



International Civil Aviation Organization

Eight Meeting of the Communications/Navigation/Surveillance and Meteorology Sub-Group (CNS/MET SG/8) of APANPIRG

Bangkok, Thailand, 12-16 July 2004

Agenda Item 10: Review of the implementation of ICAO Warning Systems

RESULTS OF THE SURVEY ON TC-SIGMETs

(Presented by Rapporteur, VA/TC Implementation Task Force)

SUMMARY

This paper presents the results of the Survey on TC SIGMETs conducted by the VA/TC Implementation Task Force, for consideration by the CNS/MET SG.

1. INTRODUCTION

1.1 The history of the ASIA/PAC Task Force on the implementation of volcanic ash and tropical cyclone advisories and warnings (VA/TC Implementation TF) dates back to COM/MET SG/2 held in 1994; the Volcanic Ash Warning ad-hoc Working Group was established in accordance with its decision. After its satisfactory contribution to the International Airways Volcano Watch (IAVW), CNS/MET SG/6 agreed to dissolve it into a new organization, Volcanic Ash Task Force (VA TF), which was formally established by Decision 13/31 of APANPIRG.

1.2 The result of the survey on SIGMETs on volcanic ash (VA SIGMETs), conducted by VA TF and presented to CNS/MET SG/7 and CNS/ATM IC SG/10, showed that there were a number of implementation issues regarding VA SIGMETs. It was further discussed during the meeting that similar implementation problems existed regarding SIGMETs on tropical cyclones (TC SIGMETs), and that it would be feasible that one task force could address the issues related to both tropical cyclones and volcanic ash advisories and warnings.

1.3 With the endorsement of the Draft Decision 7-10/30 by APANPIRG/14 as Decision 14/38, the VA TF was disbanded and VA/TC Implementation TF, composed by experts from Australia, Japan (Rapporteur), New Zealand, United Kingdom, United States, China, Tonga and Maldives, was established with terms of reference:

- a) Monitor the implementation of the tropical cyclone (TC) and volcanic ash (VA) advisories and SIGMETs within the ASIA/PAC Regions and identify any deficiencies.
- b) Coordinate operational issues related to the issuance of the VA and TC advisories and SIGMETs.
- c) Continually seek ways to improve the operational effectiveness of the IAVW and the TC advisory and warning system;
- d) Provide advice to the CNS/MET Sub-group on the above issues.

2. THE QUESTIONNAIRE

2.1 VA/TC Implementation TF decided to start its work with undertaking a survey on TC SIGMETs within APAC region. A questionnaire for the survey (Appendix 1) was drawn up by the Rapporteur with input and suggestions from TF members and the ICAO APAC Office.

3. SURVEY RESULTS

3.1 The ICAO APAC Office sent the questionnaire to all the Contracting States/Territories on 25 March 2004. By the end of June 2004, 18 responses were received. Among the returned questionnaire, one is from State without a MWO, four are from those with a TCAC.

3.2 The survey results are presented in tables Appendix 2.

- (a) The number of TCs affecting the area of responsibility
Most of the States are affected by one to five TCs a year.
- (b) Whether TC SIGMETs are issued for all TCs affecting the area of responsibility.
Most of the States answered that they issue TC SIGMETs for all TCs affecting their area of responsibility.
- (c) The source of issuing TC SIGMETs
Approximately half of the States answered that their TC SIGMETs depend on TCAs, while the others use other information.
- (d) The satisfaction level of TCAs
Most of the answers show their satisfaction level is “good”.
- (e) Some outstanding comments
 - MWOs have to interpolate 6 hour forecast from TCAs.
 - All the SIGMETs concerning TC should have the same format so that computers can easily process them.
 - Information related to TCA (Tokyo) is generally reliable.
 - TCAs should be communicated electronically to all member countries.
 - The very erratic behavior of TCs in the SW Pacific requires more frequent updates of TC advisories and warnings.
 - We need VSAT for WAFS grid data and SIGMETs, VA/TC information.
 - We suggest TC advisories and warnings be issued every 3 hours.
 - TCAs are not orderly received at VCBI.
 - TCAs could cover TC-SIGMET role. SIGMETs for TS around a TC might replace TC-SIGMET.

4. DISCUSSIONS

4.1 Based on the survey results obtained, the following points are highlighted for discussion by the CNS/MET SG:

- a) Many States use, as the source of information on TCs, other information than TCAs, such as their own data, warnings from Joint Typhoon Warning Center (JTWC) of the U.S. This situation may lead to inconsistency between TCAs and TC-SIGMETs.

- b) Although JTWC is not a TCAC, many States depend on the warnings from it. Warnings of JTWC contain not only the parameters included in TCAs, but also additional information such as wind gusts, radius of storm winds and remarks on actual and prognostic reasoning. The fact that JTWC warnings are used widely may indicate the needs for such information in operations in MWOs.
- c) Some States expressed the need of more frequent issuance of TCAs and SIGMETs.
- d) There are States that do not receive TCAs. They use alternative information such as warnings in other format.

5. ACTION BY THE MEETING

5.1 The meeting is invited to note the results of the survey on TC SIGMETs presented above and discuss on the future improvement of TC SIGMETs.

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QUESTIONNAIRE

Asia/ Pacific Regional survey on the status of implementation of Tropical Cyclone Advisories and SIGMETs issuance

(Place X in box where applicable)

The purpose of this questionnaire is:

- 1) to acquire basic information on MWOs that issue SIGMETs for tropical cyclones (TC) ;
and
- 2) to collect views for future development of international system of TC advisories
and warnings.

Q1. State: _____

1.1 Name of the administration unit to which SIGMET related issues should be addressed

1.2 Name and address of a contact person regarding SIGMETs

Name _____

Mail Address: _____

Tel: _____

Fax: _____

E-mail Address: _____

**Q2. Name, ICAO location indicator (CCCC) and AFTN address of the Meteorological Watch
Office(s) (MWO) responsible for issuing SIGMET for tropical cyclones (TC-SIGMET).**

Name: _____ CCCC: _____ AFTN: _____

Name: _____ CCCC: _____ AFTN: _____

Note: Add additional lines if necessary

Q3. How many TCs a year is your area of responsibility (AoR) affected by?

___ Never ___ less than 1 ___ 1 to 5 ___ 5 to 10 ___ more than 10

If you chose Never to Q3, please skip to Q7

Q4. TC-SIGMETs are issued:

___ Never ___ For all TCs affecting AR ___ Depending on the significance

Q5. TC-SIGMETs are based on:

___ Tropical Cyclone Advisories(TCAs) (specify the name of TCAC _____)
___ Other than TCAs (specify the information source _____)

Q6. Please choose the level of satisfaction with TCAs

6.1 Timing

___ *very good* ___ *good* ___ *fair* ___ *poor* ___ *very poor*

6.2 Reliability of present information of TCs

___ *very good* ___ *good* ___ *fair* ___ *poor* ___ *very poor*

6.3 Reliability of forecast information of TCs

___ *very good* ___ *good* ___ *fair* ___ *poor* ___ *very poor*

6.4 Comments on current TCAs (including the reason if you chose "poor" in the previous questions).

Q7. Comments and/or requirements on future development of the system of international TC advisories and warnings.

*Please return completed questionnaire to ICAO Asia and Pacific Office by 14 May 2004
(e-mail: icao_apac@bangkok.icao.int / facsimile: +66 (2) 537 8199)*

— END —

Statistics of the answers to the survey on TC SIGMETs

Q3. How many TCs a year is your area of responsibility (AoR) affected by?

Never	less than 1	1 to 5	5 to 10	More than 10
1	1	11	3	2

Q4. TC-SIGMETs are issued:

Never	For all TCs affecting AR	Depending on the significance
1	15	1

Q5. TC-SIGMETs are based on:

TCAs	Others	Both
7	9	1

Q6. Please choose the level of satisfaction with TCAs

6.1 Timing

Very good	Good	Fair	Poor	Very poor
5	8	3	0	0

6.2 Reliability of present information of TCs

Very good	Good	Fair	Poor	Very poor
5	9	2	0	0

6.3 Reliability of forecast information of TCs

Very good	Good	Fair	Poor	Very poor
5	7	4	0	0

Note: Three of “Very good” are from TCAC provider states.