For information on 5 December 2013

# LEGISLATIVE COUNCIL PANEL ON ENVIRONMENTAL AFFAIRS

### Launching the Air Quality Health Index Reporting System

#### **PURPOSE**

We briefed the Panel on 25 February 2013 of our proposal to replace the existing Air Pollution Index (API) by a new health risk-based Air Quality Health Index (AQHI) (ref: LC Paper CB(1)569/12-13(02)). We now plan to launch the AQHI on 30 December 2013 and this paper updates Members of the launching of the new reporting system.

#### **BACKGROUND**

- 2. The AQHI is a health risk-based and multiple-pollutant index, reflecting the risk to public health following exposure to certain air pollution levels. It provides timely information about the health risk due to air pollution to the public and to enhance their awareness. It also serves as an alert to the public before the onset of serious air pollution episodes and helps the general public, especially susceptible groups such as children and the elderly as well as those with heart or respiratory illnesses, to consider taking precautionary measures as necessary.
- 3. The AQHI estimates the additional short-term health risk caused by air pollution of respiratory and cardiovascular illnesses that lead to hospital admissions. It makes reference to the short-term World Health Organization Air Quality Guidelines as anchor points to define the level where health risk is high due to short term exposure to air pollution. AQHI is reported on a scale of 1 to 10 and 10+ and is grouped into five AQHI health risk categories. The AQHI system provides different health advice for people having different degrees of susceptibility to air pollution. At an AQHI level of 7 or above, the susceptible groups may notice aggravation of their health conditions while some healthy individuals may also experience some discomfort. Details of the health advice are at Annex.

#### PROGRESS MADE

- 4. Since our report to the Panel, we have been preparing the relevant stakeholders for the switch from API to AQHI. Together with the relevant Government bureaux/departments, we have updated guidelines and response plans in collaboration with medical doctors/practitioners, employers of outdoor workers, schools, nurseries and elderly homes for them to follow during high AQHI days. To facilitate timely and effective dissemination of the AQHI information, in addition to revamping and enhancement of our website and interactive voice recording system, we have also set up an AQHI alert wizard for computers as well as a dedicated AQHI application with features such as customized filters on AQHI information by districts, risk categories and alert system for smartphone users. We have scheduled to launch the AQHI system on 30 December 2013.
- 5. Over the past months, we organized over 20 briefing sessions for key stakeholders. These include principals of primary and secondary schools, kindergartens and kindergartens-cum-child care centers; outdoor sports associations, green groups, labour groups in the construction, logistics, cleansing services sectors and other sectors. We also briefed the Labour Advisory Board and the Construction Industry Council.

#### **PUBLICITY**

- 6. In the coming weeks, we will hold two briefing sessions for members of the public and interested parties on 9 and 14 December 2013 respectively. We will also launch publicity via a new dedicated AQHI website (www.aqhi.gov.hk) and AQHI smartphone Apps, television and radio announcements. We will start distributing promotional leaflets and posters at public libraries, public hospitals, sports halls, public enquiry service centres of the Home Affairs Department and environmental resources centres and regional offices of the Environmental Protection Department.
- 7. To allow interested parties to familiarize themselves with the new system early, we will start a trial run of the AQHI on 23 December 2013. This will also facilitate us to solicit users' feedback with a view to making necessary fine-tuning as necessary.

## WAY FORWARD

8. After launching the new AQHI system, we will closely monitor its implementation and continue to publicize as a health-risk communication tool to facilitate the public to adjust their physical activities for better protection of health.

**Environment Bureau/Environmental Protection Department December 2013** 

## RECOMMENDED PRECAUTIONARY ACTIONS FOR THE AIR QUALITY HEALTH INDEX SYSTEM

| Health Risk | AQHI | People who are sensitive to  Air Pollution |                            | Outdoor Workers*      | General Public        |
|-------------|------|--|----------------------------|-----------------------|-----------------------|
| Category    |      |  |                            |                       |                       |
|             |      | People with existing heart                 | Children and the Elderly   |                       |                       |
|             |      | or respiratory illnesses #                 |                            |                       |                       |
| Low         | 1    | No response action is                      | No response action is      | No response action is | No response action is |
|             | 2    | required.                                  | required.                  | required.             | required.             |
|             | 3    |  |                            |                       |                       |
| Moderate    | 4    | No response action is                      | No response action is      | No response action is | No response action is |
|             | 5    | normally required.                         | required.                  | required.             | required.             |
|             | 6    | Individuals who are                        |                            |                       |                       |
|             |      | experiencing symptoms                      |                            |                       |                       |
|             |      | are advised to consider                    |                            |                       |                       |
|             |      | reducing outdoor physical                  |                            |                       |                       |
|             |      | exertion.                                  |                            |                       |                       |
| High        | 7    | People with existing heart                 | Children and the elderly   | No response action is | No response action is |
|             |      | or respiratory illnesses are               | are advised to reduce      | required.             | required.             |
|             |      | advised to <b>reduce</b> outdoor           | outdoor physical exertion, |                       |                       |

<sup>\*</sup> The advice does not apply to outdoor workers who are sensitive to air pollution.

<sup>#</sup> Such as coronary heart disease and other cardiovascular diseases, asthma and chronic obstructive airways diseases including chronic bronchitis and emphysema.

|           |    | physical exertion, and to         | and to <b>reduce</b> the time of |                                   |                                  |
|-----------|----|-----------------------------------|----------------------------------|-----------------------------------|----------------------------------|
|           |    | reduce the time of their          | their stay outdoors,             |                                   |                                  |
|           |    | stay outdoors, especially in      | especially in areas with         |                                   |                                  |
|           |    | areas with heavy traffic.         | heavy traffic.                   |                                   |                                  |
|           |    |                                   |                                  |                                   |                                  |
|           |    | They should also seek             |                                  |                                   |                                  |
|           |    | advice from a medical             |                                  |                                   |                                  |
|           |    | doctor before participating       |                                  |                                   |                                  |
|           |    | in sport activities and take      |                                  |                                   |                                  |
|           |    | more breaks during                |                                  |                                   |                                  |
|           |    | physical activities.              |                                  |                                   |                                  |
| Very High | 8  | People with existing heart        | Children and the elderly         | Employers of outdoor              | The general public is            |
|           | 9  | or respiratory illnesses are      | are advised to reduce to         | workers performing heavy          | advised to <b>reduce</b> outdoor |
|           | 10 | advised to reduce to the          | the minimum outdoor              | manual work are advised to        | physical exertion, and to        |
|           |    | minimum outdoor physical          | physical exertion, and to        | assess the risk of outdoor        | reduce the time of their         |
|           |    | exertion, and to <b>reduce to</b> | reduce to the minimum            | work, and take appropriate        | stay outdoors, especially in     |
|           |    | the minimum the time of           | the time of their stay           | preventive measures to            | areas with heavy traffic.        |
|           |    | their stay outdoors,              | outdoors, especially in          | protect the health of their       |                                  |
|           |    | especially in areas with          | areas with heavy traffic.        | employees such as                 |                                  |
|           |    | heavy traffic.                    |                                  | reducing outdoor physical         |                                  |
|           |    |                                   |                                  | exertion, and <b>reducing</b> the |                                  |
|           |    |                                   |                                  | time of their stay outdoors,      |                                  |
|           |    |                                   |                                  | especially in areas with          |                                  |
|           |    |                                   |                                  | heavy traffic.                    |                                  |

| Serious | 10+ | People with existing heart      | Children and the elderly   | Employers of all outdoor          | The general public is      |
|---------|-----|---------------------------------|----------------------------|-----------------------------------|----------------------------|
|         |     | or respiratory illnesses are    | are advised to avoid       | workers are advised to            | advised to reduce to the   |
|         |     | advised to <b>avoid</b> outdoor | outdoor physical exertion, | assess the risk of outdoor        | minimum outdoor physical   |
|         |     | physical exertion, and to       | and to avoid staying       | work, and take appropriate        | exertion, and to reduce to |
|         |     | avoid staying outdoors,         | outdoors, especially in    | preventive measures to            | the minimum the time of    |
|         |     | especially in areas with        | areas with heavy traffic.  | protect the health of their       | their stay outdoors,       |
|         |     | heavy traffic.                  |                            | employees such as                 | especially in areas with   |
|         |     |                                 |                            | reducing outdoor physical         | heavy traffic.             |
|         |     |                                 |                            | exertion, and <b>reducing</b> the |                            |
|         |     |                                 |                            | time of their stay outdoors,      |                            |
|         |     |                                 |                            | especially in areas with          |                            |
|         |     |                                 |                            | heavy traffic                     |                            |

#### Note:

- 1. As the health effects on individuals may vary, you should seek advice from a medical doctor if you are in doubt or feel uncomfortable. If you are suffering with existing heart or respiratory illnesses (such as coronary heart disease and other cardiovascular diseases, asthma and chronic obstructive airways diseases including chronic bronchitis and emphysema), you should follow your doctor's advice on the amount of physical exercise and the management of your illness under different air quality health index bands. If you are a smoker, you should quit smoking now!
- 2. Outdoor workers need to be aware of the potential impact on their health at times when the AQHI reaches "Very High" or "Serious" health risk, and seek advice from a medical doctor if they are in doubt of their health condition or suffer from any chest or breathing discomfort. They should inform their employers of the medical advice so that suitable work arrangements can be worked out.
- 3. The amount of physical exercise that should be performed differs according to the individual's physical capacity, and should be tailored to one's own physical condition. Ask your doctor for advice.
- 4. Schools are advised to ensure their school children will avoid physical exertion when AQHI reaches 10+ with serious health risk.