

**Confirmed Minutes of the 150<sup>th</sup> Meeting of  
the Advisory Council on the Environment  
held on 10 March 2008 at 2:30 pm**

**Present:**

Prof LAM Kin-che, SBS, JP (Chairman)  
Dr Dorothy CHAN, BBS  
Mr James GRAHAM  
Prof Paul LAM  
Ms Goretti LAU  
Dr NG Cho-nam, BBS  
Prof POON Chi-sun  
Mr Markus SHAW  
Mr TSANG Kam-lam  
Prof WONG Tze-wai  
Mr Carlson K S CHAN (Secretary)

**Absent with Apologies:**

Prof WONG Yuk-shan, BBS, JP (Deputy Chairman)  
Ms Betty HO  
Prof Howard HUANG  
Mr Edwin LAU  
Dr MAN Chi-sum, JP  
Mr Eddie WONG  
Mr Simon WONG  
Dr YAU Wing-kwong

**In Attendance:**

Ms Anissa WONG, JP	Permanent Secretary for the Environment
Mr Joseph SHAM	Acting Assistant Director (Country & Marine Parks), Agriculture, Fisheries and Conservation Department
Mr P Y TAM	Assistant Director/Technical Services, Planning Department
Ms Monica KO	Principal Information Officer, Environmental Protection Department (EPD)
Ms Josephine CHEUNG	Chief Executive Officer (CBD), EPD
Ms Loletta LAU	Executive Officer (CBD), EPD

### **In Attendance for Agenda Item 3:**

Mr Raymond FAN, JP	Deputy Director of Environmental Protection (2), EPD
Mr Alfred LEE	Assistant Director (Waste Management Policy), EPD
Mr Vincent TANG	Assistant Director (Nature Conservation and Infrastructure Planning), EPD
Dr Ellen CHAN, JP	Assistant Director (Environmental Infrastructure), EPD

### **In Attendance for Agenda Item 4:**

Dr Ellen CHAN, JP	Assistant Director (Environmental Infrastructure), EPD
Mr Maurice YEUNG	Principal Environmental Protection Officer (Assessment and Noise), EPD
Mr Alex NG	Principal Environmental Protection Officer (Special Waste and Landfill Restoration), EPD

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### Action

#### **Agenda Item 1 : Confirmation of the draft minutes of the 149<sup>th</sup> meeting held on 14 February 2008**

The draft minutes were confirmed without amendments.

#### **Agenda Item 2 : Matters arising from the minutes of the 149<sup>th</sup> meeting held on 14 February 2008**

2. There were no matters arising from the minutes of the last meeting.

#### **Agenda Item 3 : Update on the progress of the key initiatives in the “Policy Framework for the Management of Municipal Solid Waste (2005-2014)” (ACE Paper 9/2008)**

3. The Chairman informed Members that the Waste Management Subcommittee co-organized a seminar on Thermal Waste Treatment with the Environmental Protection Department (EPD) on 7 March 2008. Before the seminar, he received two letters and a slogan statement from some petition groups addressed to the Council. The letters and slogan statement were tabled for Members’ information.

4. Mr Alfred Lee briefed Members on the progress of the key initiatives in the “Policy Framework for the Management of Municipal Solid Waste (2005-2014)” (Policy Framework).

5. The Chairman considered that it was important to adopt an integrated approach laid down in the Policy Framework to tackle the imminent waste problem by setting clear targets. He enquired about the progress of the achievement of the targets. Mr Raymond Fan said that the three key waste management targets under the Policy Framework were –

- (a) to 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) to increase the recovery rate of MSW to 45% by 2009 and 50% by 2014; and
- (c) to reduce the total MSW disposed of in landfills to less than 25% by 2014.

On target (a), domestic waste disposed of in landfills continued to drop in 2007 by another 4%, despite an increase of about 1% in the local population, bringing a cumulated decrease in landfill disposal of domestic waste by about 6.8% since the launch of the Policy Framework. However, landfill disposal of commercial and industrial (C&I) waste increased by almost 16% in 2007, which was probably driven by robust economic growth and increased tourism. As a result, the overall landfill disposal of MSW (i.e. domestic as well as C&I waste) increased slightly by 1.6%. On target (b), the recovery rate of 45% for MSW was achieved in 2006, three years ahead of the target. It should be on track to achieve the 50% target by 2014. On target (c), the development and timely completion of the Integrated Waste Management Facilities (IWMPF) was critical to achieve the target. He highlighted that the package of 11 initiatives under the Policy Framework had to be proceeded in parallel to achieve the targets. He assured Members that continued efforts would be made to implement the package of initiatives to achieve the targets.

6. In response to a Member’s enquiry about target (a), Mr Raymond Fan said that the target of 1% reduction of MSW waste referred to the reduction

of absolute amount of waste based on the 2003 levels, regardless of any change in population.

7. In reply to a Member's enquiry about target (c), Mr Alfred Lee explained that in order to reduce the total amount of MSW disposed of in landfills to less than 25% by 2014, the remaining 75% would have to be handled through recycling and bulk reduction.

8. On the Chairman's enquiry about the characteristics of C&I waste, Dr Ellen Chan said that survey findings showed that C&I waste composed of a wide variety of waste types, such as paper, metal, plastics, food waste and residual waste from recycling activities, all of which had increased due to the growth in commercial activities.

9. A Member said that while the Government was making efforts to reduce C&I waste, there were plans to demolish the Government buildings in Wanchai which would increase unnecessary construction and demolition waste. Mr Raymond Fan said that the plans were to address the problem of shortfall in office premises in prime sites and no firm decision had been made. In conducting demolition projects, the Government would adopt the best waste management strategy to minimize the generation of construction and demolition waste.

10. In reply to the Chairman's enquiry about major constraints in tackling the increasing trend of C&I waste, Mr Raymond Fan said that while the recovery rate of C&I waste had been maintaining at satisfactory level of about 60%, the major difficulty was the reduction of C&I waste at source. Efforts were being made through various means to achieve reduction at source. The Product Eco-responsibility (PER) Bill, being examined by the Legislative Council (LegCo), would provide a legislative framework to introduce producer responsibility schemes (PRSs). New technologies would be pursued to reduce and recycle organic waste, which was one of the key components of C&I waste. Close liaison would be maintained with the commercial sector to achieve the target.

11. A Member reported that the Waste Management Subcommittee discussed the progress of the key initiatives in the Policy Framework at the meeting in early March. The Subcommittee was pleased to note the

introduction of the PER Bill to the LegCo but expressed concern about the slippage of the target implementation programme of the overall PRS package, especially the PRSs for waste electrical and electronic equipment (WEEE) and packaging waste. While voluntary measures were in place, PRS would be an important economic disincentive to reduce waste at source and increase recycling. It was disappointed that there was no firm commitment from the Administration to introducing the PRSs for various products.

12. Mr Alfred Lee said that the PER Bill was an umbrella legislation providing a legislative framework for the introduction of PRSs for various products if necessary. Based on the experience in developing the environmental levy for plastic shopping bags, the introduction of voluntary PRS for individual products would serve as a useful means in developing *modus operandi* most suitable for Hong Kong, and where necessary, provide a good reference for the development of the relevant statutory scheme. In this connection, voluntary WEEE-related schemes were being rolled out, including the computer and fluorescent lamp recycling programmes. As for packaging waste, EPD had commissioned a consultancy study to examine the issue of over-packaging. Yet, unlike other economies that regulated over-packaging, Hong Kong did not have a manufacturing base and most of the commodities were imported. It was therefore necessary to examine whether and how regulatory frameworks applicable elsewhere could similarly be applied in Hong Kong. Meanwhile, parallel efforts were being made to explore voluntary initiatives, such as recycling of glass bottles and reduction of festive packaging.

13. A Member said that MSW charging scheme was another important policy tool for waste reduction and recovery. The Subcommittee noted that the trial scheme revealed the difficulties of introducing a purely volume-based MSW charging scheme in Hong Kong. A 16-month territory-wide baseline survey would be conducted to consider the modes of charging. The Subcommittee considered that the survey period was too long and there would be significant delay to the implementation of the charging scheme. The Subcommittee suggested imposing volume-based MSW charging scheme on C&I waste as a “fast-track” approach before introducing the scheme to domestic waste. It was important to send a message to the community that the Administration was determined to introduce the MSW charging scheme while rolling out other initiatives such as the IWMP. Based on the experience of construction waste charging scheme, the scheme could successfully provide

incentives for contractors and designers to reduce waste though there were some difficulties in the initial stage of implementation.

14. On the baseline survey, Mr Raymond Fan said that the 16-month period was necessary for an in-depth study of a considerable sample size in order to collate credible data for developing a territory-wide charging scheme. He noted Members' requests and said that as part of the overall survey, there might be scope to advance the consideration of a volume-based scheme for certain C&I waste.

15. The Chairman considered that it would be useful to come up with some viable options for application to C&I waste before completion of the survey. This would enable the public to understand the waste management problem in a holistic manner, especially for the smooth implementation of other key initiatives such as the IW MF.

16. A Member considered that to deter waste generation, the charging scheme should be directly related to the amount of waste produced. The volume-based or variable charging scheme, which could serve this purpose, should be accorded priority than the flat rate system or those using proxies, such as water consumption or rates as the basis for determination of waste charges. Otherwise, there would not be incentive for reducing waste generation and the Government would be accused of charging for the purpose of increasing revenue.

17. Mr Raymond Fan said that the use of a proxy as a means to assess waste generation was proposed with reference to the experience overseas. He further noted that the introduction of a volume-based charging scheme in other places was usually preceded by some form of flat rate or proxy charging scheme. The introduction of a proxy charging scheme could therefore be seen as a means to instill public acceptance of the "polluter-pays" principle, and could facilitate an eventual transition to a variable-rate charging scheme that would adhere more closely to the spirit of "polluter-pays".

18. A Member considered that a charging scheme had dual purposes. First, it would arouse the attention of the public by putting a price on generating waste to induce behavioural change. Hong Kong lagged behind many overseas countries in terms of waste management because the public considered that it

was the Government's problem. The crux of the matter was not about a volume-based or a flat rate charging scheme, but educating the public about the seriousness of the problem by imposing a kind of economic disincentive. Second, the charging scheme would be a tool to achieve the target of waste reduction. While the green groups promulgated a volume-based charging scheme, a practical and sensible approach had to be adopted having regard to the unique situation of Hong Kong. A phased approach might be a possible option for implementation. The drive of the legislation should not come from the Government but from the general public for a green environment. During the course of conducting the baseline survey, priority should be given to public education for behavioural change.

19. A Member fully agreed that attitude change in the wasteful habits of Hong Kong lifestyle was the most important. Public education should not be confined to school education. Large-scale publicity programme through mass media and launching of more public seminars would be useful in increasing public awareness.

20. A Member considered that MSW charging was a controversial subject and the implementation in Hong Kong was not an easy task. The public would consider it as an additional taxation measure which would add hardship to the low income groups. She asked what other measures would be taken if the charging scheme would take a longer time than expected.

21. Mr Raymond Fan said that MSW charging was a missing link for waste avoidance and minimization. Regardless of the eventual form of MSW charging scheme to be implemented, it was important to spell out clearly that the purpose of the scheme was for behavioural change rather than generation of public revenue. He fully agreed that public education was the key to change wasteful habits. The Chairman said that the basis of charging should thus be carefully considered to induce behavioural change.

22. Ms Anissa Wong said that the Policy Framework set out a comprehensive strategy to tackle the waste problem, including the MSW charging scheme for reducing waste at source and the IWMP as a scientific approach for waste treatment. In view of the complexity of the IWMP project, a long lead time of about eight to ten years would be required from site searching to operation. The different initiatives had to be proceeded in parallel.

It would not be possible to wait for the details of the MSW charging scheme to be sorted out before starting the site selection of the IWMF. The implementation of MSW charging scheme in Hong Kong was a complicated issue and could not be implemented within a short timeframe as the public had got used to the efficient waste management service currently provided free of charge by the Government. If planning work for IWMF did not start at this stage, it would be too late to deal with the waste disposal problem given the short life span of the landfills.

23. Ms Anissa Wong further explained that when formulating a MSW charging scheme, there was a need to ensure its practicability. The trial scheme to examine the logistical arrangement for introducing a variable rate using designated garbage bags identified a number of practical issues. Given the multi-storey multi-tenant household setting and the prevailing waste collection arrangements in Hong Kong, a variable rate charging scheme would likely give rise to implementation difficulties in terms of ascertaining the amount and sources of MSW on individual household basis as well as hygiene problem. It would be necessary to examine alternative means of charging, such as a flat rate system or a proxy system. For C&I waste, early actions would be taken to explore feasibility of a variable rate scheme. In the meantime, it would be necessary to arouse public awareness on the urgency of the waste problem. Continuing efforts on public engagement would therefore be made to increase public awareness and acceptance of policy tools. After all, the achievement of the targets would hinge upon the cooperation and participation of the community as a whole.

24. A Member agreed that all the 11 key initiatives in the Policy Framework, which were interrelated, had to be proceeded in parallel to achieve the three targets. There was an urgent need to proceed with the MSW charging scheme and IWMF. The former targeted at waste minimization while the latter targeted at bulk reduction and disposal. For the MSW charging scheme, he agreed that it would be difficult to implement the volume-based charging for domestic waste but it might be possible for C&I waste.

25. On the development of IWMF, a Member said that he learnt that the Green Island Cement Limited (GIC) proposed an alternative option of co-combustion at the current cement plant site at Tap Shek Kok in Tuen Mun which could meet the emission standards and achieve the synergy of waste

management and cement manufacturing operations. Mr Raymond Fan noted that the GIC had conducted a Pilot Plant research project at the GIC site in 2005 with the Pilot Plant capacity of less than 40 tonnes per day (tpd). He understood that the claim of meeting the emission standards was confined to the pilot project. The proposed IWWMF was a much larger scale plant with state-of-art technology for treatment capacity of 3,000 tpd. To ensure a level-playing field, the first phase of the IWWMF project would be taken forward as a Design-Build-Operate contract on the basis of the well-established competitive and open tendering process for government projects. The IWWMF was an important facility as part of the overall strategy for sustainable management of MSW. The Government was open-minded and welcomed suggestions. Any interested party or technology provider was welcome to participate in the Design-Build-Operate procurement process for developing the IWWMF at the finally chosen site. In response to the Chairman's enquiry, Mr Raymond Fan confirmed that the tendering process would allow any tenderer who could comply with the specified tendering requirements to bid for the project.

26. A Member said that the Advisory Group on Waste Management Facilities, in which he was one of the members, had identified a number of technologies for waste treatment and concluded that IWWMF with incineration as the core technology should be pursued and only proven technologies capable for large treatment capacity would be considered.

27. The Chairman asked whether the pilot scale sorting and recycling plant could be scaled up and incorporated in the IWWMF project. Mr Raymond Fan said that overseas experience showed that if source separation was performed properly, there should be few recyclables in the waste for thermal treatment. For the case of Hong Kong, a pilot plant was necessary to ascertain the presence of residual recyclables remaining in the mix of MSW after source separation. This would provide information on the possibility of waste recycling before putting the waste for thermal treatment. Mr Vincent Tang added that the site for the first phase of IWWMF was 10 ha and there was room consideration of a sorting and recycling facility if it proved to be necessary.

28. A Member said that the German experience of thermal waste treatment showed that the incineration facilities should be close to domestic development for maximizing the use of energy generated from the facilities. The site selection of the IWWMF had to take this factor into account.

Mr Raymond Fan explained that the heat generated from the thermal waste treatment facility could be used directly if the facility was located near domestic development, such as that in Hamburg where the energy so generated was used for cooling and heating systems. If the facility was not near domestic development, the heat generated could still be utilized by transmitting through the grid for electricity generation as in the case of other overseas countries.

29. On the EcoPark, a Member expressed concern about its operation, in particular in the aspect of coordination between Government departments. He learnt that there were complications in the occupation of the EcoPark in the first two phases. Moreover, the rental cost of industrial estate sites managed by the Hong Kong Science and Technology Parks Corporation seemed to be cheaper than that of the EcoPark, thus reducing the attractiveness of the latter. He noted that a biodiesel plant for recycling used cooking oil, which should more appropriately be located in the EcoPark, was planned to be set up in the Tseung Kwan O Industrial Estate.

30. Dr Ellen Chan said that there were ongoing dialogues regarding the EcoPark with trade associations, federations, stakeholders as well as within the Government. The operation of the industrial estate sites was different from that of the EcoPark. The operators were required to purchase the lots in the industrial estates while the EcoPark involved a ten-year tenancy agreement. The EcoPark was provided with infrastructural and seafront facilities and the rental cost was comparatively low. The choice of individual operators in locating their facilities was a commercial decision. As the EcoPark was a new establishment in Hong Kong, she assured Members that its operation would be closely monitored. Assistance would be offered to potential users and close liaison with relevant parties would be maintained to achieve the objective of developing and promoting diversified recycling businesses at the site.

31. On food waste management, the Chairman enquired about the implementation of the pilot plant and the full-scale organic waste treatment facilities (OWTF). Mr Vincent Tang said that the OWTF would be developed in two phases, each phase handling 200 tpd source-separated organic or food waste. The plant would be based on biological treatment technology, including composting and anaerobic digestion. The first phase would be located at Siu Ho Wan on Lantau Island for commissioning before mid-2010s. As Hong Kong did not have an established mechanism for food waste collection and

treatment, a pilot plant would be established in Kowloon Bay Waste Recycling Centre based on in-vessel composting to be commissioned in mid-2008. This would be important to gather information and experience on collection and treatment of source-separated food waste from C&I establishments.

32. Ms Anissa Wong added that the pilot plant would run in parallel with the planning of OWTF and would not defer the commissioning of the OWTF which was proceeding in full speed. The capacity of the pilot plant was only 4 tpd with the purpose of gathering information on how food waste could be collected from enterprises. Unlike other types of waste, the mechanism of collecting organic waste from segregated locations was important to ensure timely handling of the waste.

33. The Chairman considered that the proposed amendments to the Building Regulations would be important to ensure the provision of refuse storage space in new domestic buildings. He asked whether there were hurdles to the proposed legislative amendments. Dr Ellen Chan said that the proposed legislative amendments aimed at mandating the provision of refuse storage and material recovery room on every floor of new domestic buildings and the domestic part of composite buildings. The proposal was supported by the trade and the LegCo Panel on Environmental Affairs. The discussion at this stage focused on the implementation details, such as exemptions to small-scale developments. The plan was to introduce the proposed legislative amendments within the current legislative session.

34. Referring to the need for public support and participation for the various waste initiatives, a Member considered that the responsibility of waste reduction should be on the general public rather than the Government. He suggested that more open fora and seminars be held in town halls and community centres to reach out to the public for exchanging views and disseminating information or clarifying doubts from the professional point of view. Mr Raymond Fan assured Members that more public engagement programmes would be rolled out at the district level to arouse public awareness and exchange views on various initiatives under the Policy Framework.

35. The Chairman summarized Members' views as follows –

- (a) given the seriousness and imminence of the waste problem, there

was a pressing need to tackle the problem with a sustainable waste management strategy in an integrate approach as laid down in the Policy Framework;

- (b) the Council was pleased to note the achievement of the target in increasing the recovery rate of MSW and significant progress of some initiatives, such as the introduction of the PER Bill to the LegCo, development of the IWMF and source separation of domestic waste programme;
- (c) the Council was concerned about the increase in C&I waste which hindered the achievement of the target of reducing MSW;
- (d) the Council considered that the package of 11 initiatives under the Policy Framework should be implemented in full speed in parallel with MSW charging and IWMF as critical and essential policy tools; and
- (e) the Council considered that public support and consensus were essential for the successful implementation of the waste management strategy and thus efforts should be made to increase public awareness to induce behavioural change.

**Agenda Item 4 : Revision of fees and charges under Noise Control Ordinance (Cap. 400) and Merchant Shipping (Prevention and Control of Pollution) (Charges for Discharge of Polluting Waste) Regulation (Cap. 413I)**  
***(ACE Paper 10/2008)***

36. Dr Ellen Chan briefed Members on the proposed revision of fees and charges under the Noise Control Ordinance (NCO) (Cap. 400) and the Merchant Shipping (Prevention and Control of Pollution) (Charges for Discharge of Polluting Waste) Regulation (MSPCR) (Cap. 413I). She explained that the proposed revision of fees under the NCO required the endorsement of the Council as stipulated in the legislation while the proposed revision of charges under the MSPCR was for Members' information.

37. A Member enquired about the regulatory framework for ships to

treat marine polluting waste. Dr Ellen Chan explained that Hong Kong had to comply with the International Convention for the Prevention of Pollution from Ships (MARPOL Convention). The marine polluting waste included both chemical and non-chemical waste. Ship operators could choose freely where to treat the waste. When ship operators intended to dispose of the waste in the Hong Kong territory, they had to make applications to the marine authority. EPD was responsible for the collection and treatment of the oily waste and noxious liquid substances arising from ships at the Chemical Waste Treatment Centre.

38. A Member considered that Hong Kong, being an international port and the largest container port, should not only rely on the MARPOL Convention as the regulatory framework. He noted that the Long Beach in the west coast of the US, a large container port, had introduced very stringent requirements on the disposal of marine polluting waste. He suggested that the Council be briefed about the broader picture on the overall environmental-related issues regarding pollution from ships as there were increasing concerns about pollution caused by the marine sector, including marine polluting waste and emission of air pollutants. A Member suggested that the subject of ballast water in the ships be also included. Dr Ellen Chan undertook to relay the concerns to parties concerned to provide relevant information to the Council.

(Post-meeting note: The parties concerned were informed and would brief Members on the subject in due course.)

39. A Member considered that the proposed increase of charges under the MSPCR might discourage ship operators to use the waste disposal facilities in Hong Kong. Dr Ellen Chan said that the proposed revision of charges under the MSPCR was the second phase after the one in 2006. Based on statistics, the increase of charges did not have much impact on the number of ships using the reception facilities of the Chemical Waste Treatment Centre. The charges after revision would only recover about 66% of the full variable operating cost and the Government was still providing subsidy. Mr Alex Ng added that the expenditure on waste treatment in terms of revenue for ship operators was not significant. Using 2007 data, a shipping company in Hong Kong would need to pay additional charges of about \$0.27 million for the MARPOL waste treatment after revision of the charges while the company's total revenue was about \$40 billion. Under the MARPOL Convention, Hong Kong Government,

as the port administrator, had the obligation to provide facilities for the disposal of MARPOL waste.

40. Ms Anissa Wong said that it was the responsibility of ship operators to treat the waste in accordance with the MARPOL Convention. The proposed fee revision was in line with the full-cost recovery principle in that users should pay for the costs of using the services. The charges in Hong Kong would not be particularly high in comparison with those of the neighbouring ports. Moreover, the fee levels after the current revision exercise was still below the full cost levels.

41. The Chairman concluded that the Council was supportive of the proposal which was in line with the “user-pays” principle and consistent with the established mechanism and guidelines for revision of fees and charges.

#### **Agenda Item 5 : Any other business**

##### **Site visit to the New Territories regarding illegal development**

42. The Chairman informed Members that in relation to the issue of illegal bridge traversing a natural stream in Tai Po raised by a Member at a previous meeting and the observation that there was an increasing trend of illegal development in the New Territories, a site visit would be arranged in April regarding illegal development from the environmental perspective. Members would be informed of the detailed arrangements.

##### **Tentative items for discussion at the next meeting**

43. The agenda was being compiled. Members would be informed in due course.

#### **Agenda Item 6 : Date of next meeting**

44. The next meeting was scheduled for 14 April 2008.

**ACE Secretariat**  
**March 2008**