

為了清新空氣 你我一同付出

Let's contribute to achieve better air quality



空氣質素指標檢討公眾諮詢

Public Consultation on Air Quality Objectives Review

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空氣質素指標檢討公眾諮詢

Public Consultation on Air Quality Objectives Review



香港特別行政區政府 環境局
Environment Bureau Hong Kong SAR Government

為香港的清新空氣訂定新基準

Setting New Benchmarks for Clean Air in Hong Kong

你的意見非常重要

空氣質素與我們的健康息息相關。2007年年中，政府委任顧問檢討我們的空氣質素指標，為大氣中的污染物濃度訂定新的標準，加強保障市民健康。為使新的空氣質素指標能夠真正改善空氣質素，政府在制定和執行新標準的同時，亦須一併考慮相應的排放管制措施計劃，以協助我們符合新的指標。檢討在最近完成，報告已詳列於相關的諮詢文件中，並邀請市民發表意見，有關報告的摘要如下：

現行的空氣質素指標

空氣污染是全港市民關心的問題。經過本港和內地當局的努力，四種主要空氣污染物（二氧化硫、氮氧化物、可吸入懸浮粒子和揮發性有機化合物）的排放水平已經減低。但能見度卻未見相應改善，反映我們的空氣質素受區域情況所影響。為應付區域性的空氣污染，我們已聯同廣東省政府一起工作，一起邁向區域性的減少污染物排放目標——在2010年或之前，以1997年排放水平為基準，減少四種主要空氣污染物排放20%至55%。

我們的污染物排放水平近年逐漸下降，為我們繼續致力改善空氣質素，提供了有利的基礎。香港現行的空氣質素指標在1987年公布。由於空氣污染對健康影響的新研究結果近年陸續出現，世界衛生組織（世衛）於2006年10月發出新的空氣質素指引。因此，我們亦需要參考世衛最新的空氣質素指引把本港的空氣質素指標更新，藉以加強對公眾健康的保障和進一步改善空氣質素。為此，行政長官在2008/09年施政報告中，宣布香港會參照世衛的指引，採納階段性指標。

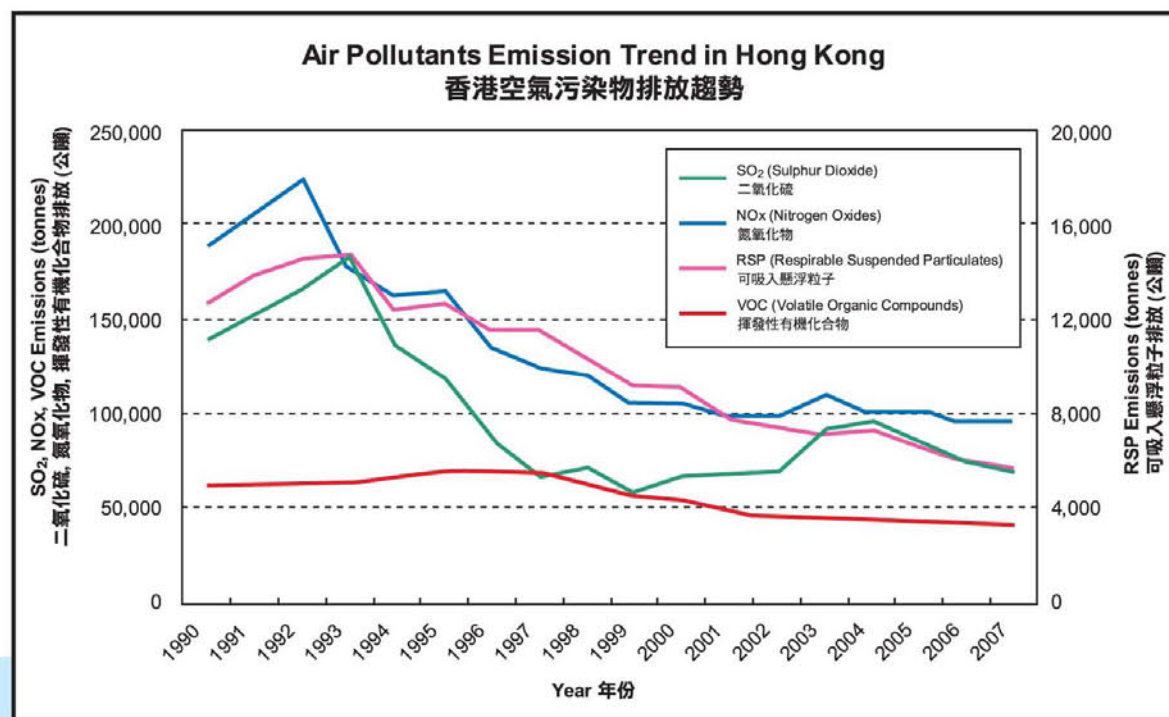
YOUR VIEWS COUNT

The air we breathe impacts our health. In mid-2007, the Government engaged a consultant in a review of our Air Quality Objectives (AQOs), with a view to determining the new standards on the air pollutants in the atmosphere that will better protect human health. In order for the new AQOs to bring actual improvement to the air quality, the promulgation of the new standards should come with a programme of emission control measures to help the community achieve the new Objectives. We have recently completed the Review and would like to invite your views on the proposals as detailed in the consultation document and summarized in this leaflet.

OUR CURRENT AIR QUALITY OBJECTIVES

Air pollution is a concern widely shared by the community in Hong Kong. Efforts undertaken both locally and across the border have successfully brought down the level of emissions of four key pollutants including sulphur dioxide, nitrogen oxides, respirable suspended particulates and volatile organic compounds (VOC). Yet visibility did not show corresponding improvement, reflecting the regional dimension of our air quality. To tackle regional air pollution, we have also been working jointly with the Guangdong Provincial Government towards a regional emission reduction target – reducing by 2010 20% to 55% of the emissions of the four key pollutants on the basis of the emission levels in 1997.

Building on the foundation of a gradual decline in the emission of pollutants, we need to show determination by the community as a whole to further improve our air quality. The current AQOs used in Hong Kong were promulgated in 1987. Since then, there have been new research findings on the health implications of air pollution. In October 2006, the World Health Organisation (WHO) released a new set of new Air Quality Guidelines. There is a need to bring our AQOs up-to-date making reference to the latest WHO guidelines with a view to enhancing the protection of public health and further improvement of air quality. The direction is underscored by an announcement by Chief Executive in his 2008/09 Policy Address that Hong Kong will adopt targets in stages giving due regard to the WHO guidelines.



Note: Hours of reduced visibility observed at the Hong Kong Observatory. Visibility below 8 kilometres when there is no fog, mist or precipitation.

備註：天文台總部出現的低能見度時數。低能見度是指撇除了雨、霧、薄霧後能見度低於8公里的情況。

達到新的空氣質素指標

檢討工作是根據以下原則而訂定建議的香港新空氣質素指標：

- 保障公眾健康
- 參照世衛的指引
- 分階段達到世衛的最高標準

考慮了上述原則和其他國家實行的空氣質素指標，以及本港的特殊情況，上述檢討建議香港採納一套新空氣質素指標。為方便與現行空氣質素指標以及世衛空氣質素指引 / 中期指標比較，有關建議顯示於下表黃格內。根據建議，香港在修訂個別污染物的指標時，會盡可能以世衛建議的最終空氣質素指引為基準。在七種主要污染物中，有三種及一種污染物分別全部及部分達到最終的世衛空氣質素指引。整體而言，除了在可吸入懸浮粒子(PM₁₀)和微細懸浮粒子(PM_{2.5})方面，建議的新空氣質素指標大致上與其他的先進國家(如歐盟和美國)所採取的指標相約。世衛建議各地政府因應本身情況可參照其中期指標而訂定各地的標準，由於本港的懸浮粒子濃度極受區域因素影響，因此我們為PM₁₀和PM_{2.5}建議較為實際的目標。

為逐步達致世衛的最終空氣質素指引這個長遠目標，我們同時建議每五年進行檢討，以更新空氣質素指標的新機制。

ATTAINING THE NEW AQOs

The Review adopts the following principles in setting the proposed new AQOs for Hong Kong:

- Protection of public health
- Benchmarking against WHO Guidelines
- A staged approach in achieving WHO's highest standards

Taking into account the above principles, the air quality standards being pursued in other countries and the local situations, the Review has come up with a set of proposed new AQOs for Hong Kong. They are highlighted in the yellow boxes in the table below for easy comparison with the existing AQOs and the WHO AQGs or ITs. Under the proposal, Hong Kong will seek to benchmark the ultimate AQGs recommended by WHO on the individual pollutants wherever possible and practicable. Among the seven major pollutants, three of them will have the entire categories and one partially meeting the ultimate WHO AQGs. As a whole, the proposed new AQOs are comparable to those of other advanced countries such as the EU and US, except for PM₁₀ and PM_{2.5}. In line with the WHO advice that local authorities may derive interim targets (ITs) as specified by it having regard to local situations, the proposal adopted more practical AQOs for the latter two pollutants as the particulate concentration in Hong Kong is subject to very strong regional influence.

To deliver progressively the long-term goal of achieving the ultimate WHO AQGs, a review mechanism to update the AQOs no less than every five years is also proposed.

Pollutant	Averaging Time	Existing AQOs	Proposed New AQOs vis-à-vis WHO AQGs / ITs (µg/m³)			
			IT-1	IT-2	IT-3	AQGs
Sulphur Dioxide	10-minute	---	---			500
	24-hour	350	125	50		20
Respirable suspended particulates (RSP or PM ₁₀)	24-hour	180	150	100	75	50
	Annual	55	70	50	30	20
Fine suspended particulates (FSP or PM _{2.5})	24-hour	---	75	50	37.5	25
	Annual	---	35	25	15	10
Nitrogen dioxide	1-hour	300	---			200
	Annual	80	---			40
Ozone	8-hour	240 (1-hour)	160			100
Carbon monoxide	15-minute	---	---			100,000
	30-minute	---	---			60,000
	1-hour	30,000	---			30,000
	8-hour	10,000	---			10,000
Lead	Annual	1.5 (3-month)	---			0.5

管制措施、代價和實施步伐

為協助達到建議的新空氣質素指標，上述檢討提出以下的建議空氣質素改善措施：

排放上限及管制

1. 增加本地天然氣發電比例至50%及新增減排裝置
2. 提早淘汰舊式 / 污染嚴重的車輛
3. 加快引進符合最新歐盟標準取代歐盟 III 期商業柴油車輛
4. 推廣使用混合動力 / 電動車輛或其他性能相若的環保車輛
5. 要求本地船隻使用超低硫柴油
6. 要求本地船隻採取脫硝裝置
7. 採用電氣化的空運地勤支援設備
8. 管制非道路使用的車輛 / 設備的廢氣排放
9. 加強管制揮發性有機化合物

交通管理

10. 設立低排放區
11. 設立不准車輛進入區 / 行人專用區
12. 重整巴士路線

基建發展及規劃

13. 擴展鐵路網絡
14. 連接主要公共交通樞紐的單車徑網絡

提高能源效益

15. 強制實施《建築物能源效益守則》
16. 家用電器能源效益標準
17. 採用發光二極管或其他效能相若的產品作交通信號 / 街道照明
18. 推廣植樹 / 綠化屋頂
19. 在啓德發展區設立區域供冷系統

落實這些管制措施後，預計大約可避免4,200宗入院，而人口的平均預期壽命約可延長一個月。社會每年的經濟得益（主要由於改善公眾健康和節約能源成本）估計約為12.28億港元，遠超估計的經濟成本大約每年5.96億港元。

部分建議措施會影響香港每位市民，例如電費和巴士票價會增加，而我們的生活方式亦需有所調整。因此，我們需要就整套的排放管制措施、市民願意付出的代價和實施有關措施的步伐建立共識，同心為達到新的空氣質素指標而努力。

欲知檢討的詳細內容，請參閱環保署網站(www.epd.gov.hk)所載的諮詢文件和研究報告。

THE PACKAGE, THE PRICE AND THE PACE

To help achieve the proposed new AQOs, the Review recommends the following emission control measures:

Emission Capping and Control

1. Increasing the ratio of natural gas in local electricity generation to 50% with additional emission abatement measures
2. Early retirement of aged / heavily polluting vehicles
3. Earlier replacement of Euro III commercial diesel vehicles with models meeting latest Euro standards
4. Wider use of hybrid / electric vehicles or other environment-friendly vehicles with similar performance
5. Ultra low sulphur diesel for local vessels
6. Selective catalytic reduction for local vessels
7. Electrification of aviation ground support equipment
8. Emission control for off-road vehicles / equipment
9. Strengthening volatile organic compounds control

Transport Management

10. Low emission zones
11. Car-free zone / pedestrianisation scheme
12. Bus route rationalization

Infrastructure Development and Planning

13. Expand rail network
14. Cycling network to major public transport hubs

Energy Efficiency Measures

15. Mandatory implementation of Building Energy Codes
16. Energy efficiency standards for domestic electrical appliances
17. Light-emitting diode or equivalent alternatives for traffic signal / street lighting
18. Tree planting / roof-top greening
19. District cooling system for Kai Tak Development

Upon the implementation of these control measures, it is expected that about 4,200 hospital admissions would be avoided and the average life expectancy of the population would be increased by about 1 month. The economic benefits to the society (mainly due to improvement of public health and savings in energy costs) are estimated to be about \$1,228 million per year, which are substantially higher than the estimated economic costs of HK\$ 596 million.

At the same time, some of the proposed measures will impact on each and every member of the community, such as increases in higher electricity tariffs and bus fares, as well as adjustments in our way of living. We need to build consensus on the package of emission control measures to help Hong Kong achieve our new AQOs, the prices we are willing to pay and the pace at which we should move forward.

For details of the Review, please read the consultation paper and the study report which are available at EPD's website (www.epd.gov.hk)

問卷 Questionnaire

問題 Question (1)

你認為現行空氣質素指標需要更新嗎？

Do you agree that the existing Air Quality Objectives (AQOs) need updating?

問題 Question (2)

你認為更新空氣質素指標時，應否以保護公眾健康為主要考慮因素？

Do you agree that protection of public health should be the key consideration in updating the AQOs?

問題 Question (3)

你認為空氣質素指標應否參考世衛頒布的指引和中期目標制訂？你是否認同為了達致世衛的空氣質素指引這個長遠目標，應採納分期策略以更新空氣質素指標？

Do you agree that the AQOs should be set with reference to the guidelines and interim targets (ITs) published by the World Health Organisation (WHO) and that a staged approach be adopted to update the AQOs with a view to achieving the WHO Air Quality Guidelines (AQGs) as a long-term goal?

問題 Question (4)

你認同參考世衛的空氣質素指引及中期目標所制訂的建議的新空氣質素指標嗎？

Do you agree to the proposed new AQOs which have been set with reference to a combination of WHO AQGs and ITs?

問題 Question (5)

你認為應否設立機制以定期檢討空氣質素指標，最少每五年檢討一次？

Do you agree that a mechanism should be put in place to regularly review the AQOs no less than every five years?

問題 Question (6)

請問你在多大程度上認同應實施所建議的排放管制措施，以達致新空氣質素指標及改善本港整體空氣質素？你認為政府還應考慮哪些其他措施？

To what extent do you agree that the proposed emission control measures should be implemented for achieving the new AQOs and improving local air quality in general? What other measures do you think the Government should consider?

問題 Question (7)

你認為有關建議的排放管制措施應最快何時實施？

How soon do you think these proposed emission control measures should be implemented?

問題 Question (8)

你是否願意負擔實施建議排放管制措施引起的費用，例如多付一點電費、巴士車費及改變你的生活習慣？

Are you willing to bear the costs arising from the implementation of the proposed emission control measures, such as higher electricity tariff and bus fares, as well as adjustments in your way of living?

問題 Question (9)

你對空氣質素指標檢討有其他意見嗎？

Do you have any other views on the Review?
