



International Civil Aviation Organization

**SEVENTEENTH MEETING OF THE METEOROLOGY
SUB-GROUP (MET SG/17) OF APANPIRG**

Bangkok, Thailand, 13 – 16 May 2013

Agenda Item 7: Meteorological advisories, warnings and hazards

7.3) review METWSG SIGMET advisory

PROGRESS RELATED TO SIGMET ADVISORY IN CHINA

(Presented by China)

SUMMARY

This paper presents the progress related to SIGMET Advisory after the SIGMET advisory trial in Asia in 2011.

1. Introduction

1.1 From 4 May to 30 July 2011, as the host state, China conducted the SIGMET advisory trial in Asian region, covering 10 countries, namely Bangladesh, Cambodia, China, Democratic People's Republic of Korea, Lao People's Democratic Republic, Mongolia, Myanmar, Nepal, Thailand and Vietnam, i.e.18 MWOs for 19 FIRs. The purpose of the trial is to provide SIGMET advisories as guidance information for the issuance of SIGMETs in the coverage area. During the trial, SIGMET advisories were issued for thunderstorms and severe turbulence occurring above 10,000 feet (> FL100) every 4 hours, with possible updates when there are significant changes in the weather phenomena (only for thunderstorms during the trial) before next advisory. The validity period is no greater than 6 hours. The advisory is in textual and graphical format. Feedback from MWOs and airlines suggests SIGMET advisories are helpful for the improvement of SIGMET issuance by the MWOs.

1.2 After successfully conducting the SIGMET advisory trial, China continued its work on SIGMET advisory. The Civil Aviation Administration of China (CAAC) and China Meteorological Administration (CMA) formed an ad-hoc group to coordinate the research and development on SIGMET Advisories on both sides. Research of the use of the China Aviation Numerical Forecast System (CANFS), a meso-scale numerical model, for SIGMET advisory purpose is under way. Efforts have been taken on how to use current international cooperative programs organized by CMA and/or CAAC, such as The Asian Aeronautical Meteorology Service website and the WMO Severe Weather Forecasting Demonstration Project in Southeast Asia (SWFDP-SeA), for the preparation of SIGMET Advisories. Air Traffic Management Bureau of CAAC continues its cooperation with the State Secretariat of Civil Aviation of Cambodia (FOSD of SSCA) on the issuance of SIGMET for the Phnom Penh FIR. An International Training Course on Aeronautical Meteorological Service was organized by CMA and CAAC in April 2013 in Beijing.

2. Discussion

2.1 China Aviation Numerical Forecast Systems (CANFS)

China Aviation Numerical Forecast Systems (CANFS) have been deployed in Beijing, Shanghai and Guangzhou by the Air Traffic Management Bureau of CAAC. With the horizontal resolution of 36km, update cycle of 3 hours and validity period of 72 hours (outer domain), the systems can be used to support the preparation of SIGMET advisories in Asian region.

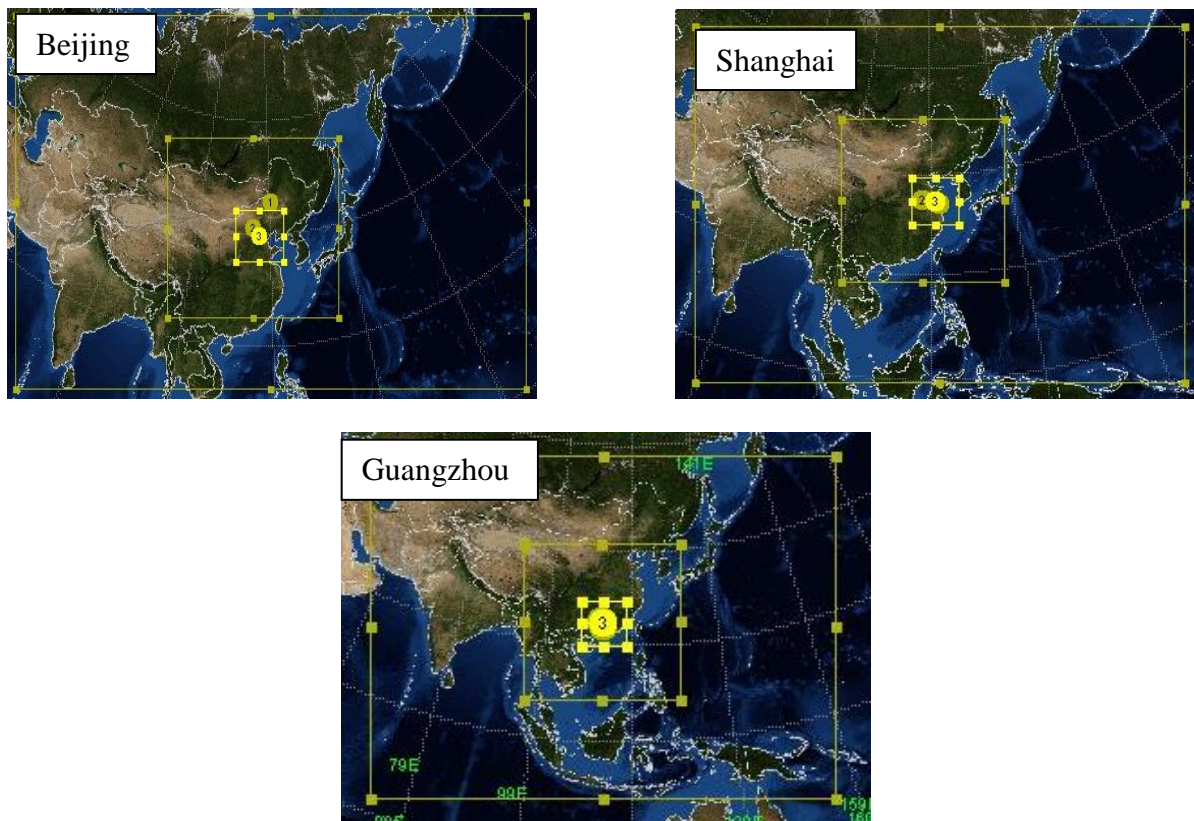


Figure 1. Coverage area of CANFS products

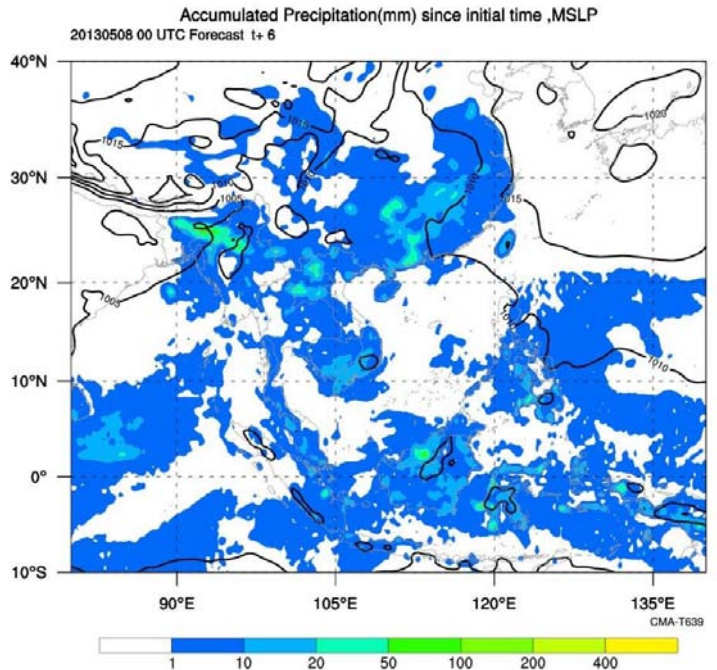
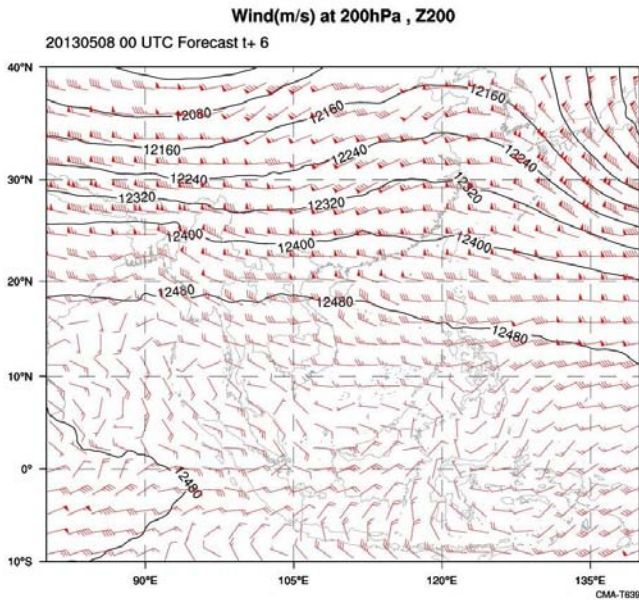
2.2 The Asian Aeronautical Meteorology Service website

The Asian Aeronautical Meteorology Service website (<http://www.aamets.org/>) for the WMO RA II Pilot Project to Develop Support for Developing Countries was set up by China for semi-operational use in March 2007. The website has been fully operationally used from November 2010. Authorized Users from about 30 countries get access to the website, which provide Flight Meteorological Documentation, Guidance Material for TAF, Convective Parameters, Synoptic Analysis, Dust Storm, Composite Radar Image, FY-2C Satellite Product, etc. New products for volcanic ash, tropical cyclone and AMDAR data, new SIGMET guidance, and route-specific forecasts will be included in the website among other additions in the future.

The website was used to disseminate the advisories during the SIGMET advisory trial, and can also be used for future SIGMET advisories.

2.3 Severe Weather Forecasting Demonstration Project in Southeast Asia

The WMO Severe Weather Forecasting Demonstration Project in Southeast Asia (SWFDP-SeA) hosted by National Meteorological Center of CMA, has set up its website (<http://eng.weather.gov.cn/swfdp/>). From July 2012, products of disaster weather monitoring and forecast, which are based on CMA's global numerical weather prediction system and FY2 stationary satellite, have been published and provided through the website to four Southeast Asian recipient countries.



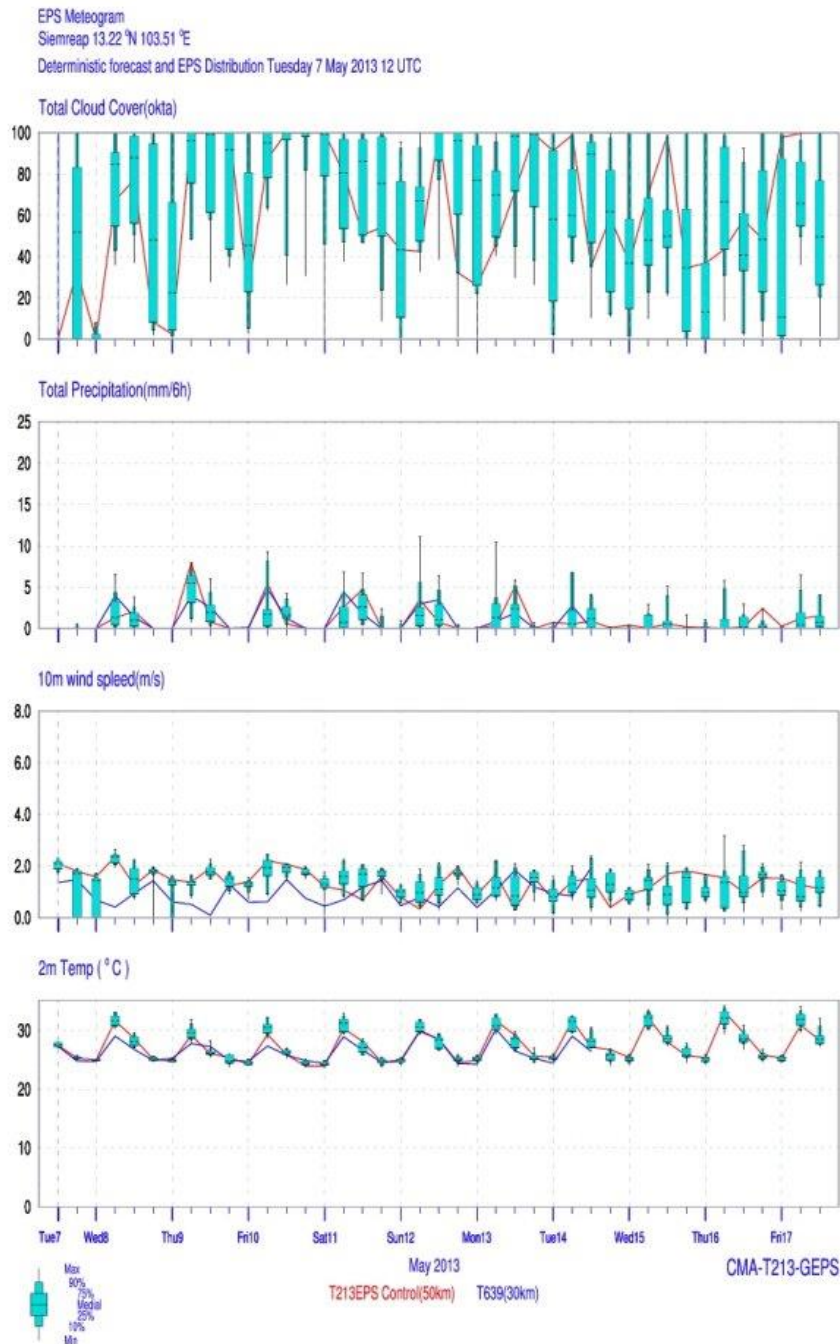


Figure. 2 SWFDP-SeA Products

2.4 Issuance of SIGMET for the Phnom Penh FIR

In light of the bilateral Letter of Agreement between the Air Traffic Management Bureau of the Civil Aviation Administration of China (ATMB of CAAC) and the Flight Operation and Safety Department of the State Secretariat of Civil Aviation of Cambodia (FOSD of SSCA), Kunming (ZPPP) MWO (1 June 2009 to 31 August 2010) and Chengdu (ZUUU) MWO (since 1 September 2010) issues SIGMET for the Phnom Penh FIR on behalf of the Phnom Penh MWO.

From 9 to 22 October 2012, the second exchange visit on aviation meteorology between the State Secretariat of Civil Aviation (SSCA) of Cambodia and The Civil Aviation Administration of China (CAAC) was held in Chengdu, China. The exchange visit included: a high-level meeting to review previous cooperation development and to discuss future cooperation between both sides; introduction of the operations of Chengdu MWO and Chengdu Meteorological Center; and discussion on how to strengthen the cooperation in aviation meteorological service between CAAC and SSCA. During the 2-week visit, 5 forecasters from SSCA were invited to work together with local forecasters to better understand how to issue SIGMETs for Phnom Penh FIR and Kunming FIR.

2.5 International Training Course on Aeronautical Meteorological Service in Beijing

An International Training Course on Aeronautical Meteorological Service was organized by CMA and CAAC from 9 to 19 April 2013 in Beijing. 30 participants from 23 countries attended the training course. Main topics of the training course included: introduction of CMA and CMA's international cooperative programs; the civil aviation meteorological service in China; the SIGMET Advisory Trial in Asia; SIGMET issuance; Nowcasting methods and meteorological service for terminal area; Aviation meteorological personnel competency assessment; and WMO CAeM priorities and future Aeronautical Meteorological services.

3. Action by the Meeting

3.1 The meeting is invited to note the information contained in this paper.
