



APIRG/13-WP/7  
19 March 2001

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**  
**AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP (APIRG)**  
**THIRTEENTH MEETING**  
(Sal, Cap Verde, 25 - 29 June 2001)

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**Agenda Item 4: Air Navigation Issues**

**4.4: Meteorology - Review of the report of the Fifth Meeting of the Meteorology Sub-Group (MET/SG/5)**

(Presented by the Secretariat)

This paper presents the report of the Fifth Meeting of the MET/SG. The Sub-Group reviewed action taken on various conclusions and decisions of the APIRG. The meeting also discussed matters relating to the WAFS in the AFI Region, the AFI Meteorological Bulletins Exchange (AMBEX) Scheme, provision of tropical cyclone and volcanic ash advisories for the AFI Region and the list of shortcomings and deficiencies in the MET field.

**1. Introduction**

1.1 The Fifth Meeting of the Meteorology Sub-Group (MET/SG/5) was held at the ICAO Western and Central African Office, Dakar, Senegal from 23 to 25 October 2000. The meeting was attended by 33 participants from 23 States and two international organizations.

1.2 It should be noted that the Sub-Group recorded its actions in the form of Conclusions and Decisions. Apart from approval of the report, formal action is required by the APIRG on conclusions which are submitted for consideration in this paper.

## 2. Review of APIRG Conclusions and Decisions

2.1 Under this agenda item, the Sub-Group noted action taken and progress made so far on the implementation of conclusions and decisions formulated by MET/SG/1, 2, 3 and 4 which were adopted by the APIRG. The following decision was formulated:

### **Decision 13/-: Follow-up action on Conclusions and Decisions**

**That emphasis be laid as a matter of urgency on the follow-up on conclusions and decisions relating to the operation of the AMBEX Scheme and the WAFS.**

## 3. WAFS in the AFI Region

3.1 The Sub-Group reviewed the status of implementation in the AFI Region of the WAFS in particular the Satellite Distribution System (SADIS) for information relating to air navigation provided by the United Kingdom as an integral part of the ICAO aeronautical fixed service (AFS). The meeting also reviewed the AFI requirements for WAFS products and the implementation of the AFI transition plan and procedures towards the WAFS final phase and making emphasis on the training part of the plan. The Sub-Group discussed the deletion of WINTEM messages from the AFI ANP/FASID. The following decision and conclusion were formulated:

### **Decision 13/-: Task Force for the use of GRIB and BUFR codes**

**That a task force whose terms of reference, Work Programme and composition are given at Appendix A be set up to assist AFI SADIS users to reap full and proper use of GRIB and BUFR codes.**

### **Conclusion 13/-: Deletion of WINTEM messages from AFI ANP/FASID Documents**

**That reference to WINTEM messages in AFI ANP/FASID be deleted.**

## 4. AFI Meteorological Bulletins Exchange (AMBEX) Scheme

4.1 Under this agenda item the Sub-Group examined the operation of the AMBEX Scheme. The Sub-Group discussed difficulties affecting AMBEX exchanges, the requirement for the exchange of METARs in the AFI Region and their inclusion in the AMBEX exchanges. In order to improve OPMET exchanges the meeting recommended the establishment of two OPMET data

bank(s) in the Region located at TCCs hosting a two way SADIS VSAT namely Dakar and Johannesburg. Nairobi could also be considered in due course. The Sub-Group recommended the amendment of the AMBEX Handbook to reflect changes relating to Amendment 72 to Annex 3 on code name METAR/SPECI and TAF. The following conclusions were formulated:

**Conclusion 13/-: Inclusion of METAR exchange in the AMBEX Scheme**

**That the requirement for METAR exchange be included in the AMBEX Scheme.**

**Conclusion 13/-: OPMET data banks at Pretoria and Dakar**

**That two OPMET data banks be established at Dakar and Pretoria to serve the AFI Region.**

**Decision 13/-: Amendment of the AMBEX Handbook to reflect code name METAR/SPECI and TAF**

**That the AMBEX Handbook be amended to reflect changes relating to Amendment 72 of Annex 3 on code name METAR/SPECI and TAF**

**5. Provision of tropical cyclone and volcanic ash advisories for the AFI Region**

5.1 Under this agenda item the MET/SG reviewed progress and status of implementation of tropical cyclone advisory centre (TCAC) Réunion (France) and the volcanic ash advisory centre (VAAC), Toulouse both designated to serve the AFI Region. The meeting noted that the centres are operating satisfactorily, however there is a need for better communications between volcanological observatories and area control centres (ACCs), meteorological watch offices (MWS) and VAAC Toulouse.

**6. List of shortcomings and deficiencies in the MET field**

6.1 The Sub-group reviewed and updated the list of shortcomings and deficiencies in the MET field based on the identification, assessing, tracking and reporting of shortcomings and/or deficiencies of air navigation systems in the AFI Region. WP/13 gives details on the list of shortcomings and deficiencies in the MET field.

7. **Draft Facilities and Services implementation document Africa and Indian Ocean  
Part VI - Meteorology (MET)**

7.1 The Sub-Group was informed that the work on this subject has been completed in both languages English and French and has been submitted - WP/9 refers.

8. **Terms of reference, Work Programme and Composition of the MET/SG**

8.1 The meeting also reviewed the terms of reference, the work programme and the composition of the MET/SG which are given at Appendix B.

9. **Any other business**

9.1 Under this agenda item, the Sub-Group urged its members to continue to produce quality work notably preparing and presenting working papers relevant to agenda items of its meetings.

10. **Action by the APIRG**

10.1 The APIRG is invited to:

- a) note the report of the Fifth meeting of the MET/SG;
- b) take action on the conclusions of the Fifth Meeting of the MET/SG as presented above; and
- c) approve the future work programme and composition of the MET/SG.

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## **“Terms of Reference for MET/SG Task Force on use of GRIB and BUFR codes**

### **Background**

One of the objectives for the final phase of WAFS, agreed within the WAFSSG, is for the eventual cessation of T4 chart broadcasts on the SADIS Satellite distribution system. The cessation of the T4 element of the broadcast will enable a significant reduction in both transmitted data volumes and therefore also in the transmission costs associated with the SADIS broadcast.

However the cessation of the T4 chart broadcast can only be actioned when all SADIS recipient States are capable of producing WAFS charts from the GRIB and BUFR elements of the SADIS broadcast.

As the current plan is that the T4 element of the broadcast should be terminated in 2004, there is an urgent need to ensure that all SADIS recipient States are capable of satisfactorily decoding GRIB and BUFR messages on an operational basis prior to cessation of the T4 broadcast.

In order to facilitate the process of ensuring that all States can operationally decode GRIB and BUFR messages the SADIS provider State has proposed that each of the 4 ICAO Regions within the SADIS Satellite footprint should establish a Task Force to undertake the following activities:-

### **Terms of Reference**

To prepare and maintain with the SADIS provider State a regional transition plan for the implementation of operational GRIB and BUFR decoding within the region.

### **Work Programme**

- i) The plan should as a minimum identify:
  - a) Those States within the Region taking a SADIS service.
  - b) The current capability of each of the identified States in regard to GRIB and BUFR decoding.
  - c) The necessary level and form of technical assistance and training required within the Region in order to enable cessation of the T4 broadcast.
  - d) Establish a mechanism by which the Region can identify when all the States within the Region are prepared for the T4 broadcast to be ceased.
- ii) To operate and monitor the mechanism by which the region will identify when all the States within the Region are prepared for the T4 broadcast to be ceased.

- iii) To instigate and manage with the assistance of the SADIS provider State a programme of GRIB and BUFR decoder training commensurate with the needs of the Region.
- iv) To report to the MET/SG on the status of preparedness of the region for the cessation of the T4 broadcast.

**Composition**

Kenya, Senegal, United Kingdom and ASECNA.

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**Appendix B**

**Terms of Reference, Work programme and composition  
of the Meteorology Sub-Group (MET/SG)**

**1. Terms of Reference**

1. To keep under review, the adequacy of meteorological facilities and services to meet new technological developments in the air navigation field and make proposals as appropriate for implementation by States to APIRG.
2. To identify, State by State, those specific deficiencies and shortcomings that constitute major obstacle to the provision of efficient and reliable meteorological facilities and services to meet the requirements of air navigation in the AFI Region and recommend specific measures to eliminate them.

**2. Work Programme**

No.	Task description	Priority	Target Date
1	Establish and maintain detailed lists, State by State of the specific shortcomings of facilities for the provision of atmospheric measurements pertaining to surface wind, pressure, visibility/runway visual range, cloud base, temperature and dew point temperature considered critical for flight safety	A	Continuing
2	Monitor the exchange of OPMET information through the AMBEX scheme in the AFI Region and between the AFI and ASIA/PACIFIC and EUR Regions	A	Continuing
3	Plan for the introduction of efficient inter-regional OPMET exchanges in coordination with the COM Sub-group as required	B	APIRG/13
4	Study the possibility of including other OPMET information in the AMBEX Scheme in addition to the exchanges of TAFs and AIREPs	B	APIRG/13
5	Study the impact of SADIS on the AMBEX Scheme and in particular the possible inclusion of METARS (AFI/7 Rec.8/4 b)	A	Continuing
6	Monitor the degree of implementation of very small aperture terminals (VSATs) for the reception of WAFS products (AFI/7 Rec. 14/12)	B	Continuing
7	Review and determine the necessary OPMET exchanges through the two-way VSAT SADIS stations in the AFI Region	A	Continuing

No.	Task description	Priority	Target Date
8	Monitor the quality of WAFS high and low level significant weather charts in the AFI Region, provide feed back to WAFC, London as appropriate	B	APIRG//13
9	Monitor the implementation of regional procedures for the issuance of volcanic ash and tropical cyclone advisories (AFI/7 Rec. 7/3 and 7/4)	B	Continuing
10	Review on a continuing basis the contents of Tables MET 1A and 1B and Tables MET 2 and MET 2A to ensure their validity in light of operational requirements and develop proposals to update them if necessary.	B	Continuing
11	Review the meteorological procedures in the introductory text to Part IV - Meteorology of the AFI Regional Plan FASID, as well as Meteorological related issues in other sections of the Plan and relevant regional supplementary Meteorology procedures (SUPPs) in the Doc 7030, in the light of procedures employed in other regions and develop amendment proposals as appropriate, coordinating where necessary with other APIRG Sub-Groups.	A	Continuing
12	Monitor developments in the CNS/ATM Systems with regard to meteorological requirements in the AFI Region.	B	Continuing
13	Develop guidelines for the use of GRIB and BUFR codes in the AFI Region	A	Continuing

Priority:

- A High priority tasks on which work should be speeded up;
- B Medium priority tasks, on which work should be undertaken as soon as possible, but without detriment to priority A tasks;
- C Lesser priority tasks, on which work should be undertaken as time and resources permit, but without detriment to priority and A and B tasks.

### 3. **Composition**

Algeria, Burkina Faso, Cameroon, Congo, Côte d'Ivoire, Egypt, Ethiopia, France, The Gambia, Ghana, Guinea, Kenya, Morocco, Niger, Nigeria, Senegal, Spain, Tunisia, United Kingdom, Zambia, ASECNA and IATA.

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