

Guangdong-Hong Kong-Macao Pearl River Delta Regional Air Quality Monitoring Network results for 2019 released

The Guangdong-Hong Kong-Macao Pearl River Delta Regional Air Quality Monitoring Network released today (July 30) a report on its 2019 monitoring results, which showed a continuous improvement of air quality in the Pearl River Delta (PRD) in recent years.

Overall, the emission reduction measures implemented by Guangdong, Hong Kong and Macao in recent years have contributed to the gradual improvement of the overall air quality in the PRD. The monitoring network was launched in November 2005. Compared with 2006, the average annual concentration levels of sulphur dioxide (SO₂), respirable suspended particulates (RSP) and nitrogen dioxide (NO₂) in 2019 decreased by 84 per cent, 37 per cent and 29 per cent respectively. Although the other two parameters, i.e. carbon monoxide (CO) and fine suspended particulates (FSP) were only added to the monitoring network in September 2014, their average annual concentration levels also decreased by 4 per cent and 14 per cent respectively in 2019 when compared with 2015. On the other hand, the 2019 average annual concentration level of ozone (O₃) increased by 36 per cent when compared with 2006, indicating that further alleviation of regional photochemical pollution is required. The annual pollution trends of the above six air pollutants since 2006 are shown in the Annex.

To continually improve regional air quality, the Hong Kong Special Administrative Region Government and the Guangdong Provincial Government have long been committed to reducing emissions of air pollutants from key sources. The two governments are conducting a study on post-2020 regional emission reduction targets and concentration levels with a view to formulating emission reduction targets up to 2030. In addition, the Governments of Guangdong, Hong Kong and Macao will launch a three-year joint study from 2021 to 2023 on "Characterisation of photochemical ozone pollution in the Greater Bay Area and its regional and super-regional transportation". Results from the study will help better understand the origins of ozone precursors, its formation mechanism and regional and super-regional transportation characteristics in the Greater Bay Area.

Hong Kong has implemented various emission control measures on marine and land transport, power plants and non-road mobile machinery in order to continually improve air quality. On the vehicular emission front, Hong Kong has tightened the emission standards for first registered vehicles to Euro VI in phases according to vehicle classes and will continue to phase out old diesel commercial vehicles. It has also stepped up emission control against petrol and liquefied petroleum gas vehicles by using roadside remote sensing equipment as well as encouraged the use of electric vehicles. As regards marine emissions, the Hong Kong Special Administrative Region Government and the Guangdong Provincial Government have jointly implemented control measures

to mandate vessels to use low-sulphur fuel. Hong Kong will also increase the use of natural gas in power generation, promote the local development of renewable energy and continue to tighten emission caps for power plants progressively. In addition, the emission standards for newly approved non-road vehicles have been tightened in phases to Euro VI, on par with that for the newly registered road vehicles.

In 2018, Guangdong Province promulgated the Regulations on Prevention and Control of Atmospheric Pollution; published and implemented the three-year action plans on pollution control (2018 – 2020) and the implementation plan on safeguarding blue sky (2018 – 2020), which have introduced various air pollution control measures including upgrading industrial structures; enhancing energy supply structures; adjusting transportation structures; deepening control of pollution sources from industries; enhancing control on mobile and area sources; tackling polluted weather effectively and enhancing its decision-making ability based on scientific considerations to further improve the air quality. New projects subject to environmental impact assessment (including steel, petrochemical and cement industries) must comply with the specific emission standards for air pollutants. All motor vehicle petrol and diesel sold in Guangdong must comply with National VI standards. Guangdong Province is also taking forward full scale electrification of public transport, implementing comprehensive control on polluting industries and premises, introducing joint inspections on volatile organic compounds and providing guidance to key enterprises to adopt "One Enterprise One Strategy" integrated control measures.

Macao rolled out a series of air quality improvement measures to reduce pollution from mobile and stationary sources respectively in accordance with relevant initiatives laid down in The Five-Year Development Plan of the Macao Special Administrative Region (2016-2020) and its Policy Objectives. Such measures include pushing forward the use of natural gas and construction of relevant facilities, upgrading the emission standards for newly-imported vehicles to Euro VI, optimising emission standards for in-use vehicles and phasing out polluting motorcycles with two-stroke engines. The measures also include promoting new energy vehicles, raising the standards for vehicle fuels to Euro V, requiring the installation of vapour recovery systems in petrol filling stations and implementing emission standards for large stationary sources such as sewage treatment plants, chemical and pharmaceutical industries, oil depots and power plants.

The monitoring network, comprising 23 air monitoring stations located in Guangdong, Hong Kong and Macao, monitors six major air pollutants (i.e. SO₂, NO₂, O₃, RSP, FSP and CO). The Guangdong Environmental Monitoring Centre, the Environmental Protection Department of Hong Kong (HKEPD), the Macao Environmental Protection Bureau and the Macao Meteorological and Geophysical Bureau are responsible for the co-ordination, management and operation of the monitoring stations of the three sides. They will continue to release annual reports on the monitoring results and pollution trends of the PRD as well as quarterly statistical monitoring results. Members of the public can visit the website of the Guangdong-Hong Kong-Macao Regional Air Quality Monitoring Information System (113.108.142.147:20047) direct, or the websites of the

Department of Ecology and Environment of Guangdong Province (gdee.gd.gov.cn), HKEPD (www.epd.gov.hk), the Macao Environmental Protection Bureau (www.dspa.gov.mo) or the Macao Meteorological and Geophysical Bureau (www.smg.gov.mo) to obtain the relevant annual reports and quarterly monitoring statistics.