

Speech by Dr BY Lee, Director of the Hong Kong Observatory 23 March 2011

Every year, we celebrate the World Meteorological Day on 23 March. The theme for the World Meteorological Day this year is “Climate for you”. Our ancestors, who toiled the ground for food, knew too well about the importance of climate. Even city dwellers today, cannot help but notice how weather and climate affect our day-to-day living. Widespread flooding in Australia and Pakistan; persistent drought in northern China and scourging heat in Russia in the past year, has reminded us mother nature’s ferocity in extreme climate. Being the official keeper of climate record for Hong Kong, the Observatory promotes the understanding of climate and effective use of climate information in the community. We also join hands with the scientists local and abroad to further our knowledge about the climate, thereby building the necessary foundation on which sound adaptation and mitigation policies must be based.

Speaking about weather knowing no boundaries, none other than the recent severe earthquake and tsunamis in Japan attracted the sympathy and attention from the rest of the world. Here one could appreciate the speed with which the news spread and the extensive use of social networks on the Internet to relay observations, photos and videos taken by people at the scene. Along with these came concern expressed by local people, first on the possible effect of tsunami and then followed by fear of radiation from a damaged nuclear power plant at Fukushima. In this connection, the Observatory has stepped up its services to better inform the public, namely the release of forecast track of air reaching Hong Kong in the next 3 days, and of real-time radiation data at the 10 radiation monitoring stations in Hong Kong.

In addition to our existing public education programme on ionizing radiation and nuclear power, such as school visit to our radiation exhibition, virtual tour of the exhibition on the internet, online educational resources, etc., we have, in the past week, also participated in various special TV programmes on radiation monitoring, produced educational videos on HKO YouTube, Upper Albert Road Facebook, Roadshow, as well as organized a public lecture on the effect of the accident to Hong Kong. Such educational work will continue.

On a more cheering note, I would like to report that the Observatory has continually led the international effort in the development and operation of the World Weather Information Service (WWIS) and the Severe Weather Information Centre (SWIC)

websites. The WWIS reached a new height with the release of the Google Earth-enabled future version in 2010 allowing English (and soon Italian) users to navigate over a virtual globe for speedy retrieval of official weather forecasts. This service was featured in the Meteorological Pavilion in the Shanghai Expo. Page visits of the website soared to 147 million in 2010. The launch of the Russian version of the WWIS last week will boost its popularity further as viewers may now obtain weather forecasts, in 9 different languages, from 127 countries for 1,347 cities.

The SWIC also reaches an ever growing audience with the incorporation of world-wide gale information and its personal computer software tool called SWidget. Potentially a powerful tool to reach many at risk of natural disasters, SWidget automatically retrieves official weather warning messages from participating meteorological services and alerts the user. Warnings are now contributed by the Observatory and 4 other services and more is expected to join. The Observatory will continue to play a leading role in these websites to contribute towards improvement in the provision of weather information for the purpose of disaster preparedness and prevention.

Before reporting on the latest developments in the Hong Kong Observatory, let me first introduce my assistant directors. They are:

1. Mr. WM Leung, responsible for instruments and radiation monitoring
2. Mrs. Hilda Lam, responsible for climate and geophysical matters
3. Miss SY Lau, responsible for aviation weather service
4. Mr. KC Tsui, responsible for public weather service in acting capacity.

Over the past year, we have, for the first time, formed a liaison group for the shipping community to foster better ties with a view to enhancing our service to the sector.

It is worth noting that the Observatory provided support to the 2010 Asian Games by sharing our experience with our counterparts in Guangdong in the setting up and operation of a heat-stress monitoring system there for the equestrian competitions. Another in-house developed nowcasting system of the Observatory, SWIRLS, after featuring in the 2008 Beijing Olympics, the 2010 Shanghai EXPO and the Commonwealth Games in New Delhi, will be adapted to provide short-term forecasts to support the Universiade in Shenzhen later this year. Experience gained in running these systems in other venues are being channelled back to the further development and improvement of the systems and their related services.

In 2010, we made significant strides in the provision of weather information on mobile devices. 'MyObservatory', after its enhancement in July last year with easy access of many weather products specific to the user's location, it has become quite popular with iPhone and iPad users. The service was further launched on Android mobile platform last November with favourable feedback. The total visitor figures for 'MyObservatory' exceeded 400 million since its launch in early 2010. In order to reach a broader audience, we plan to continue to develop 'MyObservatory' for other mobile platforms.

To further enhance communication with the public and stakeholders, we have explored the use of social networking services for dissemination of weather warnings and information. We started the Observatory Twitter website in September last year. We also produce a video in-house on YouTube every Friday, which discusses the week's weather and more importantly, presents a new topic each week with a scientific theme of interest to the public.

The internet website remains one of our major channels in delivering voluminous weather data and information to the public. The page visits in the past 12 months was over 2.1 billion. Our recently enhanced services on the Internet include:

1. PRD warning website – a portal to provide weather warning and information for 11 cities in the Pearl River Delta for the benefit of cross-border students and commuters, made possible by collaboration with Guangdong and Macao authorities;
2. Sand/dust information webpage – featuring surface reports of sand/dust observations, satellite pictures processed to better delineate areas affected by sand or dust, and forecast tracks of air reaching Hong Kong in the next 3 days; and
3. Fishermen portal – which integrates relevant weather information for easier access by fishermen. The information includes: marine forecasts, tropical cyclone warnings and visibility observations.

On climate research, we have published the findings of a follow-up study on extreme temperature projection for Hong Kong in the 21st century, made possible by the availability of more refined simulation data (i.e. daily data) of the UN IPCC AR4 models. The results suggest that there will be a significant increase in hot nights and very hot days and a significant decrease in cold days.

This year, the Observatory plans to apply for funding to replace its 17-year radar at Tate' Cairn to ensure that its ability to detect severe storms remains uninterrupted. At the same time, we continue our effort to upgrade equipment and replace aging facilities to support the increasing air traffic at the Hong Kong International Airport. This includes the replacement of the terminal Doppler weather radar for wind shear detection at the airport. In securing a site for this radar, the Government has been consulting with villagers of Tuen Mun with a view to gaining their support for building the said facility.

After a rather long quiescent period, solar activities are expected to peak at around 2012 to 2013. During the solar maximum, occasional intense solar storms may bring disruptions to power supply, communication and navigation systems on Earth. Apart from necessary information about the impact of space weather on daily lives and business operations, the HKO Space Weather webpage also conveys the latest warnings of the U.S. authority on adverse space weather. I urge those industries sensitive to the effects of space weather to get prepared.

Now, I would like to take the opportunity to introduce four new services of the Observatory which will start today:

- a) Revamped PDA version of the HKO website – To benefit users of all mobile platforms, we have revamped the PDA version of the HKO website with friendly displays and richer contents (Appendix 1).
- b) HKO Weibo website - encouraged by the growing popularity of our Twitter website, we have developed the Observatory's Weibo website (Appendix 2) which is the Chinese equivalent of Twitter, for dissemination of our weather warning and information to a wider audience;
- c) Quick Earthquake Message – this is a trial use of Twitter to disseminate promptly messages about earthquakes of magnitude 6 or above (Appendix 3). The generation of these messages will be fully automatic, which enable them to reach users about 10 minutes faster than that in the current practice which relies on manual analyses. They are meant to deliver fast notification whenever an intense earthquake is detected or analysed. For more precise location and magnitude information, the user may refer to subsequent press releases carrying further information from the Observatory; and

- d) Enhanced Ultraviolet-A (UVA) Information - We have enhanced our Ultraviolet webpage (Appendix 4) with real-time UVA measurement, together with advice on the use of information to protect oneself from the damaging effects of UVA (in addition to UVB).

Many of us are interested about what is in store for us in terms of weather this year, which I will try to answer now. The Pacific tropical sea temperature underwent a large fluctuation in 2010. The El Nino in the first half of the year ended in spring, giving way to La Nina which became established by December. The general consensus is that the current La Nina event has peaked and is expected to weaken in spring, i.e. March to May. On the basis of past climate and the latest climate forecast, this means that Hong Kong may start to experience tropical cyclone activity in June or earlier this year. For the year 2011, we expect that the number of tropical cyclones affecting Hong Kong will be normal to above normal, that is, between 6 and 9. The annual rainfall is expected to be near normal, i.e. between 2100 and 2700 mm (Appendix 5). It is important that Hong Kong people should prepare well for the rain and typhoon season to mitigate loss and damage.

I would like to take this opportunity to announce the publication of the Director's Collectanea, a sequel to the Director's Blog published in 2010. This is a collection of blog messages written in the past year to share with the public thoughts and views on meteorology and other issues of interest to members of the public.

Finally, I would like to request your help in publicizing the Hong Kong Observatory's Open Day this Saturday and Sunday, that is, 26 and 27 March, when the Observatory ground and exhibit will be open to the public. All are welcome.

Let me stop here. If you have questions, my assistant directors and I will try our best to answer them. Thank you.

Appendix 1. Facelift of PDA version of HKO website

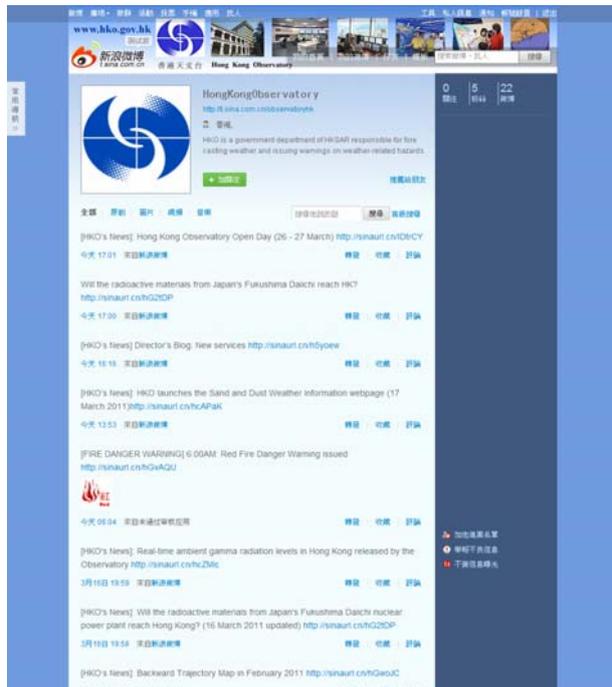
The Hong Kong Observatory (HKO) launches on 23 March 2011 a new mobile version (Chinese: <http://m.weather.gov.hk>; English: <http://m.weather.gov.hk/report.htm>) of the HKO website. The new version is a facelift of the existing PDA version with better displays and navigation as well as richer contents. The new mobile version website contains an intelligent function that can re-scale automatically to fit the screen size of different mobile devices.



Appendix 2. Weibo Service

The Hong Kong Observatory (HKO) launches on 23 March 2011 a trial service on Weibo website (Chinese: <http://t.sina.com.cn/hkobservatory>; English: <http://t.sina.com.cn/observatoryhk>) to deliver real-time weather warnings and HKO's latest news. These include tropical cyclone warning, rainstorm warning, thunderstorm warning, landslip warning, special flood announcement for the northern New Territories, very hot weather warning, cold weather warning, strong monsoon signal, fire danger warning, frost warning and news about storm surge and tsunami.

Weibo is a social networking website enabling users to send messages and read messages posted by other users. On following “香港天文台” (Chinese) or “HongKongObservatory” (English), HKO's official weather accounts on Weibo, the user will be kept posted about the latest weather news including the latest warnings in force.



Appendix 3. Quick Earthquake Messages on Twitter Trial Version

In order to provide early notification of the occurrence of strong earthquakes to members of the public, the Hong Kong Observatory launches a trial version of Quick Earthquake Messages on Twitter on March 23 (Wednesday). This would include notification messages on worldwide earthquakes of magnitude 6.0 or above as analyzed by the Observatory.

These Twitter earthquake messages are compiled and posted by the Observatory's computer systems automatically without human intervention so as to expedite information release. For certain events, Observatory personnel may make use of subsequent information to compile and issue earthquake press releases with more detailed information. Information given in such press releases should supersede those given in the tweets if there are deviations.

As locally felt earthquakes of any magnitude may be of interest to the public, the Observatory will also disseminate manually prepared messages on locally felt earthquakes through Twitter as quickly as possible.

To read about Quick Earthquake Messages on Twitter, please visit,

<http://twitter.com/HKOQEME>

More information about this service can be found at the following web page:

<http://www.hko.gov.hk/gts/quake/hkoqeme.htm>

Press releases on earthquake issued by the Observatory can be found at:

http://www.hko.gov.hk/gts/quake/neqpress_e.htm

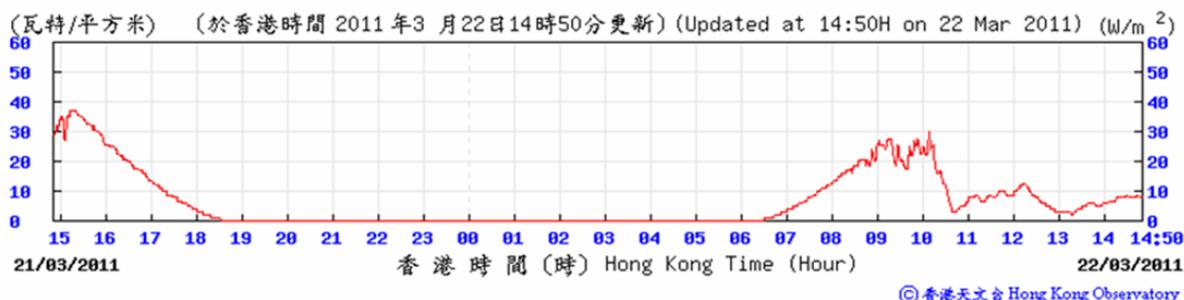
Appendix 4. The Observatory enhances its Website with Ultraviolet-A (UVA) Radiation Information

The Hong Kong Observatory today (23 March) starts providing real-time UVA radiation data on its webpage, so that the public can better appreciate the ultraviolet (UV) radiation in Hong Kong.

UVA radiation is a major component of the solar radiation. Over-exposure to UVA radiation may cause wrinkling, ageing and tanning of the skin, as well as potential development of skin cancer. As there is increasing concern about the health effect of UVA radiation, the Observatory has set up equipment to measure UVA radiation intensity at the King's Park Meteorological Station.

Apart from real-time UVA radiation data, relevant information including the characteristics of UVA radiation, its health effect and sun protective measures, etc, are available on the Observatory's webpage. Members of the public are welcome to visit the webpage at: www.weather.gov.hk/wxinfo/uvindex/english/uvatoday.htm. The latest report and forecast of the UV index are available through the Observatory's website, radio and Dial-a-Weather system (1878200).

UVA radiation intensity measured at the King's Park Meteorological Station
(1-minute mean updated every 10 minutes)



Real-time UVA radiation data on the Observatory's webpage

Appendix 5. Outlook for 2011

<p>香港全年總雨量 Annual rainfall in Hong Kong</p>	<p>接近正常 (介乎 2100 至 2700 毫米) Near normal (between 2100 and 2700 mm)</p>
<p>進入香港 500 公里範圍內的 熱帶氣旋數目 Number of tropical cyclones entering 500 km of Hong Kong</p>	<p>正常偏多 (6 至 9 個) Normal to above normal (6 to 9)</p>