



**SP AFI RAN
(2008)**

International Civil Aviation Organization

SPECIAL AFRICA-INDIAN OCEAN (AFI) REGIONAL AIR NAVIGATION (RAN) MEETING

Durban, South Africa

24–29 November 2008

REPORT FOLDER

LETTER OF TRANSMITTAL

To: President of the Council

From: Chairperson of the General Committee,
Special Africa-Indian Ocean (AFI)
Regional Air Navigation (RAN) Meeting

I have the honour to submit herewith the report of the Special Africa-Indian Ocean Regional Air Navigation Meeting held in Durban, South Africa from 24 to 29 November 2008.



Mpumi Mpofu

Durban, South Africa, 29 November 2008

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HISTORY OF THE MEETING

1. PLACE AND DURATION OF THE MEETING

The Special Africa-Indian Ocean Regional Air Navigation Meeting was convened by the International Civil Aviation Organization on 24 November 2008 at the International Convention Centre in Durban, South Africa and completed its Agenda on 29 November 2008.

2. ORGANIZATION, OFFICERS, OFFICIALS AND TASKS

The following are the major components of the meeting and their officers, technical Secretariat and tasks:

2.1 GENERAL COMMITTEE

Chairperson	–	Ms. Mpumi Mpofu
First Vice-Chairman	–	Mr. Harold Olusegun Demuren
Secretary	–	Mr. G. Moshabesha
ICAO Advisers	–	Mr. M.R. Khonji
	–	Mr. K. Theil
	–	Mr. A.O. Guitteye
	–	Ms. N. Graham
	–	Mr. R. Heighes-Thiessen

The General Committee held two meetings. The opening remarks and introduction to the meeting were given by the Director General, DOT, of South Africa and addresses by His Worship, the Mayor of Durban; the Honourable Premier of KwaZulu-Natal Province; the First Vice-President of the Council of ICAO; the President of the Air Navigation Commission; the President of the African Civil Aviation Commission; the Secretary General of ICAO; His Excellency the Minister of Transport of South Africa and the keynote address by Her Excellency the Deputy President of the Republic of South Africa addressed the meeting as well. The text of these addresses are reproduced in pages iv-1 to iv-.... of this report in the order in which they were delivered.

The General Committee noted the *Directives of the Council for the Conduct of ICAO Meetings* in Doc 7986 and the *Directives to Regional Air Navigation Meetings and Rules of Procedure for their Conduct* in Doc 8144. Furthermore, the General Committee adopted the agenda of the meeting and the organization plan for the meeting as established by the Air Navigation Commission.

The General Committee dealt with Agenda Items 1, 2, 3, 7 and 8 directly and, further reviewed and approved the reports of the Safety and Efficiency Committees on Items 4, 5 and 6 of the agenda.

2.2 EFFICIENCY COMMITTEE

Chairman	–	Mr. C. Kabalika
Vice-Chairman	–	Mr. S.J. Ignatius
ICAO Advisers	–	Mr. V. Galotti (Secretary)
	–	Mr. D. Gardilčić
	–	Mr. A. Kharuga
	–	Mr. S. Machobane
	–	Mr. H. Ewels
	–	Mrs. M. Obeng

The Efficiency Committee was charged with Agenda Item 6.

2.3 SAFETY COMMITTEE

Chairperson	–	Mrs. S.T. Isaabre
Vice-Chairman	–	Mr. M.H.R. Alloo
ICAO Advisers	–	Mr. M. Fox (Secretary)
	–	Mr. H. Belai
	–	Mr. M. Chakisa
	–	Mr. A. de Kock
	–	Mr. H. Defalque
	–	Mr. A. Hewawasam
	–	Mr. R. Lambo
	–	Ms. N. Onyedim

The Safety Committee was charged with Agenda Items 4 and 5.

3. WORKING LANGUAGES

The working languages of the meeting were English and French and the documentation and report of the meeting were issued in English and French.

4. REPRESENTATION

From the States and international organizations invited to attend the meeting, the following were present:

CONTRACTING STATES

Algeria	Congo	Germany
Angola	Côte d'Ivoire	Ghana
Argentina	Czech Republic	Guinea
Benin	Democratic Republic of the	Guinea-Bissau
Botswana	Congo	Kenya
Brazil	Denmark	Lebanon
Burkina Faso	Egypt	Lesotho
Cameroon	Equatorial Guinea	Liberia
Cape Verde	Eritrea	Madagascar
Central African Republic	Ethiopia	Malawi
Chad	France	Mali
China	Gabon	Mauritania
Comoros	Gambia	Mauritius

Mozambique	Saudi Arabia	Tunisia
Namibia	Senegal	Uganda
Netherlands	Seychelles	United Kingdom
Niger	Singapore	United Republic of Tanzania
Nigeria	Somalia	United States
Oman	South Africa	Zambia
Republic of Korea	Spain	Zimbabwe
Rwanda	Sudan	
Sao Tome and Principe	Togo	

INTERNATIONAL ORGANIZATIONS

Airlines Association of Southern Africa (AASA)
 Airports Council International (ACI)
 African Civil Aviation Commission (AFCAC)
 AFI Regional Monitoring Agency (ARMA)
 Agency for Air Navigation Safety in Africa and Madagascar (ASECNA)
 Common Market for Eastern and Southern Africa (COMESA)
 European Aviation Safety Agency (EASA)
 European Organization for the Safety of Air Navigation (EUROCONTROL)
 International Air Transport Association (IATA)
 International Federation of Air Line Pilots' Association (IFALPA)
 International Federation of Air Traffic Controllers' Associations (IFATCA)
 International Federation of Air Traffic Safety Electronics Association (IFATSEA)
 Industry Safety Strategy Group (ISSG)
 Southern African Development Community (SADAC)
 Société internationale de télécommunications aéronautiques (SITA)
 United Nations
 World Food Programme (WFP)
 World Meteorological Organization (WMO)

5. AGENDA

- Agenda Item 1: Adoption of the draft agenda
- Agenda Item 2: Outline of the working methods of the meeting
- Agenda Item 3: Overview of the *Comprehensive Regional Implementation Plan for Aviation Safety in Africa*, the Global Air Navigation Plan (GANP) and the Global Aviation Safety Plan (GASP)
- Agenda Item 4: Current status of aviation safety and related activities in the Africa-Indian Ocean (AFI) Region
- the current status of aviation safety in the region; and
 - review of current regional/sub-regional aviation safety activities, including assistance efforts by States, donor agencies, international organizations, regional organizations and ICAO.

- Agenda Item 5: Development of a set of comprehensive work programmes in the safety field
- review proposed aviation safety activities based on GASP principles;
 - need for the alignment and development of current aviation safety initiatives;
 - agree to a suitable and consolidated action plan aimed at improving aviation safety in the AFI Region on the basis of the African Comprehensive Implementation Programme (ACIP) work programme;
 - process to rationalize and coordinate the provision of bilateral or multilateral assistance through the *Comprehensive Regional Implementation Plan for Aviation Safety in Africa*; and
 - agree on a follow-up system on the implementation of safety-related activities.
- Agenda Item 6: Development of a set of comprehensive work programmes in the Air Navigation field, aimed at improving efficiency of the air navigation system
- identify major air navigation deficiencies in the region;
 - review regional/sub-regional air navigation planning and implementation activities, including assistance efforts by States, donor agencies, international organizations, regional organizations and ICAO;
 - define regional air navigation performance objectives based on GANP principles;
 - agree on comprehensive work programmes with timelines and milestones to meet the identified performance objectives;
 - agree on a format for the development of national action plans to support the regional work programmes; and
 - agree on follow-up action to be taken through the planning and implementation regional group (PIRG) process.

6. LIST OF REPRESENTATIVES

A list of Representatives who attended the meeting appears on pages ii-5 to ii-16.

LIST OF REPRESENTATIVES

Contracting States	Family Name	First Name	Position in Delegation	
Algeria	Benchemam	M.	D	
	Smail	Alili	ADV	
Angola	Manuel	Nzakimuena	D	
Argentina	Duran	Gustavo Diaz	D	
Benin	Amouzou	Donne	D	
	Koumagnon	T. Eliezer	ADV	
	Dovonon	G. Vivien Rene	ADV	
	De Souza	Aristide	ADV	
	Sentle	M.	D	
Botswana	Belayneh	Meshesha	ADV	
	Keebine	Gobusamang	ADV	
	Maroba	Oganne	ADV	
	Moketo	Wilfred	ADV	
	Masego	Mathhaga	ADV	
	Brazil	Mascimento	Luiz	D
	Burkina Faso	Bouda	Mathieu	D
Ouedraogo		Fulgence Edgard	ADV	
Dieguimede		Moumouni	ADV	
Pafadnam		Yarce	ADV	
Kone		Ibrahim Hassane	ADV	
Dechambenoit		Raphael Charles	ADV	
Bakienon		Louis	ADV	
Cameroon	Sama Juma	Ignatius	D	
	Tekou	Thomas	ADV	
	Tsamo	Christien	ADV	
	Mandeng	Samuel	ADV	
	Kouogueu	Jean Pierre	ADV	
	Mendouga	Paul Alain	ADV	
	Tchuisseu	Theodore	ADV	
	Kaffo	Michel	ADV	
	Cape Verde	Ferreira Rodrigues	Jose Manuel	D
Central African Republic	Doumta	Isabelle	D	
	Kiapo	F.	ADV	
	Bondo	G.	ADV	
	Gomaiaam	J.	ADV	
Chad	Ceubah	Guelpina	D	
	N'gako	Beyadi	ADV	
	Sarahoubaye	Traouingue	ADV	
	Reyara	Alladoumngaye	ADV	
	Orozi	A. Hassan	ADV	
	Hassan	Terap	ADV	

D: Delegate/Délégué
 ALT: Alternate/Suppléant

ADV: Adviser/Conseiller
 OBS: Observer/Observateur

LIST OF REPRESENTATIVES

Contracting States	Family Name	First Name	Position in Delegation	
China	Ma	Tao	D	
	Ngubane		ADV	
Comoros	Abdou Said	Madi	D	
	Kassim	Ibrahim	ADV	
	Topan Kam	Kamnadji	ADV	
	Hassani Ali	Mohamed	ADV	
	Attoumani	Mohamed	ADV	
Congo	Tsassa	Fidele	D	
	Hugues	Ayina	ADV	
	Ondze	Henri Joel	ADV	
	Ngomamby	Alain Gerard	ADV	
Côte d'Ivoire	Kouassi	Abonouan Jean	D	
	Alla	Jean Amani	ADV	
	Attro	Firmin	ADV	
	Assi	Henri Jacques Ayebi	ADV	
	Agnimel	Mel Mathieu	ADV	
	Capri-Traore	M.	ADV	
	Kone	Sidi	ADV	
	Elefteriou	Georges	ADV	
	Czech Republic	Stolc	Jaromir	D
		Mika	Ladislav	ADV
Democratic Republic of the Congo	Kasanza	Richard Nyanguile	D	
	Mandamuna	Joseph Kabombo	ADV	
	Kasongo	B.	ADV	
	Izai	Pascal	ADV	
	Assice	J.	ADV	
	Warin	Herve	ADV	
	Christensen	Flemming	D	
Denmark	Mourad	Kamel Mohamed	D	
	Helmy	Hassan Kamel Abdel	ADV	
Egypt	Miko Angue	Leandro	D	
	Nguema Mba	Leandro	ADV	
	Obama	Pedro	ADV	
	Abeme	A.A.	ADV	
	Bolekia	Gil-Esopi	ADV	
Equatorial Guinea	Kahsai	Paulos	D	
	Ghebrezghi	Mesfun	ADV	
	Fassil Ogbazgi	Eden	ADV	
Eritrea	Fikru	Mesfin	D	
	Fufa	Temesgen Oli	ADV	
	Deress	Berhanu A.	ADV	
	Mekonnen	Tefera	ADV	
	Zerufael	Kibreob Shimelet	ADV	
	Gulilat	Desta Lulseged	ADV	
	Ethiopia	Soucheleau	Alain	D
		Demichel	Jean-Claude	ADV

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LIST OF REPRESENTATIVES

Contracting States	Family Name	First Name	Position in Delegation
	Ravelojaona	M.	ADV
	Catlla	Bernard	ADV
	Koning	Yves	ADV
	Lefevre	Patrick	ADV
	Thebault	Bertrand	ADV
	Neyret-Gigot	Charlotte	ADV
Gabon	Mfoubou Moudhouma	Dieudonne	D
	Obame-Edou	Claire	ADV
	N'Goua	Jean-Hilaire	ADV
Gambia	Jammeh	Abdoulie Ebrahim	D
Germany	Burlage	Thomas P.	D
Ghana	Allotey	Simon	D
	Andjorin	Chamsou	ADV
	Taylor	Albert	ADV
	Akatue	Emmanuel	ADV
	Boateng	Prince Bismarck	ADV
	Ata-Bedu	Hendrick	ADV
	Danso	Foster	ADV
	Haye	William S.	ADV
	Acquah	Daniel	ADV
	Mawusi	Oscar	ADV
Guinea	Diallo	Thierno Ousmane	D
	Oulare	Kalagban	ADV
Guinea-Bissau	Moreira	Eugenio	D
	Mendes Pereira	Marcelino Pedro	ADV
	Azo	Abdoulaye J.P.	ADV
Kenya	Kuto	Chris	D
	Wesechere	Shadrack	ADV
	Enyenze	Benjamin	ADV
	Kadenge	Esolloyo John	ADV
	Njogu	Erastus	ADV
	Chocho	Truphosa	ADV
	Sospeter	Muiruri	ADV
Lebanon	Hassoun	Sahar Ayoub	D
Lesotho	Mokete	Palesa	D
	Mothibe	Simollang	ADV
	Ntholi	Manoeli	ADV
Liberia	BAH	Ibrahima	D
	Conteh	Alihamy Dixon	ADV
Madagascar	Douan	Clarisse	D
	Robinson	A. Eugene	ADV
	Rakotoarivony	Sylvain	ADV
Malawi	Mtilatila	Alfred	D

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ADV: Adviser/Conseiller
 OBS: Observer/Observateur

LIST OF REPRESENTATIVES

Contracting States	Family Name	First Name	Position in Delegation
Mali	Kwatani	Damiano Dixie	ADV
	Sanogo	Tene Issabre	D
	Goita	Issa Salif	ADV
	Banta	Diabate	ADV
	Diallo	Salif	ADV
	Siaka	Baya	ADV
	Goro	Saliou	ADV
Mauritania	Bougounno	Sanogho Khalilou	ADV
	N'Gaide	Abdoulaye Abass	D
	Ivekou	A.	ADV
Mauritius	Kinnoo	Sarupanand	D
Mozambique	Gabriel	Antonio	D
	Jose	Cardoso	ADV
Namibia	Lucrecia C Mericia	Ndeve	ADV
	Bakari	Mustapher	ADV
	Simana	Paulo Angelina	D
	Eiman	Christine	ADV
	Likando	Brian	ADV
	Eggerschwiler	Harry	ADV
	Theart	Anton	ADV
	Shipanga	Immanuel	ADV
	Pule	William Norman	ADV
	Mujetenga	Bethuel Tijao	ADV
	Kubrcke	Ernst A	ADV
	Gunzel	Tobias	ADV
	Netherlands	Kok	Tom
Niger	Halidou	Moussa	D
	Yacouba	Boubacar	ADV
	Issa Ado	Issoufou	ADV
Nigeria	Boukary	Malam	ADV
	Aliu	Bernard Olumuyiwa	D
	Emenalo	Boniface	ADV
	Yahaya	Dauda	ADV
	Ajayi	S.O.	ADV
	Achimugu	Ojogbane Joseph	ADV
	Sasegbon	Dele	ADV
	Awogbami	C.	ADV
	Demuren	Harold	ADV
	Adedoyin	Tosin Ademola	ADV
	Adetu	EE	ADV
	Nkemaolam	Joyce Daniel	ADV
	Adeyemi	AI	ADV
	Adesola	Arowold	ADV
	Oduselu	Samuel	ADV
	Sidi	Abdullah M.	ADV
	Ogochukwu	I.F.	ADV
	Bassey	Teresa	ADV

D: Delegate/Délégué
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OBS: Observer/Observateur

LIST OF REPRESENTATIVES

Contracting States	Family Name	First Name	Position in Delegation	
Oman	Emmanuel	Diala Chukwuma	ADV	
	Al Harmi	Abdul Rahim Salim	D	
	Al Busaidy	Nasr Ghalib Khalifa	ADV	
Republic of Korea	Cho	Choon-Soon	D	
	Yu	Kyungsoo	ADV	
Rwanda	Masozera	Richard	D	
	Murera	James	ADV	
Sao Tome & Principe	Carvalho	Jose	D	
Saudi Arabia	Hakami	Ali Hassan	D	
	Mosa	Ali Naser	ADV	
Senegal	Hane	Amadou Tidiane	D	
	Fall	Papa Atoumane	ADV	
	Gningue	Mamadou	ADV	
	Makosso	J.P	ADV	
	Alassane	M.	ADV	
	Ba	Seydou	ADV	
	Kebe	Yacine	ADV	
	Bessane	Mathiaco	ADV	
	Ndiaye	Issa	ADV	
	Bodian	Atabou	ADV	
	Ndao	Magueye Maramé	ADV	
	Gueye	Sidy	ADV	
	Mendy	David	ADV	
	Diaw	Ismaila	ADV	
	Ndiaye	Ndene	ADV	
	Sy Oumar	Ben Khatab	ADV	
	Gafari	Bernadette	ADV	
	Samake	Wodiaba	ADV	
	Seychelles	Fock Tave	Wilfred	D
		Samson	Esmee	ADV
Singapore	Kumar	Ashok	D	
	Fernando	Mervyn	ADV	
Somalia	Sheikh Ali	Mohamoud	D	
	Sheikh Harun	Mohamud	ADV	
	Mosupukwa	Kemitse J.	ADV	
	ABDI	Ali Jama	ADV	
	Wanyama	Athanas B.	ADV	
South Africa	Mpofu	Mpumi	D	
	Thwala	Zakhele Gilbert	ADV	
	Peege	T.D.	ADV	
	Abdul Gany	Anwar	ADV	
	Mabaso	L.	ADV	
	Mokgako	Yvonne	ADV	

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LIST OF REPRESENTATIVES

Contracting States	Family Name	First Name	Position in Delegation
	Mpye	E.	ADV
	Prins	Janine	ADV
	Sekele	J.	ADV
	Nyaka	C.	ADV
	Jordaan	C.	ADV
	Sim	K.	ADV
	Marais	P.	ADV
	Lulama	B.	ADV
	Ilcev	D.S.	ADV
	Marais	Hennie	ADV
	Gersbach	C.	ADV
	Roberts	H.	ADV
	Mamashela	M.	ADV
	Dibate	B.	ADV
	Khambule	G.E.	ADV
	Ngubane	S.	ADV
	Mothusi	Ronnie	ADV
	Sangweni	N.	ADV
	Matshoba	J.	ADV
	Ngqumeya	Monde	ADV
	Nelson	M.	ADV
	Rennie	R.	ADV
	Kotsoe	T.M.	ADV
	Sasa	Subban	ADV
	Hall	Mamotseki	ADV
	Kolisang	Ntsane	ADV
	Geyer	J.	ADV
	Badenhorst	M.	ADV
	Gebu	Emnet	ADV
	Duley	Steve	ADV
	Mabaso	Levers	ADV
	Marobela	K.C.	ADV
	Roberts	Harry	ADV
	Dlamini	Zamokwakhe Peacemaker	ADV
	Morrison	John	ADV
	Marais	Peter	ADV
	Musandiwa	Joe	ADV
	Bradshaw	Arthur	ADV
	O'Brien	Kevin	ADV
	Prins	Janine	ADV
	Goshalia	Ravi	ADV
	Dlamini	Patrick	ADV
	Matola	Lerato	ADV
	Lunga	Sifundiswa	ADV
	Stretch	Chris	ADV
	Mthabela	Lydia	ADV
	Lufuno	Sebitso	ADV

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LIST OF REPRESENTATIVES

Contracting States	Family Name	First Name	Position in Delegation
	Xulu	Phindile	ADV
	Cele	Wilson Zakhele	ADV
	Zondi	Ntokozo	ADV
	Mongezi	India	ADV
	Mothusi	Ronnie	ADV
	Carrasco	Michel	ADV
	Matshoba	Jeoffrey	ADV
	Khambule	G.E.	ADV
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	Morales	Juan	OBS
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(OPENING REMARKS AND ADDRESSES TO BE INCLUDED IN BLUE COVER REPORT)

Agenda Item 1: Adoption of the draft agenda (General Committee)

1.1 The meeting adopted the Agenda of the meeting, as approved by the Air Navigation Commission, for use at the Special Africa/Indian Ocean Regional Air Navigation (SP AFI/08 RAN) Meeting. There were no additions proposed.

Agenda Item 1: Adoption of the draft agenda (General Committee)

Agenda Item 2: Outline of the working methods of the meeting (General Committee)

Agenda Item 3: Overview of the *Comprehensive Regional Implementation Plan for Aviation Safety in Africa*, the Global Air Navigation Plan (GANP) and the Global Aviation Safety Plan (GASP) (General Committee)

Agenda Item 4: Current status of aviation safety and related activities in the Africa-Indian Ocean (AFI) Region (Safety Committee)

- the current status of aviation safety in the region; and
- review of current regional/subregional aviation safety activities, including assistance efforts by States, donor agencies, international organizations, regional organizations and ICAO

Agenda Item 5: Development of a set of comprehensive work programmes in the safety field (Safety Committee)

- review proposed aviation safety activities based on GASP principles;
- need for the alignment and development of current aviation safety initiatives;
- agree to a suitable and consolidated action plan aimed at improving aviation safety in the AFI Region on the basis of the African Comprehensive Implementation Programme (ACIP) work programme;
- process to rationalize and coordinate the provision of bilateral or multilateral assistance through the *Comprehensive Regional Implementation Plan for Aviation Safety in Africa*; and
- agree on a follow-up system on the implementation of safety-related activities

Agenda Item 6: Development of a set of comprehensive work programmes in the Air Navigation field, aimed at improving efficiency of the air navigation system (Efficiency Committee)

- identify major air navigation deficiencies in the region;
- review regional/subregional air navigation planning and implementation activities, including assistance efforts by States, donor agencies, international organizations, regional organizations and ICAO;
- define regional air navigation performance objectives based on GANP principles;
- agree on comprehensive work programmes with timelines and milestones to meet the identified performance objectives;

- agree on a format for the development of national action plans to support the regional work programmes; and
- agree on follow-up action to be taken through the planning and implementation regional group (PIRG) process

Agenda Item 7: Approval of report material (General Committee)

Agenda Item 8: Any other business (General Committee)

Agenda Item 2: Outline of the working methods of the meeting (General Committee)

2.1 The opening ceremony, including speeches by high level officials, took place on Monday, 24 November 2008, at the first Plenary meeting. Agenda Items 1, 2 and 3 were also addressed by the General Committee. On Tuesday, 25 November 2008, the meeting broke into two committees: Safety and Efficiency, in order to address Agenda Items 4, 5 and 6. These two committees met until Friday, 28 November 2008. A second Plenary meeting was convened to address Agenda Items 7 and 8 on Saturday, 29 November 2008, the last day of the meeting.

2.2 It was agreed that the meeting would consist of a General Committee and two technical committees (Safety Committee and Efficiency Committee). The General Committee served as the principal body of the meeting and was responsible for the formulation of directives and operational policies to guide the work of the meeting as a whole. The technical committees were attended by experts in the flight safety, operations, airworthiness and air navigation fields duly authorized to make decisions.

2.3 The approach to the work of this Special Regional Air Navigation (RAN) Meeting was different from past RAN meetings. Most noticeably, this meeting dealt extensively with safety. In the field of efficiency, a review and amendment of the Regional Air Navigation Plan was not undertaken. For each agenda item and sub-items, basic working papers developed by the ICAO Secretariat provided strategic guidance and background necessary to establish the framework and help to progress the work of that item.

2.4 Secretariat papers also proposed work programmes with timelines, based on achieving performance objectives, in accordance with the Global Air Navigation Plan (GANP), the Global Aviation Safety Plan (GASP) and the Comprehensive Regional Implementation Plan for Aviation Safety in Africa.

2.5 On the last day of the meeting, the Plenary meeting reviewed the report material under Agenda Item 7. Any changes made to the final report will be captured in a Corrigendum to the report and will be distributed by the ICAO Secretariat within three weeks of the end of the meeting.

2.6 The meeting noted the organization and structure of the meeting pursuant to the *Directives to Regional Air Navigation Meetings and Rules of Procedure for their Conduct* (Doc 8144) and approved the timetable for the handling of the agenda items. Attention was drawn to the following decisions taken by the Council or the Air Navigation Commission on certain organizational procedures:

a) Working languages

The working languages of the meeting to be in English and French.

b) Agenda

The agenda of the meeting and explanatory notes on the agenda items were contained in SP AFI/08-WP/1 and SP AFI/08-WP/2, respectively.

Agenda Item 3: Overview of the *Comprehensive Regional Implementation Plan for Aviation Safety in Africa*, the *Global Air Navigation Plan (GANP)* and the *Global Aviation Safety Plan (GASP)* (General Committee)

3.1 Under this agenda item, the meeting was made aware that the 36th Session of the ICAO Assembly urged Contracting States of the AFI Region to commit to the achievement of the goals and objectives of the AFI Comprehensive Regional Implementation Plan for Aviation Safety in Africa (AFI Plan) and to ongoing transparency with regard to the progress accomplished (A36-1: *Comprehensive Regional Implementation Plan for Aviation Safety in Africa* refers); and that the Global Aviation Safety Plan (GASP) be used as the framework for development of regional and subregional implementation plans, thus ensuring harmonization and coordination of efforts aimed at improving international civil aviation safety and efficiency (A36-7: *ICAO Global Planning for Safety and Efficiency* refers). In this respect, the meeting, under Agenda Item 3, was presented with an overview of the AFI Plan, the Global Aviation Safety Plan (GASP) as these formed the basis for the work of the meeting.

Overview of the *Global Air Navigation Plan (GANP)* and of the *Global Aviation Safety Plan (GASP)*

3.2 The meeting recalled that the GANP described a strategy aimed at achieving near- and medium-term air traffic management (ATM) benefits on the basis of available and foreseen aircraft capabilities and ATM infrastructure. It contained guidance on ATM improvements necessary to support a uniform transition to the ATM system envisioned in the *Global Air Traffic Management Operational Concept* (Doc 9854). On the basis of the GANP, planning should be focused on specific performance objectives, supported by a set of “Global Plan Initiatives” that meet performance objectives, identified through an analytical process, specific to the particular needs of a State, region, homogeneous ATM area or major traffic flow.

3.3 The meeting recalled that the objective of the GASP was to reduce the accident risk for civil aviation by providing a common frame of reference for all stakeholders in order to allow a more proactive approach to aviation safety, and to help coordinate and guide safety policies and initiatives worldwide. At the ICAO level, GASP provided the methodology and focus required to implement the ICAO Strategic Objective of Safety. It would be used to prioritize and plan safety initiatives and to measure their impact. The meeting noted that GASP was based on the following three principles: GASP integrates the Global Aviation Safety Roadmap (GASR) developed by the Industry Safety Strategy Group (ISSG) to ensure the involvement of all stakeholders; GASP defined twelve *Global Safety Initiatives* that supported the implementation of the ICAO Safety Strategic Objective, including a set of best practices, metrics and maturity levels defined in the GASR; and GASP used a planning process aimed at a collaborative approach between States and industry in the development of action plans at the regional, subregional and national level in order to improve safety.

3.4 The meeting noted the work done by ICAO to harmonize safety and efficiency planning on a global basis and recalled that GANP and GASP provided a common frame of reference for all stakeholders in order to allow a coherent and integrated as well as a more proactive approach to efficiency planning and to aviation safety and to help coordinate a global programme for ICAO work on safety and efficiency. The meeting also noted that both the GANP and GASP rely on a high level of cooperation and coordination between Contracting States and stakeholders. Both the GANP and GASP were used in concert with the AFI Plan as the basis for the work of this RAN meeting.

The role of the ICAO technical cooperation programme

3.5 The meeting recalled that the challenges facing aviation in the Africa-Indian Ocean (AFI) Region were numerous and complex, yet similar in nature, revealing the existence of serious deficiencies at the State and service provider levels. Despite a general political will to move forward towards sustainable safe and efficient air transportation, many States continued to struggle with the implementation of international Standards and Recommended Practices (SARPs), due to the unavailability of adequate human, technical and/or financial resources.

3.6 Many civil aviation authorities had already initiated actions to remedy their shortcomings in accordance with national priorities and without external assistance. Where this was not possible, governments were seeking outside assistance from the aviation industry, bilateral aid from donors in the public and private sectors and funding through loans from financial institutions.

3.7 The meeting noted that the ICAO technical cooperation programme was a long established, powerful and cost-effective tool, for States, donors, financial institutions and the private industry, that assisted with the practical implementation of measures to remedy, in a coordinated way, identified deficiencies, in neutrality, objectivity and transparency.

3.8 The services of the ICAO Technical Co-operation Bureau (TCB) comprised the recruitment of international experts and national professionals, the provision of training, the development or upgrading of training institutions, and the procurement of equipment and services.

3.9 The meeting noted that ICAO implemented projects in close coordination with donors, and in accordance with the conditions defined by the donor for the use of funds made available, taking responsibility for legally acceptable, technically satisfactory and cost-effective project implementation through comprehensive project support, monitoring and reporting.

3.10 The meeting recalled that the 36th Session of the ICAO Assembly adopted the “Consolidated Statement of ICAO Policies on Technical Cooperation” (Assembly Resolution A36-17 refers) which recommended to donor States, financing institutions and other development partners, including the aviation industry and the private sector, wherever appropriate, to give preference to ICAO for the identification, formulation, analysis, implementation and evaluation of civil aviation projects, drawing their attention to the fact that ICAO is the United Nations specialist authority for carrying out technical cooperation to developing countries in civil aviation.

3.11 The meeting recognized the importance of the role of the ICAO Technical Cooperation Programme, and was of the opinion that States should consider the use of ICAO TCB as project implementation agent, after taking into account the competitiveness of its proposal.

3.12 The meeting thus agreed to the following recommendation:

Recommendation 3/1 — ICAO involvement in the implementation of civil aviation projects

That, in accordance with the provisions of Assembly Resolution A36-17:

- a) States consider associating ICAO as executing agency for their civil aviation projects and advise donors and financing institutions, if any, accordingly; and

- b) donors and financing institutions consider using the technical cooperation services of ICAO for implementing their programmes of assistance to civil aviation.

Overview of the *Comprehensive Regional Implementation Plan for Africa (AFI Plan)*

3.13 The meeting considered the overview of the ICAO AFI Plan. The overview served as the basis for the discussions and actions contained in the working papers to be addressed by the Safety Committee under Agenda Item 5.

3.14 ICAO developed the AFI Plan to address aviation safety concerns and to support African States to meet their international obligations for safety oversight. The AFI Plan was endorsed by a high-level meeting, convened in Montréal in September 2007, and presented to the 36th Session of the ICAO Assembly (18 to 28 September 2007) which, inter alia, tasked both the Council and the Secretary General to implement the plan within the shortest possible period.

3.15 Subsequently, the Secretary General established the AFI Comprehensive Implementation Programme (ACIP) to give effect to the objectives of the AFI Plan and nominated the members of the ACIP Steering Committee to oversee the work of ACIP. The Steering Committee composed of nine ICAO Contracting States and six members from the industry and international organizations had already met twice and provided directions for the implementation of ACIP.

3.16 The meeting was advised that the Steering Committee had discussed the merits of the three focus areas identified by the Secretariat as the basis for the work programme of ACIP. The Steering Committee approved the three focus areas and indicated that they should be implemented as soon as practicable. With respect to Focus Area One: *Enabling States to establish and maintain a sustainable safety oversight system*, the Steering Committee directed that:

- a) States and organizations are actively encouraged by ICAO to provide ACIP with information on current and planned assistance activities which can contribute to realizing the objectives of the programme. This inventory, in the form of a database, should constitute the basis for the coordination of projects in the AFI Region under the umbrella of the programme;
- b) ACIP identify groupings of States to engage in a GASP implementation exercise;
- c) ACIP utilize the resulting gap analysis of the GASP exercise as the basis for prioritization of its activities;
- d) ACIP provide the support necessary to the organization and delivery of GASP workshops; and
- e) ACIP provide guidance and support as necessary for the implementation of the actions resulting from the gap analysis.

3.17 With respect to Focus Area Two: *Assisting States to resolve identified deficiencies within a reasonable time*, the Steering Committee instructed that:

- a) ACIP closely coordinate and cooperate with the industry and other stakeholders to enhance aviation safety culture of service providers;

- b) ACIP promote and encourage regional cooperation based on existing regional platforms such as the Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs) to assist States within their respective regions to resolve identified deficiencies; and
- c) ACIP promote and facilitate cooperation among existing regional aviation training centres and take advantage of the training centres in capacity building activities directed at resolving identified deficiencies.

3.18 With respect to Focus Area Three: *Enhancing aviation safety culture of African aviation service providers*, the Committee instructed that:

- a) ACIP provide assistance with respect to enhancing safety cultures and take a holistic approach in implementing activities;
- b) higher management of service providers be included in the safety management systems training courses, seminars and workshops to be provided;
- c) ACIP emphasize that the State responsibility for developing and establishing a safety programme include a requirement for service providers to establish a Safety Management System (SMS); and
- d) ACIP stress and emphasize that the requirement for the establishment of SMS include all air operators, airports and air navigation service providers regardless of their membership in international or regional organizations.

3.19 ICAO launched the implementation of the AFI Plan work programme in line with the directives and instructions of the Steering Committee as endorsed by the Council and as a result:

- a) with the support of the ISSG and the host governments, workshops on the GASR were held in Abuja, Nigeria (14 to 16 April 2008), Arusha, Tanzania (12 to 15 August 2008) and Ouagadougou, Burkina Faso (11 to 13 November 2008). The meeting was also advised that an additional workshop was planned immediately after the AFI RAN Meeting in Maputo, Mozambique (1 to 5 December 2008);
- b) a gap analysis based on GASP and GASR was conducted in States that are members of the Banjul Accord Group (BAG) and States in the Eastern African Region. The outcome of the gap analysis will be used to develop effective and sustainable programmes/projects to enable States to establish an effective and sustainable national and/or regional safety oversight system;
- c) ACIP developed a template/manual for a State Safety Programme (SSP) tailored to meet the needs of the African States; and
- d) an SSP seminar/workshop and an SMS training course using the newly developed SSP manual and the updated *Safety Management Manual (SMM)* (Doc 9859) was conducted in Addis Ababa, Ethiopia from 23 September to 3 October 2008. The seminar/workshop included a one-day safety management awareness course for high-level management personnel of Civil Aviation Authorities and African aviation service providers (airlines, air traffic service providers and airports).

3.20 Several participants requested that some seminars and workshops be conducted in Portuguese where this would be beneficial and practicable. The meeting noted that ACIP would endeavour to provide seminars and workshops in Portuguese, with a prerequisite that the host State would provide the language support.

3.21 The meeting agreed that in order for ICAO to succeed in implementing the programme it was essential that Contracting States in the AFI Region strengthen cooperation across the region to make the optimum use of available resources and also commit to the ideals of the AFI Plan as detailed in Assembly Resolution A36-1 (Appendix to the Report on Agenda Item 3 refers). The meeting also agreed that it was essential for all stakeholders to fully cooperate with the programme established to give effect to the AFI Plan and agreed to the following recommendation:

Recommendation 3/2 — ACIP programme implementation

That the Special AFI RAN Meeting encourages States in the AFI Region to take full advantage of the programme established to enhance aviation safety in the region and also encourage industry and donors to undertake projects that address the priorities identified through gap analysis conducted by ACIP in cooperation with all stakeholders.

Regional offices and the planning and implementation regional group (PIRG)

3.22 The meeting was presented with proposals to strengthen the AFI regional offices overall in light of requirements related to safety initiatives and requirements in the region. The proposals also suggested budgetary adjustments within ICAO and changes with respect to the use of specific ICAO resources including where resources were located. These were aimed at strengthening the AFI regional programme. In a similar manner, the meeting discussed current regional planning processes and the activities of the planning and implementation regional group (PIRG) including their names, composition, terms of reference, scope and reporting structure.

3.23 In follow-up to the discussions, the meeting was made aware that the ICAO Council, through a special working group on efficiency, was already reviewing regional office activity, structure, and resources among other things. Additionally, the ICAO Air Navigation Commission, through a working group currently reviewing the work of PIRGs, was already addressing the terms of reference of PIRGs, their reporting processes and work programmes. In light of the above, the meeting agreed that the information provided to the meeting and the associated working papers, should be referred to the ICAO Council and Air Navigation Commission working groups as input for their work.

Performance-based approach and measurement

3.24 The meeting agreed that a performance-based approach to planning of air navigation services and aviation safety offered an opportunity to strengthen a continent wide commitment to improving safety and efficiency, toward resolving deficiencies and addressing critical issues and that the objective should be to develop a comprehensive report which would contain a set of proposed work programmes based on performance objectives with measurable outcomes and metrics. This would facilitate regional and global management, technical and financial assistance and provide a comprehensive and documented set of needs and requirements for the AFI Region.

3.25 It was noted that the performance-based approach to planning stemmed from requirements associated with the results based environment that ICAO, industry and States had been steadily moving toward. Doc 9854 provided a clear statement of the expectations of the ATM

Community. Eleven of these expectations, also referred to as key performance areas (KPAs), had been identified in the operational concept. To support this approach, the *Manual on Global Performance of the Air Navigation System* (Doc 9883) was developed. Doc 9883 provided a step-by-step approach to performance-based planning on the basis of the KPAs. GASP also provided the foundation for measuring safety performance.

3.26 The performance-based approach was structured upon the following principles:

- a) strong focus on desired/required results through adoption of performance objectives and targets;
- b) informed decision making, driven by the desired/required results; and
- c) reliance on facts and data for decision making.

3.27 On the basis of the above, the meeting agreed that successful improvement to the aviation system in the AFI Region would be best facilitated if a meaningful, realistic and effective means of performance measurement were implemented. It was noted that a performance-based approach required that achievements were periodically assessed through performance reviews, which in turn required adequate performance measurement and data collection capabilities. In this respect, it was agreed that consensus must be reached on the desired outcome of performance management in terms of results to be achieved.

3.28 The meeting identified the need for participation of the aviation community in the performance-based process and that a data reporting culture was essential. Additionally, the capability to successfully manage disclosure and confidentiality aspects had to be addressed. On a regular basis, data must be condensed into a few indicators which help to understand the performance of the system.

3.29 The meeting was made aware of the step-by-step approach to performance-based planning, as described in Doc 9883.

- a) Step 1 : Define/review scope, context and general ambitions/expectations;
- b) Step 1.1 : Define scope;
- c) Step 1.2 : Define context;
- d) Step 1.3 : Identify ambitions and expectations;
- e) Step 2 : Identify opportunities, issues and set objectives;
- f) Step 2.1 : Develop a list of present and future opportunities and issues that require performance management attention;
- g) Step 2.2 : Focus efforts by defining and prioritizing performance objectives as needed;
- h) Step 3 : Quantify objectives;

- i) Step 3.1 : Define how progress in achieving performance objectives will be measured and which data are required to do so;
- j) Step 3.2 : Define the desired speed of progress in terms of baseline and target performance;
- k) Step 4 : Select solutions to exploit opportunities and resolve issues;
- l) Step 4.1 : Select the decisive factors to reach the target performance;
- m) Step 4.2 : Identify solutions to exploit opportunities and mitigate the effects of the selected drivers and blocking factors;
- n) Step 4.3 : Select a sufficient set of solutions;
- o) Step 5 : Implement solutions; and
- p) Step 6 : Assess achievement of objectives.

3.30 It was noted that in many ways, the meeting was taking the first steps toward addressing Steps 1 through 5, however, Step 6 required agreement on a set of metrics on the basis of KPAs.

3.31 In addition to the above, the meeting recalled that ICAO was transitioning to a results based approach to its work and it was therefore important to trace all activities and work programmes to the Business Plan (and the outputs contained therein) to ensure consistency of strategy and traceability to previously agreed global results. To address both the performance-based approach to implementation planning and the results based approach of ICAO, performance framework forms (PFF) were proposed to be used to guide the planning process in the fields of both safety and efficiency.

3.32 On the basis of the discussion, the meeting agreed that it was critical to establish an initial set of metrics to measure performance in the region and therefore agreed to adopt the following recommendation.

Recommendation 3/3 — Performance-based approach and measurement

That APIRG and regional safety groups develop indicators that are specific, measurable, achievable, realistic and time bound and attach them to the performance framework forms (PFFs) in the appropriate box, using the following metrics and/or others determined to be appropriate indicators for the African continent (see Appendices to the report on Agenda Items 5 and 6):

Safety

- a) Safety-1 : Number of fatal accidents;
- b) Safety-2 : Number of fatalities;
- c) Safety-3 : Accident rate in the AFI Region as compared to the global average; and

- d) Safety-4 : Number of accidents and serious incidents that are reported to ICAO (as a percentage of the total number of reportable accidents and incidents known to ICAO).

Efficiency

- a) Cost-effectiveness-1 : Total operating cost plus cost of capital divided by the number of IFR flights;
- b) Capacity-1 : Average daily airport capacity for a group of thirty-five airports measured as a five-year moving average;
- c) Efficiency-1 : Estimated fuel savings (based on 2000 as baseline);
- d) Efficiency-2 : Number of PBN routes/number of APV approaches to runway ends;
- e) Environment-1 : CO₂ burn;

and that,

ICAO coordinate with States, organizations and stakeholders in the region to collect and process data to measure the metrics, leveraging to the extent possible all existing data and ongoing efforts.

Any other business

3.33 During any other business of the opening Plenary meeting, one State requested discussion of a matter not on the agenda of the meeting. The Chairperson and ICAO advised the delegation that this matter was not a subject for the agenda of this meeting and would not be discussed during the General Committee, or any of the subordinate committee meetings. However, ICAO advised that any Contracting State is allowed to make a short statement on any subject and append the statement to the proceedings. In this case, two statements are annexed to the report.

APPENDIX**A36-1: Comprehensive Regional Implementation Plan
for Aviation Safety in Africa**

Whereas it is essential that there be increased coordinated efforts under ICAO leadership to reduce serious deficiencies in the Africa-Indian Ocean (AFI) Region which are detrimental to the functioning and further development of international civil aviation;

Noting that the Council of ICAO has already taken steps to address safety issues through the development of a Comprehensive Regional Implementation Plan for Aviation Safety in Africa (the AFI Plan);

Recognizing that many Contracting States in the AFI Region may not have the technical or financial resources to comply with the requirements of the Chicago Convention and its Annexes and therefore have to rely on ICAO and other stakeholders for expertise and assistance;

Recognizing the need to coordinate, under the ICAO umbrella, activities of all stakeholders providing assistance to States in the AFI Region;

Recognizing that ICAO may require additional resources to successfully carry out its coordination role;

Considering the willingness of the international community to assist the AFI Region in giving, as soon as possible, a concrete and substantial content to the AFI Plan;

The Assembly:

1. *Urges* Contracting States of the AFI Region to commit to the achievement of the goals and objectives of the AFI Plan and to ongoing transparency with regard to the progress accomplished;
2. *Encourages* Contracting States of the AFI Region to strengthen cooperation across the region in order to make the optimum use of available resources through regional and subregional projects in all sectors of civil aviation, with a high priority in the field of safety oversight;
3. *Instructs* the Council to notify States, industry and donors of the priority projects arising from the gap analysis, performed in accordance with the Global Aviation Safety Plan (GASP);
4. *Encourages* all Contracting States, industry and donors to undertake projects that address the priorities identified through the gap analysis, which is to be consistent with the GASP and other principles laid out in the AFI Plan;
5. *Instructs* the Council to establish a mechanism to receive voluntary contributions from the parties willing to contribute to ICAO's coordination of the plan or implementation activities undertaken within the AFI Plan;
6. *Instructs* the Council to coordinate the contributions towards the implementation of the AFI Plan;
7. *Instructs* the Council to ensure a stronger ICAO leadership role in coordinating activities, initiatives and implementation strategies aimed specifically at meeting the goals and objectives of the Plan, in order to achieve sustained improvement of flight safety in the AFI Region and to allocate resources to the relevant Regional Offices accordingly;

8. *Instructs* the Council to implement the AFI Plan in line with programme management and business plan principles and practices;
9. *Instructs* the Council to monitor and measure the status of implementation in the AFI Region throughout the triennium and to report to the next Assembly on the progress made;
10. *Instructs* the Council to ensure the continued development of new working relationships integrating the capabilities of the bureaux at Headquarters with the resources of Regional Offices, Contracting States and industry stakeholders.

Agenda Item 4: Current status of aviation safety and related activities in the Africa-Indian Ocean (AFI) Region (Safety Committee)

4.1 Under this agenda item, the meeting reviewed the status of safety in the AFI Region. This included a review of accident statistics, and a compilation of safety oversight audit reports. During this agenda item the meeting reviewed any trends identified in the accident data and deficiencies, as well as occurrence reporting levels of the States within the regions. In addition, the meeting also explored the feasibility of pooling resources within the regions for the conduct of accident and incident investigations.

4.2 The meeting also reviewed current regional/subregional aviation safety activities, including assistance efforts by States, donor agencies, international organizations, regional organizations and ICAO. The discussion helped to set the framework for the discussion under Agenda Item 5.

Current status of implementation of the safety critical elements of safety oversight systems in the region

4.3 The meeting noted the current status of implementation of the safety critical elements of a safety oversight system by States in the AFI Region based upon the ICAO Universal Safety Oversight Audit Programme (USOAP) reports. The analysis presented also compared accident data available in the ICAO accident/incident data reporting (ADREP) system with the current status of implementation of the safety critical elements. The analysis included reports for more than 68 per cent of the AFI States, which was considered an acceptable sample size.

4.4 The meeting recalled that the eight critical elements of a safety oversight system cover primary aviation legislation, specific operating regulations, civil aviation system and safety oversight functions, qualifications and training of technical personnel, procedures and technical guidance, licensing and certification obligations, surveillance obligations and resolution of safety concerns. ICAO assists States in the identification, reporting and correction of deficiencies in safety critical elements of a State's civil aviation oversight system through USOAP. There was strong evidence from the USOAP data presented that the level of non-implementation of the critical elements of a safety oversight system in the AFI Region was at a very high level.

4.5 Based upon the analysis of audit results performed by USOAP, there was a very strong relationship between four of the critical elements and accident rates. Given the high rate of non-implementation in the AFI Region in seven of the eight critical elements and the indicative relationship to accident rates, the meeting agreed that States in the AFI Region should commit to improvements in their level of implementation of the eight critical elements, ensure that personnel and organizations performing an aviation activity within their territory meet the established requirements before they are allowed to exercise the privileges of a licence, certificate, authorization and/or approval; and conduct effective surveillance over their aviation industry, including the ability to identify and resolve safety-related deficiencies. During the deliberations, the meeting pointed out that it was important for all critical elements to be implemented by States. In addition, it was pointed out that the implementation of Critical Element 4, (qualifications and training of technical staff) was a prerequisite for implementation of the other critical elements. On this basis, the meeting agreed to the following recommendation:

Recommendation 4/1 — Implementation of the safety critical elements

AFI States set a high priority to implement all eight critical elements with special emphasis on the following elements that have a strong relationship with accident rates: Critical Element 4

(Qualification and training of technical personnel); Critical Element 8 (Resolution of safety concerns); Critical Element 6 (Licensing and Certification); Critical Element 3 (State civil aviation system and oversight functions); and Critical Element 7 (Surveillance obligations).

Assessment of levels of safety in the AFI Region

4.6 The meeting noted an assessment of the safety situation in the AFI Region and the proposed programme to improve the flow of safety data, aiming at improving aviation safety. The meeting recalled that the AFI Region has the highest accident rate in the world, at 4.5 accidents per million departures for scheduled operations involving aircraft with maximum take-off mass (MTOM) above 2 250 kilograms, and recognized that the AFI Region had a high probability of not meeting the ICAO safety goal of having no ICAO region exceeding twice the world accident rate by 2011.

4.7 The available occurrence statistics in the ICAO ADREP system for the AFI States were analyzed and the data presented to the meeting. The AFI States that had a high number of occurrences were identified. The analysis also identified the top categories of occurrences to be runway excursions and powerplant failure or malfunction. The main contributing factors to the high rate of runway excursions were considered to be issues associated with airworthiness, crew decision-making and runway infrastructure.

4.8 The meeting was also informed that approximately 66 per cent of ADREP records for the AFI Region came from unofficial sources. This indicated that many States do not report occurrences as required. Moreover, of the reports received from States, 76 per cent remained at the preliminary or notification stages and were not completed.

4.9 The meeting recalled that ICAO adopted the European Co-ordination Centre for Aviation Incident Reporting Systems (ECCAIRS) software as its platform to operate the ADREP system. The ADREP/ECCAIRS system has the ability to collect accident and incident data in a uniform taxonomy so that such information can be analyzed on a timely basis and shared between States and between States and ICAO. As the ADREP/ECCAIRS system becomes more comprehensive, it will enable States to better refine the performance of their State Safety Programme (SSP) and benchmark it with global data. The ECCAIRS software is available free-of-charge to States. The meeting noted that ICAO has delivered numerous ADREP/ECCAIRS training courses in States and endeavoured to continue to provide training courses upon request from States.

4.10 The meeting was advised that the statistics presented were based on the accidents and serious incidents for the State of Occurrence. A concern was raised and supported that many accidents in the AFI Region involved aircraft not registered in the State of Occurrence. The meeting was reminded that States are responsible for the safety of all operations in their territory. However, a concern about the availability of qualified personnel to carry out these oversight and surveillance responsibilities was expressed.

4.11 As a result of the foregoing, and in order to help improve the level of safety in the AFI Region, the meeting agreed to the following recommendations:

Recommendation 4/2 — Improved oversight

That ACIP, as a matter of priority, assists African States to acquire the capability for effective and sustainable safety oversight systems in close cooperation with existing platforms such as COSCAPs and RSOOs, as applicable.

Recommendation 4/3 — State Safety Programme

That ICAO urge the AFI States, with cooperation from COSCAPs and RSOOs as applicable, to implement a State Safety Programme that incorporates effective occurrence investigations, the gathering of such safety data in a database compatible with ADREP and to share and analyze the data.

Recommendation 4/4 — ADREP/ECCAIRS implementation

That ICAO assists States, COSCAPs and RSOOs in the planning of ADREP/ECCAIRS training courses to empower the AFI States to share safety data and effectively report to ICAO.

Regional cooperation in investigations

4.12 The meeting was advised of a means by which States in the AFI Region could pool resources to meet their needs for accident and incident investigations through the establishment of regional accident and incident investigation agencies.

4.13 Many States in the AFI Region lack the capability to investigate accidents and serious incidents and the support of other States may not always be available. For those States, the availability of a regional accident investigation organization, or the creation of a regional pool of qualified investigators might be the best option to enable the establishment of an effective accident and incident investigation system.

4.14 The cooperative concept of regional safety oversight organizations could also be extended to the establishment of regional accident investigation organizations enabling States to meet their international obligations in the area of accident investigation while producing economies of scale leading to increased efficiency due to the possibility of sharing and pooling of human and financial resources.

4.15 The meeting was reminded of the high aviation accident rate in the AFI region, but that it was not necessarily the case in all AFI States. At the same time the level of reporting of accidents and incidents was low in the region. A need existed in the AFI Region to carry out effective investigations as a requirement of the SSPs to move from a reactive to a proactive approach to safety management. The meeting further reviewed the need for cooperation among African States during occurrence investigations and considered the convening of AIG workshops, which would include a SSP component, in the region, on a regular basis. It also highlighted the need for a forum to share safety-related information in a regional context, as well as the need for support of a non-punitive investigation culture in the region.

4.16 The meeting was informed that a regional accident investigation organization was being created through a COSCAP in the AFI Region. However, it expressed its concerns about the development of regional accident investigation organizations alongside regional safety oversight organizations. The meeting agreed that there should be a separation between the functions of these organizations so as not to

compromise the independence of an accident investigation. Further concerns were expressed about the funding of regional accident investigation organizations.

4.17 The meeting expressed the need for cooperation between the regional accident investigation organizations that may be established in Africa and States from outside of the AFI Region.

4.18 The meeting also expressed a concern about the lack of reporting of accidents and incidents and the adequacy of investigations.

4.19 A discussion about the concept of “just culture” versus the protection of safety information followed. The meeting agreed to align its recommendations with Annex 13 — *Aircraft Accident and Incident Investigation*, Attachment E (“protection of safety information”).

4.20 The meeting was informed of a recommendation by the recent Accident Investigation and Prevention Divisional Meeting (AIG/08) that Annex 13 should be amended to include the ability for a State to delegate an accident investigation to a regional accident investigation organization. There was also a recommendation for ICAO to develop guidance material to assist regional groupings to establish and manage a regional accident and incident investigation system.

4.21 On the basis of this discussion, the meeting agreed to the following recommendation:

Recommendation 4/5 — Establishment of Regional Accident Investigation Organizations

That:

- a) ICAO urge States in the AFI Region to fulfil their obligations to conduct accident investigations and to release the resulting reports;
- b) as a means of meeting their accident investigation obligations, States establish Regional Accident Investigation Organizations by pooling resources through existing grouping of States or other mechanisms;
- c) ICAO arrange additional accident investigation workshops;
- d) States in the AFI Region establish appropriate legislation to protect safety information in accordance with guidance provided in Annex 13, Attachment E to promote a proactive reporting system and the sharing of safety data; and
- e) States and donors provide resources for the development of such regional accident investigation organizations.

Air Traffic Services (ATS) Incident Analysis Group

4.22 The meeting was informed of the work of the Air Traffic Services (ATS) Incident Analysis Group (AIAG). The group meets on an annual basis to analyze ATS incidents reported during the preceding year. Through the work of the AIAG, States and air navigation service providers were encouraged to carry out thorough investigations of all reported ATS incidents and take adequate measures to prevent repetition of similar occurrences. The meeting was also advised that the AIAG evaluated the effectiveness of the IATA In-Flight Broadcast Procedure and the airborne collision avoidance systems in

the region. The meeting called upon States to make their investigations, conclusions and recommendations readily available to all concerned parties.

4.23 The meeting supported the AIAG work but a concern was raised about the reporting of ATS incidents by users, who did not always file reports in a timely manner, following the ICAO model (as contained in the *Procedures for Air Navigation Services – Air Traffic Management*, (PANS-ATM, Doc 4444), Appendix 4) or include sufficient information.

4.24 Based on the discussion, the meeting agreed to the following recommendations:

Recommendation 4/6 — Investigation of air traffic services incidents and provision of comprehensive feedback to parties involved

That, in coordination with their air navigation service providers, States:

- a) diligently conduct investigations on all reported air traffic services incidents having taken place in airspace under their responsibility; and
- b) provide timely, documented feedback to all involved parties through participation in the established AIAG mechanism via the relevant ICAO regional office.

Recommendation 4/7 — Reporting of air traffic services incidents

That air operators be reminded, by IATA and their State Authority, of their obligation to ensure that air traffic services incident reports are filed on a timely basis, following the ICAO model as contained in the *Procedures for Air Navigation Services – Air Traffic Management* (PANS-ATM, Doc 4444), Appendix 4, and provide sufficient relevant information to facilitate the ensuing investigation.

Aviation safety initiatives in the Czech Republic

4.25 The meeting was informed about the history and success of international courses in Aviation safety and Accident Prevention and Investigation (AAPI) that had been organized by the Southern California Safety Institute (SCSI) together with the Ministry of Transport (MOT) of the Czech Republic. The meeting encouraged participation in an advanced AAPI course to be presented in Prague from 20 April to 1 May 2009. It was noted that this course would be well suited for all those who have previously taken an AAPI course, as well as more experienced accident investigators and other key aviation safety professionals. It was also acknowledged that the availability of the international courses in aviation safety strongly support ICAO goals to provide enhanced training and education for aviation safety professionals and to improve skills of investigators from different regions.

Introduction of an Accident Prevention and Flight Safety Management System

4.26 The meeting reviewed three proposals to ICAO regarding the Safety Management Manual (SMM). First, that methodological support be provided for implementing a proactive flight safety management method; second, that training programmes be developed for risk managers; and third, that in order to avoid different interpretations of concepts and terminology, explanations be developed regarding the status and use of the Accident Prevention Manual in connection with the introduction of the SMM. The meeting noted that the Accident Prevention Manual had been incorporated into the Second Edition of

the Safety Management Manual recently posted on the ICAO website thus alleviating the confusion. The meeting agreed that hazard and risk identification was at the core of an SMS system. Moreover, the meeting agreed that ICAO should develop additional training for risk assessment.

Progress report on the activities of the Implementation Support and Development (ISD) Programme: resolution of safety oversight deficiencies in Africa

4.27 The meeting recalled that pursuant to Assembly Resolutions A36-2, *Unified Strategy to Resolve Safety-Related Deficiencies* and A36-3, *Implementation Support and Development (ISD) Programme – Safety*, the ISD Programme was created to provide support and assistance to States in their efforts to rectify safety-related oversight deficiencies identified through the ICAO audits and other safety oversight mechanisms. The meeting also recalled that there were four elements to the programme:

- f) assistance to States and promoting the establishment of regional safety oversight systems to include regional safety oversight organizations and the Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs);
- g) the sharing and exchange of safety-critical information via the Flight Safety Information Exchange (FSIX);
- h) the promotion of partnerships and alliances with international and regional funding agencies and other stakeholders; and
- i) activities related to the ICAO procedures for transparency and disclosure regarding significant safety oversight compliance shortcomings, including the support the ISD Programme provides to the Audit Results Review Board (ARRB).

4.28 The meeting reviewed the activities carried out in the AFI Region under the Implementation Support and Development (ISD) Programme aimed at facilitating the provision of assistance to States and regional safety systems, for the purpose of resolving the deficiencies identified by the ICAO safety oversight audits. The meeting also took note of the assistance provided by ISD in support of the Comprehensive Regional Implementation Plan for Aviation Safety in Africa (AFI Plan). In addition to assistance in the area of safety oversight, the meeting was informed of other related activities undertaken by ISD with respect to the sharing and exchange of safety-critical information and the promotion of partnerships and alliances with financial institutions and other stakeholders for mobilizing resources. In respect to transparency, the meeting further noted the activities undertaken by ISD that were carried out in line with the recommendations of the Audit Results Review Board (ARRB) in States where a significant level of deficiencies had been identified through the ICAO safety oversight audits.

4.29 The meeting noted that the ISD Programme has provided assistance to States and regional safety oversight organizations for the resolution of safety-related deficiencies and for the implementation of Standards and Recommended Practices (SARPs). The ISD Programme had facilitated the provision of assistance to a number of African States. It had played this role through the initiation of projects which, in collaboration with ICAO's Technical Co-operation Bureau (TCB), led to the deployment of flight operations and airworthiness inspectors for the purpose of strengthening safety oversight capabilities. The ISD Programme, along with TCB, also monitored the execution of projects in order to ensure that the stated objectives were achieved.

4.30 The ISD Programme had more recently contributed to the development and the execution of the AFI Plan. ISD worked with States, many of which are States in the AFI Region, that had been referred to the ARRB to ensure that immediate actions were taken to secure safety and to provide short-term assistance for strengthening safety oversight capabilities. In close cooperation with the ICAO Regional Offices in Africa, TCB, donor States and international institutions, the ISD Programme continued to facilitate and coordinate technical support for the implementation of COSCAPs in Africa, which had reinforced safety initiatives at the State, subregional and regional level.

4.31 In respect to assistance to African States, ICAO had partnered with funding agencies such as the World Bank, as well as with a number of donor States. To further strengthen the ISD Partnership and Alliances Programme and to ensure that assistance efforts, including those in the AFI Region, were properly coordinated with each other, ICAO developed the International Database of Assistance Projects (IDAP) which was currently being tested. This database is a reference for information on aviation safety and security assistance activities undertaken by ICAO and other relevant stakeholders. It was designed to identify complementary or overlapping assistance projects, in order to improve effectiveness by eliminating redundancy and avoiding duplication in efforts. The database would contain information on projects at different stages of development, to include projects at the proposal stage.

4.32 The meeting noted that FSIX facilitated the exchange and distribution of safety-related information and encouraged transparency. Extensive reference and safety oversight documentation, as well as State safety oversight audit reports continued to be made available on the FSIX. The meeting also recalled that all African Contracting States had provided their consent to the release of their audit results information through the FSIX. Other forms of safety-critical information on the FSIX website included a list of non-airworthy and de-registered aircraft, several of which had been on the registers of African States. FSIX also provided a means for States to download ICAO guidance material, safety-related tools and regulatory material developed by other States, and provided links to COSCAP websites and other websites offering technical and guidance material. The meeting was informed that access to the FSIX could be found at the following website address: www.icao.int/fsix/.

4.33 In view of the services offered by ISD, the meeting agreed to the following recommendation:

Recommendation 4/8 — Implementation Support and Development (ISD) Programme

That States take advantage of the services of ISD in respect to facilitating assistance to rectify safety oversight deficiencies identified by ICAO audits and promoting the establishment of partnerships and alliances for the purpose of mobilizing resources.

The Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs) in Africa

4.34 The meeting agreed that in light of the fact that only a few African States could afford the resources for effective safety oversight, a regional approach was required. The benefits of regional cooperation were cited by ASECNA. It was also agreed that States already participating in a COSCAP should meet their obligations to COSCAP, and non-participant States should be encouraged to join a COSCAP group in the AFI Region. The meeting further realized that “coordination and alignment of assistance”, as tabled under Agenda Item 5, was critical and should be adopted using COSCAPs as the platform for such coordination. The expansion of the scope of COSCAP, taking into account the current situation in Africa and USOAP was also discussed.

4.35 The meeting recalled that COSCAPs in the region had received wide support from various stakeholders and donors. COSCAPs were recognized as a means to promote regional integration. Moreover, they constitute a test bed for a cooperative approach to resolving safety-related issues by using best practices, including gap analyses, in coordination with the AFI Comprehensive Implementation Programme (ACIP) and in line with the ICAO Global Aviation Safety Plan (GASP). It was noted that COSCAPs required continued strong support in order for them to maintain their operational effectiveness

4.36 The meeting agreed that in light of the challenges faced by African States in the area of flight safety, COSCAP offered a practical and cost-effective solution to address safety issues and had the potential to expand in scope to cover all the elements of a State's safety oversight programme. The meeting also noted that the COSCAPs in Africa complemented ACIP and were well positioned to further the objectives of ACIP for the enhancement of safety in the AFI Region. The meeting was informed that additional details would be found in those AFI RAN papers that specifically address ACIP.

4.37 The meeting noted that while some States were yet to experience the benefits of COSCAP, other States reported satisfaction with activities of their COSCAPs and reaffirmed the usefulness of the programme. These States cited the achievements, which included training provided to regional and national inspectors, development of common regulations, conduct of mock audits of Civil Aviation Authorities, inspections of airline and improved cooperation among the member States.

4.38 The meeting further noted that the varying degrees of progress of COSCAP in the different subregions are normal and to be expected. COSCAPs continued to face challenges hampering the smooth implementation of the programmes, which, if not adequately addressed, could further jeopardize the achievement of the programme goals. Some of these challenges were: slow or low funding delaying implementation of critical programme activities; difficulty in finding suitably qualified international and regional experts, especially in the area of flight operations; lack of commitment by States to fully participate in programme activities; political and social upheavals delaying the start of individual programmes; and unpreparedness or reluctance of some States to commit to join a COSCAP grouping.

4.39 In response to a request for clarification regarding the establishment of RSOOs and COSCAPs, it was pointed out that certain States had elected to establish an RSOO without first having established a COSCAP, in other cases, States had decided to establish a COSCAP as a precursor to the establishment of a fully fledged RSOO. In either case, the meeting was assured that support would be provided by ICAO.

4.40 The Committee was informed that a meeting of the COSCAP Chief Technical Advisers was scheduled to take place during the SP AFI RAN meeting. It was intended that the regular holding of such meetings would ensure better coordination and sharing of information between COSCAPs.

4.41 On the basis of the above, the meeting agreed to the following recommendation:

Recommendation 4/9 — The COSCAP Programmes in Africa

That:

- a) States in the AFI Region which do not belong to a COSCAP or RSOO be encouraged to form or join a COSCAP or RSOO grouping;

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- b) COSCAP participant States actively contribute to the respective work programme, including participation in, as well as offering to host, workshops and training courses established under the programme;
 - c) COSCAP participant States draw on COSCAP regional inspectors for assistance in certification, surveillance, personnel licensing and related activities;
 - d) COSCAPs serve as an entry point for regional cooperation activities where applicable within the AFI Region, including the interrelated work with ACIP;
 - e) donors, the industry and other stakeholders be encouraged to support COSCAPs through financial and/or in-kind contributions and participate in setting its guiding strategies;
 - f) the scope of a COSCAP be expanded and aligned with that of the USOAP at the discretion of its member States;
 - g) ICAO should strengthen the monitoring and follow-up of the activities and implementation of COSCAPs to ensure that they achieve their intended objectives; and
 - h) regular meetings of COSCAPs in the AFI Region be held to ensure better coordination and sharing of information.

General statements

4.42 The meeting noted a statement by the Republic of Korea.

4.43 The Republic of Korea has developed a software application tool aiming at the management of a State's national regulations with respect to current ICAO SARPs, to help ensure implementation of the SARPs. The application tool and initial technical assistance was offered free of charge by the Republic of Korea.

Agenda Item 5: Development of a set of comprehensive work programmes in the safety field (Safety Committee)

5.1 In the field of safety, in addition to the basic working papers, others that dealt with technical implementation issues were presented. A Secretariat paper proposed an overarching work programmes with timelines, based on achieving performance objectives, in accordance with the Global Safety Initiatives of the Global Aviation Safety Plan (GASP). The plan developed through this process was considered to be complementary to the more detailed work programme established by the AFI Comprehensive Implementation Programme (ACIP) Steering Committee. Thereafter, working papers prepared by States, the Secretariat and participants were considered.

5.2 Subjects that were discussed included analysis of the challenges faced by the majority of African States to establish and maintain an effective and sustainable safety oversight system and to effectively address and resolve deficiencies identified by the ICAO safety oversight audit programme, under the comprehensive systems approach. Further, the papers also addressed a programme of activities designed to assist the African aviation service providers to enhance their safety culture. The discussions highlighted the various actions taken, on-going or planned aimed at ameliorating the situation and proposed an action plan that would be directed both at the States and the stakeholders including international and regional organizations and the aviation industry. The activities conducted under ACIP were presented for the consideration of the meeting including their implementation status.

Regional approach towards implementation of the Global Aviation Safety Plan (GASP)

5.3 The meeting recalled that the planning process and methodology of GASP were adopted as essential components of the Comprehensive Regional Implementation Plan for Aviation Safety in Africa (AFI Plan). The meeting reviewed a proposal for the effective coordination and monitoring of the implementation of GASP in conjunction with the AFI Plan through the use of performance framework forms. The intent of the forms was to assist in planning and the development of subregional and national action plans developed under the AFI Plan and based on the Global Safety Initiatives (GSIs) as contained in GASP. The performance framework forms would also provide a means to communicate overarching time frames for the entire region to meet the objectives of GASP.

5.4 The meeting recalled that regional planning for safety and implementation had already started in the AFI Region under the umbrella of the AFI Plan. The meeting recognized that the regional planning process for safety should be conducted in accordance with GASP and its GSIs. GSIs were designed to support the implementation of the ICAO Safety Strategic Objectives, and other safety objectives, by the AFI Region as well as all other regions. Each GSI within GASP had a corresponding *focus area* within the Global Aviation Safety Roadmap (GASR). Focus areas should be addressed by all aviation stakeholders to ensure successful implementation of the plan. The focus areas were further broken down into supporting objectives. The objectives were performance-based and described what should be done by States, regions, subregions and industry to meet the overall aim of a focus area. Following the objectives, best practices were described which, when implemented, would ensure that each objective is met. Metrics were also provided so that an analysis could be made in order to evaluate the implementation of each best practice. The GASR also included *maturity models* that can be used to determine the overall level of implementation for a specific focus area.

5.5 The best practices outlined in the GASR represented an important tool to ensure that the objectives are met. However, the meeting noted that there might be other practices that could be implemented that would equally meet the intent of the identified objectives and that each stakeholder was in the best position to evaluate which practices would be most appropriate to meet the objective for a particular region.

5.6 The meeting agreed that implementation of GASP and associated roadmap concepts should proceed in a systematic manner. The step-by-step planning process contained in the GASR was being used by AFI States and industry with the support of ACIP to develop appropriate action plans which, in turn, defined the specific activities and projects that should take place in order to improve safety on a State, sub-regional and regional basis.

5.7 The meeting noted that gap analysis exercises had been carried out with the support of ACIP and that, to facilitate the establishment of target dates for the completion of gap analysis exercises and the development of action plans, performance framework forms were developed to provide a means of communicating target dates and monitoring the results of the analysis. Each performance framework form included the supporting objectives, benefits of meeting each objective, and references. A status column was also included in the form and could be used as a means for ACIP to report to the ACIP Steering Committee on the status of the gap analysis exercises and of the action plans. The meeting agreed that the forms also provided ACIP with a tool for monitoring the implementation of GASP principles within the AFI Region, and for coordinating support for the activities and projects carried out under ACIP.

5.8 The meeting recalled that the GASR/GASP focus areas were oriented towards States, regions and industry in line with a guiding principle that safety improvements in civil aviation can be best advanced through a coordinated effort involving both the State regulatory authorities and industry. Similarly, in an effort to engage all stakeholders, the ACIP gap analysis involved the coordinated participation of both the regulatory authorities and industry. The performance framework forms proposed for consideration by the meeting covered each GSI/focus area individually. It was further proposed that the meeting establish overarching time frames for the region to meet the objectives as outlined in the GASP. Defining such overarching time frames to meet the GASP objectives would provide parameters for the sub-regions and States to develop their work in accordance with the plan for the region.

5.9 The proposal to establish overarching time frames for the region was supported by the meeting. However, it was pointed out that the time frames could only be considered as preliminary, as they may need to be adjusted given that the region had not yet completed the roadmap gap analysis. The feedback from the gap analysis would provide the information necessary to confirm if the time frames for the region were realistic. The meeting agreed to form a working group to draft a proposal for the time frames for consideration by the Safety Committee.

5.10 It was agreed that the performance framework forms, applicable to each of the focus areas would provide an effective management tool for developing and monitoring the activities and projects designed to resolve safety deficiencies. On this basis, the meeting agreed to the following recommendation:

Recommendation 5/1 — Regional safety planning methodology

That the Special AFI RAN Meeting adopt the performance framework forms, contained in the Appendix to the report on Agenda Item 5, as a management tool for use by States and subregions to track the progress made in the implementation of the AFI Plan and Global Aviation Safety Plan (GASP). In addition, the forms should be used as the means to communicate overarching time frames for the region to meet the objectives of GASP.

5.11 The meeting agreed to preliminary overarching time frames for the AFI Region to achieve the objectives of GASP. These time frames were also included in the forms for each GSI in the Appendix to the Report on Agenda Item 5. The meeting agreed that the overarching goals would be useful to guide States and sub-regional organizations in their work, but also recognized that the overarching time

frames would need to be reviewed regularly to ensure that they were realistic as experience was gained by the region in the GASP process. It was also recognized that States and subregional organizations should use the performance framework forms to communicate their progress to ACIP as a means to aggregate the overall progress in the region. The meeting also emphasized the need for training to familiarize more civil aviation personnel with the GASP process.

A cooperative approach towards improving aviation safety

5.12 The meeting discussed a cooperative approach towards improving aviation safety, presented by the Industry Safety Strategy Group (ISSG). A proper implementation plan based on the GASR, a strategy developed by the ISSG, was considered to be an integral part of the ICAO GASP, and would instil confidence among worldwide industry and donor organizations that their contributory efforts and financial investments would yield real safety benefits because they would be targeted appropriately. The meeting recognized that by committing to the GASR and using its gap analysis process, African States and industry would inspire confidence among worldwide industry and donor organizations that their contributions would yield real safety benefits in the AFI Region. The use of the GASR process would ensure that contributions would be targeted correctly providing an opportunity to coordinate and guide safety policies and initiatives and prevent duplications in effort, uncoordinated strategies and wasted resources.

5.13 The meeting recalled that the ISSG had worked closely with ICAO, ACIP, and local Authorities and had organized successful GASR workshops aimed at familiarizing Civil Aviation Administration (CAA) and industry with the GASR tools, in Abuja (14 to 16 April 2008), Arusha (12 to 15 August 2008) and Ouagadougou (11 to 13 November 2008), with an additional workshop to be held in Maputo (1 to 5 December 2008). The ISSG planned to continue to support implementation of the GASR through joint industry-government regional aviation safety teams.

5.14 The meeting agreed that in order for aviation to grow in Africa and to promote economic development of the continent, air transport in Africa needed to be perceived to have a safety level equivalent to the worldwide average. The meeting also noted in this respect that continuous and effective safety oversight was fundamental. It was agreed that to establish an effective safety oversight system, a State should have a sufficient amount of aviation activity to support the substantial investment required. But it was also recognized that some States did not have enough aviation activity to justify this investment when considering other pressing national needs. The meeting, once again, endorsed the concept of regional safety oversight organizations that would assist States by sharing and pooling resources and strategies at a regional level to provide effective safety oversight. The meeting further recognized that while a State could delegate the functions of a safety oversight system to a regional safety oversight organization, it could not delegate its responsibilities for the oversight system.

5.15 On this basis, the meeting noted the cooperative approach being proposed and agreed to the following recommendations:

Recommendation 5/2 — Commitment to government and industry cooperation

That the Special AFI RAN Meeting recognize the importance of joint industry and government efforts to improve safety and encourage States and industry to work closely together in the implementation of the Global Aviation Safety Roadmap.

Recommendation 5/3 — Safety oversight capability

That, as an integral part of performing gap analysis, States should determine if current and future aviation activities are sufficient to support their own self-sustained safety oversight system. If the activity is not sufficient, States should consider delegating this function to a Regional Safety Oversight Organization in line with Best Practice (GASP) 2a-5 and ICAO Doc 9734, Part B.

Recommendation 5/4 — Establishment of regional aviation safety teams

That States and industry safety experts work together within Regional Aviation Safety Teams to discuss safety issues and adopt safety enhancement initiatives that are relevant to their operations and develop implementation plans based on the Global Aviation Safety Roadmap.

IATA safety programmes and initiatives

5.16 The meeting noted five on-going safety programmes and initiatives developed by IATA in order to enhance the safety and efficiency of air transport operations, as presented below.

5.17 The *IATA Operational Safety Audit (IOSA)* programme was an internationally recognized and an accepted evaluation and audit system designed to assess the operational management and control systems of a commercial air operator. The meeting was advised that, as of 1 January 2009, successful completion of an IOSA audit was required for all airlines worldwide in order to achieve and maintain IATA membership. To assist air operators and Civil Aviation Authorities (CAA) in the understanding of the IOSA audit, IATA had established the *Partnership for Safety (Pfs)* Programme, which provided training to both CAA and airline personnel. An additional IATA initiative assisted airlines in resolving findings from their initial audits, and helped them to prepare for renewal audits by maintaining IOSA compliance.

5.18 The *IATA Safety Audit for Ground Operations (ISAGO)* was aimed at increasing safety while reducing the number of audits that ground handlers were facing today. The ISAGO programme utilized internationally recognized auditing principles, similar to IOSA. The meeting was advised that workshops had been conducted in 2008 in the AFI Region and two AFI ground service providers had applied for ISAGO audits.

5.19 In addition to these safety audit programmes, IATA also had two proactive safety data collection and analysis programmes. The *Safety Trend Evaluation Analysis and Data Exchange System (STEADDES)* was a service to the aviation industry, whereby airline operators as well as other stakeholders such as ground handling providers collect and send operational safety reports to IATA regularly. The information received by IATA was de-identified, consolidated and analyzed based on available global data. From the analysis, safety concerns and prevention strategies were identified and shared with participants. The *Implementation Plan for Safe Operations in Africa (IPSOA)* was a partnership project using Flight Data Analysis (FDA) to improve safety and efficiency. The meeting was advised that thirty-four airlines in the AFI Region were invited to participate in the programme, with six positive responses recorded to date.

5.20 Finally, with respect to the training of aviation personnel, the *IATA Training and Qualification Initiative (ITQI)* was designed to address quality and harmonization requirements in training licensed personnel, delivering global solutions that aimed at enhancing the quality of training.

5.21 The meeting noted, and expressed appreciation for, the programmes and initiatives developed by IATA to improve safety and efficiency. It agreed that concerned aviation industry

stakeholders should support these IATA activities and should raise awareness of these programmes amongst operators in the AFI Region.

Safety improvement strategy for the AFI Region

5.22 The meeting considered a vision and strategy on ways and means of improving safety in Africa, based on the implementation of the GASR. The meeting agreed that air transport is Africa's only practicable means to integrate its economies, be competitive in the global marketplace, and make a significant contribution to sustainable economic development in the Region. Safety performance was considered by the meeting as the principal success factor of a healthy air transport system and the meeting recognized that the industry had committed to working with ICAO and other partners to improve both the safety and efficiency of air transport operations in Africa and to positively change the perception of the travelling public, with a resulting boost to air traffic growth. It was agreed that this challenge required initiatives that could effectively induce a decline in the accident rate.

5.23 The meeting recognized that the most successful efforts to improve flight safety had been recorded when government and industry worked together, sharing expertise and resources to implement GASP and following a standard process, that utilized the GASR, involved all stakeholders and resulted in an action plan to address the identified priorities. States and other donors were urged to participate in and fund projects which followed this approach.

5.24 The meeting recalled that the 36th Session of the ICAO Assembly had adopted Resolution A36-7, Appendix A, *Global Aviation Safety Plan*, that urged Contracting States and the industry to apply the GASP and Global Aviation Safety Roadmap principles and objectives and to implement its methodologies in partnership with all concerned stakeholders to reduce the number and rate of aircraft accidents.

Processing of air navigation occurrences in the ASECNA Region

5.25 The meeting noted the air navigation occurrence investigation practices employed in the Member States of the Agency for Air Navigation Safety in Africa and Madagascar (ASECNA). ASECNA had the responsibility of carrying out the necessary investigations, performed by designated experts in accordance with a documented formal process, in the event of such air navigation-related matters such as infractions, bird strike hazards, suspected AIRPROX, and accidents (preliminary investigations). The meeting was advised that during the course of an investigation, a report was prepared which included information made available to appropriate State authorities for the purpose of improving safety. ASECNA expressed its commitment to the adoption of a non-punitive attitude toward the persons involved in air navigation occurrences by virtue of the exercise of their respective professions.

5.26 Solutions to improve the effectiveness of actions resulting from investigations were also considered by the meeting. These included the strengthening of investigators' expertise, the provision of adequate financial resources, the establishment of standardized investigation packages and the installation of infrastructure supporting communications and automation.

5.27 The meeting also discussed the issue of "just culture", which was a term for which a globally acceptable definition had not yet been found. Alternatively, the protection of safety information from inappropriate use was recognized as necessary in order to eliminate the fear of sanctions which, if present, was an obstacle to voluntary reporting and to the transparent exchange of information important to safety. The meeting noted that a legal framework would need to be established in order to create an environment that would nurture an effective reporting system and the exchange of safety information. This framework should be incorporated into national legislation.

English training strategy for ASECNA air traffic controllers

5.28 The meeting noted the process used by ASECNA to elaborate an English language training programme for its air traffic controllers. The aim of the programme was to improve the English language proficiency of the concerned personnel to the operational level (Level 4) in order to comply with the ICAO language proficiency requirements and to rectify the deficiencies and inadequacies identified in the USOAP audit reports.

5.29 The meeting recalled that such a programme should correct all related inadequacies by 5 March 2011. It was mentioned that the longer term strategy of ASECNA would include a continuing training and improvement programme.

5.30 The meeting commended the actions initiated by ASECNA to improve the English language proficiency of its ATC controllers and comply with ICAO requirements. An exchange of views highlighted a successful model of cooperation whereby ATC controllers had opportunities for exchange positions in the AFI Region that would help improve their English language proficiency. The value of cooperation and harmonization among service providers in other areas was further highlighted by the meeting.

SMS implementation in ASECNA Member States

5.31 The meeting noted the status of implementation and the activities conducted and planned in ASECNA member States in relation to the implementation of Safety Management Systems (SMS) for air navigation service providers. ASECNA had defined its SMS implementation strategy in a draft document, with the objective of demonstrating that safety risks involved in the provision of ATM services result in safety performance levels acceptable to the relevant authority. The meeting reviewed the ASECNA SMS strategy that consisted of four components: first, a safety policy and objectives component, with a general policy statement by Member States and the creation of a dedicated Air Navigation Safety Assessment Centre; second, a safety risk management function, which included safety studies to be conducted for significant changes in the provision of ATM services and included safety occurrences processing; third, a safety assurance system that would include monitoring of the safety performance through statistical analysis of safety occurrences and a follow-up mechanism for corrective actions; and fourth, an education and training component.

5.32 The meeting was informed that ASECNA had opted for a “just culture”. The meeting recalled that “just culture” was a term for which a globally acceptable definition has not been found. The concept for which ASECNA had opted was between a non-punitive culture and a culture that sanctions safety breaches. It was agreed that such a concept was complex, but was required to define unacceptable and, therefore, punishable behaviour, as well as the conditions under which exemption from disciplinary action would be applicable, such as in the case of inadvertent errors.

5.33 The meeting agreed that the concept of protection of safety information from inappropriate use (Annex 13 — *Aircraft Accident and Incident Investigation*, Attachment E refers) in the AFI Region was required to support an effective safety reporting system which would be a prerequisite for an effective safety management system.

The ICAO Technical Cooperation Programme in the AFI Region

5.34 The meeting noted the information concerning the implementation of the ICAO Technical Cooperation Programme in the AFI Region and discussed its role as a major partner in assisting States to meet international requirements in terms of safety, security and efficiency of civil aviation.

5.35 The meeting recalled that the overall objective of the ICAO Technical Co-operation Bureau (TCB) was to provide advice and assistance to ICAO Contracting States in the development and implementation of projects across the full spectrum of civil aviation. Its main objective was to improve operational safety, security, efficiency and regularity of air transport with a view to achieving standardization, in accordance with ICAO's Standards and Recommended Practices (SARPs). The meeting noted that in pursuit of this objective, the Technical Cooperation Programme was aligned with ICAO Strategic Objectives and, for the most part, focused on resolving identified safety issues and support of the efforts to eliminate air navigation deficiencies and implement the goals of performance-based navigation (PBN).

5.36 The meeting was presented with the many on-going projects initiated and managed by TCB. The meeting noted that TCB had a long history of association with States in the development and implementation of projects and was able to mobilize and coordinate external resources from donors, the industry and other development partners, as well as internal ICAO resources in the form of financial and technical support

5.37 A number of States expressed their satisfaction with the services provided by TCB. Nevertheless, it was recommended that a survey be conducted by TCB to assess the level of customer satisfaction with its services and to determine what areas require improvement.

5.38 As a result of the foregoing, and in order to help improve the level of safety in the AFI Region, the meeting adopted the following recommendation:

Recommendation 5/5 — The ICAO Technical Cooperation Programme for the AFI Region

That:

- a) States should avail themselves of the vast potential offered through the ICAO Technical Cooperation Programme for meeting their requirements in the various fields of civil aviation; and
- b) ICAO to conduct a survey to assess the level of customer satisfaction with the Technical Co-operation Bureau services and to determine what areas require improvement.

ICAO guidance on issuance of Air Operators' Certificates

5.39 The meeting considered a proposal related to the issue of an Air Operator Certificate (AOC) and to the wet-lease of aircraft as a means to sustain air operations in States that did not have sufficient safety oversight capabilities and its potential effect on the safety of flight operations in the AFI Region. The meeting emphasized that ICAO requirements, in this particular case the requirements for the issue of an AOC, should not be compromised. The meeting was advised that ICAO had posted, on its ICAONET website accessible to States, the draft Fifth Edition of the *Manual of Procedures for Operations Inspection, Certification and Continued Surveillance* (Doc 8335). The new edition included guidance material related to the issue of an AOC, wet lease operations, among others, and to the oversight responsibilities of States, including surveillance of all operations within the State's territory. The meeting agreed that expertise in the regional offices to assist AFI States in their oversight responsibilities, particularly with respect to the issue of an AOC and wet-leasing operations was needed.

5.40 Based on its consideration, the meeting agreed to the following recommendation:

Recommendation 5/6 — Support to States in relation to their oversight responsibilities

That ICAO provide guidance and advice to States in Africa in carrying out their oversight responsibilities, particularly with respect to the issuance of an Aircraft Operator Certificate and wet-leasing operations.

Need for the alignment and development of current aviation safety initiatives: development and implementation of a regional safety reporting tool

5.41 The meeting was presented with a proposal for the development and implementation of a regional safety reporting tool aiming to address the need for safety reporting resulting from the State Safety Programme and the Safety Management System requirements. The meeting's agreement, in principle, was requested for the proposal and for the establishment of a working group to plan this initiative and to drive its implementation. It was envisaged that a regional reporting tool would ensure better alignment of safety initiatives within the region through the identification of regional safety trends and challenges. The analysis of safety data would improve regional safety planning by focussing effort on areas of high risk and therefore high priority.

5.42 The meeting was informed that States would need safety data in order to develop to proactive safety management principles. A system for capturing occurrence data was already available in the form of the Accident/Incident Data Reporting/European Co-ordination Centre for Aviation Incident Reporting System (ADREP/ECCAIRS) system. It was proposed that ICAO Regional Offices participate in the development and implementation of a regional safety reporting tool. The meeting was reminded that Regional Safety Oversight Organisations also needed to be involved as it would be a regional endeavour with the African Civil Aviation Commission potentially coordinating the efforts.

5.43 The meeting was informed that the system needed to have a method of capturing and analyzing hazards and that international organizations should be requested to share their data with States. The meeting was informed that such a database existed in the form of the ADREP/ECCAIRS system as a database for occurrence data and that this system was available to States. The ADREP/ECCAIRS system was operational in two COSCAPs.

5.44 The Secretariat clarified the concept of an acceptable level of safety that is referred to in the State Safety Programme and informed the meeting that, during the AIG Divisional Meeting held from 13 to 18 October 2008, a recommendation was adopted to urge States to adopt an ADREP compatible taxonomy as an aviation occurrence taxonomy and a further recommendation was adopted for States to implement the ADREP/ECCAIRS or a compatible system to operate their safety database, with the goal of facilitating the exchange of safety data between States and between States and ICAO. The meeting was further informed that efforts were being initiated to include "hazards" in the ADREP taxonomy in order to capture hazard identification and occurrence safety data in such a way that the taxonomy would support proactive safety efforts required in a State Safety Programme.

5.45 Based upon the above deliberations, the meeting agreed to the following recommendation:

Recommendation 5/7 — Development and implementation of a regional safety reporting tool

That stakeholders and specifically States agree to implement the Accident/Incident Data Reporting/European Co-ordination Centre for Aviation Incident Reporting System

(ADREP/ECCAIRS) software tool or a compatible software tool based on the ADREP taxonomy or an ADREP compatible taxonomy as a regional safety reporting tool in the AFI Region, and to establish a task team to investigate and recommend the implementation of the reporting tool for the region that would meet all States' needs.

Training strategies for aviation safety in Africa

5.46 The meeting recalled that training constitutes a significant contributing factor for safety and security in air operations. The safety and efficiency of international civil aviation depends primarily on the skills of the personnel that manage, operate and maintain its systems. These professionals must not only possess high individual skills, but in order for an international system to function safely and efficiently, they must also be able to work together as an “international team”. To achieve this goal, it is essential that the team members receive the same high quality training throughout the world. ICAO is committed to working with Contracting States to advance worldwide quality standards in civil aviation training.

5.47 Three areas were considered during this item: the need to harmonize training policies and standards in Africa; the skill shortage in African regulatory bodies and in the African aviation industry; and the implementation of the ICAO TRAINAIR Programme. All three topics were considered by the meeting to be inter-related.

5.48 The meeting acknowledged that the training capacity within Africa was limited and the available training institutions had not always kept pace with the advancements in civil aviation and training technology. As a result, training frequently had to be performed outside of the continent at great cost to government and industry. It was also cited that due to visa restrictions, trainees often could not be sent to locations where the training was being conducted. It was agreed that the training needs of Africa should be met within Africa to the extent possible.

5.49 It was also agreed that in order to determine the training resources required within Africa, the training demand would first need to be assessed. The shortage of skilled personnel in the African aviation industry and in African regulatory bodies had been a cause of serious concern for many years. What was particularly worrisome was that this shortage had recently intensified. African civil aviation faced additional problems due to the migration of aviation experts looking for better opportunities overseas. This was exacerbated by the number of impending retirements of many aviation professionals. Over the past few years African training institutions had not been able to fill these gaps.

5.50 Several steps would be needed in order to determine the demand and develop a strategic training plan. The meeting noted that the first step would be to analyze the training needs within Africa. This analysis would consist of a review of the skills and knowledge needed in the near, mid- and long-term to support civil aviation within the AFI Region. The next step would be to develop a strategic human resource plan that took into consideration the projected retirements of staff, staff loss due to other reasons and the growth of the aviation sector within the region. The combination of the skills and knowledge required, coupled with the projection of human resources required would provide a strategic view of the training resources that would be required over a five to ten year projection period. It was acknowledged that Africa could not afford to have a significant duplication in effort in civil aviation training and it would therefore be necessary to rationalize the capacity of training centres to provide regional training for Africa in select disciplines. The meeting agreed that this also would require strategic planning and cooperation among Contracting States. To facilitate the use of training facilities by multiple States, the meeting acknowledged that training standards between States would need to be harmonized. The meeting also concluded that regulations governing training would need to be reviewed to facilitate the use of multinational training facilities.

5.51 The meeting emphasized the need for quality assurance in civil aviation training. In this regard, the meeting strongly supported the ICAO TRAINAIR Programme as a means to enhance quality, as well as the cost-efficiency, of civil aviation training. However, it was also agreed that additional measures should be taken to enhance quality assurance of training centres in the AFI Region.

5.52 The meeting was informed that members of the TRAINAIR Programme established an active course development unit (CDU), with Course Developers trained to TRAINAIR standards. The CDU prepared Standardized Training Packages (STPs) with support and guidance from the ICAO TRAINAIR Central Unit. The Central Unit's guidance included keeping members advised of available STPs, monitoring the standards of STP materials under preparation and assisting Course Development Units in maintaining the required standards. TRAINAIR members improved the quality of the course materials that they developed through the use of a modern course development methodology. In addition, as a benefit of membership, the members freely shared high quality course materials with other members, thus improving both the quality and cost-efficiency of their training programmes. Course Developers were also trained in the techniques of adapting STPs (prepared at other locations) to meet local conditions.

5.53 The meeting agreed that the TRAINAIR Programme was an effective means to standardize training materials and facilitate coordination and cooperation among training centres. Instead of isolated approaches by training institutions with limited resources producing their own training courses in order to comply with amended or new ICAO SARPs, TRAINAIR members were equipped with the right tools, shared the burden in developing high quality training courses, and received technical backstopping from ICAO when necessary. Therefore, the meeting agreed that the TRAINAIR Programme should figure prominently in training standardization, as well as quality assurance in training.

5.54 Based on its consideration, the meeting agreed to the following recommendation:

Recommendation 5/8 — Training strategies for safety in Africa

That:

- a) States and organizations responsible for training in the AFI Region prepare an inventory of the training that is presently available in their civil aviation training centres;
- b) States review their regulatory frameworks to determine if there are any barriers to the use of training centres in other States and receiving credit for that training;
- c) AFI Comprehensive Implementation Programme (ACIP) in cooperation with AFCAC and other stakeholders organize Pan African Training Coordination Conferences that will serve as the framework for closer cooperation and harmonization of training requirements as well as standardization and quality assurance;
- d) the first Pan African Training Coordination Conference form a working group of training experts to define a master plan for harmonization of training in the AFI Region;
- e) based on an aggregated results of the gap analysis, ACIP include as part of its work programme, the conduct of a training needs analysis. The training needs analysis and States' human resource plans would establish a strategic plan to increase, as well as rationalize training resources within Africa;
- f) States and donors consider reinforcing the capacity of existing training centres;

- g) States and organizations responsible for training in the AFI Region consider membership in the TRAINAIR Programme; and
- h) States and service providers in the AFI Region support and fully participate in the TRAINAIR programme.

Follow-up action system on the implementation of safety related activities – audit results and follow-up by ICAO

5.55 The meeting noted a status report on the activities carried out by ICAO aimed at the correction of safety and security-related deficiencies identified during audits conducted under Universal Safety Oversight Audit Programme (USOAP) and the Universal Security Audit Programme (USAP). These activities were coordinated throughout ICAO in order to prioritize and focus guidance and assistance to States, as well as to mobilize stakeholders and resources. In respect to transparency, the meeting also received a report on ICAO's approach towards States where a significant level of deficiencies had been identified. The meeting recalled, that in the event that such deficiencies were not corrected, the State could be recommended to the ICAO Council for action under Article 54 j) of the Chicago Convention.

5.56 The meeting was advised that in November 2006, the Secretary General established the Audit Results Review Board (ARRB), a high-level Secretariat board to review the specific safety and security histories of individual States referred to it and to serve as a forum for coordination within ICAO. States may be referred to the board for review on the basis of safety or security indicators related to their level of non-compliance during safety and security audits, as well as other safety indicators.

5.57 The meeting noted that once a State's audit results had been reviewed, the board may recommend certain actions to the Secretary General in order to assist the State in addressing deficiencies identified during its safety and/or security audits. The responsibility for carrying out these recommendations was then assigned to the appropriate ICAO office, which was given a deadline by which it should provide a progress report. Once this report was received, the board then determined whether further action was required, whether the same course of action should be maintained, or whether the deficiencies had been resolved.

5.58 Once a State had succeeded in addressing the most serious deficiencies identified in the audit(s), or had complied satisfactorily with the recommendations of the board, it was then removed from the list of those States referred to the board.

5.59 In some cases, the audits had revealed safety concerns that require a timely response. The meeting recalled that as a result of a recommendation of the Directors General of Civil Aviation Conference (DGCA/06), a procedure was approved by the Council to address "significant safety concerns" on a timely basis. A significant safety concern occurs when the audited State allows the holder of an authorization or approval to exercise the privileges attached to it, although the minimum requirements established by the State and by the Standards set forth in the ICAO Annexes are not met, resulting in an immediate safety risk to international civil aviation. If the finding was considered to be a bona fide significant safety concern, a notification letter was sent to the State to take immediate corrective action within a specified time frame (normally two weeks). If a State did not respond appropriately by notifying ICAO of the actions that it would take, the significant safety concern was made available to all Contracting States through the ICAO secure website. In a situation in which a State was not responsive to ICAO recommendations to rectify significant safety concerns, the board may also refer a State to the Council for consideration under the procedure for transparency and disclosure regarding significant

compliance shortcomings with respect to safety related SARPs under Article 54 j) of the Chicago Convention.

5.60 Concern was expressed that some of the measures as described above could be more punitive than helpful. The meeting, however, then recalled Assembly Resolution A36-2, that directed the Council of ICAO “to apply and review, as necessary the procedures to inform Contracting States, within the scope of Article 54 j) of the Chicago Convention, in the case of a State having significant shortcomings with respect to ICAO safety-related SARPs in order for other Contracting States to take appropriate action in an adequate and timely manner.” The meeting agreed that States be referred to the ICAO Council for action under Article 54 j) only as a last resort. It was also recognized that the ARRB was an effective means to assist States by focussing assistance efforts to best meet the needs of States.

Coordination and alignment of assistance provided to African States aimed at enabling them to establish and maintain an effective and sustainable safety oversight system and resolve identified deficiencies – coordination of bilateral and/or multilateral provision of assistance to enhance aviation safety in Africa

5.61 The meeting discussed the need to coordinate and align the assistance provided to States in the AFI Region aimed at enabling States to establish and maintain an effective and sustainable safety oversight system and resolve identified deficiencies. The need for a coordinated approach to the provision of assistance in order to prevent a duplication of assistance programmes, was submitted to the meeting. It was submitted that proper coordination and alignment under the leadership of ICAO, in line with the various Assembly Resolutions, would significantly improve the effectiveness of the assistance support provided and enhance aviation safety in the AFI Region.

5.62 The meeting recognized that there was a lack of effective implementation of the critical elements of a safety oversight system in the majority of the States in the AFI Region and that African States had also been challenged in obtaining adequate assistance from donor States, international and regional organizations. It was also noted that in some cases similar assistance had been provided from various sources resulting in a duplication of effort, causing confusion and thus falling short of expected results. Even when assistance provided by different donors was subject-specific, due to the interdependent nature of the industry there was some overlap and therefore a need for effective coordination to ensure efficiency and sustainability. In general, the lack of appropriate coordination and alignment had resulted in the misuse of resources without achieving the desired results.

5.63 The meeting recalled that, over the last year, ICAO, in coordination with donor States had developed the International Database of Assistance Projects (IDAP) where information relating to assistance being provided to requesting States can be made available to donor States and organizations thus enabling the sharing of information on assistance provided. The database would consist of information such as the nature and type of assistance project, stage of development of the project, implementation period, executing agency and deliverables.

5.64 The meeting was informed that the IDAP had first been set up as a pilot study for the purpose of receiving inputs for its improvement and for determining the nature and the format of the information requested. The second phase of the project was, however, about to begin, whereby donor States, funding agencies and recipient States would be formally requested to provide information on projects for populating the database.

5.65 The meeting agreed that the availability of such information would assist in directing assistance where it was most needed and prevent the duplication of efforts. The meeting was further

advised that this information would be provided and accessible only to donors and recipient States. Audit and other types of sensitive information would not be included in the database.

5.66 The meeting agreed that the main objective for coordinating and aligning assistance provided to States in the AFI Region would be to ensure that individual and collective safety-related aviation assistance programmes would result in better coordinated assistance efforts and would lead to sustained improvements in the global aviation safety undertakings. To this end, sharing of information to improve the coordination process was considered essential so that assistance programmes of individual States would be efficiently and appropriately focused.

5.67 The meeting noted that the role of ICAO in the alignment of assistance would focus on, and facilitate the application of the GASP principles and methodology by States or groups of States in the development of their action plans for resolving deficiencies. In addition, the Committee was also informed that the IDAP also enabled ICAO to identify possible funding sources/partners and facilitate the implementation of projects undertaken either through TCB or other organizations.

5.68 The meeting agreed that for the coordination and alignment process to bear fruit, it was essential for States and donors providing aviation-related assistance in the AFI Region and States receiving such assistance to fully cooperate with ICAO by providing the required information and updating such information in a timely manner. On the basis of this discussion, the meeting adopted the following recommendation:

Recommendation 5/9 — Coordination and alignment of assistance provided

That, as a means to coordinate assistance aimed at resolving identified deficiencies and the overall enhancement of safety in the AFI Region in line with the Global Aviation Safety Plan (GASP) and the AFI Implementation Plan, stakeholders, and specifically recipient States and donors, provide information to ICAO on assistance being provided to States.

Implementation of the ACIP work programme and the development of a suitable and consolidated action plan aimed at improving aviation safety in the AFI Region

5.69 The meeting reviewed the progress made to date on the ACIP work programme and on efforts being made on the part of ICAO and all stakeholders to ensure the effective implementation of the work programme. States in the AFI Region were urged to participate actively in the ACIP work programme and to commit to implement prioritized projects designed to enhance aviation safety in the region. All States, the industry and donors, as stakeholders in the enhancement of safety throughout the world were invited to undertake prioritized projects developed on the basis of GASP as contained in Assembly Resolution A36-1 (Appendix to the Report on Agenda Item 3 refers).

5.70 The meeting noted that, while aviation activities in Africa significantly increased over the years, it's proportion remained less than 3 per cent of the global activities (international and domestic). While Africa had the second highest regional growth rate per year between 2006 and 2007, the traffic still averaged 2.6 per cent of the global civil aviation activities. This in spite of Africa being the second largest continent, inhabited by over 14 per cent of the world population and with the least developed means of surface transport, continent-wide. The meeting recognized that the majority of the African States share similar shortcomings in their ability to establish and manage an appropriate and effective safety oversight system. With less than 3 per cent of the global aviation activity, it was also noted that Africa as a whole had the highest rate of accidents at nine times the world average. The meeting agreed that while aviation could significantly contribute to the social and economic development of a State, the level of aviation activities in most African States implied that safety oversight programmes would not be supported by

funds generated from aviation activities alone and therefore, would have to be subsidized from the States' meagre resources, probably using resources that might have been made available to education, health and other social and development sectors.

5.71 The meeting noted that the AFI Plan was, therefore, launched to work closely with States in the AFI Region and all stakeholders to enhance aviation safety in Africa at the national and regional level and that the work programme and the implementation plan of ACIP, established to give effect to the objectives of the AFI Plan, included a number of activities which were in the process of being implemented, such as GASR workshops, aviation safety seminars/workshops, other seminars or courses and detailed gap analysis exercises. The meeting noted that a consolidated action plan will be developed when the gap analysis had been conducted in the majority or all of the States in the AFI Region and when an overarching long-term plan is established for ensuring the sustainability of the outcomes of the AFI Plan.

5.72 The meeting agreed that once properly developed and managed in an efficient and safe manner, there was no doubt that aviation can significantly contribute to the social and economic development of a State. The meeting recalled that the First Joint Annual Meetings of the AU Conference of Ministers of Economy and Finance and ECA Conference of African Ministers of Finance, Planning and Economic Development (Addis Ababa, 26 to 29 March 2008) recognized that air transport safety and services were one of the challenges that Africa faced in the 21st century. The Committee of Experts that preceded the Joint Meeting agreed *“that transport remained a major challenge to Africa’s development, in particular, air transport services and safety within the continent need urgent improvement, and therefore there was a need to address aviation safety involving not only Ministers responsible for transport, but also those of Finance and Economic Planning. The Ministers adopted the recommendation of the Experts that “ECA should assist African Countries in improving their transport system, including air transport services and safety;” and that “in addition to African Ministers responsible for Transport, those of Finance and Economic Planning should also be involved in transport development on the continent”* was recognized by the Committee as a step forward.

5.73 The meeting noted that ACIP’s work programme was based on the need to assist States in the AFI Region to enhance aviation safety at the national and regional level. To this end, a number of activities had been designed and were in the process of being implemented. It was also noted that the ACIP programme had closely cooperated with the ISSG to conduct a number of GASR workshops in the various subregions of the continent (Abuja, Nigeria, (14 to 16 April 2008), Arusha, Tanzania, (12 to 14 August 2008) and Ouagadougou, Burkina Faso, (11 to 13 November 2008)).

5.74 It was noted that each workshop was followed by the conduct of a detailed gap analysis in each of the States that had participated in the workshops under the umbrella of a regional and/or sub-regional organization. Following the Abuja workshop, a gap analysis of the Banjul Accord Group States (BAG) was conducted from 16 June to 25 July 2008. The results and recommendations of the gap analysis had been studied and priority actions determined. The priority actions were presented to the Council during its 185th Session, resulting in a Decision of the Council for ACIP to assist the BAG States to implement the preliminary priority actions that had been determined.

5.75 With respect to the conduct of gap analysis and follow-up action, the meeting recalled Resolving Clause 4, of Resolution A36-1 that *“Encourages all Contracting States, industry and donors to undertake projects that address the priorities identified through the gap analysis, which is to be consistent with the GASP and other principles laid out in the AFI Plan.”* Among groups where a regional safety organization already exists or where a COSCAP project was in progress, the gap analysis should constitute an effective tool for defining priorities in their action plan/work programme.

5.76 The meeting noted ACIP had conducted a series of GASR Workshops in cooperation with the Industry Safety Strategy Group (ISSG). The meeting further noted that ACIP developed and conducted seminars, workshops and courses on State Safety Programme and Safety Management Systems.

5.77 The meeting noted that ACIP also had developed a programme of seminars, workshops and courses, as applicable, to be delivered in 2009 in the AFI Region. It was also noted that the programme of seminars/workshops, courses was developed to address specific safety related areas such as licensing, flight operations and cabin safety; aircraft certification and airworthiness; air traffic management and ground operations; accident prevention and investigation; transport of dangerous goods by air; and aviation medicine. In this regard, the meeting asked the Secretariat to invite training centres to participate in those activities. It was also indicated that a wide-range of instructor/presenter resources were sought in the conduct of seminars, workshops and training course to benefit from the experiences available and to ensure that skills and knowledge from as wide as possible a source were shared. It was also agreed that the events should be fairly distributed throughout the continent and that States should be encouraged to host the events and indicate their intention to the ICAO Secretariat. On the basis of this discussion, the meeting agreed to the following recommendations:

Recommendation 5/10 — ACIP work programme

That the Special AFI RAN Meeting adopt the AFI Comprehensive Implementation Programme (ACIP) work programme as a tool for the development of a suitable action plan aimed at improving aviation safety in the AFI Region.

Recommendation 5/11 — Gap analysis

That States, regional and subregional organizations implement agreed upon priority projects emanating as a result of the gap analysis conducted, in accordance with the schedule established for their implementation.

Recommendation 5/12 — Priority projects

That Contracting States, industry and donors undertake projects that address priorities identified by ACIP and its partners in line with the Global Aviation Safety Plan (GASP) process as is resolved by Assembly Resolution A36-1.

Follow-up action on the implementation of safety related activities

5.78 The meeting reviewed proposals to ensure that follow-up actions were taken to enable States to build the capability for safety oversight, to resolve identified deficiencies, and to enhance the safety culture within the aviation service providers in Africa in an effective and sustainable manner. The meeting also considered a proposal for a system to support follow-up actions and the coordination necessary to achieve the goals of the AFI Plan. As part of these proposals, a plan was outlined and considered by the meeting for the establishment of Safety Teams at the Regional Office level as well as in States, COSCAPs, and other Regional Aviation Safety Agencies.

5.79 The meeting recalled that, over the years, ICAO had made significant efforts to assist States in the implementation of international requirements. The meeting considered a proposal to establish a continuous monitoring approach as an integral part of implementation projects. The concept of “continuous monitoring” would be based on the establishment of a system that would continuously monitor the effectiveness and sustainability of the assistance provided at a national or regional level. The

responsibility for continuous monitoring would be that of the Regional Offices and would be executed within a structured and pre-established system. To this end, the meeting was informed that ICAO is in the process of establishing Regional Office Safety Teams to be responsible for ensuring the continued implementation of the AFI Plan beyond 2011, including the continuous monitoring and follow-up of implementation projects in the AFI Region.

5.80 The meeting agreed that the value of assistance programmes and implementation of projects mainly depended upon their effectiveness and sustainability over a long period. The meeting also agreed that the establishment of a system and procedures for follow-up and continuous implementation would ensure the sustainability of assistance provided while also enabling the continuous improvement of safety concerns addressed through the assistance provided.

5.81 With respect to the establishment of Safety Teams in States and Regional Offices, it was noted that the establishment of Safety Teams at all levels is a continuation of the GASP process alluding to the fact that all stakeholders should be involved in the effort to give effect to GASP and enhance aviation safety. On the basis of this discussion, the meeting agreed to the following recommendations:

Recommendation 5/13 — Follow-up and continuous monitoring of the sustainability of implementation projects

That Regional Office Safety Teams be established in the AFI Region to ensure the continuity of the AFI Comprehensive Implementation Programme (ACIP) and to follow-up and continuously monitor the effectiveness and sustainability of implementation projects.

Recommendation 5/14 — Establishment of complementary safety teams

That Safety Teams be established by States, COSCAPs and other Regional Aviation Safety Agencies in the AFI Region to complement and work closely with the ICAO Regional Office Safety Teams.

Establishment of teams of inspectors in Dakar and Nairobi Regional Offices

5.82 The meeting considered a proposal to establish teams of inspectors in the ICAO Regional Offices in Dakar and Nairobi, with the aim of responding quickly to the needs of direct assistance to States in the field of safety oversight in the areas of airworthiness, aircraft operations and aerodrome certification. While the proposal indicated that it did not exclude the possibility of establishing regional organizations, it recalled that the complexity inherent in the process leading to an effective implementation of these organizations took a period of time.

5.83 The proposal consisted in establishing teams of inspectors in Dakar and Nairobi Regional Offices with the objective of assisting States that so requested to discharge their safety oversight responsibilities, including the conduct of inspections or audits prior to the issuance or renewal of airworthiness certificates, personnel licenses, air operator certificates and the certification of aerodromes.

5.84 While appreciating the intent of the proposal the meeting agreed that recommendations and actions already taken by the Committee satisfactorily addressed the intent of the proposal and therefore there would not be a need at this time to accept the recommendations contained in the proposal.

APPENDIX

GLOBAL SAFETY INITIATIVES AND OBJECTIVES

GSI-1: Consistent Implementation of International Standards and Industry Best Practices (<i>Note.— Objectives to be achieved by 12/2015</i>)*				
Objectives				
1a	States implement ICAO SARPs and best practices consistently.			
1b	Perform gap assessment for those States that cannot comply. Establish plans to reach desired compliance, including international support where necessary.			
1c	Compliance with international SARPs is assessed on a continuing basis through ICAO USOAP and other equivalent means of assessment. Coordinated international support is being provided where necessary.			
Benefits				
<ul style="list-style-type: none"> • Regulatory framework that is robust and able to meet safety challenges. • Uniformity with other States improves safety and efficiency. • International recognition. 				
Strategy				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 1a:			
	Objective 1b:			
	Objective 1c:			
	TASKS			
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. • Develop prioritized recommended actions. • Develop an action plan. 			
Medium term	<ul style="list-style-type: none"> • Implement the action plan. 			09/2010**
References	GSI-1; and Focus Area 1 of the Roadmap			

**Note.— Achieve a minimum of Level 3 on the maturity scale.*

** *Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.*

****Note.— Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.*

GSI-2: Consistent Regulatory Oversight <i>(Note.— Objectives to be achieved by 12/2015)*</i>				
Objectives				
2a	States ensure that their Regulatory Authority is independent in the conduct of its safety functions, competent and adequately funded. Dec 2015			
2b	States establish appropriate systems to ensure continued effectiveness of their regulatory function.			
Benefits				
<ul style="list-style-type: none"> • States can license and certify in accordance with ICAO Standards and best practices. • States can conduct safety oversight of all air operators and approved maintenance organizations. • States can oversight foreign air operations in their territories. • States can resolve safety issues in a timely manner. 				
<i>Strategy</i>				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 2a:			
	Objective 2b:			
TASKS				
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. 			
	<ul style="list-style-type: none"> • Develop prioritized recommended actions. • Develop an action plan. 			09/2010**
	<ul style="list-style-type: none"> • Implement the action plan. 			01/2011***
References	GSI-2; and Focus Area 2 of the Roadmap			

*Note.— Achieve a minimum of Level 3 on the maturity scale.

** Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.

***Note.—Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.

GSI-3: Effective Errors and Incidents Reporting (<i>Note.— Objectives to be achieved by 09/2013</i>)*				
Objectives				
3a	States introduce legislative changes to support the “just culture”, encourage open reporting systems and protect data collected solely for the purpose of improving aviation safety.			
3b	ICAO implements review of States’ activities to identify gaps in their legislative action to encourage open reporting systems. Develop a plan to address gaps.			
3c	Collate regional safety data.			
3d	Implement international sharing of data/global data reporting system.			
Benefits				
<ul style="list-style-type: none"> • Encourages personnel to report errors. • Required to implement a proactive and predictive approach towards safety management. 				
<i>Strategy</i>				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 3a:			
	Objective 3b:			
	Objective 3c:			
	Objective 3d:			
	TASKS			
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. • Develop prioritized recommended actions. • Develop an action plan. 			
Medium term	<ul style="list-style-type: none"> • Implement the action plan. 			09/2010**
References	GSI-3; and Focus Area 3 of the Roadmap			

**Note.— Achieve a minimum of Level 3 on the maturity scale.*

** *Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.*

****Note.—Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.*

GSI-4: Effective Incident and Accident Investigation (<i>Note.— Objectives to be achieved by 12/2013</i>)*				
Objectives				
4a	States implement ICAO Annex 13 principles and the introduction of, or access to, an adequately funded, professionally trained, independent and impartial investigative body. Action is taken on recommendations.			
4b	States institute a legal framework for the protection of safety data, with the purpose of accident prevention, not assignment of blame.			
4c	Implement international cooperation and information sharing of accidents and incidents.			
Benefits				
<ul style="list-style-type: none"> • Encourages personnel to report errors. • Required to implement a reactive, proactive and predictive approach towards safety management. 				
Strategy				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 4a:			
	Objective 4b:			
	Objective 4c:			
TASKS				
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. • Develop prioritized recommended actions. • Develop an action plan. 			
				09/2010**
Medium term	<ul style="list-style-type: none"> • Implement the action plan. 			01/2011***
References	GSI-4; and Focus Area 4 of the Roadmap			

**Note.— Achieve a minimum of Level 3 on the maturity scale.*

** *Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.*

****Note.— Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.*

GSI-5: Consistent Coordination of Regional Programmes (<i>Note.— Objectives to be achieved by 12/2013</i>)*				
Objectives				
5a	Design regional mechanisms and build on existing ones in order to foster consistency.			
5b	Assign priority to action to regions on the basis. Sept 2013			
Benefits				
<ul style="list-style-type: none"> • Rationalization of resources. • More effective implementation of action plans. • Sustainable. 				
<i>Strategy</i>				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 5a:			
	Objective 5b:			
TASKS				
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. • Develop prioritized recommended actions. • Develop an action plan. 			
				09/2010*
				01/2011***
Medium term	<ul style="list-style-type: none"> • Implement the action plan. 			
References	GSI-5; and Focus Area 5 of the Roadmap			

**Note.— Achieve a minimum of Level 3 on the maturity scale.*

** *Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.*

****Note.— Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.*

GSI-6: Effective Errors and Incidents Reporting and Analysis in the Industry <i>(Note.— Objectives to be achieved by 09/2013)*</i>				
Objectives				
6a	Industry commits to a “Just Culture” of reporting all safety-related and potential safety issues without fear of reprimand to involved parties.			
6b	Identify and implement common metrics and descriptors of precursor events needed to enable adoption of a proactive approach to managing risk.			
6c	Establish and integrate across the industry shared incident/error databases. Demonstrate and disseminate the benefits of open reporting.			
Benefits				
<ul style="list-style-type: none"> • Enables a proactive and predictive approach towards managing safety. • Prerequisite to implement a Safety Management System. 				
<i>Strategy</i>				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 6a:			
	Objective 6b:			
	Objective 6c:			
	TASKS			
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. • Develop prioritized recommended actions. • Develop an action plan. 			
Medium term	<ul style="list-style-type: none"> • Implement the action plan. 			09/2010**
References	GSI-6; and Focus Area 6 of the Roadmap			

*Note.— Achieve a minimum of Level 3 on the maturity scale.

** Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.

***Note.—Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.

GSI-7: Consistent Use of Safety Management Systems (SMS) (<i>Note.— Objectives to be achieved by 12/2015</i>)*				
Objectives				
7a	SMS is mandated across all sectors and disciplines of the industry.			
7b	Develop a plan for incorporation of SMS into audit processes.			
7c	Develop audit processes to assess operation of SMS function.			
7d	Implement review of SMS during audits.			
7e	Define interface points between industry focus areas and develop a plan for SMS programme integration across all interfaces.			
Benefits				
<ul style="list-style-type: none"> • Enables a proactive and predictive approach towards managing safety. • Prerequisite to implement an effective Safety Management System. 				
Strategy				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 7a:			
	Objective 7b:			
	Objective 7c:			
	Objective 7d:			
	Objective 7e:			
	TASKS			
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. • Develop prioritized recommended actions. • Develop an action plan. 			
Medium term	<ul style="list-style-type: none"> • Implement the action plan. 			09/2010**
References	GSI-7; and Focus Area 7 of the Roadmap			

**Note.— Achieve a minimum of Level 3 on the maturity scale.*

** *Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.*

****Note.— Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.*

GSI-8: Consistent Compliance with Regulatory Requirements <i>(Note.— Objectives to be achieved by 09/2013)*</i>				
Objectives				
8a	With full management support, execute independent assessment and gap analysis within the industry of regulatory compliance to address areas of non-compliance.			
8b	Perform regular independent audits of operational safety to assess ongoing compliance across the industry.			
Benefits				
<ul style="list-style-type: none"> • A safe system can only be attained when the industry complies with the State regulations, which are fundamentally based upon the ICAO Standards and Recommended Practices (SARPs). • Continued and audited compliance with State regulations ensures continued improvement in safety, as these regulations are amended to bring and keep them in full compliance with ICAO SARPs, which are updated to reflect the evolving aviation safety requirements. 				
Strategy				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 8a:			
	Objective 8b:			
	TASKS			
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. • Develop prioritized recommended actions. • Develop an action plan. 			
Medium term	<ul style="list-style-type: none"> • Implement the action plan. 			09/2010**
References	GSI-8; and Focus Area 8 of the Roadmap			

*Note.— Achieve a minimum of Level 3 on the maturity scale.

** Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.

***Note.—Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.

GSI-9: Consistent Adoption of Industry Best Practices (<i>Note.— Objectives to be achieved by 09/2013</i>)*				
Objectives				
9a	Improve the structures (through management commitment) for maintaining knowledge of best practices and identify future developments in best practices.			
9b	With industry openly sharing information regarding the benefits of best practices, implement performance benchmarking of dissemination consistency.			
Benefits				
<ul style="list-style-type: none"> • Enables the incorporation of up-to-date industry best practices, which represent the application of lessons learned by the international aviation industry, through the ongoing acquisition and maintenance of best practices knowledge. • Benchmarking of the dissemination of best practices allows the identification of those operators, States or regions where additional efforts are needed to increase best practice adoption. • Adoption of these best practices will improve overall safety and/or efficiency. 				
Strategy				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 9a:			
	Objective 9b:			
	TASKS			
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. • Develop prioritized recommended actions. • Develop an action plan. 			
Medium term	<ul style="list-style-type: none"> • Implement the action plan. 			09/2010**
References	GSI-9; and Focus Area 9 of the Roadmap			

**Note.— Achieve a minimum of Level 3 on the maturity scale.*

** *Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.*

****Note.—Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.*

GSI-10: Alignment of Industry Safety Strategies <i>(Note.— Objectives to be achieved by 09/2013)*</i>				
Objectives				
10a	Design a mechanism for coordination and sharing of safety strategies.			
10b	Coordinate and share safety strategies, seeking to achieve alignment and minimize duplication.			
Benefits				
<ul style="list-style-type: none"> • The effectiveness of efforts dedicated to improve aviation safety is increased by aligning strategies, goals and methods, especially when integrated solutions are available at global or regional levels. • Duplication of efforts is minimized. 				
<i>Strategy</i>				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 10a:			
	Objective 10b:			
TASKS				
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. • Develop prioritized recommended actions. • Develop an action plan. 			
Medium term	<ul style="list-style-type: none"> • Implement the action plan. 			09/2010**
References	GSI-10; and Focus Area 10 of the Roadmap			

*Note.— Achieve a minimum of Level 3 on the maturity scale.

** Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.

***Note.—Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.

GSI-11: Sufficient Number of Qualified Personnel <i>(Note.— Objectives to be achieved by 12/2015)*</i>				
Objectives				
11a	Identify requirements for sustaining aviation safety against projected growth of commercial aviation.			
11b	Implement resource plans to deliver appropriate numbers of qualified people.			
11c	Establish audit processes to confirm that people resource plans will deliver the appropriate numbers.			
Benefits				
<ul style="list-style-type: none"> The recruitment, training and retention of technically qualified staff, including those engaged in regulatory oversight functions, ensures the potential for growth in commercial aviation while maintaining safety levels. A core workforce of well trained competent staff is a prerequisite for safety. 				
<i>Strategy</i>				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 11a:			
	Objective 11b:			
	Objective 11c:			
TASKS				
Short term	<ul style="list-style-type: none"> Select the subregion (e.g. Banjul Accord) or State for analysis. Identify key stakeholders. Outline the safety strengths and enablers. Identify the existing and emerging risks. Perform a gap analysis. Develop prioritized recommended actions. Develop an action plan. 			
Medium term	<ul style="list-style-type: none"> Implement the action plan. 			09/2010**
References	GSI-11; and Focus Area 11 of the Roadmap			

*Note.— Achieve a minimum of Level 3 on the maturity scale.

** Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.

***Note.—Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.

GSI-12: Use of Technology to Enhance Safety (<i>Note.— Objectives to be achieved by 12/2015</i>)*				
Objectives				
12a	Define proven technology gaps. Industry works together to identify areas where technology might provide significant safety benefits.			
12b	Deploy proven technologies that have been developed to enhance safety.			
12c	Integrate measures to close technology gap.			
Benefits				
<ul style="list-style-type: none"> • Technological advances contribute significantly to major improvement in safety. • The purchase, installation and maintenance of advanced technologies increases strongly the potential for safety improvement, but only when carefully planned, making use of appropriate technology and taking in consideration all regional factors. 				
<i>Strategy</i>				
	TIME FRAME FOR OBJECTIVES	START-END	RESPONSIBILITY	STATUS
	Objective 12a:			
	Objective 12b:			
	Objective 12c:			
	TASKS			
Short term	<ul style="list-style-type: none"> • Select the subregion (e.g. Banjul Accord) or State for analysis. • Identify key stakeholders. • Outline the safety strengths and enablers. • Identify the existing and emerging risks. • Perform a gap analysis. • Develop prioritized recommended actions. • Develop an action plan. 			
				09/2010**
Medium term	<ul style="list-style-type: none"> • Implement the action plan. 			01/2011***
References	GSI-12; and Focus Area 12 of the Roadmap			

**Note.— Achieve a minimum of Level 3 on the maturity scale.*

** *Note.— Accomplish development of action plan for States/sub-regional groups no later than 09/2010. Some States/subregional groups may complete this process as early as 09/2009.*

****Note.—Implementation begins for States in the AFI Region no later than 01/2011. Some States/subregional groups will begin 10/2009.*

Agenda Item 6: Development of a set of comprehensive work programmes in the air navigation field, aimed at improving efficiency of the air navigation system (Efficiency Committee)**Introduction**

6.1 Under this agenda item, the meeting addressed a wide range of issues related to improving the safety and efficiency of the air navigation system. Subjects addressed included development of a performance-based approach to air navigation planning, implementation of performance-based navigation (PBN) in enroute and terminal airspace, implementation of required navigation performance (RNP) approaches and development of a follow-up work programme related to the implementation of reduced vertical separation minimum (RVSM). The RVSM work programme's objectives are to improve communications and ensure effective and adequate monitoring. Other issues considered critical to the region which were discussed in detail included aerodromes and ground aids (AGA) and aerodrome certification; meteorology (MET) and quality management issues; world geodetic system-1984 (WGS-84); electronic terrain and obstacle data (eTOD); effectiveness of planning and implementation regional groups (PIRGs); pandemic planning preparedness; harmonization and integration of sub-regional very small aperture terminal (VSAT) networks supporting aeronautical communications; frequency spectrum, and several other technical issues related to an improved and more efficient air navigation system. Major air navigation deficiencies identified through the regional planning processes were also addressed. Additionally, broad agreement was reached on how to harmonize the work of the Africa-Indian Ocean (AFI) Region with other regions and improve planning processes.

Performance-based planning framework

6.2 The meeting recalled that the 36th Session of the ICAO Assembly expressed satisfaction with the efforts underway toward implementation of a performance-based approach to implementation planning at the regional level, agreeing that interoperability, harmonization and uniformity in the global air traffic management (ATM) system were critical issues in which ICAO should continue to take a leading role and continue with its efforts toward ensuring a common approach to development and implementation of a global ATM system.

6.3 In this respect, the meeting supported the need to adopt a performance-based approach to regional and national air navigation planning in the AFI Region, which was aligned with the *Global Air Navigation Plan* (Doc 9750, GANP). The meeting noted that the GANP was developed to assist States and regional planning groups in identifying the most appropriate operational improvements to achieve near- and medium-term benefits on the basis of current and foreseen aircraft capabilities and ATM infrastructure while the *Global Air Traffic Management Operational Concept* (Doc 9854) provided the overall vision of a performance based ATM system.

6.4 The meeting was made aware that several other ICAO documents were available to support the planning process including the *Manual on Air Traffic Management System Requirements* (Doc 9882) which converted the overall vision of the operational concept into material specifying the functional evolution of ATM, and the *Manual on Global Performance of the Air Navigation System* (Doc 9883) which provided a broad overview of the tasks that needed to be undertaken to transition to such a system. This approach would support the further evolution of the communication, navigation surveillance/air traffic management (CNS/ATM) transition plans that were already in place, which should be integrated with the performance-based approach to planning.

6.5 The meeting was presented with a series of performance framework forms (PFF) that the meeting agreed to refer to the AFI Planning and Implementation Regional Group (APIRG). APIRG would use the PFFs to identify individual parties responsible for achieving the performance objectives as well as to establish timeframes for implementation. It was agreed that APIRG should also implement a monitoring mechanism to follow-up on the PFFs developed by the RAN meeting and any future PFFs developed through the regional planning process.

6.6 The meeting recalled that the AFI Region had developed an extensive document to guide planning and implementation of air navigation facilities and services (CNS/ATM Implementation Plan for the AFI Region (Doc 003)). On this basis, it was agreed that the performance objectives and the associated PFFs developed by the meeting and any other PFFs developed by APIRG, should be integrated into Doc 003 which should then serve as an integrated planning document.

6.7 In addition to the above, the meeting stressed that States would have to develop national plans, using the PFFs, harmonized and aligned with the regional PFFs, and that associated tasks should include the necessary, detailed actions to successfully achieve national performance objectives.

6.8 Considering the need to have a clearly defined strategy to implement ATM systems as well as the need to align work programmes of the States, regions and ICAO Headquarters, the meeting agreed to the following recommendations:

Recommendation 6/1 — Regional performance framework

That:

- a) APIRG adopt the performance-based framework for air navigation systems planning as detailed in the report of this meeting, identifying regional performance objectives and utilizing the performance framework forms (PFFs);
- b) APIRG develop additional PFFs to meet new performance objectives as necessary; and
- c) the performance objectives and the associated PFFs adopted by the meeting and any other PFFs developed by APIRG, be integrated into the CNS/ATM Implementation Plan for the AFI Region (Doc 003) which should then be updated to serve as an integrated planning document for the AFI Region.

Recommendation 6/2 — National performance framework

That States adopt a national performance-based framework for air navigation systems planning as detailed in the report of this meeting, identifying national performance objectives, aligned with the regional performance objectives, utilizing the performance framework forms.

6.9 In follow-up to the discussion, the meeting agreed that APIRG should review its structure to determine if changes would be beneficial in light of the performance-based approach to air navigation planning being proposed. The meeting also felt that the structure and organization of regional air navigation plans (ANPs) should be reviewed on a global basis with a view to aligning the regional ANPs with the Global Air Navigation Plan and the performance-based approach to planning. The meeting therefore, agreed to adopt the following recommendations:

Recommendation 6/3 — Re-organization of the regional air navigation plan

That ICAO, at the global level and in coordination with regional offices, review the regional air navigation plans and propose changes to their structure, organization and format to ensure alignment of the regional air navigation plans with the Global Air Navigation Plan and the performance-based approach to air navigation planning.

Recommendation 6/4 — Re-organization of APIRG

That APIRG review its working methods and organization and consider making adjustments to better support the ICAO performance framework in its planning and implementation activities.

6.10 The International Air Transport Association (IATA) presented the meeting with its operational requirements for the AFI Region which addressed very high frequency radio coverage, automatic dependent surveillance (ADS), controller pilot data link communication (CPDLC), global navigation satellite systems (GNSS) and performance based navigation (PBN). The meeting noted that the operational requirements identified by IATA would be taken by the Efficiency Committee during its deliberations and that recommendations on most of the issues would be made which would require APIRG action. Furthermore, it was agreed that the operational requirements presented by IATA should be referred to APIRG by the Secretariat.

Implementation of the new ICAO model flight plan form

6.11 The meeting recalled that in May 2008, Amendment No. 1 to the Fifteenth Edition of the *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444) was approved. The amendment encompassed a substantial revision to the ICAO flight plan as contained in Appendix 2 to the PANS-ATM. Furthermore, the impact of the modifications to flight data processing systems would vary from one air navigation service provider and State to another depending on their data requirements, the level of validation necessary and the types of systems in place.

6.12 As implementation of this proposed amendment would require significant effort and lead time for States, air navigation service providers and aircraft operators, and because the change-over should be coordinated with all stakeholders, the planning and implementation regional groups (PIRGs) should develop coordinated transition plans with common strategies and mitigation measures. The meeting therefore agreed to a basic checklist in the form of a PFF, to be followed by States and used by APIRG to monitor transition efforts and developed the following recommendation:

Recommendation 6/5 — Implementation of the new ICAO model Flight Plan Form

That:

- a) APIRG adopt the ATM Performance Objective: Transition to the New ICAO Model Flight Plan Form as contained in the performance framework form (PFF) in Appendix A to the Report on Agenda Item 6; and
- b) States coordinate, through APIRG, their transition to the new ICAO flight plan and follow the checklist in the PFF in Appendix A to the Report on Agenda Item 6 in order to ensure harmonization and orderliness in their transition to the new flight plan by 15 November 2012.

Safety Assessments and reduced vertical separation minimum (RVSM)

6.13 The meeting noted with satisfaction that RVSM had been safely and successfully implemented in the AFI Region on 25 September 2008 and recognized that this would serve to enhance efficiency, reduce workload and facilitate improved flight profiles resulting in fuel savings while at the same time reducing CO₂ emissions by allowing the use of more efficient flight levels and more direct routes.

6.14 The meeting acknowledged the efforts made by States and international organizations (i.e. ARMA, ASECNA, IATA, IFALPA, IFATCA, ICAO), over many years that led to the successful implementation of RVSM in the AFI Region.

6.15 When examining the safety implications of RVSM and the requirements to ensure that safety levels were maintained, the meeting recalled that subsequent to the implementation of RVSM in other regions, yearly follow-up safety assessments showed that the overall collision risk was exceeding the target level of safety (TLS) of 5×10^{-9} fatal accidents per aircraft flight hour. However, the meeting recognized, as had other ICAO regions, supported by hazard analyses, that the higher collision risk was caused primarily by controller/pilot errors and other contingencies that would have occurred at the same rates whether RVSM was implemented or not.

6.16 In light of this, it was agreed that except for technical altimetry performance, a different, more robust and realistic approach should be followed by the AFI Region for the monitoring of RVSM operations, which should utilize best practices of other regions as well as safety management principles.

6.17 In this respect, the meeting noted that in the AFI Region, RVSM implementation planning had been conducted under the framework of a comprehensive plan known as the RVSM pre-implementation safety case (PISC) with the active participation of the AFI Regional Monitoring Agency (ARMA), supported by Air Traffic Navigation Services (ATNS) of South Africa, which managed the PISC and maintains the RVSM database as well as carry out other monitoring activities.

6.18 In the context of the above and considering the effectiveness of the comprehensive RVSM implementation plan incorporating safety management principles, the meeting agreed on the following recommendation:

Recommendation 6/6 — Operational safety assessment methodology

That APIRG adopt the ATM Performance Objective: Operational Safety Assessment Methodology as contained in the performance framework form in Appendix B to the Report on Agenda Item 6.

6.19 Noting the continuing communication difficulties in certain parts of the AFI Region, the meeting agreed to take advantage of the momentum gained through the implementation of RVSM and the work of the RVSM Task Force and its Project Management Team (PMT). In this respect, it was recalled that the PMT began tracking and promoting the investigative follow-up of errors and deviations brought to its attention, on a regular basis, as a result of its efforts to implement RVSM.

6.20 The meeting was informed that the PMT had also been working on these matters through weekly teleconferences organized by the ATM Section at ICAO Headquarters in Montreal. This weekly

focus on deficiencies, errors and deviations had resulted in a decline in reported incidents and communications deficiencies.

6.21 It was noted that the PMT was made up of representatives from several States and international organizations with support from ICAO Headquarters as well as the ATM Regional Offices in Dakar and Nairobi. In addition, the PMT had been fortunate to have participating in the weekly teleconferences, representatives from Angola and the ATS provider from the Democratic Republic of Congo (DRC) and the Regie Des Voies Aeriennes, (RVA). The meeting was informed that in the opinion of the PMT, great strides had been taken toward enhancing the safety of operations however, the PMT also believed that with consistent follow-up there could be greater safety gains.

6.22 The meeting was informed that the PMT during the weekly teleconferences had been experimenting with very good results, with a low-cost web application that allowed members to view each other's screens thus allowing presentations to be made remotely. The application which included voice over internet protocol (VOIP) cost less than USD\$50 a month with unlimited meeting scheduling. In this context, the meeting agreed that funding avenues should be pursued in order to minimize costs and maximize benefits and participation.

6.23 The meeting agreed that the PMT should be renamed as the Tactical Action Group (TAG), with terms of reference and a work programme. It was agreed that the group, through its by-weekly teleconferences, should tactically address any deficiencies or operational errors identified. The meeting therefore agreed to the following recommendation:

Recommendation 6/7 — Establishment of a Tactical Action Group (TAG)

That:

- a) a Tactical Action Group (TAG) be created in the AFI Region with the Terms of Reference and Work Programme outlined in Appendix C to the Report on Agenda Item 6; and
- b) States as a matter of priority make all efforts to assist and comply with requests from the TAG group.

6.24 In the post-RVSM implementation period, it was noted that data would continue to be collected and analyzed in order to maintain the highest safety levels. This data would be provided to ARMA by operators, States, other regional monitoring agencies and stakeholders. ARMA, on a yearly basis would report on the safety level of RVSM operations. In this context, the meeting recalled the importance of providing data to the ARMA for analyses and reporting and stressed the need for all States to meet their obligations in this respect.

6.25 The meeting was pleased to note that the results of the latest data analysis carried out by ARMA showed that there had been a steady decrease in the collision risk in the region. The meeting accepted that this improvement was due to the RVSM National Safety Plans and the feedback and follow-up carried out by ARMA and the PMT.

6.26 The meeting was advised that operational errors leading to large height deviations were critical contributors to the erosion of safety levels. For this reason the meeting agreed with a proposal by ARMA to establish an RVSM scrutiny group early in 2009 to assist with the management of operational errors.

6.27 The meeting was informed of the scope of activities carried out by ARMA in support of RVSM implementation and proposed follow-up activities as follows:

- a) maintain a database of State RVSM operational approvals (operators/aircraft);
- b) monitor aircraft height-keeping performance and the occurrence of large height deviations reporting results appropriately;
- c) conduct safety assessments and report results appropriately;
- d) monitor operator compliance with State approval requirements; and
- e) initiate necessary remedial actions if RVSM requirements are not met.

6.28 On the basis of the above, the meeting agreed that in order for the AFI Region to meet its obligations toward continuous monitoring and regular assessment of the safety level in RVSM airspace, a structured approach should be implemented and agreed to the following recommendation:

Recommendation 6/8 — Reduced vertical separation minimum (RVSM) monitoring and follow-up activities

That AFI States support:

- a) the long-term submission of State RVSM operationally approved aircraft to the AFI Regional Monitoring Agency (ARMA);
- b) provision of long-term support to the AFI height monitoring programme;
- c) long-term collection of safety assessment data;
- d) the availability of personnel to fulfil the role of RVSM National Programme Managers;
- e) the establishment of the ARMA scrutiny group in 2009; and
- f) measures to reduce the large number of horizontal incidents in the AFI Region.

6.29 The meeting noted that as required by the AFI RVSM safety policy, a Post Operational Safety Case (POSC) would be completed to ensure that all the PISC aspects had been met and that RVSM was meeting safety expectations.

Implementation of performance-based navigation (PBN)

6.30 The meeting recalled that APIRG, at its sixteenth meeting held in Rubavu, Rwanda from 19 to 23 November 2007, discussed various issues related to the implementation of PBN in the AFI Region in the context of a performance-based global ATM system, taking into consideration the benefits of PBN, recent actions by ICAO at the global and regional levels, and in consideration of the role that APIRG, the States and stakeholders should play.

6.31 The meeting noted that the Global Air Navigation Plan contained Global Plan Initiatives (GPIs) which were aimed at taking advantage of advanced aircraft capabilities however, continued development of diverging navigation specifications would result in negative safety and efficiency impacts and penalties to States and industry. In this respect, the meeting urged States and aircraft operators to use the common navigation specifications contained in the Manual on Performance Based Navigation (PBN, Doc 9613).

6.32 The meeting recalled Assembly Resolution A36-23 which was adopted to support implementation of PBN globally. The resolution urged all States to implement area navigation (RNAV) and required navigation performance (RNP) routes and approach procedures in accordance with the PBN Manual.

6.33 The meeting recalled that as an early step toward PBN implementation in the AFI Region, one pair of RNP 10 routes was implemented in May 2006 with excellent results. These routes, informally known as Red Carpet I (RC I) routes, were the first long-range AFI RNAV routes anchored by points at the South Africa/Botswana border and the Mediterranean coast in Algeria and Tunisia. A second pair of RNAV RNP 10 (RNAV 10) routes was implemented in 2007. These routes were also serving the southern African and European Regions but on a more easterly course than RC I.

6.34 The meeting agreed that the current RNP 10 routes should be seen as an interim step toward a more appropriate solution that would likely see the implementation of RNP 4 in oceanic and remote areas and RNAV 5 in more dense airspace. In an effort to continue the progress achieved through PBN in the near term, current efforts would continue toward implementation of additional RNP 10 routes in a generally east-west direction.

6.35 As a result of the foregoing and to support a structured approach to PBN implementation, the meeting agreed that high-level performance objectives were required. On this basis, the meeting agreed to the following recommendation to guide the work of APIRG on PBN:

Recommendation 6/9 — Performance-based navigation (PBN) performance objectives

That APIRG adopt the Performance Objectives as contained in the performance framework forms in Appendix D to the Report on Agenda Item 6:

- a) optimization of the air traffic services (ATS) route structure in en-route airspace;
- b) optimization of the ATS route structure in terminal airspace; and
- c) implementation of vertically guided required navigation performance (RNP) approaches.

That States develop their national action plans to meet the requirements of the regional performance framework forms, as a matter of priority to meet the PBN implementation goals established by Assembly Resolution A36-23.

Establishment of a flight procedures office (FPO)

6.36 The meeting agreed that one of the most promising aspects of PBN was related to the implementation of new instrument flight procedures, which would take advantage of databases on aircraft. However, quality assurance in the flight procedure design process would take on added

significance for PBN-based procedures. The meeting recognized that many States in the AFI Region lacked the expertise to establish a sustainable internal procedure design capability, meeting the requirements of the *Procedures for Air Navigation Services – Aircraft Operations* (PANS-OPS, Doc 8168) and to meet their responsibilities in accordance with Annex 15 with respect to the quality of their instrument flight procedures.

6.37 The meeting was made aware that most ICAO regions suffered the same difficulties with respect to the new types of flight procedures and that ICAO was working to establish flight procedures offices (FPO) in each region to assist and accelerate the implementation of PBN.

6.38 The meeting noted that an FPO would employ best practices in training, automation and quality assurance to address the procedure design needs of States. It would be managed by a full-time ICAO employee whose position would be funded from the FPO funding sources. The meeting agreed that location, size and initial operational capability date of the FPO should be based on demand for the services and the level of financial support extended by the States and international organizations for start-up and initial operating costs.

6.39 The objectives of the FPO would be to foster implementation of flight procedures, developed with the appropriate quality systems, especially PBN and vertically guided instrument approach procedures by:

- a) assisting those States with sufficient procedure design requirements to establish a sustainable internal procedure design capability to meet the requirements of PANS-OPS and their responsibility under Annex 15 for the quality of their procedures;
- b) providing the appropriate level of technical expertise necessary to enable States that do not have the density of procedures necessary to sustain an internal procedure design capability, to meet their responsibilities under Annex 15 and PANS-OPS; and
- c) providing a vehicle to improve quality in the States' procedure design process through access to procedure design automation solutions and associated data storage.

6.40 The meeting was presented with an offer from ASECNA to accommodate the ICAO FPO within its organization. The meeting welcomed the offer from ASECNA. France also informed the meeting that the French DGAC would be willing to provide support to the FPO when established.

6.41 The meeting supported the concept of an FPO however, ICAO was requested to provide additional detail on the concept and to circulate a request to States for proposals to support the establishment of the FPO, taking into consideration the need for complementary capacity within States in order for them to discharge their regulatory responsibilities with respect to issues associated with implementation of RNP approaches.

6.42 On the basis of the above, the meeting, while noting that implementation of PBN in the region was important and would yield safety, efficiency and environmental benefits, agreed to the following recommendation:

Recommendation 6/10 — Support for establishment of an Africa ICAO flight procedures office

That:

- a) States and international organizations support the implementation of an AFI flight procedures office (FPO); and
- b) ICAO disseminate a letter, with supporting documentation, inviting interested States and international organizations to submit proposals for establishment and hosting of the FPO.

World geodetic system (WGS-84) and electronic terrain and obstacle data (eTOD)*WGS-84*

6.43 The meeting noted that on 28 February 1994, the Council adopted Amendment 28 to Annex 15 — *Aeronautical Information Services* which included the specification of world geodetic system-1984 (WGS-84) as the standard geodetic reference system for international aviation. Shortly thereafter, amendments were adopted to Annex 4 — *Aeronautical Charts* and Annex 11 — *Air Traffic Services* which included requirements regarding the provision of geographical coordinate information in terms of WGS-84. These requirements became applicable on 1 January 1998.

6.44 The meeting recalled that APIRG and States had been working toward WGS-84 implementation for many years and that a large part of the work had been completed by most States however, considerable work remained. Additionally, WGS-84 required regular maintenance. The major difficulties reported by States were insufficient funding for WGS-84 implementation and maintenance; lack of effective coordination between the aeronautical and geodetic departments; and a lack of reliable equipment to conduct the task.

6.45 The meeting recognized that this implementation is now all the more important, as the availability of geographical coordinates in the commonly agreed WGS-84 reference system is a prerequisite for States to obtain the benefits of PBN, and is also an important step in preparing for the transition from Aeronautical Information Services (AIS) to Aeronautical Information Management (AIM) where the provision of digital geographic data of appropriate quality will be essential.

e-TOD

6.46 The meeting was reminded that on 23 February 2004, the Council adopted Amendment 33 to Annex 15 which included the addition of a new Chapter 10 — Electronic Terrain and Obstacle Data, a new Appendix 8 – Terrain and Obstacle Data Requirements, and a number of amendments to Appendix 1 — Contents of Aeronautical Information Publication (AIP) and Appendix 7 — Aeronautical Data Quality Requirements. The applicability dates for Amendment 33 to Annex 15 are as follows:

- a) 20 November 2008 for those parts of the amendment related to the availability of terrain and obstacle data in accordance with Area 1 specifications (entire territory of a State) and for the availability of terrain data in accordance with Area 4 specifications (Category II or III operations area); and

- b) 8 November 2010 for those parts of the amendment related to the availability of terrain and obstacle data in accordance with Area 2 (terminal control area) and Area 3 (aerodrome/heliport area) specifications.

6.47 In this context, the meeting was made aware that Annex 15 required States to provide terrain and obstacle data at different precisions for different areas as necessary to accommodate current and planned new air navigation systems or functions. Four coverage areas had been defined for which specific levels of precision were required, with Area 1 requiring the least precision and Area 4 requiring the greatest.

6.48 It was agreed that significant safety and efficiency benefits for international civil aviation could be provided by in-flight and ground-based applications that relied on quality eTOD however, performance of these applications, which often made use of multiple data sources, could be degraded by data with inconsistent or inappropriate specifications for quality.

6.49 It was recognized that implementation of eTOD requirements was a challenging process that must be accomplished with a high level of commitment, careful planning, sharing of resources and a structured tracking of regional progress. A series of short- and medium-term tasks should therefore be established with a view to facilitating implementation. The meeting agreed to the following recommendation to guide the work of APIRG:

Recommendation 6/11 — Implementation of WGS-84 and eTOD

That APIRG adopt the AIM Performance Objective: Implementation of world geodetic system-1984 (WGS-84) and electronic terrain and obstacle data (eTOD) as contained in the performance framework form in Appendix E to the Report on Agenda Item 6.

6.50 The meeting noted a study underway aimed at the establishment of an AFI Centralized AIS Database (AFI-CAD) Programme. The framework and guidance material had been agreed by APIRG Conclusion 16/41 and further work was currently by the AIS/MAP Task Force in APIRG.

ATS routes and route systems

Atlantic Ocean random routing area (AORRA)

6.51 The meeting addressed the implementation of AORRA and noted that Phase 1 of the implementation had been accomplished and that three more phases were required to complete the implementation process. In this regard, the meeting recalled that the South Atlantic Planning Group (SAT) at its Fourteenth Meeting held in Montevideo, Uruguay in May 2008, agreed to proceed with the implementation of AORRA Phase II in December 2008, and that as of 23 October 2008 a common aeronautical information publication (AIP) Supplement for implementing Phase II was to be disseminated. Phases III and IV were planned for implementation by 17 December 2009.

6.52 Noting, that due to poor coordination, some States would not be ready, the meeting agreed on the following recommendation to support implementation of AORRA:

Recommendation 6/12 — Full implementation of Atlantic Ocean random RNAV routing area (AORRA)

That ICAO:

- a) take immediate action to inform all concerned States that implementation of AORRA Phase II will be delayed until further notice; and
- b) as a matter of urgency, facilitate and coordinate implementation of all phases of AORRA and assist in determining a suitable date for AORRA Phase II implementation.

ATS routes

6.53 The meeting noted that in order to accommodate traffic demand in the AFI Region, APIRG had adopted a number of conclusions related to the implementation of ATS routes. It was further noted that with some exceptions, most of the recommended routes had not yet been implemented. Furthermore, new ATS route requirements had been identified by the aircraft operators. To support the effort, APIRG had identified the need to establish an internationally funded project in the AFI Region (APIRG Conclusion 15/27 refers) however, as of yet, no action had been taken.

6.54 In this context and taking into consideration the aviation industry fuel crisis, the meeting was urged to implement in the near-term, an ATS route project in line with the above and at the same time, to take account of the introduction of PBN operations in the region, pursuant to Assembly Resolution A36-23. The meeting also agreed that the PBN Task Force was the most suitable body to address the ATS route structure in the region.

Global navigation satellite systems (GNSS) procedures

6.55 The meeting was informed by IATA of a project for the design of GNSS procedures with seventeen southern African States. The meeting was further apprised that only fourteen States had published the procedures. In this context, IATA had requested that States that had not done so, publish the procedures as soon as possible. When discussing this issue, the meeting was informed that regulatory and legal, rather than technical barriers, were keeping some States from publishing the procedures. In this context, the meeting agreed to the following recommendations:

Recommendation 6/13 — Publication of GNSS-based RNP approach procedures

That:

- a) States having taken part in the IATA area navigation (RNAV) global navigation satellite systems (GNSS) procedures development and implementation programme and which had not yet done so, publish GNSS-based required navigation performance (RNP) approaches, and at the same time, remove any operational restrictions that may be in place; and
- b) States that had not taken part in the IATA RNAV GNSS procedures development and implementation programme, seek assistance from appropriate organizations with the objective of designing and implementing GNSS-based RNP approach procedures.

Recommendation 6/14 — ICAO assistance with legal and regulatory issues associated with implementation of GNSS approach procedures

That ICAO provide assistance to States in overcoming legal and regulatory difficulties associated with implementation of global navigation satellite systems (GNSS) based approach procedures.

6.56 In the context of the above, the meeting was made aware that design and publication of a procedure was not an end in itself and that there were other considerations that had to be taken into account to ensure safety, such as training, equipage, implementation and maintenance of WGS-84, quality assurance, and regulatory issues.

6.57 In addition, it was noted that some States having implemented GNSS-based procedures were sometimes failing to maintain their conventional navigational ground aid infrastructure as required. The meeting agreed that States should continue to comply with their obligations to maintain their conventional navigational aids in accordance with their obligations as contained in the AFI ANP.

Measures to foster the implementation of SIGMET, the quality management system for the provision of MET Service to international air navigation, and other MET matters

6.58 The meeting recalled that the MET Divisional Meeting (2002) had formulated Recommendation 1/12 – *Implementation of SIGMET Requirements*, which called for the PIRGs to foster implementation of SIGMET information. However, information indicated non-compliance by most of the AFI States, to ICAO Annex 3 — *Meteorological Service for International Air Navigation* requirements on the issuance of SIGMET.

6.59 The meeting also noted that Amendment 72 to ICAO Annex 3, introduced the quality management system (QMS) for meteorological service to international air navigation, which became applicable on 1 November 2001 and that APIRG/14, Conclusion 14/40 recognized the new requirements of Annex 3, requested States in the AFI Region to give priority to the implementation of QMS and APIRG/16, Conclusion 16/59 called for support to AFI States to implement QMS. However, the level of implementation of QMS in the area of aeronautical meteorology in the AFI Region remained very low.

6.60 Other critical safety related aviation meteorology deficiencies identified through various ICAO missions to States and through APIRG, related to the lack of:

- a) provision of information on volcanic activity to civil aviation units;
- b) issuance and dissemination of SIGMETs; and
- c) provision of QMS for meteorological information.

6.61 The meeting also noted that QMS involved role players and stakeholders at all levels within the organization. QMS was intended to be cohesive by nature and therefore all owners and drivers of business and operational processes were responsible for ensuring that this remained the status quo. In this context the meeting also agreed that implementation of QMS come with a certain economic cost and these costs needed to be factored into the discussions with users when implementing QMS.

6.62 In this regard, the meeting noted progress made by the South African Weather Service towards the implementation of total quality management (TQM). The major objectives of this programme

were ensure service delivery of international standard and ICAO compliancy by obtaining ISO 9001 certification as well as to align the relevant elements of its TQM programme with the World Meteorological Organization (WMO) Quality Framework. The fundamental constructs of its QMS were now in place. These formed the foundation upon which all outstanding elements would be built in order to deliver quality-assured products and services to all stakeholders.

6.63 On the basis of the above, the meeting agreed to a set of projects to foster the implementation of SIGMET and QMS for the provision of meteorological service to international air navigation. It was also agreed that a number of seminars and workshops should be requested using the special implementation projects (SIPs) mechanism, the AFI Comprehensive Implementation Programme (ACIP) and the International Financial Facility for Aviation Safety (IFFAS) cooperative development projects, to assist in updating and preparing action plans to remove existing deficiencies in the area of SIGMET and QMS. To eliminate the safety-related MET deficiencies, the meeting agreed to the following recommendation:

Recommendation 6/15 — Foster the implementation of SIGMET and QMS in the AFI Region

That APIRG adopt the MET Performance Objective: Foster the Implementation of SIGMET and quality management system (QMS) in the AFI Region as contained in the performance framework form in Appendix F to the Report on Agenda Item 6.

6.64 The meeting was informed that aviation cost recovery mechanisms in the region were not fully and effectively implemented in most African States and that African States would therefore, find it difficult to fund the implementation of QMS. In this regard, the meeting agreed that alternative means of funding for this effort should be investigated. On this basis, the meeting agreed to the following recommendation:

Recommendation 6/16 — Technical and financial support for implementation of Quality Management Systems in the AFI Region

That ICAO identify potential sources of technical and financial support for States for the implementation of quality management systems (QMS) in the field of Meteorology.

6.65 The meeting noted efforts made by States to improve facilities and services and to implement APIRG Conclusions and Decisions and, in particular, by ASECNA member States. However, considering the safety issues associated with hazardous MET phenomenon, the meeting felt that a specific performance objective should be adopted by the meeting related to the implementation of terminal area warnings and forecasts, the provision of world area forecast system (WAFS) forecasts and improvement of OPMET data exchanges in the AFI Region. The meeting therefore agreed to the following recommendation:

Recommendation 6/17 — Implementation of terminal area warnings and forecasts, provision of WAFS forecasts and optimization of OPMET data exchanges and training for aeronautical meteorological staff

That APIRG adopt the Performance Objective: Foster the implementation of terminal area warnings and forecasts, provision of world area forecast system (WAFS) forecasts and

optimization of OPMET data exchanges as contained in Appendix G to the report on Agenda Item 6.

Communications

Modernization and harmonization of very small aperture terminal (VSAT) networks

6.66 The meeting agreed that ground networks based on VSAT technology offered the best means of providing aeronautical fixed services (AFS) connectivity as well as relaying air-ground communications between ATS centres and remote ground stations. VSAT lends itself well to off-the-shelf technology, it is cost-effective, easy to install, maintain and reconfigure. However, as there were many different ways a VSAT network could be implemented and because VSAT vendors used proprietary signal protocols, providing interconnectivity between nodes belonging to different VSAT networks was often difficult, costly, and suboptimum in terms of performance. On this basis, the meeting agreed that all VSAT plans should be coordinated at an early stage to avoid unnecessary proliferation and mounting costs. Furthermore, when an existing VSAT network was due for upgrade or when a new system was being planned, consideration should be given to integrating the network with adjacent networks. The meeting recalled that these points were addressed by the fifth meeting of the All Planning and Implementation Regional Group (ALLPIRG) (Montreal, 23 to 24 March 2006).

6.67 The meeting recognized that in the AFI Region, positive steps had already been taken to integrate subregional VSAT networks in line with ALLPIRG conclusion 5/16 as follows:

Conclusion 5/18 — Implementation of very small aperture terminals (VSATs)

That PIRGs:

- g) discourage the proliferation of VSAT networks where one/some of the existing ones can be expanded to serve the new areas of interest;
- h) work towards integrated regional/interregional digital communication networks with a single (centralized) operational control and preferably based on the Internet Protocol (IP); and
- i) give due consideration to managed network services (e.g. a virtual private network (VPN)), subject to availability and cost-effectiveness.

6.68 In addition, SADC/2 and NAFISAT networks had essentially become one network and the recent decision in the Middle East Region to implement additional NAFISAT nodes in that region, instead of implementing a new VSAT network, was also recognized.

6.69 It was recalled that some nodes of the other major VSAT network in the region (i.e. AFISNET) had reached the end of their useful life and as a result, the availability of some key AFS circuits in parts of the Region had been drastically reduced. In this connection, the sixteenth meeting of the Satellite Network Management Committee (SNMC/16, Dakar, 17 to 19 December 2007) formulated a conclusion aimed at technical evaluation and re-engineering of the network.

6.70 The meeting agreed that it was extremely important for the aforementioned conclusion to be followed up so that the availability of communication links in the region could be restored and capacity could be created for future communications, navigation, and surveillance (CNS) systems. In this

regard, the upgrade of AFISNET (nuclear nodes) should be undertaken with due regard for eventual integration with the modern AFISNET in order to obtain all the benefits of a truly regional AFI-wide communication network. Additionally, a distributed monitoring and control scheme could be implemented to address possible institutional concerns. However, the meeting noted that follow-up action had started through a short-term enhancement programme.

6.71 In this context, the meeting agreed that as experts from the individual SNMC member States and organizations became involved in site visits and surveys and shared their experience and knowledge among themselves, the sustainability and future growth of the network would be assured. The experience gained in the day to day engineering, maintenance and operation of AFISNET had already been recognized by APIRG/13 (Sal Cap Vert, 25-29 July 2001, Conclusion 13/6).

6.72 The meeting noted that there were many ways a VSAT network could be implemented to provide links between certain fixed points and that in general, there was a direct relationship between cost of the network and the type of performance it was required to provide. It was therefore, critical that the performance requirements be kept to a reasonable limit to avoid unnecessary costs. In this respect, entities charged with planning and implementation of VSAT networks were encouraged to use the guidelines developed by ICAO as shown in Appendix L.

6.73 On the basis of the above, the meeting agreed to the following recommendations:

Recommendation 6/18 — AFISNET follow-up

That, as a matter of urgency, ICAO and States involved in AFISNET follow-up on Conclusion 16/07 of Satellite Network Management Committee (SNMC/16):

Conclusion 16/07: AFISNET technical evaluation and re-engineering project

That AFISNET member Administrations and Organizations undertake to implement a joint technical evaluation of the network in view of its re-engineering, in accordance with SNMC Conclusion 15/06. In this connection:

- 1) AFISNET member Administrations and Organizations should implement a joint technical evaluation of the network. In so doing, they should establish a team of qualified experts to:
 - a) conduct a comprehensive assessment of the network potential for current and future requirements and applications;
 - b) identify technical and operational deficiencies of the current network and propose short-term solutions for their mitigation;
 - c) develop user requirements and basic specifications for the re-engineering of the network, to be submitted for formal approval by members;
 - d) participate in the request for proposals (RFP) process referred to in 2) hereunder; and
 - e) prepare a report for consideration by the next SNMC meeting;

- 2) a request for proposal (RFP) for upgrading/re-engineering of AFISNET, including technical, operational, financial and institutional aspects should be developed on the basis of a comprehensive assessment of current and future requirements and applications to be supported by the network; and
- 3) the ICAO Regional Office propose the timescales for the RFP process and related steps based on 1) above for consideration by the next SNMC meeting.

Recommendation 6/19 — Planning, implementation and operation of very small aperture terminal (VSAT) networks in the AFI Region

That all entities involved with planning, implementation and operation of very small aperture terminal (VSAT) networks in the AFI Region hold regular joint meetings under the auspices of ICAO regional offices for the purpose of harmonization and eventual realization of a seamless AFI communication network supporting all present and future communications, navigation, and surveillance (CNS) systems.

6.74 In the context of the above, the meeting was informed that AFISNET member administrations and organizations had formed a Joint Technical Evaluation Team with terms of reference and work programme as agreed by the 16th Special Coordinating Meeting (SNMC/16) held in Dakar, Senegal on 26 March 2008. The work is expected to be completed by the end of March 2009.

6.75 The meeting recognized that elimination of shortcomings and deficiencies in the field of aeronautical telecommunications in the AFI Region and in particular, with aeronautical fixed service (AFS) links, had become a unique challenge for the implementation of the area control service as specified in APIRG/13 Conclusion 13/31. In this regard, ASECNA informed the meeting of its activities in implementing aeronautical fixed telecommunication network (AFTN), ATS direct speech (DS) circuits. The meeting also agreed that it was necessary to identify suitable methodologies for measuring and evaluating ATS/DS circuit performance. It was noted that some guidance material was available however, there were several entities involved with ATS/DS, some of which were outside of aviation, and there were issues of a local nature that had to be considered. It was agreed that States should therefore rely on each other and share expertise and knowledge.

A cooperative approach to optimize the effectiveness of communication systems

6.76 The meeting encouraged that a cooperative approach be taken when implementing communications systems near flight information region (FIR) boundaries. In this regard, it was noted that the hosting of very high frequency (VHF) stations in neighbouring FIRs had already been the subject of previous APIRG recommendations.

6.77 The meeting was informed that as a result of the planning activities for RVSM implementation and at the request of the AFI RVSM Task Force and the Project Management Team (PMT), IATA and IFALPA conducted a special communications survey in the Brazzaville, Kinshasa and Luanda FIRs from 23 June to 11 July 2008. Following this survey, corrective measures were taken in the Brazzaville, Kinshasa and Luanda FIRs. Data on communications continued to be collected daily, sent to IATA for analysis and presented to weekly teleconferences of the RVSM PMT. Through this special focus, gradual improvements were shown throughout the period from the end of July to the end of August 2008.

High frequency (HF) ionospheric propagation

6.78 An important lesson learned through the work of the PMT was that States and air navigation service providers (ANSPs) using HF communications needed to select operational frequencies taking ionospheric propagation conditions into consideration. In this context, the meeting agreed to the following recommendation:

Recommendation 6/20 — Improvement of air-ground high frequency (HF) communications in the AFI Region through use of ionospheric propagation forecasts

That States and air navigation service providers (ANSPs) utilizing high frequency (HF) air-ground communications develop procedures for selection of operational frequencies taking into account ionospheric propagation forecasts.

Frequency spectrum

6.79 The meeting was informed of the difficulties encountered in the AFI Region in its preparations for World Radio Conference WRC meetings and the vital role that regional coordination played in this respect. It was noted that during WRC-2007 the issue of protection of the C-Band used by satellite communication providers to ensure communications in tropical regions had been approved. In addition, the meeting was made aware that WRC-2007 had adopted the request for the use of fixed satellite service (FSS) frequencies by developing States.

6.80 Given the importance and value of frequency protection and considering the safety aspects in the aeronautical realm, the meeting agreed that preparatory activity should continue for the upcoming WRC-2011 and that regional considerations should be coordinated with ICAO Headquarters for its consideration in developing the ICAO position. In this regard, the meeting agreed to the following recommendation:

Recommendation 6/21 — Frequency spectrum

That:

- a) AFI States provide support to the activities of the frequency management group formed by APRIG/16;
- b) ICAO Headquarters support several meetings and one seminar in the AFI Region prior to World Radio Conference 2011 (WRC-2011);
- c) States and other international organizations support attendance by regional offices at International Telecommunications Union (ITU) preparatory events for WRC-2011;
- d) AFI States' civil aviation authorities request their regulatory authorities to assign aviation experts to participate in their national delegations at ITU Conferences in order to brief the delegations at those conferences on the ICAO position and to support that position; and
- e) a regional coordination meeting be held to develop a harmonized position prior to WRC 2011.

Surveillance

6.81 The meeting was provided with information on work underway by ASECNA on secondary surveillance radar (SSR) and automatic dependent surveillance-contract/controller pilot data link communication (ADS-C/CPDLC) systems which had been implemented in several area control centres (ACCs). In this context, it was the meeting's view that cooperative agreements should be sought among service providers in areas where surveillance systems may overlap. The meeting encouraged ASECNA to continue with its activities and to participate in the APIRG surveillance task force meetings.

6.82 The meeting noted that a subregional initiative related to automatic dependent surveillance-broadcast (ADS-B) trials in the Indian Ocean had been undertaken. Additionally, three ANSPs, ASECNA, France and Seychelles, had recently signed a cooperation agreement aimed at sharing experiences, collaborating and acting jointly in the establishment of an ADS-B surveillance capability in the southwest part of the Indian Ocean. In this respect, the meeting agreed that stakeholder buy-in was essential.

6.83 The meeting was reminded of the importance of upgrading and maintaining CNS systems and the associated benefits, and agreed that CNS implementation should be based on ATM requirements and performance objectives.

Establishment of subregional search and rescue (SAR) arrangements

6.84 The meeting noted that the historical approach to SAR system development had rested on the establishment of independent national SAR services and by knitting these together to develop a loose conglomerate of providers around the globe. It was also noted that from a global systems perspective, this had not been very effective as many States were only able to provide a low level of services and extensive areas were left without SAR support altogether. Africa, particularly, had been characterized by a patchwork of SAR services of varying effectiveness.

6.85 On this basis, the meeting was made aware that both ICAO and the International Maritime Organization (IMO) now recommend the regionalized provision of SAR services as the means of most expeditiously achieving an effective global SAR system. Regional SAR service provision also offered the opportunity of aeronautical and maritime agencies to cooperate to provide SAR services over a geographic area determined in consideration of need and risk rather than within State borders that, from an operational perspective, were entirely arbitrary. Additionally, the number of rescue coordination centres (RCCs) necessary to facilitate operations could be reduced, communication networks could be shared and databases consolidated, thereby allowing emergency response wherever aircraft fly in the region and regardless of territorial airspace. Furthermore, the establishment, training and on-going proficiency of staff could be effectively managed.

6.86 The meeting recalled that in January 2002, after several catastrophic accidents in the AFI Region and in the realization that many States were hard pressed to provide effective SAR services, the African Civil Aviation Commission (AFCAC) and ICAO, with the financial support of France, undertook to implement a large-scale project to upgrade SAR services in Africa. This project extended over five years. During this time, thirty-four State SAR systems were evaluated by a team of experts, many technical cooperation missions undertaken, extensive training arranged and a number of seminars and conferences convened.

6.87 The findings of the evaluation missions to States were analyzed in-depth by the ICAO ATM Section and a commonality in many shortcomings and deficiencies were identified which included insufficient staffing levels and a severe shortfall in funding. These and other factors indicated that SAR services could be provided in a more cost-effective manner in the region and at the sub-regional level.

6.88 In making its recommendations to the AFI States that were evaluated during the project, the ICAO evaluation team repeatedly recorded findings that “in advancing the process of SAR cooperation with neighbouring States, in cooperation with maritime authorities, activity should be directed to:

- a) effective establishment of a regional SAR Committee;
- b) establishment of a subregional RCC;
- c) urgent establishment of Letters of Agreement with neighbouring States;
- d) development of improved, detailed procedures to be followed in live SAR actions across territorial borders;
- e) regular tests of cross-border operational procedures; and
- f) organization of international SAR exercises.”

6.89 As a sequel to the project’s findings, ICAO, in cooperation with AFCAC, organized an international SAR conference at Saly-Portudal, Senegal, in October 2004. Over 120 participants from fifty States, international organizations and private companies participated. Delegates to the conference developed a Declaration that stated, as its primary conclusion, that:

“Optimal organisation, management and regulation of SAR services has a profound and positive effect on the cost and the efficiency of SAR service provision” and that, in particular, “the extent of required resources can be reduced if the following principles are applied:

- d) implementing sound SAR needs assessments based on risk;
- g) signing and updating domestic and international SAR agreements;
- h) implementing preventive SAR and appropriate regulatory measures;
- i) using material assets on a shared basis;
- j) using staff on an incremental basis;
- k) establishing sub-regionalized SAR provision; and
- l) establishing joint aviation/maritime operational centres, possibly multi-functional.”

6.90 The meeting was made aware that in October 2007, the Department of Transport of the Republic of South Africa (RSA), in collaboration with South African Search and Rescue (SASAR), hosted a Consultative Conference in Port Elizabeth on the integration of SAR services in the southern

African region to the theme “Southern Africa goes all out towards the integration of aeronautical and maritime search and rescue services”. The conference attracted participation by the majority of States within the region and resolved that an approach be made to ICAO and IMO for assistance with a SAR training programme and, in particular, training for SAR Administrators and SAR Mission Coordinators. Cooperative discussions about a programme of support between ICAO, IMO and RSA are on-going.

6.91 The meeting noted the existence of short-, medium-, and long-term activities being undertaken by Mali in its efforts to transform the Bamako rescue sub-centre (RSC) as required in the Search and Rescue Regional Plan included in the Africa-Indian Ocean Air Navigation Plan (Doc 7474, Part 5), into a rescue coordination centre (RCC).

6.92 Based on the above and considering the substantial benefits to be gained through establishment of JRCCs and cooperative activities in the provision of SAR services, the meeting agreed to the following recommendation:

Recommendation 6/22 — Establishment of subregional search and rescue (SAR) arrangements

That APIRG:

- a) adopt the SAR Performance Objective: Establishment of subregional SAR arrangements as contained in the performance framework form in Appendix H to the Report on Agenda Item 6;
- b) adopt as policy the general concept of subregional SAR provision from joint aviation/maritime rescue coordination centres (RCCs) as a key strategy in the improvement of the Africa-wide SAR system;
- c) support the establishment of a task force to progress the initiative taken at the Port Elizabeth Consultative Conference of October 2007 on the integration of SAR services in the southern African Region; and
- d) cooperate with ICAO and IMO in their continuing collaboration with African States to implement sub-regional, joint RCCs at strategic locations on the African continent.

Framework for aerodrome certification in the AFI Region

6.93 The meeting noted the global trend towards greater autonomy and privatization of aerodromes and that the role of the aerodrome operator, in many cases, had changed hands from the State to the private sector. Some States had created aerodrome authorities or other government entities to manage and operate their aerodromes. However, it was recognized that the role of States to ensure safety remained unchanged in accordance with Article 28 of the Chicago Convention and with ICAO Standards and Recommended Practices (SARPs). The meeting was made aware that it was in this context that in 2001 requirements were introduced in Annex 14, Volume I — *Aerodrome Design and Operations* for aerodromes to be certified. Included in the requirements was the provision that a certified aerodrome must implement a safety management system (SMS). In addition, in November 2006, the safety management requirements in Annex 14, Volume I, were harmonized with those of Annex 6 — *Operation of Aircraft* and Annex 11. Finally, Assembly Resolution A35-14, Appendix Q (superseded by A36-13, Appendix P)

resolves that States shall undertake certification of aerodromes and should ensure that SMS was introduced at their aerodromes.

6.94 In this context, the meeting was made aware that State's Safety Programmes (SSP) were directed at regulators while SMS was directed at service providers such as aerodrome operators. Additionally, the requirement for SMS had been in place in Annex 14 for many years and must be implemented whether or not a State had in place its SSP.

6.95 The meeting was informed of a survey carried out by ICAO in August 2006 to assess the level of global implementation of aerodrome certification and SMS in States and at international aerodromes. The responses received indicated that twenty aerodromes in the AFI Region had been certificated, representing 32 per cent (20/62) of those in the responding States, while the world average was 59 per cent (401/680).

6.96 With respect to the implementation of SMS at international aerodromes, fourteen aerodromes in the AFI Region had an SMS in place, representing 23 per cent (14/62) of those in the responding States, as opposed to 38 per cent (258/680) worldwide. The low level of implementation of aerodrome certification was corroborated by the results of the Universal Safety Oversight Audit Programme (USOAP) audits conducted under the comprehensive systems approach where, out of the thirty-six States audited in the AFI Region, ten had promulgated regulations requiring certification of aerodromes, two had completed the certification of their aerodromes and three had partially implemented aerodrome certification mainly at their primary aerodromes. With respect to SMS, fifteen had promulgated regulations and were in the process of implementing SMS.

6.97 The meeting noted that the sixteenth meeting of APIRG discussed the issue of aerodrome certification and developed Conclusion 16/11 to address the subject.

6.98 On the basis of the foregoing, and considering that in order to effectively implement aerodrome certification and SMS at aerodromes in the AFI Region, a structured approach was needed the meeting agreed to the following recommendation to guide the work of APIRG:

Recommendation 6/23 — Implementation of aerodrome certification and safety management systems (SMS) at aerodromes

That APIRG adopt the Performance Objective: Implementation of aerodrome certification as contained in the performance framework form in Appendix I to the Report on Agenda Item 6.

6.99 The meeting was informed that an amendment to Annex 14, Volume I had been approved by the Commission for the inclusion of wildlife hazards as an item to be considered when assessing threats to aircraft operational safety on or around airports. Subject to adoption by the ICAO Council in 2009, the proposed amendment will form part of Amendment 10 to Annex 14, Volume I with an applicability date of 19 November 2009.

Composition of planning and implementation regional groups (PIRGs)

6.100 The meeting was informed that on 20 February 2006, during its review of the report of the sixteenth meeting of the ASIA/PAC Air Navigation Planning and Implementation Regional Group (APANPIRG/16), the ICAO Council agreed that it was time to reconsider the format and method of

processing the reports of the Air Navigation Commission on PIRG activity, as well as the terms of reference of PIRGs. The Commission subsequently conducted a study for review by the Council.

6.101 The meeting was informed of the detailed consideration of the report by the Commission to the Council as follows:

Work programme

6.102 The Commission agreed that PIRGs were primarily responsible for the development and maintenance of regional air navigation plans as well as the identification and resolution of air navigation deficiencies. It was noted that PIRGs were a planning and coordination mechanism and that, while implementation is the responsibility of States, PIRGs could play a significant role in supporting the implementation of Standards and Recommended Practices (SARPs). Furthermore, the Commission recognized the importance of providing technical expertise and guidance to Regional Offices so as to enhance integration of Regional Offices and ICAO Headquarters, and consequently endorsed the participation of experts from the ICAO Air Navigation Bureau in the work of relevant technical sub-groups of the PIRGs.

Terms of Reference

6.103 The Commission examined the possibility of expanding the mandate of PIRGs to cover the broader Strategic Objectives of ICAO and concluded that their focus should remain on air navigation issues. It was noted that any expansion would require more technical and human resources for both ICAO and States; result in lengthier meetings; call for attendance of a greater number of participants per delegation; and also result in duplication of efforts, thereby decreasing productivity.

6.104 It was noted that security was included in the terms of reference of only two PIRGs – CAR/SAM Regional Planning and Implementation Group (GREPECAS) and APIRG – with GREPECAS doing limited work in this field. It was acknowledged that security matters were of a different nature and scope than air navigation issues and required a different kind of expertise; therefore, they did not fit into the activities of PIRGs. Consequently, it was agreed that security-related items should not be included in the work programmes of PIRGs and that the terms of reference of GREPECAS and APIRG should be amended accordingly. However, the security matters of the region would continue to be addressed using a different mechanism that may involve regional civil aviation bodies.

6.105 Regarding the inclusion of flight safety in the work programme of PIRGs, the Commission felt that the involvement of PIRGs in flight safety issues was not feasible in the current regional air navigation planning structure. To include this item in the work programmes of PIRGs would require a different mechanism to accommodate experts provided by States and other bodies, such as maintenance organizations, airline/cargo operators and pilots' associations. However, there was a need to address specific flight safety issues in line with the methodology of the Global Aviation Safety Plan (GASP). It was agreed that PIRGs should continue to concentrate their efforts, at this time, on air navigation planning issues. The Commission noted that flight safety issues were most adequately addressed within the framework of GASP. The regional, subregional and State action plans, resulting from the application of GASP, might generate specific actions by PIRGs. The Commission agreed to return to this aspect after the implementation structure for GASP is finalized.

6.106 Referring to the environment, the Commission noted that PIRGs addressed environmental issues within the context of ATM improvements, and endorsed this approach. The Commission also noted

that PIRGs take into account environmental benefits of CNS/ATM systems and estimate resultant reductions in emissions, while developing and reviewing the ATS route structures in the regions.

6.107 The Commission was therefore of the view that PIRGs should continue working on air navigation planning and implementation issues. At the same time, the Commission would continue work to develop new structures to coordinate other Business Plan implementation activities related to safety, security and environmental subjects.

6.108 With regard to the membership of PIRGs, the Commission agreed that all ICAO Contracting States, who were service providers in an air navigation region and part of that region's air navigation plan (ANP), should be included in the membership of that region's PIRG. Furthermore, user States are entitled to participate in any other PIRG meetings as a non-member. International organizations recognized by the Council may be invited as necessary to attend as observers to the PIRG meetings.

6.109 The Commission noted that PIRG reports were intended to be stand-alone documents developed essentially to serve the needs of States, and consequently agreed that the present format and style met their requirements, but should be open to continuous improvements. Furthermore, the Commission noted that the agenda of these PIRG meetings had been standardized and aligned with the Business Plan items related to air navigation services.

6.110 The Commission noted that the outcome of PIRG meetings was significant and had to be analyzed in a structured manner in order to address the issues and deficiencies raised therein by including them in the work programme at Headquarters. To implement such an environment, the Commission developed a gate process which is supported by an issue form, a workflow and a list of accredited sources. To meet this gate process, subsequent to each PIRG meeting, the pertinent Regional Office, in coordination with the relevant section at Headquarters and, if required, with the concerned State(s), will submit the duly completed issue forms for further action by the Commission.

6.111 To further improve the way that the Council reviews the work of its PIRGs, the need for an executive summary of the outcome of each PIRG meeting, taking all the elements into consideration, was identified. This action would also avoid duplication and would differentiate between the technical review by the Commission and the overall decision-making process of the Council. The Commission proposed that, at the end of each year, the Council receive a consolidated report containing the Commission analysis of the regional air navigation developments and the status of the resolution of air navigation deficiencies. However, in the event that any action item arises from a PIRG meeting, such as an implementation issue or a requirement for additional resources that calls for specific attention of the Council, then an immediate report would be made to the Council instead of waiting until the end of the year.

6.112 In reviewing the Commission's report, the Council took the following actions:

- a) agreed that the Commission should present, on an annual basis, a consolidated report to the Council containing the Commission's analysis of regional air navigation developments and the status of the resolution of air navigation deficiencies, as well as an indication of the value added from the PIRGs' activities;
- b) while agreeing to retain, for the time being, the terms of reference of PIRGs, except those of the APIRG and the GREPECAS which should be amended to exclude security matters, requested that the Commission study the merits of the PIRGs;

- c) agreed that all ICAO Contracting States, who are service providers in an air navigation region and part of that region's air navigation plan (ANP), should be included in the membership of that region's PIRG. Furthermore, user States are entitled to participate in any other PIRG meeting as a non-member. International Organizations recognized by the Council may be invited as necessary to attend as observers to the PIRG meetings; and
- d) requested that the Commission present, in due course, a report to the Council regarding the development of new structures to coordinate Business Plan implementation activities related to safety, security and environmental subjects, as well as the outcome of its further review of the mandate and terms of reference of the PIRGs pursuant to sub-paragraph b) above.

6.113 Consequent to the decisions of the Council, the Commission had initiated a further study on the merits of PIRGs and development of new structures to coordinate Business Plan implementation activities related to safety, security and environmental subjects. The study is expected to be completed by the end of 2008.

6.114 In view of the above, the meeting agreed to the following recommendation:

Recommendation 6/24 — Revised membership of the Africa-Indian Ocean regional planning and implementation group (APIRG)

That the terms of reference of the Africa-Indian Ocean regional planning and implementation group (APIRG) be amended as follows:

1. Membership

All ICAO Contracting States, who are service providers in an air navigation region and part of that region's ANP, should be included in the membership of that region's PIRG. Furthermore, user States are entitled to participate in any other PIRG meetings as a non-member. International organizations recognized by the Council may be invited as necessary to attend PIRG meetings as observers.

Identification and elimination of major air navigation deficiencies in the AFI Region

6.115 The meeting recalled that identification, assessment, tracking and reporting of air navigation deficiencies is one of the regular tasks of the ICAO PIRGs and that to achieve consistency in this matter, a uniform methodology was developed and endorsed by the Commission. Following concerns raised by the Commission and the Council on the serious impact of unresolved deficiencies on safety, the meeting agreed that States concerned should with extreme urgency, take concrete measures to eliminate all deficiencies impairing safety in the region.

6.116 In accordance with established practice, at the sixteenth meeting of APIRG (Rubavu, Rwanda, 19 – 23 November 2007) deficiencies were updated in the air navigation fields of AGA, ATM, AIS/MAP, CNS, MET and SAR as shown in Appendix P of the APIRG/16 Report available on the ICAO website at www.icao.int/icao/en/ro/wacaf/apirg/apirg16/ and proposed appropriate remedial action to reduce or eliminate them. Furthermore, the respective Regional Offices undertook the follow-up action of

APIRG Conclusion 16/67 relating to these deficiencies. The meeting was made aware that as a consequence of this follow-up, the list of deficiencies had been updated and was available on the website.

6.117 With respect to deficiencies in the field of SAR, the meeting noted that supplementary data had become available to the normal deficiency identification process by virtue of the ICAO/AFCAC SAR Project in the AFI Region that was conducted from 2002 through 2007.

6.118 Based on the above and in order to address the most urgent deficiencies, the meeting agreed to the following recommendation:

Recommendation 6/25 — Elimination of air navigation deficiencies in the AFI Region

That:

- a) APIRG adopt the Performance Objective: Elimination of air navigation deficiencies in the AFI Region as contained in the performance framework form in Appendix J to the Report on Agenda Item 6;
- b) States develop their national action plans, aligned with the regional performance objective, to eliminate their relevant deficiencies in the fields of aerodromes and ground aids (AGA), air traffic management (ATM), aeronautical information services (AIS), communications (CNS), meteorological (MET) and search and rescue (SAR), priority being given to the deficiencies as contained in the performance framework form in Appendix J to the Report on Agenda Item 6; and
- c) States take steps to seek assistance where required for the implementation of their action plans through ICAO mechanisms such as Technical Co-operation Bureau (TCB), International Financial Facility for Aviation Safety (IFFAS), special implementation projects (SIPs) and from industry stakeholders and donor agencies.

Environmental issues

6.119 Considering the recent emphasis from many sources and, in particular, ICAO governing bodies, on the need for aviation to address the environment, particularly with respect to CO₂ emissions, the meeting was in agreement that many initiatives over many years in the AFI Region had contributed to reduced greenhouse gas emissions. The two most prominent examples noted were the implementation of RVSM and the RNP 10 route structure. The meeting acknowledged that these and several other initiatives underway, as well as the performance objectives contained in this report, would lead to even greater environmental benefits.

6.120 The meeting also noted that unfortunately, the ATM community had not consistently attempted to measure environmental gains associated with ATM improvements. Considering the current reality whereby improvements in both efficiency and environment must be measurable, and metrics established, the meeting agreed that efforts should be taken to measure environmental benefits associated with ATM improvements. The meeting was also made aware that the Committee on Aviation Environmental Protection (CAEP) was developing the means by which such measurements could be made. Additionally, IATA agreed to assist with measuring fuel consumption benefits associated with ATM improvements and converting these into CO₂ reductions.

6.121 The meeting recalled that the Global ATM Operational Concept called for a planning process that resulted in best outcomes and which considered several key performance areas (KPAs) such as capacity, efficiency, cost-effectiveness, safety, security as well as the environment. It was important, to be forthright and balanced when discussing the environment and not simply state that changes or improvements should be made for environmental purposes alone. Furthermore, it was important that environmental issues be considered and assessed during the air navigation planning process as an important KPA. The meeting agreed that APIRG should work toward identifying and measuring the environmental benefits associated with ATM improvements.

6.122 Considering the importance of addressing the environment when planning air navigation systems, the meeting agreed to the following recommendation:

Recommendation 6/26 — A collaborative approach to air traffic management (ATM) systems planning that considers the environment

That APIRG adopt an approach to the planning and implementation of ATM systems and ATM improvements that supports collaboration and considers best outcomes and the environment.

Preparation of the aviation sector for an outbreak of a communicable disease posing a serious health risk or public health emergency of international concern

6.123 The meeting recalled the impact on air travel from the outbreak of Severe Acute Respiratory Syndrome (SARS) and noted that, in follow-up, ICAO had strengthened its support of Article 14, *Prevention of Spread of Disease* to the *Convention on International Civil Aviation* (Doc 7300). The emerging threat from pandemic influenza in 2005 further focused efforts in this area and the Cooperative Arrangement for the Prevention of Spread of Communicable Disease through Air Travel (CAPSCA) project was commenced by ICAO in Asia, in September 2006. In November 2006, preparedness planning guidelines for States were posted on the ICAO public website (<http://www.icao.int/icao/en/med/guidelines.htm>) and in July 2007 changes to ICAO Annex 9 — *Facilitation* became applicable, requiring States, inter alia, to establish a national aviation plan in preparation for an outbreak of a communicable disease posing a public health risk. In November 2007 CAPSCA commenced in Africa, and in July 2008 relevant proposals to amend Annexes 11 and 14 and the PANS ATM were distributed by State letter AN 13/1.8-08/53 for comment. The proposed changes were recently reviewed by the Air Navigation Commission and have an anticipated applicability date of November 2009.

6.124 The meeting was informed that the World Health Organization's International Health Regulations (2005) (WHO IHR) came into force in June 2007 and that they included several references to airports and aircraft. The main challenge facing the aviation sector was to bring together the various organizations that needed to be involved in preparedness planning in the aviation sector to ensure that the response to a serious public health risk was effective and proportionate to the risk.

6.125 With respect to the above, the meeting was reminded that Article 14 of the Chicago Convention states: "Each contracting State agrees to take effective measures to prevent the spread by means of air navigation of cholera, typhus (epidemic), smallpox, yellow fever, plague, and such other communicable diseases as the contracting States shall from time to time decide to designate....". Bearing in mind the risks posed by modern diseases such as SARS, and influenza having pandemic potential, the 35th Session of the ICAO Assembly adopted Resolution A35-12 which requested the Council, as a matter of priority: "...to develop Standards and Recommended Practices in the appropriate Annexes to the

Convention in order to address contingency plans to prevent the spread of communicable diseases by air transport.”

6.126 ICAO accordingly developed SARPs in Annex 9 as follows:

- a) “8.16. A Contracting State shall establish a national aviation plan in preparation for an outbreak of a communicable disease posing a public health risk or public health emergency of international concern.”;
- b) revision of the health part of aircraft general declaration (Annex 9, Appendix 1); and
- c) improved notification procedures to public health authorities of a suspected case of communicable disease on board an aircraft.

6.127 The amendment to Annex 9 became applicable on 15 July 2007 and guidelines concerning improved notification procedures to the public health authority at destination were promulgated by State letter (AN 5/22-07/55) during the same month.

6.128 Resolution A35-12 also requested the Council to “...establish suitable institutional arrangements to coordinate efforts by contracting States and other members of the international civil aviation community aimed at protecting the health of passengers and crews.”

6.129 The meeting noted that in order to address the above issues, ICAO established a working group that included WHO, IATA, Airports Council International (ACI) and the United States' Centres for Disease Control and Prevention to develop guidelines for States, airport operators and aircraft operators concerning preparedness planning. Guidelines for States are available on the ICAO public website. More detailed guidelines, emphasizing the specific action to be taken by aircraft and airport operators respectively can be found on the websites of IATA and ACI.

6.130 The meeting recalled that CAPSCA-Africa was initiated by means of an aviation medicine seminar in Libreville, Gabon, in November 2007. Subsequently, two workshops were held, in Johannesburg, South Africa and Dakar, Senegal, in March 2008. States in the region were encouraged to join CAPSCA by means of State letters TC 1/3.11-010, dated 5 June 2008 (distributed from the Dakar Regional Office) and TC 2/31-0211, dated 13 June 2008 (distributed from the Nairobi Regional Office).

6.131 In addition to the above, it was noted that proposals to amend Annexes 11 and 14, Volume I and the PANS-ATM, were distributed by State letter on 31 July 2008. These included the following:

- a) public health emergencies in Attachment C, “Material relating to Contingency Planning” with respect to air traffic services (ATS);
- b) public health emergencies in Annex 14, Volume I, Chapter 9, as an example of items to be included in aerodrome contingency plans; and
- c) PANS-ATM procedures for flight crew and air traffic controllers in the event of a suspected case of communicable disease on board an aircraft.

6.132 With respect to the PANS-ATM amendments, these were considered necessary because experience had demonstrated that notification of public health authorities of an inbound suspected case of

communicable disease was currently unreliable and limited use of ATS for notification of the appropriate authority at destination should improve such reliability. Additionally, the public health response was more efficient the longer the time period between notification and aircraft arrival, and the proposed procedures would maximize the time available for preparation.

6.133 The meeting recognized that pandemic preparedness planning required a cross-organizational effort, primarily involving the regulatory authorities and the public health authorities and that communication between different stakeholders was the most challenging aspect of developing a pandemic preparedness plan for the aviation sector.

6.134 The meeting was made aware that at present, the chief medical officer of, or aviation medicine adviser to, a regulatory authority may not, in many States, be directly concerned with the subject of prevention of the spread of communicable disease, or the risk of contracting such disease by travellers on board aircraft. On the other hand, public health authorities had little knowledge of the aviation sector and need aviation medicine advice. It was therefore essential that national regulatory and public health authorities worked together, with other stakeholders as necessary, to develop a pandemic preparedness plan for aviation that was integrated into the national preparedness plan. Such plans should be synergistic with regional and global initiatives.

6.135 The effect of the 2003 SARS outbreak on passenger numbers at a major international airport in Asia was demonstrated. Over a period of a few weeks, passenger numbers had reduced to one sixth. This was the result of a disease that caused approximately 800 deaths worldwide, whereas a pandemic could be expected to result in many tens of thousands, or even millions of deaths and the effects would therefore be proportionally greater. The meeting was advised that although not often reported in the media, human deaths caused by avian influenza continued to occur and the WHO advice was that a human influenza pandemic should be anticipated, but that its timing was unpredictable. On the other hand, a serious disease or a pandemic could equally be caused by an, as yet, unidentified illness. The CAPSCA project provided a mechanism to assist States to prepare the aviation sector for a future pandemic.

6.136 The meeting recognized the need for adequate funding for successful pandemic preparedness planning and proposed that States and donor organizations consider financial support for preparedness planning in the AFI Region.

6.137 On the basis of the above, the meeting agreed to the following recommendation:

Recommendation 6/27 — Pandemic preparedness planning in the aviation sector

That:

- a) APIRG adopt the MED Performance Objective: Prepare for an outbreak of communicable disease posing a serious public health risk as contained in the performance framework form in Appendix K to the Report on Agenda Item 6;
- b) States join the prevention of spread of communicable disease through air travel (CAPSCA) project; and
- c) States and donor organizations consider financial support for pandemic preparedness planning.

ICAO Technical Co-operation Bureau

6.138 The meeting was briefed on the assistance to ICAO Contracting States that ICAO TCB offered in the development and implementation of civil aviation projects. It was noted that in the AFI Region, TCB focused primarily on resolving safety issues identified through regional office missions and meetings, project formulation missions, APIRG and, in recent years, the ICAO USOAP audits. It was anticipated that there would be increasing requests in the near future for assistance in support of the efforts to eliminate air navigation deficiencies and to implement the goals of PBN and other performance objectives as contained in the PFFs in Appendices A through K of this report.

6.139 The meeting recognized that technical cooperation projects could serve as an important mechanism to support the implementation of air navigation systems in a progressive, cost-effective and cooperative manner and to assist States and regions in progressing toward a more global and seamless ATM system (see Recommendation 5/x).

6.140 The meeting was presented with an example of a large scale technical cooperation project in the ICAO SAM Region. That project emanated from the ninth meeting of Civil Aviation Directors held in Santiago, Chile in April 2005, where the results of the ICAO Eleventh Air Navigation Conference were analyzed taking into account the Global ATM Operational Concept and the Global Air Navigation Plan. In follow-up to the meeting, ICAO was requested to prepare and circulate a technical cooperation project document for assistance in CNS/ATM systems implementation leading to a global ATM system.

6.141 Further to the above, the project document prepared by ICAO (jointly by TCB and the ICAO Regional Office in Lima, Peru) was circulated to South American States which were requested to review the project document and advise of their interest and commitment to the project. As a result, eight States agreed to be part of the project. The annual budget for the project was estimated at USD\$ 1 250 000. Therefore, with eight States involved in the project, the annual cost-sharing contribution per State resulted in USD\$ 31 250 from 2007 to 2011.

6.142 The advantages of the project were that it served to directly support the implementation of the regional air navigation plan, global plan initiatives and performance objectives. It also supported attendance at meetings of ICAO Headquarters Technical Officers and the hiring of technical experts.

6.143 The meeting agreed that such a project in the AFI Region could serve as a useful mechanism to support implementation of the performance objectives contained in the performance framework forms in Appendices A through K of this report as well as to assist States in meeting national performance objectives, in addressing air navigation deficiencies; training, planning and implementation of quality assurance systems. On this basis, the meeting agreed to the following recommendation:

Recommendation 6/28 — Implementation of a Global ATM System ICAO Technical Cooperation Project

That the AFI Region consider the establishment of a Technical Cooperation Project, funded by AFI States and donors, to support planning and implementation of performance objectives, aligned with the Global ATM Operational Concept and the Global Air Navigation Plan.

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APPENDIX A

ATM PERFORMANCE OBJECTIVES

BASIC CHECKLIST FOR IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN (FPL) FORM				
Benefits				
Environment	<ul style="list-style-type: none"> • reductions in fuel consumption 			
Efficiency	<ul style="list-style-type: none"> • ability of air navigation service providers to make maximum use of aircraft capabilities • ability of aircraft to conduct flights more closely to their preferred trajectories • facilitate utilization of advanced technologies thereby increasing efficiency 			
Safety	<ul style="list-style-type: none"> • optimized demand and capacity balancing through the efficient exchange of information • enhance safety by use of modern capabilities onboard aircraft 			
Strategy				
<i>Short term (2010)</i>				
<i>Medium term (2011 - 2015)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
SDM	<p><i>En-route airspace</i></p> <ul style="list-style-type: none"> • ensure that the automation and software requirements of local systems are fully adaptable to the changes envisaged in the new FPL form • ensure that issues related to the ability of FDPS's to parse information correctly and to correctly identify the order in which messages are received, to ensure that misinterpretation of data does not occur • analyze each individual data item within the various fields of the new flight plan form, comparing the current values and the new values to verify any problems with regard to applicability of service provided by the facility itself or downstream units • ensure that there are no individual State peculiarities or deviations from the flight plan provisions 	2009-2012		
		2009		
		2009-2012		
		2009		
		2009-2012		

	<ul style="list-style-type: none"> • ensure that the accepting ATS Reporting Office accepts and disseminates all aircraft capabilities and flight intent to all the downstream ACCs as prescribed by the PANS-ATM provisions • plan the transition arrangements to ensure that the changes from the current to the new ICAO FPL form occur in a timely and seamless manner and with no loss of service • in order to reduce the change of double indications it is important that any State having published a specific requirement(s) which are now addressed by the amendment should withdraw those requirements in sufficient time to ensure that aircraft operators and flight plan service providers, after 15 November 2012, use only the new flight plan indications. • establish a central depository in order to track the implementation status and inform the ICAO regional offices on an ongoing basis 	<p style="text-align: center;">2012</p> <p style="text-align: center;">2009-2012</p> <p style="text-align: center;">2009-2012</p> <p style="text-align: center;">2009</p>		
<p>linkage to GPIs</p>	<p>GPI/18 Aeronautical Information</p>			

APPENDIX B

ATM PERFORMANCE OBJECTIVES

OPERATIONAL SAFETY ASSESSMENT METHODOLOGY				
Benefits				
Environment	<ul style="list-style-type: none"> • reductions in fuel consumption 			
Efficiency	<ul style="list-style-type: none"> • ability of aircraft to conduct flight more closely to preferred trajectories • facilitate utilization of advanced technologies (e.g. improved altimetry systems) thereby increasing efficiency 			
Safety	<ul style="list-style-type: none"> • enhance safety by wider distribution of aircraft in a given airspace 			
<i>Strategy</i>				
<i>Short term (2010)</i>				
<i>Medium term (2011 - 2015)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOM	<p><i>En-route airspace</i></p> <ul style="list-style-type: none"> • create a scrutiny group to monitor and analyze the safety of operations in the AFI region in a formal basis. The scrutiny group will utilize safety management principles outlined in Doc 9859 in order to analyze operational errors and deviations and propose mitigation measures to control them • that AFI States' use Safety Programmes and SMS methodologies in the control and mitigation of risks in the region • that a yearly CRA be conducted by the RMA for analysis by the scrutiny group. The CRA will be used as a relative reference from year to year. The initial acceptability of a collision risk to be determined by experts of the scrutiny group. Meeting the TLS of 2.5×10^{-9} fatal accidents per aircraft flying hour for technical risk be maintained as a requirement to continue with RVSM operations • the Scrutiny Group provide yearly report to APIRG about the status of operations safety in the region 	2009-....		
		2009		
		2009		
		ongoing		
		ongoing		
linkage to GPIs	GPI/02: Support implementation of RVSM			

APPENDIX C**TERMS OF REFERENCE AND WORK PROGRAMME OF THE
TACTICAL ACTION GROUP (TAG)****Terms of reference**

To carry out an ongoing safety assessment of operations in the AFI Region on a bi-weekly basis. The assessment will include all aspects related to the operational environment in the AFI airspace above FL290 including but not limited to ATC loop errors, communications problems, navigation and surveillance issues and any other item affecting the safety of operations. Meet twice yearly to coordinate activities and plan future goals.

Work Programme

Operational level of safety:

- a) review, on a bi-weekly basis, all error and deviation reports received from the AFI Region;
 - b) investigate and, if necessary, propose corrective action to identified deficiencies;
 - c) coordinate activities with and maintain a two-way communication bridge with the ARMA; and
 - d) provide yearly feedback to APRIG about TAG activities.
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APPENDIX D

REGIONAL PERFORMANCE OBJECTIVES/NATIONAL PERFORMANCE OBJECTIVES FOR PBN

REGIONAL PERFORMANCE OBJECTIVES/NATIONAL PERFORMANCE OBJECTIVES OPTIMIZATION OF THE ATS ROUTE STRUCTURE IN EN-ROUTE AIRSPACE				
Benefits				
Environment	<ul style="list-style-type: none"> reduction in gas emissions 			
Efficiency	<ul style="list-style-type: none"> ability of aircraft to conduct flight more closely to preferred trajectories increase in airspace capacity facilitate utilization of advanced technologies (e.g., FMS-based arrivals) and ATC decision support tools (e.g., metering and sequencing), thereby increasing efficiency 			
<i>Strategy</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOM	<i>Terminal airspace</i>	2008		
	<ul style="list-style-type: none"> develop regional implementation plan 	1Q 2008 – 1Q 2009	PBN TF	In progress
	<ul style="list-style-type: none"> develop regional action plan 	1Q 2009	PBN TF	Not started
	<ul style="list-style-type: none"> develop airspace concept based on AFI PBN regional implementation plan, in order to design and implement a trunk route network, connecting major city pairs in the upper airspace and for transit to/from aerodromes, on the basis of PBN, e.g. RNAV 10 and RNAV 5, and taking into account interregional harmonization 			
	<ul style="list-style-type: none"> harmonize State and PBN implementation plans with regional plan 			
	<ul style="list-style-type: none"> develop performance measurement plan 			
	<ul style="list-style-type: none"> formulate safety plan 			
	<ul style="list-style-type: none"> establish collaborative decision making (CDM) process 			
	<ul style="list-style-type: none"> publish national regulations for aircraft and operators approval using PBN manual as guidance material 			
	<ul style="list-style-type: none"> identify training needs and develop corresponding guidelines 			
	<ul style="list-style-type: none"> formulate system performance monitoring plan 			
	<ul style="list-style-type: none"> implementation of ATS routes enroute 		Region/States	In progress

	<ul style="list-style-type: none"> • monitor implementation progress in accordance with AFI PBN implementation plan and State implementation plan 			
<p>linkage to GPIs</p>	<p>GPI/5: performance-based navigation; GPI/7: dynamic and flexible ATS route management; GPI/8: collaborative airspace design and management</p>			

REGIONAL PERFORMANCE OBJECTIVES/NATIONAL PERFORMANCE OBJECTIVES OPTIMIZATION OF THE ATS ROUTE STRUCTURE IN TERMINAL AIRSPACE				
Benefits				
Environment	<ul style="list-style-type: none"> reduction in gas emissions 			
Efficiency	<ul style="list-style-type: none"> ability of aircraft to conduct flight more closely to preferred trajectories increase in airspace capacity improved availability of procedures facilitate utilization of advanced technologies (e.g., FMS based arrivals) and ATC decision support tools (e.g., metering and sequencing), thereby increasing efficiency 			
Strategy				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOM	<i>Terminal airspace</i>	2008		
	• develop regional implementation plan	1Q 2008 – 1Q 2009	PBN TF	In progress
	• develop regional action plan	1Q 2009	PBN TF	Not started
	• develop State PBN implementation	1Q 2009 – 4Q 2009	State	
	• develop airspace concept based on AFI PBN roadmap, in order to design and implement a optimized standard instrument departures (SIDs), standard instrument arrivals (STARs), holding and associated instrument flight procedures, on the basis of PBN and, in particular RNAV 1 and Basic-RNP 1			
	• develop performance measurement plan			
	• formulate safety plan			
	• establish collaborative decision making (CDM) process			
	• publish national regulations for aircraft and operators approval using PBN manual as guidance material			
	• identify training needs and develop corresponding guidelines			
	• formulate system performance monitoring plan			
	• develop a regional strategy and work programme for implementation of SIDs and STARs		State	
• monitor implementation progress in accordance with AFI PBN implementation roadmap and State implementation plan				
linkage to GPIs	GPI/5: performance-based navigation; GPI/7: dynamic and flexible ATS route management; GPI/8: collaborative airspace design and management; GPI/10: terminal area design and management; GPI/11: RNP and RNAV SIDs and STARs; GPI/12: FMS-based arrival procedures			

REGIONAL PERFORMANCE OBJECTIVES/NATIONAL PERFORMANCE OBJECTIVES OPTIMIZATION OF VERTICALLY GUIDED RNP APPROACHES				
Benefits				
Environment	<ul style="list-style-type: none"> reduction in gas emissions 			
Efficiency	<ul style="list-style-type: none"> increased accessibility to aerodromes, including continuity of access increased runway capacity reduced pilot workload availability of reliable lateral and vertical navigation capability 			
Strategy				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOM	<i>En-route airspace</i>	2008		
	• develop regional implementation plan	1Q 2008 – 1Q 2009	PBN TF	In progress
	• develop regional action plan	1Q 2009	PBN TF	Not started
	• develop State PBN implementation	1Q 2009 – 4Q 2009	State	
	• develop airspace concept based on AFI PBN implementation plan, in order to design and implement RNP APCH with Baro-VNAV in accordance with Assembly resolution A36-23, and RNP AR APCH where beneficial			
	• develop performance measurement plan			
	• formulate safety plan			
	• establish collaborative decision making (CDM) process			
	• publish national regulations for aircraft and operators approval using PBN manual as guidance material			
	• identify training needs and develop corresponding guidelines			
	• identify training needs and develop corresponding guidelines			
	• implementation of APV procedures	present - 2016	State	
• Formulate system performance monitoring plan				
linkage to GPIs	GPI/5: performance-based navigation; GPI/7: dynamic and flexible ATS route management; GPI/8: collaborative airspace design and management; GPI/10: terminal area design and management; GPI/11: RNP and RNAV SIDs and STARs; GPI/12: FMS-based arrival procedures			

APPENDIX E

AIM PERFORMANCE OBJECTIVES

NATIONAL PERFORMANCE OBJECTIVE – IMPLEMENTATION OF WGS-84 AND eTOD				
Benefits				
Environment	<ul style="list-style-type: none"> • none 			
Efficiency	<ul style="list-style-type: none"> • WGS-84 is a prerequisite for performance-based navigation, benefits described in performance objectives for PBN. • support approach and departure procedure design and implementation • improve aircraft operating limitations analysis • support aeronautical chart production and on-board databases 			
Safety	<ul style="list-style-type: none"> • improve situational awareness • support determination of emergency contingency procedures • support technologies such as ground proximity and minimum safe altitude warning systems • see benefits described in performance objectives for PBN 			
<p><i>Strategy</i> <i>Short term (2010)</i> <i>Medium term (2011 - 2015)</i></p>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
ATM CM	<p><i>Electronic terrain and obstacle data (eTOD)</i></p> <ul style="list-style-type: none"> • share experience and resources in the implementation of eTOD through the establishment of an eTOD working group. 	2008-2011	APIRG States	
	<ul style="list-style-type: none"> • report requirements and monitor implementation status of eTOD using a new AIS Table of the AFI FASID (Ref. Appendix B). 	2009-ongoing	APIRG States	
	<ul style="list-style-type: none"> • develop a high level policy for the management of a national eTOD programme. 	2008-2009	States	
ATM AUO	<p><i>WGS-84</i></p> <ul style="list-style-type: none"> • establish WGS-84 implementation goals in coordination with the national PBN implementation plan. 	2008-2009	States	
	<ul style="list-style-type: none"> • report requirements and monitor implementation status of WGS-84 using the AIS-5 Table of the AFI FASID and take remedial action if required. 	Ongoing	APIRG States	
Link to GPIs	<p>GPI-5: Performance-based navigation; GPI-9: Situational awareness; GPI-11: RNP and RNAV SIDs and STARs; GPI-18: Aeronautical Information; GPI-20: WGS-84; GPI-21: Navigation systems</p>			

APPENDIX F

MET PERFORMANCE OBJECTIVES

FOSTER THE IMPLEMENTATION OF SIGMET AND QMS IN THE AFI REGION				
Benefits				
Environment	<ul style="list-style-type: none"> • contribution in the reduction in fuel consumption 			
Efficiency	<ul style="list-style-type: none"> • improvement of efficiency of meteorological services to aircraft in flight • ensure timely preparation and provision to airlines of aviation warnings for en-route meteorological hazards • ensure the quality management system (QMS) in the provision of MET information to international civil aviation 			
Safety	<ul style="list-style-type: none"> • minimize encounters by aircraft of hazardous meteorological conditions 			
<i>Strategy</i>				
<i>Short term (2010)</i>				
<i>Medium term (2011 - 2015)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOM	SIGMET <ul style="list-style-type: none"> • assessment on the current level of implementation through a first SIGMET test in the AFI Region • establishment of an updated list of deficiencies including States not compliant with SIGMET format • provision of details guidance to States not issuing SIGMET or correct SIGMET • second SIGMET test to re-assess the level of implementation • establishment of an implementation project in terms of seminars through special implementation projects (SIPs) and IFFAS projects for States not meeting their obligation 	2008-2010	RO, MET	
	QMS <ul style="list-style-type: none"> • two seminars in French and English for the chief executive of MET authorities and assessment of the current level of implementation during the seminars 	2008-2011	RO, MET	

	<ul style="list-style-type: none"> • establishment of an updated list of States not implemented or partly implemented the QMS • training of trainers for personnel in States not implemented through SIP and IFFAS projects • establishment of an implementation project in terms of seminars and consultancy services through special implementation project (SIP) and IFFAS projects during the initial stages of implementation for States not meeting their obligation 			
<p>linkage to GPIs</p>	<p>GPI/19: Meteorological systems</p>			

APPENDIX G

MET PERFORMANCE OBJECTIVES

FOSTER THE IMPLEMENTATION OF TERMINAL AREA WARNINGS AND FORECASTS, PROVISION OF WAFS FORECASTS AND OPTIMIZATION OF OPMET DATA EXCHANGES IN THE AFI REGION				
Benefits				
Environment	<ul style="list-style-type: none"> • contribution in the reduction in fuel consumption; 			
Efficiency	<ul style="list-style-type: none"> • improvement of efficiency in meteorological services to aircraft in flight; • ensure timely preparation and provision to airlines of aviation warnings for terminal area meteorological hazards; • improvement in the efficiency of flight planning by airlines taking into account prevailing and expected meteorological conditions along the route based on WAFS forecasts; 			
Safety	<ul style="list-style-type: none"> • minimize encounters by aircraft of hazardous meteorological conditions. 			
<i>Strategy</i>				
<i>Short term (2010)</i>				
<i>Medium term (2011 - 20015)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
RPO MET 2	<i>Terminal area warnings and forecasts</i>	2008-2010		
	<ul style="list-style-type: none"> • Step 1: Assessment of the current level of implementation of facilities at aerodromes for monitoring hazardous meteorological conditions; 			
	<ul style="list-style-type: none"> • Step 2: Establishment of an updated list of deficiencies including States not compliant with required facilities stipulated in Annex 3 and the AFI ANP and for States to develop action plans to eliminate the deficiencies; 			
	<ul style="list-style-type: none"> • Step 3: Provision of details guidance to States not issuing terminal area warnings and forecasts; • Step 4: Establishment of an implementation project in terms of seminars and consultancy services through special implementation projects (SIP) and IFFAS projects respectively for States not meeting their obligation; 			

<p>RPO MET 1</p>	<p><i>World area forecast system (WAFS)</i></p> <ul style="list-style-type: none"> • Step 1: Two seminars in French and English on new WAFS gridded forecasts; • Step 2: Establishment of an updated list of States not receiving WAFS products and areas of constraints in implementing SADIS VSAT and FTP service and States concerned to develop remedial action plans; • Step 3: Establishment of an implementation project in terms of seminars and consultancy services through SIPs and IFFAS projects respectively; 	<p>2008-2011</p>		
<p>RPO MET 4</p>	<p><i>Optimization of OPMET data Exchange and implementation of OPMET databanks</i></p> <ul style="list-style-type: none"> • Step 1: Undertake an assessment of the availability and quality of OPMET data in the region and States not meeting the required levels of implementation to develop remedial action plans; • Step 2: Two seminars in French and English on AMBEX and OPMET AFI data banks procedures; • Step 3: Establishment of an implementation project in terms of seminars and consultancy services through SIPs and IFFAS projects respectively obligation; 	<p>2008-2011</p>		
<p>linkage to GPIs</p>	<p>APIRG/16 Report, Conclusions 16/49, 16/51, 16/67 GPI/19: Meteorological systems</p>			

APPENDIX H

REGIONAL PERFORMANCE OBJECTIVES/NATIONAL PERFORMANCE OBJECTIVES FOR SAR

ESTABLISHMENT OF SUBREGIONAL SAR ARRANGEMENTS				
Benefits				
Efficiency and Safety	<ul style="list-style-type: none"> • cost-efficient use of accommodation and RCC equipment on a shared basis • service provision more uniform across a geographic area defined by risk • proficient services provided near and within States with limited resources. • harmonization of aviation / maritime procedures • inter-operability of life-saving equipment • development of a pool of experienced SAR mission coordinators skilled across both aviation and maritime domains thus reducing coordination and fragmentation 			
<i>Strategy</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
N/A	• conduct Southern African regional SAR workshop	1Q 2009		Not started
	• establish collaborative decision making process	1Q 2009		
	• develop needs assessment and gap analysis	1Q 2009		
	• develop Southern African regional action plan	1Q 2009		
	• conduct regional SAR Administrators training and SAR Mission Coordinators training	1Q 2009		
	• determine regional organisation, functions and responsibilities, accommodation and equipment needs	2Q 2009		
	• produce draft legislation, regulations, operational procedures, letters of agreement SAR plans and safety management policies for regional SAR provision using IAMSAR manual as guidance.	2Q 2009		
• determine future training needs and develop training plans	2Q 2009			

	<ul style="list-style-type: none"> • develop <ul style="list-style-type: none"> ➤ alerting procedures ➤ resource databases ➤ interface procedures with aerodrome emergency procedures and generic disaster response providers ➤ RCC check lists ➤ staffing, proficiency and certification plans ➤ preventive SAR programmes ➤ quality programmes ➤ education and awareness programmes ➤ in-flight emergency response procedures 	3Q 2009		
	<ul style="list-style-type: none"> • conduct training as required 	3Q 2009		
	<ul style="list-style-type: none"> • conduct SAR exercises required 	3Q 2009		
	<ul style="list-style-type: none"> • monitor implementation process 	as appropriate		
<p>linkage to GPIs</p>	N/A			

Notes:

1. The above work plan requires to be duplicated for NW Africa, Eastern Africa, Western Africa (Lagos) and Western Africa (Liberia) in turn. The timing of work in these regions will be dependent on operational, demographic, financial and social factors which, presently, are indeterminate. The nature and duration of the planning and implementation activity for each sub-regional RCC is considered to be in the same order of the Southern African plan detailed above.
2. All work requires close cooperation with all States affected, ICAO, IMO, Cospas-Sarsat and other worldwide bodies as required.

APPENDIX I

AERODROME OPERATION OBJECTIVES

IMPLEMENTATION OF AERODROME CERTIFICATION				
Benefits				
Efficiency	<ul style="list-style-type: none"> ensure aerodrome operators comply with relevant ICAO SARPs and/or applicable national regulations continued provision of safe and efficient aircraft operations at aerodromes 			
Safety	<ul style="list-style-type: none"> strengthen States' safety oversight responsibility on aerodrome operations 			
<i>Strategy</i>				
<i>Short term (2010)</i>				
<i>Medium term (2011 - 2015)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AO	<ul style="list-style-type: none"> create a scrutiny group to assist and monitor the implementation of aerodrome certification in the AFI Region analyze Annex 14, Volume I provisions on aerodrome certification vis-a-vis national legislations and regulations analyze guidance in the <i>Manual on Certification of Aerodromes</i> (Doc 9774) vis-à-vis national regulations develop and/or complete national regulations on aerodrome certification as necessary; and training of aerodrome inspectors develop an action plan for certifying all remaining aerodromes used for international operations, including implementation of SMS implement the action plan; and the scrutiny group to provide yearly feedback to APIRG regarding the status of the implementation of aerodrome certification 	<p>January 2009 – June 2009</p> <p>June 2009 – December 2009</p> <p>June 2009 – December 2009</p> <p>ongoing</p> <p>ongoing</p> <p>ongoing</p>		
linkage to GPIs	GPI/13: Aerodrome design and management; GPI/14: Runway operations			

APPENDIX J

AERODROME PERFORMANCE OBJECTIVES

ELIMINATION OF IDENTIFIED AOP DEFICIENCIES (bird hazard reduction, rescue and fire fighting services and aerodrome emergency planning)				
Benefits				
Safety	<ul style="list-style-type: none"> strengthen States' safety oversight responsibility on aerodrome operations 			
Efficiency	<ul style="list-style-type: none"> enhanced safety, efficiency and regularity of aerodrome operations in the States uniform implementation of the relevant ICAO SARPs and/or applicable national regulations in the AFI States 			
<i>Strategy</i>				
<i>Short term (2010)</i>				
<i>Medium term (2011 - 20015)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOP	<ul style="list-style-type: none"> regional office to carry out a survey within States to determine the current level of implementation with respect to the three major deficiencies in the AFI Region 	January – June 2009		
	<ul style="list-style-type: none"> regional office to analyze guidance in the ICAO <i>Manual on the ICAO Bird Strike Information System (IBIS)</i> (Doc 9332) and the <i>Airport Services Manual, Part 1 — Rescue and Fire Fighting, Part 3 — Bird Control and Reduction</i> and Part 7 — <i>Airport Emergency Planning</i> (Doc 9137) vis-à-vis national regulations and Annex 14 provisions 	June – December 2009		
	<ul style="list-style-type: none"> regional office to evaluate training needs in the AFI Region, if any; and coordinate these with the training needs for aerodrome certification 	October – November 2009		
	<ul style="list-style-type: none"> regional office in collaboration with the respective States to identify specific technical assistance needs, if any 	October – November 2009		
	<ul style="list-style-type: none"> regional office to develop and implement an action plan to meet the identified training needs in coordination with those for aerodrome certification 	November – February 2010		

	<ul style="list-style-type: none"> • regional office to develop and implement an action plan for technical assistance needs in coordination with the respective States and TCB • each State to develop and implement an action plan to remove the three major deficiencies • regional office to develop and implement an efficient monitoring system and regular feedback mechanism to APIRG regarding the correction of the identified three major deficiencies within the respective AFI States 	<p>June 2009 – December 2014</p>		
		<p>2009 – 2011</p>		
		<p>2009 – ..</p>		
<p>linkage to GPIs</p>	<p>GPI/13: Aerodrome operations</p>			

ATM PERFORMANCE OBJECTIVES

ELIMINATION OF IDENTIFIED ATM DEFICIENCIES (provision of ATC service and implementation of ATS routes including RNAV routes, joint use of airspace)				
Benefits				
Environment	• reductions in fuel consumption			
Efficiency	• ability of aircraft to conduct flight more closely to preferred trajectories			
Safety	• enhance safety by wider distribution of aircraft in a given airspace			
	• enhanced safety management			
<i>Strategy</i>				
Short term (2010)				
<i>Medium term (2011 - 2015)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOM	• implementation and provision of ATC service along ATS routes UA618, UB525, UB607, UL612, UM220, UM365, UR400 (Khartoum FIR) and UR780 (Mogadishu FIR), in the Table ATS 1 – Basic ANP, Doc 7474 and the provision of ATC service at terminal area of Mogadishu International Airport	2008 – 2009		
	• elimination and/or removal of special use airspaces (prohibited restricted and danger areas)	2008 – 2009		
	• State develop an implementation action plan to eliminate/or reduce these deficiencies	2008 – 2009		
linkage to GPIs	GPI/1: Flexible use of airspace; GPI/7: Dynamic and flexible ATS route management; GPI/8: Collaborative airspace design and management; GPI/10: Terminal area design and management			

AIS/MAP PERFORMANCE OBJECTIVES

ELIMINATION OF IDENTIFIED AIS/MAP DEFICIENCIES (implementation of WGS-84 coordinates, publication of aeronautical charts and timely publication and updating of AIS/MAP documents, i.e. NOTAMs, AIPs, AICs, etc.)				
Benefits				
Efficiency	<ul style="list-style-type: none"> improved collaborative decision-making through sharing aeronautical data information 			
Safety	<ul style="list-style-type: none"> enhance safety by timely exchange air safety data, i.e. electronically and wider distribution of such data 			
<i>Strategy</i>				
<i>Short term (2010)</i>				
<i>Medium term (2011 - 2015)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AIS/MAP	<ul style="list-style-type: none"> publication of relevant aeronautical charts 	2008 – 2009		
	<ul style="list-style-type: none"> publication of WGS-84 coordinates for en-route waypoints and use for GNSS coordinates for terminal approaches and departure procedures 	2008 – 2009		
	<ul style="list-style-type: none"> publication of AIPs, NOTAMs and AICs using standards formats 			
	<ul style="list-style-type: none"> States concerned to develop action plan to eliminate the deficiencies 	2008 – 2009		
linkage to GPIs	GPI/18: Aeronautical information; GPI/20: WGS-84			

CNS PERFORMANCE OBJECTIVES

ELIMINATION OF IDENTIFIED CNS DEFICIENCIES				
Benefits				
Safety		Implementation of AFI ANP		
		<ul style="list-style-type: none"> enhanced safety in flight operations uniform implementation of CNS/ATM systems (Doc 003) and relevant ICAO SARPs 		
<i>Strategy</i>				
Short term (2010)				
<i>Medium term (2011 - 20015)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AMS	<ul style="list-style-type: none"> provision of VHF in FIRs Angola, Sudan, Somalia and Congo (RD) 	2008 – 2009		ongoing
		2008 – 2011		ongoing
Navigational	<ul style="list-style-type: none"> implementation of navigational aids to increase safety at terminal areas implementation of GNSS – carry out survey to determine the implementation status and identify the specific assistance needed if any 	2009		ongoing (60% implementation)
		2008 – 2009		
Surveillance	<ul style="list-style-type: none"> development of AFI surveillance plan development of State implementation action plan based on AFI surveillance plan 	2009 – 2012		
		2008 – 2009		
Safety	<ul style="list-style-type: none"> implementation of automation support tools to enhance frequency management AFI to join ICARD 	July 2008 – 2009		ongoing
		August 2008 – March 2009		
linkage to GPIs	GPI/10: Terminal area design and management; GPI/21: Navigation systems			

SEARCH AND RESCUE (SAR) PERFORMANCE OBJECTIVES

ELIMINATION OF IDENTIFIED SAR DEFICIENCIES (SAR legislation, SAR agreements and SAR ELT)				
Benefits				
Efficiency	<ul style="list-style-type: none"> • efficiency in the conduct of SAR service • effective and timely assistance by all participating emergency response agencies 			
Safety	<ul style="list-style-type: none"> • safety of life 			
<i>Strategy</i>				
Short term (2010)				
<i>Medium term (2011 - 2015)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
SAR service	• review deficiencies in the provision of effective SAR and rescue service	2008 – 2009		
	• review deficiencies concerning implementation of SAR legislation	2008 – 2009		
	• review deficiencies concerning implementation of SAR agreements with assisting SAR organizations	2008 – 2009		
	• review deficiencies concerning implementation of COSPAS SARSAT ELT 406 MHz	February 2009		
	• develop State action plan to eliminate and/or reduce these deficiencies	2009		
linkage to GPIs	GPI/16: Decision support and alerting service			

In addition to the above long standing deficiencies, supplementary data has become available to the normal deficiency identification process by virtue of the ICAO/AFCAC SAR Project in the AFI region that was conducted from 2002 through 2007. In all, thirty-four African States were evaluated by the project.

APPENDIX K

MED PERFORMANCE OBJECTIVES

PREPARE THE AVIATION SECTOR FOR AN OUTBREAK OF A COMMUNICABLE DISEASE POSING A SERIOUS PUBLIC HEALTH RISK, OR PUBLIC HEALTH EMERGENCY, OF INTERNATIONAL CONCERN				
Benefits				
Efficiency	<ul style="list-style-type: none"> reduction of risk of spreading disease by air transport; 			
Safety	<ul style="list-style-type: none"> reduction of risk from disease to individual air travellers; mitigation of adverse economic effects caused by a disease outbreak; more rapid recovery when an outbreak is over. 			
<i>Strategy</i>				
<i>Short term (2010)</i>				
<i>Medium term (2011 - 2015)</i>				
MED OC COMPONENTS	TASKS	TIME FRAME START-END	RESPONSIBILITY	STATUS
	<ul style="list-style-type: none"> Regulatory authorities establish means of communication with national public health authorities. States establish national and airport facilitation programmes to include pandemic preparedness planning (unless effective alternatives are in place). States join the CAPSCA project and participate in Steering Committee and Regional Aviation Medicine Team Meetings. States consider supporting the CAPSCA project by providing financial contributions or contributions in kind. Minimum of two international airports per year evaluated against the ICAO guidelines with respect to preparedness planning. CAPSCA Steering Committee Meeting held annually. CAPSCA Regional Aviation Medicine Team Meeting held annually. 	2009		
		2009		
		2009		
		2009		
		Ongoing		
		Ongoing		
		Ongoing		
Linkage to GASP	<ul style="list-style-type: none"> 2.1.1. Focus Area 1 – Inconsistent Implementation of International Standards 2.2.1. Focus Area 5 – Inconsistent Coordination of Regional Programs 			

APPENDIX L**Guidelines on Performance of Very Small Aperture Terminal (VSAT) Networks****1. Introduction**

1.1 Digital communication networks based on very small aperture terminal (VSAT) are being increasingly used in the provision of aeronautical ground-ground communications in areas where terrestrial communication systems are unavailable, unreliable or uneconomical. VSAT networks are generally flexible, scalable, versatile, easy to implement/operate and cost-effective in certain areas, terrains or conditions.

1.2 On the other hand, a wide variety of often incompatible architectures, configurations, access techniques, management, operation schemes and protocols are used in different VSAT networks. Moreover, almost all VSAT networks available in the market employ some proprietary products. As a result, in general, non-identical VSAT networks are not interoperable.

1.3 There are no international standards governing VSAT networks. A number of International Telecommunication Union (ITU) recommendations relating to radio frequency or other aspects of communication systems are applicable to VSATs and are often complied with by VSAT vendors. Such compliance should not, however, be interpreted as a indication of compatibility with other products.

1.4. ICAO has not standardized the physical layer of communications, therefore there are no provisions for VSATs, nor for terrestrial-based systems-like cable, microwave relay system or optical fibre.

1.5 Noting the above, States or organizations that plan to implement VSAT networks for the provisions of aeronautical ground-ground communications, are advised to:

- a) ascertain that VSAT is in fact the preferred and most cost-effective means of communication in the geographical area(s) or interest;
- b) take into consideration Conclusion 5/16 of ALLPIRG/5; and
- c) use the performance requirements states in the ensuing paragraph as a guide to planning, system design and evaluation activities.

2. Performance requirements

2.1 Many factors influence the architecture, configuration and system design of a VSAT network. The end user is however mainly interested in the quality or performance of the communication service that is being provided and not so much in the technical details. As such, the user should state the desired basic performance requirements at the very early stage of planning to enable VSAT system design to proceed accordingly. Such performance requirements, once agreed upon by all parties concerned, would be used as a basis for further evaluation and continuing monitoring of the network.

2.2 In general, there is a direct relationship between performance and cost. This is particularly important for VSAT networks as there are also many parameters involved in achieving a given performance level. For example, insisting on higher availability implies duplicate terminals using

different satellites. Similarly, a very low bit error rate requires large earth station antennas, high power transmitters and large satellite transponder bandwidth. All those directly translate to significantly higher acquisition and operation costs.

2.3 The minimum performance targets stated below are generally suitable for aeronautical ground-ground communication and can be achieved with “reasonable” resources and cost. The stated performance parameters apply to the overall communication service as seen by the end user of a digital VSAT network.

Availability $\geq 99.8\%$
(see Note 1)

Bit error rate (BER) ≤ 1 in 10^{-7}
(see Note 2)

One-way latency < 400 ms
(see Note 3)

Call blocking probability $\leq 2.5 \times 10^{-3}$ (or 1 in 400 attempts)
(see Note 4)

Call set-up time ≤ 2 s

Note 1.— The above shows the required overall availability of the communication service to the end user. It includes the consideration of all scheduled/non-scheduled maintenance and sun outages.

Note 2.— BER is applicable to the physical layer of communications. Forward error correction (FEC) may be employed to achieve this figure.

Note 3.— The above implies that for voice communications, only a single satellite hop should be used. The major contributor to the latency is the propagation delay of approximately 240 ms (a single hop). Voice compression and encoding also introduce additional delays.

Note 4.— The above applies to a normal switched voice communications environment. In certain operational scenarios, it may be necessary to guarantee the availability of a voice circuit upon demand by employing priority/pre-emption techniques or dedicated satellite resources.

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Statement by the Delegation of Eritrea

The Eritrean airspace was administered by the Italian colonial rule from 1890 – 1941. Britain took charge from 1941 – 1952 after the defeat of fascism in World War II.

Indeed, the Airspaces over the two Yemens (North and South), Oman (Muscat), Part of the Indian Ocean, Somalia, Djibouti, Eritrea and Ethiopia, were administered by Britain as “*Aden Flight Information Region*” technically known as (*Aden FIR*), until the liberation of Aden in 1967.

Ever since, the UG – 650 Airway was operational and was identified as expeditious and above all, the most appropriate and economically viable air route, with dense traffic volume, linking north-south of the African Continent, all the way to South Africa. Indeed such a configuration was designed purely on the basis of safety, security, efficiency and effectiveness (economic viable).

Regrettably, this historic route that was operational for almost a century is now closed for ten years (1998 – 2008) for no apparent reason whatsoever, under the guise of border issue, which was legally settled in the first quarter of 2002. This unwarranted closure is and will continue to penalize airspace users, especially now when they are already hit hard because of environmental degradation attributed to global warming, soaring oil prices, and worldwide economic recession. It is, therefore, not surprising to see major carriers run bankrupt one after the other and day and day out. This in turn will jeopardize the very essence for the need of adequacy and frequency of air transport industry in the COMESA/SADC Region in general and AFI Region in particular. Moreover, in the absence of bilateral air traffic control service agreements, systems standardization and harmonization including appropriate coordination and consultation with adjacent FIRs could lead to vulnerability to risk, ineffective SAR and aircraft accident investigation.

A great deal has been done to reduce the workload of controllers and pilots through the use of various technologies. In the same vein, a lot could be done within the scope of this august meeting to help airspace users bail out of the ongoing crisis through the commitment of Contracting States in the AFI Region to put aside unwarranted excuses and give prime attention to and adhere to full compliance of the norms and principles enshrined in the Chicago Convention and the ICAO SARPS.

Looking at air navigation services from the other side of the coin, we witness that a number of Contracting States in the AFI and MID Regions, making use of secondary *surveillance radar (SSR)*, while others, including Eritrea heavily depend on *procedural* air traffic systems as appropriate. To that effect, prompting neighbouring FIRs to develop air traffic procedures for safe handover and transfer typical to that of the September RVSM implementation programme which proved a success.

Lastly, Article 15 of the Chicago Convention, stipulates that Contracting States are entitled to levy charges, for air navigation services rendered to airspace users, either in part or wholly for cost-recovery of supra and infra structures put in place. Despite that, some airspace users defy the law and bluntly refuse to settle their debt and continue to demand fly permission to make use airspaces of sovereign ICAO Contracting States. This is tantamount to air piracy of one Contracting State over another Contracting State.

Statement by the Delegation of Ethiopia

In the opening plenary of the Special AFI RAN Meeting (24 to 29 November 2008, South Africa), the Chairperson and the ICAO Secretariat advised the Delegation of Eritrea that this matter was not a subject for, or on, the agenda of, this meeting. Eritrea was further advised that this matter would not be discussed in any of the subordinate working groups. ICAO, however, advised that any Contracting State may make a short statement to the proceedings.

ICAO's working paper SP AFI/08-WP/2 dated 31/7/08, paragraph 2.2 clearly gives guidance to this Special AFI RAN Meeting. Accordingly the meeting shall only deal extensively on regional safety and efficiency while reviewing and amending the RANP shall not be undertaken at this meeting.

ICAO's State letter to the invitation of this special RAN meeting has also set a deadline to the submittal of working papers.

Therefore, the Delegation of Ethiopia in conformity to the ICAO Secretariat working paper (WP/2) and its further guidance given to participants totally opposes the consideration nor the inclusion of the usual allegation made by Eritrea in the report in any form.

If, however, the Secretariat contravenes its own procedure and guidance to this meeting and allows the consideration of the issue, the Ethiopian Delegation would have been forced to reconsider its participation to such a meeting in the region.

Moreover, if the meeting decides to consider the inclusion of the allegation in the report, Ethiopia would like to remind ICAO, the Secretariat and this meeting on the general and politically sensitive issues as follows:

- a) Ethiopia adamantly rejects the statement made by Eritrea and strongly reminds ICAO and Contracting States that this politically sensitive issue is under the competent body of the United Nations;
- b) Route UG-650 (on the Ethiopian side) has only been closed in order to ensure the safety and security of flights as per Article 9 of the Chicago Convention and Annex 11. As it is known by the international community, the war initiated by Eritrea has forced Ethiopia to close the northern routes due to safety concerns.

Finally, it has to be noted that the aforementioned Ethiopia's position has been officially communicated in detail to the President of the ICAO Council and the Secretary General on various occasions.

— END —