

For discussion  
on 26 March 2007

## Legislative Council Panel on Environmental Affairs

### Update on the Progress of the Key Initiatives in the “Policy Framework for the Management of Municipal Solid Waste (2005-2014)”

#### PURPOSE

This paper updates Members on progress of the key initiatives in the “Policy Framework for the Management of Municipal Solid Waste (2005-2014)” (Policy Framework).

#### BACKGROUND

2. To address the waste problem in a holistic manner, the Administration published the Policy Framework in December 2005, which sets out a comprehensive waste management strategy for the next ten years. Based on the waste management hierarchy of “Avoidance and Minimisation”, “Reuse, recovery and recycling”, “bulk reduction and disposal” and the “polluter-pays principle”, the Policy Framework promulgated a series of policy initiatives to move towards the following targets recommended by the Council for Sustainable Development and adopted in the Government’s “A First Sustainable Development Strategy for HK”:

- (a) **Target 1 – Waste Avoidance and Minimization:** Reduce the amount of municipal solid waste (MSW) generated in Hong Kong by 1% per annum up to the year 2014, based on the 2003 levels.
- (b) **Target 2 – Reuse, Recovery and Recycling:** Increase the recovery rate of MSW to 45% by 2009 and 50% by 2014.
- (c) **Target 3 – Bulk Reduction and Disposal:** Reduce the total MSW disposed of at landfills to less than 25% by 2014.

3. The LegCo Panel on Environmental Affairs considered the Policy Framework on 15 December 2005, and a special meeting was convened by the

Panel on 19 January 2006 to invite views from deputations. Members of the Panel and other stakeholders were generally supportive of the initiatives under the Policy Framework.

## **OUR WASTE STATISTICS**

4. A summary of the recently available waste statistics for 2006, the first year of implementation of the Policy Framework initiatives, is at Annex. Compared to the previous year, the amount of MSW disposed of at our landfills dropped by 1% (or 36,000 tonnes) against an economic growth of 6.8% in 2006. Equally encouraging is the increase in the recovery rate of domestic waste from 16% to 20% in only one year's time. With the increase in domestic waste recovery, the overall recovery of MSW also increased from 43% in 2005 to 45% in 2006, three years ahead of the target listed in para 2(b) above.

5. There are however areas of concern. Even though the amount of MSW landfilled was reduced by 1% in 2006, there is still a long way to go in achieving the Policy Framework's target of reducing the total MSW landfilled to less than 25%. In addition, despite our efforts in waste reduction, the amount of MSW generated remains on an increasing trend, which is likely to be the result of robust growth in commercial, industrial and tourism-related activities in 2006, which resulted in about 4% increase in commercial and industrial waste generation. It is also noteworthy that while the amount of MSW recovered increased from 2.59 million tonnes in 2005 to 2.84 million tonnes in 2006, the amount of MSW recovered for local recycling actually dropped to 0.11 million tonnes. These figures strongly indicate that despite the good results achieved for source separation and recycling, the other policy initiatives in the Policy Framework, in particular MSW charging, producer responsibility schemes (PRSs), EcoPark and Integrated Waste Management Facilities (IWMF), must press ahead in full speed. The implementation progress of the individual initiatives under the Policy Framework is set out in more detail in paragraphs 6 to 24 below.

## **KEY INITIATIVES IN THE POLICY FRAMEWORK**

### **Source Separation of Domestic Waste Programme**

6. Launched in January 2005, the Source Separation of Domestic Waste Programme is a territory-wide programme which aims at providing suitable recycling facilities for domestic waste at locations as close as possible to their generation sources, and at the same time broadening the types of recyclables to be recovered. It encourages community participation in recycling and

facilitates the provision of a reliable source of materials for the recycling industry.

7. As at end January 2007, there were 504 housing estates participating in the Programme, covering about 0.7 million households and some 30% of the population. Around half of them have implemented a floor-to-floor mode of waste separation, while the remaining set up waste separation facilities on the ground floor. In general, the participating estates have reported encouraging results, with an overall 3 to 4% reduction in the waste disposal. In view of the encouraging recovery rate of domestic waste in 2006, we will continue to press ahead with the Programme with a view to achieving the Policy Framework's target of covering 700, 1,140 and 1,360 estates by the end of 2007, 2009 and 2010 respectively. As stated in the Policy Framework, our target is to achieve a domestic waste recovery rate of 26% by 2012.

8. As regards commercial and industrial waste, the Wastewi\$e Scheme has been launched to encourage businesses in Hong Kong to voluntarily reduce the amount of waste generated within their establishments or through their services and products. Businesses participating in the Scheme have to set and implement waste prevention and reduction targets while Government gives free technical advice and monitors the progress. Each year, we present Wastewi\$e logos to the participants to honour their contributions to waste reduction and recycling. The number of participating organizations has increased to over 1,500 since the establishment of the Scheme in 1999. Many large organizations, prominent listed companies and public utilities are members of the Scheme and recipients of the Wastewi\$e logo. In addition, in order to manage the increasing amount of organic waste (mainly food waste) generated from the commercial and industrial activities in Hong Kong, we are also planning to develop organic waste treatment facilities that would treat and recycle source separated organic waste, from establishments including the catering and food processing industries as well as restaurants, into useful products.

### **Producer Responsibility Schemes**

9. PRS is a key policy tool for waste reduction, recovery and recycling. Under a PRS, a host of stakeholders, who could be manufacturers, importers, wholesalers, retailers or consumers, shall share the eco-responsibility of handling the products from cradle to grave, so as to avoid and minimize their environmental impact. As set out in the Policy Framework, we will introduce a Product Eco-responsibility Bill (PER Bill) to provide a legal framework for implementing PRSs.

10. Our proposal on the PER Bill was discussed at this Panel in April 2006. While supporting the implementation of PRSs in principle, Panel members expressed reservations on an “umbrella” legislative approach, and would like to consider the PER Bill together with individual schemes. Following this advice, we have embarked on a study on the environmental levy on plastic shopping bags, which would become the first individual scheme under the PER Bill. We aim to present a detailed proposal on this scheme to the Panel very shortly. With the support of the public and Members, we aim to introduce the PER Bill into the Legislative Council within this year. Before the legislation kicks in, we have been working closely with the retail sector to reduce plastic bags on a voluntary basis. In 2006, ten major retail chains, including the three largest supermarkets, respectively entered into a “Voluntary Agreement on Plastic Bag Reduction” with the Environmental Protection Department (EPD), and pledged to reduce a total of 120 million plastic bags in a year. Up to December 2006, these retail chains have reported a reduction of 124 million plastic bags, well ahead of their reduction target. We are liaising with these retail chains to explore the possibility of raising the reduction target even further. In parallel, four major green groups organized a territory-wide “No Plastic Bag Day” campaign, with the support of EPD, between June and December 2006. The campaign won the overwhelming support of the public and more than 30 retail chains took part. Riding on the momentum, major retail chains have decided to continue to hold “No Plastic Bag Day” at least once a month in 2007, with a few turning it into a weekly, or even daily, event.

11. In addition to plastic shopping bags, waste tyres and waste electrical and electronic equipment (WEEE) are two other priority products for PRS under the Policy Framework. In the light of experience overseas and in developing an environmental levy on plastic bags, we consider working jointly with stakeholders to undertake voluntary schemes an effective means to promote acceptance and to develop practicable logistics. On this basis, we are exploring with the tyre industry on the feasibility of recovering and recycling tyres by the trade. In addition, we have run pilot contracts to recycle tyres currently handled by the Government, and are exploring the feasibility of using rubber modified asphalt for road pavement construction, so as to build up local tyre recycling capability. As for WEEE, we have engaged two non-profit organizations to recycle WEEE and computers since 2003, and over 170,000 items have been collected and processed so far. We have been encouraging the local computer industry to take on more responsibility in managing their products at post-consumption stage. A major computer company has recently launched a free-of-charge computer recycling service for local consumers, and we are exploring with other major local computer suppliers on the provision of

similar service.

## **Municipal Solid Waste Charging**

12. In keeping with the principle of “polluter pays”, MSW charging seeks to provide the public with direct economic incentives to reduce and recover waste. It is an essential tool to enable us to halt and reverse the increasing trend and achieve the waste reduction target set out in the Policy Framework. Since domestic waste accounts for about 70% of MSW generated, we carried out as a first step in exploring the feasibility of MSW charging in Hong Kong, a three month trial scheme in 20 estates from November 2006 to February 2007 to examine the logistical arrangement for waste recovery and disposal in different housing settings.

13. During the trial period, residents of the 20 estates were given different sizes of "designated bags" for disposal of non-recyclable domestic waste, while five of the participating estates also tried out "food waste bags" to separate food waste from domestic waste. Useful information on the trial scheme was collected through quantitative surveys, a questionnaire survey and a series of view sharing workshops.

14. We are reviewing the findings from the scheme and the views collected from residents and property management companies of the participating estates. Our initial observations suggest that a volume-based approach for MSW charging would be feasible under a domestic estate type household setting with logistical support available for them to source separate recyclable materials. More consideration is being given to the design specifications, distribution and collection of the designated bags, etc. However, in designing a practicable scheme for the whole of Hong Kong, quite a number of important issues have to be addressed. In particular, we have to consider measures necessary to encourage compliance such as the provision of necessary logistical support, and the enforcement measures needed to deter charge evasion and flytipping. Consideration will also need to be given to possible constraints at singleton buildings which may have limited or no source separation facilities. Village housing in suburban areas may need a different mode of collecting recyclables and unavoidable waste. In addition, the nearly 30% of the total MSW disposed of by commercial and industrial undertakings may also require a separate system of collection and treatment. Lastly, we will formulate the mode and level of charging based on the “polluter pays” principle with a view to providing economic incentives for waste reduction.

15. Our on-going feasibility study will cover all these issues incrementally.

In view of the territory-wide implication of such a scheme, we will consult the public on practicable options in the second half of this year before we introduce the relevant legislation into LegCo.

### **Promoting “Circular Economy”**

16. While the increase in waste recovery rate is encouraging, our latest waste statistics suggest that we are still relying on the export of the recovered materials as the primary outlet for MSW recycling. We therefore need to continue with our effort to promote a “circular economy” within Hong Kong, whereby our waste is turned into useful products and channeled back to the local economic chain. To this end, the EcoPark in Tuen Mun seeks to provide long-term land at affordable costs for the local environmental and recycling industries with a view to encouraging them to invest in advanced and cost-effective technologies. Funding for the project was approved by LegCo Finance Committee in March 2006 and construction work started in July 2006. A tender exercise was called in end 2006 and we are completing the tender assessment for tenancies for the first batch of three lots in Phase I of the EcoPark. The lots are designated for processing waste plastics, vehicle tyres, wood, plaster, glass and other building materials. In addition to the EcoPark, we have been providing land to the recycling trade through short-term tenancies. As at February 2007, 36 sites with an aggregate area of 7.4 hectares were leased exclusively to the recycling trade.

17. The Policy Framework reaffirms the adoption of a green procurement policy by Government departments as another key measure to promote a “circular economy”. Over the past four years, the Government purchased more than \$180 million worth of “green” products, including recycled paper, office stationery, cleansing supplies, etc. The Government has also incorporated “energy label” under the “Energy Efficiency Labeling Scheme” as a mandatory requirement in the purchase tenders for room coolers, refrigerators and photocopiers. Details of the green measures adopted by the Government were considered by the Panel in December 2006 (paper CB(1) 513 06-07(04)).

18. In addition, the Government will continue to provide funding support for research and development in new recycling technologies, community engagement programme on waste minimization, trial for waste recovery and reuse etc. through the Innovation and technology Fund, the Small and Medium Enterprises Development Fund, the Environment and Conservation Fund (ECF), the Quality Education Fund, etc. In 2006, 45 relevant projects involving a total funding of about \$12 million were supported by these funds.

## **Provision of Waste Management Facilities**

19. Our three strategic landfills will be full within the next decade. Even though the waste reduction and recovery initiatives under the Policy Framework will reduce the volume of waste generated and disposed of, we still need to extend the lifespan of our landfills as the repository for our unavoidable waste. In this connection, the feasibility and environmental impact assessment (EIA) studies for North East New Territories and South East New Territories Landfill extensions are in progress and their EIA reports will be ready for public exhibition and ACE's consideration within 2007. The feasibility and EIA study for the West New Territories Landfill extension will commence soon.

20. Hong Kong is one of the very few modern cities that still rely solely on landfill for waste disposal. Yet given our waste generation trend, the sole reliance on landfill disposal is clearly not a sustainable solution to our waste problem. We need to develop multi-technology, state-of-the-art IWWMF to reduce the volume of waste before final disposal. The early commissioning of the IWWMF would also enable us to achieve the Policy Framework's target of reducing the total MSW landfilled to less than 25% by 2014,

21. In this connection, an ACE delegation visited the Netherlands and Germany in March 2006 to obtain first hand knowledge on the experience of those countries in MSW management and treatment. Based on the recommendations of the delegation, we have refined the proposed technologies to be adopted for developing the IWWMF, whereby thermal treatment will be adopted as the core technology, while biological treatment will be used for source-separated biodegradable waste and mechanical sorting and recycling for clean mixed recyclables. We have initiated a site search exercise to identify suitable sites, taking into account environmental, technical/engineering and economic considerations, as well as social impact and implications to consumers/users. This will be followed by detailed feasibility and EIA studies.

22. Subsequent to the commissioning of the IWWMF and the implementation of the various PRSs, we will consider introducing landfill disposal bans for specific types of waste and untreated municipal solid waste. We will consult the public before introducing relevant legislation.

## **Public Education Programme and Partnership**

23. Public support and participation is critical to the successful implementation of the initiatives under the Policy Framework. To support the

launch of the Policy Framework, “waste avoidance and reduction” was featured as the main theme in publicity and education activities organized such as the World Environmental Day 2006, the Hong Kong Environmental Protection Festival 2006-07, the 6th Hong Kong Green School Award and the Student Environmental Protection Ambassador Scheme 2006-07. In addition, we have been working closely with green groups and local corporations to organize specific waste reduction activities, notable examples being the “Voluntary Agreement on Plastic Bag Reduction” and the “No Plastic Bag Day” mentioned in paragraph 10 above.

24. To add further impetus to our public engagement efforts, we have also obtained the ECF Committee’s support to reserve \$10 million for a public education programme that promotes our environmental initiatives under the Policy Framework. Our plan is to make use of this designated funding to support community-wide activities such as public seminars, exhibitions and other activities that will promote public awareness of our waste problem and their support of the initiatives under the Policy Framework. We will invite funding applications in end March 2007.

## **WAY FORWARD and ADVICE SOUGHT**

25. We will steadfastly continue our efforts in implementing the initiatives under the Policy Framework after a promising first year. High on the agenda are Source Separation, PRSs, MSW charging, landfill extensions and IWMF. More importantly, the public education programme should be stepped up and rolled out.

26. Members are invited to note the latest waste statistics and the implementation progress of the key initiatives under the Policy Framework. We call on Members and the public to give full support to these initiatives as we roll out detailed proposals in due course.

**Environmental Protection Department  
March 2007**

**Key Waste Data in 2006****A. Recovery of Municipal Solid Waste (MSW)**

	2005	2006
Overall MSW Recovery Rate <i>Policy Framework Target: 45% by 2009 50% by 2014</i>	43%	45%
Domestic Waste Recovery Rate <i>Policy Framework Target: 20% by 2007 26% by 2012</i>	16%	20%
Commercial & Industrial Waste Recovery Rate	63%	63%
Total quantity of MSW recovered	2.59 million tonnes	2.84 million tonnes
MSW recovered for export	2.43 million tonnes	2.73 million tonnes
Total export value	HK\$4.5 billion	HK\$5.3 billion
MSW recovered for local recycling	0.16 million tonnes	0.11 million tonnes

**B. Disposal of Municipal Solid Waste (MSW)**

	2005	2006
Domestic waste landfilled	2.492 million tonnes	2.421 million tonnes (-2.8%)
Commercial and industrial waste landfilled	0.931 million tonnes	0.966 million tonnes (+3.8%)
Total MSW landfilled <i>Policy Framework Target: Reduce the total MSW landfilled to less than 25% by 2014</i>	3.423 million tonnes	3.387 million tonnes (-1.0%)

### C. Generation of Municipal Solid Waste (MSW)

	2005*	2006*
Domestic waste generated	2.982 million tonnes	3.042 million tonnes (+2%)
Commercial and industrial waste generated	2.551 million tonnes	2.655 million tonnes (+4.1%)
Total MSW generated (i.e. MSW recovered + MSW landfilled) <b><i>Policy Framework Target: Reduce the MSW generated by 1% per annum up to 2014</i></b>	6.013 million tonnes	6.227 million tonnes (+3.6%)

\* MSW recovered from ad-hoc activities such as moving, refurbishing, demolition, etc with uncertain origins cannot be classified into either domestic or commercial/industrial waste. Hence the small discrepancies in the total figures.