recycling; over 9 000 tonnes of recyclables, an increase by more than four times of that collected by the previous generation of Community Recycling Centres, were collected. Furthermore, a new batch of 10 Recycling Stores has been joining the GREEN@COMMUNITY family since early this year. As of end March, six of these new community recycling facilities have commenced shop operation.

38. To promote smart city development of Hong Kong, EPD is taking forward a Pilot Programme on Smart Recycling Systems, with a view to testing out their application and benefits in Hong Kong. The first phase of the pilot was implemented from November 2020 to December 2021 and the outcomes were positive. We are making arrangement to increase the number of application points to about 80-100 (including community recycling network facilities, large housing estates and other suitable venues), and to expand the scope of technical testing. To support wider local application of smart recycling systems, we have established the required common communication protocol, central cloud data system and mobile application. It is expected that the new application points would commence operation progressively in the second quarter of 2022.

39. Taking the opportunity of the Pilot Programme, EPD rolled out in November 2020 a GREEN\$ Electronic Participation Incentive Scheme (GREEN\$ ePIS) to encourage more members of the public to participate in separation of resources and recycling. We continue to expand and enhance the GREEN\$ ePIS, such as the launch of a mobile app in January 2022. Members of the public can earn GREEN\$ points for redemption of gifts when carrying out recycling in the facilities of the community recycling network. Since its commencement of operation in end 2020, the GREEN\$ ePIS has built up to more than 130 000 membership accounts and clean recycling is carried out through the incentive scheme with an average of around 20 tonnes of recyclables collected daily at present.

40. Apart from facilities and equipment of both hardware and software above, EPD also provides outreach services on waste reduction and recycling to local stakeholders through the Green Outreach. By mid 2021, the Green

Outreach has expanded its services to all 18 districts in Hong Kong. In addition to close collaboration with local partners to educate the public on waste reduction at source and assist the public in practising proper clean recycling, the Green Outreach also help identify proper outlets for recyclables and formulates specific plans on community recycling support for individual districts. In light of the upcoming expansion of the coverage of the Plastic Recycling Pilot Scheme from three districts to nine districts (see paragraph 43 below), we plan to roll out a one-stop service for housing estates participating in the Programme on Source Separation of Domestic Waste to collect various types of recyclables with limited commercial recycling outlets (e.g. plastics, glass containers, small electrical appliances, etc.), and to deliver the recyclables to recycling service contractors (e.g. the contractors of the Plastic Recycling Pilot Scheme, the Glass Management Contractors, etc.) for proper treatment and recycling. It is expected that this new one-stop service will help the residents of housing estates to strengthen their habit of clean recycling to turn more types of recyclables into resources.

Central collection services for food waste, waste plastics, and waste paper

41. On food waste recycling, EPD launched the Pilot Scheme on Food Waste Collection (Pilot Scheme) on a larger scale in 2021 by rolling out four two-year service contracts in phases, covering relatively clustered premises that generate larger quantities of food waste with less impurities in various districts in Hong Kong. These include public premises (e.g. shopping centres of public housing estates, cooked food venues and public markets, catering facilities of social service organisations, canteens in tertiary institutions and hospitals, etc.) and private commercial and industrial premises (e.g. food factories, hotels, large shopping malls, aircraft caterers, etc.), with a view to progressively achieving the target of collecting 250 tonnes of food waste per day by the end of 2022, which is the maximum daily treatment capacity of the food waste treatment facilities currently in operation in Hong Kong. Among the four food waste collection contracts, the first two contracts have already commenced service in September 2021 and February 2022 respectively, while the remaining two contracts are scheduled for tendering in the second quarter of 2022. Regarding domestic food waste collection, the four contracts would, at the same time, collect food waste from housing estates that have previous trial experience in food waste source separation in order to explore further the operation mode, specific arrangement and effectiveness of domestic food waste collection. In addition, we have completed the first small-scale trial project for collecting food waste using smart bins in a public housing estate (Lin Tsui Estate) in March 2022. We are exploring with HD to conduct food waste collection trials with smart bins at other public housing estates, so as to

accumulate more experience in domestic food waste collection in the run up to the implementation of MSW charging. We will continue to strengthen the promotion of the Pilot Scheme and plan to gradually expand it to locations with relatively dense food establishments (e.g. shopping malls and hotels), with a view to increasing the collection amount of properly separated food waste in Hong Kong in an orderly manner.

42. The existing daily food waste treatment capacity in Hong Kong of about 250 tonnes mainly comes from O•PARK1 and the Food Waste/ Sewage Sludge Anaerobic Co-digestion Trial Scheme at the Tai Po Sewage Treatment Works (STW). We are also striving to enhance our food waste treatment capability by developing more O•PARK and implementing food waste/ sewage sludge anaerobic co-digestion technology at suitable STW. Due to the epidemic, the commissioning dates of the Food Waste/ Sewage Sludge Anaerobic Co-digestion Trial Scheme at the Sha Tin STW (with a daily treatment capacity of 50 tonnes) which is being tendered and O•PARK2 (with a daily treatment capacity of 300 tonnes) which is under construction are expected to be deferred to 2023 and 2024 respectively. By then, the total food waste recycling capacity can be gradually increased to 600 tonnes daily. In the longer term, EPD and the Drainage Services Department (DSD) are looking into further expanding the food waste treatment capacity at the Tai Po STW and extending the anaerobic co-digestion technology to other suitable STW, including Hung Shui Kiu and Yuen Long Effluent Polishing Plants, in order to achieve the target of equipping Hong Kong with adequate facilities to handle about half of the recyclable food waste disposed daily by mid-2030s as set out in the Waste Blueprint.

43. On waste plastics recycling, we have commenced progressively since 2020 a pilot scheme on waste plastics collection and recycling in three districts, namely Eastern District, Kwun Tong and Sha Tin to collect all types of waste non-commercial and non-industrial plastics for proper handling and recycling. We have further extended the pilot scheme to nine districts progressively from late-March 2022 with new service contracts of a two-year term. Three different contractors would each be responsible for services in three districts, covering over half of the population in Hong Kong. The daily collection amount is expected to reach 16 tonnes. Subject to the experience and effectiveness of the pilot scheme, we will further optimize and extend the service to cover the entire territory.

44. To pave way for the future implementation of the PPRS (see paragraph 23 above), EPD rolled out a one-year pilot scheme in 2021 to test out the application of reverse vending machines (RVMs) in Hong Kong. A total of 60 RVMs have been set up at locations with suitable foot traffic in phases, with provision of instance rebate via e-payment platforms to

encourage the public to return used plastic beverage containers for recycling. Positive responses have been received from the public since the rollout of the pilot scheme. As at end of March 2022, the pilot scheme has recovered over 19 million plastic beverage containers, equivalent to 475 tonnes of waste plastics, which were sent to local recyclers for recycling. The contract for Stage 2 of the pilot scheme was awarded on 24 December 2021, which is expected to be rolled out in phases in the second quarter of 2022 with the number of RVMs to be increased from the current 60 to 120 progressively.

45. On waste paper recycling, to enhance the quality and quantity of local waste paper recyclables and promote a sustainable development of the local waste paper recycling industry, EPD launched the territory-wide waste paper collection and recycling services in September 2020. At present, around 1 630 tonnes of waste paper are collected and recycled every day. Through open tendering, multiple contractors were engaged through service contracts. They are required to process the waste paper locally, including screening, sorting and baling, etc., and then deliver them to various markets for recycling into paper products. To provide more diversified recycling outlets for local waste paper, EPD is preparing for the development of a modern pulping facility in EcoPark, Tuen Mun. The tenant with the successful bid is expected to commence construction of the pulping facility this year and commence operation in 2025, processing not less than 300 000 tonnes of local waste paper annually (i.e. not less than 820 tonnes every day).

Strengthen support to the recycling industry

46. The local recycling industry is our important partner in waste management. The Government launched the \$1 billion Recycling Fund in 2015 to assist the recycling industry in enhancing its operational capability and efficiency, so as to promote the sustainable development of the industry, and facilitate waste recycling and transformation of waste into resources. Recent years have seen a continuous downturn in the global recycling market, which has affected the performance of the local recycling industry. In April 2021, the Government injected an additional sum of \$1 billion into the Recycling Fund and extended its application period to 2027 in order to continuously support the recycling industry in coping with the latest needs of both the local and non-local markets. The Government will continue to provide financial support to the recycling industry, with a vast majority of which comprising local small- to medium-sized enterprises, in order to sustain the operation and sustainable development of the recycling chain, and will also assist the trade to upgrade their operation with technology. In complement with the waste management policy objective, this would help realise re-industrialisation and

facilitate development of a circular economy. As at end March 2022, the Recycling Fund has already approved about \$660 million for over 1 000 recycling enterprises, covering projects on treatment of different types of recyclables, including waste paper, waste plastics, waste metal, waste wood, food waste, etc. In recognition of the efforts of frontline staff of the recycling business amidst the epidemic, EPD also launched the One-off Frontline Recycling Staff Support Scheme on 21 March 2022 upon the endorsement by the Advisory Committee on Recycling Fund. A sum of \$100 million has been earmarked to provide financial support to frontline recycling staffs. Each eligible staff would receive a monthly allowance of \$2,000 for five months, i.e. a total subsidy of \$10,000 per person. About 7 000 frontline staff are estimated to benefit from the scheme.

47. As substantial space is required for recycling operations, we have been taking a multi-pronged approach, including leasing out land parcels in the EcoPark at an affordable price, as well as working closely with the Lands Department to provide short-term tenancy sites designated exclusively for recycling uses. In addition, the Government is also actively identifying more land for the long-term development of the recycling industry. For instance, the Government is considering reserving land for the construction of multi-storey buildings in new development areas for the recycling industry as well as the expansion of the EcoPark.

48. ENB has been actively encouraging the public and private sectors to procure products and services that incur minimal adverse environmental impacts (including decarbonisation, reduction in air pollutant emissions, waste reduction, etc.). As many of these products are made of recycled materials, promoting green procurement can also boost the demand of recyclables and create business opportunities for the recycling industry, thereby facilitating the development of a circular economy. At present, the Government's green procurement list has already covered 183 products and services. We have also been promoting green procurement to the private sector through information sharing on our website, organising forums, etc.

Development of New Waste-to-Energy Facilities

49. To achieve the goals of moving away from the reliance on landfills for MSW disposal by around 2035 and carbon neutrality in waste management before 2050, the Government is on one hand committed to promoting waste reduction at source and various means of recycling, and on the other hand expediting the development of sufficient WtE facilities with a view to converting unavoidable and non-recyclable MSW into resources comprehensively. The Integrated Waste Management Facilities Phase 1 (I•PARK1), which is now being built near Shek Kwu Chau, will be the first

WtE facility that adopts advanced incineration technology to treat MSW in Hong Kong. I•PARK1 is targeted for commissioning in 2025 with a treatment capacity of 3 000 tonnes of MSW daily.

50. We will commence in the first half of this year the Environmental Impact Assessment (EIA) and the technical studies for the Tsang Tsui middle ash lagoon site in Tuen Mun for developing the Integrated Waste Management Facilities Phase 2 (I•PARK2), which would also adopt advanced incineration technology and is targeted to treat around 4 000 tonnes of MSW daily. The Tsang Tsui site was one of the potential sites under consideration when the Government was planning for the development of I•PARK1, and its conditions are relatively mature for developing WtE facilities. This will be conducive to the expeditious commencement and completion of the construction works for I•PARK2, with an aim to commence operation in the early 2030s.

51. Modern WtE facilities have already been proved to be safe, efficient and decarbonising while converting waste into energy. These facilities can be compatible with the overall district planning and development as well as in harmony with the surrounding environment. Apart from I•PARK1 and I•PARK2, we will commence a territory-wide site search study in parallel to identify other potential sites suitable for developing similar WtE facilities in order to build more WtE facilities, so as to achieve the goal of “Zero Landfill”. We will duly consider various relevant factors including geographical location, available land, environmental impacts, waste transportation arrangements and the distribution of waste management infrastructure in the study.

52. To meet the long-term needs of waste management in Hong Kong, the Government commits to continue developing sufficient WtE facilities and, coupled with the continued efforts on waste reduction and recycling, strives to achieve “Zero Landfill” by 2035. During the transitional period before sufficient WtE facilities come into operation, landfills are still necessary to handle MSW for meeting the short to medium term waste handling demand in Hong Kong.

WAY FORWARD

53. In the coming future, ENB will continue to implement strategies and actions set out by the Waste Blueprint in full force, but our progress hinges on multiple factors, including the change in the market environment as well as the co-operation of members of the public and different sectors of our society. Therefore, in order to realise the vision and keep abreast of the latest situation, ENB will adopt a pragmatic approach to conduct periodic review of and even

update our strategies and targets roughly every five years to timely meet the prevailing community needs. During the review and update, ENB will take account of the latest developments of waste recycling and treatment in Hong Kong and other places, and consult relevant stakeholders.

ADVICE SOUGHT

54. Members are invited to note ENB's strategies and work under the Waste Blueprint, as well as the progress updates of its major policy initiatives, and offer views.

Environment Bureau
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