

# Hong Kong's sewage surveillance programme wins IWA Project Innovation Awards (with photos)

The Territory-wide Sewage Surveillance Programme was awarded the Gold Award of the 2024 International Water Association (IWA) Project Innovation Awards under the category of "Performance Improvement and Operational Solutions". This fully recognises the Hong Kong Special Administrative Region (HKSAR) Government's innovative spirit and outstanding technological achievements in using sewage surveillance to help combat the epidemic.

The Awards Gala Dinner was held at the IWA World Water Congress & Exhibition in Toronto, Canada, on August 13 (Toronto time). The Director of Environmental Protection, Dr Samuel Chui, together with the Deputy Director of Drainage Services, Mr Robin Lee, and Principal Medical & Health Officer of the Department of Health (DH), Dr Kung Kin-hang, led an interdepartmental delegation to receive the award.

The interdepartmental team, comprising the Environmental Protection Department, the Drainage Services Department and the DH, has implemented a unique territory-wide sewage surveillance programme that combated COVID-19 by using sewage surveillance to provide important data to assist anti-epidemic measures during the most severe epidemic situation in Hong Kong, and brought about significant socio-economic benefits.

"Standing out from 108 submissions worldwide, the programme showcased that the HKSAR Government is keen to apply an innovative spirit that incorporates water research in public health control strategy in developing a framework that not only suits Hong Kong, but is also applicable to other places in the world. The achievements are internationally recognised," Dr Chui said.

The Territory-wide Sewage Surveillance Programme detects the viral concentration of the SARS-CoV-2 virus in the sewage network through a non-intrusive way, covering about 80 per cent of Hong Kong's population during the COVID-19 epidemic. This programme also effectively traces the source of the virus in different anti-epidemic phases and serves a sentinel surveillance function, enabling the Government to keep track of the activity of the virus in the community and the prevalence of its variants. During the fifth wave of the epidemic, the team developed two statistical models using a large amount of sewage virus data, which could predict the number of new cases in real-time two to four days ahead to assist in formulating anti-epidemic strategies and measures.

The programme has received full recognition from both local and foreign experts and has won several awards, including the Chief Executive's Commendation for Government/Public Service, the Excellence in Partnership

Award of the Civil Service Outstanding Service Awards, and the Hong Kong Institution of Engineers Grand Award and Merit Award. The sewage monitoring work has also been regularised after the full resumption to normalcy of society and has become one of the key indicators of the COVID-19 surveillance system. Relevant data and results are listed in the COVID-19 & Flu Express released weekly by the DH. Looking ahead, the Government will further strengthen sewage surveillance. The scope of sewage surveillance will be expanded to cover other infectious diseases (such as seasonal influenza) in a stepwise manner, with a view to early identification of risks arising from different infectious diseases to formulate appropriate public health response measures.

The IWA is the world's largest professional organisation in the water sector, bringing together water professionals from 140 countries/areas to explore smart water usage and seek solutions to global water resource challenges. Its Project Innovation Awards are presented every two years to recognise projects and teams that demonstrate outstanding innovation and leadership in research and technology within the professional water research sector.

