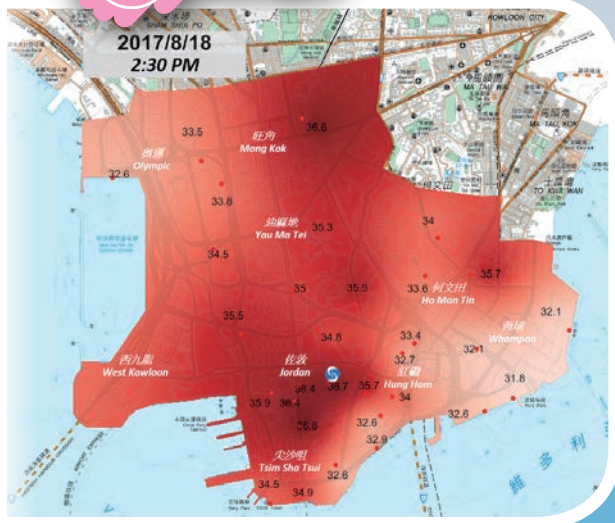




New generation of Community Weather Information Network Co-WIN 2.0 microclimate *launched*

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Results of a microclimate study conducted in Kowloon Peninsula: under the influence of easterly winds, the temperatures over the eastern part of Kowloon Peninsula are generally lower, while the temperatures over the central and western parts are somewhat higher.

Co-WIN 2.0 microclimate station made its debut on 4 November 2017, at the Zero Carbon Building (ZCB) in Kowloon Bay. Co-WIN 2.0 sensors were installed at different locations of ZCB in a demonstration of how a network of a prototype microclimate stations could provide information on air temperature, relative humidity, wind direction, wind speed, atmospheric pressure, UV Index and more.

New technologies have been adopted for the equipment, including an open-source microcontroller as well as microsensors for measuring wind, temperature, relative humidity and other weather elements. Some of the components, such as temperature shields, were fabricated with 3D printing technology. The new technologies help to reduce the size, power consumption and cost of the microclimate station, making it more suitable for operation within the city environment. The microclimate station can be mounted on a drone as well, so that measurement can also be taken aloft to provide three-dimensional data for urban microclimate monitoring.

In early 2017, the Observatory set up 33 button-sized microsensors for measuring temperatures in parks, green belts, waterfront, kerbsides and hills on the Kowloon Peninsula, to observe the urban microclimate in Hong Kong. The preliminary findings showed that local topography, building orientation and winds at the Victoria Harbour all had an influence on the temperatures in urban areas. The Observatory hopes that the technologies under study will contribute to future urban planning.

Different set-up of Co-WIN 2.0 microclimate stations



Microclimate sensors on a bollard



Microclimate sensors on a lamp pole



Microclimate sensors on a drone



DIRECTOR AND MEDIA AT LUNCHEON

Editorial Board



On 7 December 2017, Director of the Hong Kong Observatory, Mr Shun Chi-ming, had lunch with media representatives with around 30 reporters joining the event. During the luncheon, Mr Shun remarked that if Super Typhoon Hato had come 20 to 30 kilometres closer to Hong Kong, more severe local sea water flooding and damages due to storm surge would have occurred. In addition, under the influence of global warming, the average temperature in Hong Kong has hit record highs in recent years. A record-breaking high temperature of 36.6 degrees Celsius was recorded on 22 August 2017, the day before Hato hit Hong Kong.