



International Civil Aviation Organization

North American, Central American and Caribbean Office

27th Eastern Caribbean Informal Working Group Meeting (27th E/CAR IWG)

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27th E/CAR IWG - WP/07

12/06/03

Agenda Item 3: Specific Air Navigation Activities and Developments
3.3 Aeronautical Meteorology (MET)

**CURRENT STATUS OF THE WAFS OPERATIONS AND THE IMPLEMENTATION OF THE
TROPICAL CYCLONE ADVISORY MESSAGE IN THE CAR/SAM REGIONS**

(Presented by the Secretariat)

SUMMARY

This working paper presents updated information on the WAFS requirements for the final phase in the CAR/SAM Regions. Information is provided on the issuance and dissemination of tropical cyclone advisories issued by the tropical cyclone advisory centre (TCAC) Miami, according to the format specified by ICAO in Annex 3.

References:

- Report of the Ninth Meeting of the CAR/SAM Planning and Implementation Group (GREPECAS/9)
- Report of the Tenth Meeting of the CAR/SAM Planning and Implementation Group (GREPECAS/10)
- GREPECAS AERMETSG, Report on the WAFS Task Force Special Meeting (WAFS/TF/SM) (Santiago, Chile 2-3 April 2002)
- CAR/SAM ANP Volume II, FASID Part VI-Meteorology, Doc 8733
- Summary of Conclusions and Decisions of the Twenty-Sixth Eastern Caribbean Informal Working Group Meeting (26th E/CAR IWG) (Barbados, 3 to 7 June 2002)
- Report of the Sixth Meeting of the Aeronautical Meteorological Subgroup (AERMETSG/6) (Brasilia, Brazil, 23-27 June 2003)

1. Introduction

1.1 The Twenty-Sixth Eastern Caribbean Informal Working Group Meeting (26th E/CAR IWG) which was held in Bridgetown, Barbados, from 3 to 7 June 2002, reviewed the transition plan to implement the final phase of the world area forecast system (WAFS) in the CAR/SAM Regions. The meeting noted that it was necessary to update the information contained in the plan. Furthermore, the Working Group was informed that the GREPECAS Aeronautical Meteorology Subgroup (AERMETSG) would review the plan at their next meeting to be held in June 2003 in Brazil. This working paper presents the proposed updated information.

1.2 In the past decades, there have been a number of tropical cyclones in the Central American, the Caribbean and North American Regions that have disrupted aircraft operations and threatened the safety of flight through the flight information regions (FIRs) of the CAR/SAM Regions. The occurrence of tropical cyclones in the CAR Region has a critical effect on air navigation safety. Every year from 1 June to 30 November, the Atlantic hurricane season is officially established, dates selected to encompass over 97% of tropical activities. During this time, the aircraft operations are potentially dependent on the occurrence of this meteorological phenomenon that has a critical impact on the safety of flights and operability of aerodromes. The new provisions of the Amendment 72 to ICAO Annex 3/WMO Technical Regulations [C.3.1] related to SIGMET information and the format for tropical cyclone advisory message, will provide the advisory information for the preparation of SIGMET messages.

2. Discussion

Progress in the transition to the final phase of the WAFS in the CAR/SAM Regions

2.1 The meeting will be aware that the responsibility for the production of WAFS high level SIGWX forecasts (SWH) by the Brasilia and Buenos Aires RAFCs was transferred to the Washington WAFS (GREPECAS/9 Conclusion 9/3), effective 1 September 2000. Likewise, the WAFS Task Force Special Meeting (WAFS/TF/SM – April 2002) formulated draft Conclusion 2, adopted by GREPECAS/11 as Conclusion 11/70, which indicates that the Washington WAFS will not produce SWM charts for limited geographical areas in the CAR/SAM Regions. In this regard, the meeting may be aware of the fact that the issue of the provision of medium – level SIGWX forecasts will be examined from a global perspective by the WAFSOPSG/1 Meeting, to be held in Lima, Peru from 10 to 13 November 2003. The WAFS/TF/SM also formulated draft Conclusion 5 – Closure of CAR/SAM Regional Area Forecast Centres, included in GREPECAS/11 draft Report as Conclusion 11/73. However, during its revision the meeting, due to a misunderstanding, did not adopt the referred conclusion. In this context, the meeting will wish to note that the establishment of the RAFCs were based on Recommendation 3.2/1 of the COM/MET Divisional Meeting held in 1982, which was approved by Council and therefore, it is important that Council be informed of the closure of the CAR/SAM RAFCs.

2.2 The planning for the transfer of responsibilities from the RAFCs to the WAFSs has been conducted by the ICAO planning and implementation regional groups (PIRGs), in accordance with Council action on relevant recommendations of the COM/MET Divisional Meeting (1982). It will be noted that on September 2002, responsibilities of the RAFCs were transferred to the WAFSs in accordance with the transition plans of the PIRGs concerned.

2.3 Aimed at ensuring the reception of WAFS forecasts in GRIB and BUFR code forms, which will allow CAR/SAM States to access the global forecasts, the GREPECAS/11 formulated Conclusion 11/69 – Transition Plan for the final phase of WAFS in the CAR/SAM Regions – including the dates in which the CAR/SAM States/Territory should take necessary action to achieve the WAFS final phase without problems in these two regions. At the last Aeronautical Meteorology Subgroup Meeting (AERMETS/6) held in Brasilia, Brazil from 23 to 27 June 2003, updated the schedule of the Transition Plan to implement the final phase of WAFS in the CAR/SAM Regions as included in the **Appendix**.

2.4 It may be noted that the two-way satellite-based Regional Meteorological Telecommunication Network (RMTN), which is integrated with the International Satellite Communication System (ISCS) operated by the United States for ICAO/WAFS Working Group, is fully operational in all countries concerned. The STAR 4 PC based terminal equipment needs to be changed because of the technology upgrade of the satellite segment, which will necessitate new workstations to handle the protocol advancements. As expected during the AERMETS/6, the status of implementation of GREPECAS Conclusion 11/71 calling CAR/SAM States to procure WAFS workstations, was reviewed. According to the ISCS regarding the workstation replacements, the new schedule calls for all new workstations be installed and initial training completed between June and December 2003. On January 1, 2004, all workstations capable of receiving and sending in Transfer Communication Protocol/Internet Protocol (TCP/IP) should be in place and functioning. A temporary dual operation (X.25 and TCP/IP) is planned from approximately September 2003- December 2003.

Implementation of new format of the tropical cyclone advisory message by TCAC Miami

2.5 The meeting will recall that the ICAO tropical cyclone warning system is based on the World Meteorological Organization (WMO) Tropical Cyclone Program (TCP) and that all the Tropical Cyclone Advisory Centres (TCACs) designated by the RAN are those that are already WMO Regional Specialized Meteorological Centres (RSMC) with specialization in tropical cyclones.

2.6 Furthermore, a follow-up action on Recommendation 1/21 of the Meteorology (MET) Divisional Meeting (2002) was carried out by the NACC Regional Office to promote the implementation of the tropical cyclone advisories for international civil aviation. ICAO requested TCAC Miami to implement the new format following Amendment 72 to ICAO Annex 3/WMO Technical Regulations [C.3.1].

2.7 I inform the Meeting that TCAC Miami with the beginning of the 2003 Hurricane Season has implemented the tropical cyclone advisory (TCA), in compliance with Annex 3 provisions related to the tropical cyclone advisory message.

3. Conclusions

3.1 Based on the updated information and considerations with regard to the transition plan to the final phase of the WAFS in the Eastern Caribbean expressed in paragraphs 2.1 to 2.4 of this paper, and also based on the GREPECAS/11 Meeting Conclusion 11/69, 11/71 and 11/72 to support the transition towards the final phase of WAFS, shown in the Appendix, the Meeting is invited to adopt the following Draft Conclusion:

DRAFT

CONCLUSION 27/X: IMPLEMENTATION OF THE UPDATED PROGRAMME FOR THE TRANSITION PLAN TO THE FINAL PHASE OF THE WAFS IN THE ECAR STATES/TERRITORIES

The E/CAR States/Territories are urged to:

- a) implement the replacement with workstations capable of receiving and sending in TCP/IP by 1 January, 2004; and

- b) follow-up on the results of the Sixth Aeronautical Meteorology Subgroup Meeting (AERMETSG/6) and other valid GREPECAS Conclusions.

3.2 With regard to the tropical cyclone advisory message, and based on the above information contained in paragraphs 2.5 to 2.7, the following Draft Conclusion is proposed to be adopted by the Meeting:

DRAFT

**CONCLUSION 27/Y: NEW ICAO FORMAT FR TROPICAL CYCLONE ADVISORY
MESSAGES**

That, the Civil Aviation Authorities, in co-ordination with the Meteorological Authorities of the Eastern Caribbean States/Territories be prepared to receive and use the new tropical cyclone advisory message that is being issued by TCAC Miami following Amendment 72 to ICAO Annex 3/WMO Technical Regulations [C.3.1].

4. Recommended Actions

4.1 The Meeting is invited to:

- a) note the updated information presented in this working paper;
- b) review and adopt the Conclusion 27/X on the final phase of the WAFS that is presented under paragraph 3.1; and
- c) review and adopt the Conclusion 27/Y regarding the implementation of ICAO tropical cyclone warning system that is presented under paragraph 3.2.

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APPENDIX**TASKS TO BE COMPLETED TO SUPPORT TRANSITION TO THE FINAL PHASE OF WAFS
IN THE CAR/SAM REGION**

Task	Description of task	Date
1	WAFS Washington to provide global grided W/T data in GRIB code	Completed
2	WAFS Washington to produce SWH charts	Completed
3	ICAO NACC and SAM Regional MET officers survey states ability to produce wind/temperature charts from GRIB data for the purpose of assessing training needs.	Completed
4	ICAO to coordinate with States and users if there is validated regional requirement for SWM Charts for limited geographical area.	Completed
5	U.S. to provide BUFR decode software to the workstation manufactures	Completed
6	Provide the technical functionality specifications for the purpose of acquiring new WAFS workstations	Completed
7	Buenos Aires and Brasilia RAFC close	Completed
8	States to initiate a process to procure new workstations, service agreements, and training to support these stations with a planned installation of workstations by November 2003.	Ongoing
9	Establishment of back-up distribution arrangements for WAFS products	Completed
10	Provision of test BUFR coded SIGWX via File Transfer Protocol Server (FTP) to selected States for testing	Completed
11	Satellite distribution of global SWH and SWM for limited geographical areas in BUFR format	mid-September 2003
12	Training in the operational conversion of GRIB to wind and temperature charts and BUFR to significant weather charts at Regional seminars	October 2004 – March 2005
13	States have the ability to operate the decoding and presentation software to convert GRIB forecasts into operational wind and temperature charts and BUFR SIGWX forecasts into operational significant weather charts	March 2005
14	Removal of T4 wind and temperature and SIGWX products from satellite broadcast	1 July 2005
WAFS Transition Completed		1 July 2005

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