



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP (APIRG)
FOURTEENTH MEETING**

(Yaounde, Cameroon, 23 – 27 June 2003)

Agenda Item 4 : Air Navigation Issues

**4.4 : Meteorology – Review of the report of the Sixth Meeting
of the Meteorology Sub-Group (MET/SG/6)**

(Presented by the Secretariat)

This paper presents the report of the Sixth 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, the list of deficiencies in the MET field and new challenges facing AFI meteorological services.

1. Introduction

1.1 The Sixth Meeting of the Meteorology Sub-Group (MET/SG/6) was held at the ICAO Eastern and Southern African Office, Nairobi, Kenya from 21 to 23 May 2002. The meeting was attended by 24 participants from 14 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 in previous meetings and which had been endorsed by the APIRG.

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 for information relating to air navigation (SADIS) provided by the United Kingdom as an integral part of the ICAO aeronautical fixed service (AFS).

3.2 The meeting noted the follow-up action carried out by ICAO and the SADIS Provider State concerning Conclusion 13/63 of APIRG/13 on the training on the use of GRIB and BUFR codes. It was also noted that a seminar, in the French language, was organized at EAMAC Niamey in March 2002 in favour of 15 States of Western and Central Africa. The meeting agreed that a second seminar should be organized for English speaking States. South Africa had offered to host this second seminar. This seminar was subsequently held in January 2003.

3.3 The meeting was also of the view that there is a need for States to acquire the latest version of workstations software relating to the use of GRIB and BUFR codes. The following conclusion was formulated:

Conclusion 14/Need for latest version of workstation software

That: States in the AFI Region be encouraged to acquire the latest version of workstation software from their respective workstation suppliers for the use of GRIB and BUFR codes.

3.4 The meeting was informed of the transfer of Regional Area Forecast Centre (RAFC) Dakar responsibilities to the World Area Forecast Centre (WAFc) London effective since 2 January 2002, and the transfer of that of RAFC Nairobi effective 13 May 2002. The meeting noted the closure of all AFI RAFCs and therefore formulated the following conclusion.

Conclusion 14/Closure of the RAFCs (Dakar, Las Palmas and Nairobi)

That: as a follow-up conclusion 12/33 of APIRG/12 on the AFI WAFS transition plan, the closure of all the RAFCs in the AFI Region as of 13 May 2002 be noted.

3.5 The meeting also reviewed the membership list of AFI States to the SADISOPSG and noted that the members are: Côte d'Ivoire, Kenya, Senegal, South Africa and ASECNA. The mandatory cost recovery of the SADIS service was also discussed and the following conclusion concerning the principles for the AFI representation in the SADISOPSG was formulated:

Conclusion 14/Composition of the SADIS Operations Group (SADISOPSG)

That:

- a) **members of the SADISOPSG be appointed only from States which are users of the service and hence participate in the mandatory cost recovery scheme; and**
- b) **in accordance with the principle, the AFI members in the SADISOPSG be Côte d'Ivoire, Kenya, Senegal, South Africa and ASECNA.**

3.6 Follow-up of the SADISOPSG/6 Meeting

3.6.1 The SADISOPSG/6 meeting held in Paris 28 May to 1 June 2001 had adopted EUR OPMET update procedures. Since these procedures had proved to be efficient, the meeting is invited to propose that similar procedures be developed and introduced in the AFI Region. The following conclusion was formulated:

Conclusion 14/- Application of EUR OPMET update procedures in the AFI Region

That, the procedure similar to the EUR OPMET update procedure be developed and introduced in the AFI Region.

3.7 SADIS Strategic Assessment Tables

3.7.1 In accordance with Decision 12/35 of the APIRG the SADIS strategic Assessment Tables for the AFI Region have been updated by the meeting as required.

4. AFI Meteorological Bulletins Exchange (AMBEX) Scheme

4.1 The meeting noted that following the approval by ICAO Council and by delegated authority, the Air Navigation Commission (ANC), of conclusion 13/66 formulated by the APIRG/13 meeting held in Sal, Cape Verde, June 2001, the Secretariat has revised the AMBEX Handbook and introduced METAR exchanges as well as general improvement of the content of the handbook. The meeting agreed to the changes introduced and the following Decision was formulated:

Decision 14/ Introduction of METARs in AMBEX exchanges

That States in the AFI Region be invited to implement METAR exchanges as contained in the AMBEX Handbook 6th Edition.

4.2 The meeting discussed the requirements for Trend forecasts and aerodrome forecasts (TAFs) of Port-Gentil, Gabon. As METARs and trend forecasts issued by the MET Centre at Port-Gentil are required by users, the meeting decided to include this Centre in the AMBEX exchanges and in FASID MET Table 1A for Trend forecast requirement. The following decision was formulated:

Decision 14/ Inclusion of Port-Gentil in AMBEX exchanges and FASID Table MET 1A for Trend forecasts

That the aerodrome of Port-Gentil be included in AMBEX exchanges and in AFI FASID Table MET 1A.

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

5.1 Under this agenda item, the meeting discussed the issuance of tropical cyclone and volcanic ash advisories including related SIGMETs in the AFI Region. It was recognized that volcanic ash and tropical cyclones continue to be a threat to aircraft operations.

5.2 The meeting agreed that States should endeavour to have personnel continually trained on the requirements of Annex 3 SARPs and associated procedures and ensure that Communications facilities are operational all the time. The following conclusion was formulated:

Conclusion 14/ Training of Personnel manning MWOs, TCAs and VAACs

That: States in the AFI Region ensure that

- a) **SIGMETs for tropical cyclones and volcanic ash are issued in accordance with Chapter 7 of Annex 3 and comply with procedures in ICAO Handbook on the International Airways Volcano Watch (IAVW) - Operational Procedures and Contact List (Doc 9766);**

- b) **personnel manning MWOs, TCACs and VAACs are constantly provided with training to ensure compliance with the SARPs.**

6. Deficiencies in the MET field

6.1 Under this agenda item, the meeting reviewed and updated the list of deficiencies based on the uniform methodology approved by the Council for identification, assessing, tracking and reporting of deficiencies of air navigation systems in the AFI Region. WP/15 gives details on the list of deficiencies in the MET field.

7. New challenges facing AFI meteorological services under this agenda item

7.1 Under this agenda item the meeting discussed the major challenges facing the majority of the AFI meteorological services in particular autonomous management, cost recovery and introduction of quality assurance.

7.2 The meeting noted that efforts were being made to overcome the difficulties and so face the challenges. In fact the meeting was aware that the First Meeting of Directors General of Civil Aviation (DGCA/1) Western and Central Africa held in Abuja, Nigeria from 19 to 21 March 2002 had pointed out these difficulties and proposed appropriate solutions for AFI meteorological services. These solutions are related to cost recovery and the establishment of autonomous entities for the management of meteorological services. Along the lines of the DGCA/1 meeting recommendations, the sub-group formulated the following conclusions:

Conclusion 14/ Cost recovery of aeronautical meteorological services

That:

States in the AFI Region in establishing a cost recovery system for aeronautical meteorological services should use relevant ICAO and WMO documents and cooperate with airports, air navigation services and other aeronautical partners, including users.

Conclusion 14/ Seminars on Cost recovery of aeronautical meteorological services

That:

WMO in co-ordination with ICAO organize seminars on cost recovery of aeronautical MET Services in favour of States requiring them.

Conclusion 14/ Autonomous entities and meteorological service for air navigation

That: States in the AFI Region

When considering the establishment of autonomous entities to manage their air navigation services, take due account of the provision of meteorological service to air navigation.

7.3 The meeting emphasized on the need for aviation meteorology personnel in quality and quantity for efficient management of AFI aeronautical meteorological services in consideration of quality management. It was recognized that aeronautical meteorological services should stress on quality assurance. The following conclusion was formulated:

Conclusion 14/ Quality Management

That:

States in the AFI Region give priority to implementation of a quality management system (ISO 9000 series of standards) in order to improve meteorological service for international air navigation.

7.4 Manpower survey in the MET field

As a follow-up of Recommendation 10/26 of LIM AFI (COM/MET/RAC), 1988 and Recommendation 14/17 of AFI/7, 1997 concerning the study of training available for aeronautical meteorological personnel in the AFI Region, it has been proposed that regional offices Dakar and Nairobi carry out the study within the limit of their available budgets. The following conclusion was formulated :

Conclusion 14/ Study of training available for aeronautical meteorological personnel in the AFI Region

That: As a follow-up action on Recommendation 10/26 of LIM AFI (COM/MET/RAC) 1988 and Recommendation 14/17 of AFI/7, 1997, Regional Offices Dakar and Nairobi carry out the study of training available for aeronautical meteorological personnel in the AFI Region.

7.5 The DGCA/1 Meeting also emphasized on the importance of the seminars on ATS/MET/Pilot coordination organized in the AFI Region and called for them to be persued. The following conclusion was formulated:

Conclusion 14/ Seminar on ATS/MET/Pilot coordination

That:

ICAO, in co-ordination with WMO, organize seminars on ATS/MET/Pilot co-ordination for the AFI Region.

7.6 The meeting discussed the development of the meteorology component of the AFI CNS/ATM implementation Plan and decided to create a Task Force to deal with this important subject. The following decision was formulated:

Decision 14/ Meteorology Chapter for the AFI CNS/ATM Implementation

That:

A Task Force composed of experts in ATM, CNS and MET from Kenya, Nigeria, Senegal, South Africa, UK, ASECNA and IATA be established to develop the meteorology component of the AFI CNS/ATM Implementation Plan along the lines given at Appendix A.

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

APPENDIX A

METEOROLOGY TASK FORCE FOR CNS/ATM PLAN

Terms of Reference

- a) Evaluate the current status of implementation, capabilities and developments of the meteorological systems in the AFI Region.
- b) Evaluate the future operational needs and emerging capabilities of meteorological systems in the AFI Region and develop proposals for changes necessary to meet those needs.
- c) Develop a regional plan for implementation of meteorological services and facilities for the new CNS/ATM systems including associated target dates and the responsible bodies.
- d) Report to the MET Sub-Group for further coordination through the ICAO Secretariat and other relevant bodies.

Composition:

Kenya, Nigeria, Senegal, South Africa, U.K., ASECNA and IATA.

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 deficiencies 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	Continuing
4	Monitor the degree of implementation of very small aperture terminals (VSATs) for the reception of WAFS products (AFI/7 Rec. 14/12)	B	Continuing
5	Review and determine the necessary OPMET exchanges through the two-way VSAT SADIS stations in the AFI Region	B	Continuing
6	Monitor the quality of WAFS high and low level significant weather charts in the AFI Region, provide feed back to WAFS, London as appropriate	B	Continuing
7	Monitor the implementation of regional procedures for the issuance of volcanic ash and tropical cyclone advisories (AFI/7 Rec. 7/3 and 7/4)	A	Continuing

No.	Task description	Priority	Target Date
8	Review on a continuing basis the contents of Tables MET 1A and 1B and Tables MET 2A and MET 2B to ensure their validity in light of operational requirements and develop proposals to update them if necessary.	B	Continuing
9	Review the meteorological procedures in the introductory text to Part VI – Meteorology of the Basic 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
10	Monitor developments in the CNS/ATM Systems with regard to meteorological requirements in the AFI Region.	B	Continuing
11	Develop guidelines for the use of GRIB and BUFR codes in the AFI Region.	A	Continuing
12	Monitor quality assurance/performance relating to the MET field	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, Eritrea, Ethiopia, France, Gabon, The Gambia, Ghana, Guinea, Kenya, Madagascar, Morocco, Niger, Nigeria, Senegal, South Africa, Spain, Tunisia, United Kingdom, Zambia, ASECNA, IATA and WMO.
