



International Civil Aviation Organization

**THE SECOND MEETING OF ASIA/PACIFIC METEOROLOGICAL
ADVISORIES AND WARNINGS IMPLEMENTATION TASK FORCE
(METWARN/I TF/2)**

Bangkok, Thailand, 19 – 20 April 2012

Agenda Item 1b: Review of the TORs and follow-up action on the TF/1 meeting and relevant APANPIRG/22 Conclusions

**REVIEW OF THE TERMS OF REFERENCE AND WORK PROGRAMME
OF THE METWARN/I TF**

(Presented by the Secretariat)

SUMMARY

This paper presents the Terms of Reference and Work Programme of the METWARN/I TF as endorsed by the CNS/MET SG/15 meeting for review and update, as necessary.

This paper relates to:

Strategic Objectives:

- A. Safety
- B. Sustainability

Global Plan Initiatives:

1. INTRODUCTION

1.1 The Fourteenth Meeting of the Communications/Navigation/Surveillance and Meteorology Sub-Group of the APANPIRG (CNS/MET SG/14) held in Jakarta, Indonesia from 19 to 22 July 2010, agreed on renaming the Volcanic Ash / Tropical Cyclone Implementation Task Force (VA/TC I TF) to the new Meteorological Advisories and Warnings Implementation Task Force (METWARN/I TF) that will manage SIGMET issues as well as other aerodrome warnings (CNS/MET SG/14 Decision 14/30 refers).

1.2 Furthermore, the Terms of Reference (TORs) of the METWARN/I TF include developing a framework of regional contingency plan for weather phenomenon that includes volcanic ash, tropical cyclone, radioactive cloud and Tsunami. In September 2011, APANPIRG/22 concluded that a Regional ATM Contingency Plan Task Force (RACP/TF) be formed reporting to APANPIRG through the ATM/AIS/SAR Sub-Group for planning, coordination and implementation of a regional ATM contingency plan, with a link to the METWARN/I Task Force (APANPIRG/22 – Conclusion 22/9 refers).

2. DISCUSSION

2.1 The METWARN/I TF/1 meeting proposed the TORs include Singapore as a member and adjust the development of contingency plans to consider outcomes from global ICAO groups and WMO. The revised TORs and Work Programme were adopted at the CNS/MET SG/15 meeting and are provided in the **Attachment** for review by the meeting.

2.2 The attributes of all MET related task forces have been standardized and can be accessed by following the links at the following website:
http://www.bangkok.icao.int/apanpirg_sg.html. The standardized form contains activities to achieve milestones that may be updated by the relevant group.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review the TORs and work programme;
- b) review the milestones and associated activities in the attachment; and
- c) propose any changes, as necessary, for consideration by the CNS/MET SG/16 meeting in July 2012.



**ICAO APANPIRG CNS/MET
METEOROLOGICAL ADVISORIES and WARNINGS
IMPLEMENTATION TASK FORCE (METWARN I/TF)**

1. TASK TEAM		
Secretariat	Address	Contact
Christopher F. Keohan	Regional Officer MET International Civil Aviation Organization 252/1, Vibhavadee Road Ladyao, Chatuchak Bangkok 10900 Thailand	Ph: +66 (2) 537-8189 Ext. 153 Fax: +66 (2) 537-8199 Em: ckeohan@bangkok.icao.int
Co-Chairs	Address	Contact
Mr Jun Ryuzaki JAPAN	Scientific Officer Aeronautical Meteorology Division Administrative Department Japan Meteorological Agency (JMA) Ministry of Land, Infrastructure, Transport and Tourism 1-3-4 Otemachi, Chiyoda-ku Tokyo Japan	Tel: +81 3 3212 8341 (ext.2285) Fax: +81 3 3212 8968 E-mail: jryuzaki@met.kishou.go.jp
Mrs Shona Rosengren AUSTRALIA	Weather and Ocean Services Branch Australian Bureau of Meteorology GPO Box 1289 Melbourne VIC 3001 Australia	Ph: +61 3 9669 4586 Fax: +61 3 9669 4695 Em: srav@bom.gov.au or Shona.Rosengren@bom.gov.au
Members	Address	Contact
Mr. Wang Fengyun	Engineer MET Office, Air Traffic Management Bureau of East China Shanghai 200335 China	Ph: +86 (21) 2232 7521 Fax: +86 (21) 6268 3667 Em: wangfy@atmb.cn
Ms. Zou Juan CHINA	Engineer MET Division Air Traffic Management Bureau, CAAC No. 12, East San-huan Road Middle Chaoyang District Beijing 100022	Ph: +86 (10) 8778 6828 Fax: +86 (10) 8778 6820 Em: zoujuan@atmb.net.cn juan_zou@yahoo.com
Mr. Pak-wai CHAN HONG KING, CHINA	Senior Science Officer Hong Kong Observatory 134A Nathan Road Tsim Sha Tsui Hong Kong	Ph: +852 2926 8435 Fax: +852 2375 2645 Em: pwchan@hko.gov.hk

CNS/MET SG/15
Appendix A3 to the Report

Mr. Manoj Kumar Bhatnagar INDIA	Deputy Director General of Meteorology Mausam Bhavan Office of the Director General of Meteorology India Meteorological Department Lodi Road New Delhi 110 003 India	Ph: 00 91 (11) 246 15371 Fax: 00 91 (11) 246 99216 / 246 00 91 (11) 246 15371 Em: bhatnagarmk1@gmail.com mk.bhatnagar@imd.gov.in
Dr. R. Suresh INDIA	Scientist 'E' Aerodrome Meteorological Office, ATS Complex Meenambakkam India Meteorological Department Chennai 600027 India	Ph: 00 91 44 225 61636 00 91 44 225 60618 Fax: 00 91 44 225 61636 00 91 44 225 60790 Em: suresh.imd@gmail.com dr_r_suresh@yahoo.co.in
Member Name INDONESIA	(transferred from OPMET/M TF membership – no contact information declared – to confirm)	
Ab Llah Che Cob MALAYSIA	Director KLIA Meteorological Office 1 st Floor, Airport Management Centre (AMC) 64000 KLIA Sepang, Selangor	Ph: +603 8787 2388 Fax: +603 8787 1019 Em: ablah@met.gov.my
Ali Shareef MALDIVES	Deputy Director General Maldives Meteorological Service Hulhule, 22000 MALDIVES	Ph: +960 332 6200 Fax: +960 334 1797, 332 0021 Em: shareef@meteorology.gov.mv
Mr. Keith Mackersy NEW ZEALAND	Technical Consultant, Meteorology Civil Aviation Authority of New Zealand P.O. Box 31441 Lower Hutt 5040 NEW ZEALAND	Ph: +64 (4) 560 9400 Fax: +64 (4) 569 2024 Em: keith.mackersy@caa.govt.nz
SINGAPORE		
Mr. Perapol Begkhuntod THAILAND	Acting Director Weather Monitoring Division Bureau of Aeronautical Meteorology Thai Meteorological Department 6 th Floor, ATC Complex Suvarnabhumi International Airport Bang Pli, Samut Prakarn, 10540 THAILAND	Ph: +66 (2) 1340006 +66 (2) 1340007 Fax: +66 (2) 1340009 +66 (2) 1340010 Em: pira@tmd.go.th
Ms. Plaidao KhumchaiYaphum THAILAND	Meteorologist Aeronautical Meteorology Forecast Division Bureau of Aeronautical Meteorology Thai Meteorological Department 6 th Floor, ATC Complex Suvarnabhumi International Airport Bang Pli, Samut Prakarn, 10540 THAILAND	Ph: +66 (2) 1340006 +66 (2) 1340007 Fax: +66 (2) 1340010 Em: pound_ph@hotmail.com
Member Name TONGA	(transferred from VA/TC I TF membership – no contact information declared – to confirm)	

CNS/MET SG/15
Appendix A3 to the Report

Mr. Steven Albersheim UNITED STATES	Federal Aviation Administration Senior Meteorologist, Programme Lead International FAA Headquarters 800 Independence Ave, S.W. Washington, D.C. 20591 United States	Ph: +1 (202) 385 7185 Fax: +1 (202) 385 7240 Em: Steven.albersheim@faa.gov
Mr. Dao Son Hai VIET NAM	Deputy Director, Air Navigation Department, CAAV 119 Nguyen Son str, Long Bien Dis. Ha Noi, Viet Nam	Ph: (84 4) 38720199 Fax: (84 4) 38732762 Em: dsh@caa.gov.vn

CNS/MET SG/15
Appendix A3 to the Report

2. DESCRIPTION	
Objective	Improve the quality of meteorological advisories and warnings and implement the International Airways Volcano Watch (IAVW) and International Tropical Cyclone Watch (ITCW).
Benefits	<p>Improve in-flight safety by providing information on volcanic ash, tropical cyclone or and other hazardous weather.</p> <p>Improve pre-flight planning by optimizing flight routes with respect to volcanic ash, tropical cyclone and other hazardous weather phenomena.</p>
Terms of Reference	<p>Under guidance from ICAO Secretariat:</p> <p>Maintain awareness of current and future requirements with respect to the issuance of meteorological advisories and warnings;</p> <p>Maintain awareness of the implementation of meteorological advisories and warnings within the ASIA/PAC Region and any deficiencies;</p> <p>Continually seek ways to improve the operational effectiveness of the meteorological advisory and warning system;</p> <p>Provide advice to the CNS/MET Sub-group on the above issues.</p>
Work Program	<p>The work to be addressed by the ASIA/PAC METWARN/I TF includes:</p> <p>Review procedures for the issuance of meteorological advisories and warnings in the region and propose actions for their improvement to related performance objectives;</p> <p>In conjunction with OPMET Management Task Force, investigate the deficiencies in the format and dissemination of meteorological advisories and warnings (e.g. conducting routine SIGMET tests) and propose remediation plans;</p> <p>Respond to the needs of the States for guidance and/or training related to the implementation of meteorological advisories and warnings, including the SIGMET Guide;</p> <p>In conjunction with MET/ATM TF, provide meteorological input for contingency planning for specific phenomenon including Volcanic Ash, Radioactive Cloud, Tropical Cyclone and Tsunami;</p> <p>Follow the developments in the States related to the improvement of meteorological advisories and warnings and provide regional input on these matters to relevant ICAO and WMO groups;</p> <p>Report on its work to the CNS/MET Sub-group of APANPIRG.</p>

3. COMMUNICATION STRATEGIES				
Description	Target Audience	Delivery Method	Frequency / Date	Responsibility
Work Plan	Task Force Members	Document via email and posted on ICAO Bangkok website	As required but reviewed at least quarterly	Co-Chairs
General correspondence	Task Force Members	Email	As required	Task Force Members
Task Force Meeting	Task Team Members	Meeting in conjunction with OPMET M/TF	Yearly in March	Co-Chairs
Status & Milestone Reports	ICAO Secretariat and Task Team Members	Report via email	Quarterly	Co-Chairs
Task Force Report	METWARN I/TF and OPMET M/TF	Working Paper	Yearly	Co-Chairs
Task Force Report	APANPIRG CNS/MET SG	Working Paper	Yearly	Secretariat

Needs update from TF

4. PERFORMANCE FRAMEWORK FORM (PFF)				
Tasks	Time Frame	Responsibility	Status	Milestone
Task 1: Monitor and provide assistance to the regional implementation of meteorological warnings and advisories that include volcanic ash (VA) and tropical cyclone (TC) advisories and meteorological warnings and advisories based on current and future requirements	2011-2016	METWARN/I TF	In progress	1
Task 2: Track and investigate deficiencies in the format and dissemination of meteorological advisories and warnings and propose remediation plans and provide information to ICAO and WMO groups for possible assistance	2011-2016	METWARN/I TF OPMET/M TF	In progress	3, 4
Task 3: Conduct periodic tests for SIGMET on VA, TC, and phenomena other than VA and TC in view of assessing improvements in their implementation	2011-2016	METWARN/I TF RODB VAACs TCACs OPMET/M TF	In progress	1, 3
Task 4: Provide guidance and/or training related to the implementation of meteorological advisories and warnings, including the Regional SIGMET Guide as they relate to the Annex 3 amendment cycle	2013	METWARN/I TF OPMET/M TF RO	In progress	1
Task 5: Develop framework for emergency plan for specific phenomenon including VA, radioactive cloud, TC and Tsunami. with reference consideration to global ICAO groups and WMO developments made by the IVATF and WMO scientific steering committee	2011	METWARN/I TF MET/ATM TF	draft	2

CNS/MET SG/15
Appendix A3 to the Report

5. MILESTONES			
Milestone	Accountability	Dates	Status
<i>Milestone 1a: SIGMET Guide available on web</i>	<i>Secretariat</i>	<i>15/02/11</i>	<i>Complete (note updates are at least annual)</i>
<i>Milestone 1b: Report to METWARN I/TF on outcomes of METWSG/3 *consider the need for additional guidance on interpreting pilot reports into SIGMETs (mod to severe turbulence/icing)</i>	<i>Co-Chairs</i>	<i>01/03/11</i>	
<i>Milestone 2: Report back to CNS/MET 15 on regional performance on the OPMET SIGMET test and action plan to correct identified shortcomings</i>	<i>Co-Chairs</i>	<i>July 2011</i>	
<i>Milestone 3a: SIGMET posters published to web</i>	<i>Secretariat</i>	<i>November 2011</i>	
<i>Milestone 3b: Requirements for education material and training (work with WMO/CAeM) developed</i>	<i>Co-Chairs</i>	<i>April 2011</i>	
<i>Milestone 4: deliver framework for ASIA/PAC VA Contingency plan</i>	<i>Co-Chairs</i>	<i>July 2011</i>	
<i>Milestone 5: Report on the preliminary findings of the SIGMET advisory trial with regard to Asia to CNS/MET 15</i>	<i>Co-Chairs</i>	<i>July 2011</i>	
<i>Milestone 6: Development of regional guidance on Radioactive Cloud SIGMET</i>	<i>Task Force</i>	<i>2013</i>	
<i>Milestone 7a: prepare report for CNS/MET 15 on current status on the aerodrome warnings for Tsunami in the ASIA/PAC</i>	<i>Co-chairs</i>	<i>July 2011</i>	
<i>Milestone 7b: prepare report for METWSG/4 on current status on the aerodrome warnings for Tsunami in the ASIA/PAC</i>	<i>Co-chairs</i>	<i>Jan 2012</i>	

CNS/MET SG/15
Appendix A3 to the Report

6.1 WORK PLAN				
Task / Milestone	Accountability	Predecessors	Date	Status
Activity 1: SIGMET GUIDE				
Task 1.1: Review amendment 75 to Annex 3 to identify relevant changes	Task Force		01/10/10	<u>Complete</u> (Jun-Aug2010)
Task 1.2: Review SIGMET Guide	Task Force		01/10/10	<u>Complete</u> (Jun-Aug2010)
Task 1.3: Submit SIGMET Guide amendments to Co-chairs	Task Force	1.1 and 1.2	01/11/10	<u>Complete</u> CNS/MET SG/14 review
Task 1.4: Propose updates to the Regional SIGMET Guide to the Secretariat	Co-Chairs	1.3	15/11/10	<u>Complete</u> CNS/MET SG/14 review
Task 1.5: State Letter	Secretariat	1.4	01/12/10	<u>Complete</u> SL sent 9 Sep 2010
Task 1.6: SIGMET Guide updated	Secretariat	1.5	01/02/11	<u>Complete</u> 9 Sep 2010
<i>Milestone 1a: SIGMET Guide available on web</i>	<i>Secretariat</i>	1.6	15/02/11	<i>Complete</i> <i>(noting this is at least an annual update)</i>
<i>Milestone 1b: Report to METWARN I/TF on outcomes of METWSG/3 *consider the need for additional guidance on interpreting pilot reports into SIGMETs (mod to severe turbulence/icing)</i>	<i>Co-Chairs</i>		<i>March 2010</i>	

6.2 WORK PLAN				
Task / Milestone	Accountability	Predecessors	Date	Status
Activity 2: SIGMET TESTS				
Task 2.1: Review OPMET report on Nov 2010 test	Co-Chairs		March 2011	
Task 2.2: Develop action plan to fix identified deficiencies	Task Force	OPMET report	During meeting Mar 2011	
<i>Milestone 2: Report back to CNS/MET 15 on regional performance and action plan</i>	<i>Co Chairs</i>		<i>July 2011</i>	

6.3 WORK PLAN				
Task / Milestone	Accountability	Predecessors	Date	Status
Activity 3: EDUCATIONAL MATERIAL				
Task 3.1: Review current SIGMET posters (Amendment 75; result of OPMET test)	Task Force		During meeting Mar 2011	

CNS/MET SG/15
Appendix A3 to the Report

Task 3.2: Review educational material requirements in light of OPMET results	Task Force		During meeting Mar 2011	
Task 3.3: Consider options having SIGMET seminars/workshop in consultation with WMO	Keith to assist		April 2011	
<i>Milestone 3a: SIGMET posters published to web</i>	<i>Co- Chairs</i>		<i>July 2011</i>	
<i>Milestone 3b: Requirements for education material and training (work with WMO/CAeM) developed</i>	<i>Co- Chairs</i>		<i>July 2011</i>	

6.4 WORK PLAN				
Task / Milestone	Accountability	Predecessors	Date	Status
Activity 4: REGIONAL VOLCANIC ASH CONTINGENCY PLANS				
Task 4.1: Report on the progress of IVATF to METWARN I/TF	Jun/Shona/Keith		Mar 2011	
Task 4.2 Report on the progress of WMO Scientific Steering Committee outcomes	Jun/Keith		Mar 2011	
Task 4.3: Considering existing VA procedures and plans in the ASIA/PAC, and in light of the issuance of the EUR/NAT, NAM/SAM contingency plans, consider the appropriateness of an ASIA/PAC contingency plan, and develop possible framework.	Task Force		Meeting Mar 2011	
<i>Milestone 4: deliver framework for ASIA/PAC VA Contingency plan to CNS/MET 15</i>	<i>Co-Chairs</i>		<i>July 2011</i>	

6.5 WORK PLAN				
Task / Milestone	Accountability	Predecessors	Date	Status
Activity 5: SIGMET ADVISORY TRIAL				
Task 5.1: Liaise with METWSG to define any roles/responsibilities of METWARN I/TF in the conduct of the SIGMET Advisory trial (April – July 2011).	Jun/Shona		March 2011	
Task 5.2: Report on the trial of the Regional issue of SIGMET Advisories conducted by METWSG with regard to the Asia Region	Co-Chairs	SIGMET Advisory Trial	Oct 2011*	
Task 5.3: Review action plan for deficiencies of the issuance of SIGMET (Task 2.2) in light of the findings of the SIGMET advisory trial.	Task Force	SIGMET Advisory Trial	Dec 2011*	
<i>Milestone 5: Report on the preliminary findings of the SIGMET advisory trial with regard to Asia to CNS/MET 15</i>	<i>CO-Chairs</i>		<i>July 2011</i>	

* task beyond the current time frame of the METWARN I/TF

6.6 WORK PLAN				
Task / Milestone	Accountability	Predecessors	Date	Status
Activity 6: RADIOACTIVE CLOUD				
Task 6.1: Coordinate the development of Radioactive Cloud SIGMET process/guidance	Task Force	Annex 3 guidance update	2013*	
<i>Milestone 6: Development of regional guidance on Radioactive Cloud SIGMET</i>	<i>Co Chairs</i>		<i>2013</i>	

* task beyond the current time frame of the METWARN I/TF

6.7 WORK PLAN				
Task / Milestone	Accountability	Predecessors	Date	Status
Activity 6: TSUNAMI				
Task 7.1: Report on the progress of topic from METWSG/3 for regional applications	Co-chairs		March 2011	
Task 7.2: Review existing Tsunami Aerodrome Warning procedures in the region	Task Force		At Meeting Mar 2011	
<i>Milestone 7a: prepare report for CNS/MET 15 on current status of tsunami aerodrome warnings in ASIA/PAC</i>	<i>Co-chairs</i>		<i>July 2011</i>	
<i>Milestone 7b: prepare report for METWSG/4 on current status of aerodrome warnings for tsunamis in ASIA/PAC</i>	<i>Co-chairs</i>		<i>Jan 2012</i>	
