

## LCQ6: Air Quality Objectives

Following is a question by the Hon Chu Hoi-dick and a reply by the Secretary for the Environment, Mr Wong Kam-sing, in the Legislative Council today (January 30):

Question:

Earlier on, the Environment Bureau (ENB) recommended to the Air Quality Objectives Review Working Group that the average 24-hour concentration limit stipulated for fine suspended particulates (i.e. PM<sub>2.5</sub>) in the Air Quality Objectives (AQOs) be tightened from 75 µg/m<sup>3</sup> at present to 50 µg/m<sup>3</sup>, but the number of exceedances allowed be relaxed from the current level of not more than 9 days to not more than 35 days per calendar year. On the other hand, some environmentalists have pointed out that it is anticipated that during the period from 2020 to 2025, there will be a high concentration of air pollutants over the waters around Kau Yi Chau, i.e. the reclamation area under the Lantau Tomorrow Vision. In this connection, will the Government inform this Council:

(1) given that under the World Health Organization's Interim Target-2, the number of exceedances allowed in respect of PM<sub>2.5</sub> is no more than three days per calendar year, of the justifications for ENB's recommendation to relax that number to 35 days;

(2) whether it has assessed if the recommendation has run counter to the aim of reviewing AQOs as set out in section 7A of the Air Pollution Control Ordinance, which is to ensure that AQOs are the objectives that should be achieved and maintained in order to promote the conservation and the best use of air in the air control zone in the public interest; if it has assessed and the outcome is in the affirmative, whether ENB will shelve the recommendation; and

(3) given that some members of the public suspect that the recommendation was made to make it easier for the environmental impact assessment reports for the reclamation and related infrastructure works projects under the Lantau Tomorrow Vision to get approval, whether ENB will shelve the recommendation so as to allay public concerns?

Reply:

Acting President,

The World Health Organization (WHO) Air Quality Guidelines (AQGs) clearly state that different countries may set different air quality standards due to different approaches in balancing health risks, technological feasibility, and economic, political and social considerations. The AQGs recommend guideline values (i.e. ultimate targets) and interim targets (ITs) for air quality. The setting of ITs by WHO is intended for governments, having regard to their local circumstances, to adopt ITs to

progressively tighten their air quality standards towards an ultimate goal of meeting the WHO ultimate targets. At present, no country has fully adopted WHO ultimate targets as legal air quality standards.

The AQGs do not provide recommendations on the number of allowable exceedances when formulating the guideline values of the concerned air pollutants. In view of the fact that air quality may violate the standards owing to uncontrollable circumstances such as extreme weather, Chapter 8 of the AQGs states that when the air quality standards are set to be legally binding, governments could quantify the compliance criteria through establishing the number of allowable exceedances. The AQGs have also quoted the number of allowable exceedances for the 8-hour ozone standard set by the European Union (EU) at 25 times per year and that for the 24-hour nitrogen dioxide standard set in South Africa at three times per year as examples to illustrate that the numbers of allowable exceedances for different air pollutants concentration limits vary among different places.

The prevailing Air Quality Objectives (AQOs) came into effect on January 1, 2014. The Air Pollution Control Ordinance (APCO) stipulates that the AQOs must be reviewed at least once in every five years. The Environment Bureau embarked on a review of the AQOs in mid-2016 and formed a AQOs Review Working Group (Working Group) and sub-groups comprising members from relevant stakeholders and government department representatives to take forward the work. The review has been completed in December 2018. We plan to report the review findings to the Advisory Council on the Environment (ACE) in the first quarter of this year, consult the Legislative Council (LegCo) Panel on the Environmental Affairs (EA Panel) afterwards and launch a three-month public consultation. After completing the public consultation, we shall consider views collected and consult the ACE and the EA Panel on the way forward. If the AQOs are to be tightened, we shall submit an amendment bill to the LegCo with a view to implementing the new AQOs as soon as possible.

My responses to the questions raised by the Hon Chu Hoi-dick are as follows:

(1) and (2) As I mentioned earlier, the WHO AQGs do not provide recommendations on the number of allowable exceedances of the 24-hour particulate matter (PM) guideline values. In fact, the number of allowable exceedances of the 24-hour PM standards varies among places. For example, the EU and the United Kingdom allow 35 exceedances per year for the 24-hour PM10 (respirable suspended particulates) standards. They have set an annual PM2.5 (fine suspended particulates) standard but not any 24-hour PM2.5 standard.

The assessment results of the AQOs review reveal that there is scope for tightening the AQO for annual PM2.5 from IT-1 to IT-2. If the AQO for 24-hour PM2.5 is to be tightened concurrently to IT-2, there could be more than 30 days on which the 24-hour PM2.5 concentrations at the north-western and northern parts of the New Territories would exceed the IT-2 level due to unfavourable meteorological conditions or regional air pollution influence. Therefore, according to WHO AQGs, setting a number of allowable exceedance of 35 is appropriate and in line with international practices (including EU and United States). The air science and health experts of the Working Group also

consider that the above approach to tighten the AQOs of PM2.5 can help enhance public health protection.

Therefore, the approach of progressively tightening the air quality standards through the adoption of ITs and setting the number of allowable exceedances for determining compliance with the standards according to AQGs is fully in line with section 7A of the APCO.

(3) The review of AQOs is based on WHO AQGs and scientific grounds. The assessment approaches adopted and the findings have been thoroughly discussed among air scientists and health experts. As aforesaid, we are going to report the review findings to the ACE and embark on the public consultation. If the AQOs are to be tightened, we shall submit an amendment bill to the LegCo.

Thank you, Acting President.