



Eighth Meeting of CNS/MET Sub-Group of APANPIRG

Bangkok, Thailand, 12 – 16 July 2004

Agenda Item 10: Review of the Implementation of ICAO Warning Systems
2) Tropical cyclone watch

**IMPLEMENTATION OF TROPICAL CYCLONE ADVISORIES AND WARNINGS IN
ASIA/PAC REGION**

(Presented by the Secretariat)

SUMMARY

This paper presents information regarding the implementation of the tropical cyclone advisories by the TCACs and tropical cyclone SIGMETs by the MWOs in the ASIA/APAC Regions. Information on the ongoing coordination with the WMO on the subject is provided.

1. Introduction

1.1 The CNS/MET SG/7 meeting, July 2003, discussed some deficiencies related to the implementation of the tropical cyclone (TC) advisory and warnings in the ASIA/PAC Region. The main outstanding problem was the issuance of TC advisories (TCAs) by TCAC New Delhi. Action taken to resolve this problem are presented below.

1.2 The paper presents other recent developments of the TC advisory and warning system in the ASIA/PAC Region and the outstanding issues to be addressed by the group and the VA/TC Implementation Task Force.

2. Discussion

Implementation of the Annex 3 format of the TC advisories by the TCACs

2.1 The MET Divisional Meeting (2002) noted that some of the designated Tropical Cyclone Advisory Centres (TCAC) did not yet issue their TCAs in the format required by ICAO. The meeting formulated recommendation 1/21, which invited all TCAC Provider States to implement the ICAO format Annex 3 for the TC advisories for aviation.

2.2 TCACs Darwin, Nadi and Tokyo have implemented the correct format for TCA since the beginning of 2003 and TCACs Honolulu and Miami reported full compliance with Annex 3 since May 2003.

2.3 The only TCAC in the ASIA/PAC region that had not implemented the Annex 3 format for the TCAs by the time of CNS/MET SG/7 meeting was TCAC New Delhi. Therefore, the meeting formulated a draft conclusion on this issue, which was adopted by APANPIRG as Conclusion 14/41 calling for implementation, as a matter of urgency, of the requirements for issuance of TC advisories by TCAC New Delhi. Consequently, the non-implementation of TCAC New Delhi was included in the APANPIRG List of Air Navigation Deficiencies with high priority.

2.4 In the ensuing communication with India on this matter, ICAO Regional Office was informed that action plan was set up and the start of issuance of TC advisory by TCAC New Delhi was scheduled for the beginning of 2004.

2.5 The centre did start preparing TCAs as scheduled but in the beginning the TCAs were not disseminated correctly, thus not received by users and not available on SADIS and at the regional OPMET data banks (RODBs). After discussions with the Director of TCAC New Delhi during a WMO meeting in Colombo, TCAC New Delhi updated the AFTN addresses to which TCAs were issued. In order for ICAO to monitor the availability of the TCAs the AFTN address of the ICAO Office, Bangkok was included in the AFTN distribution list of TCAC New Delhi. Since then, the Office received a number of TC advisories; it was checked that the advisories were also available at RODB Singapore.

2.6 An example of the TCA issued by TCAC New Delhi is provided in Attachment A. It is seen that the ICAO format is used correctly, however, the bulletin contains some unnecessary information that might cause problems with the automated systems for handling OPMET information. It is noted also that TCAC New Delhi issued non-ICAO formatted TC advisories with “FK” data designator. This practice should be corrected.

2.7 Though issues related to the TCA format still exist and should be followed up, the meeting is invited to advise APANPIRG that the MET deficiency related to TCAC New Delhi, which was included in the APANPIRG List of Deficiencies in 2003, should be considered eliminated and removed from the List. It should be noted with appreciation that the fast elimination of this particular deficiency was possible because the Indian authorities concerned were extremely supportive to ICAO’s request for urgent action on the matter.

Coordination with WMO

2.6 The excellent coordination with the WMO tropical cyclone bodies in the region continued. ICAO attended as observer the 31st Session of the WMO/ESCAP Panel on Tropical Cyclones, Colombo, Sri Lanka in March 2004.

2.7 The meeting was advised that the TCACs and MWOs should adhere strictly to the internationally agreed formats of the advisories and SIGMETs in order to ensure a uniform interpretation and to allow for automatic reception and processing by the users.

2.8 It was further emphasized that the regular issuance of SIGMET by the MWOs in the area of responsibility of the TC Panel, and, in particular, of SIGMET for tropical cyclones, was still a major problem. The meeting was informed that in order to assist the States, ICAO had issued a new *ASIA/PAC Regional SIGMET Guide* which provided detailed instructions on the formats and procedures related to SIGMET including SIGMET for tropical cyclones.

2.9 The meeting was invited to note that Amendment 73 of Annex 3, which was adopted by ICAO Council and would become applicable on 25 November 2004 included *inter alia* a new Template for the TC advisory that should be used by the TCACs.

Outstanding issues

2.10 In January 2004 IATA provided ICAO with an analysis of the current production of the TCACs and pointed out some outstanding non-compliances with the Annex 3 format. This analysis will be discussed under a separate working paper presented by IATA.

2.11 It should be noted that while a significant improvement has been achieved in the implementation of the TC advisories by the TCACs, the issuance of SIGMETs for tropical cyclones by the MWOs, is still a serious implementation issue. This issue was addressed by means of a study

performed by the VA/TC Implementation Task Force. A separate paper on the results of this survey will be presented by the Rapporteur of the Task Force.

Further development of the ICAO tropical cyclone advisory and warning system

2.12 The rectification of outstanding issues related to the correct format of the TCAs should be pursued by the Secretariat with the assistance of the VA/TC Implementation Task Force and the TCAC Provider States.

2.13 Improvement of SIGMET issuance should continue be of highest priority for Implementation Task Force. The Task Force is preparing procedures for conducting regular SIGMET tests in order to keep the MWOs in “ready for action” state in regard to their duties for VA and TC SIGMETs (separate paper to be presented on this issue by the Rapporteur of the TF). The OPMET Management Task Force is also working on the procedures for monitoring the SIGMET issuance by the Regional OPMET Data Banks.

3. Action by the Meeting

3.1 The meeting is invited to :

- a) note the information regarding the implementation of the TC advisories and SIGMETs in the ASIA/PAC Regions;
- b) review the outstanding issues and consider further action to be taken to improve the implementation of the TC advisories and warnings in the ASIA/PAC Regions.

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Examples of TC advisories (FK) by TCAC New Delhi

Example 1

FF VTBBICOX
080803 VIDPYMYX
FKIN21 VIDP 080753 COR
FROM TCAC ,NEW DELHI
TO STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGON (MYNMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN) OROLOGICAL OFFICE
MALE, (MALDDIV
ES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT
(THROUGH RTH JEDDAH)
M W OS : MUMBAI (XXXXXXXX) /KOLKATA (XXXXXXXX) /DELHI (XXXXXXXX)
CHENNAI (XXXXXXXX) /DHAKA (XXXXXXXX) /
MALE (XXXXXXXX) /YANGON (XXXXXXXX) /
MUSCAT (XXXXXXXX) /KARACHI (XXXXXXXX) /
COLOMBO (XXXXXXXX) /BANGKOK (XXXXXXXX) AND
OPMET DATA BANK SINGAPORE-WSZZYPYM
BANGKOK - VTBBYPYX
TOKYO- RJAAPYX
BRISBANE- YBZZSQJX
ICAO OFFICE, BANGKOK VTBBICOX
WAFIC LONDON EGRRYMYX
WAFIC WASHINGTON KWBCYMYX

TROPICAL CYCLONE ADVISORY

DTG	20040508/0600Z
TCAC	NEW DELHI
TC	ARB0401
NR	12
PSN	N 13 DEG 30 MIN/ E 071 DEG 00 MIN
MOV	NNW02 KT
C	988
MAX.WIND	050-055 KT
FCST= PSN+12HRS	081800 N14 DEG 00 MIN/E 070 DEG 30 MIN
MAX.WIND+12HRS	055 KT
FCST=PSN+18HRS	090000 N 14 DEG 30 MIN/ E 070 DEG 00 MIN
MAX.WIND+18HRS	060 KT
FCST=PSN+24HRS	090600 N15 DEG 00 MIN/E 070 DEG 00 MIN
MAX.WIND+24 HRS	060 KT
NEXT MESSAGE	20040508/1200 Z

Example 2

FF VTBBICOX
070159 VIDPYMYX
FKIN21 VIDP 070200
DEMS

FROM RSMC-TROPICAL CYCLONE, NEW DELHI
TO STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGON (MYNMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE MALE, (MALDDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT
(THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY
RSMC TROPICAL CYCLONES NEW DELHI

TROPICAL STORM ARB0401 ADVISORY NO THIRTEEN ISSUED AT 0300 UTC OF
07 MAY 2004 BASED ON 0000 UTC CHART.

THE CYCLONIC STORM OVER SOUTHEAST ARABIAN SEA REMAINED PRACTICALLY
STATIONERY FOR LAST 3 HOURS AND LAY CENTERED AT 070000 UTC
NEAR LAT.11.5 DEG N/LONG.73.0 DEG E. SATELLITE IMAGERY SHOWS
ORGANIZED VERY INTENSE CONVECTION AROUND THE SYSTEM CENTRE. CURRENT
INTENSITY IS T 3.0 RPT T 3.0 ESTIMATED CENTRAL PRESSURE 990 HPA.
MAXIMUM SUSTAINED SURFACE WINDS 40-50 KT GUSTING TO 60 KT AROUND
SYSTEM CENTRE.

FORECAST: THE SYSTEM IS LIKELY TO INTENSIFY FURTHER AND
LIKELY TO MOVE SLOWLY IN A NORTH-NORTH-WESTERLY DIRECTION.
FORECAST INTENSITY T 4.0 AT 08000 UTC AAA