



*International Civil Aviation Organization*

**FIRST MEETING OF ASIA/PAC METEOROLOGICAL  
ADVISORIES AND WARNINGS IMPLEMENTATION TASK FORCE  
(METWARN/I TF/1)**

Bangkok, Thailand, 23 – 25 March 2011

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**Agenda Item Conjoint: SIGMET**

**b) Regional participation in SIGMET advisory trial (monitoring and  
coordination)**

**SIGMET ADVISORY TRIAL IN THE ASIAN REGION HOSTED BY CHINA**

(Presented by China)

**SUMMARY**

The paper discusses the upcoming SIGMET Advisory trial in the Asian region hosted by China.

**1. INTRODUCTION**

1.1 There are nine flight information regions (FIR) in mainland China: Beijing (ZBPE) FIR, Shenyang (ZYSH) FIR, Shanghai (ZSHA) FIR, Guangzhou (ZGZU) FIR, Wuhan (ZHWH) FIR, Sanya (ZJSA) FIR, Kunming (ZPKM) FIR, Lanzhou (ZLHW) FIR and Urumqi (ZWUQ) FIR (Fig. 1). China has established one meteorological watch offices (MWO) for each FIR in accordance with the provisions of Annex 3.



Fig. 1

1.2 One MWO, Chengdu (ZUUU) MWO, issues SIGMETs for the Phnom Penh (VDPP) FIR of Cambodia on behalf of VDPP MWO under the Letter of Agreement (LOA) between China and Cambodia aviation authorities.

1.3 Since the first meeting of the ICAO Meteorological Warning Study Group (METWSG), CAAC pays high attention to the SIGMET advisory feasibility study and SIGMET guidance study. To promote the study, a workgroup, with members from all MWOs in China, was established in 2009. The main tasks of the workgroup include:

- 1) Monitoring SIGMET issuance of MWOs in/ around China
- 2) Designing the format and dissemination of SIGMET advisory
- 3) Developing criteria and forecast tools of the weather phenomena included in SIGMET advisory issuance
- 4) Description of geographical region in SIGMET advisory

1.4 In the METWSG/3 meeting, China was selected as the host State to participate in the SIGMET advisory trial in the Asian region.

## 2. DISCUSSION

2.1 **Trial Period** - 3 months from May to July 2011.

2.2 **Geographical Area** - parts of Asia, including China, Bangladesh, Cambodia, Democratic People's Republic of Korea, Lao People's Democratic Republic, Mongolia, Myanmar, Nepal, Thailand and Vietnam, are invited to participate in the SIGMET Advisory trial in the Asian region.

2.3 **Data sources.** The SIGMET advisory during the trial will be based on:

- 1) numerical weather prediction products;
- 2) meteorological satellite products;
- 3) weather radar data;
- 4) surface observations;
- 5) upper air observations;
- 6) world area forecast centre products and
- 7) other weather information.

2.4 **Weather phenomena** - The contents of SIGMET advisory are restricted to:

- 1) Thunderstorms:
  - obscured (OBSC TS), with hail (OBSC TSGR)
  - embedded (EMBD TS), with hail (EMBD TSGR)
  - frequent (FRQ TS), with hail (FRQ TSGR)
  - squall line (SQL TS), with hail (SQL TSGR)

- 2) Severe turbulence (SEV TURB)
- 3) Severe icing (SEV ICE), due to freezing rain (SEV ICE (FZRA))
- 4) Severe mountain wave (SEV MTW)

2.5 **Vertical Coverage.** SIGMET advisories are to be issued for the above phenomena occurring above 10,000 feet (> FL100).

2.6 **Format.** The format for the SIGMET advisory during the trial was to be both textual and graphical with the textual format having a similar format to existing advisories, and the graphical advisory allowing for multiple phenomena to be depicted on a single chart over multiple flight information regions (FIRs).

2.7 **Validity period, update frequency and dissemination.**

The text version of the SIGMET advisory (abbreviated to SMA) during the trial is to be issued for each phenomenon every 4 hours until the phenomena concerned were no longer expected with the validity period up to 6 hours, which are disseminated via AFTN.

The graphical version (web-based) of the SIGMET advisory (abbreviated to SMG) during the trial may consist of advisory areas for all concerned phenomenon, and will be updated as a new advisory is issued to include all current advisories, which disseminated via internet ( the Asian Aeronautical Meteorology Service website, <http://www.aamets.org> ).

2.8 **Examples.** The examples for textual and graphical SIGMET advisory are shown as follows.

SMA A08	
DTG:	20091105/2200Z
SAC:	BEIJING
VALID:	052200/060400
FIR:	VNSM/ ZPKM
PHENOMENON:	SEV TURB FCST
LOCATION:	WI N3000 E08500 – N2700 E08800 – N2700 E08500
LEVEL:	FL280/340
MOVEMENT:	MOV NW 40KT
INTENSITY:	WKN
RMK:	NIL
NXT ADVISORY:	20091106/0100Z

SMA A09	
DTG:	20091105/2200Z
SAC:	BEIJING
VALID:	052300/060400
FIR:	ZPKM
PHENOMENON:	SEV ICE FCST
LOCATION:	WI N2530 E10130 – N2530 E10400 – N2230 E103000 – N2230

	E10000
LEVEL:	FL180/200
MOVEMENT:	STNR
INTENSITY:	NC
RMK:	NIL
NXT ADVISORY:	20091106/0100Z



NR	VALID	PHENOMENON	LEVEL	MOVEMENT	INTENSITY
A08	052200/060400	SEV TURB FCST	FL290/340	NW 40KT	INTSF
A09	052300/060400	SEV ICE FCST	FL190/200	STNR	NC

2.9 **Training.** A training course under World Meteorological Organization (WMO) Voluntary Cooperation Programme (VCP) for the participating States prior to the SIGMET advisory trial is planning to be conducted by China in April 2011 in Beijing. SIGMET and SIGMET advisory trial issuance, the use of the Asian Aeronautical Meteorology Service website ([www.aamets.org](http://www.aamets.org)) and the application of related guidance materials will be the main topics.

2.10 **Monitoring.** Hong Kong, China has been developing a SIGMET monitoring website. The website will be available to all participants during the trial.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information in this paper; and
- b) provide comments and advices on the SIGMET advisory trial in the Asian region.

*Note: some materials in this paper are from the summary of discussions of ICAO METWSG/3 meeting and many thanks to the Meteorological Warning Study Group.*

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