

INTERNATIONAL CIVIL AVIATION ORGANIZATION

AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP SEVENTEENTH MEETING (APIRG/17)

(Burkina Faso, 2 to 6 August 2010)

Agenda Item 4.1: Review and update the list of deficiencies in the air navigation fields

4.1.5: **Deficiencies in the MET field**

(Presented by the Secretariat)

Summary

The list of deficiencies in the MET field as revised and updated by the Secretariat is presented herein.

1. **Introduction**

- 1.1 The list of deficiencies in the MET field was reviewed and updated based on the uniform methodology approved by Council for identification, assessing, tracking and reporting of deficiencies of air navigation systems. The review also took into account remedial action from States concerned and inclusion of additional deficiencies identified since APIRG/16 Meeting.
- 2. Action by the APIRG
- 2.1 The APIRG is invited to:
 - review the list of deficiencies and actions thereon taken so far and decide on the safety impact and prioritization of each item of deficiency as well as on other factors according to the uniform methodology.

adopt it for further action.

Deficiencies in the Meteorology Field (REF. Air Navigation Plan - Africa-Indian Ocean region (Doc 7474) Part IV - Meteorology (MET)

	Identification			De	ficiencies		Corrective action		
STATE	Requirements Facilities of services		Description of Deficiency	Date first reporte d	Comments on deficiency	Description of corrective action	Executing body	Target date for imple- mentatio n	Priorit y for action
	1	2	3	4	5	6	7	8	9
ANGOLA	Requirement to provide aerodrome forecasts (AFI FASID Table MET 1A)	Angola/Luanda 4 de Fevereiro Associated MET Office	TAF of Luanda not regularly available	2003	Advice given by correspondence	Improve reliability of telecomm	INAMET and ENANA	As soon as possible	A
BURUNDI	Requirement to provide automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure at Busumbura aerodrome with a runway intended for Category II instrument approach and landing operations in accordance with ICAO Annex 3, Chap 4, para. 4.1.5 and 4.6.3.1	Burundi/ Busumbura International Airport	MET station located very far from the runway and among buildings	2006	Data observed not representative of weather conditions along the runway. Unreliable exchange of data to users	Install an automatic weather observing system with sensors appropriately located. Install a MET message distribution system.	Meteorolo gical Services Departmen t	2007	U
CAPE VERDE	Requirement to provide automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure at Sal aerodrome with a runway intended for Category II instrument approach and landing operations in accordance with ICAO Annex 3, Chap 4, para. 4.1.5 and 4.6.3.1	Cape Verde/Sal International Airport.	Visibility data, RVR, cloud base height, air temperature, dew point and pressure are not provided by an automatic weather observing system at Sal International airport equipped with an ILS	09/2009	Advice given during CODEVMET Mission	Install an automated weather observing system with sensors appropriately located.	INMG/ ASA	2011	U

	Identification			De	ficiencies		Corr	rective action	n
STATE	Requirements	Facilities or services	Description of Deficiency	Date first reporte d	Comments on deficiency	Description of corrective action	Executing body	Target date for imple- mentatio n	Priorit y for action
	1	2	3	4	5	6	7	8	9
CAPE VERDE	Requirements for Surface wind, RVR and air pressure displays relating to each sensor to be located in the meteorological station with corresponding displays in the appropriate air traffic services units. The displays in the meteorological station and in the air traffic services units to be related to the same sensors in accordance with ICAO Annex 3. para. 4.1.5 and App. 3 para. 4.1.2.1, 4.3.3.1 and 4.7.1	Cape Verde/Sal International Airport	The meteorological parameters displayed in the control tower and those displayed in the aerodrome meteorological centre and used for issuance of observation messages METAR, MET REPORT, SPECI and SPECIAL are from two different sources of observations: the Meteorological observation station and an automatic observing system under demonstration. Meteorological information used to issue ATIS are not	09/2009	Advice given during CODEVMET Mission	Use the same sensors for the measurement of meteorological parameters to be displayed in ATS units and the aeronautical meteorological station Use local routine and	INMG/ ASA ASA INMG	2011	U
	SPECIAL in the meteorological information used pour l'ATIS in accordance with Annex 11, chap. 4, para. 4.3.6.1, g) and Annex 3, Chap. 4 para. 4.3.2 and 4.4.2	Verde/Sal International Airport	the local routine and special reports MET REPORT and SPECIAL	09/2009	Advice given during CODEVMET Mission	special meteorological reports to issue ATIS information (ATIS voice and D-ATIS)			A
СНАВ	Requirement to provide meteorological information to aerodrome control tower, approach control unit and flight information centre in accordance with ICAO Annex 3, App. 9, para. 1.1, 1.2 and 1.3	Chad, N'Djamena International Airport	Aerodrome Warning (AD WRNG) and wind shear (WS WRNG) reports are not displayed in the control tower and at the ATS units. TAF, SIGMET and AIREP whose display is provided by the air traffic management system EUROCAT/X, are not available at the ACC (Rea Control centre)	02/2010	Advice given during Sate Mission	Display warning reports WRNG AD and WS WRNG in the existing system for display of weather information of the control tower of N'djamena. Display TAFs, SIGMET and special AIREP in the EUROCAT/X system and forward to the MWO all special AIREPs transmitted by aircraft en route in N'djamena FIR.	ASECNA	2011	U

	Identification			Defi	ciencies		Cor	rective action	1
STATE	Requirements	Facilities or services	Description of Deficiency	Date first report ed	Comments on deficiency	Description of corrective action	Executing body	Target date for imple- mentatio n	Priority for action
	1	2	3	4	5	6	7	8	9
AD	Requirement to provide runway visual range (RVR) assessments at the touchdown zone and the mid-point of the runway at N'Djamena International Airport, intended for Category II (ILS) instrument approach and landing operations in accordance with Annex 3, Chap. 4, para. 4.6.3.4 b)	Chad, N'Djamena International Airport	Even though N'Djamena International Airport is intended for Category II (ILS) instrument approach and landing operations, RVR assessments are not provided at the mid-point of the runway.	02/2010	Advice given during Sate Mission	Install RVR sensor at the mid-point of the runway	ASECNA	2010	A
CHAD	Requirement to collect, process and relay special air reports in accordance with Annex 3 Chapter 5, para 5.1, 5.2-b), 5.5, 5.8 and 5.9	Chad, N'Djamena International Airport	special aircraft observations and reports are not collected, processed and redistributed	02/2010	Advice given during Sate Mission	- Update and implement the provisions of the ATS/MET service agreement - Encourage ATS/MET/pilots coordination meetings	ADAC et ASECNA	2011	В
COMOROS	Requirement to provide automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure at Sal aerodrome with a runway intended for Category II instrument approach and landing operations in accordance with ICAO Annex 3, Chap 4, para. 4.1.5 and 4.6.3.1	Comoros/ Prince Said Ibrahim International Airport of Moroni	Moroni International Airport equipped with a category II approach and landing operations instrument, is not using a proper automated equipment for measuring, assessing, monitoring and remote indicating of MET parameters	09/ 2009	Advice given during Sate Mission	Install an automated aerodrome weather observing system with sensors and display located at required places for the provision of operational MET information	ASECNA	December 2010	υ
	Requirement to provide runway visual range (RVR) assessments at the touchdown zone and the mid-point of the runway of Prince Said Ibrahim International Airport of Moroni, intended for Category II instrument approach and landing operations in accordance with Annex 3, Chap. 4, para. 4.6.3.4 b)	Comoros/ Prince Said Ibrahim International Airport of Moroni	Runway visual range (RVR) assessments are not representative of the touchdown zone and the mid-point of the runway intended for Category II instrument approach and landing operations	09/ 2009	Advice given during the mission	1°) Introduce manual assessment of RVR in accordance with ICAO Doc. 9328. Install RVR sensor at the touchdown zone and the mid-point of the runway	ASECNA	December 2010	U

	Identification			Defic	ciencies		Corrective action		
STATE	Requirements	Facilities or services	Description of Deficiency	Date first reported	Comments on deficiency	Description of corrective action	Executin g body	Target date for imple- mentatio n	Priori ty for actio n
	1	2	3	4	5	6	7	8	9
	Requirement to provide aerodrome forecasts (TAF) in accordance with AFI FASID MET Table 1A	Comoros/ Prince Said Ibrahim International Airport of Moroni	Only three TAF are issued every day, the TAF expected at 16:00 is not issued	09/ 2009	Advice given during the mission	Issue four TAF every day	ASECNA	December 2010	U
COMOROS	Requirement to provide runway visual range (RVR) assessments at the touchdown zone and the mid-point of the runway of Brazzaville International Airport, intended for Category II instrument approach and landing operations in accordance with Annex 3, Chap. 4, para. 4.6.3.4 b)	Congo, Brazzaville International Airport	Runway visual range (RVR) is not assessed at the mid-point of the runway of Brazzaville International Airport, intended for Category II instrument approach and landing operations	08/2008	Advice given during the mission	Install RVR sensor at the mid-point of the runway.	ASECNA	2009	U
	Requirement to provide VOLMET broadcast at Brazzaville International Airport (VOLMET), in accordance with ICAO Doc 7474 Volume II, Part V, Table ATS 2A	Congo, Brazzaville International Airport	The VOLMET broadcast service is not operational	08/2008	Deficiency identify during ICAO WACAF mission	Re-establish the VOLMET broadcast service in the Brazzaville FIR	ASECNA	2009	U
CONGO	Requirement to collect, process and relay special air reports in accordance with Annex 3 Chapter 5, para 5.1, 5.2, 5.3.2, 5.4.1, 5.5, 5.7, 5.8 and 5.9	Congo, Brazzaville International Airport	Aircraft observation and reports are not collected, processed and relayed	08/2008	Advice given during the mission	Necessary arrangements between the MET authority and the appropriate ATS authority be made.	ANAC, ASECNA , Airlines	2009	U
[00	Requirement to provide Automatic Terminal Information Service (ATIS) in accordance with ICAO Doc 7474 Volume II, FASID AFI, Part III - Tableau AOP 1.	Congo, Brazzaville International Airport	The ATIS service is not implemented at Brazzaville International Airport	08/2008	Deficiency identify during ICAO WACAF mission	Install and implement an operational ATIS system	ASECNA	2009	В

	Identification			Defic	ciencies		Con	rrective action	n
STATE	Requirements	Facilities or services	Description of Deficiency	Date first reported	Comments on deficiency	Description of corrective action	Executin g body	Target date for imple- mentatio n	Priori ty for actio n
	1	2	3	4	5	6	7	8	9
	Requirement to provide automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure at Sal aerodrome with a runway intended for Category II instrument approach and landing operations in accordance with ICAO Annex 3, Chap 4, para. 4.1.5 and 4.6.3.1	Djibouti/ Djibouti International Airport	Djibouti International Airport equipped with a category II approach and landing operations instrument, is not using an automated equipment for measuring, assessing, monitoring and remote indicating of MET parameters	09/ 2009	Advice given during the mission	Install an automated aerodrome weather observing system with sensors and display located at required places for the provision of operational MET information	AID-DP W	December 2010	U
DJIBOUTI	Requirement to provide runway visual range (RVR) assessments at the touchdown zone and the mid-point of the runway of Djibouti International Airport of Moroni, intended for Category II instrument approach and landing operations in accordance with Annex 3, Chap. 4, para. 4.6.3.4 b)	Djibouti/ Djibouti International Airport	Runway visual range (RVR) assessments are not representative of the touchdown zone and the mid-point of the runway intended for Category II instrument approach and landing operations	09/ 2009	Advice given during the mission	1°) Introduce manual assessment of RVR in accordance with ICAO Doc. 9328. Install RVR sensor at the touchdown zone and the mid-point of the runway	AID-DP W	December 2010	U
	Requirement to issue local routine and special reports in accordance with Annex 3, chap. 4, para. 4.3.1, 4.3.2 a) et 4.4.2 a)	Djibouti/ Djibouti International Airport	Local routine and special reports (MET REPORT) and SPECIAL) are not issued	09/ 2009	Advice given during the mission	Issue local routine and special reports (MET REPORT) and SPECIAL)	AID-DP W	June 2010	U

	Identification				Defic	iencies	Correc	ctive action	
STATE	Requirements	Facilities or services	Description of Deficiency			Executing body	Target date for imple- mentati on	Priori ty for actio n	
	1	2	3	4	5	6	7	8	9
	Requirement to issue aerodrome and wind shear warnings and wind shear alert in accordance with Annex 3, chap. 7, para. 7.3 et 7.4 et App. 6 Table A6-2 et A6-3	Djibouti/ Djibouti Internationa l Airport	Aerodrome and wind shear warnings (AD WRNG, WS WRNG) and wind shear alert are not issued at Djibouti International	07/ 2009	Advice given during the mission	sensitize forecasters and observers in the issuance and dissemination of messages and WS WRNG AD WRNG sissue and disseminate WS WRNG and AD WRNG information and wind shear alert; develop and enforce a letter of service agreement between the MET and ATS (TWR, CCR, Office of the runway,) in order inter alia to	2. AID-DPW 3. DACM et AID-DPW	1. June 2010 2. June 2010 3. June 2010	U U
рувости			Airport			promote the regular routing of aircraft reports on wind shear at landing or take off, to assess RVR, etc 4. consider the possibility of installing, after a survey with users, at Djibouti Airport, a wind shear detecting system	4. DACM et AID-DPW	End 2010	A
	Requirement to provide flight documentation in accordance with AFI FASID Table MET 7 (Doc 7474 Volume II, FASID AFI)	Djibouti/ Djibouti Internationa l Airport	Flight documentation is provided from a public non-secured website ADDS	07/2009	Advice given during the mission	In the short term, a SADIS FTP service shall be accessed from the WAFC London to extract required data for the provision of flight documentation. Access procedures are described on the following Website http://www.icao.int/anb/sadisopsg/sadis%20ftp%2 Oservice%20v4.0.pdf	AID-DPW	SADIS FTP: avant fin juin 2010	A
						In the medium term, install a SADIS VSAT station with the required SADIS workstation software:		-Station VSAT SADIS 2G: fin 2010	
EQUATORIAL GUINEA	Requirement to provide aerodrome forecasts (AFI FASID Table MET 1A)	Equatorial Guinea/ Malabo Aeronautica I MET centre	TAF of Malabo issued by the Douala MET Office not by MET Office of Malabo	2000	Advice given through correspondence and mission	Installation of reliable telecomm. link and provision of sufficient number of forecasters	Civil Aviation Authority, Equatorial Guinea	As soon as possible	A

	Identification				Deficiencie	es	Correc	tive action	
STATE	Requirements	Facilities or services	Description of Deficiency	Date first reporte d	Comments on deficiency	Description of corrective action	Executing body	Target date for imple- mentati on	Priori ty for actio n
	1	2	3	4	5	6	7	8	9
	Requirement to provide runway visual range (RVR) for runway intended for non-precision or Category I approach and landing Operations (Annex 3, Chapter 4, para. 4.6.3. 4 a), 4.6.3.5 and Appendix 3, para.4.3.6.4).	The Gambia/ Banjul/ Yundum Internationa l Airport.	Runway visual range (RVR) is not assessed and reported during periods of reduced visibility.	30/07/2 007	Reported by the State concerned from a survey questionnaire, advice given during State mission, further advice given CODEVMET 9/2009.	In the short term: Training of MET personal for manual assessment and reporting of RVR, or In the medium term: Installation of a RVR measurement, assessment and reporting equipment recommended.	Civil Aviation Authority and MET, The Gambia.	2009	U
THE GAMBIA	Requirement to report visibility along the runway in local routine and special reports: Annex 3, Appendix 3 para; 4.2.4.2.	The Gambia, Banjul/ Yundum Internationa l Airport. MET station 07/20 and behind a tree.		07/2007	Data observed not representative of weather conditions along the runway. Advice given during State Mission and CODEVMET Project 9/2009.	Install an automatic weather observing system with sensors appropriately located.	GCAA (Gambia Civil Aviation Authority).	2012	U
HT	Requirement to relay air reports: Annex 3 Chapter 5, para.5.8.	The Gambia, Banjul/ Yundum Internationa l Airport.	Aircraft observations and reports are not collected, processed and disseminated.	07/2007	Advice given during State Mission.	Necessary arrangements between the MET authority and the appropriate ATS authority be made.	GCAA (Gambia Civil Aviation Authority).	2010	В
	Requirement to measure and report wind direction and speed Annex 3 Chapter 4 para.4.6.11.	The Gambia, Banjul/ Yundum Internationa l Airport.	Wind direction and speed are estimated due to breaking of wire around the runway.	16/09/ 2009	Reported to CODEVMET Mission, advice given for immediat solution.	Short Term: Purchase wire and connect at the selected point to restore measurement and reading at MET and controlo Tower. Medium Term: Installation of automatic weather observing system.	GCAA and MET the Gambia.	11//200 9 2012	U
THE	Requirement to issue aerodrome warnings (AW) and wind shear warning Annex 3 Chapter 7 para.7.3, 7.4 App.6 Table A6.2 and A6.3.	The Gambia, Banjul/ Yundum Internationa l	No provision for issuance of AW.	16/09/ 2009	Deficiency assessed during CODEVMET mission, advice given.	Short term, write procedures for issuance of AD and implement immediately.	GCAA and MET The Gambia.	When required starting from 11/2009	U

	Identification				Deficiencie	es	Correc	ctive action	
STATE	Requirements	Facilities or services	Description of Deficiency	Date first reporte d	Comments on deficiency	Description of corrective action	Executing body	Target date for imple- mentati on	Priori ty for actio n
	1	2	3	4	5	6	7	8	9
	Requirement to issue trend forecasts as contained in AFI FASID Table MET 1 A.	Airport. The Gambia, Banjul/ Yundum Internationa I Airport.	No provision to issue trend forecast.	16/09/2 009	Deficiency assessed during CODEVMENT Project, advice given.	Writing required procedures to follow for issuance of Trend forecasts.	GCAA and MET The Gambia	12/2009	A
	Requirement to provide MET Reports to ATS Units Annex 3 Chapter 10 para. 10.1.1.	The Gambia, Banjul/ Yundum Internationa l Airport.	Provision of MET reports to ATS Units deficient, messages carried by hand and no wind display at Control Tower.	16/09/2 009	Deficiency assessed during CODEVMET Project, advice given.	Repair the internal communication system and the wind measurement system. Medium Term Acquisition of new internal communication system.	GCAA and MET the Gambia GCAA and MET	2011	U
GHANA	Requirement to disseminate SIGMET information in accordance with the provisions in the AFI FASID Table 2B.	Ghana, Accra Kotoka International Airport (KIA	SIGMET information issued by Accra MWO is not disseminated properly and the AMBEX procedures are not well known by the telecommunicatio n staff for the dissemination of OPMET information	March 2010	Advice given during State Mission and a new version of the AMBEX Scheme was provided	Disseminate SIGMET information in accordance with AMBEX scheme and AFI FASID Table 2B.	GMet	12/2010	U

	Identification			I	Deficiencies		Correc	tive action	
STATE	Requirements	Facilities or services	Description of Deficiency	Date first reported	Comments on deficiency	Description of corrective action	Executing body	Target date for imple- mentati on	Priori ty for actio n
	1	2	3	4	5	6	7	8	9
GHANA	Requirement to provide meteorological parameters affecting landing and take-off operations as surface wind, visibility, runway visual range (RVR), height of cloud base, air and dew-point temperatures and atmospheric pressure from an integrated automatic system for acquisition, processing, dissemination and display in real time: ICAO Annex 3, Chap. 4, para. 4.1.5	Ghana, Accra Kotoka International Airport (KIA)	Surface wind, visibility, runway visual range (RVR), height of cloud base, air and dew-point temperatures and atmospheric pressure are not provided from an integrated automatic system for acquisition, processing, dissemination and display in real time at Accra International Airport	March 2010	Procurement for the purchase of an integrated automatic system underway (Letter N° PPA/CEO/ 436/10 of 22 February 2010 from the Public Procurement Authority)	Install an automatic integrated observing system on AKIA runway (ILS Cat 2) with sensors appropriately sited in accordance with the provision in ICAO Annex 3, Chap 4, para 4.1.5 and 4.6.3.1 and Appendix 3 para; 4.2.4.2	GMet (Ghana Meteorologic al Agency)	12/2010	U
5	Requirement to provide runway visual range (RVR): Annex 3, Chapter 4, para. 4. 6.3	Ghana, Accra Kotoka International Airport (KIA	Runway visual range (RVR) is not assessed and reported	March 2010	Advice given during State Mission	Install a RVR assessment and reporting system	GMet	12/2010	U
	Requirement to issue compliant local routine report (MET REPORT) and local special report (SPECIAL) in accordance with provisions in ICAO Annex 3, Table 3-1	Ghana, Accra Kotoka International Airport (KIA	MET REPORT and SPECIAL are not compliant with Annex 3, Table 3-1	March 2010	Advice given during the mission	Issue compliant local routine and special reports and display them at the MET Office and at all ATS units	GMet	12/2010	U
GUINEA	Requirement to provide automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure at Sal aerodrome with a runway intended for Category II instrument approach and landing operations in accordance with ICAO Annex 3, Chap 4, para. 4.1.5 and 4.6.3.1	Republic of Guinea, Conakry International Airport.	Conakry International Airport equipped with a category II approach and landing operations instrument, is not using an automated equipment for measuring, assessing, monitoring and remote indicating of MET parameters	09/2009	Advice given during CODEVMET mission	Install an automatic integrated observing system on Conakry International Airport runway (ILS Cat 2) with sensors appropriately sited in accordance with the provision in ICAO Annex 3, Chap 4, para 4.1.5 and 4.6.3.1 and Appendix 3 para; 4.2.4.2	DNAC and DNM	December 2011	U

		Identification				Deficiencies		Cor	rective actio	n
S	TATE	Requirements	Facilities or services	Description of Deficiency	Date firs reported			Executing body	Target date for imple- mentati on	actio
		1	2	3	4	5	6	7	8	9
	ro lo a	Requirement to issue compliant local outine report (MET REPORT) and ocal special report (SPECIAL) in accordance with provisions in ICAO Annex 3, Table 3-1	Republic of Guinea, Conakry International Airport.	MET REPORT and SPECIAL are not compliant with Annex 3, Table 3-1	09/2009	Advice given during CODEVMET mission	Issue compliant local routine and special reports and display them at the MET Office and at all ATS units	DNM	Before December 2010	U
	R ir ay ir IO au	Requirement to provide meteorological information to aerodrome control tower, approach control unit and flight information centre in accordance with CAO Annex 3, App. 9, para. 1.1, 1.2 and 1.3	Republic of Guinea, Conakry International Airport.	Aerodrome Warning (AD WRNG) and wind shear (WS WRNG) reports are not displayed in the control tower and at the ATS units	09/2009	Advice given during CODEVMET mission	Display warning reports WRNG AD and WS WRNG in the existing system for display of weather information of the control tower of N'djamena.	DNM	Before Decemb er 2010	A
GUINEA	d	Requirement to provide flight locumentation in accordance with AFI FASID Table MET 7 (Doc 7474 Volume II, FASID AFI)	Republic of Guinea, Conakry International Airport	Flight documentation is provided from a public non-secured website ADDS	09/2009	Advice given during CODEVMET mission	In the short term, a SADIS FTP service shall be accessed from the WAFC London to extract required data for the provision of flight documentation. Access procedures are described on the following Website http://www.icao.int/anb/sadisopsg/sadis%20ftp%20service%20v4.0.pdf In the medium term, install a SADIS VSAT station with the required SADIS workstation software:	DNAC, DNM, ANA, FIR Roberts, SOGEAC	SADIS FTP before Decemb re 2010 - VSAT SADIS before Decembre 2011	A
	in a N D	Requirement to issue OPMET Information from the following AOP Iterodromes Kankan, Labé, IN'Nzérékoré in accordance with ICAO INDOCO 7474 Volume II, FASID AFI, Part II - Tableau AOP 1.	Republic of Guinea, Conakry International Airport	OPMET information from AOP aerodromes Kankan, Labé, N'Nzérékoré is not issued 24h a day	09/2009	Advice given during CODEVMET mission	issue METAR and SPECI from AOP aerodromes Kankan, Labé and N'Nzérékoré	DNAC, DNM and ANA	Before December 2015	В

	Identification			Deficiencies						
STATE	Requirements	Facilities or services	Description of Deficiency	Date first reported	Comments on deficiency	Description of corrective action	Executing body	Target date for imple- mentati on	Priori ty for actio n	
	1	2	3	4	5	6	7	8	9	
	Requirement to re-establish the Meteorological Watch Office (MWO) of Robertsfield in accordance with Annex 3, Chap. 3, para. 3.4.1 and ICAO Doc 7474, Volume II, AFI FASID Table MET 1B.	Liberia/ Robertsfield International Airport.	The meteorological watch office (MWO) has not been re-established and the Liberian Administration has not arranged for another contracting State to provide SIGMET.	10/2009	Advice given during the mission and a draft Agreement provided for the issuance of SIGMET by an adjacent MWO	Reach an agreement with the nearest MWO for the provision of meteorological watch services including SIGMET for an interim period of time. Re-establish the MWO in the medium term	LCAA and MET Authority	-Short term: End Novem ber 2009 -Mediu m term: 2012	U	
LIBERIA	Requirement to provide runway visual range (RVR) assessments at the touchdown zone and the mid-point of the runway of Robertsfield International Airport intended for Category II instrument approach and landing operations in accordance with Annex 3, Chap. 4, para. 4.6.3.4 b)	Liberia/ Robertsfield International Airport.	Runway visual range (RVR) is not assessed and reported during periods of reduced visibility.	10/2009	Advice given during the mission.	In the short term: Training of MET personal for manual assessment and reporting of RVR, and In the medium term: Installation of a RVR measurement, assessment and reporting equipment recommended.	LCAA, Meteorologic al Authority and RIA	-Short term: Novem ber 2009 -Mediu m term: 2012	υ	
	Requirement to provide appropriate sensors of the automated equipment for measuring, assessing, monitoring and remote indicating visibility, runway visual range (RVR) and height of cloud base at the required in accordance with Annex 3, Chap 4, para. 4.1.5 and 4.6.3.1 and App. 3 para; 4.2.4.2	Liberia/ Robertsfield International Airport.	Except the wind sensor, the other required sensors of the automatic weather observing system, are not installed to support approach, landing and take-off operations.	10/2009	Advice given during the mission.	Install the required sensors of the automatic weather observing system at appropriate location	LCAA, Meteorologic al Authority and RIA	End of April 2010	U	

	Identification				Defi	ciencies	Corrective action		
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	1	2	3	4	5	6	7	8	9
	Requirement to provide briefing, consultation and flight documentation to flight crew members and/or other flight operations personnel in accordance with Annex 3, Chap. 3, para. 3.3.2 d) and Chap. 9, para. 9.3	Liberia/ Robertsfield Internationa I Airport.	Briefing, consultation and flight documentation are not provided to flight crew members and/or other flight operations personnel.	10/2009	A draft statement on the re-establish ment of the AMO and the MWO established.	Provide briefing, consultation and flight documentation to flight crew members and other flight operations personnel, and equip the AMO and the future MWO with a high speed Internet access and required MET systems listed in Annex 3 Chap. 9 para. 9.1.3 h) and i). The AMO/MWO should be installed in a suitable room having a direct access to the AIS Office itself having direct access to the apron	LCAA, MET Authority, RIA and RFIR	End of April 2011	A
	Requirement to collect, processed and disseminated aircraft observations and reports (AIREP) in accordance with Annex 3, para. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8 and 5.9	Liberia/ Robertsfield Internationa 1 Airport.	Aircraft observations and reports (AIREP) are not collected, processed and disseminated at Roberts MWO.	10/2009	Advice given during the Mission.	Develop and implement a service agreement for air traffic services, aeronautic information services and aeronautical MET services at Robertsfield International Airport in accordance with ICAO DOC 9377; Initiate regular meetings between the MET authorities, ATS units and appropriate local airlines.	LCAA, RFIR, RIA	Februar y 2010	A
LIBERIA	Requirement to provide reliable data source for the preparation of aviation weather forecasts in accordance with Annex 3, Chap. 9, para. 9.1.3 c), e), g), h) and i).	Liberia/ Robertsfield Internationa I Airport.	Reliable data sources are not available for the preparation of aviation weather forecasts such as SIGMET, aerodrome warnings, Trend forecast, TAFs, flight documentation, etc	10/2009	Advice given during the Mission.	Supply the meteorological information to operators and flight crew members in accordance with the provisions contained in ICAO Annex 3, Chap. 9, para. 9.1.3 c), e), g), h) and i).	LCAA, MET Authority and RIA	2010	В
	Requirement to use forecasts issued by the WAFCs in the preparation of flight documentation, whenever these forecasts cover the intended flight path in respect of time, altitude and geographical extent, in accordance with Annex 3, App. 2, para. 2.1.1	Liberia/ Robertsfield Internationa 1 Airport.	The Roberts AMO does not receive any WAFS products for the provision of flight documentation.	10/2009	Advice given during the Mission.	Short Term: Use SADIS FTP service. Access procedures are described on the following Website: http://www.icao.int/anb/sadisopsg/SADIS%20FTP%20Service%20V4.0.pdf Medium Term: Provide AMO/MWO with SADIS 2G VSAT equipment and compliant SADIS workstation software in accordance with SADISOPSG/9 conclusion 9/15 and SADISOPSG/10 conclusion 10/4	MET Authority and RIA	11//200 9	В

	Identification			Deficiencies					
STATE	Requirements	Facilities or services	Description of Deficiency	Date first reported	Comments on deficiency	Description of corrective action	Executing body	Target date for imple- mentati on	Priori ty for actio n
	1	2	3	4	5	6	7	8	9
NIGER	Requirement to provide meteorological information to aerodrome control tower, approach control unit and flight information centre in accordance with ICAO Annex 3, App. 9, para. 1.1, 1.2 and 1.3	Niger, Niamey Internatio nal Airport	Aerodrome Warning (AD WRNG) and wind shear (WS WRNG) reports are not displayed in the control tower and at the ATS units. TAF, SIGMET and AIREP whose display is provided by the air traffic management system EUROCAT/X, are not available	03/2010	Advice given during Sate Mission	Display warning reports WRNG AD and WS WRNG in the existing system for display of weather information of the control tower of Niamey. Display TAFs, SIGMET and special AIREP in the EUROCAT/X system and forward to the MWO all special	ASECNA	Decemb er 2009 Decemb er 2010	U
			at the ACC (Rea Control centre)			AIREPs transmitted by aircraft en route in Niamey FIR.			
	Requirement to provide runway visual range (RVR) assessments at the touchdown zone and the mid-point of the runway at Niamey International Airport, intended for Category II (ILS) instrument approach and landing operations in accordance with Annex 3, Chap. 4, para. 4.6.3.4 b)	Niger, Niamey Internatio nal Airport	Even though NiameyInternational Airport is intended for Category II (ILS) instrument approach and landing operations, RVR assessments are not provided at the mid-point of the runway	03/2010	Advice given during Sate Mission	Install RVR sensor at the mid-point of Niamey runway.	ASECNA	Before Decemb er 2010	A
	Requirement to collect, process and relay special air reports in accordance with Annex 3 Chapter 5, para 5.1, 5.2-b), 5.5, 5.8 and 5.9.	Niger, Niamey Internatio nal Airport	special aircraft observations and reports are not collected, processed and redistributed	03/2010	Advice given during Sate Mission	Update and implement the provisions of the ATS/MET service agreement Encourage ATS/MET/pilots coordination meetings	DAC and ASECNA	Before Decemb er 2010	В
NIGERIA	Requirement to provide measurement of MET elements representative of conditions prevailing on the Runmay – Annex 3, Appendix 3 – Part 4 observing and reporting of MET element	Nigeria / Kano MA	Observing and reporting of MET elements deficient, Site of measurement about 2 kms from touchdown zone	25/09/09	Advice given by CODEVMET Phase 1 mission	Relocation of site of measurement of MET elements at a distance of 120 m or less from touchdown zone install an automatic observing system already available (NIMET Source)	NIMET NCAA and NAMA	2010	U

	Identification				Corrective action				
STATE	Requirements	Facilities or services	Description of Deficiency	Date first reported	Comments on deficiency	Description of corrective action	Executing body	Target date for imple- mentati on	Priori ty for actio n
	1	2	3	4	5	6	7	8	9
	Requirement to measure and report RVR for runway intended for category II instrument approach and landing operations – Annex 3 Chapter 4 – Para. 4.6.3.4, 4.6.3.5 – appendix 3 – Para 4.3.6.4.	Nigeria / Kano MA	RVR not measured and reported for runway intended for category II instrument approach and landing operations	25/09/09	Advice given by CODEVMET – Phase I mission	Short term: Manuel measurement and reporting as immediate solution Medium term: install automatic observing system which is available	NIMET and NAMA	2010	U
NIGERIA	Requirement to assess and report wind shear in accordance with Annex 3 chapter 7 para. 7.4.1 and relevant provisions contained in low level wind shear Manuel 9817	Nigeria / Kano M.A.	Kano Airport affected by WS, no system of detection except for information received from pilots	25/09/09	Advice given by CODEVMET Phase I mission	NIMET, NAMA and NCAA to study possibility of installing WS detection system	NIMET NAMA and NCAA	2011	U
	Requirement to use WAFS products for flight documentation as in provisions contained in Annex 3 Chapter 9 para 9.4.3 and 9.1.6	Nigeria/ Kano AM	Use of other non WAFS products for coverage of flights departing Kano	25/09/200 9	Advice given during CODEVMET Phase I mission	NIMET and NAMA to provide a SADIS station to Kano MET centre	NIMET and NAMA	2012	A
BLIC OF CONGO	Requirement to arrange that selected volcano observatory of Goma, observes: a) significant pre-eruption volcanic activity, or a cessation thereof; b) a volcanic eruption, or a cessation thereof; and/or c) volcanic ash in the atmosphere and send this information as quickly as practicable to its associated ACC, MWO and VAAC: ICAO Annex 3, para. 3.6	Democratic Republic of Congo (DRC), Volcano Observatory of Goma.	Volcanic activity information are not provided to air navigation units because of the lack of communication means between the observatory and MWO, ACC and FIC	09/2009	Advice given during Sate Mission	Improve communication means between Goma and Djili	Goma Observatory / METELSAT/ RVA	Before December 2011	U
DEMOCRATIC REPUBLIC OF CONGO	Requirement to provide automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure at Djili aerodrome with a runway intended for Category II instrument approach and landing operations in accordance with ICAO Annex 3, Chap 4, para. 4.1.5 and 4.6.3.1	Democratic Republic of Congo (DRC), N'Djili Internationa 1 Airport.	Except the wind sensor, the other required sensors of the automatic weather observing system, are not installed to support approach, landing and take-off operations.	09/2009	Advice given during Sate Mission	Install an automatic weather observing system with sensors appropriately located. Install a MET message distribution system	METELSAT/ RVA	Before december 2010	U

	Identification			Deficiencies					
STA TE	Requirements	Facilities or services	Description of Deficiency	Date Comments on deficiency repor ted		Description of corrective action	Executin g body	Target date for imple- mentation	Priori ty for actio n
	1	2	3	4	5	6	7	8	9
DEMOCRATIC REPUBLIC OF CONGO	Requirement to issue aerodrome and wind shear warnings and wind shear alert in accordance with Annex 3, chap. 7, para. 7.3 et 7.4 et App. 6 Table A6-2 et A6-33	DRC, N'Djili Internationa l Airport.	Aerodrome and wind shear warnings (AD WRNG, WS WRNG) and wind shear alert are not issued at N'Djili International Airport	09/2009	Advice given during Sate Mission	1. issue and disseminate WS WRNG and AD WRNG information and wind shear alert; 2. develop and enforce a letter of service agreement between the MET and ATS (TWR, CCR, Office of the runway,) in order inter alia to promote the regular routing of aircraft reports on wind shear at landing or take off, to assess RVR, etc 3. consider the possibility of installing, after a survey with users, at Djibouti Airport, a wind shear detecting system	METELS AT/ RVA	Before March 2010	U
DEMOCRATIC	Requirements to use local routine and special reports MET REPORT and SPECIAL in the meteorological information used pour l'ATIS in accordance with Annex 11, chap. 4, para. 4.3.6.1, g) and Annex 3, Chap. 4 para. 4.3.2 and 4.4.2	DRC, N'Djili Internationa I Airport	Meteorological information used to issue ATIS are not the local routine and special reports MET REPORT and SPECIAL	09/2009	Advice given during Sate Mission	Use local routine and special meteorological reports to issue ATIS information (ATIS voice and D-ATIS)	METTEL SAT RVA	July 2010	A
SAO TOME	Requirement to issue aerodrome and wind shear warnings and wind shear alert in accordance with Annex 3, chap. 7, para. 7.3 et 7.4 et App. 6 Table A6-2 et A6-33	Sao Tome, and Principe, Sao Tome Internationa I Airport (STIA).	Aerodrome and wind shear warnings (AD WRNG, WS WRNG) and wind shear alert are not issued at Sao Tome International Airport	09/ 2009	Advice given during CODEVMET Mission	1. issue and disseminate WS WRNG and AD WRNG information and wind shear alert; 2. develop and enforce a letter of service agreement between the MET and ATS (TWR, CCR, Office of the runway,) in order inter alia to promote the regular routing of aircraft reports on wind shear at landing or take off, to assess RVR, etc 3. consider the possibility of installing, after a survey with users, at Djibouti Airport, a wind shear detecting system	INM, ENASA	Before June 2010	U
SAO TO	Requirement to issue local routine and special reports in accordance with Annex 3, chap. 4, para. 4.3.1, 4.3.2 a) et 4.4.2 a)	Sao Tome, and Principe, (STIA)	Local routine and special reports (MET REPORT) and SPECIAL) are not issued	09/ 2009	Advice given during CODEVMET Mission	Issue local routine and special reports (MET REPORT) and SPECIAL)	INM/ ENASA	Before december 2010	A
	Requirements to issue METAR, SPECI) and TAF on 24h Sao Tome International Airport: FASID AFI, Tableau MET 1A	Sao Tome, and Principe, (STIA).	METAR and SPECI are not issued on 24h basis	09/2009	Advice given during CODEVMET Mission	Issue METAR and SPECI on 24h basis	INM et ENASA	Before June 2010	A

	Identification		Car	rences		Action Co	orrective		
ETAT	Besoins	Etat/ Installations	Description de la Carence	Date d'identi-f ication	Observa tions sur la carence	Description de la mesure corrective	Organe exécutif	Date de Mise en Œuvre	Priori té
1	2	3	4	5	6	7	8	9	10
SAO TOME	Requirement to provide flight documentation in accordance with AFI FASID Table MET 7 (Doc 7474 Volume II, FASID AFI)	Sao Tome, and Principe, Sao Tome International Airport	Flight documentation is provided from a public non-secured website ADDS	09/2009	Advice given during CODEVMET Mission	In the short term, a SADIS FTP service shall be accessed from the WAFC London to extract required data for the provision of flight documentation. Access procedures are described on the following Website http://www.icao.int/anb/sadisopsg/sadis%20ftp%20service%20v4.0.pdf In the medium term, install a SADIS VSAT station with the required SADIS workstation software:	INM/ ENASA	Before December 2010	В
SÉNÉGAL	Requirement to provide runway visual range (RVR) assessments at the touchdown zone and the mid-point of the runway of Dakar International Airport, intended for Category II instrument approach and landing operations in accordance with Annex 3, Chap. 4, para. 4.6.3.4 b)	Senegal/ Leopold Sedar Senghor International Airport or Dakar	Runway visual range (RVR) assessments are not representative of the touchdown zone and the mid-point of the runway intended for Category II instrument approach and landing operations	02/ 2009	Deficiency identify during ICAO WACAF visit	Install RVR sensor at the mid-point of the runway	AID-DP W	December 2010	U
	Requirement to collect, process and relay air reports in accordance with Annex 3 Chapter 5, para 5.1, 5.2, 5.3.2, 5.4.1, 5.5, 5.7, 5.8 and 5.9	Senegal/ Leopold Sedar Senghor International Airport or Dakar	Aircraft observation and reports are not collected, processed and relayed	02/2009	Deficiency identify during ICAO WACAF visit	Necessary arrangements between the MET authority and the appropriate ATS authority be made.	ANACS and ASECNA	December 2009	В
	Requirement to report visibility along the runway in local routine and special reports in accordance with Annex 3, Appendix 3 para; 4.2.4.2	Senegal/ Leopold Sedar Senghor International Airport or Dakar	Many obstacles (2 control towers, airlines hangars, etc) around the visibility estimation platform of the aeronautical meteorological station (SMA), does not allow to estimate the visibility along the runway.	02/2009	Deficiency identify during ICAO WACAF visit	Install visibility sensors along the runway Or Relocate the SMA at a location enabling the observer to estimate the visibility along the entire length of the runway.	ASECNA	June 2010	A

	Identification			Carences		Act	ion Corrective		
ETAT	Besoins	Etat/ Installations	Description de la Carence	Date d'identi -ficatio n	Observa tions sur la carence	Description de la mesure corrective	Organe exécutif	Date de Mise en Œuvre	Priorité
1	2	3	4	5	6	7	8	9	10
SÉNÉGAL	Requirement to provide Automatic Terminal Information Service (ATIS) in accordance with ICAO Doc 7474 Volume II, FASID AFI, Part III - Tableau AOP 1.	Senegal/ Leopold Sedar Senghor International Airport or Dakar	The ATIS service is not implemented at Brazzaville International Airport	02/2009	Deficiency identify during ICAO WACAF visit	Install and implement an operational ATIS system	ASECNA	June 2010	A
	Requirement to measure and report wind in accordance with provisions contained in Annex, Chapter 4 para 4.6.1.1.	Sierra Leone/ Freetown Lungi Airport	Wind measurement system old and deficient	1994	Advice given during mission CODEVMET Phase I 10/2009	Installation of new wind measurement equipment	SLAA and MET Department	2010	U
	Requirement to measure and report RVR for runway intended for Category II instrument approach and landing operations	Sierra Leone/ Freetown Lungi Airport	In case of reduced visibility RVR not measured and reported	29/09/ 2009	Advice given during mission CODEVMET Phase I	Short term: manual measurement Long term: Installation of RVR measurement, assessment and reporting equipment	MET Department and SLAA	10/2009	U
SIERRA LEONE	Requirement to issue aerodrome warnings (AW) and Wind Shear warnings (WS) as contained in provisions of Annex 3 Chapter 7 para 7.3.1 and 7.4.1 and App. 6 Table A6.2, A6.3	Sierra Leone/ Freetown Lungi Airport	AW and WS are not issued at Lungi Airport	29/09/ 2009	Advice given during mission CODEVMET Phase I	Short term: Writing of procedures for issuance of AW and WS Warnings and implement immediately. Medium term: Acquisition of MET Radar and wind shear detection equipment	MET Department and SLAA	11/2009 2013	U
SIERRA	Requirement to observe and report MET elements in accordance with Anne 3, para 4.6	Sierra Leone/ Freetown Lungi Airport	Not in compliance with recommended practices on observing and reporting of MET elements	29/09/ 2009	Advice given during mission CODEVMET Phase I	Relocate measurement site and acquire automated observing system	MET Department SLAA and SLCA	2012	A
	Requirement to provide MET information to ATS units Annex 3 Chapter 10 para 10.1.5 Appendix 9 para 1.1.a)	Sierra Leone/ Freetown Lungi Airport	MET messages MET report, METAR, SPECIAL are hand carried to control TWR Lack of commu-nication system	29/09/ 2009	Deficiency reported during mission CODEVMET Phase I	Repair the communication system and install reliable display system to ATS	SLAA Roberts FIR and MET Department	2010	A
	Requirement to implement MET facilities and services AFI/7 Rec. 10/14	Sierra Leone/ Freetown Lungi Airport	Insufficient number of forecasters and observers at Lungi MET centre	29/09/ 2009	Deficiency assessed during mission CODEVMET Phase I	Provide MET centre with required number of qualified personnel	MET Department SLAA Roberts FIR	2012	A

SIERRA LEONE	Requirement to use qualify WAFS products for flight documentation in accordance with provision contained in Annex 3 Chapter 9 para 9.1.3, 9.1.6 and 9.1.6 and FASID Table MET7	Sierra Leone/ Freetown Lungi Airport	No SADIS station at Lungi Airport	29/09/ 2009	Deficiency assessed during mission CODEVMET Phase I	Short Term: Use FTP to acquire WAFS data Acquisition of SADIS station	MET Department SLAA Roberts FIR SLAA MET Roberts FIR	10/2009	A
SOMA LIA	Situation unknown	FIR Mogadishu							
SWAZI LAND	Requirement to provide MET reports to ATS Units (Annex 3, Chapter 10, para 10.1.1)	Swaziland/Man zini Matsapha Airport Associated MET Office	Provision of MET reports to ATS units deficient. No wind displays in control tower	2004	Advice was given on mission	Install a display system for MET data and information at ATS units	DCA and MET Department	As soon as possible	U
ZAMB IA	1)Implementation of MET facilities and services (Annex 3, para 4.1.6)	Zambia/Lusaka International Airport	Inadequate level of equipment maintenance	2002 and mission s of 2004 and 2007	Equipment remain unserviceable for a long time due to lack of spare parts	Provide financial resources including use of air navigation charges which currently is not fully available to the MET Department.	Zambia MET Department and NACL	As soon as possible	U
	2)Requirement to provide MET reports to ATS Units (Annex 3, Chapter 10, para 10.1.1)	Zambia/Lusaka Meteorological Office	Provision of MET reports to ATS Units deficient	2002 and mission s of 2004 and 2007	Advice given during mission by correspondence	Install display system of MET data to ATS units	MET Department	As soon as possible	U
	3)Requirement to provide meteorological data and forecasts in form of flight documentation (Annex 3, Chapter 3, para 3.3.2).	Zambia/Lusaka Meteorological Office	Provision of MET reports to ATS Units deficient	2002 and mission s of 2004 and 2007	Advice given during mission and by correspondence	Install appropriate telecomms equipment to receive OPMET information and appoint adequate trained personnel	MET Department	As soon as possible	U
	4) Requirements for SIGMET information (Annex 3 para 3.4.2 b, c, d and add para. 7.1.1	Zambia/Lusaka Meteorological watch office (MWO)	SIGMET not issued	2007	Advice given on mission	Immediately provide training and issue SIGMET	MET Department	As soon as possible	U

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EXPLANATORY NOTES FOR APPENDICES ON DEFICIENCIES

Requirement identified at a given meeting through a recommendation; name of the meeting and the related recommendation number

Name of the State or States involved and/or the name of the facilities such as name of airport, FIR, ACC, TWR, etc.

- 3. Brief description of the deficiency:
- 4. Date deficiency was first reported :
- 5. Comments.
- 6. Brief description of the corrective actions to be undertaken.
- 7. Identification of the executing body.
- 8. Target date for completion of the corrective action.
- 9. Priority and classification.
- 10. Target date for implementation.
- 11. Priority for Action.
- 12.

"U" priority = **Urgent** requirements having a **direct** impact on **safety** and requiring immediate corrective actions.

Urgent requirements consisting of any physical, configuration, material, performance, personnel or procedures specifications, the application of which is urgently required for air navigation safety.

"A" priority = **Top priority** requirements **necessary** for air navigation **safety**.

Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

"B" priority = Intermediate requirements necessary for air navigation regularity.

Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.