



International Civil Aviation Organization

INFORMATION PAPER

**TWENTIETH MEETING OF THE METEOROLOGY SUB-GROUP
(MET SG/20) OF THE ASIA/PACIFIC AIR NAVIGATION PLANNING
AND IMPLEMENTATION REGIONAL GROUP (APANPIRG)**

Bangkok, Thailand, 6 – 9 June 2016

Agenda Item 6: Research, development and implementation issues in the MET field

**6.5 Governance and training (incl. quality management, cost recovery,
qualification and competencies of meteorological personnel)**

IMPROVEMENT OF MET SERVICES BY TRAINING

(Presented by China)

SUMMARY

This paper presents a review of international training courses organized by China to improve the MET services, especially the quality and efficiency of SIGMET issuance, and on-the-job trainings for aviation weather forecasters from Cambodia.

1. INTRODUCTION

1.1 In recent years, under the framework of World Meteorological Organization (WMO) Voluntary Cooperation Programme (VCP), four VCP training courses/seminar of WMO were organized by China Meteorological Administration (CMA) and Civil Aviation Administration of China (CAAC) in Beijing. The main purposes are to improve the issuance of SIGMET and to enhance the capability of participants in aviation significant weather forecasting. Participants from many countries attended the training courses. In future, at least one VCP training course will be arranged in China every year.

1.2 In addition, in order to enhance the capability of MET services provided by some countries, China has sent senior aviation weather forecasters and observers to join the WMO training courses aboard in recent years.

1.3 Besides, in light of the bilateral Letter of Agreement effective on 1 June 2009 between China and Cambodia, several exchange visits and on-the-job trainings were also conducted to improve the SIGMET issuance in Cambodia since 2011, which will be also continued in future.

2. DISCUSSION

2.1 The VCP training courses/seminar included several topics to improve the aeronautical MET services, especially the quality and efficiency of SIGMET issuance. The contents are mainly

focused on the knowledge about SIGMET issuance, including related regulations, technical specifications, interpretation, dissemination and examples of incorrect SIGMETs. Techniques of weather nowcasting, forecasting of convective weather and other aeronautical significant weather phenomena were also developed for the participants. Hong Kong, China also passed on the knowledge related to Aeronautical Meteorological Personnel (AMP) competency and shared the experience on the implementation of AMP competency assessment system during the VCP courses in 2011, 2013 and 2014. AMDAR data management and application in aviation weather forecasting was also mainly introduced during the course in 2015.

2.2 Experts from WMO, Meteorological Service of Canada, CMA, CAAC, and Hong Kong Observatory were invited to present important knowledge related to aeronautical MET services to participants. In 2011, Dr. Herbert Puempel, former Chief of Aeronautical Meteorology Unit of WMO was also invited to present a keynote speech on AMP Competence and Assessment and make presentations about the importance of SIGMET provision and SIGMET for turbulence and icing.

2.3 More than 100 participants from more than 48 countries/regions attended these courses/seminars. During the courses, participants also introduced the characteristics of local weather and climate, and shared their experience in aviation weather forecasting with each other.

2.4 Except for the one-week course organized in 2011, the latest 3 VCP courses are arranged for two weeks in order to pass on much knowledge for participants. In future, at least one course every year will be also organized for two weeks. In 2016, a two-week VCP course is planned to be arranged in October. Some photos are shown in Figure 1.



Figure 1. Photos of VCP training courses/seminar

2.5 As a WMO Regional Training Center in Nanjing, China also organized several aeronautical meteorological trainings in Nanjing or in requested countries to enhance their capability in the provision of MET services. For example, there were four training courses organized for aviation weather forecasters or meteorological observers in Mozambique, East Timor and Cape Verde in 2012, in which China sent several senior forecasters and observers to give lectures for the training courses.

2.6 Besides, in light of the bilateral Letter of Agreement effective on 1 June 2009 between the Air Traffic Management Bureau (ATMB) of CAAC and the Flight Operation and Safety Department of the State Secretariat of Civil Aviation of Cambodia (FOSD of SSCA). ATMB of CAAC continues its cooperation with FOSD of SSCA on the issuance of SIGMET for the Phnom Penh FIR. Since 2011, four exchange visits meeting between both sides for “The Strengthening Cooperation On The provision of Aeronautical Meteorology Services Over Phnom Penh Flight Information Region” was held alternately in Phnom Penh, Cambodia and Chengdu, China. Two on-the-job trainings were also provided for 15 aviation weather forecasters from SSCA in Chengdu in 2012 (12 days) and 2015 (21days). They were also invited to work together with local forecasters to better understand how to issue SIGMETs for Phnom Penh FIR and Kunming FIR. Some snapshots are shown in Figure 2.



Figure 2. Snapshots of exchange visits and trainings

2.7 These courses were proved to be very useful to develop the knowledge in the issuance of SIGMETs and in application of advanced techniques in aviation weather forecasting and MET services.

3. ACTION BY THE MEETING

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