

INTERNATIONAL CIVIL AVIATION ORGANIZATION



**Report of the Air Traffic Management/Communications, Navigation and
Surveillance (ATM/CNS) Coordination Meeting**

BETWEEN

**Angola, Botswana, Congo, Côte d'Ivoire, Democratic Republic of the Congo,
Gabon, Ghana, Namibia, Nigeria, Sao Tome & Principe, Senegal,
South Africa, Zambia and Zimbabwe**

(Luanda, Angola 24 – 26 November 2003)

November 2003

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TABLE OF CONTENTS

PART I - HISTORY OF THE MEETING

PAGE

Table of Contents (i)

Venue and Date: (ii)

Objective: (ii)

Officers and Secretariat: (iii)

Attendance (iii)

Working Language: (iii)

Agenda: (iii – iv)

Conclusions: (v - viii)

Appendices (viii)

PART II – REPORT ON AGENDA ITEMS 1 - 8

**ATM/CNS COORDINATION MEETING BETWEEN ANGOLA, BOTSWANA, CONGO,
CÔTE D'IVOIRE, D. R. CONGO, GABON, GHANA, NAMIBIA, NIGERIA,
SAO TOME & PRINCIPE, SENEGAL, SOUTH AFRICA, ZAMBIA AND ZIMBABWE
(LUANDA, 24 – 26 NOVEMBER 2003)**

Venue and Date

1. The meeting was held in the Conference Room of ENANA-E.P. Centro Aeronautico de Instrucao, in Luanda from 24 to 26 November 2003, at the kind invitation of the Republic of Angola.

Objective

2. The main objective of the meeting was to review the implementation and operational status of various air traffic management (ATM), aeronautical information service (AIS), communications, navigation, surveillance (CNS) and search and rescue (SAR) facilities and services being or to be provided by Angola, Botswana, Congo, Côte d'Ivoire, D. R. Congo, Gabon, Ghana, Namibia, Nigeria, Sao Tome & Principe, Senegal, South Africa, Zambia and Zimbabwe along areas of routing AR4 (Europe – Southern Africa routes) and AR5 (Continental Western and Central Africa routes including coastal areas), with a view to making appropriate recommendations including arrangements necessary for the improvement of safety and efficiency of aircraft operations.

3. The meeting was opened by the Honourable Minister of Transport of the Republic of Angola, Dr. André Luis Brandao. On behalf of the Government, he welcomed the participants to the meeting and emphasized the importance of the co-ordination meeting as a means of ensuring the continuing safety, efficiency and regularity of international aircraft operations within and through the airspaces concerned. In this context, he stressed the need for the implementation of the essential facilities and services to meet this objective consistent with the ICAO provisions. He further highlighted Angola plans for the improvement of air navigation services, including human resource development and working conditions. Mr. Jorge Dos Santos Correia de Melo, acting Chairman of the Board of Administrators and General Manager of ENANA E.P., Angola and Mr. Andrew K. Mensah, Deputy Regional Director, ICAO Western and Central African Office also addressed the meeting. Mr. Mensah emphasized the need for continued cooperation regionally and globally in order to enhance safety, security, economy and efficiency of international air navigation.

4. Mr. H. Preza, the National Director of Civil Aviation, Angola presided over the closing session. In his remarks he stressed the need for States to promote closer cooperation in the implementation of the ICAO CNS/ATM systems in the spirit of the Global ATM operational concept which *aims at achieving an interoperable global air traffic management system for all users during all phases of flight that meets to the levels of safety, provides for optimum economic operations, is environmentally sustainable, and meets national security requirements.*

Officers and Secretariat

5. The meeting elected Mr. Abilio Pinto Da Cruz, Administrator, Director of Air Navigation of ENANA E.P., Angola as Chairman. He was assisted by Mr. Andrew K. Mensah, Deputy Regional Director, ICAO Western and Central African Office. Mr. A.J. Kharuga, ICAO Regional Officer ATM, Nairobi served as the Secretary of the meeting. He was assisted by the following Officers from the Dakar and Nairobi Offices of ICAO:

Mr. P. Zo'o Minto'o,	Regional Officer CNS, Dakar
Mr. I.U. Auyo,	Regional Officer ATM, Dakar
Mr. Th. Masabarakiza,	Regional Officer CNS, Nairobi

Working Language

6. The discussions were conducted in English and the meeting documentation was issued in this language.

Attendance

7. The meeting was attended by 62 participants from 10 States, 1 international Organization and 4 air navigation system providers. A list of participants is at **Appendix A**.

Agenda

8. The meeting adopted the following agenda:

1. Air Traffic Management (ATM)

- 1.1 Review of the implementation of ATS routes.
- 1.2 Delegation of airspace.
- 1.3 ATS contingency plans.
- 1.4 Implementation of the 10 minute-longitudinal separation minimum.
- 1.5 ATS letters of Agreements/Procedures.
- 1.6 SAR: Legislation and agreements.

1.7 Airspace restructuring in Windhoek FIR.

1.8 Coordination of air traffic operations in the Atlantic Ocean affecting Accra, Brazzaville, Johannesburg, Luanda and Windhoek FIRs.

2. Communications/Navigation/Surveillance (CNS)

2.1 Aeronautical Mobile Service

2.2 Aeronautical fixed services

2.3 Use of VSAT networks

3. Consideration of Deficiencies in the Air Navigation Fields

4. Any other business

4.1 Exchange of personnel

4.2 Establishment of safety management programmes

Conclusions

9. The following conclusions were adopted.

Number	Title
Conclusion 1/1	<p>Implementation of ATS Routes</p> <p>That, the States concerned implement the ATS routes at Appendix B to this report as soon as possible, but not later than the AIRAC date 10 June 2004.</p>
Conclusion 1/2	<p>ATS Contingency Plans</p> <p>That, the States which have not done so as required by the Standard 2.28 of ICAO Annex 11 (<i>air traffic services</i>), develop the relevant ATS contingency plans and forward the same to ICAO for approval using the sample at Appendix C to this report.</p>
Conclusion 1/3	<p>Implementation of 10-minute longitudinal separation minimum</p> <p>That, States that have not done so, implement the 10-minute longitudinal separation minimum as soon as possible, taking into account the requirement as advocated by APIRG Conclusion 14/24 and those requirements contained in the PANS/ATM, Doc 4444.</p>
Conclusion 1/4	<p>ATS Letters of Procedures (LOPs)/Agreements (LOAs)</p> <p>That, States undertake to implement the ATS Letters of Procedures/agreements listed in paragraph 1.5 of the agenda on the applicable date indicated in paragraph 2 of each LOPs/LOA.</p>
Conclusion 1/5	<p>SAR Legislation</p> <p>That, States which have not yet done so, expedite inclusion of SAR Legislation in their national statutes using the sample at Appendix D to this report.</p>
Conclusion 1/6	<p>SAR Agreements</p> <p>That, States which have not done so, conclude as soon as possible their respective SAR agreements in the spirit of AFI/7 conclusion 6/3, using the sample at Appendix E to this report as appropriate.</p>
Conclusion 1/7	<p>Satellite-aided Search and Rescue</p> <p>That, States that have not done so, implement the provisions required by the AFI/7 Rec. 6/2 relating to satellite-aided search and rescue.</p>

Number	Title
Conclusion 1/8	<p>Liaison between Aeronautical and Maritime SAR Authorities</p> <p>That, concerned States promote the intent of AFI/7 RAN Rec. 6/4 relating to coordination between Aeronautical and Maritime SAR authorities in response to the ICAO/IMO Memorandum of Understanding (MOU) of 1985.</p>
Conclusion 1/9	<p>AFCAC initiative to implement SAR provisions</p> <p>That, States provide support to the AFCAC initiatives in the implementation of SAR provisions and, accordingly, respond to the AFCAC SAR questionnaire in this respect. (Appendix I to this report refers).</p>
Conclusion 1/10	<p>Civil /Military Coordination</p> <p>That, States that have not done so, expedite the establishment of Civil/ Military Coordination bodies in accordance with AFI/7 Rec 5/3.</p>
Conclusion 1/11	<p>ATM/CNS coordination meeting between Angola and South Africa</p> <p>That, Angola and South Africa, meet as soon as possible but not later than March 2004, in order to address issues relating to the aircraft operations in South Atlantic Oceanic airspace.</p>
Conclusion 1/12	<p>Extension of VHF Coverage in Accra FIR</p> <p>That, in coordination with States concerned, Ghana expedite the extension of VHF Radio coverage in Accra FIR, South/East Sector using remote AFISNET stations located in Sao Tome & Principe and Togo.</p>
Conclusion 1/13	<p>Implementation of an AFISNET Station in Luanda</p> <p>That, Angola expedite the implementation of an AFISNET station in Luanda, in order to meet AFS requirements in the AFI Air Navigation Plan with Accra, Brazzaville, Dakar and Luanda ACCs.</p>
Conclusion 1/14	<p>Implementation of an AFISNET station in Sao Tome</p> <p>That, Ghana and Sao Tome & Principe implement an AFISNET station at Sao Tome, in order to meet AFS requirements in the AFI Air Navigation Plan with Accra, Brazzaville and Libreville ACCs.</p>
Conclusion 1/15	<p>Elimination of Deficiencies in the Air Navigation Fields</p> <p>That, States concerned eliminate, as soon as possible, relevant deficiencies in the fields of ATS, AIS, SAR and CNS at Appendix H to this report.</p>
Conclusion 1/16	ATM Safety Management System

Number	Title
	That, in order to enhance safety, security and efficiency in air navigation services, States expedite the implementation of relevant ICAO provisions relating to safety management systems, taking into account the provisions of Annex 11, paragraph 2.26 and PANS-ATM (Doc 4444) applicable as from 27 November 2003.
Conclusion 1/17	Seminars/Workshops on Safety Management That, ICAO organize seminars and workshops on safety management, in order to assist States in the implementation of safety management programmes.
Conclusion 1/18	Exchange of Technical Visits That, each State exchange regular technical visits to each other's operational units in order to promote efficient coordination procedures.
Conclusion 1/19	Future Meetings That, ATM/CNS coordination meetings be held regularly and, ideally, every two years, in order to address new identified problems as well as update the coordination procedures as required.

APPENDICES

Appendix A: List of participants A

Appendix B: ATS routes in the ICAO AFI ANP requiring implementation..... B

Appendix C: Sample of ATS Contingency Plan C

Appendix D: Sample SAR Legislation..... D

Appendix E: Sample SAR Agreement E

Appendix F: Status of Implementation of ATS/DS Circuits.....F

Appendix G: Status of Implementation of AFTN Circuits..... G

Appendices H: List of Deficiencies in the ATM, AIS, SAR and CNS Fields H

Appendix I: AFCAC Questionnaire on SAR I

PART II – REPORT ON THE AGENDA ITEMS

Report on Agenda Item 1: Air Traffic Management

Review of the implementation of the ATS Routes

1.1 The meeting reviewed the implementation of ATS routes in the relevant airspace of Angola, Botswana, Congo, Côte d'Ivoire, D. R. Congo, Gabon, Ghana, Namibia, Nigeria, Sao Tome & Principe, Senegal, South Africa, Zambia and Zimbabwe and agreed on common implementation for the non-implemented routes/route segments. The meeting thus formulated the following conclusion:

Conclusions: 1/1 Implementation of ATS Routes

That the States concerned implement the ATS routes at Appendix B this report as soon as possible, but not later than the AIRAC date 10 June 2004.

Delegation of Airspace

1.2 The meeting was appraised on the current ICAO provisions relating to delineation of ATS airspace as advocated by ICAO Assembly Resolution A33-14 Appendix 'N' and ICAO Convention, Annex 2 para. 2.1.2. The meeting recalled the AFI/7, Recommendation 5/1, relating to cooperative approach to airspace management in the implementation of CNS/ATM systems responding to the need for efficiency in airspace management, through regionalisation leading to globalisation of upper airspace management in order to facilitate the safety, order and expeditious flow of air traffic. The meeting noted that, although the current airspace management system was adequate, there was a need to constantly review the systems in order to respond to aircraft operations.

ATS contingency Plans

1.3 The meeting reviewed the ICAO requirements relating to the ATS contingency planning. The meeting recognized the need for contingency planning in each FIR in the AFI Region for use in the event of disruption of air traffic services (ATS) and related supported services in the spirit of **standard 2.28** of ICAO Annex 11 (Air Traffic Services) which became applicable on 27 November 2003. The meeting formulated the following conclusion.

Conclusion 1/2 ATS Contingency Plans

That, the States which have not done so as required by Standard 2.28 of ICAO Annex 11 (Air Traffic Services) develop the relevant ATS contingency plans and forward the same to ICAO for approval using the sample at Appendix C to this report.

Implementation of 10 minutes longitudinal separation minimum.

1.4 The meeting noted that a number of States had implemented the 10 minutes longitudinal separation minimum in their respective selected airspace where the necessary supporting facilities of Communications and Nav aids were available. The meeting concluded as follows:

Conclusion: 1/3 Implementation of 10 minute longitudinal separation minimum

That, States that have not done so, implement the 10-minute longitudinal separation minimum as soon as possible, taking into account the requirement as advocated by APIRG Conclusion 14/24 and those requirements contained in the PANS/ATM, Doc.4444.

ATS letters of Agreement/Procedures (LOAs/LOPs)

1.5 The ATS authorities reviewed and updated respective letters of agreement/procedure (LOAs/LOPs) and agreed on their relevant common implementation dates.

The following letters of Agreement/Procedures were concluded and signed at the meeting:

- Letter of Procedures between Luanda ACC/FIC and Johannesburg ACC/FIC.
- Letter of Procedures between Luanda ACC/FIC and Accra ACC/FIC.
- Letter of Procedures between Luanda ACC/FIC and Brazzaville ACC/FIC.
- Letter of Procedures between Luanda ACC/FIC and Windhoek ACC/FIC.
- Letter of Procedures between Luanda ACC/FIC and Lusaka ACC/FIC.
- Letter of Procedures between Accra ACC/FIC and Brazzaville ACC/FIC.
- Letter of Procedures between Kano FIC and Brazzaville ACC/FIC.
- Letter of Procedures between Lubumbashi ACC and Lusaka ACC.
- Letter of Procedures between Luanda and Kinshasa ACC/FIC.

1.6 The meeting addressed issues relating to coordination of traffic in the respective FIRs and these were incorporated in the relevant letters of agreement/procedure.

The following conclusion was formulated:

Conclusion 1/4 ATS Letters of Agreement/Procedure (LOAs/LOPs)

That States undertake to implement the ATS letters of agreement/procedures mentioned at paragraph 1.5 of the agenda on the applicable dates indicated in paragraph 2 of each letter of agreement/procedures.

Search and Rescue: SAR Legislation and Agreements

SAR Legislation

1.7 The meeting reviewed the implementation of SAR Legislation in the respective States and recognised that some States had included SAR Legislation in their statute Law. The meeting thus concluded as follows:

Conclusion 1/5 SAR Legislation

That States which have not yet done so, expedite inclusion of SAR Legislation in their national statutes using the sample at Appendix D to this report.

SAR Agreements

1.8 The meeting reviewed the relevant ICAO provisions relating to the Search and Rescue Service in the area concerned. The meeting noted that there was a need to conclude SAR agreements with their respective SAR authorities. The meeting in this respect formulated the following conclusion:

Conclusion: 1/6 SAR Agreements

That States which have not done so, conclude as soon as possible their respective SAR agreements in the spirit of AFI/7 Conclusion 6/3, using the sample at Appendix E to this report as appropriate.

Satellite-Aided Search and Rescue

1.9 The meeting discussed the issues relating to satellite aided search and rescue and the importance of enhancing SAR operations. The meeting thus concluded as follows:

Conclusion: 1/7 Satellite-Aided Search and Rescue

That States that have not done so, implement the provisions required by the AFI/7 Rec. 6/2 relating to satellite-aided search and rescue.

Liaison between Aeronautical and Maritime SAR Authorities

1.10 The meeting recalled the provisions relating to the need to maintain close liaison between Aeronautical and Maritime (where applicable) SAR Authorities in the spirit ICAO/IMO memorandum of understanding (MOU) 1985 and AFI RAN Rec. 6/4. The meeting formulated the following conclusion:

Conclusion: 1/8 Liaison between Aeronautical and Maritime SAR Authorities

That concerned States promote the intent of AFI/7 RAN Rec. 6/4 relating to coordination between Aeronautical and Maritime SAR authorities in response to the ICAO/IMO Memorandum of Understanding (MOU) of 1985.

AFCAC initiative to implement SAR Provisions

1.11 The meeting reviewed the AFCAC initiative in assisting States to implement the SAR requirements and urged States to support such initiative in this regard. The meeting requested States that have not done so to respond to AFCAC SAR questionnaire. The following conclusion was adopted:

Conclusion: 1/9 AFCAC initiative to implement SAR provisions

That States provide support to the AFCAC initiatives in the implementation of SAR provisions and accordingly respond to the AFCAC SAR questionnaire in this respect. (Appendix I to this report refers).

1.12 The meeting reviewed the provisions relating to civil/military coordination in light of the support for ATM operation concept requiring flexible use of airspace and the need to reduce or eliminate special use airspaces ie. Danger, prohibited and restricted areas. The need to involve

military aviation personnel in the air space organization and restructuring was emphasized. In view of the discussions, the following conclusion was formulated:

Conclusion 1/10 - Civil /Military Coordination

That, States that have not done so, expedite the establishment of Civil/ Military Coordination bodies in accordance with AFI/7 Rec 5/3.

1.13 The meeting noted that Angola and South Africa needed to meet in order to address issues relating to aircraft operations in their respective FIRs in the Oceanic airspace. The meeting adopted the following conclusion.

Conclusion 1/11 ATM CNS Coordination Meeting between Angola and South Africa

That, Angola and South Africa, meet as soon as possible but not later than March 2004, in order to address issues relating to the aircraft operations in South Atlantic Oceanic airspace.

1.14 The meeting noted the information relating to the on-going project on the re-organizations of Windhoek FIR. Namibia was requested to ensure that adequate coordination with adjacent FIRs was effected as some of the routes proposed affect adjacent FIRs.

Report on Agenda Item 2: Communication, Navigation and Surveillance

2.1 Aeronautical Mobile Services (AMS)

2.1.1 The meeting recalled that in accordance with AFI/7 RAN Rec.5/12, VHF coverage should be provided, to the extent practicable, along all ATS routes shown in Table ATS-1. Remote VHF stations located in the State concerned or in adjacent States are recommended to be used as necessary.

2.1.2 The meeting agreed to urge States concerned to implement as soon as possible the remaining remote VHF stations. The meeting concluded as follows:

Conclusion 1/12 Extension of VHF Coverage in Accra FIR

That, in coordination with States concerned, Ghana expedite the extension of VHF Radio coverage in Accra FIR, South/East Sector using remote AFISNET stations located in Sao Tome & Principe and Togo.

2.2 Aeronautical Fixed Service (AFS)

2.2.1 Air Traffic Services Direct Speech (ATS/DS)

2.2.2.1 The meeting noted that some ATS/DS circuit requirements for the States adjacent to Luanda FIR are not yet implemented. They are:

Brazzaville/Sao Tome
Luanda/Brasilia, and
Luanda/Dakar

2.2.1.2 The status of implementation of ATS/DS circuits in the area under consideration is shown in **Appendix F**.

2.3 Aeronautical Fixed Telecommunications Network (AFTN)

2.3.1 The meeting also noted that some AFTN circuit requirements for the States adjacent to Luanda FIR are not yet implemented. They are:

Luanda/Brazzaville
Sao Tome/Brazzaville

2.3.2 The status of implementation of AFTN circuits in the area under consideration is at **Appendix G**.

2.3.3 These deficiencies introduce a long transit time on messages to/from Luanda.

2.4 Use of VSAT Network

2.4.1 The meeting was of the view that implementation of AFIS NET stations at Luanda and Sao Tome is the only sustainable solution to solve the current AFS deficiencies in the area under consideration therefore the meeting concluded as follows:

Conclusion 1/13 Implementation of an AFISNET Station in Luanda

That Angola expedite the implementation of an AFISNET station in Luanda in order to meet ANP requirements in the AFS field between Accra, Brazzaville, Dakar and Lunada FIRs.

Conclusion 1/14 Implementation of AFISNET in Sao Tome

That Ghana and Sao Tome & Principe implement an AFISNET station at Sao Tome in order to meet AFT requirements in the AFI Air Navigation Plan with Accra, Brazzaville and Libreville ACCs.

Report on Agenda Item 3 Consideration of Deficiencies in the Air Navigation Field

3.1 The meeting reviewed and updated the list of deficiencies in the ATM, AIS, SAR and CNS fields covering Angola, Botswana, Congo, Côte d'Ivoire, D. R. Congo, Gabon, Ghana, Namibia, Nigeria, Sao Tome & Principe, Senegal, South Africa, Zambia and Zimbabwe. The meeting adopted the following conclusions:

Conclusion 1/15 Elimination of Deficiencies in the Air Navigation Fields

That States concerned eliminate, as soon as possible, relevant deficiencies in the fields of ATS, AIS, SAR and CNS at Appendix H to this report.

Establishment of Safety Management Programmes

4.1 The meeting noted that the ICAO provisions in Annex 11 and the PANS-ATM (Doc.4444) relating to ATM safety management became applicable on 27 November 2003. It was recalled that the subject was adequately addressed by the 11th Air Navigation Conference in September 2003.

4.2 The meeting underscored the need to hold seminars/workshops to address the subject. The meeting adopted the following conclusions:

Conclusion 1/16 ATM Safety Management System

That, in order to enhance safety, security and efficiency in air navigation services, States expedite the implementation of relevant ICAO provisions relating to safety management systems, taking into account the provisions of Annex 11, paragraph 2.26 and PANS-ATM (Doc.4444) applicable as from 27 November 2003.

Conclusion 1/17 Seminars/Workshops on Safety Management

That, ICAO organize seminars and workshops on safety management, in order to assist States in the implementation of safety management programmes.

Report on Agenda Item 4 Any other business**Exchange of Personnel**

4.3 The meeting considered it desirable to exchange technical visits to each other's operational units as such visits enhanced efficient coordination. It was noted that some States had already established programmes for such exchange visits.

Future Meetings

4.4 The meeting underscored the need for the future meetings in order to address new identified problems that would require solutions in a coordinated manner as well as the need to update existing coordination procedures.

4.5 In light of the discussions, the following conclusions were formulated:

Conclusion 1/18 Exchange of Technical Visits

That, each State exchange regular technical visits to each others' operational units in order to promote efficient coordination procedures.

Conclusion 1/19 Future meetings

That, ATM/CNS coordination meetings be held regularly and, ideally, every two years, in order to address new identified problems as well as update the coordination procedures as required.
