

**Confirmed Minutes of the 231st Meeting
of the Advisory Council on the Environment (ACE)
held on 4 June 2018 at 2:30 pm**

Present:

Mr Stanley WONG, SBS, JP (Chairman)
Prof Nora TAM, BBS, JP (Deputy Chairman)
Dr Billy HAU
Dr HUNG Wing-tat, MH
Prof LAU Chi-pang, JP
Ms Julia LAU
Dr Michael LAU
Prof Kenneth LEUNG, JP
Mr Anthony LOCK
Ir MA Lee-tak, SBS
Ir Michelle TANG
Dr Eric TSANG
Prof Jonathan WONG, MH, JP
Mr Luther WONG, JP
Mr Simon WONG, JP
Prof WONG Sze-chun, BBS, JP
Mrs Alice CHEUNG, JP (Secretary)

Absent with Apologies:

Ir Cary CHAN, JP
Prof Albert LEE
Mr Andrew LEE
Ir Prof Irene LO, JP
Prof John NG
Ir Conrad WONG, BBS, JP

In Attendance:

Mr Donald TONG, JP	Permanent Secretary for the Environment/Director of Environmental Protection
Mr Edward LO	Assistant Director of Planning/Technical Services, Planning Department (Acting) (PlanD)
Mr Simon CHAN	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department (AFCD)
Miss Heidi LIU	Principal Information Officer, Environmental Protection Department (EPD)

Ms Becky LAM	Chief Executive Officer (CBD), EPD
Miss Dora CHU	Executive Officer (CBD) 1, EPD
Miss Apple LEUNG	Executive Officer (CBD) 2, EPD

In Attendance for Item 3:

Mr Dave HO	Assistant Director (Air Policy), EPD
Mr Brian LAU	Principal Environmental Protection Officer (Air Policy), EPD

Action

The Chairman welcomed Members to the meeting. Apologies of absence had been received from Ir Cary Chan, Mr Andrew Lee, Prof Albert Lee, Ir Prof Irene Lo, Prof John Ng and Ir Conrad Wong.

Item 1 : Confirmation of the draft minutes of the 230th meeting held on 5 March 2018 (Closed-door session)

2. The draft minutes were confirmed without amendments.

Item 2 : Matters arising (Closed-door session)

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

Item 3 : Proposals to Update the Indoor Air Quality Objectives under the Indoor Air Quality Certification Scheme for Offices and Public Places (ACE Paper 6/2018)

4. The Chairman informed Members that *ACE Paper 6/2018* briefed Members on the proposal to update the Indoor Air Quality objectives (IAQOs) under the IAQ Certification Scheme for Offices and Public Places (the Scheme) to tally with the latest IAQ guidelines published by the World Health Organization (WHO).

5. There was no declaration of interest by Members.

[The presentation team joined the meeting at this juncture.]

Presentation cum Question-and-Answer Session (Open session)

6. Mr Dave Ho introduced the background of the proposal to update the IAQOs under the Scheme to encourage property owners and management to adopt good IAQ management practices in their premises. With the aid of a powerpoint presentation, Mr Brian Lau explained the details of the proposal, including the certification requirements of the Scheme, review of the IAQOs and the proposed update of IAQOs.

Proposed update of the IAQOs

7. A Member appreciated the work of the Government in promoting and enhancing good IAQ and suggested making the Scheme mandatory. Mr Dave Ho said that a consultancy study commissioned by the Environmental Protection Department (EPD) revealed that most overseas countries adopted a voluntary approach to manage IAQ. The study also noted that it would be difficult to differentiate the responsibilities between owners and users should the management of IAQ become mandatory, and hence recommended EPD to continue to adopt the voluntary approach. Mr Ho said that EPD would continue to keep in view overseas developments on the approach on IAQ management.

8. A Member commented that the measurement of ten volatile organic compounds (VOC) species should be an additional requirement instead of an alternative compliance arrangement to total volatile organic compounds (TVOC). Mr Dave Ho explained that one of the proposed updates in the proposal was to replace the ten VOC species in the current IAQOs with the VOC species as set out in WHO's IAQ guidelines (2010) which were recommended based on scientific evidence of their health effects. He said that WHO had not yet published any IAQ guideline related to VOCs when the Scheme was launched in 2003. When considering the IAQOs to be established for VOCs at that time, the Government made reference to the standards adopted by some overseas jurisdictions and occupational health standards on workplace IAQ. As some of these VOC species were normally found in industrial workplaces only but not in indoor public places and offices, the Government now proposed adopting the six VOC species in WHO's IAQ guidelines to replace the current species. Mr Ho added that, among the six VOC species in the WHO's IAQ guidelines, formaldehyde (HCHO) was commonly emitted from furniture and therefore had been set as a separate IAQ parameter under the current IAQOs and would remain as a separate parameter in the updated IAQOs. For the remaining five VOC species, a consultancy study commissioned by EPD indicated that their concentrations at 30 Good Class IAQ premises were in general very low. Hence, the measurement of the five VOC species would only be

set as an alternative to the TVOC measurement.

9. As regards the proposed revisions to the alternative compliance arrangement for TVOC, a Member opined that the concentration of individual VOC species should be measured as any exceedance to the respective objectives could pose health risks to occupants even though the total concentration of the five VOC species was less than or equal to 200 µg/m³. Mr Dave Ho said that accredited IAQ Certificates Issuing Bodies (CIBs) would conduct a walk through inspection to identify any potential sources of VOCs in the premises and the need for measuring individual VOC species. As the cost of measuring VOC species would be much higher than that of TVOC, it would be more cost effective to measure the TVOC if no significant source of VOCs was identified at the premises. Mr Brian Lau further clarified that if the premises opted for the measurement of individual VOC species, the concentration of each of the five VOC species should comply with the respective objective.

10. Considering that the three physical parameters (i.e. room temperature, relative humidity (RH) and air movement) might be related to the growth of mould, a Member enquired on the reason for removing them from the IAQOs. Another Member also pointed out that the growth of mould was directly related to the three physical parameters and thus should be retained under the IAQOs. Mr Dave Ho said that the three physical parameters were related to human comfort rather than health protection and hence it was proposed to remove them from the IAQOs from health protection perspectives. However, EPD also recognised that the control of RH was essential to minimizing the growth of mould and thus the prescriptive checklist for mould assessment had stipulated the control of RH at below 70% as a requirement.

11. A Member said that the three physical parameters should still be measured to serve as a reference for the conditions for mould growth. Another Member also agreed to retain the three parameters given the ease of measurement and that human comfort should also be regarded as one of the objectives for improving the IAQ. Mr Brian Lau advised that EPD would draw up guidelines for CIBs and premises owners to control room temperature, RH and air movement with a view to addressing occupants' comfort in the premises.

12. A Member showed concern on the standard proposed for Formaldehyde (HCHO) (30-minutes) being the same as the level of HCHO (8-hours) for achieving a Good Class IAQ. Mr Brian Lau explained that existing IAQOs that were more

stringent than WHO's IAQ Guidelines would be retained in the proposed update. For HCHO, a new short-term objective for 30-minute HCHO was set at 100 µg/m³ having regard to WHO's IAQ guidelines (2010). As to the longer term effect of the pollutant, the WHO's IAQ guidelines (2010) stated that exposure to HCHO at about 200 µg/m³ would have long-term health effects. As the existing 8-hour HCHO objective of 100 ug/m³ for Good Class IAQ was more stringent than the long-term threshold of the pollutant advised by WHO (i.e., 200 µg/m³), it was suggested retaining the existing 8-hour objective for HCHO in the IAQOs.

13. In response to a Member's question on whether EPD would include additional parameters, e.g. TVOC, apart from the two IAQ parameters (CO₂, PM₁₀) during annual IAQ recertification for intermediate years, Mr Dave Ho said that a new IAQ parameter of mould was proposed to be included in the annual IAQ recertification given mould was commonly found in Hong Kong.

14. A Member asked whether the Scheme would be extended to include residential premises. Another Member opined that residential premises should also be encouraged to participate in the IAQ management programme for "healthy living". Mr Dave Ho explained that the Scheme was applicable to offices and public places installed with a mechanical ventilation and air condition (MVAC) system which could effectively control the fresh air intake, ventilation, etc. that were essential to maintaining a good IAQ. On the other hand, residential buildings normally relied on natural ventilation or exhaust fans which could not control the IAQ parameters as effectively as an MVAC system. He explained that the IAQ in residential premises hinged on whether the occupants could maintain adequate ventilation through natural ventilation and use of exhaust fans and also minimise emission sources such as using products of lower VOC content. EPD had thus been conducting a wide range of publicity activities, e.g. promotional messages on media and posters/videos in public transport to enhance public awareness of the importance of good practices to maintain good IAQ in their premises.

15. A Member suggested and another Member agreed that the Government might consider setting PM_{2.5} rather than PM₁₀ as the IAQ parameter given its negative impact on public health. Mr Dave Ho said the proposed update of IAQOs was set out having regard to factors including WHO's IAQ Guidelines, technical and financial aspects of the voluntary Scheme. IAQ standards of PM₁₀ had been set in overseas countries like Australia, Singapore, Japan, etc. whereas IAQ standards of PM_{2.5} were not common. He further explained that since PM_{2.5} was part of PM₁₀, it was considered not necessary to set objectives for similar IAQ

parameters which would incur additional cost implication to the Scheme. In addition, the proposed tightening of the 8-hour PM₁₀ objective for the Good Class IAQ would also be conducive to the control on PM_{2.5}. EPD would continue to keep abreast with the latest international development in this regard and conduct a review as and when necessary.

16. Noting that mould was commonly found in air-conditioned premises in Hong Kong and the scale of the mould might vary, a Member enquired on the effectiveness of walkthrough inspection for mould assessment and the criteria for setting acceptable levels of mould. Mr Brian Lau agreed that mould was commonly found in premises and some stakeholders had raised concerns during consultation about the resources required to rectify mould problems. However, EPD considered that adding a new IAQ parameter of mould could raise the awareness of relevant stakeholders such as property owners and management companies to address possible health impact due to mould as set out in WHO's IAQ guidelines. Mr Dave Ho added that technical guidelines had been devised to assist CIBs in conducting mould inspection using a prescriptive checklist. Guidance notes would also be prepared for property owners and management companies to minimize and control indoor mould.

Promotion and Publicity

17. As regards publicity efforts to promote good IAQ, Mr Dave Ho said that attaining IAQ certification under the Scheme was one of the credit criteria under the BEAM Plus standards. In addition, EPD had been promoting IAQ through various channels including radio, television broadcasting, social media and posters. The annual IAQ Certificate Award Ceremony cum Technical Seminar had been organised since 2006 to commend organizations which had made efforts to achieve good IAQ. Organizations would be invited to share their experiences and practices to achieve good IAQ. Educational activities e.g. roving exhibitions and seminars were also organized to promote IAQ in schools.

18. In response to a Member's question on whether any online resources and information were available to the public regarding IAQ management, Mr Dave Ho said that Hong Kong Productivity Council (HKPC) was commissioned to operate an IAQ Information Centre which provided online services and IAQ information via a dedicated website and a service hotline for answering public enquiries on IAQ matters. The Member suggested posting the names of the certified premises online as a way to promote the Scheme and encourage more organizations to

participate in the Scheme.

19. A Member opined that the Government should place greater emphasis on premises such as offices where staff had to stay for long hours on a daily basis. Mr Brian Lau advised that all premises certified under the Scheme could be browsed at the IAQ Information Centre website. He advised that amongst the 1,562 certified premises up to December 2017, about 700 premises were offices.

20. In response to a Member's enquiry of whether universities or higher education institutions had participated in the scheme, Mr Dave Ho said that around 50 educational premises had been certified under the Scheme, covering local universities and higher education institutions. He welcomed Members to help promote the Scheme in their organizations and encourage participation.

21. Addressing a Member's suggestion on encouraging more kindergarten, primary and secondary schools to join the Scheme, Mr Brian Lau explained that the Scheme was only applicable to premises served by MVAC systems. While some international schools served by the MVAC system had joined the Scheme, most local schools were using window type air-conditioners and/or exhaust fans which could not provide proper control on IAQ. Nevertheless, EPD was devising guidelines for schools to implement good IAQ practices, e.g. regular cleaning and maintenance of air-conditioners, maintaining good ventilation in laboratories, setting up a dedicated IAQ management team and conducting regular inspections.

22. A Member suggested that the Government should take the lead in participating in the Scheme so as to set an example for other premises owners/management. Mr Dave Ho advised that the Government had issued an internal circular which stipulated that all new Government premises served by MVAC systems should aim to achieve the Excellent Class IAQ, and existing Government premises served by MVAC systems should aim to achieve the Good Class IAQ wherever practicable. He advised that 80% of eligible Government premises had already obtained the IAQ certification.

Provision of incentives

23. Noting that the total number of certified premises was 1,562 and the growth in the number was rather slow, the Chairman enquired if there was any incentive to encourage more premises to participate in the Scheme. Mr Dave Ho said some organizations had shared their experiences that participation in the

Scheme could enhance their corporate image by providing a healthy working environment for staff/employees, raising staff morale and reducing sick leave and medical expenses.

24. To promote a higher participation rate, a Member suggested strengthening the promotional efforts and providing more incentives to organizations to join the Scheme, e.g. granting funds on a matching basis under the Environmental Conservation Fund (ECF). Noting the time and resources required in the certification of a range of IAQ parameters, Mr Brian Lau said that EPD would consider stepping up publicity to promote the Scheme and providing incentives in future.

25. While expressing support for the Proposal, a Member raised concern that the increased cost and difficulty for obtaining a full certification of all IAQ parameters under the proposed revised IAQ objectives would discourage premises owners/management from joining the Scheme. She opined that the Government should provide more incentives and assistance to premises owners/management, especially for those old premises where the problem of mould growth was prevalent.

26. Mr Dave Ho agreed that the inclusion of a new IAQ parameter of mould would pose greater challenges for premises to meet the Excellent or Good Class IAQ under the Scheme. He said that EPD would provide technical support to CIBs in carrying out the mould inspection as well as to premises owners/management on mould remediation work. The IAQ Information Centre operated by the HKPC would continue to provide relevant IAQ information to the public. Furthermore, he mentioned that a 5-year transitional arrangement had been allowed for IAQ certificate holders to undertake necessary improvement / rectification measures to meet the revised IAQ objectives.

Conclusion

27. The Chairman thanked the subject team of EPD for their presentation. He summarized the views of Members and concluded that Members were in general supportive of the Proposal.

[The presentation team left the meeting at this juncture.]

Internal Discussion Session (Closed-door session)

Provision of incentives

28. A Member shared that the Building Energy Efficiency Funding Schemes launched in 2009 had achieved a widespread publicity within a short span of time and more building owners conducted the energy-cum-carbon audits and energy efficiency projects under the schemes. He suggested the Government consider adopting a similar approach to promote the IAQ Certification Scheme with incentives.

29. A Member suggested the Government make reference to overseas experience and consider making available to the public the environmental record of the properties, which included the year of participation and class achieved under the IAQ Certification Scheme. This might encourage more organizations to participate in the scheme.

30. A Member suggested that IAQ certification should be regarded as a prerequisite for participating in the Hong Kong Awards for Environmental Excellence.

31. Given the difficulties in obtaining a full certification of all IAQ parameters under the proposed revised IAQ objectives, a Member considered that it would be more practical to provide technical assistance as well as funding support for the premises owners/management. She also pointed out that apart from office buildings, public places such as shopping malls should also be encouraged to adopt good IAQ management practices.

32. A Member considered that a review on the effectiveness of the Scheme should be conducted as soon as possible with a view to examining the challenges encountered by the applicants in obtaining a full certification of all IAQ parameters and improvements could be made to the Scheme where necessary.

33. Mrs Alice Cheung pointed out that the maintenance of a good IAQ would largely depend on sustained good housekeeping of the premise owners/management. EPD would consider stepping up publicity to promote the Scheme and providing incentives in future.

34. The Chairman concluded that EPD should review the Scheme, update the

IAQ parameters on a regular basis and report back to ACE when the outcome of the review was available.

Item 4 : Any other business (Closed-door session)

35. A Member sought clarification about arranging the briefing by the Task Force on Land Supply (the Task Force) as a separate session from the ACE meeting.

36. The Chairman advised that the Task Force was in the process of briefing various advisory and statutory bodies (ASBs). Instead of holding an omnibus briefing for all ASBs, the Task Force conducted the briefings at ASBs' premises for ASBs' convenience. Similar arrangements were made in respect of other ASBs such as the Housing Authority and the Country and Marine Parks Board.

Item 5 : Date of next meeting (Closed-door session)

37. The Chairman advised Members that the next ACE meeting was scheduled for 9 July 2018 and Members would be advised on the agenda in due course.

[Post meeting notes: As there was no proposed item for discussion at the ACE meeting in July and a summer break was scheduled for ACE in August, the meetings scheduled on 9 July and 13 August 2018 were cancelled. As there are no agenda items for the meeting scheduled on 10 September other than the consideration of the EIASC recommendation of endorsement of the EIA report discussed at its meeting held on 23 July 2018, the Chairman had also agreed to cancel the meeting scheduled on 10 September 2018. The next ACE meeting is scheduled on 8 October 2018.]

**ACE Secretariat
September 2018**