Mr Petteri Taalas, Secretary-General of the World Meteorological Organization

Distinguished Guests, Ladies and Gentlemen

INTRODUCTION

1. First of all, let me extend a very warm welcome to our overseas guests who have travelled from afar to be with us today.

2. I am delighted to join you today for the opening of the World Meteorological Organization’s (WMO) Regional Office for Asia and the South-West Pacific in Singapore. This office will serve as the nerve centre for the WMO’s programmes in the region.
It will be hosted by the Meteorological Service Singapore (MSS) and co-located here at the Centre for Climate Research Singapore (CCRS).

3. The establishment of this Regional Office is a very significant milestone for Singapore and the region. Allow me to elaborate.

SINGAPORE AND THE WORLD METEOROLOGICAL ORGANISATION (WMO)

4. Since its inception in 1950, WMO has been the United Nation’s authoritative voice on the behaviour of the Earth’s atmosphere – the atmosphere’s interaction with the oceans, the climate that this produces and the resulting distribution of water resources. Weather, climate and water go beyond national boundaries and this is why, the WMO plays a pivotal role in galvanising the global community to come together to cooperate in these areas.
5. In particular, the WMO is instrumental in facilitating real-time, free and unrestricted exchange of weather, climate and hydrological data among National Meteorological and Hydrological Services (or NMHSs in short) and its regional networks around the world. The framework for this international exchange of data was initiated in the late 19th century, and gradually led to the establishment of WMO’s World Weather Watch in 1963 – in a sense, WMO has been way ahead of the ‘Big Data’ revolution that we see happening now! This free sharing of data has enabled the provision of early warnings and forecasts which have helped to prevent and mitigate disasters, save lives and reduce damage to societies, economies and the environment through early planning and better risk management.

6. Singapore’s relationship with WMO dates back to 1966, when we first joined the organisation as a Member. We are honoured and delighted that WMO has decided to set up this Regional Office here in Singapore. We believe that this will further enhance collaboration and create synergies among the various NMHS in this region.
In addition, this will facilitate the cross-pollination of new and innovative ideas with scientists here at CCRS as well as with the larger research and scientific community in Singapore and the region. This is important as I am told that producing weather forecasts with high precision and accuracy is particularly challenging for this part of the world. As there has been little research dedicated to this area, CCRS is trying to address this scientific gap and we want to work closely with the WMO on this. We recognise the importance of WMO’s work, and will support and contribute to this Regional Office’s capacity-building initiatives through the MSS.

EMERGING TRENDS IN THE ASIA PACIFIC DEMAND ADVANCED, CUTTING-EDGE METEOROLOGICAL SERVICES

_Symbiotic Relationship between Air Transport and Aeronautical Meteorological Services_

7. We are faced with three emerging challenges in our region today. First, no region in the world is spared from the growing threats of weather and climate extremes induced by climate change.
The last decade alone has seen the Asia Pacific region experience major natural disasters that resulted in significant fatalities and financial losses – a recent one being Cyclone Mora that cut a path of destruction across Sri Lanka, Bangladesh and Myanmar. Studies have shown that the Southeast Asian region is highly vulnerable to rising sea levels, heavy floods and droughts. For the aviation sector, in particular, fluctuating climate extremes overlaid with already dynamic tropical weather patterns in our region can potentially be hazardous to flights and air travel if we are not prepared.

8. At the same time, we are seeing significant growth in air traffic in the region. The International Air Transport Association (IATA) has forecasted that global air passenger demand would double over the next 20 years – from 3.8 billion in 2016 to 7.2 billion passengers in 2035. This is primarily fuelled by the strong demand in Asia Pacific which is projected to have a growth rate of more than 6% per annum. In Singapore, we are expanding our airport in preparation for this – when Changi Airport’s Terminal 5 is ready in the 2020s, Singapore is expected to handle up to 700,000 flights annually – double the number of flights handled today.
9. This brings me to the third challenge. Given strong air passenger demand globally, it is imperative to transform the air traffic management system. The International Civil Aviation Organization (ICAO) envisions a globally interoperable and harmonised air traffic management system that will enable smooth, safe and seamless flights.

10. These three challenges – climate change, strong steady growth in global air traffic, and the transformation of air traffic management system, significantly changes the operating paradigm for our national meteorological services. Maintaining status quo is not an option. Meteorological information must be of even higher standards, precision and accuracy, particularly in the face of climate variability and climate change. WMO has made aeronautical meteorological services one of their key strategic priorities. So has Singapore.
11. A key role of MSS is to provide accurate and reliable forecasts and warnings of hazardous weather conditions for Singapore’s Flight Information Region (FIR) – these are paramount for aviation safety and efficiency. MSS also leads several regional initiatives. For instance, in South East Asia, MSS leads the coordination arrangements with the Meteorological Watch Offices of Malaysia and Indonesia to harmonise the issuance of advisories of significant meteorological conditions that can affect the safety of flights traversing different FIRs. This regional initiative, which started out as a WMO project, is the first to become operationalised in Asia and the Southwest Pacific region. Internationally, MSS is also the inter-regional gateway for the exchange of meteorological data between the Asia Pacific and Europe.

12. Against the backdrop of the ‘triple challenges’ confronting us, we have been investing heavily in cutting-edge research and building up our expertise to improve the precision of our weather predictions.
For example, CCRS has embarked on a multi-year research programme to develop an advanced modelling system that will simulate the convective-scale thunderstorms over our tropical region. Such thunderstorms can be particularly disruptive to flights and can potentially be hazardous. When completed, the research from the programme will improve the short-term prediction of thunderstorms.

**Working with the Region to Build Capacity and Expertise**

13. Besides aviation, MSS also plays a key role in the monitoring and assessment of transboundary hazards in the region. MSS is also host to the ASEAN Specialised Meteorological Centre or ASMC in short. Founded in 1993, the ASMC’s objective is to enhance regional capacity and strengthen support in the provision of meteorological services. Through the ASMC, MSS is spearheading a regional programme to promote research and application of Sub-Seasonal to Seasonal (S2S) predictions for the tropics, with a focus on high impact events such as heavy floods and droughts.
This programme is undertaken in close collaboration with the WMO S2S Prediction Project. The capability to predict the weather at longer lead times of a few weeks and months will help in the planning of water resources, agriculture and disaster management over a longer time horizon.

14. One of the key roles of ASMC is to monitor and issue alerts for land and forest fires and the occurrence of transboundary haze in the ASEAN region. During the traditional dry season, the Southeast Asian region is susceptible to transboundary smoke haze from peatland fires and the burning of agricultural waste. These haze events have caused adverse health and economic impact on countries in the region. Research and development into a dispersion modelling system that the ASMC uses is on-going. The aim is to improve the prediction of transboundary smoke occurrence and its impact in the ASEAN region so that stakeholders can take early mitigation actions.
15. So, these are some of the exciting and impactful projects that MSS, CCRS and ASMC are undertaking. We welcome collaborations with the Regional Office to further strengthen regional cooperation and coordination in the area of meteorology.

CONCLUSION

16. Ladies and gentlemen, we are heartened by WMO’s vote of confidence in Singapore by choosing to relocate the Regional Office for Asia and the South-West Pacific here. I would like to thank the WMO Secretary General, Mr Petteri Taalas and his staff for their support and hard work in making the establishment of this office a reality. Also, I would like to extend a warm welcome to Dr. Park, who will be based in Singapore as the Director of this Regional Office.

17. This opening ceremony marks the beginning for this Regional Office in Singapore. We are excited to have WMO’s physical presence in this part of the world, and look forward to the many exciting opportunities ahead for regional collaboration and capacity-building efforts in the region.
On this note, I wish the Regional Office all the best, and to all our guests from abroad, I hope you have a pleasant stay in Singapore.

Thank you.