



INTERNATIONAL CIVIL AVIATION ORGANISATION

AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP (APIRG)
 AFI METEOROLOGY SUB-GROUP (AFI MET/SG/11) ELEVENTH MEETING
 (Nairobi, 08 - 10 July 2013)

Agenda Item 04: Review of the Recommendations of the AFI OPMET Management Task Force 4th and 5th Meetings (MTF/4 and MTF/5)

REVIEW OF THE AFI MTF/4 AND MTF/5 MEETINGS RECOMMENDATIONS

(Presented by Secretariat)

SUMMARY

This paper reviews the recommendations in the reports of the AFI OPMET MTF/4 and 5 including the AMBEX Scheme, update of the AFI SIGMET Guide, AFI ICD and OPMET related FASID Tables

Ref:

- AFI MTF/4 meeting report
- AFI MTF/5 meeting report
- SADISOPSG/18 meeting report

1. Introduction

1.1 The Group may recall that Conclusion 16/54 of APIRG/16 meeting called for the establishment of the AFI OPMET Management Task Force (AFI OPMET MTF or MTF). The Task Force held its fourth meeting (MTF/4) in Pretoria, South Africa, from 9 to 10 September 2012 and its fifth meeting from 3 to 5 July 2013 in Nairobi, Kenya.

1.2 This paper reviews the Recommendations from the two meetings and submits the same, including updated related guidance material, to MET/SG for its consideration.

2. Discussions

2.1 The MET/SG/11 meeting is invited to review the list of recommendations of the MTF/4 and MTF/5 given in **Appendix A** to this working paper for appropriate action by the meeting.

2.2 In reviewing the list of Recommendations and decisions, the Sub-group may wish to agree that all MTF/4 and MTF/5 Decisions in **Appendix A** should be regarded as the MTF own decision which do not need further action from the MET/SG Meeting. The task Force further noted that some States were not implementing the AMBEX scheme appropriately. To address this issue, the Task Force was of the opinion that it was necessary to establish a list of OPMET Focal Points for the AFI region as well as adjacent IROGs. In this regard, the Task Force formulated Decision 5/01 to establish OPMET focal points.

2.3 In further reviewing Appendix A to this report, the meeting agreed that in order to increase the availability of required OPMET data in the AFI RODBs through a regular OPMET monitoring process as indicated in the AMBEX Handbook, a set of actions and measures should be developed. In this regard, the meeting formulated Recommendation 5/02. To address this issue, the MET/SG may wish to adopt Recommendation 5/02 as a draft Conclusion to be submitted to APIRG for inclusion in the AMBEX Scheme.

Draft Conclusion 11/xx: Procedure for AFI OPMET data monitoring

That,

a) Dakar and Pretoria RODBs implement the following procedure:

- 1) Conduct the monitoring of OPMET received from AFI BCCs within the areas of responsibilities;**
- 2) Analyse the monitoring results and identify shortcomings and deficiencies;**
- 3) Develop and forward on a quarterly basis, the monitoring results and recommendations to be implemented by the concerned BCC of NOC provider States;**
- 4) Engage directly with the concerned State to assist removing the shortcomings which can be solved quickly; and**
- 5) Issue on semester basis, a report on the above four actions to be forwarded to ICAO Dakar and Nairobi regional Offices.**

b) ICAO Dakar and Nairobi regional Offices

- 1) distribute the report through State Letters to AFI States with particular emphasis on the concerned States with the deficiencies; and**
- 2) Visit the concerned States during State missions to provide further advice and awareness if necessary.**

2.4 *Provision of tropical cyclone and volcanic ash for the AFI Region and of the corresponding SIGMET by MWOs and Review of report on SIGMET Tests conducted in November 2012*

2.4.1 The MTF/4 and MTF/5 meetings recalled provisions of Annex 3 regarding SIGMET including those concerning advisory information provided by VAACs and TCACs. The Task Force also reviewed the reports of the SIGMET Tests conducted in November 2011 and 2012, given in **Appendix C** to this working paper. The report indicated that 22 MWOs (61%) are still not issuing SIGMETs at the time of the test (APIRG/18 Conclusion 18/52 refers). MTF/5 reported an increased level of participation by States in the tests and improvements relating to issuance, dissemination and formatting of SIGMETs. It also shows that, in 2012, 37% of the MWOs have never issued SIGMET whereas the figure for 2011 was 51%, an improvement of 14%. This positive impact could be as a result of a SIGMET training conducted recently (2012).

2.4.2 Regarding SIGMET information for large, complex volcanic ash events, the MTF/5 reported that the Secretariat should liaise with the concerned ICAO operations group to follow-up on the development and regional implications of SIGMET for complex volcanic ash and report back in time for the AFI OPMET MTF/7 meeting.

2.4.3 The MTF/5 reported that South Africa proposed an amendment of the AFI Air Navigation Plan (Doc 7474) to enable willing States to issue and distribute MET products to support low level flight

information (AIRMET, GAMET, et..) in the AFI region following recurrent requests from users. The Task Force recalled that such information is not a requirement in the region as per AFI Air navigation plan; however, some States including South Africa have consistently issued AIRMET information. The meeting recalled that initially, MET information for low level flights were not a requirement in the AFI region because of the small number of flights below flight level 250 in the region. MTF/5 noted however, that this number has recently increased significantly in some States in the region. Therefore, the MTF formulated recommendation 5/03 for the implementation of products to support low level flight operations in the AFI Region. The MET/SG may wish to adopt the following Conclusion:

Conclusion 11/xx: Implementation of Products to Support Low Level Flight Operations in the AFI Region

That, the low level flight information be implemented in the AFI region where required by the users.

2.4.4 The MTF/5 reported that to improve the modeling of volcanic pollutants by MOCAGE, a better knowledge of the source term was necessary and that Meteo France had decided to create a network of LIDARs on the French Metropolitan area, in order to collect data on aerosols such as volcanic ash. The MTF/5 further reported that from June 2011 until May 2013, VAAC Toulouse issued 187 operational advisories both in text and graphical format and that:

- ✓ From June 2011 until the end of 2012, VAAC Toulouse issued 11 test/exercise advisories in text and 7 graphics for exercise purposes;
- ✓ In 2013, VAAC Toulouse issued 3 test/exercise advisories in text and 3 graphics also for exercise purpose; and
- ✓ The Task Force was pleased to learn that the VAAC London and VAAC Toulouse are mutual backups.

2.5 *Review of regional guidance material on OPMET exchange – AFI Regional SIGMET Guide*

2.5.1 MTF/4 reported that the list of Meteorological Watch Offices (MWOs) in the AFI Region is contained in Appendix A to the AFI Regional SIGMET Guide whereas the World Meteorological Organization (WMO) headings used by AFI MWOs are contained in Appendix H to the Guide. The meeting then reviewed the two documents to ensure consistency particularly with regards to the names of MWOs and the corresponding Flight Information Regions served.

2.5.2 In order to avoid the possible confusion of the use of the word “Standard” in AFI SIGMET guide and the same word in Annex 3, MTF/5 agreed that it would be better to replace the word “Standard” in the guidance material with the “Procedure”. In addition, the MTF/5 reported to include additional details of VA and TC test procedures.

2.5.3 The MTF/5 meeting reported that the amended version of the AFI SIGMET Guide given in **Appendix B** to this working paper, has been adopted through Decision 18/47 of the APIRG/18 meeting which required inclusion of explanations of Table MET 3A and Table MET 3B.

2.6 *Review of the current edition of the AFI meteorological bulletin exchange (AMBEX) Handbook*

2.6.1 The MTF/4 meeting noted that reviews of bulletins, as monitored by the SADIS gateway, indicated that bulletins for AFI Region were not only different from those in the AFI routine tables and also from those monitored by IROG Toulouse. In this regard the Task Force was of the opinion that to improve the availability and exchange of OPMET data, monitoring should be done at different stages of

the system (APIRG/18 Conclusion 18/45 refers). In this regard the Sub-Group may wish to formulate the following decision:

Decision 11/xxx: Monitoring of OPMET bulletins in coordination with ROC Toulouse

That, the monitoring done by RODBs Pretoria and Dakar and ROC Toulouse be harmonized to ensure that the same bulletins headers, as described in the AFI AMBEX Handbook, be monitored at all these facilities for comparison and continuous improvement.

2.6.2 The MTF/4 reported that the monitoring activities by two AFI OPMET Data monitoring activities revealed that in the AFI Region, the BCCs were not compiling bulletins as per AMBEX Handbook and further noted that this could contribute to the lack of AFI OPMET Bulletins in the region and other ICAO Regions.

2.6.3 The MTF/5 reported that some discrepancy exist the content of the OPMET bulletins of the AMBEX scheme and the user needs expressed in the SADIS users Guide. The identified gaps include the following:

- ✓ Irregularities in the contents of bulletins transmitted by the NOCs to the BCCs;
- ✓ Non compilation by the BCC, of OPMET information received from NOCs (AOP and non AOP);
- ✓ Transmission of the individual bulletins from NOC to RODBs, IROGs and to WAFCs; and
- ✓ Some required data are not included in the current AMBEX scheme.

2.6.4 To ensure the availability of AFI OPMET information to users in AFI and other ICAO Regions as well as IROGs, the MTF/5 was of the opinion that it was crucial that concerned entities perform their role in accordance with the AFI AMBEX Handbook (APIRG/17, Conclusion 17/75 refers). Furthermore, a Core Team has been tasked to review the AMBEX scheme and report back to the MTF on the MTF/6 meeting.

2.6.5 The MTF/5 meeting further reported that the Core Team of Experts on AMBEX provided a progress report for the process of updating the AMBEX Handbook. The following main issues were addressed:

- ✓ change of the TAF filling time as indicated in appendix 10 Amendment 76 to ICAO Annex 3;
- ✓ some improvements in the text and schema of the AMBEX Handbook to better clarify the scheme;
- ✓ describe the back-up procedures between the two RODBs;
- ✓ Possible change concerning the schema for some States belonging to another ICAO region; and
- ✓ Updating the AMBEX Handbook to include all required data as indicated in SADIS User Guide Annex 1 and AFI FASID Table MET 2A.

2.6.6 The MTF/5 meeting felt that these important issues including urgent items (as the amendment 76 to Annex 3 will become applicable from 15 November 2013) together with related MTF, MET/SG and APIRG Decisions should be addressed in the process of updating the AMBEX Handbook before APIRG/19 meeting. In this regard, and for the AMBEX Handbook to be in compliance with ICAO Annex 3 from 15 November 2013, the Sub-group may wish to formulate the following draft Conclusion:

Draft Conclusion 11/xx: Finalization of the Draft Updated AMBEX Handbook

That, the draft updated handbook given in Appendix D to this paper, be finalized by the MTF and submitted to the APIRG/11 meeting as the AMBEX Handbook Amendment 3, without waiting for the MET/SG/12 meeting.

2.6.7 The MTF/5 meeting further reported that the outcome of the 12th Air Navigation Conference (AN-Conf/12), held in Montreal, 19-30 November 2012. The task force was informed that the AN-Conf/12 recommended that the areas of applicability of the *Regional Air Navigation Plans* (ANPs) with those of the *Regional Supplementary Procedures* be aligned. In this respect therefore, the current requirements for air navigation services and facilities of FIRs Alger (DAAA), Casablanca (GMMM), Tunis (DTTC) and Canaris (GCCC) from the Africa-Indian Ocean (AFI) ANP (Doc 7474) were proposed to be transferred to the European (EUR) ANP (Doc 7754).

2.6.8 In considering these issues, the MTF/5 meeting agreed to include the above mentioned tasks to that of the Core team on AFI AMBEX Handbook.

2.7 *AFI RODBs Implementation Status Report*

2.7.1 The MTF/5 reviewed the implementation status reports of Dakar and Pretoria RODBs and was pleased to note that many actions had been taken to improve on the implementation of the AMBEX scheme in accordance with Decisions, Recommendations and Conclusions of MTF, MET/SG and APIRG meetings.

2.7.2 Having considered the reports from the two AFI RODBs, the MTF/5 agreed to develop a template for reporting by the RODBs. In this regard, MTF/5 formulated the Decision 5/04 to provide a template for the reports.

2.8 *Finalization of the AFI OPMET Data Catalogue*

2.8.1 The MTF/5 meeting recalled that Conclusion 18/46 of APIRG/18 Meeting called for the OPMET data catalogue to be expeditiously finalized and implemented by States in the AFI Region. The MTF/5 further recalled that Conclusion 17/59 of APIRG/17 Meeting calls for the implementation of the interface control document (ICD) for AFI OPMET database access procedures.

2.8.2 The MTF/5 then reviewed the updated data catalogue given in **Appendix E** to this paper, proposed by the RODB Managers and formulated the recommendation 5/05. In this regard, the Sub-group may wish to formulate the following Decision:

Decision 11/xx: Finalization of the AFI OPMET Data Catalogue

That,

- a) **the finalized data catalogue given in the Appendix E to this paper be implemented by AFI RODBs; and**
- b) **the Secretariat distribute to States and publish on the AFI website, the updated AFI ICD**

2.9 *Report of the Core team of Experts on RODB back up procedures*

2.9.1 The MTF/4 reported that the MTF/2 meeting recommendations 2/7 and 2/9 called for the establishment of a Core Team of experts with a task to develop backup procedures for the two AFI RODBs (Dakar and Pretoria).

2.9.2 The MTF/5 meeting reported that the Core team presented a set of procedures during MTF/4 meeting but there was a need for further investigation and therefore formulated the Decision 4/13 to encourage the Core Team to improve the backup procedures so far developed using contributions from existing backup procedures especially from London and Washington WAFCS. In this regard, the Core Team agreed that the backup of the two AFI RODBs can be achieved by implementing few measures as follows:

- a) Dakar and Pretoria RODBs implement and maintain an identical OPMET bulletins catalogue;

- b) Dakar and Pretoria RODBs implement the AFI Interface Control Document (ICD);
- c) The bulletin compiling centres (BCCs) disseminate OPMET data to both Dakar and Pretoria RODBs using appropriate AFTN addresses;
- d) Dakar and Pretoria RODBs conduct monitoring activities in order to ensure that the databanks contain required OPMET data at all times; and
- e) The MTF to include AFTN addresses of both RODBs in the AFI ICD.

2.9.3 The MTF/5 meeting further reported that the backup procedure between SADIS 2G/Secure FTP and WIFS cannot be used to backup the two AFI RODBs. This is because the methods and infrastructure used are different. The current backup practice between Brussels, Vienna and Toulouse is simple and not resource intensive and the MTF/5 meeting agreed that the same could be implemented by both AFI RODBs. However, for such a practice to work in the AFI Region, the measures listed above are to be implemented first, and therefore, formulated Recommendation 5/06. In this regard, the MET/SG may wish to adopt the following Decision:

Draft Decision 11/xx: Implementation of AFI RODB Back up Procedure

That, the AFI OPMET MTF coordinates the implementation of the following measures:

- a) Dakar and Pretoria RODBs implement and maintain an identical OPMET bulletins catalogue;**
- b) Dakar and Pretoria RODBs implement the AFI Interface Control Document (ICD);**
- c) The bulletin compiling centres (BCCs) disseminate OPMET data to both Dakar and Pretoria RODBs using appropriate AFTN addresses;**
- d) Dakar and Pretoria RODBs conduct monitoring activities in order to ensure that the databanks contain required OPMET data at all times; and**
- e) The MTF to include AFTN addresses of both RODBs in the AFI ICD.**

2.10 Review of OPMET Related FASID Tables

2.10.1 The MTF/5 reported that the SADIS/18 meeting held in Dakar, Senegal from 29 to 31 May 2013 recalled that the requirements by States and users for aerodrome routine meteorological reports (METAR), aerodrome special meteorological reports (SPECI) and aerodrome forecasts (TAF) to be broadcast on the SADIS were given in Annex 1 to the SADIS User Guide (SUG) which is extracted from a global OPMET data base maintained the Secretariat.

2.10.2 The MTF/5 further reported that made aware that SADISOPSG/18 noted that variability of reception of OPMET information has been cause of adverse comments from users in the past. However, where such comments concern aerodromes not listed in Annex 1 of the SUG, the SADIS provider State was not obliged to ensure that these aerodromes are available on the SADIS broadcast and also it could not regarded as a deficiency on the State concerned with its production nor in respect of the dissemination of such information.

2.10.3 Recognizing the importance of this OPMET information for users, and that States are required to provide, or have agreed to provide, the OPMET information from the AOP aerodromes or non-AOP aerodromes respectively listed in Annex 1 of the SUG, the SADISOPSG group concurred that regional OPMET bulletin exchange schemes that exist in all ICAO Regions (to a greater or lesser degree of maturity) should be aligned with the OPMET information requirements contained in Annex 1 of the SADIS User Guide and that, to this end, the regional OPMET

bulletin/data management groups should ensure the availability of up-to-date regional processes and procedures to support implementation, including routing tables, monitoring, validation and documentation.

2.10.4 The meeting was also reminded that that all AOP aerodromes issue METAR and SPECI, as a minimum in the AFI Region, while the requirements for TAF were subject to formal regional air navigation (RAN) agreement, which is reflected in Table MET 1A of all the facilities and services implementation documents (FASID) of the regional air navigation plans.

2.10.5 The MTF/5 is aware of the fact that OPMET information from these aerodromes could be included in Annex 1 of the SUG only if the State concerned has no objection to its distribution on the SADIS and with the understanding that States do not have any obligation of providing such data for non-international aerodromes.

2.10.6 The MTF/5 reviewed AFI FASID Table 1A and was pleased to note that the proposals made by the Democratic republic of Congo and the Republic of South Africa has been implemented as proposed by the two States.

2.11 *Implementation of Special Air reports.*

2.11.1 The MTF/4 meeting reported with regret that despite existence of adequate guidance material on procedures relating to special air reports, not much improvement had been achieved with regard to compliance by States to the requirements for dissemination of Special Air Report not much improvement has been made.

2.11.2 The MTF/4 concurred that it was necessary to engage the AFI AMBEX Focal points with a view to taking steps in order to address the lack of this data type in the databanks and other platforms.

2.12 *Future developments*

2.12.1 The MTF/4 meeting reported the developments on the aeronautical meteorological requirements for Air Traffic Management Operational Concept and noted the important role the databank provider States will be playing in the digital environment. Considering that it is expected that bilateral exchange of OPMET bulletin will commence from November 2013 (amendment 76 to Annex 3 refers), the AFI Data bank provider States were encouraged to develop the necessary handling capacity.

2.12.2. In this regard the Sub-Group may wish to formulate the following Draft Conclusion:

Draft Conclusion 11/xxx: Development of Capabilities of Handling OPMET Information in Digital Format

That both Pretoria and Dakar RODBs be encouraged to:

- a) **start developing capability of handling OPMET data in digital format as soon after November 2013 as possible;**
- b) **test the codes based on the table-driven data representation (XML/GML) schema for METAR/SPECI, TAF and SIGMET with a view to fine tuning over the first year; and**
- c) **take a leading role over the transition aspect of XML/GML and assist other AFI States in implementing table-driven data representation wherever possible.**

2.12.3 The MTF/5 reported that since proprietary codes such as BUFR and GRIB will not be suitable to support interoperable, exchangeable MET information to meet future ATM needs, enabling provisions has been introduced in amendment 76 to Annex 3 for OPMET (METAR/SPECI, TAF and SIGMET) information to enable their exchange in bilateral basis in non-proprietary XML/GML thus allowing service provision to be flexible, adoptable and ultimately interoperable with the system wide information management environment. In this regard, the MTF/5 meeting formulated a decision for the secretariat to liaise with the concerned ICAO operations group to follow-up on the development and regional implications of SIGMET for complex volcanic ash and report back in time for the AFI OPMET/M TF/7 meeting.

2.12.4 The MTF/5 further reported the meeting held in EUROCONTROL (Brussels, Belgium) on the preparation of migration from the representation of the OPMET (METAR, SPECI, TAF and SIGMET) data in the present alphanumeric format to the XML format.

2.12.5 A roadmap for the migration codes to the XLM format for the period 2013 to 2019 was developed with the following stages:

- 2010 : endorsement of XML for OPMET by ANC;
- 2010 – 2012 : finalization of « code tables » for XML ;
- 2013 : enabling clauses to use XML in Annex 3 ;
- 2014 : endorsement of XML by the MET/AIM DIV Meeting ;
- 2016 – 2019: The long period of transition to accommodate developing countries.
- 2019: mandatory use of XML in Annex 3.

2.12.6 The MTF/5 was pleased to note that ASECNA has developed an Action plan for the implementation of the OPMET exchange in XML format.

2.12.7 The MTF/5 meeting agreed that the transition plan be developed after the MET Divisional meeting scheduled for July 2014.

2.13 *Terms of Reference and Future Work Programme of the MTF*

2.13.1 The MET/5 meeting reported that the updated and adopted through a Decision 5/09, its work programme.

2.14 *Any Other Business*

2.14.1 The MTF/5 meeting recalled that APIRG Decision 17/80 set the frequency on yearly basis and venues for the MTF meetings on a rotational basis between Dakar and Pretoria RODB host cities. Having evaluated the activities of the two RODBs during its 4th meeting, the Task Force considered that the RODBs were now well established and running as expected and therefore it was no longer necessary to visit the RODBs during every MTF meeting. Therefore, through its Decision 4/17 the MTF decided to convene annual meeting on a rotational basis at the ICAO Regional Offices Dakar and Nairobi.

2.14.2 However, the MTF/5 reported that some Member States pointed out that the venue should be more opened to let any State willing to host the MTF to propose to do so.

7.3 The MTF/5 meeting was informed that the next MET Divisional meeting will be held in Montreal in July 2014 and thus its sixth meeting should be held later during the fourth quarter of 2014. In this regard, the meeting formulated Decision 5/09 to make the venue more opened and to fix the next MTF/6 meeting in October or November 2014.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Note the information in this paper,
- b) decide on the above draft Conclusions and Decisions proposed for the Sub-group's consideration.

Appendix A: List of recommendations of the MTF/4 and MTF/5

Appendix B: AFI SIGMET Guide

Appendix C: Reports of the SIGMET Tests conducted in November 2011 and 2012

Appendix D: AMBEX Handbook

Appendix E : AFI OPMET Data Catalogue