

INTERNATIONAL CIVIL AVIATION ORGANIZATION



**REPORT OF THE ELEVENTH MEETING OF THE
AFI PLANNING AND IMPLEMENTATION
REGIONAL GROUP (APIRG)**

(Nairobi, 30 March - 3 April 1998)

Prepared by the Secretary of the APIRG

26 February 2001

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its frontiers or boundaries

LIST OF ABBREVIATIONS

ICAO abbreviations and acronyms are contained in ICAO PANS ABC (Doc 8400), the ICAO Lexicon (Doc 9294) and other relevant terminology material. The acronyms listed hereunder have been chosen from those which are specifically related to the activities of the APIRG and/or are most frequently found in this report in order to assist in its reading.

APIRG SUB-GROUPS AND OTHER REGIONAL BODIES

AOP/SG	-	Aerodrome Operational Planning Sub-group
MET/SG	-	Meteorological Sub-group
ATS/AIS/SAR/SG	-	Air Traffic Services/Aeronautical Information Services/Search and Rescue Sub-group
CNS/ATM/IC/SG	-	Communications, Navigation, Surveillance/ Air Traffic Management/ Implementation Coordination/ Sub-Group
COM/SG	-	Communication Sub-group
FASID/TF	-	Facilities and Services Implementation Document Task Force
TF/TF	-	Traffic Forecasting Task Force
LIM/AFI (COM/ MET/RAC) RAN Meeting 1988	-	Limited Africa/Indian Ocean (COM/MET/RAC) Regional Air Navigation Meeting (Lomé, 12 - 27 April 1988)
AFI/7 RAN Meeting	-	Seventh AFI Regional Air Navigation Meeting (Abuja, 12 - 23 May 1997)
FANS	-	Future Air Navigation Systems

OTHER ABBREVIATIONS

ACAS	-	Airborne Collision Avoidance System
ACI	-	Airport Council International
AFCAC	-	African Civil Aviation Commission
AFRAA	-	African Airlines Association
AFTN	-	Aeronautical Fixed Service Telecommunication Network
AMBEX	-	AFI Meteorological Bulletin Exchange
ASECNA	-	Agency for the Safety of Air Navigation in Africa and Madagascar
BUFR	-	Binary Universal Form of Representation for Meteorological Information
EGNOS	-	European Geostationary Navigation Overlay System
FASID	-	Facilities and Services Implementation Document
GPS	-	Global Positioning System

IATA	-	International Air Transport Association
IFALPA	-	International Federation of Airline Pilots Association
IFATCA	-	International Federation of Air Traffic Controllers' Association
IFPB	-	Inflight Pilot Broadcast
INMARSAT	-	International Maritime Satellite Organization
IOACG	-	Indian Ocean ATS Coordination Group
ITU	-	International Telecommunications Union
MSAW	-	Minimum Safe Altitude Warning
MSS	-	
PANAFTTEL	-	Pan African Telecommunications Network
RAFC	-	Regional Area Forecast Centre
RGCSF	-	Review of the General Concept for Separation Panel
RNAV	-	Area Navigation
RNP	-	Required Navigation Performance
RSP	-	Required Surveillance Performance
RTSP	-	Required Total System Performance
SABS	-	Satellite based augmentation systems
SADC	-	Southern Africa Development Community
SADIS	-	Satellite Distribution System for information relating to air navigation
SAT/6	-	The sixth informal meeting for the improvement of air traffic services over the South Atlantic (SAT/6 Meeting)
SIGWX	-	Significant Weather
SITA	-	International Aeronautical Telecommunications Corporation
TCAS	-	Traffic Alert Collision Avoidance System
TCC	-	TAF Collection Centre
WAFC	-	World Area Forecast Centre
WAFS	-	World Area Forecast System
WRC	-	World Radiocommunication Conference
VSAT	-	Very Small Aperture Terminal

TABLE OF CONTENTS

PART 1 - HISTORY OF THE MEETING	PAGE
Duration	1
Officers and Secretariat	1
Attendance	2
Languages	2
Agenda	2
Conclusions and Decisions	5
List of Conclusions	4
List of Decisions	5
 PART 2 - REPORT ON THE AGENDA	
Agenda Item 1: Election of Chairperson and Vice Chairpersons	1-1
Agenda Item 2: Review of action taken by Air Navigation Commission (ANC) and Council on AFI/7 RAN Meeting report and follow-up action by States, APIRG, and Regional Offices on the Conclusions and Recommendations	2-1
Agenda Item 3: Shortcomings and deficiencies in the air navigation field in the AFI Region	3-1
Agenda Item 4: Latest developments in the air navigation field	4-1
Agenda Item 5: Develop the Group's future work programme and determine the Terms of Reference and work programme of required APIRG subsidiary bodies	5-1
Agenda Item 6: Relation with other Groups, adjacent Regions and world-wide activities	6-1
Agenda Item 7: Any other business	7-1

APPENDICES TO APIRG/11 REPORT

AGENDA ITEM	APPENDIX	TITLE
	A	List of Participants
2	B	Follow-up responsibility on AFI/7 RAN meeting conclusions and recommendations referred to APIRG
3	C	Shortcomings in the AOP Field
3	D	Shortcomings in the Communication Field
3	E	Shortcomings in the Air Traffic Management, Aeronautical Information Services, and Search and Rescue Fields
3	F	Shortcomings in the MET Field
5	G	APIRG Organigram
5	H	Terms of Reference, work programme and composition of the Aerodrome Operational Planning Sub-group (AOP/SG)
5	I	Terms of Reference, work programme and composition of the ATS/AIS/SAR Sub-group
5	J	Terms of Reference, work programme and composition of the CNS Sub-group (CNS/SG)
5	K	Terms of Reference, work programme and composition of the AFI CNS/ATM/IC/SG
5	L	Terms of Reference, work programme and composition of the MET Sub-group (MET/SG)
5	M	Terms of Reference, work programme and composition of the Facilities and Services Implementation Documents/Task Force (FASID/TF)
5	N	Terms of Reference, work programme and composition of the Traffic Forecasting Task Force (TF/TF)
5	P	Tentative Meetings schedule for APIRG and its subsidiary bodies
7	Q	Guidelines for the selection of locations for two-way VSATs
7	R	WAFS areas of coverage

PART I - HISTORY OF THE MEETING

1. Duration

1.1 The Eleventh meeting of the AFI Planning and Implementation Regional Group (APIRG) was held in the Conference room No. 3 of United Nations Organization at Nairobi (UNON) at the site of the ICAO Eastern and Southern African Office, Nairobi, from 30 March to 3 April 1998.

2. Officers and Secretariat

2.1 The meeting reaffirmed Mr. A. Bodian as its Chairman. Consequently, Mr. A. Bodian will continue in office. The meeting took note of the decision of the Second Vice Chairman, Mr. S.M. Machobane not to stand for re-election. The meeting thanked him for his contribution to the Group and went on to re-elect the Second Vice Chairman, Mr. M. Cherif Mohamed of Tunisia as First Vice Chairman and elected Mr. Ezron E. Yosa of Zambia as Second Vice Chairman. Mr. A. Bodian presided over all the sessions of the meeting. Para 1.1 under Agenda Item 1 also refers.

2.2 Mr. Z.M. Baliddawa, the Secretary of the Group, and ICAO Representative, Nairobi was in full-time attendance. The Meeting was assisted by Mr. E.A. Olaniyan, Deputy Representative, Dakar and Mr. Lot Mollel, Deputy Representative, Nairobi, and the following officers from the Dakar and Nairobi Offices of ICAO:

Mr. H. Cisse, TO/MET, Dakar
Mr. A. J. Kharuga, TO/ATM, Nairobi
Mr. J. Lare, TO/CNS, Dakar
Mr. Th. Masabarakiza, TO/CNS, Nairobi
Mr. L. Ndiwaita, TO/AGA, Nairobi
Mr. V. Pericles, TO/AGA, Dakar
Mr. D. Ramdoyal, TO/ATM, Dakar
Mr. B. M. Sekwati, TO/MET, Nairobi
Mr. A. Sene, TO/CNS, Nairobi

2.3 Mr. V. Zubkov, Chief Regional Affairs Officer and Mr. H. Tehrani, Senior Regional Affairs Officer from ICAO Headquarters, Montreal, attended all sessions and assisted the Meeting.

2.4 The Chairman gave a brief account of progress made by the Group in the implementation of its Conclusions and Decisions and stated that it was encouraging to note that many States in the region had taken increasing interest in the activities of APIRG. He also noted the substantial contributions made by the Sub-groups and Task Forces to the work of APIRG and commended the work of those contributory bodies of APIRG.

2.5 ICAO Representative, Nairobi, and Secretary of the APIRG welcomed the participants to the Meeting and expressed appreciation for the large turn-up of members and observers. He acknowledged the encouragement to the Group by the Air Navigation Commission (ANC) and the ICAO Council in its work over the years. The efforts by ICAO to meet the needs of the APIRG related to the conduct of meetings of its contributory bodies were notified to the Group. He expressed appreciation for the tangible results achieved by the subsidiary bodies of the APIRG since the last meeting of the Group. On the ICAO CNS/ATM Systems concept, he advised members that the CNS/ATM Sub-group had finalized as requested

by APIRG, the plan for the agreement of States to implement the new CNS/ATM System in the AFI Region. He briefed the meeting on the formation by ICAO of the ICAO CNS/ATM Implementation Advisory Group (ALLPIRG) which comprised all planning and implementation regional groups (PIRGs) and CNS/ATM stakeholders and partners. Finally, the meeting was also informed of the outcome of the AFI/7 RAN Meeting (Abuja, 12 to 23 May 1997). In this connection the contribution of the APIRG was commended.

3. Attendance

3.1 The meeting was attended by 90 participants from 32 States; representing 20 of the twenty-four States members of APIRG, 10 other States located in the AFI Region as well as United Kingdom, the United States of America and observers from AFRAA, ASECNA, IATA, IFALPA, IFATCA and SADC.

3.2 The list of participants is given at **Appendix A**.

4. Languages

4.1 The discussions were conducted in English and French and documentation was issued in both languages. Language services were provided under the supervision of Mr. J. Belinga, Language Officer of the ICAO Dakar Office. He was assisted by three free-lance interpreters and one freelance translator.

5. Agenda

5.1 The following Agenda was adopted:

Item1: Election of Chairperson and Vice Chairpersons.

Item2. Review of action taken by Air Navigation Commission (ANC) and Council on AFI/7 RAN Meeting report: and follow-up action by States, APIRG, and Regional Offices on the Conclusions and Recommendations

Item3. Shortcomings and deficiencies in the air navigation field in the AFI Region.

Item4: Latest developments in the air navigation field.

Item5: Develop the Group's future work programme and determine the Terms of Reference and Work Programme of required APIRG subsidiary bodies.

Item6: Relation with other Groups, adjacent Regions and world-wide activities.

Item7: Any other business.

6. Conclusions and Decisions

6.1 The APIRG records its actions in the form of Conclusions and Decisions with the following significance:

6.2 **Conclusions**

6.2.1 Conclusions deal with matters which, in accordance with the Group's Terms of Reference, merit directly the attention of States or on which further action will be initiated by ICAO in accordance with established procedures.

6.3 **Decisions**

6.3.1 Decisions deal with matters of concern only to the APIRG and its contributory bodies.

6.4 List of Conclusions

NUMBER	TITLE	PAGE
Conclusion 11/1	REGULAR FOLLOW-UP OF THE RESULTS OF AFI/7 RAN MEETING AND REPORT TO APIRG	2-1
Conclusion 11/2	REVIEW OF STATES CIVIL AVIATION ESTABLISHMENTS	2-1
Conclusion 11/4	IMPLEMENTATION OF AFS CIRCUITS BETWEEN DAKAR AND ROBERTS FIRs	2-3
Conclusion 11/6	FACILITATION OF THE AFI SBAS TRIALS AND DEMONSTRATIONS	2-5
Conclusion 11/7	PARTICIPATION OF STATES AT ICG MEETINGS	2-5
Conclusion 11/8	URGENT IMPLEMENTATION OR IMPROVEMENT OF COM FACILITIES	3-1
Conclusion 11/9	SHORTCOMINGS AND DEFICIENCIES IN THE AIR NAVIGATION FIELD IN THE AFI REGION	3-2
Conclusion 11/10	PREPARATORY WORK FOR THE ITU WRC-99	4-1
Conclusion 11/12	INFORMATION TO APIRG AND ITS SUBSIDIARY BODIES ON DEVELOPMENTS IN THE NEW CNS/ATM AND OTHER AIR NAVIGATION FIELDS	4-2
Conclusion 11/13	IMPLEMENTATION OF MINIMUM SAFE ALTITUDE WARNING (MSAW) SYSTEM	4-4
Conclusion 11/14	YEAR 2000 COMPUTER DATE PROBLEM	4-4
Conclusion 11/15	MEMBERSHIP OF THE APIRG	5-2
Conclusion 11/17	IMPLEMENTATION CO-ORDINATION GROUPs (ICGs) ACTIVITIES WITHIN ROUTING AREAS AR-1 (EUR-SAM) AND AR-2 (ATLANTIC OCEAN AFI -NAT - SAM INTERFACE)	6-1
Conclusion 11/18	LOW-LEVEL SIGWX CHARTS ON SADIS	7-1
Conclusion 11/19	GUIDELINES FOR THE SELECTION OF LOCATIONS FOR TWO-WAY VSATs	7-1
Conclusion 11/20	WAFS AREA OF COVERAGE FOR FLIGHTS BETWEEN SOUTH AFRICA, AUSTRALIA/NEW ZEALAND, ANTARCTICA AND SOUTH AMERICA	7-1
Conclusion 11/22	EXCHANGE REQUIREMENTS FOR AIR-REPORTS (AIREPs) IN AMBEX HANDBOOK	7-2

6.5 List of Decisions

NUMBER	TITLE	PAGE
Decision 11/3	PREPARATION OF THE AFI BASIC ANP AND FASID DOCUMENTS	2-3
Decision 11/5	PROPOSAL FOR AFI EGNOS TEST BED	2-4
Decision 11/11	FOLLOW UP OF ITU WRC-97	4-2
Decision 11/16	MEMBERSHIP TO APIRG SUBSIDIARY BODIES	5-2
Decision 11/21	PREPARATION OF A TRANSITION PLAN FOR THE TRANSFER OF RESPONSIBILITIES OF DAKAR, LAS PALMAS AND NAIROBI RAFCs TO WAFC, LONDON	7-2
Decision 11/23	SUBMISSION OF WORKING AND INFORMATION PAPERS FOR MEETINGS OF THE APIRG AND ITS SUBSIDIARY BODIES TO THE SECRETARY(IES)	7-3

PART 2 - REPORT ON THE AGENDA**Agenda Item 1: Election of Chairperson and Vice Chairpersons**

1.1 Further to para 2.1 under Part I of this report the Meeting, in view of the need for continuity and coordination considered advantageous for the bureau of APIRG to remain unchanged. However as the First Vice-Chairman decided not to stand for re-election the meeting elected its bureau as follows:

Mr. A. Bodian	-	Chairman
Mr. M. Cherif Mohamed	-	First Vice-Chairman
Mr. Ezron E. Yosa	-	Second Vice-Chairman

Agenda Item 2: Review of action taken by Air Navigation Commission (ANC) and Council on AFI/7 RAN Meeting report and follow-up action by States, APIRG, and Regional Offices on the Conclusions and Recommendations

2.1 Review of action taken by the Air Navigation Commission (ANC) and the Council

2.1.1 The meeting noted that the AFI/7 Regional Air Navigation Meeting (Abuja, May 1997) had developed 128 recommendations and 36 conclusions aimed at updating the AFI Air Navigation Plan and facilitating its implementation. The meeting also noted that the AFI/7 Report had been published in English and French as ICAO Doc. 9702 and had been circulated to States and International Organizations.

2.1.2 The meeting further noted the specific actions taken by the ANC and Council on each recommendation of the AFI/7 and on certain conclusions. It was noted that many of the recommendations and conclusions of AFI/7 had been referred to the APIRG for follow-up. Such recommendations and conclusions were referred to the relevant APIRG subsidiary bodies for action. Follow-up responsibility by the subsidiary bodies and regional offices is at **Appendix B**.

2.1.3 With regard to the outcome of AFI/7, the meeting noted that States have received the report of the meeting (Doc. 9702) and their responsibility for proper implementation of the meeting's recommendations and conclusions has been clearly described. Furthermore, ICAO regional offices will continue their regular contacts with States to monitor the progress of implementation of air navigation facilities, services and procedures developed by AFI/7 RAN Meeting.

2.1.4 The meeting also emphasized the need for APIRG to be informed of the progress on the implementation by States of the requirements in the AFI/7 Report (Doc 9702). The meeting re-iterated that civil aviation administrations in the AFI Region should review their establishments and strengthen their resources by using appropriate institutional strategies such as those contained in AFI/7 Recommendation 14/3 and 14/6. In view of the above, the meeting developed the following conclusions:

CONCLUSION 11/1: REGULAR FOLLOW-UP OF THE RESULTS OF AFI/7 RAN MEETING AND REPORT TO APIRG

THAT THE ICAO REGIONAL OFFICES SERVING THE AFI REGION REGULARLY MONITOR THE IMPLEMENTATION OF THE OUTCOME OF AFI/7 REPORT BY STATES THROUGH MISSION TO STATES AND CORRESPONDENCE AND PROVIDE REGULAR REPORTS TO APIRG MEETINGS.

CONCLUSION 11/2: REVIEW OF STATES CIVIL AVIATION ESTABLISHMENTS

THAT ICAO REGIONAL OFFICES SERVING THE AFI REGION CONTINUE THEIR EFFORTS TO ASSIST AFI STATES TO REVIEW THEIR CIVIL AVIATION ESTABLISHMENTS MAKING USE OF AFI/7 RECOMMENDATIONS 14/3 (INSTITUTIONAL STRATEGIES FOR ADDRESSING SHORTCOMINGS IN THE AIRPORTS AND AIR NAVIGATION SYSTEMS OF THE AFI REGION) AND 14/6 (GUIDELINES ON THE ESTABLISHMENT AND PROVISION OF

MULTINATIONAL FACILITIES OR SERVICES) WITH A VIEW TO DECIDING WHETHER ANY IMPROVEMENTS COULD BE MADE TO THEIR RESOURCES AND CAPABILITIES IN ORDER TO BETTER COPE WITH THE OBLIGATIONS THEY HAVE TO IMPLEMENT THE VARIOUS ELEMENTS OF THE AFI ANP.

2.2 Action and comments of the ANC and Council on the Report of APIRG/10

2.2.1 The Meeting noted the specific actions taken by the ANC and the Council on certain conclusions of APIRG/10 meeting held in Dakar in June 1996 and the follow-up actions taken by States and the Secretariat on all conclusions and decisions of that meeting. It was noted that the inputs prepared by APIRG/10 for the AFI/7 RAN Meeting had greatly facilitated the work of the RAN meeting and had been commended by both the ANC and Council.

2.3 Proposal of amendment to Table AOP 1

2.3.1 Under this agenda item, the APIRG noted the relevant conclusions and recommendations of the AFI/7 RAN Meeting, in particular Conclusion 3/2 which recognized the need for periodical review by the APIRG for updating Table AOP 1 of the ICAO Air Navigation Plan for the AFI Region Doc 7474. The meeting noted also that this task was already part of the work programme of the AOP/SG which will present its review of Table AOP 1 at the APIRG/12 Meeting.

2.3.2 Independent from any future action on the subject to be taken by the AOP/SG, the APIRG was presented with amendment proposals intended to be introduced into Table AOP 1 in respect of the Democratic Republic of the Congo (DRC) which did not attend the AFI/7 RAN Meeting. In addition, Guinea has officially advised ICAO of its plan to withdraw the aerodromes of Boke/Baralande and Faranah/Badala from the ANP, these aerodromes being no longer open to international aircraft operations.

2.3.3 In view of the significance of the proposed changes, the meeting agreed that the AOP data and consequential amendments in the AIS, ATM, CNS and MET fields for the Democratic Republic of Congo and Guinea be, as soon as possible, introduced into the AFI Facilities and Services Implementation Document (FASID) through the ICAO established amendment procedures.

2.4 Preparation of the AFI Basic Air Navigation Plan (ANP) and the AFI Facilities and Implementation document (FASID)

2.4.1 The meeting recalled Conclusion 10/45 of the APIRG which endorsed the new format of regional air navigation plans contemplated by the ICAO Council, whereby the AFI ANP would consist of a basic ANP document containing stable planning material and implementation guidelines and an accompanying Facilities and Services Implementation Document (FASID) which would be an integral part of the basic ANP and would contain the list of air navigation facilities and services that States of the region have agreed to be required for the safety, regularity and efficiency of international civil aviation. The aim of the new structure was to better respond to the dynamic requirements of the new ICAO CNS/ATM systems implementation.

2.4.2 The meeting further noted that the ICAO Council on 26 February 1997 had approved the new structure of basic ANP and FASID documents for application to all regions. With regard to the AFI basic ANP and AFI FASID documents, the AFI/7 RAN Meeting (Abuja, May 1997) noted that the APIRG had

supported the new structure of the AFI ANP by its Conclusion 10/45 and that preparation of the new AFI ANP and FASID documents would be a task for the APIRG to pursue. Having noted that in other ICAO regions FASID task forces were being created to assist the Secretariat in developing the first edition of the basic ANP and FASID, the meeting agreed to adopt the same approach and developed the following Decision:

DECISION 11/3: PREPARATION OF THE AFI BASIC ANP AND FASID DOCUMENTS

THAT A FASID TASK FORCE BE ESTABLISHED TO ASSIST THE SECRETARIAT IN THE DEVELOPMENT OF THE AFI BASIC ANP AND FASID DOCUMENTS AS A MATTER OF PRIORITY. THE TERMS OF REFERENCE AND COMPOSITION OF THIS TASK FORCE ARE IN APPENDIX N.

2.5 Follow-up action since AFI/7 RAN Meeting

2.5.1 Follow-up action on AFI/7 Conclusion 9/1 concerning implementation of AFS circuits between Dakar and Roberts FIRs

2.5.1.1 The Meeting was informed that, pursuant to AFI/7 Conclusion 9/1 concerning the implementation of AFS circuits between Dakar and Roberts FIRs, an informal technical meeting on the subject was held on 2 December 1997 with a view to speeding up implementation. The Roberts ATC was relocated in Conakry due to civil war in Sierra Leone. The Informal Meeting adopted a temporary solution consisting in the leasing of a PANAFTEL circuit between Dakar and Conakry equipped with a multiplex unit providing ATS/DS and AFTN - circuits between the two centres. As a final solution it was decided to implement a VSAT station in Conakry due for completion in June 1998.

2.5.1.2 The meeting having noted these developments adopted the following conclusion:

CONCLUSION 11/4: IMPLEMENTATION OF AFS CIRCUITS BETWEEN DAKAR AND ROBERTS FIRs

THAT STATES CONCERNED BE URGED TO PURSUE THEIR EFFORTS TOWARDS THE EARLY IMPLEMENTATION OF THE AFS CIRCUITS BETWEEN DAKAR AND ROBERTS FIRs.

2.5.2 AFI GNSS study

2.5.2.1 The meeting was briefed on the status of the GNSS study and took note of AFI/7 RAN Conclusion 10/6, on GNSS implementation - Africa-Indian Ocean Region Strategy, Recommendation 13/4 regarding Early completion of the AFI GNSS study and Conclusion 13/5 requiring completion of the work of APIRG related to the AFI GNSS Strategy. The meeting noted with appreciation that, in response to AFI/7 Recommendation 13/4, the European Union has already provided 396,000 ECU for the completion of the study. The Group decided to assign to the CNS/ATM Implementation Coordination Sub-Group (CNS/ATM/IC/SG) it established under Agenda Item 5 the follow-up of AFI/7 RAN Conclusions 10/6 and Conclusion 13/5.

2.5.2.2 In this connection the Group reviewed the report on traffic forecast which was conducted during Phase I of the GNSS study and decided to transmit the document to the AFI Traffic Forecasting Task Force it established under Agenda Item 5, for its consideration as a basis for their future work.

2.5.2.3 The APIRG reviewed a proposal made by the European GNSS Secretariat for a joint EGNOS test bed to be established in the AFI Region and which could start operations in 1999. The purpose of the test bed would be to gain experience and test satellite-based augmentation in the AFI environment, namely in the equatorial and tropical regions. It was stressed that participation by the AFI Region in joint test bed activities would by no means prejudice a future decision on the final choice on an augmentation system for the AFI Region. It was also indicated that in order to take advantage of potential financing within the framework of the Lome Convention, a decision by the AFI Region on the participation in the trials of the EGNOS test bed should be made before the end of 1998. A presentation on the EGNOS test bed proposal was given to the meeting by a representative of the European GNSS Secretariat.

2.5.2.4 The APIRG thanked the European GNSS Secretariat for the presentation and expressed its appreciation for the proposal. The meeting recognized that an AFI GNSS satellite-based augmentation system (SBAS) test bed would allow the collection of essential information and data for an informed decision (i.e. deployment of an AFI SBAS) to be taken in due course with better understanding of the issues. Furthermore it would be in line with several recommendations adopted at ICAO meetings concerning the need for trials and demonstrations of CNS/ATM systems.

2.5.2.5 It was also noted that other SBAS providers were free to conduct similar trials and demonstrations within the AFI Region. ASECNA presented a proposal for an AFI SBAS test bed and offered the use of its X.25 communications network, locales, flight checking aircraft and human resources. A number of other members of APIRG came in support for the proposal for the test bed.

2.5.2.6 The need to preserve independence of decision on eventual deployment and the control of the scope and outcome of the experiments by regional structures under APIRG was stressed.

2.5.2.7 After extensive discussion the APIRG, recalling its Decision 10/43, agreed that trials were necessary for the AFI decision process, welcomed the proposal from the European GNSS Secretariat. The APIRG noted that, pending the first meeting of the CNS/ATM Implementation Coordination Sub-group (CNS/ATM/IC/SG) and the need to expedite work on the AFI SBAS test bed, the existing GNSS Study Group would continue its work, taking into account related technical, operational, financial and institutional aspects. The request to include in the GNSS Study Group Egypt, Kenya and Nigeria was left to the CNS/ATM/IC/SG to decide at their first meeting. The following decision and conclusion were adopted:

DECISION 11/5: PROPOSAL FOR AN AFI EGNOS TEST BED

THAT APIRG :

- a) **ACCEPT THE INITIATIVE FOR AN EGNOS TEST BED IN THE AFI REGION TO CONDUCT OPERATIONAL TRIALS AND DEMONSTRATIONS ON SBAS;**
- b) **TASK THE CNS/ATM/IC/SG TO COORDINATE, AS APPROPRIATE, THE TRIALS AND DEMONSTRATIONS WITH THE EUROPEAN GNSS SECRETARIAT, THE AFI STATES TO BE INVOLVED FOR THE GROUND**

ELEMENTS AND TO DOCUMENT THE RESULTS FOR CONSIDRATION BY APIRG/12; AND

- c) **ACCEPT ANY INITIATIVE BY OTHER SBAS PROVIDERS TO CONDUCT SIMILAR TRIALS AND DEMONSTRATIONS WITH THE AFI REGION UNDER SIMILAR ARRANGEMENTS AS IN b).**

CONCLUSION 11/6: FACILITATION OF THE AFI SBAS TRIALS AND DEMONSTRATIONS

THAT:

- a) **AFI STATES CONCERNED WITH THE AFI SBAS TRIALS AND DEMONSTRATIONS, FACILITATE TO THE EXTENT PRACTICABLE THE IMPORTATION, INSTALLATION AND OPERATION OF THE GROUND ELEMENTS;**
- b) **AFRICAN AIRLINES MAKE ARRANGEMENTS TO PARTICIPATE IN THE TRIALS.**

2.5.3 AFI CNS/ATM Implementation Plan

2.5.3.1 The meeting recalled that the AFI/7 RAN Meeting endorsed the AFI CNS/ATM Implementation Plan as contained in Doc 003. The APIRG was presented with the fourth Edition of Doc 003 and noted that the amendments formulated by the technical committees of the AFI/7 RAN were inserted in the new edition of the plan. The Group decided to task the CNS/ATM/IC/SG with the further development of the AFI CNS/ATM Implementation Plan.

2.5.3.2 The meeting was informed that the revised ICAO Global CNS/ATM Plan is composed of two volumes (Global Plan for CNS/ATM systems, and Companion Document). The Group noted that the new edition of Doc 003 had been restructured to adopt the presentation of the Global Plan.

2.5.3.3 The Meeting noted that ICAO, in furtherance of AFI/7 Recommendation 13/3 inviting States to include the evolutionary implementation of the AFI CNS/ATM Plan in their national plans, was organizing during the first half of 1998 several workshops on the development of national CNS/ATM plans at the regional offices. The APIRG urged all States to actively participate in the workshops.

2.5.3.4 The APIRG noted with concern that the first meetings planned for the Implementation Coordination Groups (ICGs) for areas of routing 4 (Europe - Southern Africa), 5 (Gulf of Guinea) and 9 (Trans Sahel) which had been called by the regional offices had to be postponed because of insufficient participation by the concerned States. The meeting appealed to all States to actively participate in those ICG meetings and therefore adopted the following Conclusion:

CONCLUSION 11/7: PARTICIPATION OF STATES AT ICG MEETINGS

THAT:

- a) **ICGs MEETINGS BE CONVENED AS A MATTER OF PRIORITY IN ORDER TO FOSTER IMPLEMENTATION OF THE AFI CNS/ATM PLAN; AND**
- b) **STATES TAKE THE NECESSARY STEPS TO ACTIVELY AND REGULARLY PARTICIPATE IN ICGs MEETINGS OF THE AREAS OF ROUTING COVERING THEIR TERRITORY.**

2.5.4 Implementation action by States

2.5.4.1 The meeting noted with appreciation information provided by Algeria, Burundi, Congo, Côte d'Ivoire, France, Gabon, Madagascar, Niger, Senegal, South Africa, Spain, Tunisia, United Kingdom, United States of America, as well as ASECNA, IATA and IFALPA, on the follow-up action they had taken in regard to the report of AFI/7 RAN Meeting or on latest developments in the air navigation field affecting the AFI Region. The ICAO AFI Regional Offices will continue to monitor the follow-up of all implementation matters, assist States as far as possible and report the results to APIRG. In this regard assistance given by the Kingdom of The Netherlands to the AFI provider States was noted with appreciation.

2.5.4.2 The meeting noted the request by Cameroon, Côte d'Ivoire, Gabon, Madagascar and Senegal concerning the planning for the introduction of ATIS at the main aerodromes. The meeting agreed that this matter will form part of the planned amendment to the AFI Air Navigation Plan Doc 7474 to be developed by the AOP/SG.

2.5.5 A cooperative approach to airspace management

2.5.5.1 The meeting noted the existing airspace structure in the AFI Region and the services being provided. It also took note of a proposal by ASECNA for the phased integrated harmonization of the upper airspace management leading towards a global airspace management by the year 2010 pursuant to AFI/7 RAN Meeting Recommendation 5/1.

2.5.5.2 The meeting was informed of the plan by ASECNA for the coordination and harmonization of its upper airspace by the creation of three UIRs. The meeting was also apprised of developments in other parts of AFI Region concerning action being taken towards a cooperative approach to airspace management, namely within the SADC (14 States) member States and the three East African Cooperation States of Kenya, Tanzania and Uganda

2.5.6 ATM automation: the ASECNA ATM automation project

2.5.6.1 The meeting noted the actions currently being undertaken by ASECNA aimed at implementing a coherent, reliable and efficient automated ATM system within ASECNA control centres. It was pointed out that this new automation project will undoubtedly enhance the safety of air navigation within the airspace managed by ASECNA by assisting air traffic controllers in the discharge of their duties.

Agenda Item 3: Shortcomings and deficiencies in the air navigation field in the AFI Region**3.1 Identification, assessment and reporting**

3.1.1 When considering this agenda item the Group noted the concerns of the Air Navigation Commission and Council related to safety impact of shortcomings and deficiencies. The meeting also noted the appreciation by the Air Navigation Commission and Council of the efforts made by the APIRG as well as those of the States to identify, assess, and report air navigation shortcomings and deficiencies. The meeting recalled the improved methodology proposed by the AFI/7 RAN meeting and which is intended to achieve a consistent approach in all ICAO regions for better results. The meeting noted further that application of the new methodology was being extended to other planning and implementation regional groups to ensure uniformity in all ICAO Regions.

3.1.2 The meeting reviewed and updated the list of shortcomings provided by the Secretariat and IATA and decided that all the shortcomings and deficiencies would be compiled in a separate document to be used by the Secretariat for follow-up action, updating and for regular submission to APIRG at future meetings.

3.1.2.1 The APIRG was particularly concerned about the major shortcomings affecting not only the States concerned but the entire sub-region thus compromising safety. Under this category, the meeting noted:

- a) the non-implementation of the AFTN main circuits Brazzaville/Nairobi, Brazzaville/Johannesburg, Johannesburg/Nairobi;
- b) the lack of reliability of the main circuit Algiers/Niamey;
- c) the non-implementation of a very large number of ATS/DS circuits;
- d) the lack of VHF coverage; and
- e) human factors such as insufficient training, language proficiency, inadequacy of the available tools to enable efficient performance.

3.1.2.2 Notwithstanding the corrective action being taken by some States on the above shortcomings, the meeting adopted the following conclusion:

CONCLUSION 11/8: URGENT IMPLEMENTATION OR IMPROVEMENT OF COM FACILITIES

THAT STATES CONCERNED, AS A MATTER OF URGENCY:

- a) **IMPLEMENT THE AFTN MAIN CIRCUITS BRAZZAVILLE/NAIROBI, BRAZZAVILLE/JOHANNESBURG AND JOHANNESBURG/NAIROBI;**
- b) **IMPROVE THE MAIN CIRCUIT ALGIERS/NIAMEY; AND**

- c) **IMPLEMENT THE ATS/DS CIRCUITS SHOWN AT APPENDIX D TO THE REPORT; AND**
- d) **EXTEND VHF COVERAGE AS INDICATED AT APPENDIX D.**

3.1.3 As ICAO intended to set up a data base of shortcomings and deficiencies in order to facilitate their tracking and resolution, the meeting agreed that the critical deficiencies should be identified separately and brought to the attention of ANC and Council for immediate actions. These are reflected as Appendices to this report as follows:

AOP	Appendix C
CNS	Appendix D
ATS/SAR/AIS/MAP	Appendix E
MET	Appendix F

3.1.4 Having noted that critical deficiencies and shortcomings affecting safety, regularity and efficiency of international civil aviation still exist in the AFI Region, the meeting agreed that there was a need for giving the highest priority to this issue. With this concern in mind, the meeting formulated the following conclusion

CONCLUSION 11/9: SHORTCOMINGS AND DEFICIENCIES IN THE AIR NAVIGATION FIELD IN THE AFI REGION

THAT CONSIDERING THE NEGATIVE IMPACT OF NON IMPLEMENTATION OF THE AIR NAVIGATION PLAN REQUIREMENTS AND THE PERSISTENCE OF SERIOUS CASES OF SHORTCOMINGS AND DEFICIENCIES IN SEVERAL PARTS OF THE AFI REGION :

- a) **STATES CONCERNED SHOULD WITH EXTREME URGENCY, TAKE CONCRETE MEASURES TO ELIMINATE ALL SHORTCOMINGS AND DEFICIENCIES IMPAIRING THE SAFETY OF AIRCRAFT OPERATIONS IN THE REGION;**
- b) **THE MATTER BE REGULARLY FOLLOWED UP BY THE REGIONAL OFFICES; AND**
- c) **RESULTS BE BROUGHT TO THE ATTENTION OF APIRG.**

3.2 Reporting and analyses of air traffic incidents

3.2.1 The meeting recalled that the reporting and analysis of air traffic incidents is essential for the betterment of the provision of services, and that several AFI Regional Air Navigation Meetings and the APIRG itself have adopted successive recommendations urging that ATS incidents be reported in time and that States put in place machinery for their investigation with a view to identifying corrective actions necessary to minimise recurrence.

3.2.2 The meeting took note of the statistics received from the first meeting of the IATA ATS Incident Analysis Working Group at which AFRAA, ASECNA, ICAO, IFALPA and IFATCA participated,

which indicated a decline by over 20% of reported incidents between 1996 and 1997 and that this had occurred in a situation of increased reporting awareness. Of the 55 reported incidents, 6 were considered a serious threat to safety. The meeting recognized the positive effect of the IATA IFBP and the ACAS in the trend observed.

Agenda Item 4: Latest Development in the Air Navigation field

4.1 Results of the ITU WRC-97 Conference

4.1.1 The Meeting reviewed a report on the results of the third International Telecommunication Union (ITU) World Radiocommunication Conference (WRC-97) which was held in Geneva, Switzerland from 27 October to 21 November 1997. The WRC-97 agenda included various items relating to the use of radio by international civil aviation. The most important specific items addressed at the conference were:

- a) the introduction of a generic allocation in the bands 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz to replace the exclusive allocation to the aeronautical mobile satellite (route) (AMS(R)S) service;
- b) the introduction of an allocation to the mobile satellite service (MSS) in the Earth-to-space direction in the band 1 559 - 1 567 MHz, a band which is used for global navigation satellite system (GNSS) elements such as the global positioning system (GPS);
- c) difficulties with the operation of the fixed service in the band 1 559 - 1 610 MHz (GNSS band).

4.1.2 The APIRG noted that the WRC-97 adopted the generic allocation of the band 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz to the mobile satellite service in lieu of the exclusive allocations to the aeronautical, land and maritime mobile satellite services. The meeting further noted that, in so doing, the WRC-97 agreed to some footnotes providing additional protection of the aeronautical and maritime requirements and usage. However, both the aeronautical and maritime communities remained unconvinced that these provisions will provide the protection required for distress and safety communications.

4.1.3 The APIRG noted with great concern, that with regard to the band 1 559 - 1610 MHz used for GPS and the global-orbiting navigation satellite system (GLONASS), the conference adopted a resolution (Resolution 220 (COM 5-31)) calling for the ITU-R to undertake studies on the feasibility of introducing an allocation to the MSS in the band 1 559 - 1 567 MHz and to complete it prior to WRC-99. The meeting was apprised with the draft agenda of the WRC-99 and noted that important issues concerning civil aviation would be discussed there and agreed that intensive work needed to be done within AFI States to defend ICAO positions on spectrum issues. The Group concluded as follows:

CONCLUSION 11/10: PREPARATORY WORK FOR THE ITU WRC-99

THAT:

- a) **STATES' CIVIL AVIATION ADMINISTRATIONS ACTIVELY PARTICIPATE IN THEIR STATES' PREPARATORY MEETINGS FOR ITU WRCs USING, AS NECESSARY, THE ICAO HANDBOOK ON RADIO FREQUENCY SPECTRUM**

REQUIREMENTS FOR CIVIL AVIATION INCLUDING STATEMENT OF APPROVED ICAO POLICIES; AND

- b) THAT STATES INCLUDE AERONAUTICAL EXPERTS IN THEIR NATIONAL DELEGATION TO THE ITU WRCs.**

DECISION 11/11: FOLLOW UP OF ITU WRC-97

THAT THE CNS/SG:

- A) SURVEY FIXED SERVICE ASSIGNMENTS IN THE BAND 1 559 - 1 610 MHZ IN THE AFI REGION; AND**
- B) KEEP UNDER REVIEW TOPICS OF INTEREST TO CIVIL AVIATION ON THE AGENDA OF THE ITU WRC-99 SO THAT STATES MAY BE ADVISED ON THOSE ISSUES.**

4.2 Technical and Operational Developments related to CNS/ATM Systems in 1997

4.2.1 The meeting noted the latest technical and operational developments related to CNS/ATM systems within ICAO planning and implementation regional groups (PIRGs), ICAO Panels, ICAO Study Groups and changes to Standards and Recommended Practices (SARPs). The meeting was also informed of the revision and updating of the Global CNS/ATM Plan and the new structure of the air navigation plan publications.

4.2.2 By this exercise, the meeting became aware of activities of PIRGs in other ICAO regions in relation to CNS/ATM implementation and developments in SARPs in order to harmonize its work programme as well as the work programme of its sub-groups and task forces with those of other regions for the purpose of consistency and proper interface with adjacent regions.

4.2.3 The meeting appreciated the information provided under this agenda item and emphasized the need for the APIRG and its subsidiary bodies to be aware in a timely fashion of the technical and operational developments related to the new CNS/ATM systems as well as matters related to all other air navigation fields. The meeting therefore developed the following decision:

DECISION 11/12: INFORMATION TO APIRG AND ICAO SUBSIDIARY BODIES ON DEVELOPMENTS IN THE NEW ICAO CNS/ATM SYSTEMS AND OTHER AIR NAVIGATION FIELDS.

THAT THE SECRETARIAT SHOULD REGULARLY INFORM THE APIRG AND ITS SUBSIDIARY BODIES OF TECHNICAL AND OPERATIONAL DEVELOPMENTS IN THE NEW ICAO CNS/ATM SYSTEMS AND OTHER AIR NAVIGATION FIELDS DEALING WITH THEIR TERMS OF REFERENCE AS WELL AS OF RELEVANT DEVELOPMENTS WITHIN OTHER PLANNING AND IMPLEMENTATION REGIONAL GROUPS.

4.2.4 The meeting also noted that the Council Advisory Group on CNS/ATM Implementation held its second meeting (ALLPIRG/2) in Montreal in February 1998 under the chairmanship of the President of the Council. Its report contained a number of Conclusions related to the work of Regional Planning and Implementation Groups (PIRGs) in general and to the APIRG in particular. It was highlighted that the management of a global ATM system will be largely based on the concept of homogenous ATM areas and major international traffic flows. It was noted that APIRG were the first to introduce the concept of Areas of Routing (AR) and that this practice should continue and be developed further.

4.2.5 On the issue of role and scope of PIRGs, it was suggested to approach with an open mind suggestions by ALLPIRG regarding some changes to the working methods, including greater emphasis on economic and institutional matters, development of business cases and closer contacts with financial institutions.

4.2.6 Finally, it was accepted that a number of conclusions call for action not only by ICAO but also by other CNS/ATM partners and that an early follow-up action will be required through co-ordinated efforts of ICAO and all the PIRGs.

4.2.7 With regard to the Agenda Item on the Preparation for the World-wide CNS/ATM Systems Implementation Conference to be held in Rio de Janeiro from 11 to 15 May 1998 (Rio Conference), a separate presentation was made outlining the origins, agenda and major initiatives put forward by ICAO to the conference.

4.2.8 Exchange of views had taken place on the modalities of financing, options for institutional arrangements, cost-recovery and utilization of user charges. In connection with this, it was noted that some initial contacts had been made between ICAO and IATA with a view of expanding application of the project financing method; commercial and development banks have been approached and will be involved in different sessions of the Rio Conference; multinational provision of services is recognized as one of the more rational ways, especially in the CNS/ATM environment; autonomous authorities have been considered as a good way for enhancing the efficiency, credibility and bankability of the air navigation services providers; strict adherence by States to the ICAO policies concerning the utilization of the user charges had been considered to be of paramount importance.

4.2.8 It was generally agreed that every effort is to be made to secure participation of high-level officials from the national civil aviation administrations as well as from the departments dealing with finances at the Rio Conference. It was also considered important that the States and Regional Groups be equipped with the tools allowing for cost-benefit analysis at different levels and development of business cases.

4.3 Implementation of Minimum Safe Altitude Warning (MSAW) system

4.3.1 Under this item, the meeting noted that the ICAO Air Navigation Commission (ANC), when reviewing the report of an industry task force related to controlled flight into terrain (CFIT), decided to urge States to study the the MSAW in accordance with ICAO provisions. The ANC further requested that planning and implementation regional groups, such as APIRG encourage the use of MSAW. In this connection, the meeting noted the description of MSAW system and its potential for the enhancement of flight safety as brought to the attention of States in ICAO State letter AN 11/1.1.19-93/61 dated 16 June

1993. It was pointed out that the system has the capacity to warn the air traffic controller of an aircraft which is either too close, or is projected to be too close, to terrain.

4.3.2 The MSAW system has also been recognized as an important element in the drive for the reduction of CFIT accidents. It was however noted that many ATC radars have been provided with the basic MSAW capability but the system is not fully being exploited. The meeting emphasized the need to implement the MSAW system in the AFI Region at airports where the automated terminal radar have been installed or planned to be installed. Based on the foregoing, the meeting formulated the following conclusion:

CONCLUSION 11/13: - IMPLEMENTATION OF MINIMUM SAFE ALTITUDE WARNING (MSAW) SYSTEM

THAT IN VIEW OF THE RECOGNIZED POTENTIAL FOR THE ENHANCEMENT OF FLIGHT SAFETY OF THE MSAW SYSTEM:

- a) **STATES HAVING AUTOMATIC SAFETY ALERT CAPABILITY SHOULD, AS SOON AS POSSIBLE, UTILIZE THE FEATURES OF THE SYSTEM;**
- b) **STATES INTENDING TO INSTALL AUTOMATED RADAR TERMINAL SYSTEM ENSURE THAT THE SYSTEM IS FULLY EXPLOITED AND CAPABLE OF ENSURING THE MSAW SERVICE;**
- c) **APIRG MONITOR THE PROGRESS OF IMPLEMENTATION OF MSAW IN THE AFI REGION.**

4.4 Year 2000 Computer date problem.

4.4.1. The meeting noted that year 2000 computer date problem has gained widespread attention within the aviation industry. The problem stems from the fact that many computer systems world-wide may malfunction or produce incorrect information because of a date change anomaly which has to do with the way computer systems store and manipulate data. A significant number of computer-based mission critical aviation systems may be adversely affected by the year 2000 date change including mainframes, client/servers, networks, telecommunication, navigation, surveillance, en route, terminal, oceanic and air traffic flow management automation systems. In this regard, ICAO notified States and selected International Organizations on the impending problem by State letter AN 13/46-97/92 dated 12 December 1997.

4.4.2 In February 1998, ICAO also referred the matter to its CNS/ATM Advisory Group (ALLPIRG) for consultation. As a result, it was agreed that the matter be included in the work programmes of planning and implementation regional groups (PIRGs) and that work on the subject be commenced urgently in order to provide assistance to States.

4.4.3. Having noted the magnitude and urgency of the problem, the meeting wondered why ICAO had not taken action on this matter earlier and at any rate requested ICAO to collate, as a matter of high priority, as much information as possible on the subject and disseminate it to States. The meeting also noted that many States are not sensitized on the problem. Accordingly, the meeting adopted the following conclusion:

CONCLUSION 11/14: YEAR 2000 COMPUTER DATE PROBLEM

THAT:

- a) **THE ICAO AFI REGIONAL OFFICES SHOULD AGAIN FORWARD ICAO STATE LETTER AN 13/46-97/92 DATED 12 DECEMBER 1997 TO ALL AFI STATES, TOGETHER WITH ANY ADDITIONAL INFORMATION WHICH HAS**

BECOME AVAILABLE, AND OBTAIN REPLIES AND COMMENTS FROM AFI STATES. THE REPLIES AND COMMENTS SHOULD THEN BE REFERRED TO THE APIRG OR ONE OF ITS APPROPRIATE SUB-GROUPS AS A MATTER OF PRIORITY FOR FURTHER ACTION; AND

- b) **STATES CONTACT THEIR SOFTWARE SUPPLIERS TO ASCERTAIN YEAR 2000 COMPUTER DATE COMPATIBILITY OF THEIR SYSTEMS.**

4.5 Implementation of WGS-84 World Geodetic System (WGS -84)

4.5.1 Under this agenda item the meeting was informed of the activities/experience of ASECNA concerning the implementation of WGS -84 within ASECNA- member States. It was pointed out that WGS-84 co-ordinates will be implemented within ASECNA- member States by the first quarter of 1999. The Group was informed that States in the AFI Region encountering problems with the implementation process could get in touch with ASECNA in order to take advantage of their experience in the field.

4.5.2 The meeting was informed that the Kingdom of the Netherlands is already giving assistance to States in the Region with the implementation of WGS-84. States requiring assistance may wish to get in touch with Kingdom of the Netherlands. It was also pointed out that an ICAO Special Implementation Project (SIP) on AIS is in progress in order to assist States within the AFI Region in the implementation of the WGS-84 system in the spirit of AFI/7 Rec 12/29.

4.5.3 The meeting noted that a number of States have implemented the WGS-84 system and some other States are in the process of implementing the system in the spirit of AFI/7 Rec 12/28.

Agenda Item 5: Develop the Group’s future work programme and determine the Terms of Reference and work programme of required APIRG subsidiary bodies.

5.1 Review of the APIRG structure

5.1.1 The Group reviewed its structure in accordance with its Terms of Reference (TOR) established by the Council and contained in Part 1 paragraph 6.1 of the APIRG Procedural Handbook. The Group then agreed to dissolve the Working Group on GNSS and assigned its responsibilities to the GNSS Task Force which will operate under the CNS/ATM/IC/SG. In the meantime, the GNSS Study Group will continue its tasks as initially assigned until the CNS/ATM/IC/SG develops the new terms of reference and work programme. The Group also established the following sub-groups and task forces whose terms of references and work programmes are at the Appendices as indicated. The resulting organizational structure of APIRG is at **Appendix G**.

A. Sub-Groups

1. Aerodrome Operational Planning Sub-Group (AOP) - **Appendix H**.
2. Air Traffic Services/Aeronautical Information Services/Search and Rescue Sub-Group (ATS/AIS/SAR/SG) - **Appendix I**.
3. Communications Sub-Group (COM/SG) - **Appendix J**.
4. Communication/Navigation, Surveillance/Air Traffic Management/Implementation Coordination Sub-Group (CNS/ATM/IC/SG) - **Appendix K** and its GNSS Task Force (Terms of reference and work programme to be developed by the CNS/ATM/IC Sub-group)
5. Meteorology Sub-Group - **Appendix L**.

B. Task Forces directly under APIRG

1. Facilities and Services Implementation Document/Task Force (FASID/TF) - **Appendix M**.
2. Traffic Forecasting Task Force (TF/TF) - **Appendix N**.

5.2 Membership to APIRG and its subsidiary bodies

5.2.1 The Group was informed that applications had been received by the Secretary of APIRG from Angola, Guinea and France prior to the meeting to be members of the Group. In the interest of a balanced representation of the region as a whole, the Group agreed to recommend these States for ICAO Council’s consideration for membership to the Group and adopted the following conclusion.

CONCLUSION 11/15: MEMBERSHIP OF THE APIRG

THAT THE ICAO COUNCIL APPROVE THE APPLICATIONS BY ANGOLA, FRANCE, AND GUINEA TO BE MEMBERS OF APIRG.

5.2.2 The Group agreed to a number of requests from States for membership to its subsidiary bodies and formulated the following decision:

DECISION 11/16: RESTRUCTURING AND MEMBERSHIP TO APIRG SUBSIDIARY BODIES

THAT;

1) **THE FOLLOWING APIRG SUBSIDIARY BODIES BE ESTABLISHED AND/OR CONTINUED AND THE MEMBERSHIP INCREASED TO INCLUDE EXPERTS FROM THE FOLLOWING STATES:**

- | | | |
|----|-----------------------|----------------------------------|
| a) | AOP | NIGERIA |
| b) | ATS/AIS/SAR/SG | GABON AND SOUTH AFRICA |
| c) | CNS/SG | SOUTH AFRICA |
| d) | CNS/ATM/IC/SG | CAMEROON |
| e) | MET/SG | GHANA AND UNITED KINGDOM |
| f) | GNSS/TF | EGYPT, KENYA, AND NIGERIA |

2) **THE FOLLOWING TASK FORCES BE ESTABLISHED WITH THE CORRESPONDING MEMBERSHIP:**

- | | | |
|----|-------------------------------|--|
| a) | FASID/TF | EGYPT, KENYA, NIGERIA, SENEGAL, SOUTH AFRICA, SPAIN, ASECNA, IFALPA, IATA |
| b) | TRAFFIC FORECASTING/TF | MALAWI, NIGERIA, SENEGAL, SPAIN, SOUTH AFRICA, TANZANIA, TOGO, ZAMBIA, AFRAA AND IATA |

5.2.3 The meeting took note of the tentative meeting schedule of the APIRG and its subsidiary bodies as at **Appendix P**, it being understood that firm dates will be advised to respective members in a timely manner.

5.2.4 Tunisia offered to host the APIRG/12 Meeting in Tunisia. The APIRG welcomed the invitation. The detailed arrangements would be negotiated between ICAO and Tunisia.

Agenda Item 6: Relation with other Groups adjacent Regions and world-wide activities**6.1 Improvements to air navigation systems in the South Atlantic**

6.1.2 Under this agenda item the meeting was apprised on action which had been taken pursuant to AFI/7 RAN Meeting Recommendation 5/11 concerning improvements to the air navigation system in the South Atlantic. The meeting noted that an informal SAT co-ordination meeting (SAT/6) was accordingly held in Recife, Brazil from 24 - 28 November 1997.

6.2 Mindful of the views expressed by the AFI/7 RAN Meeting concerning implementation co-ordination group (ICG) activities for routing area AR-1 (EUR-SAM) to be delegated to the SAT co-ordination meetings, the implementation of CNS/ATM systems in the area as per the AFI CNS/ATM implementation plan (Doc. 003) was also addressed. Furthermore, the meeting also considered improvements to air navigation services within routing area AR-2 (Atlantic Ocean AFI - NAT - SAM interface).

6.2 It was pointed out that although significant improvements to air navigation services in the areas concerned were achieved, the meeting however, had to set up a Task Force to explore the possibility of further enhancements to ATM services in the area, and in particular, to consider the most appropriate RNP type(s) to be applicable, to review the ATS route network and to develop guidance material for the implementation of 1000 ft vertical separation minimum (RVSM) between FL290 and FL410 inclusive. Based on the foregoing the meeting formulated the following decision:

**CONCLUSION 11/17: IMPLEMENTATION CO-ORDINATION GROUP (ICG)
ACTIVITIES WITHIN ROUTING AREAS AR-1 (EUR-SAM)
AND AR-2 (ATLANTIC OCEAN AFI -NAT - SAM
INTERFACE)**

**THAT, TAKING INTO ACCOUNT THE SIGNIFICANT ENHANCEMENTS TO AIR
NAVIGATION SERVICES WHICH HAVE BEEN ACHIEVED THROUGH INFORMAL
SAT CO-ORDINATION MEETINGS, THE ACTIVITIES OF ICGs FOR ROUTING AREAS
AR-1 AND AR-2 BE DELEGATED TO THE INFORMAL SAT CO-ORDINATION GROUP.**

Agenda Item 7: Any other business**7.1 The world area forecast system (WAFS) in the AFI Region**

7.1.1 The meeting considered the draft conclusions of the second meeting of the SADIS Operations Group (SADISOPSG/2) concerning the inclusion of low-level SIGWX charts on the SADIS, guidelines for the selection of two way VSATs and on the interpretation of the meaning of SADIS acronym. The APIRG endorsed these draft conclusions. It, however, agreed that the question of low-level charts should further be considered at the time when transition plan for the transfer of RAFCs Dakar, Las Palmas and Nairobi responsibilities to WAFC, London are being developed. With regard to the guidelines for the selection of two-way VSATs, the meeting agreed that these would be taken into account if any reviews for location of two-way VSATs in the AFI Region are found necessary since the designation of the locations have already been agreed on. Concerning the interpretation of the SADIS acronym, the meeting agreed that SADIS should be interpreted to mean "Satellite distribution system for information relating to air navigation" since it is in alignment with related definition in Annex 10. The meeting then endorsed the following conclusions of SADISOPSG/2:

CONCLUSION 11/18: LOW-LEVEL SIGWX CHARTS ON SADIS

THAT, UNTIL SUCH TIME AS THE SIGWX CHARTS CAN BE TRANSMITTED ON SADIS IN NUMERICAL CODE AND IT HAS BEEN AGREED THAT THE TRANSMISSION OF SUCH CHARTS IN T4 FACSIMILE FORMAT SHOULD CEASE, LOW-LEVEL SIGWX CHARTS SHOULD NOT BE CONSIDERED FOR INCLUSION ON THE SADIS BROADCAST.

CONCLUSION 11/19: GUIDELINES FOR THE SELECTION OF LOCATIONS FOR TWO-WAY VSATS

THAT THE GUIDELINES ON THE SELECTION OF LOCATIONS FOR TWO-WAY VSATS GIVEN IN APPENDIX G TO THE REPORT OF THE SADISOPSG/2 BE USED AS ASSISTANCE IN PLANNING FOR OPMET EXCHANGES IN THE REGIONS CONCERNED.

Note: Guidelines for the selection of location for two-way VSATs are given at **Appendix Q** to this report

7.1.2 The meeting confirmed the requirements for World Area Forecast System products for flights between South Africa and Australia/New Zealand, South America and Antarctica and requested that new areas of coverage be implemented. The APIRG then formulated the following conclusion:

CONCLUSION 11/20: WAFS AREA OF COVERAGE FOR FLIGHTS BETWEEN SOUTH AFRICA, AUSTRALIA/NEW ZEALAND, ANTARCTICA AND SOUTH AMERICA

THAT ICAO MAKE ARRANGEMENTS TO INCLUDE UNDER THE WAFS NEW AREAS OF COVERAGE (CHARTS "J" AND "K" AS GIVEN IN APPENDIX R) TO MEET

REQUIREMENTS OF FLIGHTS BETWEEN SOUTH AFRICA, SOUTH AMERICA, AUSTRALIA/NEW ZEALAND AND ANTARCTICA.

7.1.3 The meeting noted the progress made in the installation of the SADIS VSATs in the AFI Region.

7.1.4 The APIRG meeting was informed on progress made in the implementation of the WAFS and progress towards the final phase. The meeting was also informed on the development of significant weather forecast (SIGWX) charts in BUFR code and on tests which are currently underway. It is expected that high and medium SIGWX charts in BUFR code will be available by April 1999.

7.1.5 The meeting also recalled AFI/7 Recommendation 7/10 on the need to develop a transition plan for the transfer of responsibilities of Dakar, Las Palmas and Nairobi Regional Area Forecast Centres (RAFCs) to WAFS London. The Group agreed to task the MET Sub-group to develop a transition plan and formulated the following decision:

DECISION 11/21: PREPARATION OF A TRANSITION PLAN FOR THE TRANSFER OF RESPONSIBILITIES OF DAKAR, LAS PALMAS AND NAIROBI RAFCs TO WAFS, LONDON.

THAT THE MET SUB-GROUP DEVELOP A TRANSITION PLAN FOR THE TRANSFER OF RESPONSIBILITIES OF DAKAR, LAS PALMAS AND NAIROBI RAFCs TO WAFS LONDON.

7.2 **Exchange of OPMET Information in the AFI Region**

7.2.1 The meeting noted the follow-up action taken by the Secretariat on Conclusion 8/5 of AFI/7 RAN Meeting concerning the updating of the AMBEX Handbook. The meeting also noted the changes introduced in the AMBEX Scheme to reflect the exchange requirements stemming from the new rationalized AFTN and the introduction of air-reports (AIREPs). The meeting then formulated the following conclusion:

CONCLUSION 11/22: EXCHANGE REQUIREMENTS FOR AIR-REPORTS (AIREPs) - IN THE AMBEX HANDBOOK

THAT STATES WHICH HAVE NOT YET IMPLEMENTED THE EXCHANGE REQUIREMENTS FOR AIR-REPORTS AS CONTAINED IN THE AMBEX HANDBOOK TO DO SO AS SOON AS POSSIBLE.

7.2.2 The meeting noted the difficulty in the exchange of OPMET data at Accra MET Centre due to telecommunication problems between Accra, Niamey and EUR Region. It was emphasized that difficulties of exchange exist not only with regard to OPMET data but also with AIS and ATS and the same problem affects States of the Gulf of Guinea. The meeting was informed by ASECNA that an investigation was being carried out concerning these difficulties of exchange of aeronautical messages. The group endorsed the initiative of ASECNA for the conduct of such investigation and wished that its results be brought to the attention of all States and international organizations concerned.

7.3 **Submission of working and information papers for meetings of APIRG and its subsidiary bodies**

7.3.1 The meeting whilst discussing the question of submission of working and information papers agreed that authors of these papers should ensure that they reach the Secretary(ies) of the Group (Sub-groups) at least forty-five (45) days before the meeting date as is stipulated in the APIRG procedural handbook. Those who fail to adhere to this deadline (which is repeated in the State letter announcing the dates of the meeting) should provide the working papers in a form ready for reproduction in both English and French languages. Information papers will be reproduced and distributed in the language they were prepared. The Group then formulated the following decision:

DECISION 11/23: SUBMISSION OF WORKING AND INFORMATION PAPERS FOR MEETINGS OF THE APIRG AND ITS SUBSIDIARY BODIES TO THE SECRETARY(IES)

THAT MEMBERS/OBSERVERS SUBMITTING WORKING/INFORMATION PAPERS FOR MEETINGS OF APIRG AND ITS SUBSIDIARY BODIES TO THE SECRETARY(IES) SHOULD DO SO AT LEAST FORTY-FIVE (45) DAYS BEFORE THE MEETING FAILING WHICH THEY CAN SUBMIT WORKING PAPERS IN BOTH ENGLISH AND FRENCH LANGUAGES AND IN A FORMAT READY FOR REPRODUCTION TO THE SECRETARIAT DURING THE MEETING. INFORMATION PAPERS WILL BE REPRODUCED AND DISTRIBUTED IN THE LANGUAGE THEY ARE SUBMITTED.

TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE AERODROME OPERATIONAL PLANNING SUB-GROUP (AOP/SG)

1. Terms of reference

a) In the field of aerodrome operational planning:

To keep under review the adequacy of the requirements contained in the ICAO Regional Air Navigation Plan taking into account changes to aircraft operations, new operational requirements, or technological developments and propose amendments as required.

b) In the field of aerodrome services:

To identify critical shortcomings in the provisions of aerodrome installations, equipment and services with priority to:

- i) aerodrome power supply;
- ii) visual aids;
- iii) rescue and fire fighting;
- iv) aerodrome fencing;
- v) bird hazards; and
- vi) aerodrome emergency planning.

2. Work Programme:

No.	Task description	Priority	Target Date
1	Review at each AOP/SG meeting the content of the Table AOP 1 and where necessary, after coordination with users and operators, introduce the respective changes through the established procedures. (AFI/7 RAN Meeting Conc. 3/2.)	A	Continuing
2	Develop a data base on shortcomings and deficiencies in th AOP field and at each AOP/SG meeting, review and update the data base and identify requirements for possible technical cooperation. (AFI/7 RAN Meeting Concs. 14/1 and 14/2 and Rec. 14/3)	A	Continuing
3	Review the severity of the bird hazard and the status of implementation of appropriate bird hazard reduction measures in the Region .(AFI/7 RAN Meeting Conc. 4/7)	A	Continuing
4	Review States efforts to allocate the necessary resources to ensure the establishment of preventive maintenance at their aerodromes in order to provide adequate maintenance of facilities , installations and services. (AFI/7 RAN Meeting Conc. 4/10)	A	APIRG/12

No.	Task description	Priority	Target Date
5	Review the need and monitor the measurement and reporting by States of the surface condition and unevenness on movement areas at aerodromes in the AFI Region. (AFI/7 RAN Meeting Rec. 4/4)	B	APIRG/13
6	Review the provision of rescue and fire fighting services and emergency planning at international aerodromes in the AFI Region and monitor the switch over to the use of environmentally friendly materials for fire fighting. (AFI/7 RAN Meeting Conc. 4/6)	A	APIRG/12
7	Review and monitor the development and implementation of guidelines and procedures for surface movement guidance and control systems at complex airports and during low visibility conditions. (Input to CNS/ATM planning process)	C	APIRG/13
8	Review, assess and provide guidance on the impact of the operations of the new larger aeroplanes at aerodromes in the AFI Region.	B	APIRG/12
9	Review and monitor the implementation of new approach and landing systems in order to ensure smooth transition and optimization of the performance of the systems implemented. (Input to CNS/ATM planning process)	A	APIRG/12
10	Monitor the progress in the implementation of the common geographical reference system (WGS-84) and the publication of coordinates of significant points with required degree of accuracy in the AFI Region. (AFI/7 RAN Meeting Recs. 12/28 and 12/29)	A	APIRG/12
11	Review and monitor the status of implementation of visual aids in the AFI Region and of provision of resources for ensuring preventive maintenance, human factors and progress in technology development in order to achieve increased safety and capacity. (AFI/7 RAN Meeting Conc. 4/1, Rec. 14/7)	A	APIRG/13
12*	Review and monitor the traffic growth in the AFI Region in order to develop appropriate guidance for the development of a planning criteria.	B	APIRG/13

Priority:

- A High priority tasks, on which work should be speeded up;
- B Medium priority tasks, on which work should be undertaken as soon as possible, but without detriment to priority A tasks;
- C Lesser priority tasks, on which work should be undertaken as time and resources permit, but without detriment to priority A and B tasks.
- * This task will be a subject of coordination with the Traffic Forecasting Task Force.

3. Composition:

Algeria, Burkina Faso, Côte d'Ivoire, Egypt, Gambia, Kenya, Malawi, Morocco, Nigeria, Senegal, SouthAfrica, Togo, Tunisia, Zambia, ACI, ASECNA, IATA.

TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE ATM/AIS/SAR SUB/GROUP

1. Terms of Reference

- a) To identify State by State, those specific shortcomings and problems that constitute major obstacles to the provision of efficient Air Traffic Management, Aeronautical Information Services and Search and Rescue Services and recommend specific measures to eliminate them.
- b) To keep under review, the adequacy of requirements in the Air Traffic Management, Aeronautical Information Services and Search and Rescue fields, taking into account, *inter alia* changes to aircraft operations and new operational requirements or technological developments.

2. Work Programme

No.	Task Description	Priority	Target Date
1	Analyse the operational implications of the introduction of ICAO CNS/ATM Systems in the fields of ATS, SAR and AIS/MAP and propose any required actions with a view to ensuring their smooth integration in the operational environment.	A	APIRG/12
2	Taking into account Human Factors, study problems and make specific recommendations related to ATM and AIS personnel, with a view to ensure the best services to users. (AFI/7 Rec 14/7)	B	APIRG/12
3	Study the requirements for civil/military coordination procedures including the promotion of the implementation of the concepts of joint use of airspace, free flight, flexible tracks etc. and in addition consider reducing and/or eliminating prohibited, restricted and danger areas. (AFI/7 Rec 5/3)	A	APIRG/12
*4	Determine the framework within which air traffic data collection statistical analysis and forecasting should be carried out.	C	APIRG/12
5	Review the requirements and monitor the programme of implementation of area control service. (AFI/7 Rec 5/21)	A	APIRG/12
6	Review the existing ATM route network (including RNAV routes) on a systematic basis with a view to achieving an optimum flow of air traffic while keeping flight distances of individual flights to a minimum. (AFI/7 Rec 5/8)	A	APIRG/12
7	Consider problems and make specific recommendations relating to ATM interface routes with other regions.	A	Continuing
8	Monitor achievements and progress in the implementation of RNAV/RNP, RSP and RTSP in the AFI Region and provide recommendations in the light of acquired experience	A	APIRG/12

No.	Task Description	Priority	Target Date
9	Monitor developments in SSR planning criteria and review the allocation of SSR codes in the region to ensure there is no duplication with adjacent regions. (AFI/7 Rec 5/20)	A	Continuing
10	Review the ATM requirements for navigation. (AFI/7 Rec 10/4)	A	APIRG/12
11	Review of ATM requirements for communication including extension of VHF coverage. (AFI/7 Rec 5/13, Rec 5/12 and LIM AFI Rec 10/36)	A	APIRG/12
12	Identify the ATM requirements for Surveillance (RADAR, ADS, Voice etc.) (AFI/7 Rec 11/1)	A	APIRG/12
13	Carry out studies and develop recommendations aimed at facilitating in an effective way the existing Contingency plans ,reduce air traffic incidents, implementation of ACAS, ATIS, pressure-altitude reporting transponders, Digital Flight Information Service (D-FIS) RVSM, MSAW/CFIT, COSPAS/SARSAT and safety oversight programs in the AFI Region.	A	Continuing
14	Develop standard auditing and proficiency maintenance procedures to be used by States to assess the capability/competence of any ATM unit as well as monitor the implementation of uniform proficiency assessment for ATM personnel. (AFI/7 Conc 5/27)	B	Continuing
15	Review the requirements and monitor the implementation of Search and Rescue Services.	B	Continuing
16	Review the requirements and monitor the implementation of AIS and MAP services	B	Continuing
17	Analyse, review and monitor shortcomings and deficiencies in the fields of ATS, AIS/MAP and SAR	A	Continuing

Priority:

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

* This task will be a subject of coordination with the Traffic Forecasting Task Force.

3. Composition:

Algeria, Burkina Faso, Cameroon, Congo, Congo (DRC), Côte d'Ivoire, Egypt, Ethiopia, France, Gabon, Guinea, Kenya, Madagascar, Malawi, Mauritania, Morocco, Niger, Nigeria, Senegal, Spain, South Africa, Sudan, Tanzania, Togo, Tunisia, Zambia, ASECNA, IATA and IFATCA.

TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE CNS SUB-GROUP**1. Terms of reference**

- a) Ensure the continuing and coherent development of the AFI Regional Implementation Plan for COM systems in the light of new developments;
- b) Identify, review, and monitor shortcomings and deficiencies that impede or affect the provision of efficient COM services and recommend appropriate corrective action.

2. Work Programme

Item	Task description	Priority	Target date
1	Analyse, review and monitor shortcomings and deficiencies in the operation of the aeronautical fixed service, the aeronautical mobile service and the radio nav aids.	A	continuing
2	Monitor the performance and implementation of the AFTN and propose corrective measures, as required	A	continuing
3	Follow-up the implementation programmes of the ATS/DS circuits and propose corrective measures, as required	A	APIRG/12
4	Update the AFI AFTN Routing Directory	A	continuing
5	Follow-up the interconnection of VSAT networks in the AFI Region.	A	APIRG/12
6	Survey the extent of fixed service frequency assignments in the GNSS frequency band in the AFI Region and recommend appropriate course of action for civil aviation position at ITU WRC-99.	A	APIRG/12
7	Follow-up the implementation of the Brazil-Dakar and Recife Dakar AFTN and ATS/DS circuits (SAT/6 Concl. 2/1)	B	APIRG/12
8	Review the application of circuit control protocols between AFTN main centres so as to define a uniform system of interface control (AFI/7 Rec. 9/6)	B	APIRG/13
9	Draft, in co-ordination with the ATS/SAR/AIS Sub-group, a plan for the extension of VHF coverage in the AFI region along all ATS routes shown in Table ATS-1 (AFI/7 Rec. 5/12)	B	APIRG/13
10	Draft a plan for the ground element of the aeronautical telecommunication network (ATN) and its interface with the AFTN	B	APIRG/13

Item	Task description	Priority	Target date
11	Review the assignment of HF network designators for aeronautical stations in the South Atlantic area (SAT/6 Concl.3/2)	B	APIRG/13
12	Review Conclusion 2/4 of the SAT/6 meeting for an AFTN circuit Dakar/Johannesburg	A	APIRG/12
13	Review new requirements for AFTN circuits Bujumbura/Goma, Dzaoudzi/St. Denis and Antananarivo/St. Denis (APIRG Decision 10/27)	A	APIRG/12
14	Review the proposal to establish Kano as an AFTN main centre	A	APIRG/12
15	Review and update the VHF frequency utilization plan (AFI/7 Rec. 9/11)	A	APIRG/13

Priority:

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

3. **Composition:**

Algeria, Congo, Côte d'Ivoire, D.R. of Congo, Egypt, Ethiopia, Guinea, Kenya, Malawi, Morocco, Niger, Nigeria, Senegal, South Africa, Spain, Tunisia, ASECNA, IATA.

**TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE
AFI CNS/ATM IMPLEMENTATION CO-ORDINATION SUB-GROUP**

1. Terms of reference

- a) Ensure the continuing and coherent development of the AFI Regional Implementation Plan for CNS/ATM systems in the light of new developments, in harmony with the Global Plan Air Navigation Plan for CNS/ATM Systems (Global Plan) and the plans of adjacent regions;
- b) Prepare cost/benefit analyses for CNS/ATM Implementation options;
- c) Study institutional arrangements for the implementation of CNS/ATM systems in the AFI Region.

2. Work Programme

Item	Task description	Priority	Target date
1	Continue the evolutionary development of the AFI CNS/ATM Implementation Plan (AFI/7 Concl. 13/1)	A	Continuing
2	Develop as a matter of urgency, an AFI surveillance plan, in conformance with the AFI CNS/ATM Plan (AFI/7 Rec. 11/1)	A	APIRG/12
3	Identify requirements for digital flight information service (D-FIS) and develop appropriate implementation worksheets for the concerned areas of routing (AFI/7 Concl. 13/1)	A	APIRG/12
4	Finalize, as a matter of urgency, the strategy for the implementation of GNSS in the AFI Region (AFI/7 Concl. 10/6 and 13/5)	A	APIRG/12
5	Develop comprehensive business cases for competing CNS/ATM Implementation options for the Routing Areas.	A	Continuing
6	Co-ordinate plans developed by States, international organizations, airlines, and industry for the implementation of the regional CNS/ATM systems implementation plan	A	Continuing
7	Update on a regular basis, Chapter 2 and the tables of Volume II of the Global Plan	B	Continuing
8	Advise on the Egyptian initiative for a multi mission satellite based system dedicated to CNS/ATM services.	B	APIRG/13
9	Monitor the research and development, trials and demonstrations within the AFI Region and information from other regions	B	Continuing

Priority:

- A High priority tasks on which work should be speeded up;
 - B Medium priority tasks, on which work should be undertaken as soon as possible, but without detriment to priority A tasks;
 - C Lesser priority tasks, on which work should be undertaken as time and resources permit, but without detriment to priority A and B tasks.
3. **Composition:** Algeria, Botswana, Cameroon, Cape Verde, Côte d'Ivoire, Congo, D.R. of Congo, Egypt, Ethiopia, Gabon, Ghana, Guinea, Kenya, Lesotho, Mauritania, Morocco, Nigeria, Niger, Senegal, Seychelles, South Africa, Spain, Tunisia, Tanzania, Zambia, ASECNA, IATA, IFATCA.

TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE METEOROLOGY SUB/GROUP (MET/SG)

1. Terms of Reference

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

2. Work Programme

No.	Task description	Priority	Target Date
1	Establish and maintain detailed lists, State by State of specific shortcomings of facilities for the provision of atmospheric measurements pertaining to surface wind, pressure, visibility/runway visual range, cloud base, temperature and dew point temperature considered critical for flight safety	A	Continuing
2	Monitor the exchange of OPMET information through the AMBEX scheme in the AFI Region and between the AFI and ASIA/PACIFIC and EUR Regions	A	Continuing
3	Plan for the introduction of efficient inter-regional OPMET exchanges in coordination with the COM Sub-group as required	B	APIRG/13
4	Study the possibility of including other OPMET information in the AMBEX Scheme in addition to the exchanges of TAFs and AIREPs	B	APIRG/13
5	Study the impact of SADIS on the AMBEX Scheme and in particular the possible inclusion of METARS (AFI/7 Rec. 8/4 b))	A	APIRG/12
6	Monitor the degree of implementation of very small aperture terminals (VSATs) for the reception of WAFS products (AFI/7 Rec.14/12)	B	APIRG/12
7	Review and determine the necessary OPMET exchanges through the two-way VSAT SADIS stations in the AFI Region	A	APIRG/12
8	Develop a transition plan for the transfer of Dakar, Las Palmas and Nairobi RAFCs responsibilities to WAFC, London (AFI/7 Rec.7/10)	A	APIRG/12
9	Monitor the quality of WAFS low level significant weather charts in the AFI Region, provide feed back to WAFC, London as appropriate	B	APIRG/13

No.	Task description	Priority	Target Date
10	Monitor the implementation of regional procedures for the issuance of volcanic ash and tropical cyclone advisories (AFI/7 Rec.7/3 and 7/4)	B	Continuing
11	Review on a continuing basis the contents of Tables MET 1A and 1B and Tables MET2 to ensure their validity in light of operational requirements and develop proposals to update them if necessary	B	Continuing
12	Review the meteorological procedures in the introductory text to Part IV - Meteorology of the AFI Regional Plan as well as meteorological related issues in other sections of the Plan and relevant regional supplementary meteorological procedures (SUPPs) in Doc 7030, in light of procedures employed in other regions and develop amendment proposals as appropriate, coordinating where necessary with other APIRG Sub-Groups.	A	Continuing
13	Monitor developments in the CNS/ATM systems with regard to meteorological requirements in the AFI Region	B	Continuous

3. **Composition**

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

TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE FACILITIES AND SERVICES IMPLEMENTATION DOCUMENT/TASK FORCE (FASID/TF)

1. **Terms of Reference**

To review draft AFI basic ANP and FASID documents to be prepared by the Secretariat on the basis of the format and content approved by the ICAO Council and to complete them for adoption by the APIRG and for subsequent processing according to ICAO approval procedures.

2. **Work Programme**

Secretariat to prepare drafts for consideration by the Task Force in time for APIRG/12.

3. **Composition**

Egypt, Kenya, Nigeria, Senegal, South Africa, Spain, ASECNA, IFALPA, IATA.

**TERMS OF REFERENCE WORK PROGRAMME AND COMPOSITION OF THE TRAFFIC
FORECASTING TASK FORCE (TF/TF)**

1. Terms of Reference:

- a) Identify the data source (air traffic control centres or ATS units) and the data requirements for the development of medium-term (3 to 5 years) and long-term (6 to 20 years) forecasts of air traffic for the AFI Region.
- b) Develop medium and long-term passenger, freight and total aircraft movement forecasts for AFI Region, to support the air navigation systems planning including CNS/ATM implementation taking into consideration that:
 - i) the forecasts should be developed using a methodology which links passenger and freight demand with aircraft movement forecasts directly and in a consistent manner;
 - ii) The forecasts should cover traffic flows as contained in Doc 003.
- c) Assist in the development of cost/benefit analyses for the implementation of CNS/ATM systems components, as required.

2. Work Programme

Secretariat to prepare drafts for consideration by the Task Force in time for APIRG/12.

Composition: Six experts have been designated by the following member States as follows:

Malawi	(Economist)
Nigeria	(Information/Statistics - will submit Economist)
Senegal	(Statistician)
South Africa	(1 Economist, 1 Statistician)
Tanzania	(Economist/Statistician)
Togo	(Business and Finance)

TENTATIVE MEETING SCHEDULE FOR APIRG AND ITS SUBSIDIARY BODIES

YEAR	1998				1999				2000			
Group or sub-Group	Quarter				Quarter				Quarter			
	1	2	3	4	1	2	3	4	1	2	3	4
APIRG/12						D						
AOP/SG				D							N	
ATS/AIS/SAR/SG			N							D		
CNS/ATM/IC/SG					D				N			
COM/SG				N								D
MET/SG					N						D	
TF/TF				N							D	
FASID/TF				N								

D = DAKAR

N = NAIROBI
