

Guangdong-Hong Kong-Macao Pearl River Delta Regional Air Quality Monitoring Network results for 2017 released

The Guangdong-Hong Kong-Macao Pearl River Delta Regional Air Quality Monitoring Network released today (June 20) a report on its 2017 monitoring results, which showed continual improvement of the air quality in the Pearl River Delta (PRD) last year. Compared with the 2016 levels, the average annual concentration levels of sulphur dioxide (SO₂), nitrogen dioxide (NO₂) and carbon monoxide (CO) in the PRD in 2017 decreased by 8 per cent, 3 per cent and 6 per cent respectively.

While the average annual concentration levels of respirable suspended particulates (RSP) and fine suspended particulates (FSP) in 2017 increased by 7 per cent compared with 2016 levels, the long-term downward trend of pollutant levels is evident despite the short-term fluctuations. Compared with the 2006 levels, the annual concentration levels of NO₂, SO₂ and RSP in 2017 decreased by 26 per cent, 77 per cent and 34 per cent respectively. The figures reflect that the measures implemented by Guangdong, Hong Kong and Macao in recent years have contributed to the improvement of air quality in the PRD. Nonetheless, the 2017 average annual concentration level of ozone (O₃) increased by 21 per cent and 16 per cent respectively compared with the 2006 and 2016 levels, indicating that further alleviation of the regional photochemical pollution is required. The pollution trends of the six air pollutants since 2006 are shown in the Annex.

To continually improve regional air quality and photochemical pollution, the Hong Kong Special Administrative Region Government and the Guangdong Provincial Government have long been committed to reducing key air pollutants emissions. The Guangdong and Hong Kong governments concluded in 2012 the emission reduction targets for 2015 and the emission reduction ranges for 2020. According to the results of the mid-term review study on emission reduction targets of air pollutants in the PRD region announced last year, both sides have achieved their respective 2015 reduction targets and have finalised the reduction targets for 2020.

Key emission reduction measures implemented in Hong Kong in recent years include further tightening the emission caps for power plants, reviewing the fuel mix for electricity generation, progressively phasing out pre-Euro IV diesel commercial vehicles, strengthening the control of emissions from LPG and petrol vehicles, tightening the sulphur content of locally supplied light diesel for vessels' consumption, regulating ocean-going vessels to switch to low-sulphur fuel when berthing in Hong Kong waters, progressively restricting the volatile organic compounds (VOC) content of various products and controlling the emissions from non-road mobile machinery.

Key emission reduction measures implemented by Guangdong in recent years

include increasing the supply of clean energy; enhancing the structure of energy supply; introducing stringent environmental requirements for new projects; phasing out low-technology and polluting industries; embarking on programmes to reduce air pollution by adopting desulphurisation, low nitrogen-oxides (NO_x) combustion and de-NO_x technologies; designating restriction zones for combustion of highly polluting fuels; fully implementing restriction zones for highly polluting vehicles (commonly known as yellow-label vehicles); implementing National V emission standards for motor vehicles; supplying motor diesel and petrol at National V standards; electrifying public transport; practising water-borne coating modifications of containers, and promoting remediation of VOC emissions in key industries and enterprises. In 2017, around 1 500 remedial measures were taken in Guangdong against construction materials industries, boilers and VOC, while 147 000 yellow-label vehicles were phased out. Ultra-low emission upgrading was largely completed for coal-fired generating units with generating power exceeding 100 kW. Desulphurisation equipment was installed in all sintering machines and pelletising machines, while de-NO_x equipment was installed using a selective non-catalytic reduction method for all cement clinker production lines with a daily production capacity of 2 000 tonnes or above.

The Macao side is also taking forward a series of air quality improvement measures by continuously implementing legislation and formulating scientific standards under the ambient pollution control actions outlined in the Macao Environmental Protection Plan (2010-2020). The improvement measures include announcing the tailpipe emission standards of newly imported and in-use vehicles, implementing quality control of unleaded petrol and light diesel equivalent to Euro V standards, implementing subsidy schemes to phase out two-stroke motor vehicles, formulating plans to introduce and promote environmentally friendly vehicles, and putting forward the formulation of emission standards and regulatory legislation for stationary sources.

The monitoring network comprising 23 air monitoring stations located in Guangdong, Hong Kong and Macao monitors the 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 (EPD), the Macao Environmental Protection Bureau (Macao EPB) and the Macao Meteorological and Geophysical Bureau (Macao MGB) are responsible for the co-ordination, management and operation of the monitoring stations of the three sides, and 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 Environmental Protection of Guangdong Province (GDEPD) (www.gdep.gov.cn), the EPD (www.epd.gov.hk), the Macao EPB (www.dsipa.gov.mo) and the Macao MGB (www.smg.gov.mo) to obtain the relevant annual reports and quarterly monitoring statistics.