

**Bills Committee on  
Air Pollution Control (Amendment) Bill 2024**

**Responses to the discussion at the meeting on 10 January 2025**

In response to Members' discussions and suggestions on the submissions received and the clauses of the Air Pollution Control (Amendment) Bill 2024 (the Amendment Bill), the Administration replies as per the "List of follow-up actions arising from the discussion at the meeting on 10 January 2025" as follows:

**(a) Commencement date of the Amendment Bill**

2. Our policy intention is to implement the proposed amendments at the earliest, in particular those related to regulating unlicensed specified processes (SP). However, we also fully understand the importance of allowing sufficient time for the Bills Committee to scrutinise the bill and will spare no effort in assisting its work. Nevertheless, specifying a fixed commencement date can help reduce uncertainty for the trades. To tie in with the commencement of the Amendment Bill, different trades may need to make preparations beforehand, such as making arrangements for applying necessary permits or wrapping up the ongoing studies according to the Air Quality Objectives (AQOs) in force. Therefore, the designation of a fixed commencement date is considered to be a preferred arrangement. If there is a need for reconsideration to keep pace with the latest development, we are always prepared to exchange views with the Bills Committee.

**Updating AQOs**

**(b) AQOs review and consultation**

3. The AQOs are benchmarked against the World Health Organization (WHO) Air Quality Guidelines (AQGs) in terms of the interim targets (IT) and AQG levels contained therein, and are set in a scientific and practical manner with comprehensive reference made to the views expressed by experts, stakeholders and members of the public, as well as Hong Kong's actual situation, etc. The Amendment Bill will also give effect to the recommendations of the latest AQOs

review<sup>1</sup> to update the AQOs. After the update, among the 15 AQOs, seven will be set at the most stringent level adopted in the AQGs, which is on par with the relevant standards of other advanced economies such as Japan, Singapore and the Republic of Korea. At the request of the Bills Committee, the Summary Report of the Public Consultation on the AQOs Review completed in 2023 is enclosed at Annex A.

#### (c) Factors considered for the proposed AQOs updates

4. Some commented that the AQOs for nitrogen dioxide (NO<sub>2</sub>) and ozone (O<sub>3</sub>) should be set at the IT-2 levels of the WHO. In fact, the annual average concentration of NO<sub>2</sub> was already on par with the AQG level; nonetheless, the WHO introduced an AQG level of annual average concentration far stricter than the current one in 2021, putting the corresponding AQO of Hong Kong as well as those of the European Union, the United Kingdom, Singapore and Mainland China to just reach IT-1. NO<sub>2</sub> is produced in combustion processes and primarily emitted from vessels, power plants and motor vehicles. After years of implementing various measures to control air pollution emissions from motor vehicles, vessels and power plants, Hong Kong has achieved a roughly 40% cut in the annual average concentration of NO<sub>2</sub> over the past decade. The further reduction of NO<sub>2</sub> emissions will involve considerations on the technical aspect, practical arrangements and the additional operational burdens to be borne by the trades. Therefore, we deem it necessary to take more time to study the feasibility of tightening the measures, and will follow it up in the next round of review.

5. A secondary pollutant formed by photochemical reactions, O<sub>3</sub> is a complicated regional air pollution problem. At present, the regional background O<sub>3</sub> concentration is still relatively high. While the peak season O<sub>3</sub> concentration fails the IT-1 of the WHO AQGs according to the assessment findings, the Government still suggests adopting the minimum threshold of IT-1 as a starting point and continuing collaboration among the governments of Guangdong, Hong Kong and Macao to achieve continuous air quality improvement and better protection of public health. AQOs are the basis for assessing air quality impacts when vetting the designated projects and the SPs under the Environmental Impact Assessment Ordinance and the Air Pollution Control Ordinance respectively.

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<sup>1</sup> The Administration reported the proposed updates of AQOs to the Panel on Environmental Affairs at its meeting on 17 October 2023. The relevant discussion paper is available on the Legislative Council website (<https://www.legco.gov.hk/yr2023/english/panels/ea/papers/ea20231017cb1-912-2-e.pdf>) and the website on the AQOs review ([https://www.epd.gov.hk/epd/english/environmentinhk/air/air\\_quality\\_objectives/2030aqos\\_review.html](https://www.epd.gov.hk/epd/english/environmentinhk/air/air_quality_objectives/2030aqos_review.html)).

The Administration will consider the feasibility of updating and tightening the AQOs for NO<sub>2</sub> and O<sub>3</sub> in the next round of AQOs review.

(d) Timetable for achieving AQG levels

6. The Administration has implemented a wide array of air pollutant emission control measures covering road and marine transport, power plants, and non-road mobile machinery. Moreover, we have for years worked closely with the Guangdong Provincial Government on emission reduction. Taken together, these initiatives have brought about continuous improvement to Hong Kong's air quality. Over the past two years, our air quality has been stabilised at the best level since Hong Kong's Return to the Motherland, with the concentration of major air pollutants having dropped by approximately 40% to 80%. However, the O<sub>3</sub> annual average concentrations have remained unsatisfactory in recent years, which calls for efforts to alleviate regional photochemical pollution. To tackle regional O<sub>3</sub> problem, the governments of Guangdong Provincial and Hong Kong are taking forward initiatives and targets on the reduction of regional air pollutants (NO<sub>2</sub> and volatile organic compounds) as planned.

7. In addition, the Administration will continue to implement various emission reduction strategies as set out in the Hong Kong Roadmap on Popularisation of Electric Vehicles, the Clean Air Plan for Hong Kong 2035, the Hong Kong's Climate Action Plan 2050, the Green Transformation Roadmap of Public Buses and Taxis, and the Strategy of Hydrogen Development in Hong Kong, for improving air quality progressively. On the basis of the assessment findings, it is expected that the six criteria pollutants in Hong Kong, namely, sulfur dioxide, respirable suspended particulates, fine suspended particulates, NO<sub>2</sub>, carbon dioxide and lead, will attain the updated AQOs in 2030.

**(e) Legal and drafting aspects**

(e)(i) Definition of "premises" under the proposed section 2

8. In paragraph (a) thereof, the proposed revised definition of "premises" is basically the same as currently defined. With the newly added paragraph (b), in relation to the conduct of "cement works", the term "premises" also includes a ship or barge and a part of a ship or barge. On enforcement, in like manner as it is in present cases where an operator applies for an SP licence, the Administration will take account of all operational facilities connected to the plant and regard

them as within the premises on the SP licence. Any licensed SP operator having connected any operation facility outside the premises for conducting an SP is subject to enforcement actions by the Administration in accordance with the licensing conditions.

9. As regards the drafting of the proposed definition of “premises”, the priority is to avoid ambiguity and ensure clarity through a definition to assure that in addition to “a part of any premises”, “a place, building or relevant plant” and “a part of any place, building or relevant plant” are also included for the avoidance of misunderstanding.

(e)(i) Reference of a “specified person” under the proposed section 30C

10. Under the proposed definition, a “specified person”, in relation to any premises used for the conduct of an SP, refers to the person who conducts the SP on the premises, which shall be determined on the case-specific evidence gathered. Generally speaking, an operating company which conducts, and engages workers to conduct on-site an SP on the premises will be deemed as the “specified person” and be served the closure notice concerned. On the other hand, no one will normally be, by presence at the scene without conducting an SP (e.g. a security guard), taken as the “specified person” under the proposed section 30C.

(e)(i) Drafting of “subject premises” under the proposed section 30C in the Chinese version

11. “Subject premises” was proposed to be drafted in a clear and structured way in the Chinese version with an aim to first establish the context of a closure notice is issued in respect of any premises (“就某處所發出封閉通知”), and then specify the premises which are in relation to the notice (“就該通知而言”). If the Chinese expression “定義如下” is deleted and replaced by “就.....而言”, it will read as “標的處所(subject premises)就就某處所發出的封閉通知而言，指該處所” where the word “就” repeats consecutively in the definition. The repetition can be avoided by using the Chinese expression “定義如下”, which also improves readability of the sentence. Besides, examples of definitions using the Chinese expression “定義如下” are readily available in Hong Kong laws.

(e)(ii) Manner of a serving closure notice to unregistered non-Hong Kong companies under the proposed section 30E(2)

12. If the “specified person” is an unregistered non-Hong Kong company, the closure notice may be served on the specified person at the last known place of business under the proposed section 30E(1)(b) or 30E(1)(c). The proposed section 30E(2) serves to provide an alternative manner of serving closure notices in cases where an operator company is a registered non-Hong Kong company.

(e)(iii) Timing of the Authority to invoke the proposed section 30G to lock or seal the subject premises

13. The ultimate objective of the proposed closure notice is to stop the continuation of unlicensed SP operations. The proposed section 30G only serves to empower the Authority to lock or seal the closed premises concerned to ensure no unlicensed SP operations are conducted thereon. When the Authority, after considering the on-site environment and actual situation, deems it necessary to lock or seal the subject premises, it will surely be planned in advance and proceeded expeditiously. Such additional wording as “will exercise due diligence ... as soon as possible” will be superfluous, and unnecessarily restraining the Authority.

(e)(iv) Additional provision in the proposed section 30I(3) to cover circumstances of and persons reasonably entering or remaining on the subject premises (such as where a non-public officer enters the subject premises at the request of a public officer)

14. The proposed section 30I(3) already provides that it is permissible for a public officer to enter or remain on the subject premises in good faith in the course of the public officer’s duty. As regards whether a non-public officer is allowed to reasonably enter or remain on closed premises in a particular circumstance, a defence for such persons with a reasonable excuse to do so is provided in the proposed section 30M. Furthermore, the Authority will instruct officers through internal guidelines to, on individual merits, consider not prosecuting a person for entering closed premises to render assistance to a public officer who made a reasonable request in good faith in the course of duty. The enforcement authority will act in strict accordance with the principles laid down in the Prosecution Code and the relevant legal provisions on merits of the actual situation and evidence relevant to each case.

(e)(v) Drafting of the proposed sections 30M and 48A

15. On account of the trades' views, the proposed section 48A provides for using "emergency" as a defence for applicable offences without defence provisions in the pre-amended ordinance. As for the proposed section 30M, it provides for a defence of reasonable excuse for offences under sections 30I, 30K and 30L. "Reasonable excuse" commands a wider coverage compared with "emergency", giving flexibility to the court in deciding whether an excuse is reasonable on the merits of all aspects of individual cases. Subject to the actual situation and evidence relevant to each case, an "emergency" may generally be taken as a "reasonable excuse".

(e)(vi) Legislative intent and implementation details of the proposed section 30J

16. The ultimate objective of the proposed closure notice is to stop the continuation of unlicensed SP operations to prevent continuous air pollution from impacting public health. To ensure that there will be no unlicensed SP operation conducted in the subject premises, the proposed section 30I prohibits entering or remaining on the subject premises with the exception of a person with a written permission issued by the Authority and public officers acting in good faith in the course of duty. If a person is to enter or remain on the subject premises for the proper purposes of, for example, maintenance, safety inspection, alteration of existing facilities of an SP for compliance with licensing requirements, and demolition of facilities upon business closure, the proposed section 30J empowers the Authority to give written permission to the person to enter or remain on the subject premises for such purposes.

**Other issues**

(f) Spillage of concrete paste from concrete lorry mixers on roads

17. To avoid spillage of concrete paste on roads, the Environmental Protection Department (EPD) required concrete batching plants in Yau Tong to retrofit an anti-spillage device on the discharge chute of concrete lorry mixers. Moreover, under the Road Traffic (Traffic Control) Regulations (Cap. 374G), drivers shall ensure proper containment of any load inside a vehicle, including the weight and security of the load. In addition, the Public Cleansing and Prevention

of Nuisances Regulation (Cap. 132BK) stipulates that no person shall deposit any waste from any vehicle in any street or public place. The EPD has been closely communicating with the Hong Kong Police Force (HKPF) and the Food and Environmental Hygiene Department (FEHD) and conduct joint operations with them in blackspots of respective districts to strengthen enforcement. Where irregularities are identified, the relevant enforcement departments will initiate prosecutions at the scene. Over the past three years, the EPD, FEHD and HKPF have conducted 59 joint operations in the Yau Tong area. The FEHD invoked the Public Cleansing and Prevention of Nuisance Regulation to make two successful prosecutions against concrete lorry mixers for leaving mud slurry or concrete paste on roads illegally. During the same period, the HKPF has also carried out inspection patrols around Cha Kwo Ling Road, Yau Tong Road and Yau Tong Lane in Yau Tong and issued 364 fixed penalty tickets<sup>2</sup> under the Road Traffic Ordinance.

18. On cleansing concrete paste from roads, the Highways Department (HyD) and the FEHD are responsible for daily cleansing on expressways and standard public roads respectively. Upon receipt of a report of concrete paste on a road, the relevant department will take prompt follow-up action as far as practicable. Over the past three years, the HyD and the FEHD have received a total of 82 reports of concrete paste on roads across the territory, of which 16 cases were in the Yau Tong area.

(g) Installation of global positioning system (GPS) device on concrete lorry mixers

19. Regarding the suggestion to retrofit GPS device on concrete lorry mixers to monitor the problem of spillage of concrete paste on roads, retrofitting a GPS device on a concrete lorry mixer can record the driving routes of the concrete lorry mixer, but it cannot monitor the situation of spillage of concrete paste on roads. Imposing legislative requirements to require the installation of GPS device could not help.

(h) Environmental issues arising from recycling operations

20. On the environmental pollution arising from recycling operations, the general processes involved in plastic recycling operations are melting, pelletising

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<sup>2</sup> The fixed penalty tickets issued by the HKPF has excluded illegal parking and speeding offences, but there is no breakdown of the remaining offences.

and packaging, and those in metal recycling operations are loading, unloading and storage. The noise, wastewater and air pollutants generated from these recycling operations must comply with the relevant environmental legislative requirements. The EPD has been adopting a multi-pronged approach to monitor the recycling operations, including regular and ambush inspections, inter-departmental enforcement actions, and publicity and education. Concurrently, the EPD also makes use of smart technologies to facilitate enforcement, such as conducting aerial surveillance and collecting evidence on illegal activities with drones. Over the past three years, the EPD has instituted a total of 107 prosecutions against illegal waste metal and plastic recycling operations resulting in conviction. Moreover, the EPD regularly conducts joint operations with relevant departments such as the HKPF, Fire Services Department, Lands Department, and Planning Department to inspect whether the operations of recycling sites comply with the statutory requirements or land lease conditions in terms of fire safety, land use and so on.

Environment and Ecology Bureau  
Environmental Protection Department  
22 January 2025



## **Public Consultation on the Review of Air Quality Objectives Summary Report**

### **Background**

To gauge the public views on the findings of the Air Quality Objectives (AQOs) review, the Environment and Ecology Bureau (EEB) conducted a two-month public consultation from August 2023 to October 2023. This summary highlights the major views and suggestions collected during the consultation period.

To give the public a clearer understanding of the content of the AQOs review, the EEB published a public consultation document and a leaflet on the overall review process, highlighting the emission reduction measures to improve air quality, the findings of the air quality impact assessment and the health and economic impact assessment, and the justifications for proposing the tightened AQOs. The concerned documents have been uploaded to the thematic website (aqoreview.hk) for public viewing.

During the public consultation period, members of the public gave their feedback through views collection forms (see **Appendix 1**) submitted by email, fax or post, or at the two public consultation forums. The EEB organised two public consultation forums in September 2023 to exchange views with the public, professional bodies, business chambers, non-governmental organisations and green groups. Details of the two public consultation forums, including the views expressed by the participants and responses of the Government and relevant experts, are at **Appendix 2**.

### **Public Views**

Overall, the recommendations of the review drew positive public responses. Below are the key points raised in the written submissions received during the public consultation period, of which the details are at **Appendix 3**:

- (1) Respondents approved of the recommendations to tighten the five prevailing AQOs and adopt three new parameters introduced in the World Health Organization (WHO) Air Quality Guidelines (AQGs);
- (2) The majority of the respondents supported the recommendation for the Government to consider the actual societal conditions before setting the statutory AQOs in alignment with the recommendation of the WHO AQGs;
- (3) Some considered that the Government should step up its efforts in promoting green transport (e.g. electric vehicles (EVs)) and energy, controlling nitrogen dioxide (NO<sub>2</sub>) and volatile organic compounds (VOCs) (ozone (O<sub>3</sub>) precursors) emissions, and proactively undertaking regional collaboration, thereby reducing the overall NO<sub>2</sub> and O<sub>3</sub> concentrations across the territory to safeguard public health;
- (4) Some suggested the Government to strike a balance among health risk, technical feasibility and economic impacts when devising the air quality control strategies, and work proactively with different sectors to make technical advancement, enhance energy efficiency and facilitate low-carbon transformation for better air quality in Hong Kong; and
- (5) Some expressed concern about the process and methodology of the next AQOs review, and suggested including the various emission sources (e.g. fumes, non-road mobile machinery, incense burning activities, and total VOCs) in the review. There were other views emphasising adopting a phased implementation of tightening emission standards in a pragmatic and practical approach; the formulation of clear targets and timetables; pushing for policies towards the WHO standards; and the importance of public education and publicity.

**Public Consultation on the Review of Air Quality Objectives  
Views Collection Form**

## Share Your Views

1. Hong Kong's air quality has been continuously improving, with major air pollutants reduced by more than 40% to 60% over the past ten years, and the number of hours of reduced visibility gradually decreased from the peak of 1 570 hours in 2004 to 401 hours last year (a decrease of 74%). Are you aware of the above improvements?

- ☐ Aware  
☐ Slightly aware  
☐ Not aware

2. The WHO recommends governments to consider their local conditions before adopting the suggested levels as legal air quality standards, including considerations on scientific evidence, public health, technological development, economic benefits and sociopolitical aspects. Do you agree with this approach?

- ☐ Agree  
☐ Somewhat agree  
☐ Disagree

3. What are your views on the proposed tightening of five prevailing AQOs and introducing three new AQOs in the current review?

- ☐ Agree  
☐ No comment  
☐ Other comments (please specify):

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4. Do you have any suggestions for the next AQOs review?

- ☐ Adopt the same method as the current review  
☐ No comment  
☐ Other comments (please specify):

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## Review on Air Quality Objectives Public Consultation Forum

During the public consultation period, the EEB organised two public consultation forums in September 2023 to present the work and findings of the Air Quality Objectives (AQOs) Review and to solicit public views. The two forums attracted an enrolment of totally 130 people from various sectors, of which 94 attended. The participants represented a broad spectrum of society, including business chambers, trade associations, business groups, environmental consultants (specialising in air quality related issues), green groups, think tanks, various trades, political parties, professional bodies/associations/institutes, tertiary institutions, women's and youth organisations, and individuals.

|          |  |   |
|----------|--|---|
| Date     | 20 September 2023 (Wednesday)  | 26 September 2023 (Tuesday)   |
| Time     | 7:00 pm to 9:00 pm   |   |
| Venue    | Ming Hua Hall,<br>4/F, St. James' Settlement,<br>85 Stone Nullah Lane,<br>Wan Chai | Auditorium,<br>1/F, Christian Family Service Centre,<br>3 Tsui Ping Road, Kwun Tong,<br>Kowloon |
| Language | Cantonese with simultaneous interpretation in English and Putonghua                |   |

The forums were chaired by Miss Diane WONG, Under Secretary for Environment and Ecology, with representatives from the EEB, the Environmental Protection Department (EPD) and AECOM Asia Company Limited, which was the consultant team, and Professor Jimmy FUNG and Professor WONG Tze-wai, who were members of the relevant expert groups, joining her on the panel.

At the forums, Miss WONG and the EEB representatives first explained to the participants the work and recommendations of the AQOs review, and the ensuing air quality improvements and the associated health and economic benefits. During the following exchange session, participants shared their views through live questions and web submissions while the government representative and the consultant team responded afterwards.

## **Comments Collected at the Public Consultation Forums**

Overall, the participants gave support to the recommendation for the Government to tighten the AQOs. The participants' views and comments focused primarily on the implementation and arrangements involving the relevant industries and the air quality improvement measures once the proposed new AQOs come into effect, and the way forward on further reducing air pollution. A detailed summary is as follows:

### *Impact of new AQOs on Specified Process (SP) licence application and environmental impact assessment (EIAs)*

Industry stakeholders and the public expressed concerns about the implementation of the new AQOs, in particular the tightened AQOs for respirable suspended particulates (PM<sub>10</sub>), in respect of the possibilities that this could complicate the application for and renewal of SP licences and the conduct of EIAs. They worried that factories situated in more polluted areas would face greater challenges, and called for the Government to provide more data to facilitate the assessment of compliance. Moreover, there were also questions on how the amendments to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (Cap. 311Z) (the Regulation) could align with the new AQOs.

In response, the Government stated that the new AQOs were formulated basing on the established and ongoing emission reduction measures under the three major blueprints, so the trades should be able to comply with the AQOs by adopting the established improvement processes and equipment performance enhancements. The Government stressed that no further modifications would be necessary for existing equipment in compliance with the requirements. Also, since there were already provisions requiring abatement measures to be implemented for reducing dust emissions (including respirable and fine suspended particulates) in respect of all processes and works projects under the Air Pollution Control (Construction Dust) Regulation, no additional cost would be incurred. The Government encouraged the use of advanced technologies to reduce pollution. The open modelling data of Pollutants in the Atmosphere and their Transport over Hong Kong (PATH) with newly added baseline air quality information were already available to support the trades, and were uploaded to the EPD's Centralised Environmental Database for their access. To preserve the integrity of the EIA system as a continual mechanism and give reasonable certainty to project

proponents having completed an EIA process, the Government would also provide a 36-month transitional period for applications for variation of environmental permits.

*Comprehensive enhancements to air quality and the monitoring mechanisms*

Members of the public and industry stakeholders expressed a wide range of views on further air quality improvements, offering suggestions on various areas: to consider the use of low-carbon fuels alongside the promotion of EV; provide more incentives (such as subsidies) for promoting green transformation; and impose restrictions on maritime and aviation emissions. Moreover, the public was concerned about the progress of electricity generation using renewable energy sources in Hong Kong. On air quality monitoring, the public called for the Government to monitor air pollutants outside the coverage of the WHO AQGs (such as total VOCs), and to set up additional real-time air quality monitoring stations. Air pollution in household settings also raised public concern.

The Government responded that it had put in place a roadmap and targets for EV development, including ceasing new registration of fuel-propelled vehicles by 2035, towards the goal of achieving zero vehicular emissions before 2050. The Government considered that internal combustion vehicles running on biodiesel, synthetic fuels and hybrid engines still cause air pollution, hence the focus on promoting zero-emission new EVs. On maritime transport, the Government's initiatives were currently underway in respect of regulating sulphur content in fuels, promoting the use of clean fuels and planning emission reduction measures. On air transport, zero-emission operations and green fuel development were progressively taking place in the Airport Authority Hong Kong and the aviation engineering industry. As for renewable energy development, the Government also emphasised the need for regional collaboration and it had planned related infrastructure projects. Regarding the monitoring of various air pollutants, the Government stated that they were already under monitoring, with data to be published for public reference. Although there were sufficient air quality monitoring facilities in place, the Government was exploring employing the use of sensor technology to provide more refined air quality information. With respect to indoor air quality in household settings, the Government already issued indoor air quality guidelines and would consider limiting the content of VOCs in furniture in the future. However, there were no plans to provide financial assistance at the moment.

### *Promoting EV development to improve air quality*

While approving of the Government's policy to promote EV development for better air quality, members of the public and industry stakeholders expressed concerns about various issues, including the sufficiency of charging facilities, the safety of using and maintaining EVs, the promotion of electrification of commercial vehicles, and the recycling of waste batteries. They were particularly concerned about the electricity demand and potential air quality impacts arising from the increase in the number of EVs. The public also raised doubts about the progress towards using EVs by franchised bus companies and the Government's strategy for waste EV battery management.

In response, the Government stated that it had formulated comprehensive policies and measures in support of EV and charging network development, with which it expected to meet increased charging demand by 2027 and would progressively promote the marketisation of charging services. To ensure the safety of EVs and their maintenance, the Government would conduct personnel training and draw up relevant standards. Subsidies and financial incentives would also be provided to promote the electrification of commercial vehicles, while new registration of fuel-propelled and hybrid private vehicles was planned to cease by 2035. On waste batteries, the Government was in discussion with the industry on a producer responsibility scheme and would announce specific measures when the policy was ready. As regards the electrification of franchised buses, the Government already provided bus companies with an updated schedule and policy support to ensure a smooth transition to electric fleets.

### *Promoting regional cooperation to improve overall air quality*

Members of the public believed that to improve Hong Kong's air quality, we should not only rely on local emission reduction measures but also need to step up collaboration with the Mainland, especially Mainland cities in the Greater Bay Area, to jointly develop and implement emission reduction targets. They worried that air quality could deteriorate again following the post-pandemic resumption of industrial production. Moreover, the specifics of regional collaboration also concerned the public in respect of, for example, Guangdong-Hong Kong and Shenzhen-Hong Kong collaboration. They looked forward to the overall improvements to regional air quality through such collaboration.

The Government responded that it required concerted efforts at both local and regional levels to improve air quality. Over the past 20 years, the Government

had established a good working relationship with the Guangdong Provincial Government and would continue the efforts to develop and implement emission reduction programmes. It was expected that air quality would not take a reverse turn into deterioration upon resumption of industrial production after the pandemic because stricter pollution control measures were already in force. The current Hong Kong-Shenzhen Joint Working Group on Environmental Protection would study and explore ways to improve the environmental quality of Shenzhen and Hong Kong in respect of air, water quality, waste and nature conservation. In addition, the Government planned to adopt new energy transport for cross-boundary transportation to reduce fossil fuel use, thereby further reducing the emission of air pollutants. The Government emphasised that there would be frequent and sustained regional collaboration in future to ensure continuous improvements to air quality.

### *Balancing cost-effectiveness and social benefits*

Members of the public and industry stakeholders suggested that the Government, in improving air quality, should consider the cost-effectiveness and effectively communicate the social benefits of the measures. Moreover, there was also public concern about waste management strategies, particularly for the pollution problems associated with transporting waste overseas for disposal. Regarding the release of pollutants from burning incense and paper offerings at religious venues, the public expected the Government to update the law to minimise the health impact on residents, and seek to foster harmonious coexistence with religious venues.

The Government responded that air quality improvement measures lead to both economic benefits and fewer premature deaths and illnesses associated with air pollution, having a far-reaching significance for families and society. Future reports would give a full account of these benefits. On waste management, the Government aims to create a local recycling economy to reduce waste and promote recycling. As for pollution at religious venues, the Government already took administrative measures to reduce the use of incense and paper offerings, and required the installation of air pollution control equipment. The Government would maintain contact with and provide guidelines to the sector, while emphasising the importance of harmonious coexistence with the community.



## Public Views

The two-month public consultation exercise concluded successfully. Apart from the forums, 65 submissions were received during the consultation period. Most of the submissions were submitted in the form of an online questionnaire, and the remaining in written form (see Tables 1 and 2).

Generally speaking, all submissions gave support to the recommendation for the Government to tighten the AQOs. Among them, some suggested that when planning the long-term air quality management strategies, the Government should consider the details and arrangements for their implementation.

**Table 1 Distribution of submissions**

| Submission                | Form  |         | Total |
|---------------------------|---|---------|-------|
|                           | Online questionnaire completed and returned | Written |       |
| Individual                | 48  | 1       | 49    |
| Group/Company/Institution | 3   | 13      | 16    |
| Total                     | 51  | 14      | 65    |

**Table 2 Categories of submission made by group/company/institution**

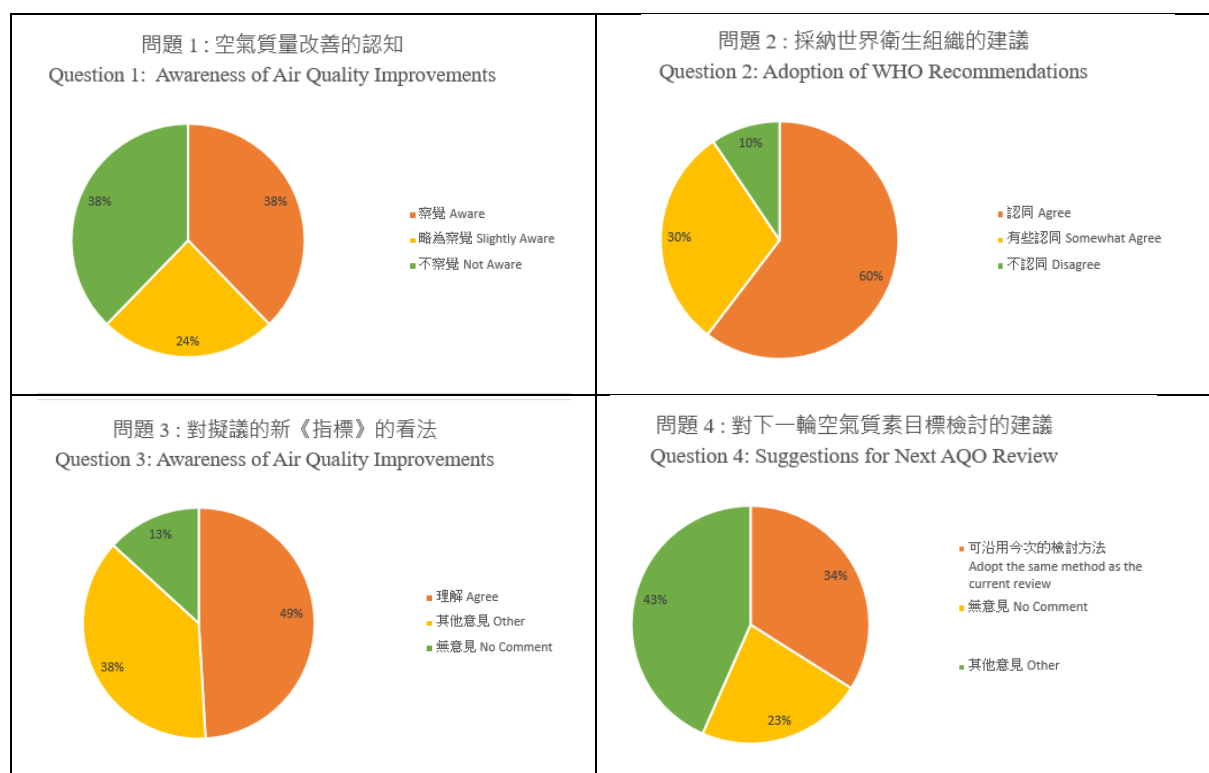
| Group/company/institution   | No. of submission |
|---|-------------------|
| Business chamber/trade association/business group                                       | 4                 |
| Green group and think tank  | 3                 |
| Professional institute/association  | 2                 |
| Industry stakeholder (e.g. petroleum company, public utility company, shipping company) | 3                 |
| Political party   | 2                 |
| Women's and youth organisation  | 1                 |
| Others  | 1                 |
| <b>Total</b>  | <b>16</b>         |

## Views collected during the consultation period

To collect public views on the current AQOs Review and suggestions for the next round of review, the Government included a views collection form in the consultation document setting out four questions:

|             |   |
|-------------|---|
| Question 1: | Hong Kong's air quality has been continuously improving, with major air pollutants reduced by more than 40% to 60% over the past ten years, and the number of hours of reduced visibility gradually decreased from the peak of 1 570 hours in 2004 to 401 hours last year (a decrease of 74%). Are you aware of the above improvements? |
| Question 2: | The WHO recommends governments to consider their local conditions before adopting the suggested levels as legal air quality standards, including considerations on scientific evidence, public health, technological development, economic benefits and sociopolitical aspects. Do you agree with this approach?                        |
| Question 3: | What are your views on the proposed tightening of five prevailing AQOs and introducing three new AQOs in the current review?  |
| Question 4: | Do you have any suggestions for the next AQOs review?   |

**Table 3 Results of the Questionnaires**



### *Air quality standards and health risk management*

Stakeholders generally agreed on the need to tighten AQOs, stressing that the WHO Global Air Quality Guidelines should be taken into consideration. Some expressed concern that Hong Kong was yet to achieve the AQGs levels set by the WHO, particularly for NO<sub>2</sub> and O<sub>3</sub>, while there were also views that it would be necessary to formulate new standards that balance technical feasibility and economic impacts.

### *Environmental impact assessment and technical standards*

Some suggested improving the PATH modelling system to better reflect the EIA findings of local work projects. Members of the public pointed out that standard-compliant projects should need no changes prior to the launch of new standards. They also enquired about the possibility of providing additional monitoring stations and the validity of the 24-hour emission levels.

### *Energy efficiency and low-carbon transformation*

Some supported enhancing building energy efficiency, using liquefied natural gas for marine fuel, reviewing emission limits of local power plants regularly, and promoting renewable energy. Members of the public also suggested diversifying the energy mix to include low-carbon fossil fuels and biodiesel, and exploring the feasibility of adopting hydrogen fuel cells.

### *Promotion of EVs and traffic management*

Some expressed support for promoting EVs, and suggested that the electrification of public transport and commercial vehicles should be quickened, additional chargers be provided and a battery recycling policy be formulated. There were public concerns about the target to cease new registration of fuel-propelled and hybrid private cars by 2035, urging the Government to actively explore new energy alternatives such as hydrogen fuel cells.

### *Regional collaboration and air quality improvement*

Some pointed out the importance of regional collaboration with Guangdong and Macao in improving air quality, especially in developing O<sub>3</sub> mitigation strategies and tackling the issue of long-range transportation of O<sub>3</sub>.

*Public education and behavioural changes*

Some suggested enhancing public education and publicity of air quality improvement measures to raise social awareness and motivate behavioural changes.

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