

INTERNATIONAL CIVIL AVIATION ORGANIZATION



REPORT OF

THE ELEVENTH MEETING OF

THE CAR/SAM REGIONAL PLANNING AND

IMPLEMENTATION GROUP (GREPECAS/11)

(Manaus, Brazil, 3 to 7 December 2002)

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HISTORY OF THE MEETING

ii.1 **Place and Duration of the Meeting**

Upon the kind invitation of the Brazilian Department of Airspace Control (DECEA), the Eleventh Meeting of the CAR/SAM Planning and Implementation Group (GREPECAS/11) was held in Manaus, Brazil, from 3 to 7 December 2002 at the Tropical Hotel.

ii.2 **Opening Ceremony and other matters**

Mr. José Miguel Ceppi, Regional Director of the ICAO SAM Office, expressed his sincere appreciation to the authorities of Brazil for hosting this meeting.

Ten. Brig. Do Ar Flávio de Oliveira Lencastre, Director General DECEA, welcomed the Delegates and wished them success in attaining the objectives of the meeting, stressing the close links between Brazil and CAR/SAM States. Also present at the opening ceremony were Maj. Brig. Do Ar Irineu Rodrigues Neto, VII Comando Aereo Regional, Maj. Brig. Do Ar Paulo Roberto Cardoso Vilarinho, DECEA Deputy Director of Planning.

ii.3 **Organization, Officers and Secretariat**

Mr Pedro Sánchez Dañino, Chairman of the GREPECAS, presided over the meeting throughout its duration.

Mr Raymond Ybarra, ICAO Regional Director, North American, Central American and Caribbean Office, was Secretary of the meeting and was assisted by the following staff from the Organization:

Mr José Miguel Ceppi, ICAORD, SAM Office
José Antonio Díaz de la Serna, ICAODRD, NACC Office
Mr Jorge Fernández Demarco, RO/ATM/SAR, SAM Office
Mr Aldo Martínez, RO/CNS, NACC Office
Mr. Michiel Vreedenburg, RO/AGA, NACC Office
Mr. Hindupur Sudarshan, Technical Officer, RAO, Headquarters

ii.4 **Working languages**

The working languages of the meeting and its documentation were English and Spanish.

ii.5 AGENDA

The agenda was adopted:

Agenda Item 1 Review of the ANC/Council actions on the GREPECAS/10 Report

MANAGEMENT OF THE CAR/SAM AIR NAVIGATION SYSTEM

Agenda Item 2 Review of other meeting Activities

- 2.1 Interregional and intra-regional CNS/ATM activities and coordination
- 2.2 Report of the CAR/SAM Traffic Forecasting Group activities
- 2.3 Review by the Council of the Report of the Ministerial AVSEC Meeting
- 2.4 Eleventh Air Navigation Conference

Agenda Item 3 Review of Reports of GREPECAS contributory bodies

- 3.1 Report of the AGA/AOP/SG/2 and AVSEC/COMM/1 Meetings
- 3.2 Report of the ATM/CNS/SG/2 Meeting

**AIR NAVIGATION PLANNING AND IMPLEMENTATION
DEFICIENCIES/PROBLEMS IN THE CAR/SAM REGIONS**

Agenda Item 4 Air navigation planning and implementation deficiencies/problems in the CAR/SAM Regions

- 4.1 Report of the ASB/4 Meeting
- 4.2 Specific air navigation planning and implementation deficiencies/problems in the CAR/SAM Regions

GREPECAS MANAGEMENT

Agenda Item 5 Management of the GREPECAS Mechanism

- 5.1 Report of the ACG/2 Meeting
- 5.2 Review of GREPECAS and its Contributory Bodies Work Programme and Terms of Reference

Agenda Item 6 Review of GREPECAS Outstanding Conclusions and Decisions

Agenda Item 7 Other Business

ii.6 **Attendance**

The Meeting was attended by 106 participants from 19 Member States and 5 Contracting States, located or having territories in the CAR/SAM Regions, as well as one State located outside the Regions, and observers from 7 international organizations. A list of participants is shown in pages iii-1 to iii-3.

ii.7 **Conclusions and Decisions**

GREPECAS records its action in the form of Conclusions and Decisions as follows:

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

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

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LIST OF PARTICIPANTS

Members	Advisers	Nominated by:
Herald Wilson		ANTIGUA AND BARBUDA (Representing Dominica, Grenada, St. Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines)
Dante Dovichi	Carlos Matiak Guillermo Cocchi José Antonio Alvarez Carlos Alberto Fasolis	ARGENTINA
Anthony Archer		BARBADOS
Leci Oliverira Perez	Flávio de Oliveira Lencastre Paulo Roberto Cardoso Vilarinho Paulo Gerarde Mattos Araujo Ronaldo Ney Telles Belchior Paulo Teixeira da Silva Marcio Roberto Vivianni Mauro Antonio da Fonseca Roberto Saa Freire de Britto Jose Mauro Barbosa Magalhaes Afonso Heleno de Oliveira Gomes Carlos Roberto Henriques Luis de Souza Monteiro Netto Ari Rodríguez Bertolino Julio César de Souza Pereira Ademir Freitas Manoel Victor Schubnell de Rezende Lima Eno Siewerdt Carlos Alberto Cirilo Paulo César Cunha Alvaro Moreira Pequeno Irineu Netto Márcio Marques Soares Carlos Alves de Melo Luiz A. F. Castro Nilson Fausto dos Santos Joao Pedro Mendes de Oliveira Normando Araujo de Medeiros Antonio Augusto Walther de Almeida Valdir Rodrigues Alves Luiz Anesio de Miranda	BRAZIL

Members	Advisers	Nominated by:
	Inaldo de Azevedo Silva Moreira José Antonio Curi José Da Silva Goncalves	BRAZIL (cont.)
	Lorenzo Sepúlveda Fernando Ramírez Sergio García Samuel Véliz Darío Retamal	CHILE
	Sergio Paris	COLOMBIA
Jorge Fernández Chacón	Edwin Quiróz	COSTA RICA
	Raúl Madrigal Fidel Ara Cruz	CUBA
	Francisco Artiles Juan Ramón Cabrera Sergio A. Gómez Gender Damiam	DOMINICAN REPUBLIC
	Iván Salas Gonzalo Echeverría	ECUADOR
Jean-Marc Sansovini	Roger Prudent	FRANCE
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	Luis Guillermo Seixas	PANAMA
Raymundo Hurtado	Freddy Nuñez	PERU
Francis Pedro	Trevor Dowrich	TRINIDAD AND TOBAGO
	Roland Zilz Andrew Newman	UNITED KINGDOM
Joaquin Archilla	Drazen Gardilic Carey Fagan Dulce María Roses Mark Ríos	UNITED STATES
Alfredo Tardáguila	Alberto Tissoni	URUGUAY

Members	Advisers	Nominated by:
	Nelson Campos Mauro Di Gennaro	VENEZUELA
Also attending the Meeting:		
Eduardo Melean	Fernando Alvarez Telles Roberto Romero Clavijo Carlos Quiroga	BOLIVIA
Wayne Farley		GUYANA
Franck St. Juste	Jacques Boursiquot	HAITI
Patrick Stern		JAMAICA
Hernán Colman	Carlos Pavetti	PARAGUAY
José Manuel Puente	Luis Alberto Ruíz Juan de Mata Morales Luis Andrada Francisco Salabert	SPAIN
Michael Ramírez	Paul Clouse	ARINC
Mayron Dos Santos Pereira		LACAC
José Ramón Oyuela	Uriel Urbizo Jorge Vargas	COCESNA
Peter Cerdá	Angel López Lucas Gabriel Baquero Manuel Góngora	IATA
Adalberto Febeliano		IBAC
Eduardo Charpentier	Salvador Gayón	IFALPA
Juan Antonio Pérez Mafla	Arturo Avila	IFATCA
Akhil Sharma	Adriana Mattos Nilson Barbosa	SITA

List of Documentation

WORKING PAPERS				
Number	Agenda Item	Title	Date	Presented by
WP/01	--	Draft Agenda and Clarifying Notes	19/11/02 Revised	Secretariat
WP/02	--	Work Schedule of the GREPECAS/11	13/09/02	Secretariat
WP/03	1	Review of Council and ANC Actions on the Report of the Tenth Meeting of the GREPECAS	07/10/02	Secretariat
WP/04	2.1	Report on Global and Regional Developments in the Modernization of Air Navigation Systems	07/10/02	Secretariat
WP/05	2.2	Progress Report of the CAR/SAM Traffic Forecasting Group Activities	15/10/02	Secretariat
WP/06	2.3	Actions taken by the Council as a result of the Ministerial AVSEC Meeting	23/10/02	Secretariat
WP/07	2.4	Agenda, date, organization and site for the Eleventh Air Navigation Conference (2003)	07/10/02	Secretariat
WP/08	3.1	Report of the AGA/AOP/SG/2 and AVSEC/COMM/1 Meetings	22/11/02 Revised	AGA/AOP/SG Chairman
WP/09	3.2	Review of the Report of the Second Meeting of the ATM/CNS Subgroup	22/11/02 Revised	ATM/CNS/SG Chairman
WP/10	3.2	Report of the Second Meeting of the ATM Committee	11/10/02	ATM/COMM Chairman
WP/11	3.2	Report of the Second Meeting of the CNS Committee	08/11/02	CNS/COMM Chairman
WP/12	4.1	Report of the ASB/4 Meeting	04/12/02	Secretariat
WP/13	4.2	Proposed actions to eliminate the Air Navigation Deficiencies in the CAR/SAM Regions	08/11/02	Secretariat
WP/14	5.1	ACG Activities and Report of the 2nd Meeting	19/11/02	Secretariat
WP/15	5.2	GREPECAS and its Contributory Bodies Work Programme and Terms of Reference	21/10/02	Secretariat
WP/16	6	Review of GREPECAS Outstanding Conclusions and Decisions	10/09/02	Secretariat

WORKING PAPERS				
Number	Agenda Item	Title	Date	Presented by
WP/17	2.2	Need for adequate resources for Regional Traffic Forecasting Groups	07/10/02	Secretariat
WP/18	4.2	Resolution of Regional Air Navigation Deficiencies	22/10/02	Secretariat
WP/19	4.2	English Language in ATC	22/11/02 Revised	United States
WP/20	7	Participation of Uruguay as Permanent Member of the GREPECAS	11/09/02	Uruguay
WP/21	4.2	Request to the World Meteorological Organization (WMO) to become a Member of the Aeronautical Meteorology Subgroup (AERMETS)	15/11/02 Revised	Secretariat
WP/22	4.2	Seminar on Aeronautical Meteorology Cost Recovery	18/11/02	Secretariat
WP/23	3.2	RVSM benefits in the EUR/SAM Corridor	14/11/02	Spain
WP/24	5.2	Increasing the efficiency and effectiveness of PIRGS	07/11/02	Secretariat
WP/25	4.2	Proposal for the identification of multinational facilities and services in the CAR/SAM FASID	15/11/02	Secretariat
WP/26	4.2	ATC Contingency Plans	15/11/02	IATA
WP/27	4.2	Implementation of WGS-84 in the CAR/SAM Regions	15/11/02	IATA
WP/28	3.2	RVSM Implementation in the CAR/SAM Regions	05/11/02	IATA
WP/29	3.2	CAR/SAM Monitoring Agency Implementation (CARSAMMA)	19/11/02	Brazil
WP/30	4.2	To homogenize the FASID Tables	15/11/02	Brazil
WP/31	4.2	Distribution of the RNAV Procedures Data	15/11/02	IATA
WP/32	3.2	RVSM Implementation	21/11/02	Colombia
WP/33	3.2	Operational security and air space evaluation agency for CAR/SAM Regions.	21/11/02	Colombia
WP/34	4.2	RNP Trials and Demonstrations	21/11/02	Colombia

WORKING PAPERS				
Number	Agenda Item	Title	Date	Presented by
WP/35	5.2	International Meetings	04/12/02 Revised	Brazil
INFORMATION PAPERS				
Number	Agenda Item	Title	Date	Presented by
IP/01	--	General Information	15/07/02	Secretariat
IP/02	--	List of Working and information papers	03/12/02 Revised	Secretariat
IP/03	--	Summary of Activities of the NACC and SAM Regional Offices during 2001	20/08/02	Secretariat
IP/04	2	Agenda, Date, Organization and Site for Fifth Worldwide Air Transport Conference	07/10/02	Secretariat
IP/05	3.1	Cooperation between States to improve Aviation Security	15/10/02	United States
IP/06	3.1	Aviation Security in the United States since September 11 th	15/10/02	United States
IP/07	4.2	ATS Quality Assurance Course Development	19/11/02 Revised	United States
IP/08	7	Joint Aeronautical and Maritime Search and Rescue Meetings	15/10/02	United States
IP/09	7	Study Group Work on Annex 12, Search and Rescue	15/10/02	United States
NI/10	6	Proyecto de base de datos AIS/MAP CAR/SAM <i>(Available only in Spanish)</i>	26/09/02	Brazil
NI/11	4.2	Avances sobre las actividades desarrolladas por los grupos de tarea AIS/MAP en las Regiones CAR/SAM <i>(Available only in Spanish)</i>	21/11/02	Presidente AIS/MAP/SG
NI/12		Cancelled		
NI/13		Cancelled		
NI/14	4.2	Enlaces Pre – Post REDDIG, <i>(Available only in Spanish)</i>	19/11/02	Argentina

INFORMATION PAPERS				
Number	Agenda Item	Title	Date	Presented by
NI/15	4.2	Información sobre la implantación de las LUT / MCC en la República Argentina <i>(Available only in Spanish)</i>	19/11/02	Argentina
NI/16	4.2	Información sobre la Implementación de un nuevo ACC en Ezeiza – República Argentina <i>(Available only in Spanish)</i>	19/11/02	Argentina
NI/17	4.2	Inclusión de la REDDIG en el FASID <i>(Available only in Spanish)</i>	19/11/02	Argentina
NI/18	4.2	REDDIG-Inconvenientes sufridos en el desarrollo del Contrato con S.E.E.E. <i>(Available only in Spanish)</i>	19/11/02	Argentina
IP/19	4.2	Institutional Aspects and Applicability	02/12/02	Secretariat

Agenda Item 1: Review of the ANC/Council actions on the GREPECAS/10 Report

1.1 The Meeting was presented with actions taken by the Air Navigation Commission (ANC) and the Council during their review and approval of the report of the tenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS) held in Las Palmas, Canary Islands, Spain from 23 to 27 October 2001. The meeting noted the specific actions taken by the ANC, the Council and the follow-up by the States and Secretariat on Conclusions and Decisions of the meeting as contained in the **Appendix** to this part of the Report.

1.2 Recognizing that there would be operational and economic benefits accrued as a result of the implementation of reduced vertical separation minimum (RVSM), the Meeting noted that the Commission endorsed the views of GREPECAS pertaining to RVSM introduction in CAR/SAM FIRs effective from 1 April 2004 (Conclusion 10/11 refers).

1.3 In relation to Conclusion 10/18 concerning the development of regional guidance material for the implementation of an air traffic services quality assurance programme, the Meeting noted that the ANC welcomed the initiative and requested the Secretary General, taking into account resources available, to study the document for possible worldwide application.

1.4 With reference to interconnection of national/regional digital networks, the Meeting recognized that depending on individual needs and preferences many existing networks have been implemented using the commercial-off-the-shelf systems and that those systems were not subjected to ICAO's standardization process. In this regard, the meeting noted that the Commission endorsed the initiative of GREPECAS in the development of preliminary guidance material on interconnection of digital networks (Conclusion 10/27 refers).

1.5 The Meeting was informed that the Commission agreed with the observation of GREPECAS that utilization of aeronautical phraseology by air traffic controllers (Conclusion 10/58 refers) would enhance safety, and acknowledged the need to address this region-wide deficiency.

APPENDIX

**GREPECAS/10 CONCLUSIONS/DECISIONS CONSIDERED
FOR SPECIFIC ACTION BY THE AIR NAVIGATION COMMISSION
AND/OR COUNCIL**

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	Page		
Paragraph 2.9	2-3	C	<p>Traffic Forecasting Group activities</p> <p>Noted that traffic forecasts to the year 2010 for the eighteen major traffic flows across CAR/SAM Regions had been developed and requested the Secretary General to monitor related developments in other regions to ensure a uniform approach.</p>
10/7	3-2	C	<p>Mandatory use of pressure altitude reporting transponders</p> <p>Noted the conclusion and requested the Secretary General to urge States to take action to mandate the carriage of pressure altitude transponders by the globally agreed date as specified in Annex 6 — <i>Operation of Aircraft</i>.</p>
10/10	3-3	C	<p>RNAV route network for the CAR/SAM Regions</p> <p>Noted the conclusion and that a proposal for amendment to the Basic ANP to reflect the designation of thirteen RNAV routes would be put forward to the Council for approval through established procedures.</p>
10/11	3-4	ANC	<p>Implementation of RVSM in CAR/SAM Regions</p> <p>Noted the conclusion and requested the Secretary General to call upon States to implement RVSM as per regional agreement.</p>

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	Page		
10/12	3-5	ANC	<p>CAR/SAM airspace safety performance monitoring agency</p> <p>Noted the conclusion and requested the Secretary General to monitor and harmonize related developments in other regions.</p>
10/18	3-8	ANC	<p>Guidelines for the implementation of an ATS quality assurance programme</p> <p>Noted the conclusion and that the regional guidance material would be published in accordance with established procedures and requested the Secretary General, taking into account resources available to study the document for possible worldwide application.</p>
10/19	3-11	C	<p>Regional actions to support ICAO's position on critical interest issues for civil aviation at ITU's WRC-2003</p> <p>Noted the conclusion and requested the Secretary General to continue encouraging the States to participate at various levels in different fora to provide support for the ICAO position at the forthcoming WRC-2003.</p>
10/22 10/23 10/24	3-12 3-13 3-13	ANC	<p>AMHS implementation AMHS addressing scheme AIDC implementation</p> <p>Noted these conclusions in relation to implementation of ATN in CAR/SAM Regions and requested the Secretary General to monitor and harmonize associated developments in other regions.</p>
10/27	3-15	ANC	<p>Preliminary material on interconnection of aeronautical communication digital network</p> <p>Noted the conclusion and recognizing that details of physical interconnection of various ground networks for ensuring interoperability were not subject to ICAO standardization, appreciated the initiative in developing guidance material.</p>

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	Page		
10/30	3-16	C	<p>Elimination of a single VHF voice communication channel sharing to provide approach (APP) and tower (TWR) services</p> <p>Noted the conclusion and requested the Secretary General to urge States to resolve this issue.</p>
10/34	3-19	C	<p>Significant weather medium-level (SWM) charts for the CAR/SAM Regions</p> <p>Noted the conclusion and its relation to the agreed plan for transition to the final phase of the WAFS.</p>
10/37	3-20	ANC	<p>Special Implementation Project (SIP): SIGMET</p> <p>Noted the conclusion and that the Council has approved and included an aeronautical meteorology SIP in the programme of SIPs for 2002.</p>
10/39	3-21	C	<p>Training of aeronautical meteorological personnel</p> <p>Noted that in accordance with the <i>Working Arrangements between the International Civil Aviation Organization and the World Meteorological Organization (Doc 7475)</i>, this conclusion should be addressed to WMO, and requested the Secretary General to invite WMO to consider developing and implementing this project in coordination with ICAO.</p>
10/43	3-23	ANC	<p>Airfield maintenance programmes</p> <p>Noted the conclusion and requested the Secretary General to urge States to ensure the implementation of an adequate airfield maintenance programme by aerodrome operators.</p>

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	Page		
10/44	3-24	C	<p>Aerodrome certification implementation</p> <p>Noted the conclusion and considering that the universal safety oversight audit programme (USOAP) had already been expanded to include Annex14 — <i>Aerodromes</i> and that the audits in this field were scheduled to commence in 2004, requested the Secretary General to urge States to establish the necessary legislation and regulatory procedures needed for certification of aerodromes.</p>
10/45	3-24	ANC	<p>Aerodrome certification workshops</p> <p>Noted the conclusion in relation to ICAO's plan to hold a series of regional workshops on aerodrome certification this year.</p>
10/48	3-25	ANC	<p>Regional bird hazard committee</p> <p>Noted the conclusion and that a regional bird hazard committee would be established by June 2003 and, accordingly, requested the Secretary General to urge States to establish and maintain national bird hazard committees.</p>
10/51	3-27	ANC	<p>Status of the coordination plan for the implementation of the national data banks (NASC) and the CAR/SAM common operational procedures manual for an integrated automated AIS system (COPM) documents</p> <p>Noted the conclusion and requested the Secretary General to urge States to continue to apply the relevant guidelines in support of on going work of the development of an integrated automated AIS system for the region.</p>
10/57	3-29	C	<p>Special implementation project (SIP) : WGS-84</p> <p>Noted the conclusion with the understanding that such a project might be put forward for the Council's approval in 2003.</p>

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	Page		
Paragraph 4.1	4-1	ANC	<p>Specific air navigation planning and implementation deficiencies in the CAR/SAM Regions</p> <p>Noted that many deficiencies continued to persist for a number of years and called upon the Secretary General to actively pursue the addressing of the deficiencies with a view to resolving them in the interest of enhancing air safety.</p>
10/58	4-1	C	<p>ATS quality assurance programme for the CAR/SAM States</p> <p>Noted the conclusion in relation to Conclusion 10/18, and requested the Secretary General to urge States to make financial commitments to achieve proper utilization of aeronautical phraseology by air traffic controllers</p>

Agenda Item 2: Review of other meeting Activities**2.1 Interregional and intra-regional CNS/ATM activities and coordination****Report on the Global and Regional developments in the modernization of air navigation systems**

2.1.1 The Meeting was presented with an overview on global developments in the modernization of air navigation systems that took place in 2002 and as well as a number of updates on various issues. The Meeting was apprised that the annual report presented to the Council this year was expanded to include regional developments.

2.1.2 The Meeting, noting that the Council requested PIRGs to enhance their efforts to support CNS/ATM systems implementation plans with appropriate and adequate operational and economical analysis, included these requirements in the GREPECAS work programme. However, the Meeting recognized the need for additional resources for undertaking these tasks and agreed to formulate the following Conclusion.

CONCLUSION 11/1 - NEED FOR ADDITIONAL RESOURCES FOR CARRYING OUT OPERATIONAL AND ECONOMIC ANALYSIS

That ICAO, in an effort to assist GREPECAS in their efforts to support CNS/ATM Systems implementation plans, provide additional resources in order to undertake the necessary operational and economical analyses.

2.2 Report of the CAR/SAM Traffic Forecasting Group activities

2.2.1 The Meeting noted that ICAO CAR/SAM Traffic Forecasting Group (CAR/SAM TFG) which was formed in 1996 to date had 5 meetings. Forecasts for the major traffic flows are prepared annually and updated on a periodic basis. The Meeting reviewed the forecasts that was prepared by the CAR/SAM TFG taking into account the impact of the 11 September events. The Meeting noted that overall number of movements was projected to increase at an average annual growth rate of 4.1%. In the case of overall passenger traffic to/from and within the region, it was projected to grow at an average annual rate of 4.5%, almost 2 percentage points below earlier forecast primarily to the impact of 11 September 2001.

Need for Adequate Resources for Regional Traffic Forecasting Groups

2.2.2 The Meeting was advised that the attendance at the CAR/SAM TFG meeting was extremely poor with no representation from the States of the CAR/SAM Regions.

2.2.3 It was pointed out that the work of the regional TFGs has been expanding continuously over the past several years based on the needs determined by the respective PIRGs. The Meeting was reminded that the TFGs were created to facilitate the requirements of the PIRGs, but in practice the vast majority of the work in some of the TFGs is being carried out by the Secretariat. While some of the demands have been accommodated, the new requests for data cannot all be met without additional resources and expertise provided by States, or additional funding to the Secretariat.

2.2.4 The Meeting noted that, against this background, ICAO's forecasting activities were reviewed at the 166th Session of Council on 3 June 2002 and a strategy will be pursued whereby all of the TFGs will be largely self-reliant in the long-term as regards the development of forecasts and business cases, with the Secretariat support limited to that of providing coordination. In view of the importance of traffic forecasts and the need to provide the CAR/SAM TFG with adequate resources, the Meeting endorsed the following conclusion:

CONCLUSION 11/2 - NEED FOR ADEQUATE RESOURCES FOR CAR/SAM TRAFFIC FORECASTING GROUP

That, the States and International Organizations provide adequate resources for the CAR/SAM TFG, which should include the designation of suitable experts to participate in the development of forecasts and regularly attend TFG meetings along with the provision of data and other information required for the development of forecasts.

2.3 Review by the Council of the Report of the Ministerial AVSEC Meeting

2.3.1 In response to the tragic events of 11 September 2001, the Meeting noted that 33rd Session of the ICAO Assembly determined the need for a High-Level, Ministerial Conference (HLMC) on Aviation Security (AVSEC). This conference was convened in Montreal on 19 and 20 February 2002. Since the conference, actions in general, which ICAO undertook included:

- a) reviewing legal instruments;
- b) enhancement of Annex 17 - Security and introduction or strengthening of security-related provisions in other Annexes to the Convention on International Civil Aviation (Annexes 1, 6, 8, 9, 11, 14, and 18);
- c) reinforcing AVSEC Mechanism activities, notably in the preparation of security audits and in undertaking immediate/urgent assistance to States;
- d) expediting work on Machine Readable Travel Documents (MRTDs), biometric identification and travel document security and improving border security systems;

- e) reviewing certain Procedures for Air Navigation Services (PANS);
- f) revising relevant ICAO manuals and other guidance material; and
- g) further development of AVSEC Training Packages (ASTPs), training programmes, workshops, seminars, as well as assistance to States through ICAO's technical cooperation programme.

2.3.2 The Meeting was appraised that an ICAO Aviation Security Plan of Action covering the current triennium (2002-2004) was adopted by the Council in June 2002 and agreed to its implementation commencing immediately thereafter.

2.3.3 The Meeting noted that Project 3 of the Plan of Action provides for the promotion of global AVSEC through regular, mandatory, systematic and harmonized audits to enable evaluation of AVSEC in place in all ICAO Contracting States.

2.3.4 To the extent practicable, the Universal Security Audit Programme (USAP) is adopting the administrative policies currently in use by the Universal Safety Oversight Audit Programme (USOAP), including languages. In recognition of the special sensitivity of AVSEC-related information, the USAP has also adopted the principle of confidentiality. Should additional staffing levels be met and should State support in the form of funding and short-term experts be sufficient, ICAO proposes to attempt as a goal a three-year audit cycle with 63 audits conducted per year. The three-year cycle would begin at the point the ASA Unit is fully staffed.

2.3.5 The Meeting was pleased to note that the Council agreed for the establishment and recruitment of Regional Aviation Security Experts which was originally described in Project 7 of the AVSEC Plan of Action. These Regional AVSEC Experts would be based in ICAO Regional Offices still to be determined, but within five of the geographical regions to include Africa, the Americas, Europe, the Middle East and Asia/Pacific.

2.3.6 The Meeting supported the objectives of the integrated AVSEC Plan of Action and any related AVSEC activities in the CAR/SAM Regions.

2.4 **Eleventh Air Navigation Conference**

2.4.1 The Meeting was informed that the Council of ICAO had agreed to convene the Eleventh Air Navigation Conference (AN-Conf/11) in Montreal from 22 September to 3 October 2003. The structure of the conference is based on two committees: Committee A to deal with air traffic management (ATM) issues and Committee B to deal with communications, navigation, and surveillance (CNS) issues. The Meeting noted that the agenda of the conference enveloped wide spectrum of issues related to CNS/ATM systems.

2.4.2 In discussing the agenda of the Conference, the GREPECAS reflected that there was a need for developing a regional position on various subjects and as such regional participation in the Conference was strongly endorsed. In this regard, it was noted that the ATM and CNS Committees of the ATM/CNS Subgroup had included this issue in their agenda for their second meeting (Rio de Janeiro, 16-20 September 2002).

Agenda, Date and Site for Fifth Worldwide Air Transport Conference

2.5 The Meeting was advised that the ICAO has convened the Fifth Worldwide Air Transport Conference from 24-29 March 2003 at Montreal with its theme “challenges and opportunities of liberalization”.

Agenda Item 3: Review of Reports of GREPECAS contributory bodies**3.1 Report of the AGA/AOP/SG/2 and AVSEC/COMM/1 Meetings****3.1.1 Report of the AGA/AOP/SG/2 Meeting**

3.1.1.1 The Meeting reviewed the work of the second meeting of the AGA/AOP Subgroup. It noted that the Subgroup had proposed amendments to its work programme and that these, together with changes to its composition, were reported on under Agenda Item 5.

Air Traffic Forecasts

3.1.1.2 Considering that the ICAO CAR/SAM Traffic Forecasting Group is not able, at least in the short-term due to insufficient resources, to provide the necessary information in order to implement Conclusion 10/42 of GREPECAS, the Meeting adopted the following Conclusion:

CONCLUSION 11/3 AGA/AOP/SG TRAFFIC FORECAST REQUIREMENTS

That,

- a) States obtain from aerodrome operators the following traffic forecast information for 5 and 10-year horizons (listed in order of priority):
 - The critical aircraft types for international aerodromes;
 - The busy hour aircraft movements for international aerodromes;
 - The annual aircraft movements for cities; and,
 - The types of aircraft operating on routes between city-pairs.
- b) States define which aerodromes are to be considered;
- c) States provide the information referred to in a) above to the ICAO Regional Offices by June 2003; and
- d) ICAO compile, consolidate, review and present the information received to the AGA/AOP/SG/3 Meeting in September 2003.

Results of the Runway Strips and Runway End Safety Areas Task Force

3.1.1.3 The Meeting discussed the findings and recommendations of the Task Force and adopted the following Conclusion:

CONCLUSION 11/4**RUNWAY STRIPS AND RUNWAY END SAFETY AREAS**

That, in the case of existing aerodromes where the required runway strips and runway end safety areas (RESA) are not provided due to physical constraints,

- a) States publish existing runway strip and RESA dimensions and note any deficiencies in the AIP;
- b) States evaluate the provision of the required runway strips and RESA through the reduction of runway declared distances, including timely consultation with the aerodrome and aircraft operators;
- c) States submit specific case studies to the AGA/AOP/SG Task Force for evaluation and advice, if required;
- d) IATA continue to support the Task Force, particularly in the evaluation of case studies in relation to any potential impact on services including payload penalties, changes of equipment and frequency of services; and
- e) States consider the provision of proven runway end arrestor bed systems to enhance the runway end safety conditions although with reference to the current ICAO SARPs, they are not an acceptable alternative to the provision of runway strips and runway end safety areas.

Results of the Runway Surface Condition Task Force

3.1.1.4 The Meeting discussed the findings and recommendations of the Task Force such as: (a) Presentation of general guidelines for runway surface condition evaluation, (b) Equipment for estimating the friction coefficient at the tire/pavement interface and (c) Techniques for rubber removal from the runway surface. The Meeting noted that the Task Force had completed its assigned tasks and ceased to exist.

3.1.1.5 The Meeting was informed that the ICAO Regional Seminar on Airfield Pavement Maintenance and Short Course on the Aircraft/Pavement Interaction held in July 2002 generated important outcomes as follows:

- Creation of the ALACPA (Latin American and Caribbean Association of Airfield Pavements) with the main objective: “To help the States to comply with the ICAO SARPs and to contribute to the elimination/mitigation of the deficiencies in the AGA field in the CAR/SAM Regions”; and
- Proposal to hold a Seminar on Pavement Management Systems and a Short Course on Pavement Condition Index (PCI) in 2003.

3.1.1.6 The Meeting adopted the following Conclusions:

**CONCLUSION 11/5 LATIN AMERICAN AND CARIBBEAN ASSOCIATION OF
AIRFIELD PAVEMENTS (ALACPA)**

That,

States support ALACPA, keeping in mind its main objective to assist States to comply with the ICAO SARPs and to contribute to the elimination and prevention of airfield pavement deficiencies in the CAR/SAM Regions.

**CONCLUSION 11/6 SEMINAR ON PAVEMENT MANAGEMENT SYSTEMS AND
SHORT COURSE ON PAVEMENT CONDITION INDEX (PCI)**

That,

ICAO consider convening a Seminar on Pavement Management Systems (PMS) and a Short Course on Pavement Condition Index (PCI) for the CAR/SAM Regions in 2003.

Results of the Airport Demand/Capacity Task Force

3.1.1.7 The Meeting discussed the findings and recommendations of the Task Force. The Task Force had achieved considerable progress in identifying the issues involved and the methodology proposed for the analysis of case studies. The Meeting concurred that aerodromes with demand/capacity problems continue to exist in the CAR/SAM Regions and that the Task Force should continue to study this matter.

Results of the Bird Hazards Task Force

3.1.1.8 The Meeting discussed the findings and recommendations of the Task Force and the plan for the establishment of the facilities, regulations and procedures related to the functioning and control of the Regional Bird Hazard Committee, including full use of ICAO IBIS in its activities as described in the regulations. The Meeting adopted the following Conclusion:

CONCLUSION 11/7 - AIRPORT, NATIONAL AND REGIONAL BIRD HAZARD COMMITTEES

That,

- a) States should urge aerodrome operators to establish and maintain Airport Bird Hazard Control Coordinating Committees;
- b) States establish and maintain National Bird Hazard Committees; and
- c) the formation of the CAR/SAM Regional Bird Hazard Prevention Committee should be implemented in accordance with the following:
 - 1) the name of the Regional Committee is “CAR/SAM Regional Bird Hazard Prevention Committee”;
 - 2) the CAR/SAM Regional Bird Hazard Prevention Committee will be an independent entity to the AGA/AOP/SG;
 - 3) AGA/AOP/SG will continue its activities to support the formation of the CAR/SAM Regional Bird Hazard Prevention Committee;
 - 4) the Regulations of the CAR/SAM Regional Bird Hazard Prevention Committee are included in **Appendix A**;
 - 5) the Organizational Structure and Stages of implementation of the CAR/SAM Regional Bird Hazard Prevention Committee are included in **Appendix B**; and
 - 6) the work plan up to December 2003 for the establishment and development of the CAR/SAM Regional Bird Hazard Prevention Committee is included in **Appendix C**.

Runway incursion incident reports

3.1.1.9 The Meeting reviewed the regional developments on runway incursions at aerodromes confirming that the principal runway incursion prevention measures which can be implemented at aerodromes are based on the reduction and eventual elimination of safety related deficiencies through compliance with Annex 14 Volume I SARPS. It was also noted that ICAO had held a regional conference on runway incursions in October 2002. The Meeting agreed on a runway incursion definition that initially be adopted by CAR/SAM States until ICAO promulgates an internationally approved definition to be applied worldwide. The Meeting considered that the AGA/AOP/SG should continue to review regional runway incursion incidents and worldwide developments on runway incursion prevention programmes. The Meeting therefore adopted the following Conclusion:

CONCLUSION 11/8 RUNWAY INCURSIONS

That,

- a) States adopt the definition of a runway incursion as “An unauthorised or unintended presence of an aircraft, vehicle, person, wildlife or object on a runway, within the graded portion of a runway strip or infringing on the obstacle free zone and in the area controlled on the ground by runway-holding and road-holding positions”;
- b) States continuously collect and compile runway incursion incident reports from aerodrome operators, air traffic services providers and aircraft operators and periodically submit these to the ICAO Regional Offices; and
- c) the information referred to in b) above be presented and reviewed at the AGA/AOP/SG/3 Meeting.

AGA Deficiencies

3.1.1.10 The Meeting noted the AGA/AOP/SG had reviewed the latest status of air navigation deficiencies in the AGA field in the CAR/SAM Regions. The Meeting discussed three critical aspects concerning the deficiencies: (1) the list of deficiencies is still very extensive; (2) the aerodrome information contained in some AIPs is incomplete and incorrect; and, (3) the majority of the States did not report on implementation of Conclusion 10/43 of GREPECAS, which required States to ensure that by June 2002 aerodrome operators would implement and maintain adequate airfield maintenance programmes. The Meeting, therefore, adopted the following Conclusions:

CONCLUSION 11/9 AIRFIELD MAINTENANCE PROGRAMMES

That:

- a) States ensure that aerodrome operators implement and maintain adequate airfield maintenance programmes to eliminate and prevent the future existence of urgent deficiencies in existing runway markings, lighting, signs and pavement surface conditions, and perimeter barriers which have a direct impact on the safety of aircraft runway operations; and
- b) the AGA/AOP/SG review implementation of this conclusion at its third Meeting in September 2003 by reviewing the list of shortcomings and deficiencies.

CONCLUSION 11/10 AIP AD SECTION DEFICIENCIES

That,

States ensure that airport operators and aeronautical information services undertake the necessary coordination for the timely publication of aerodromes information contained in the AD Section of the AIP to ensure the quality of the information in terms of accuracy, completeness and currency.

Implementation of aerodrome certification

3.1.1.11 The Meeting reviewed a status update on the regional implementation of the requirement for State certification of aerodromes. The Meeting considered that the AGA/AOP/SG should continue to review the regional implementation of aerodrome certification and therefore adopted the following Conclusion:

CONCLUSION 11/11 AERODROME CERTIFICATION IMPLEMENTATION

That States,

- a) should urgently implement the aerodrome certification process in order to be compliant with the new standard by 27 November 2003; and
- b) provide an implementation status report to the AGA/AOP/SG/3 Meeting in September 2003.

En-route Alternate Aerodromes

3.1.1.12 The Meeting recalled the outstanding AGA/AOP/SG Work Programme task to review and select en-route alternate aerodromes. The Meeting recognised that the provision of an en-route alternate aerodrome could in some cases involve significant additional operational costs and therefore warranted a consultation process to arrive at a compromise. The Meeting therefore agreed that the shortcomings need to be identified to enable the AGA/AOP/SG to evaluate these further and the Meeting adopted the following Conclusion:

CONCLUSION 11/12 EN-ROUTE ALTERNATE AERODROMES

That,

- a) IATA prepare a list of en-route alternate aerodromes required and the associated critical aircraft type, hours of operation and city-pair route for each aerodrome and submit this list to the ICAO Regional Offices by January 2003;
- b) ICAO circulate the list to States;
- c) States review the requirements and prepare a list of en-route alternate aerodromes to be provided, identify those requested aerodromes which can not be provided, recommend potential alternatives, and submit this information to the ICAO Regional Offices by June 2003; and
- d) ICAO compile, consolidate, review and present the information received to the AGA/AOP/SG/3 Meeting in September 2003.

3.1.1.13 The Meeting noted with appreciation that, subject to approval from its authorities, Mexico offered to host the next AGA/AOP/SG/3 Meeting.

3.1.2 Report of the AVSEC/COMM/1 Meeting

3.1.2.1 The Meeting reviewed the work of the first meeting of the AVSEC/COMM. It recalled the Ministerial Conference on Aviation Security held in February 2002 issued a declaration which stressed the pre-eminence of safety *and* security as underlying fundamentals in civil aviation and reaffirmed the States' responsibility in this regard. Since security has synergy with safety in air navigation systems, the GREPECAS at its 10th Meeting held in October 2001, had decided to incorporate AVSEC matters within its Work Programme in Decision 10/67. This was approved by the ICAO Air Navigation Commission and Council. In this regard, the GREPECAS Administrative Coordination Group (ACG) at its 2^d Meeting held in March 2002, decided that the AGA/AOP/SG establish a new AVSEC Committee (AVSEC/COMM). This was approved by GREPECAS members through the ACG process.

3.1.2.2 The States and International Organizations which are members of the AVSEC/COMM have nominated their representatives which are aviation security specialists familiar with ICAO AVSEC specifications, activities and developments, as well as the AVSEC conditions in the CAR and SAM Regions. Some concern was expressed with the creation of a new regional AVSEC body given the existence of the LACAC AVSEC Group of Experts due to the lack of sufficient resources in States for experts to participate in more activities and the possible duplication of work. However, LACAC is limited by its membership while GREPECAS represents all States in the CAR/SAM Regions. The current environment where AVSEC has been assigned the highest priority, greater action is required in the Regions at the technical and implementation level. Nevertheless, the AVSEC/COMM will need to coordinate closely with the LACAC AVSEC Group of Experts to ensure complementary activities and avoid duplication of work. This would be easily achieved since ICAO provides Secretariat support to both LACAC and GREPECAS and that the LACAC Secretary's office is in the ICAO SAM Regional Office. It is also expected that the focus of the two bodies will be different as reflected in the AVSEC/COMM revised terms of reference and work programme objectives.

3.1.2.3 The Meeting stressed the benefits of coordination on aviation security matters within the Region, with neighbouring regions and, through ICAO Headquarters, worldwide. To give effect to its consideration the Meeting adopted the following conclusion:

CONCLUSION 11/13 AVIATION SECURITY

That States and Territories:

- a) commit towards full implementation of the multilateral conventions on aviation security and the ICAO Standards and Recommended Practices (SARPs) and Procedures for Air Navigation Services (PANS) as well as ICAO Assembly Resolutions and Council Decisions relating to aviation security;
- b) participate actively in implementation of the ICAO *Aviation Security Plan of Action*, including the training and audit processes and necessary follow-up; and
- c) commit to active support and cooperation in the GREPECAS Aviation Security Committee and other regional aviation security activities.

3.1.2.4 In order to ensure that LACAC and GREPECAS carry out the necessary coordination to avoid duplication of work in the AVSEC area, the Meeting agreed that LACAC should be invited to join all Committee meetings and receive copies of all pertinent reports and documents relating to the work of the Committee. In like manner, the committee agreed that it is important for it to receive pertinent reports and documents relating to the work of the LACAC AVSEC Group of Experts. This reciprocal exchange of information will assist in harmonizing regional AVSEC efforts between the two regional bodies.

CONCLUSION 11/14 AVSEC/COMM COORDINATION WITH LACAC

That LACAC be invited to designate an officer to attend all AVSEC Committee meetings; that LACAC be requested to share pertinent reports and documents from the LACAC AVSEC Group of Experts with GREPECAS; and that the AVSEC Committee share pertinent reports and documents on its work programme with LACAC.

3.1.2.5 The Meeting agreed with the Committee's concern with the AVSEC/COMM/1 documentation only being available in English and requested the Secretariat to provide the documentation also in Spanish. The Meeting therefore adopted the following Decision:

DECISION 11/15 TRANSLATION OF AVSEC/COMM/1 DOCUMENTATION

That ICAO prepare the AVSEC/COMM/1 documentation in Spanish and make it available to States on the GREPECAS web page by the end of 2002.

3.1.2.6 The Meeting approved the AVSEC Committee's revised Terms of Reference presented in the report on Agenda Item 5.

3.1.2.7 The Meeting noted that for the Committee to better assess the AVSEC needs and priorities of States, the Secretary of the AVSEC Committee would develop a survey questionnaire, taking into account any similar effort already accomplished by LACAC and in coordination with Committee members, for distribution to States. States should be instructed to reply to the survey questionnaire by 31 January 2003 in order to evaluate the most important areas requiring assistance and to identify any on-going AVSEC initiatives in the region which could be shared with other States. This would enable the committee to develop a work programme relevant to the region.

DECISION 11/16 AVSEC SURVEY QUESTIONNAIRE

That the AVSEC Committee proceed as soon as possible with the development and distribution of an AVSEC Survey Questionnaire in order to assess the needs and interests of States with expectations of a preliminary report to GREPECAS on the survey responses after the second meeting of the AVSEC Committee.

3.1.2.8 The Meeting agreed that there should be a full-time ICAO AVSEC specialist position located in each of the SAM and NACC Regional Offices. These ICAO specialists must be located in each region to promote an exchange of information on regional AVSEC matters; and they should contribute to regional education and training activities in AVSEC. These specialists should also be the technical focal point in their regions for all activities involving the ICAO USAP. The Meeting further agreed that States should be encouraged to support this initiative through either contributions in kind or with monetary contributions.

CONCLUSION 11/17 ICAO REGIONAL AVSEC OFFICERS

That ICAO consider the need for an ICAO AVSEC specialist to be located in each of the ICAO NACC and SAM Regional Offices at the earliest opportunity and to encourage States to support this ICAO initiative through contributions in kind or with monetary funding.

3.1.2.9 The Meeting noted that the Committee could not develop a work programme without more information. It will be necessary to determine and prioritise the AVSEC needs and interests of the CAR and SAM regions which are expected to be accomplished initially through the results of the survey questionnaire. A meeting is planned for April or May 2003 in order to evaluate and analyse the preliminary report on the survey results and to begin developing a work programme.

3.1.2.10 It was agreed that all future AVSEC Committee meetings employ concurrent interpretation services and provide documentation in both English and Spanish.

DECISION 11/18 AVSEC/COMM LANGUAGE SERVICES

That concurrent interpretation services and documentation in both English and Spanish be provided for future AVSEC Committee meetings.

3.1.2.11 The Meeting also agreed that the AVSEC mission and the Committee's related work programme is of high importance and concurred that the Committee should be elevated to an appropriate level within the GREPECAS structure. The meeting also agreed that the AVSEC Committee should report its work progress and conclusions directly to GREPECAS instead of through the AGA/AOP Subgroup and adopted the following Conclusion.

CONCLUSION 11/19 AVSEC/COMM CONTRIBUTORY BODY

That the AVSEC Committee be elevated, as appropriate, within the GREPECAS structure and report the results of its work directly to GREPECAS.

3.1.2.12 The Meeting noted with appreciation that, subject to approval from its authorities, Mexico offered to host the next AVSEC/COMM/2 Meeting. It also agreed that annual meetings were initially required to enable the newly established AVSEC/COMM to develop its working methods and rhythm quickly. The Meeting expressed its satisfaction with the good start the AVSEC/COMM had made at the first meeting.

3.1.2.13 In a series of information papers, the United States encouraged regional as well as global cooperation amongst States as an effective, and critical means of improving aviation security and reviewed developments in aviation security in the United States since 11 September 2001.

3.2 Report of the ATM/CNS/SG2 Meeting

3.2.1 The Meeting was presented with the report of the ATM/CNS Subgroup in three parts, covering the reports of the Subgroup plenary discussions and of the ATM and CNS Committees, as approved by that same subgroup. They were presented in that order to the GREPECAS meeting.

3.2.2 The Group noted that the information presented to this Meeting under Agenda Item 1 on the review of the action taken by the ICAO Air Navigation Commission and Council had also been submitted to the ATM/CNS Subgroup plenary, thus providing Committee participants with updated information on the work done by the ICAO panels and other ATM/CNS-related regional groups, and on intra- and inter-regional CNS/ATM developments under Project RLA/98/003.

3.2.3 The Meeting also noted that the Subgroup had been informed about the topics to be covered by the Eleventh Air Navigation Conference (22 September – 3 October 2003), so that the Committees could be prepared to coordinate any CAR/SAM regional activity during the Conference.

3.2.4 The Meeting was advised that the Subgroup had reviewed the main objectives defined at its first meeting, as well as its work programme. Under this item, the Subgroup had requested information on Regional Project RLA/98/003 in order to define the terms of reference and work programme related to the updating of the CAR/SAM CNS/ATM implementation plan.

3.2.5 The Meeting recognized that activities related to institutional aspects should continue to be carried out by the Institutional Aspects Task Force, which had been previously assigned to the Subgroup but, subsequently, in view of its terms of reference and work programme, was required to report directly to GREPECAS. Taking into consideration that the future work to be developed by the Committees of the ATM/CNS Subgroup will be essentially technical/operational in support of the implementation of the CNS/ATM systems, and that the tasks on institutional aspects, due to their importance, require to be further developed with the aim of identifying and evaluating multinational systems in the CAR/SAM Regions, the meeting agreed to approve the following decision:

DECISION 11/20**TASK FORCE ON INSTITUTIONAL ASPECTS**

That the Task Force on Institutional Aspects become a Task Force of GREPECAS and no longer be a contributory body of the ATM/CNS Subgroup.

3.2.6 Following a request for clarification on the working method of the task force, the Secretariat explained that this group would operate as a contributory body reporting directly to GREPECAS, and that its terms of reference had already been established, together with its composition, which could be confirmed or expanded as required.

3.2.7 As to the operation of the Subgroup, note was taken of the difficulties it had encountered for the performance of its functions, such as the late delivery of working papers, the need for greater participation by members between subgroup meetings, the increased number of tasks to be carried out with the same human resources, and limitations on Secretariat resources and State sponsorship to support Subgroup meetings en terms of the two teams of simultaneous interpreters required.

3.2.8 Regarding the tentative meeting schedule, the Group noted that the Subgroup had scheduled a meeting for August 2003 as foreseen by the ACG, at a place still to be defined. After confirming that it would not be possible to hold the meeting in Miami as originally suggested, the Meeting took note of a proposal made by Brazil to host the third meeting, and the United States offered its support with resources.

3.2.9 The work programme of the Subgroup had not been modified and appears under Agenda Item 5.2.

Report of the ATM Committee**Air Traffic Management****National RNAV route implementation programmes**

3.2.10 Regarding the implementation of the RNAV route network and with a view to harmonizing national implementation plans with the regional RNAV planning, the Meeting deemed it necessary for civil aviation administrations to take the necessary measures to develop an RNAV route implementation programme, indicating the actual implementation requirements and establishing the relevant coordination to enable regional implementation in an integrated, harmonious and timely manner. In light of the above, the Meeting agreed to formulate the following conclusion:

CONCLUSION 11/21 NATIONAL RNAV ROUTE IMPLEMENTATION PROGRAMME

That the ICAO NACC and SAM Regional Offices encourage the CAR/SAM States/Territories and International Organizations to draft national RNAV Route Implementation Programmes compatible with the CAR/SAM RNAV implementation programme, based on the actual implementation requirements, analyzing the impact of implementation on the airspace, the aircraft fleet, on the provision of air traffic services, and establishing the relevant coordination to enable the integrated, harmonious and timely implementation of more direct RNAV routes.

Collection of data on RNP-approved aircraft

3.2.11 Taking into account the need to have as much information as possible on aircraft approved to operate with specific RNP values, or which could be approved in the near future, the Meeting proposed that the CARSAMMA Monitoring Agency carry out a survey in this respect, and agreed that IATA assist with the information collected from its operators. In light of the above, it formulated the following conclusion:

CONCLUSION 11/22 COLLECTION OF DATA ON RNP-APPROVED AIRCRAFT

That, in order to have updated information on RNP-capable aircraft operating in the CAR/SAM Regions:

- a) the CAR/SAM Monitoring Agency (CARSAMMA) start collecting such data from civil aviation authorities of both Regions; and
- b) IATA provide information on the RNP capability of its operators.

Matters related to RVSM implementation

3.2.12 The Meeting reviewed the activities carried out by both the Third Meeting of ATM Authorities and Planners (ATM/AP/3, Lima, 20 to 24 May, 2002) and the RVSM Task Force meetings.

3.2.13 It was recalled that GREPECAS, through Conclusion 10/11, had agreed to the two-staged implementation of RVSM in all of the flight information regions under the jurisdiction of the CAR/SAM States/Territories/International Organizations, pursuant to the basic programme developed by the Task Force of this Committee. It also recalled that the first stage, effective in April 2004, would cover FL350 to FL390, and the second stage from FL290 to FL410, on a date to be determined depending on operational requirements.

3.2.14 The Meeting noted that, due to the fact that the United States had modified its RVSM implementation plan for its domestic airspace from two phases to one, the RVSM Task Force of the ATM Committee had considered that an effort should be made to harmonize both implementation plans.

3.2.15 Following studies conducted on this matter, the ATM Committee concluded that it would be advisable to request GREPECAS to modify Conclusion 10/11 in order to allow RVSM implementation from FL290 to FL410 in a single phase, and that this implementation be carried out on a date consistent with that of the NAM Region, currently foreseen for December 2004.

3.2.16 The Meeting also noted that the ATM Committee continued to review this matter with a view to developing an operational concept that would allow those States that were not in a position to implement RVSM in a single phase to use the airspace in a tactical manner, so as to prevent delays in the implementation in those parts of the region that were ready to implement RVSM.

3.2.17 The Meeting reviewed the proposal of the ATM Committee and noted the concerns expressed by Argentina and Colombia regarding the single-phase implementation of RVSM, due to the impact it could have on the fleets operating in both States.

3.2.18 The delegate of Argentina also stated that one of the objectives of his State was to protect its civil aviation until such time that economic conditions would permit its recovery. An implementation that restricts flight possibilities would result in the shrinkage of markets, the generation of less foreign currency, unemployment, etc. He also urged the Group to keep working and to conduct studies on the economic cost/benefit resulting from RVSM implementation, but did not reject the initial implementation of RVSM from FL350 to FL410 as an interim solution until conditions improve and permit the extension of such implementation to FL290.

3.2.19 On the other hand, the delegate of Colombia expressed the willingness of his State to harmonize its plans with those of the region, stressing the importance of having cooperative mechanisms for the RVSM implementation phase. He also expressed a concern regarding the economic impact on airlines, the need for a thorough study of tactical operations, the completion of the safety assessment, the analysis of the orographic impact on the Andean region, air traffic flow management and the appropriate systems for the coordination required between adjacent FIRs, in the understanding that the RVSM Task Force will deal with these aspects as agreed by GREPECAS.

3.2.20 Likewise, IFALPA expressed its concerns for safety in an RVSM environment, since, at present, there are some air-ground communication problems in the CAR/SAM Regions, which might affect implementation.

3.2.21 The Secretariat stated that all safety aspects involved had been considered in the RVSM implementation programme developed by the ATM Committee, which is based on the guidelines provided in Doc. 9574 (Manual on implementation of a 300-m (1000 ft) vertical separation minimum between FL290 and FL410 inclusive). It also noted that if any of the States, Territories and International Organizations involved were not capable of implementing the various elements and tasks of the implementation programme for any reason, or if the airspace safety assessment to be conducted by CARSAMMA were to show that it was not possible to meet the Target Level Safety (TLS) approved for the region, RVSM implementation would be postponed until such time that those matters were resolved.

3.2.22 Some of the delegates felt that those States that were in a position to do so should carry out ATC simulations and, based on the results obtained, study the feasibility of both implementation options. Both Brazil and the United States offered their facilities to the States and International Organizations that might be interested in carrying out such simulations.

3.2.23 Following a lengthy and productive exchange of opinions and after the States and International Organizations expressed their positions regarding RVSM implementation in their airspace, the Meeting agreed to the following:

CONCLUSION 11/23 RVSM IMPLEMENTATION IN THE CAR/SAM REGIONS

That CAR/SAM States and COCESNA plan RVSM implementation in a single stage between FL290 and FL410 inclusive in the flight information regions under their jurisdiction in a consistent manner with the implementation in the NAM Region, which is currently foreseen for December 2004.

DECISION 11/24 RVSM ACTIVITIES TO BE CARRIED OUT BY THE ATM/CNS SUBGROUP

That, with a view to the harmonious implementation of RVSM in the CAR/SAM Regions, the ATM/CNS Subgroup:

- a) continue its activities and work programme so that RVSM implementation in the CAR/SAM Regions may be carried out in a single stage between FL290 and FL410 inclusive;
- b) taking into account the RVSM implementation plans of the CAR/SAM States and COCESNA, develop an operational concept and establish the most appropriate procedures to expedite implementation in those States which might face difficulties with the implementation of RVSM in a single stage; and
- c) submit results to GREPECAS/12 for assessment and relevant action.

CONCLUSION 11/25 ATC SIMULATIONS

That, in order to assess the possible impact of RVSM implementation, the States that are in a position to do so conduct ATC simulations and submit their results to the corresponding ICAO NACC and SAM Regional Offices.

General considerations for RVSM implementation

3.2.24 The Meeting concluded that, in order to maintain the necessary level of coordination, CAR/SAM States/Territories/International Organizations should advise their respective ICAO Regional Offices on the point of contact for each ATS service provider, as well as the point of contact in the areas of airworthiness and operator approval. In this regard, it approved the following conclusions:

CONCLUSION 11/26 POINT OF CONTACT FOR THE ATS SERVICE PROVIDER

That the States/Territories/International Organisations that have not yet done so, advise the President of the ATC Working Group (ATC/WG), as soon as possible, through the ICAO Regional Offices, on the point of contact for each ATS service provider in the CAR/SAM Regions.

CONCLUSION 11/27 POINT OF CONTACT FOR THE AIRCRAFT AND OPERATOR APPROVING STATE

That the States/Territories/International Organizations advise the Rapporteur of the RVSM Task Force, through the ICAO Regional Offices, on the point of contact for each State involved in granting RVSM approval to aircraft and/or operators if such points of contact have not yet advised the Regional Monitoring Agency, CARSAMMA.

3.2.25 The Meeting noted the need to assess the modifications and/or upgrades to automated air traffic control systems required to accommodate RVSM implementation. Automated system providers (flight and radar data processors) should, as soon as possible, determine whether these systems are capable of providing the necessary RVSM information to air traffic controllers. In the event that the systems lacked such capability, service providers should assess the modifications and/or upgrades required. The Meeting pointed out that the provision of RVSM status information is critical for RVSM implementation when done through automated systems or other means.

3.2.26 Finally, Spain informed the Meeting on the benefits of RVSM in the EUR/SAM corridor. It also explained the methodology used and the assumptions made in the studies that had been carried out. The Meeting asked Spain on the possibility of submitting the results of the studies carried out on ATC equipment modification costs involved in RVSM implementation at a future meeting. In view of the above, the Meeting formulated the following conclusion:

CONCLUSION 11/28 AIR TRAFFIC CONTROL AUTOMATED SYSTEMS

That ATS providers assess the impact of RVSM implementation on automated control systems and plan for any modifications and/or upgrades required in the system as soon as possible.

3.2.27 The Meeting recommended that ATC service providers conduct an analysis of flight level occupancy between FL290 and FL410 inclusive, taking into account flight category, type of aircraft, duration and number of operations per flight level. This information will help the RVSM Task Force in the development of the operational concept. In this regard, the following conclusion was formulated:

CONCLUSION 11/29 FLIGHT LEVEL OCCUPANCY ANALYSIS

That, with a view to the regional implementation of RVSM, CAR/SAM States/Territories/International Organizations conduct an analysis of flight level occupancy between FL290 and FL410, inclusive, considering flight category, type of aircraft and duration and number of operations per flight level. Information can be collected using the forms contained in **Appendix D** to this part of the report.

3.2.28 The Meeting felt that aircraft height-keeping performance should be monitored using GPS monitoring units (GMU). The United States offered to provide the CAR/SAM Regions with the same GMUs that will be used in their own RVSM implementation programme. Consequently, it approved the following:

CONCLUSION 11/30 HEIGHT-KEEPING PERFORMANCE MONITORING

That, in order to monitor the height-keeping performance of aircraft in RVSM airspace, the CAR/SAM Regions:

- a) use the GMU monitoring method; and
- b) consider using the GMUs provided by the United States.

3.2.29 The Meeting accepted the offer from IATA to engage a suitable, qualified contractor, provided that the contractor's measuring methodology and results are recognized by another regional monitoring agency, and the service is equally available to all CAR/SAM airspace users. In view of the above, it approved the following conclusion:

CONCLUSION 11/31 HEIGHT KEEPING PERFORMANCE MONITORING SERVICE

That the height-keeping performance be monitored through IATA, which will engage a qualified contractor, provided that the contractor's measuring methodology and results are recognized by another regional monitoring agency, such as APARMO or EUROCONTROL, and the service is equally available to all CAR/SAM airspace users.

3.2.30 The Meeting firmly supported the concept that, in order to have a successful RVSM implementation in accordance with GREPECAS and the terms of reference of the Task Force, all States/Territories and International Organizations involved in RVSM should participate in the meetings of the Task Force. The Meeting stressed that it would be very difficult to implement RVSM with the participation of only a few States, due to the need to harmonize national plans for a regional implementation. The Meeting recommended that each State/Territory/International Organization be invited and urged to participate in the Task Force, bearing in mind the high level of coordination required in this effort. The Meeting agreed to formulate the following conclusion:

CONCLUSION 11/32 PARTICIPATION IN THE RVSM TASK FORCE

That, in view of the coordination required and to avoid a potential negative impact on RVSM implementation programmes of CAR/SAM States, the States/Territories/International Organizations participate in a wide and committed manner in the activities of the RVSM Task Force.

Regional Monitoring Agency (CARSAMMA)

3.2.31 The Meeting recalled that, through Conclusion 10/12, the GREPECAS had accepted the offer made by Brazil to take on the duties and responsibilities of the regional monitoring agency for the CAR/SAM Regions until such time that a regional agreement were reached. It also recalled that, in that same conclusion, the NACC and SAM Regional Offices had been requested to obtain approval from the States/Territories/International Organizations to assign this monitoring responsibility to one State, group of States or to a regional cooperation mechanism. The Meeting was also informed that the ATM/CNS Subgroup had requested GREPECAS to take relevant action to confirm Brazil as the regional monitoring agency so as to continue with the airspace safety oversight and assessment programme. In view of the above, the GREPECAS Secretariat sent a note to the States/Territories/International Organizations requesting information on objections to the designation of Brazil as the party responsible for said agency. The Meeting was informed that 15 responses had been received in support of the designation of Brazil as the State responsible for the Regional Monitoring Agency.

3.2.32 Likewise, the Meeting was informed that Colombia was interested in offering the technical and operational infrastructure of the Special Civil Aviation Administrative Unit to the CAR/SAM Regions so that they could start working together with the experts from the States in the region towards the implementation of a monitoring agency in Colombia.

3.2.33 Bearing in mind the work already accomplished by Brazil, its experience in RVSM matters, the investment made for the establishment of CARSAMMA as the regional monitoring agency, and the need to move ahead with the RVSM implementation programme, the Meeting concluded that it would be more advisable that the RMA be assigned to Brazil and expressed its acknowledgment to Colombia for its offer.

3.2.34 The delegate of Colombia expressed the firm will of his State to cooperate with CARSAMMA through technical cooperation mechanisms or with available resources, which would be advised through the relevant channels.

3.2.35 Following discussions on this topic, the Meeting adopted the following Conclusion:

CONCLUSION 11/33 ASSIGNMENT OF THE CAR/SAM REGIONAL MONITORING AGENCY TO BRAZIL

GREPECAS agrees to assign the duties and responsibilities of the CAR/SAM regional monitoring agency (CARSAMMA) to Brazil.

3.2.36 The Meeting noted the main RVSM-related duties and responsibilities of the Regional Monitoring Agency (CARSAMMA) and, in this respect, approved the following conclusion:

CONCLUSION 11/34 MAIN RVSM DUTIES AND RESPONSIBILITIES OF CARSAMMA

That the main RVSM duties and responsibilities of the CAR/SAM Monitoring Agency (CARSAMMA) are as follows:

- a) establish and maintain a central registry of RVSM-approved operators and aircraft of each State/Territory that use the CAR/SAM RVSM airspace;
- b) facilitate the transfer of approved data to and from other RVSM regional monitoring agencies;
- c) establish and maintain a database containing the results of height-keeping performance monitoring and height deviations of 300 ft or more within CAR/SAM airspace, and to include in the database the results of CARSAMMA requests to operators and States for information on the causes of large height deviations observed;
- d) provide timely information to State authorities and operators on changes or monitoring status of aircraft type classifications;
- e) administer the GPS monitoring system (GMS);
- f) assess compliance with RVSM height-keeping performance requirements by operators and aircraft, and introduction of RVSM in the CARSAM Regions;
- g) provide the means for identifying non-RVSM approved operators using CAR/SAM RVSM airspace and to notify the appropriate State authority accordingly;
- h) develop the means for summarizing and communicating the content of relevant databases to RVSM Task Force decision makers, so that it can be used to decide when and to what extent RVSM will be applied in the airspace under their responsibility; and
- i) conduct the CAR/SAM airspace safety assessment.

Matters related to Aeronautical Phraseology

3.2.37 The Meeting noted the activities carried out by the ATM Committee regarding aeronautical phraseology. Aware of the importance of communications for safety, and recognizing the need to continue working towards the consistent use of aeronautical phraseology in Spanish, it invited Task Force members to carry out the work entrusted to them, taking into account the work methodology approved by the ATM/CNS/SG/2 Meeting.

Matters related to surveillance

3.2.38 The Meeting noted the work in the field of surveillance and the coordination activities carried out by the ATM and CNS Committees on this topic. It considered that a paragraph should be included in the surveillance guidelines to reflect that the exchange of radar information will primarily depend on the ATM benefits to be derived by the States involved, taking into account traffic flows between adjacent FIRs and/or TMAs, based on which the convenience of establishing the corresponding bilateral/multilateral agreements would be determined.

Matters related to Search and Rescue (SAR)

National Search and Rescue (SAR) Model Plan

3.2.39 With regard to search and rescue services, the Meeting noted the importance of including in a SAR national plan the services required by the national and international civil aviation in each State/Territory/International Organization.

3.2.40 Upon reviewing the national search and rescue model plan that had been submitted, the Meeting agreed to approve the plan and formulated the following conclusion:

CONCLUSION 11/35 SEARCH AND RESCUE NATIONAL PLAN

That the ICAO NACC and SAM Regional Offices encourage those CAR/SAM States/Territories/International Organizations that have not yet done so, to:

- a) develop a national search and rescue plan in line with the CAR/SAM ANP; and
- b) use the guidance material shown in **Appendix E** to this part of the Report as the basis for the development of said document.

Table SAR 1 of the CAR/SAM ANP, Volume II, FASID

3.2.41 The Meeting reviewed Table SAR 1 – Search and Rescue Facilities, of the ANP, Volume II – FASID, with the amendments proposed by the States/Territories and International Organizations during the process of consultation carried out by the Secretariat, and those made during the meeting. In view of the above, the Meeting formulated the following conclusion:

CONCLUSION 11/36 AMENDMENT TO TABLE SAR 1 - SEARCH AND RESCUE FACILITIES, OF THE ANP, VOLUME II – FASID

That the ICAO NACC and SAM Regional Offices begin a process for amending FASID Table SAR 1, as shown in **Appendix F** to this part of the Report.

Transition plan for the mandatory use of ELT 406 MHz

3.2.42 The Meeting was reminded of the amendments to Annexes 6 and 10 adopted by the ICAO Council in 1999, which define the dates in which aircraft should be equipped with ELT operating on 406 MHz and on 121.5 MHz for homing purposes.

3.2.43 The Meeting was also informed of the planned date for the deactivation by COSPAS/SARSAT of the 121.5/243.0 MHz satellite alerting services. Emergency locator transmitters shall operate on both 406 MHz and 121.5 MHz or on 121.5 MHz until 1 January 2005. The deactivation of 121.5 MHz satellite alerting services will take place on 1 February 2009. As a result of this decision, 121.5 MHz beacon users will not receive COSPAS SARSAT satellite alerting services as of that date, unless they purchase a 406 MHz replacement beacon. In view of the above, the Meeting formulated the following conclusion:

CONCLUSION 11/37 TRANSITION PLAN FOR THE MANDATORY USE OF ELT IN 406 MHz

That ICAO NACC and SAM Regional Offices urge CAR/SAM States/Territories and International Organizations to adopt the relevant measures to develop and implement a transition plan to comply with the dispositions contained in ICAO Annexes 6 and 10 on the mandatory use of ELT on 406 MHz.

Review of outstanding ATM and SAR deficiencies and GREPECAS Conclusions/Decisions

3.2.44 The Meeting noted that the ATM Committee had reviewed and updated the ATM and SAR deficiencies for their clarification, the establishment of the action required for their resolution and the dates for their implementation, and proper classification of priorities.

3.2.45 The Meeting felt that, in order to correct the deficiencies within a reasonable period of time, a major effort was required from the Administrations, so that deficiencies would not remain outstanding for years, as has been the case for some of them.

3.2.46 It was concluded that the ICAO Regional Offices should continuously follow-up deficiencies and that the States should provide them with updated information on corrective measures for their resolution.

3.2.47 Likewise, the Meeting deemed it necessary to modify the generic text of the deficiencies on English proficiency and use of aeronautical phraseology, and introduced such changes in the respective deficiency format. In light of the above, the Meeting agreed to the following conclusion:

CONCLUSION 11/38 MEASURES TO BE ADOPTED FOR RESOLVING ATM/SAR DEFICIENCIES

That,

- a) ICAO NACC and SAM Regional Offices continuously follow-up the deficiencies in their regions;
- b) the CAR/SAM States/Territories/International Organizations provide the ICAO NACC and SAM Regional Offices with periodical information to enable the updating of the table of deficiencies;
- c) the States/Territories/International Organizations share with other administrations the tools used to correct the English proficiency deficiency;
- d) the identification of the deficiency be quantified through percentages, to enable a better understanding of the progress made; and
- e) the States/Territories/International Organizations use ATS quality assurance programmes as a tool for the prompt solution of the ATM/SAR deficiencies identified.

Report of the CNS Committee

General matters

Preparation for ITU WRC-2003

3.2.48 The Meeting adopted actions in order to optimise coordination and maximise support at the WRC-2003 of the ICAO position in defence of the radio frequency spectrum needs of civil aviation. Appendices G and H to this part of the Report contain the lists to be completed with the contact persons designated by each State. Consequently, the Meeting agreed on the following Conclusion:

CONCLUSION 11/39**SUPPORT FOR THE ICAO POSITION AT THE ITU WRC-2003**

That CAR/SAM States, with a view to optimizing coordination and maximizing the support to the ICAO position at the ITU WRC-2003,

- a) designate as soon as possible the contact person closely involved in the work at the national level on aeronautical issues in preparation for the WRC-2003, completing the information contained in **Appendices G and H** to this part of the report;
- b) provide, as soon as possible, to the corresponding ICAO Regional Office and the national spectrum administration entity the name of the person referred to in item a) above, as well as his/her contact data, with a view to completing the information contained in Appendices G and H to this part of the Report;
- c) instruct the contact person designated under item a) to establish direct coordination with the CNS experts of the ICAO Regional Offices and Headquarters, as well as with the experts from other States; and
- d) participate in regional preparatory fora organized for providing a better understanding of and support to the ICAO position, as well as in the WRC-2003, in order to become familiar with all of the aeronautical frequency management and protection aspects.

3.2.49 The Meeting also agreed to request ICAO to publish the third edition of the “*Handbook on Radio Frequency Spectrum Requirements for Civil Aviation*” as soon as possible, in order to optimize the defense and protection of the aeronautical electromagnetic spectrum. Consequently, the Meeting adopted the following Conclusion:

CONCLUSION 11/40**PUBLICATION OF THE THIRD EDITION OF THE “HANDBOOK ON RADIO FREQUENCY SPECTRUM REQUIREMENTS FOR CIVIL AVIATION”**

That ICAO be urged to publish the third edition of the “*Handbook on radio frequency spectrum requirements for civil aviation*” as soon as possible with updated information, in order to contribute to optimizing the defense and protection of the aeronautical electromagnetic spectrum.

Communication system developments

Review of the implementation status of the AFTN Plan and continuation of its development

3.2.50 The Meeting noted the updated status of the CAR/SAM AFTN Plan presented in **Appendices I** and **J** to this part of the Report. Accordingly, the Meeting adopted the following Conclusion:

CONCLUSION 11/41 REVIEW OF THE STATUS OF IMPLEMENTATION OF THE AFTN PLAN AND RELEVANT AMENDMENTS

That,

- a) the AFTN Plan, contained in Table CNS1A and in Chart CNS 1 of the CAR/SAM ANP, Volume II, FASID (Doc. 8733), be amended to eliminate the Aruba-Curacao circuit and to replace the requirement of an AFTN station with a tributary COM AFTN centre for Georgetown, Guyana;
- b) the AFTN Plan be updated with information on AFTN circuits connected with the United States, as shown in Appendix J to this part of the Report; and
- c) Aruba and Netherlands Antilles, if appropriate, consider maintaining the Aruba/Curacao AFTN circuit implemented as an alternate means of communication, based on a bilateral agreement.

Solution of COM OPMET issues in the SAM Region

3.2.51 The CNS Committee adopted an Action Plan to resolve the communication problems detected during the SAM Special Implementation Project (COM/MET SIP) which affect the exchange of OPMET information in the SAM Region and to analyze the solutions proposed to increase the availability of OPMET messages. The aforementioned Action Plan appears in **Appendix K** to this part of the Report. Therefore, the Meeting agreed to adopt the following Conclusion:

CONCLUSION 11/42 RESOLUTION OF OPMET COMMUNICATION PROBLEMS IN THE SAM REGION

That SAM States that have not yet implemented the recommendations identified by the COM/MET SAM Special Implementation Project (SIP) to solve the communication problems affecting the exchange of OPMET information, comply with the Action Plan presented in Appendix K to this part of the Report, taking into account that the deadline for its implementation is 30 June 2003.

Interconnection of regional/sub-regional digital communication networks

3.2.52 The Meeting was informed about the status of digital networks in the Central Atlantic, Central Caribbean, Central American, Eastern Caribbean and South American. **Appendix L** to this part of the Report summarizes the status of the aforementioned networks. The Meeting agreed on the importance of continued efforts to achieve interconnectivity and homogeneous interoperability of regional/sub-regional digital communication networks in the CAR/SAM Regions.

Development of a regional strategy for ATN implementation

3.2.53 The Meeting noted that proposals of recommendations are being developed for consideration while reviewing the “Initial Transition Plan for the Evolutionary Development of the ATN in the CAR/SAM Region” and that the CNS Committee had established an ATN Task Force to review the current plan.

Development of an implementation plan for the ground portion of the ATN and the ground applications

3.2.54 The Meeting noted that a first draft proposal of the CAR/SAM Regional Ground ATN Transition Plan had been examined, including several applications/services for the future, and that this task will continue to be developed.

Development of a regional VDL plan

3.2.55 The Meeting was informed that the CNS Committee had reviewed a proposal on ATN/VDL Mode 2 trials which could be carried out in the CAR/SAM Regions in partnership with civil aviation administrations, and that, in principle, these trials could be conducted by State/International Organizations individually or as a regional activity. The Meeting agreed on the need to continue the study of this matter.

Use of Internet public services

3.2.56 The Meeting noted the reliability, integrity and safety problems affecting Internet public services, and the concerns regarding the aeronautical use of internet public services. It agreed that ICAO guidelines should be received before providing any guidance to the States. The Meeting was also informed that the Air Navigation Commission had decided that a new CNS Study Group should develop guidelines on the use of Internet public services for aeronautical purposes. Consequently, the Meeting adopted the following Conclusion:

CONCLUSION 11/43 USE OF PUBLIC INTERNET SERVICES FOR AERONAUTICAL PURPOSES

That, in order to plan for the possibility of using public internet services for aeronautical purposes, ICAO be requested to develop guidance material in this respect as soon as possible.

Navigation system developments

Flight inspection of radio navigation aids for GNSS NPA procedures

3.2.57 The Meeting examined the information presented by Brazil regarding the implementation of flight inspections for GNSS NPA procedures, as shown in **Appendix M** to this part of the Report. The Meeting agreed that the information submitted was valuable, since the establishment of any type of approach or departure procedure would need to be previously assessed through flight inspections and in keeping with ICAO guidelines contained in Doc 8071 – Volume I, Chapter 8. On the extent of trials and inspection of GNSS-based procedures, the Meeting was informed that ICAO will soon publish Volume II – *Testing of Satellite-Based Radio Navigation Systems*. Taking into account the information provided and the analysis done, the Meeting agreed on the following Conclusion:

CONCLUSION 11/44

FLIGHT INSPECTION OF GNSS NPA PROCEDURES

That, in order to have available guidance material on flight inspection of GNSS NPA procedures:

- a) ICAO be urged to make all efforts to publish Document 8071, Volume II – “Testing of Satellite-Based Radio Navigation Systems”, as soon as possible;
- b) the Secretariat send to ICAO Headquarters the document on flight inspection of GNSS NPA procedures submitted by Brazil, as shown in the Appendix M to this part of the report, so that it may be considered as a contribution to the document mentioned in item a) above, if deemed appropriate; and
- c) States/International Organisations that need to conduct flight inspections of GNSS NPA procedures coordinate with States/International Organisations with experience in this respect, to receive advice on the matter.

Development of GNSS augmentation systems in the CAR/SAM and other Regions

3.2.58 The Meeting was informed about the activities carried out by project RLA/00/009 on the GNSS regional augmentation trials during its first year of existence. In this regard, it was noted that: a) data collection through the aircraft receiver was successful; b) for the en route flight phase and non-precision approaches, GPS precision proved adequate even without differential corrections. In terms of the availability and integrity of the aforementioned procedures, additional studies would be required, *e.g.*, an analysis of the scintillation phenomenon on GPS and GEP signals; and c) for NPA with vertical guidance, the precision, availability and integrity parameters of the ionospheric model study need to be proven in order to develop the appropriate algorithm in the master station so as to generate the proper corrections.

3.2.59 The Meeting also noted that Brazil had carried out GNSS augmentation system trials and had detected problems in the ionosphere that affect GNSS signals. Likewise, it was noted that the planning of SBAS augmentation trials in Brazil will involve two stages, where Phase I covers from 1 October 2002 to 31 August 2003.

EGNOS trials in the CAR/SAM Regions, pursuant to GREPECAS Conclusion 8/36

3.2.60 The Meeting agreed that the proposal made by Spain, on behalf of the European Commission, to conduct EGNOS trials in the CAR/SAM Regions, using several RIMs (reference stations) was feasible pursuant to GREPECAS Conclusion 8/36 and that they would contribute to expand SBAS trials in the CAR/SAM Regions. In this regard, the Meeting noted that the proposal of the European Commission required in-kind contributions by the States participating in the trials, such as the provision of personnel, local logistics and financing contributions that States deemed appropriate. Furthermore, the Meeting felt that these trials should be conducted under the mechanism of a specific technical cooperation project, similar to RLA/00/009. The members from Colombia, Cuba and COCESNA expressed the interest of their respective States/Organizations to join this project.

3.2.61 The Meeting also noted that EGNOS-type trials would provide useful information on the exchange of collected data among CSTB augmentation trial and European Community systems, and the contribution of experts in the ionosphere and other relevant aspects. Consequently, the Meeting adopted the following Conclusion:

CONCLUSION 11/45 SBAS-EGNOS TRIALS IN THE CAR/SAM REGIONS

That,

- a) non pre-operational SBAS-EGNOS trials be carried out in the CAR/SAM Regions through an ICAO/UNDP regional project RLA/02/901;
- b) for the trials mentioned in item a) above, cooperation offers made by Colombia, Cuba, Spain, COCESNA and the European Commission be accepted and acknowledged; and
- c) the ICAO NACC and SAM Regional Offices invite other CAR/SAM States/International Organizations to participate in the project mentioned in item a).

SBAS system planning in the CAR/SAM Regions

3.2.62 The Meeting considered that most of the activities proposed by the European Commission would support the implementation of SBAS systems in the CAR/SAM Regions, which was being carried out by the GREPECAS mechanism, with the support of technical cooperation projects, such as RLA/98/003, “*Transition plan and cost-benefit analysis for CNS/ATM systems*”, and RLA/00/009, “*GNSS Regional Augmentation Plan*”. It was felt that, given the wide experience of Europe in the establishment of development projects on the matter, its contribution to the activities currently being carried out would be of great use to supplement this task. Thus, the Meeting agreed to the following Conclusion:

CONCLUSION 11/46 SUPPORT FOR THE CAR/SAM REGIONAL SBAS-GNSS AUGMENTATION PLAN

That States/International Organizations participating in non pre-operational SBAS-GNSS trials report the results of the aforementioned trials to the ATM/CNS Subgroup by the end of 2004, and those who are in a position to do so, contribute their experience and resources for the development of the CAR/SAM regional GNSS augmentation plan, in coordination with the tasks on this matter being carried out by the GREPECAS mechanism.

Surveillance system developments

Review and completion of the regional guidelines for SSR data sharing

3.2.63 The Meeting noted that the CNS Committee had concluded the review and completion of the regional guidelines for the exchange of radar data (**Appendices N, O and P** to this part of the Report), and had also completed the studies to recommend the use of a common format for the exchange of radar data in the CAR/SAM Regions. Based on this, the Meeting approved the aforementioned guidelines and thus adopted the following Conclusion:

CONCLUSION 11/47 REGIONAL GUIDELINES FOR THE EXCHANGE OF SSR RADAR DATA

That CAR/SAM States/International Organizations be urged to:

- a) use the Asterix protocol as a common regional protocol for the exchange of SSR radar data;
- b) take into account the revised regional guidelines on the exchange of radar data contained in Appendices N, O and P to this part of the Report; and
- c) establish bilateral/multilateral agreements for the exchange of radar data.

Difficulties in relation with the use of the Minimum Safe Altitude Warning (MSAW)

3.2.64 The Meeting noted that several CAR/SAM States had reported difficulties with the use of the Minimum Safe Altitude Warning (MSAW), and, based on the considerations of the ATM and CNS Committees of the ATM/CNS Subgroup, agreed to the following Conclusion:

CONCLUSION 11/48 USE OF THE MINIMUM SAFE ALTITUDE WARNING (MSAW)

That,

- a) States/International Organizations facing problems with the use of MSAW, take into account MSAW operational requirements contained in ICAO Doc 4444 and in the “Operational Requirements Documents for EATCHIP Phase III ATM Added Proximity Warning (APW)” of EUROCONTROL; and
- b) ICAO be urged to develop guidance material on the MSAW.

Brazilian ADS/CPDLC trials in the EUR/SAM corridor

3.2.65 Moreover, the Meeting was informed that Brazil had conducted ADS/CPDLC trials in the EUR/SAM corridor.

Review of regional guidelines on radar surveillance systems and ADS

3.2.66 The Meeting noted that the ATM and CNS Committees had reviewed the regional guidelines on radar surveillance systems, as well as ADS delivered by the ATM/CNS/SG/1 Meeting. The documents resulting from this review appear in Appendices Q and R to this part of the Report. In this respect, the Meeting adopted the following Conclusions:

CONCLUSION 11/49 REGIONAL GUIDELINES ON THE PLANNING AND IMPLEMENTATION OF RADAR SURVEILLANCE SYSTEMS

That CAR/SAM States/International Organizations take into account the regional guidelines on the planning and implementation of radar surveillance systems presented in Appendix Q to this part of the Report.

CONCLUSION 11/50 PRELIMINARY REGIONAL GUIDELINES ON AUTOMATIC DEPENDENT SURVEILLANCE SYSTEMS

That CAR/SAM States/International Organizations take into account the preliminary regional guidelines on Automatic Dependent Surveillance (ADS) systems presented in Appendix R to this part of the Report.

ATM automation system developments

3.2.67 The Meeting agreed on the need to continue developing a regional strategy for the introduction of ATM automation in the CAR/SAM Regions through the existing Joint ATM and CNS Task Force, and adopted the following Conclusions, which contain a general objective to guide the work of the ATM and CNS Committees on the development of ATM automation, and the internal action by GREPECAS for the development of ATM automation.

DECISION 11/51 TERMS OF REFERENCE OF THE ATM AUTOMATION TASK FORCE

That the ATM Automation Development Task Force, with a view to complying with the tasks assigned on this topic, take into account the following terms of reference:

“By the year 2012, achieve a gradual and evolutionary level of development of ATM automated systems permitting the exchange of data between ATM unit; likewise, achieve a harmonized interoperability, in addition to providing a flexible and optimized airspace management, while maintaining the required levels of safety.”

DECISION 11/52 ACTIONS FOR THE DEVELOPMENT OF ATM AUTOMATION

That, to continue with the development of the tasks on the development of ATM automation, the ATM Automation Development Task Force take the following action:

- a) continue with the development of a preliminary regional strategy for the implementation of ATM automation in the CAR/SAM Regions, for presentation at the next meeting of the CNS Committee for its review and approval;
- b) in order to support the **Strategy**, develop a document to serve as a guide for the implementation of ATM automated systems for the processing of the information managed by the ATM systems, consistent with CAR/SAM traffic flows and homogeneous areas;
- c) propose that, once presented and approved by GREPECAS, the **CAR/SAM ATM Automation Strategy** be included in the CAR/SAM Air Navigation Plan; and
- d) request that the States/International Organizations that form part of the ATM Automation Development Task Force, to designate an expert to participate in this work.

3.2.68 Furthermore, the Meeting felt that it would be useful if project RLA/98/003 could contribute to the development of the ATM automation task assigned to the ATM Automation Development Task Force of the CNS Committee. Consequently, it adopted the following Conclusion:

**CONCLUSION 11/53 REQUEST FOR SUPPORT FROM PROJECT RLA/98/003 IN THE
WORK OF THE ATM AUTOMATION DEVELOPMENT TASK
FORCE**

That the President and Secretary of GREPECAS request project RLA/98/003, as part of its assigned tasks, to conduct studies to support the work programme assigned to the ATM Automation Development Task Force.

**Regional preparation on CNS matters to be discussed at the Eleventh Air
Navigation Conference (2003) (AN-Conf/11)**

3.2.69 The Meeting noted that the CNS Committee made a general review of each one of the CNS-related agenda items of the AN-Conf/11, and agreed on the convenience of adopting regional actions accordingly, so that the CAR/SAM States can present a common position at the Conference, that may contribute to the global and inter-regional coordinated development of CNS systems. Issues related to communications, navigation and surveillance (CNS) are contained in agenda items 5, 6 and 7 of the Agenda of the Conference, as shown in **Appendix S** to this part of the Report.

3.2.70 Brazil, Colombia and COCESNA offered to assume the responsibility of centralizing the development and coordination of the common positions of the CAR/SAM States/International Organizations. In light of the above, the Meeting adopted the following Conclusion:

**CONCLUSION 11/54 REGIONAL ACTION ON COORDINATED POSITIONS ON CNS
ISSUES AT THE AN-CONF/11**

That,

- a) Brazil, Colombia and COCESNA be urged to assume the responsibility of centralizing the development and coordination of the common positions of CAR/SAM States/International Organizations on Agenda Items 5 (Brazil), 6 (Colombia) and 7 (COCESNA) of the AN-Conf/11;
- b) through the GREPECAS mechanisms and the ICAO NACC and SAM Regional Offices, coordination be made with States designated in a) above with the aim of contributing to the development of the aforementioned common, coordinated positions of CAR/SAM States; and
- c) States designated in a) above be urged to circulate the draft papers on the regional position to be adopted at the AN-Conf/11 to the remainder CAR/SAM States/International Organizations through the Regional Offices, with a view to developing papers with common national positions that may be presented on

Terms of Reference and Work Programme of the CNS Committee

3.2.71 The Meeting agreed that the main tasks that needed to be pursued as part of the immediate work of the CNS Committee were as follows:

General

CNS/1-6 Develop service quality criteria applicable to CNS systems.

Communications

CNS/2-1.2 Development and interconnection of digital communication networks.

CNS/2-1.3 Regional development of VDL and HFDL data link implementation.

CNS/2-1.5 Continue the regional development of ATN and its applications.

CNS/2-2 Development of voice communication systems.

Navigation

CNS/3-2 Regional development on GNSS augmentation systems.

CNS/3-3 Continue the development of the GNSS regional implementation plan.

Surveillance

CNS/4-1 Continue the development of surveillance radar systems.

CNS 4-1.3 Review of the regional plan for surveillance radar systems

ATM Automation

CNS/5-1 to 3 Regional development of ATM automation at ATM units and for the exchange of data among these units.

3.2.72 The Meeting agreed on the need to rationalize the work programme of the CNS Committee Meeting, so that it only include information on the tasks that need to be carried out during the immediate three-year phase, deleting those tasks that were completed.

3.2.73 The Meeting also received four Information Papers presented by Argentina on the communications links before and after the implementation of the South American digital network (REDDIG), on the implementation of the new ACC at Ezeiza, on the inclusion of the REDDIG in the FASID, as well as on the inconveniences experienced during the development of the contract with the REDDIG provider.

APPENDIX A**REGULATIONS OF THE CAR/SAM REGIONAL
BIRD HAZARD PREVENTION COMMITTEE****CHAPTER I – OBJECTIVE AND FUNCTIONS**

Article 1 – The CAR/SAM (Central America, Caribbean and South America) Committee on Prevention of Bird Hazard, identified from this point in time as Committee, is an entity without profit objectives. The main objective of this Committee is to coordinate and to integrate actions in order to reduce the number of aviation accidents/incidents in the CAR/SAM Region due to bird strikes as low as possible.

Article 2 – The main activity of the Committee will be the identification, analysis, development and investigation of problems related to bird strikes with aircraft. It will also take care of the reproduction and distribution of informative material on the subject in order to give assistance to pilots, aircraft operators, and providers of facilities and aeronautical services in the prevention and reduction of bird hazards. These activities will encompass the following tasks:

- a) To collect, analyze and make available the data and related information on aircraft bird strike among specialists and/or officials in charge of the hazard in member States from the Region;
- b) To adjust and establish statistical procedures in order to process the information;
- c) To establish connections with other investigation and avian control programs in order to avoid the duplication of efforts and to take advantage of other opportunities and accomplishments by other member States in the Region;
- d) To make available studies, research and results on bird strikes by other States or Committees;
- e) To establish methods and/or procedures with specialized institutions in order to identify remaining parts of birds after occurrence of aircraft bird strike;
- f) To study and develop methods to determine the presence, identification and quantification of birds and to disperse them from the aerodromes and their vicinities;
- g) To investigate and develop detection methods of massive migrating bird movements through radar and other auto-detection techniques ;
- h) To develop procedures for the rapid exchange of messages and early alerts to the pilots about possible risks of bird strike, especially those massive migrating bird movements who cross the regions;

- i) To develop informative material (maps, graphics, texts, etc.) about the presence of birds in aircraft flight paths/routes in order to include them in the aeronautical information system and to design automated systems able to forecast and/or prevent the danger of massive migrating bird movements using the Internet;
- j) To develop material to instruct pilots and other people involved in the prevention of bird hazard;
- k) To standardize methods and use of the material and to prove their efficiency;
- l) To motivate and to assist the civil aviation authorities from States who are involved in the Committee to elaborate integrated programs to reduce bird population at airports/aerodromes; and,
- m) To establish a connection with the ICAO Bird strike Information System (IBIS program).

CHAPTER II – COMPOSITION OF THE COMMITTEE

Article 3 – The Committee will be integrated by representatives of organisations and/or individuals, whose activities are related with the prevention of aircraft bird strike accidents/incidents .

Article 4 – The Committee will have the following composition:

- a) Board of Directors;
- b) Statistical Group;
- c) Aerodrome Group;
- d) South American Group;
- e) Caribbean Group;
- f) Central American Group; and
- g) Analysis, Development and Investigation Group.

Article 5 – The Board of Directors of the Committee will have the following composition:

- a) President and Vice-President;
- b) Statistical Group coordinator;
- c) Aerodrome Group coordinator;
- d) South American Group coordinator;
- e) Caribbean Group coordinator;
- f) Central American Group coordinator; and
- g) Analysis, Development and Investigation Group coordinator.

CHAPTER III – NATURE OF THE COMMITTEE

Article 6 – The Committee will be unofficial and permanent. The members of the Board of Directors will be elected for a 4-year period.

Article 7 – The Committee will not have a permanent head office; it will adopt the head office that belongs to the members of the Board of Directors.

CHAPTER IV – RELATIONSHIPS WITH OTHER ORGANIZATIONS

Article 8 – The Committee will keep a close relationship with ICAO (International Civil Aviation Organization), with ACI (Airports Council International), with IATA (International Air Transport Association), with IFALPA (International Federation of Air Line Pilot’s Associations), with IBSC (International Bird Strike Committee), USA and Canada Bird Strike Committees as well as with other similar organizations.

CHAPTER V – FUNCTIONS OF THE COMMITTEE

Article 9 – The first Board of Directors of the Committee will be formed with an interim basis. The acting President of the Committee will convene the first meeting of the Committee and he/she will fix the date and venue for the meeting. One of the issues to be treated in this meeting will be the election of the first Board of Directors.

Article 10 – The Committee will elect the Board of Directors for a 4-year period. The Board of Directors could be reelected.

Article 11 – The functions of the President of the Committee are:

- a) To submit annual reports to the Committee;
- b) To execute the instructions of the Committee and to verify the debates and obligations recommended by the present Regulations;
- c) To request, compile, examine and inform the concerned entities about the problems identified with bird strike hazards;
- d) To analyze and adopt the recommendations made by the groups of the Committee;
- e) To examine and follow up all pending issues related to his/her functions;
- f) To administrate the funds of the Committee;
- g) To participate or to be represented in the meetings of the Committee and in meetings of other committees related with the prevention of bird hazards;
- h) To motivate and to give support on the creation of national committees for the prevention of bird hazards;
- i) To maintain an updated list of the members of the Committee;
- j) To maintain frequent contact with the members of the Committee; and,
- k) To delegate responsibilities during his/her absence.

Article 12 – The functions of the Vice-President of the Committee are:

- a) To stand in for the President when he/she is out of his/her functions. In this case, he/she should carry out the obligations indicated in Article 11;
- b) To promote speeches in order to divulge the prevention of bird hazard;
- c) To assist the groups of the Committee in aspects relevant to the functions indicated in Article 2;
- d) To maintain a relationship with the President of the Committee.

Article 13 – The functions of the Statistical Group Coordinator are:

- a) To elaborate procedures for the analysis of bird strike information ;
- b) To compile, analyze, prepare and to divulge the bird strike statistical data;
- c) To exchange information with the ICAO IBIS program;
- d) To exchange information with other groups of the Committee;
- e) To give support to the National Committees on the prevention of bird hazard in order to standardize the statistical data.

Article 14 – The functions of the Aerodrome Group Coordinator are:

- a) To frequently compile and update ecological studies of airports and their vicinities. This information would be the basis for the adoption of concrete actions against birds;
- b) To advise the Committee and the Civil Aviation Authorities on the prevention of bird strikes in aviation, especially in those issues related with the introduction of standards and recommendations;
- c) To compile and divulge information on the methods used to reduce bird hazards at airports;
- d) To exchange information with the other groups of the Committee;
- e) To elaborate guidance material related to the training of personnel involved in bird control at the airports;
- f) To assist the National Committees for the prevention of bird hazards in the elaboration of bird control programmes at airports;
- g) To adopt the coordination measures in order to propose the modifications of the environmental conditions that will allow reducing the presence of birds in airports/aerodromes;
- h) To verify and evaluate the effectiveness of prevention plans and the reduction of bird strikes in Contracting States.

Article 15 – The functions of the Sub Regional Coordinators (South America, Central America and Caribbean) are:

- a) To promote and encourage the creation of National Bird Strike Hazard Committees through ICAO oriented talks as well as experiences from other States ;
- b) To promote the circulation of Bird Hazard talks ;
- c) To technically assist the Sub Region National Committees on aspects related to the functions of the Regional Committee as indicated in Article 2 of the present Regulations;
- d) To maintain a close relationship with the Committee’s Board of Directors;
- e) To encourage the interest and participation of all issues related with the bird strike prevention and reduction.

Article 16 – The functions of the Analysis, Development and Investigation Group Coordinator are:

- a) The compilation and evaluation of the bird strike reports in order to have a more complete knowledge about the risk caused by such reports ;
- b) To compile the statistical data, informative material of remaining parts of birds, structural damages caused to aircraft and all available information on bird strikes at different altitude levels;
- c) To encourage the interest of all the people who is related to aviation through the circulation of reports and bird strike incident and accident publications, as well as flight safety special reports ;
- d) To observe, evaluate and analyze the massive migrating bird movements, the data related with bird strikes according with systematical groups of existing and striking birds and all the other circumstances or biological movements that directly influence flight safety ;
- e) To exchange technical information to prevent bird strikes, analysis of remaining parts of birds, detection of migrating birds and to analyze the possibility of using bird strike resistance methods and procedures;
- f) To organize talks on flight procedures and to assist the aeronautical publication and air traffic services of States (who do not have a Bird Strike Prevention Committee) in the timely notification to pilots on the presence of birds in aircraft routes;
- g) To maintain contacts and to exchange information with institutes, scientific entities, laboratories and organizations related with migration and systematic bird collections;
- h) To elaborate procedures, maps, charts and texts related with the compilation, investigation and supply of information regarding remaining parts of birds and susceptible areas of conflict among bird migration routes and aircraft trajectory;

- i) To encourage, support and favor investigations on flying bird detection, automated forecast system designs, bird strikes alerts and bird strike resistance methods and procedures;
- j) To maintain a tight relationship with the Committee Groups and with equal groups from other Committees.

CHAPTER VI – ABOUT THE LANGUAGES

Article 17 – The working languages of the Committee will be English and/or Spanish. The language to be adopted will be the one that will allow the easiest way of communication among States. The translation of the documents and simultaneous interpretation of Spanish to English and vice versa will depend upon the available resources.

CHAPTER VII – ABOUT COMMUNICATION MECHANISMS

Article 18 – The CAR/SAM Regional Committee will have a Website for which the Secretariat of the Board of Directors will adopt necessary actions to consolidate the proposals from the States in the Region who are represented in the Committee and to incorporate them in the Website.

CHAPTER VIII – ABOUT THE MEETINGS OF THE COMMITTEE

Article 19 – Ordinary meetings will be carried out at least once every two years. The President of the Committee will convene the meeting and he/she will determine the date and venue .

Article 20 – Extraordinary meetings of the Committee will be carried out when the majority of the members of the committee request them.

Article 21 – All the members of the Committee will be notified about the meetings and they will have the same rights to be represented during the ordinary and extraordinary meetings.

Article 22 – During the meetings of the Committee, decisions will be taken by simple majority . Each member will have right to one vote. No one can be represented more than once.

Article 23 – By request of at least two members of the Committee and as long as majority of the voting members do not oppose, the voting process will be secret by depositing the ballots in the place indicated by the President of the Committee.

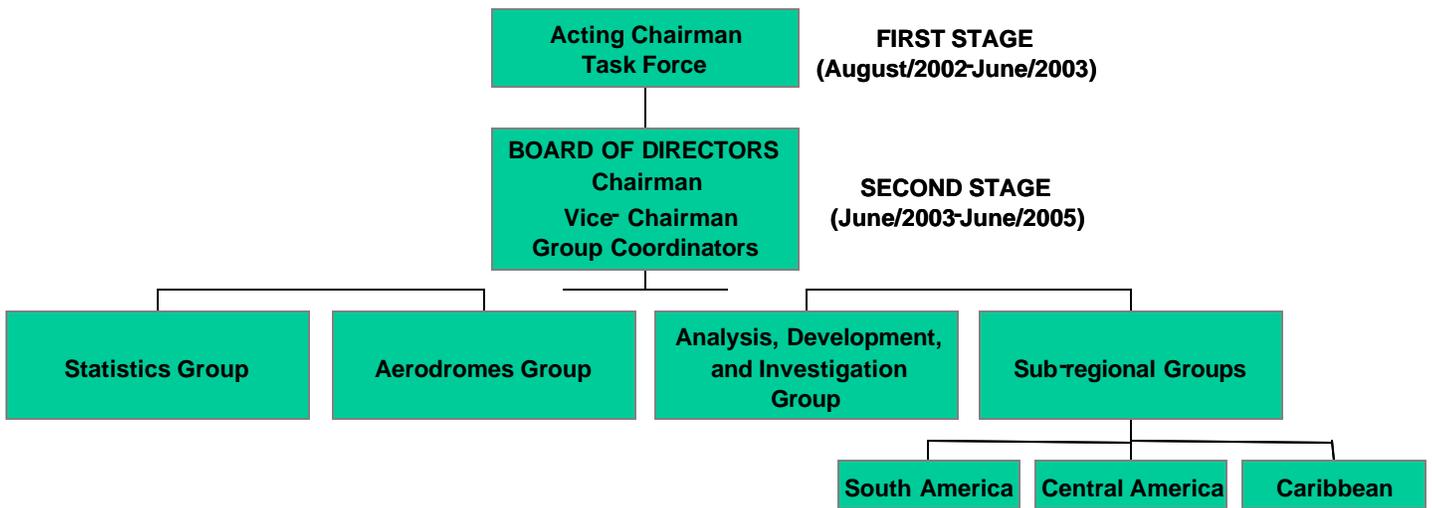
CHAPTER IX – ABOUT THE MODIFICATIONS TO THE REGULATIONS

Article 24 – These Regulations can be totally or partially amended by simple majority (fifty percent plus one) of the members of the Committee.

Article 25 – Any member could present a proposal to amend these Regulations. However, the proposal will need to be supported by at least one third of the participants of the meeting.

APPENDIX B

CAR/SAM REGIONAL BIRD HAZARD PREVENTION COMMITTEE
Composition and Organizational Structure in Stages



APPENDIX C

**PLAN FOR THE ESTABLISHMENT AND DEVELOPMENT OF THE
CAR/SAM REGIONAL BIRD HAZARD PREVENTION COMMITTEE**

TASK	TASK TITLES	RESPONSIBILITY	2002					2003												
			M8	M9	M10	M11	M12	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	
1	To define a name for the Regional Committee	AGA/AOP/SG/2																		
2	Final discussion and approval of the Regulations of the Regional Committee	AGA/AOP/SG/2																		
3	Election of the Acting Chairman	AGA/AOP/SG/2																		
4	Formation of a Task Force	AGA/AOP/SG/2																		
5	Analysis and designation of the venue and date for the First Meeting	Acting Chairman																		
6	Organization and preparation for the First Meeting	Task Force																		
6.1	Convening for the participation of ICAO Member States	Task Force																		
6.1.1	Official Invitation to Civil Aviation Authorities	Task Force																		
6.1.2	Announcement for the presentation of works in a technical conference	Task Force																		
6.2	Organization and publication of the Meeting's Documentation	Task Force																		
6.3	Analysis of budget resources	Task Force																		
6.3.1	Coordination with the Meeting's sponsoring organizations	Task Force																		
6.3.2	Coordination with the AGA/AOP/SG/3	Task Force																		
6.4	Human Resources analysis	Task Force																		
6.4.1	Coordination to nominate members of the Committee Groups	Task Force																		
7	First Meeting of the Regional Bird Hazard Committee	Task Force																		
7.1	Board of Directors Meeting	Task Force																		
7.1.1	Board of Directors Election for a two-year period	Task Force																		
7.1.2	Budget resources analysis	Board of Directors																		
7.1.3	Analysis and discussion of the Coordinators' reports	Board of Directors																		
7.1.4	Designation of the Organizing Committee for the following Meeting	Chairman																		
7.1.5	General Issues	Board of Directors																		
7.2	Technical Conference Meeting	Board of Directors																		
7.2.1	Technical Works Presentation	States																		

TASK	TASK TITLES	RESPONSIBILITY	2002					2003												
			M8	M9	M10	M11	M12	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	
7.2.2	Exhibitions and field demonstrations on wild life control techniques	States and Private Companies																		
7.2.3	Key note presentations given by experts invited from other Regional or National Bird Strike Committees.	States and Specialists																		
8	Establishment of National Committees in States of the Region	States																		
8.1	To conduct Seminars according with ICAO Doc.	Specialists																		
8.2	Organization and facilitation of constituent meetings	Specialists																		
9	Bird Hazard training	States																		
9.1	To conduct training and/or courses	Specialists																		

APPENDIX D

EXAMPLES OF TABLES FOR ANALYSIS OF LEVEL OCCUPANCY BETWEEN FL 290 AND FL 410, FLIGHT CATEGORIES AND AIRCRAFT TYPES

Table 1- Flight Type Distribution in Upper Airspace of FIRs XX, XX

FIRs XX AND XX -UPPER AIRSPACE		
FLIGHT TYPE	NUMBER OF OPERATIONS	PERCENTAGE (%)
TOTAL		

Table 2- Aircraft Type Distribution in Upper Airspace of FIRs XX, XX

AIRLINE	ACFT TYPE	NUMBER OF OPERATIONS	PERCENTAGE (%)
TOTAL			

Table 3- Flight Level Distribution in the State XX Upper Airspace

STATE XX UPPER AIRSPACE		
REPETITIVE FLIGHT PLAN		
FLIGHT LEVEL	NUMBER OF OPERATIONS	PERCENTAGE (%)
TOTAL		



GUIDANCE MATERIAL FOR THE PREPARATION OF A NATIONAL SEARCH AND RESCUE PLAN

(Lima, June 2002)

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Appendix A Sample mandate of a SAR Coordination Committee

Appendix B Sample Assistance Agreement between the agency responsible for National SAR and official and non-governmental agencies supplying facilities and services to handle cases.

Appendix C Sample operational agreement for inter-state use of SAR facilities and services, through which two or more States agree to combine their search and rescue resources.

Appendix D Sample operational agreement for inter-state use of specific SAR facilities and services, through which one State provides assistance to another State.

Appendix E Sample agreement between two States to facilitate the entry of SAR resources.

LIST OF ACRONYMS USED IN THE SAR SERVICE

English	Spanish
A/C aircraft	A/C aeronave
ACC area control centre	ACC centro de control de área
ACO aircraft co-ordinator	ACO coordinador de aeronaves
AES aeronautical earth station	AES estación terrena aeronáutica
AFN aeronautical fixed network	AFN red fija aeronáutica
AFTN aeronautical fixed telecommunications network	AFTN red de telecomunicaciones fijas aeronáuticas
AIP Aeronautical Information Publication	AIP Publicación de Información Aeronáutica
AIS aeronautical information services	AIS servicios de información aeronáutica
AM amplitude modulation	AM amplitud modulada
AMS aeronautical mobile service	AMS servicio móvil aeronáutico
AMS(R)S aeronautical mobile satellite (route) service	AMS(R)S servicio móvil aeronáutico por satélite (Ruta)
AMSS aeronautical mobile satellite service	AMSS servicio móvil aeronáutico por satélite
AMVER Automated Mutual-assistance Vessel Rescue	AMVER Sistema automatizado de asistencia mutua para el salvamento de buques
ANC Air Navigation Commission	ANC Comisión de aeronavegación
ARCC aeronautical rescue co-ordination centre	ARCC Centro Coordinador de Salvamento Aeronáutico
ARSC aeronautical rescue sub-centre	ARSC Subcentro de salvamento Aeronáutico
ATC air traffic control	ATC control de tránsito aéreo
ATN aeronautical telecommunications network	ATN red de telecomunicaciones aeronáuticas
ATS air traffic services	ATS servicios de tránsito aéreo
CES coast earth station	CES estación terrena costera
Cospas Space System for Search of Vessels in Distress	Cospas Sistema de búsqueda por satélite de buques en peligro
CRS coast radio station	CRS radio estación costera
C/S call sign	C/S distintivo de llamada
CW continuous wave	CW onda continua
DF direction finding	DF radiogoniometría
DME distance measuring equipment	DME Equipo medidor de distancia
DRU desert rescue unit	DRU unidad de salvamento de desierto
DSC digital selective calling	DSC llamada selectiva digital
ELT emergency locator transmitter	ELT transmisor de localización de siniestros
EPIRB emergency position-indicating radio beacon	EPIRB radiobaliza de localización de Siniestros
FIC flight information centre	FIC centro de información de vuelo
FIR flight information region	FIR región de información de vuelo
FM frequency modulation	FM frecuencia modulada
GES ground earth station	GES estación terrena en tierra
GHz gigahertz	GHz gigahertz
GLONASS Global Orbiting Navigation Satellite System	GLONASS sistema orbital mundial de navegación por satélites
GMDSS Global Maritime Distress and Safety System	GMDSS Sistema mundial de Socorro y seguridad marítimos
GNSS Global Navigation Satellite System	GNSS Sistema mundial de navegación por satélites
GPS global positioning system	GPS Sistema mundial de determinación de la posición

English		Spanish	
HF	high frequency	HF	alta frecuencia
ICAO	International Civil Aviation Organization	ICAO	Organización de la Aviación Civil Internacional
IFR	instrument flight rules	IFR	reglas de vuelo por instrumentos
ILS	instrument landing system	ILS	sistema de aterrizajes por instrumentos
IMC	instrument meteorological conditions	IMC	condiciones met. por instrumentos
IMO	International Maritime Organization	IMO	Organización Marítima Internacional
Inmarsat	International Mobile Satellite Organization	Inmarsat	Org. internacional de telecomunicaciones móviles por satélite
INS	inertial navigation system	INS	sistema de navegación inercial
ITU	International Telecommunication Union	ITU	Unión Internacional de telecomunicaciones
JRCC	joint (aeronautical and maritime) RCC	JRCC	RCC conjunto (aeronáutico y marítimo)
kHz	kilohertz	kHz	kilohertz
LES	land earth station	LES	estación terrena terrestre
LUT	local user terminal	LUT	terminal de usuario local
MCC	mission control centre	MCC	centro de control de misiones
MF	medium frequency	MF	ondas hectométricas
MHz	megahertz	MHz	megahertz
MMSI	maritime mobile service identity	MMSI	identidades del servicio móvil marítimo
MRCC	maritime rescue co-ordination centre	MRCC	centro coordinador de salvamento marítimo
MRSC	maritime rescue sub-centre	MRSC	subcentro de salvamento marítimo
MRU	mountain rescue unit	MRU	unidad de rescate de montaña
MSI	maritime safety information	MSI	información sobre seguridad marítima
NBDP	narrow-band direct printing	NBDP	impresión directa de banda estrecha
NM	nautical mile	NM	milla náutica
NOTAM	notice to airmen	NOTAM	aviso a los aviadores
OSC	on-scene co-ordinator	OSC	coordinador en el lugar del siniestro
OSV	offshore supply vessel	OSV	buque de suministro mar adentro
PLB	personal locator beacon	PLB	radiobaliza de localización de personas
PRU	parachute rescue unit	PRU	unidad de salvamento por paracaídas
R&D	research and development	R&D	investigación y desarrollo
RANP	regional air navigation plan	RANP	plan regional de navegación aérea
RCC	rescue co-ordination centre	RCC	centro coordinador de salvamento
RF	radio frequency	RF	radio frecuencia
RSC	rescue sub-centre	RSC	subcentro de salvamento
RTG	radio telegraphy	RTG	radiotelegrafía
SAR	search and rescue	SAR	búsqueda y salvamento
SARSAT	Search and Rescue Satellite-Aided Tracking	SARSAT	Sistema de seguimiento por satélite para búsqueda y salvamento
SART	search and rescue transponder	SART	respondedor de búsqueda y salvamento
SC	SAR co-ordinator	SC	Coordinador SAR
SCC	SAR co-ordinating committee	SCC	Comité Coordinador SAR
SDP	SAR data provider	SDP	proveedor de datos SAR
SES	ship earth station	SES	estación terrena de buque
SITREP	situation report	SITREP	informe sobre la situación
SMC	SAR mission co-ordinator	SMC	Coordinador de Misión SAR
SOLAS	International Convention for the Safety of Life at Sea	SOLAS	Convenio Internacional para la seguridad de la vida humana en el mar
SPOC	SAR point of contact	SPOC	punto de contacto SAR

English	Spanish
<p>SRR search and rescue region SRS search and rescue sub-region SRU search and rescue unit TLX teletype UHF ultra-high frequency UIR upper flight information region USAR urban search and rescue UTC co-ordinated universal time VFR visual flight rules VHF very-high frequency VMC visual meteorological conditions VOR VHF omnidirectional radio range WMO World Meteorological Organization</p>	<p>SRR Región de búsqueda y salvamento SRS Subregión de búsqueda y salvamento SRU unidad de búsqueda y salvamento TLX teletipo UHF ultra-alta frecuencia UIR región superior de información de vuelo USAR búsqueda y salvamento urbanos UTC tiempo universal coordinado VFR reglas de vuelo visual VHF muy alta frecuencia VMC condiciones meteorológicas visual VOR radiofaro omnidireccional de ondas métricas WMO Organización Meteorológica Mundial</p>
<p style="text-align: center;">Glossary (by alphabetical order)</p> <p>Aircraft co-ordinator (ACO) A person who co-ordinates the involvement of multiple aircraft in SAR operations.</p> <p>Alert phase A situation wherein apprehension exists as to the safety of an aircraft or marine vessel and of the persons on board.</p> <p>Alerting post Any facility intended to serve as an intermediary between a person reporting an emergency and a rescue co-ordination centre or rescue sub-centre.</p> <p>Area control centre (ACC) A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.</p> <p>Captain Master of a ship or pilot-in-command of an aircraft, commanding officer of a warship or an operator of any other vessel.</p> <p>Coast earth station (CES) Maritime name for an Inmarsat shore-based station linking ship earth stations with terrestrial communications networks.</p> <p>Cospas-Sarsat system A satellite system designed to detect distress beacons transmitting on the frequencies 121.5 MHz and 406 MHz.</p> <p>Craft Any air or sea-surface vehicle, or submersible of any kind or size.</p> <p>Digital Selective Calling (DSC) A technique using digital codes which enables a radio station to establish contact with, and transfer</p>	<p style="text-align: center;">Glosario (por orden alfabético)</p> <p>Alerta SAR innecesario (UN SAR) Mensaje que envía posteriormente un RCC a las autoridades apropiadas cuando se ha activado innecesariamente el sistema SAR debido a una falsa alarma.</p> <p>Amaraje forzoso Descenso forzoso de una aeronave en el agua.</p> <p>Buque Embarcación marítima.</p> <p>Búsqueda Operación coordinada normalmente por un RCC o RSC, en la que se utilizan el personal y los medios disponibles para localizar a personas en peligro.</p> <p>Capitán Capitán de un buque, piloto al mando de una aeronave, comandante de un buque de guerra o persona que gobierna cualquier otro buque</p> <p>Centro de Control de Área (ACC) Dependencia establecida para facilitar servicio de control de tránsito aéreo a los vuelos controlados en las áreas de control bajo su jurisdicción.</p> <p>Centro de Información de Vuelo (FIC) Dependencia establecida para facilitar servicio de información de vuelo y servicio de alerta.</p> <p>Centro Coordinador de Salvamento (RCC) Dependencia encargada de promover la Buena organización de los servicios SAR dentro de una región de búsqueda y salvamento.</p> <p>Centro coordinador de salvamento conjunto (JRCC) Centro Coordinador de Salvamento responsable de los sucesos de búsqueda y salvamento, tanto aeronáuticos como marítimos.</p>

English	Spanish
<p>information to, another station or group of stations.</p> <p>Direction finding (DF) Homing on signals to pinpoint a position.</p> <p>Distress alerting The reporting of a distress incident to a unit, which can provide or co-ordinate assistance.</p> <p>Distress phase A situation wherein there is reasonable certainty that a vessel or other craft, including an aircraft or a person, is threatened by grave and imminent danger and requires immediate assistance.</p> <p>Ditching The forced landing of an aircraft on water.</p> <p>Emergency locator transmitter (ELT) Aeronautical radio distress beacon for alerting and transmitting homing signals.</p> <p>Emergency phase A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.</p> <p>Emergency position-indicating radio beacon (EPIRB) A device usually carried aboard maritime craft that transmits a signal that alerts search and rescue authorities and enables rescue units to locate the scene of the distress.</p> <p>Flight information centre (FIC) A unit established to provide flight information and alerting services.</p> <p>General communications Operational and public correspondence, traffic other than distress, urgency and safety messages, transmitted or received by radio.</p> <p>Global Maritime Distress and Safety System (GMDSS) A global communications service based upon automated systems, both satellite-based and terrestrial, to provide distress alerting and promulgation of maritime safety information for mariners.</p> <p>Global positioning system (GPS) A specific satellite-based system used in conjunction with mobile equipment to determine the precise position of the mobile equipment.</p> <p>International Mobile Satellite Organization (Inmarsat) A system of geostationary satellites for world-wide mobile communications services and which support the Global Maritime Distress and Safety System and other emergency communications systems.</p>	<p>Centro de Control de Misiones (MCC) Parte del sistema de Cospas-Sarsat que acepta los mensajes de alerta procedentes de terminales locales de usuario u otros centros de misiones, y los distribuye entre los centro coordinadores de salvamento apropiados u otros puntos de contacto de búsqueda y salvamento.</p> <p>Comunicaciones generales Comunicaciones operacionales y de correspondencia pública y tráfico de mensajes que no sean de Socorro, urgencia, o seguridad, que se transmiten y reciben por ondas radioeléctricas.</p> <p>Comunicaciones para coordinar la búsqueda y salvamento Comunicaciones necesarias para coordinar los medios que participan en una operación de búsqueda y salvamento</p> <p>Coordinador de aeronaves (ACO) Persona que coordina la participación de varias aeronaves en las operaciones SAR.</p> <p>Coordinador de la misión de búsqueda y salvamento (SMC) Funcionario asignado temporalmente para coordinar la respuesta a una situación de peligro real o aparente.</p> <p>Coordinador de búsqueda y salvamento (SC) Persona(s) u organismo(s) perteneciente(s) a una Administración que tiene(n) a su cargo la responsabilidad general de establecer y prestar servicios SAR y de asegurar que la planificación de dichos servicios se coordine debidamente.</p> <p>Coordinador en el lugar del siniestro (OSC) Persona designada para coordinar las operaciones de búsqueda y salvamento en un área determinada</p> <p>Envío de un alerta de socorro Notificación de una situación de peligro a una dependencia que pueda prestar auxilio o coordinarlo.</p> <p>Estación terrena costera (CES) Denominación marítima de una estación en tierra de Inmarsat que enlaza estaciones terrenas de buque con las redes de comunicaciones terrestres.</p> <p>Fase de peligro Situación en la cual existen motivos justificados para creer que un buque u otra nave, incluida una aeronave o persona, están amenazados por un peligro grave e inminente y necesitan auxilio inmediato.</p> <p>Fase de alerta Situación en la cual se teme por la seguridad de una</p>

English	Spanish
<p>Joint rescue co-ordination centre (JRCC) A rescue co-ordination centre responsible for both aeronautical and maritime search and rescue incidents.</p> <p>Local user terminal (LUT) An earth receiving station that receives beacon signals relayed by Cospas-Sarsat satellites, processes them to determine the location of the beacons and forwards the signals.</p> <p>Mission control centre (MCC) Part of the Cospas-Sarsat system that accepts alert messages from the local user terminal(s) and other mission control centres to distribute to the appropriate rescue co-ordination centres or other search and rescue points of contact.</p> <p>NAVAREA One of 16 areas into which the world's oceans are divided by the International Maritime Organization for dissemination of navigation and meteorological warnings.</p> <p>NAVTEX Telegraphy system for transmission of maritime safety information, navigation and meteorological warnings and urgent information to ships.</p> <p>On-scene co-ordinator (OSC) A person designated to co-ordinate search and rescue operations within a specified area.</p> <p>Personal locator beacon (PLB) Personal radio distress beacon for alerting and transmitting homing signals.</p> <p>Pilot-in-command The pilot responsible for the operation and safety of the aircraft during flight time.</p> <p>Rescue An operation to retrieve persons in distress, provide for their initial medical or other needs and deliver them to a place of safety.</p> <p>Rescue co-ordination centre (RCC) A unit responsible for promoting efficient organization of search and rescue services and for co-ordinating the conduct of search and rescue operations within a search and rescue region.</p> <p>Rescue sub-centre (RSC) A unit subordinate to a rescue co-ordination centre established to complement the latter according to particular provisions of the responsible authorities.</p> <p>SafetyNET Communications service provided via Inmarsat for promulgation of marine safety information, including shore-to-ship relays of distress alerts and</p>	<p>aeronave o de un buque y de las personas a bordo</p> <p>Fase de emergencia Expresión genérica que significa, según el caso, fase de incertidumbre, fase de alerta o fase de peligro.</p> <p>Fase de incertidumbre Situación en la cual existen dudas acerca de la seguridad de una aeronave o de un buque y de las personas a bordo.</p> <p>Llamada selectiva digital (DSC) Técnica que utiliza códigos digitales y que permite a una estación radioeléctrica establecer contacto con otra estación o un grupo de estaciones y transmitirles información.</p> <p>Medio de búsqueda y salvamento Todo recurso móvil, incluidas las unidades designadas para la búsqueda y el salvamento, que se utiliza en las operaciones de búsqueda y salvamento</p> <p>NAVAREA Cada una de las 16 áreas en que la OMI ha dividido los océanos del mundo para difundir radio avisos náuticos y meteorológicos</p> <p>Nave Todo vehículo aéreo, marítimo o sumergible de cualquier tipo y tamaño.</p> <p>NAVTEX Sistema de telegrafía utilizado para transmitir a los buques información sobre seguridad marítima, radio avisos náuticos y meteorológicos e información urgente.</p> <p>Objeto de la búsqueda Buque, aeronave u otra nave que ha desaparecido o se encuentra en peligro, o superviviente u objetos de la búsqueda conexos o evidencia en que se basa la realización de la búsqueda.</p> <p>Organización Internacional de telecomunicaciones móviles por satélite (Inmarsat) Sistema de satélites geoestacionarios para los servicios mundiales de comunicaciones móviles que presta apoyo al sistema mundial de socorro y seguridad marítimos y a otros sistemas de comunicaciones de emergencia.</p> <p>Piloto al mando Piloto responsable de la operación y seguridad de la aeronave durante el tiempo de vuelo.</p> <p>Plan de búsqueda y salvamento Expresión general utilizada para describir los documentos existentes a todos los niveles de las estructuras nacionales e internacionales de búsqueda y salvamento, en los que se detallan los objetivos, las medidas y los procedimientos que apoyan la</p>

English	Spanish
<p>communications for search and rescue co-ordination.</p> <p>Search An operation, normally co-ordinated by a RCC or RSC, using available personnel and facilities to locate persons in distress.</p> <p>Search and rescue co-ordinating communications Communications necessary for the co-ordination of facilities participating in a search and rescue operation.</p> <p>Search and rescue co-ordinator (SC) One or more persons or agencies within an Administration with overall responsibility for establishing and providing SAR services and ensuring that planning for those services is properly co-ordinated.</p> <p>Search and rescue data provider (SDP) A source for a rescue co-ordination centre to contact to obtain data to support search and rescue operations, including emergency information from communications equipment registration databases, ship reporting systems and environmental data systems (e.g., weather, or sea current).</p> <p>Search and rescue facility Any mobile resource, including designated search and rescue units, used to conduct search and rescue operations.</p> <p>Search and rescue mission co-ordinator (SMC) The official temporarily assigned to co-ordinate response to an actual or apparent distress situation.</p> <p>Search and rescue plan A general term used to describe documents which exist at all levels of the national and international search and rescue structure to describe goals, arrangements and procedures which support the provision of search and rescue services.</p> <p>Search and rescue point of contact (SPOC) Rescue co-ordination centres and other established and recognized national points of contact which can accept responsibility to receive Cospas-Sarsat alert data to enable the rescue of persons in distress.</p> <p>Search and rescue region (SRR) An area of defined dimensions, associated with a rescue co-ordination centre, within which search and rescue services are provided.</p> <p>Search and rescue service The performance of distress monitoring, communication, co-ordination and search and rescue functions, including provision of medical advice, initial medical assistance, or medical</p>	<p>prestación de servicios de búsqueda y salvamento.</p> <p>Proveedor de datos de búsqueda y salvamento (SDP) Fuente con la que un RCC establece contacto para obtener datos en apoyo de las operaciones de búsqueda y salvamento, incluida información de emergencia procedente de bases de datos de registro del equipo de comunicaciones, sistemas de notificación de buques y sistemas de datos ambientales (p. Ej. Meteorológicos, corrientes marinas o Base de datos ELT en 406 MHz).</p> <p>Puesto de alerta Todo medio destinado a servir como puesto intermedio entre una persona que notifica un incidente y un centro coordinador de salvamento o subcentro.</p> <p>Punto de contacto SAR (SPOC) Centros Coordinadores de salvamento u otros puntos de contacto nacionales establecidos y reconocidos que pueden asumir la responsabilidad de recibir los datos del alerta de Cospas-Sarsat con el fin de salvar a personas en peligro.</p> <p>Radiobaliza de localización de personas (PLB) Radiobaliza personal de socorro que emite alertas y transmite señales para la radio recalada.</p> <p>Radiobaliza de localización de siniestros (EPIRB) Dispositivo que normalmente se lleva a bordo de un buque y que transmite una señal para alertar a las autoridades de búsqueda y salvamento y permitir a las unidades de salvamento localizar el lugar del siniestro.</p> <p>Radiogoniometría (DF) Radio recalada sobre señales para determinar una posición..</p> <p>Región de búsqueda y salvamento (SRR) Área de dimensiones definidas asociada a un RCC en la que prestan servicios de búsqueda y salvamento.</p> <p>SafetyNET Servicio de comunicaciones prestado a través de INMARSAT para difundir información sobre seguridad marítima, incluidas la retransmisión costera-buque de los alertas de socorro y las comunicaciones para la coordinación de las operaciones de búsqueda y salvamento.</p> <p>Salvamento Operación realizada para recuperar a personas en peligro, prestarles auxilio médico iniciales o de otro</p>

English	Spanish
<p>evacuation, through the use of public and private resources including co-operating aircraft, vessels and other craft and installations.</p> <p>Search and rescue sub-region (SRS) A specified area within a search and rescue region associated with a rescue sub-centre.</p> <p>Search and rescue unit (SRU) A unit composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.</p> <p>Search object A ship, aircraft, or other craft missing or in distress or survivors or related search objects or evidence for which a search is being conducted.</p> <p>Uncertainty phase A situation wherein doubt exists as to the safety of an aircraft or a marine vessel, and of the persons on board.</p> <p>Unnecessary SAR alert (UNSAR) A message sent by an RCC to the appropriate authorities as a follow-up when the SAR system is unnecessarily activated by a false alert.</p> <p>Vessel A maritime craft.</p>	<p>tipo y transportarlas a un lugar seguro.</p> <p>Servicio de búsqueda y salvamento Desempeño de las funciones de supervisión, comunicación, coordinación y búsqueda y salvamento en una situación de peligro, incluida la provisión de asesoramiento médico, asistencia médica inicial o evacuación médica, mediante la utilización de recursos públicos y privados, incluidas aeronaves, buques y otras embarcaciones e instalaciones que colaboren en las operaciones.</p> <p>Sistema Cospas-Sarsat Sistema satelitario proyectado para detectar balizas de socorro que transmiten en las frecuencias de 121,5 MHz o 40 MHz.</p> <p>Sistema mundial de determinación de posición (GPS) Sistema satelitario específico utilizado con equipo móvil para determinar la posición exacta de dicho equipo.</p> <p>Sistema mundial de determinación de socorro y seguridad marítimos (GMDSS) Servicio mundial de comunicaciones basado en sistemas automáticos, tanto por satélite como terrestres, utilizado para emitir alertas de socorro y difundir información sobre seguridad marítima a los navegantes.</p> <p>Subcentro de salvamento (RSC) Dependencia subordinada a un centro coordinador de salvamento, establecida para complementar la función de este último según disposiciones especiales de las autoridades responsables.</p> <p>Sub-región de búsqueda y salvamento (SRS) Área específica de una región de búsqueda y salvamento asociada a un Subcentro de salvamento.</p> <p>Terminal local de usuario (LUT) Estación terrena receptora que recibe las señales de las balizas retransmitidas por los satélites de Cospas-Sarsat, las somete a un tratamiento para determinar la posición de las balizas y las vuelve a transmitir.</p> <p>Transmisor de localización de siniestros (ELT) Radiobaliza aeronáutica de socorro que emite un alerta y transmite una señal para la radio recalada.</p> <p>Unidad de búsqueda y salvamento (SRU) Unidad compuesta por personal capacitado y dotada de equipo adecuado para ejecutar con rapidez operaciones de búsqueda y salvamento.</p>

NATIONAL SAR PLAN

The text herein is only for illustration purposes. The States/service providers may instead reflect in this paragraph their own national organisations and arrangements for approval of the plan.

Introduction

ICAO Annexes 11 and 12 explain the purpose of air traffic (ATS) and search and rescue services (SAR), as well as their functions, but neither their purpose nor their functions may be properly implemented unless there is an organisation allowing for the management of these services and the methods needed to achieve the objective desired for each of the aforementioned specialties have been determined.

Since the safety of civil aviation constitutes the desired objective of every Administration, management of ATS and/or SAR services (as applicable) has to be conceived bearing in mind that the safe and efficient use of airspace is its primary objective, to which end it must have available a management and monitoring mechanism in charge of the general policy, the planning, the staff and the budget required to meet the operational needs of the service under its control. This managerial level must rank high enough in the state hierarchy so as to be assigned an equitable percentage of all the available economic resources and, referring specifically to SAR, that the importance of the role played by this service as regards the determination of priorities and the general policies of the national civil aeronautics administration, be recognised.

It will be up to the agency responsible for directing the SAR to manage the resources assigned to the service so that, when used, they can be efficiently and rapidly organised and coordinated during search, or rescue or both kinds of operations. This, obviously, requires that the managerial and monitoring levels be manned by highly-experienced officials capable of carrying out an advance and careful planning for the establishment of a SAR organisation endowed with a national SAR plan, an operations plan for each Search and Rescue Coordination Centre (RCC) and the necessary means to implement such plans.

SAR operations may adopt different forms depending on the magnitude or complexity of the situation at hand and the capacity and specialisation of the teams required. ICAO Annex 12 sets the guidelines for the contracting States to take the necessary steps to establish, and to provide, a 24-hour SAR service within their territories. Furthermore, it states that high seas or undetermined sovereignty areas shall be fixed on the basis of regional agreements, it being understood that the services shall be established and shall be provided in keeping with the provisions of the cited Annex, an assistance that shall be rendered irrespective of the aircraft's or survivor's nationalities.

In view of the above, the Third Caribbean/South American Regional Air Navigation (CAR/SAM/3 RAN) Meeting produced Recommendation 6/2 – Search and rescue facilities, indicating that the list of search and rescue facilities contained in Table SAR-1 of Part VII – Search and rescue, of the ANP Facilities and Services Document (FASID) become the plan for SAR facilities corresponding to the CAR/SAM Regions and that the States of both regions must set up or maintain the RCCs listed in such table, guaranteeing the availability of services and facilities 24 hours a day.

Relationship between the SAR service and the Air Navigation Plan

In keeping with Article 28 of the Convention, each contracting State is responsible for providing in its territory the installations and services included in the ICAO air navigation plans (ANP).

These plans include recommendations which the governments may follow in their national programmes for air navigation facilities and services, with the guarantee that if both are provided in keeping with the ANP corresponding to their ICAO region they, together with the other States of that same region, will form a general network which shall be adequate for a long time to come. The ANP also includes any special procedures deemed to be necessary to complement the worldwide procedures included in the Annexes to the Chicago Convention and in the procedures for air navigation services (PANS).

In this same sense, it should be noted that the CAR/SAM/3 RAN meeting, due to the fact that the States should avoid differences between national aeronautical and maritime SAR plans and that the SARs set up within the framework of the International Maritime Organization (IMO) are not always consistent with those of ICAO, agreed that a close contact should be kept between those responsible for managing the aeronautical SAR with their peers of the maritime SAR, for purposes of maximising compatibility between aeronautical and maritime SAR plans to such a point that the possibility of setting up joint aeronautical and maritime rescue coordination centres, or similar arrangements, could be considered. Based on this, it drafted Recommendation 6/3 – Coordination with maritime SAR authorities and IMO.

Furthermore, CAR/SAM/3 RAN meeting acknowledged the invaluable contribution which the use of satellite technology through the COSPAS/SARSAT alert and location system represents for SAR services, but that nothing is gained by the States' having such support if they do not incorporate into national legislations clear-cut specific guidelines aimed at the installation and mandatory use in the CAR/SAM Regions of automatic emergency locator transmitters (ELT) operating in the 406 MHz radio-electric frequency and in 121,5 MHz for homing, in keeping with Annex 6, Parts I, II and III (Recommendation 6/6 – ELT in 406 MHz obligatorily on board).

Concurrently with mandatory use, this equipment must be operated jointly with associated data bases to decode emergency messages and to obtain the corresponding information in support of SAR. Consequently, each State in the CAR/SAM Regions must establish a SAR data provider (SDP) so that the RCCs may promptly obtain data when needed (CAR-SAM/3 RAN, Recommendation 6/5 – Search and rescue data provider).

Finally, Recommendation 6/4 – Satellite search and rescue, requires that CAR/SAM States set up a national-level ELT registry and that they supply ICAO with a SAR point of contact (SPOC) which must be included in Table SAR 1 of Volume II (FASID) of the ANP.

Government Responsibilities

A government's responsibilities with respect to civil aviation are considerable and complex, and are not reduced as a consequence of the deficiencies of the mechanism available for it to exercise them.

The civil aviation authority, even when it delegates some elements of the implementation of functions and services, should always be capable of exercising the responsibility for their planning, as well as for assuring that the guidelines, standards and methods recommended by the International Civil Aviation Convention, are followed.

As regards the search and rescue service, it would be pertinent to highlight the importance, which cannot be delegated by the civil aviation authority, of carrying out the planning of the services required by the national and international civil aviation of each State, as well as of the means and human resources required to provide them.

It is for this reason that the drafting and approval of the National SAR Plan based on the CAR/SAM ANP requirements plus those added by domestic aviation, with all implementation details, constitutes for the CAR/SAM States an extremely valuable permanent consultation tool for planning, budgetary allocation and operation purposes.

The basic responsibility in the SAR area is detailed in Article 25 of the Chicago Convention, which does not only indicate the responsibility of providing assistance to aircraft in distress within each State's national territory but also that of allowing, subject to control by its own authorities, entry of some other State's equipment and personnel if this were necessary to find an aircraft in distress or to rescue its occupants.

The general specifications of the SAR service are detailed in Annex 12, while the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual and the Air Navigation Plan provide the additional details and the necessary means and coordination requirements with other designated or cooperating agencies, to achieve a SAR System made up by functional components and stages.

Integration of SAR into State structure and administration

The way in which a SAR service can be managed depends on the basic civil aviation structure adopted by each State.

Even though the responsibility for providing alert services (being one of the ATS services) devolves on the ATS units, coordination of search and rescue operations is assigned to the SAR service, which reports to the civil aviation administration and, from the exclusively operational point of view, may be delegated to other government agencies having the necessary means and which, in general, are in the charge of the nation's armed forces.

If this were the case, it will be necessary to preserve the responsibility, which cannot be delegated by the civil aviation authorities, for carrying out the planning of the SAR service, it having been deemed convenient that the General Civil Aviation Bureau (or the agency appointed by the State to be responsible for the administration of civil aviation) set up an administrative and regulatory unit which may consist of a SAR Department or of a SAR Coordination Committee working directly with the governmental operational implementation unit which has been delegated the SAR service.

This unit (SAR Coordination Department or Committee) shall be in charge of coordinating the characteristics of the SAR service to be provided in keeping with ICAO standards and procedures, and of preparing the texts and their corresponding updates, as well as the amendments to Aeronautical Information Publication (AIP) Part GEN – Search and rescue service, and to the part dealing with the SAR service in the National Air Navigation Plan (NANP), in view of the fact that both responsibilities cannot be delegated by the civil aviation authority.

Legal framework and legal aspects

Every State should have laws and provisions which establish the legal basis for setting up a SAR organisation, its resources, policies and procedures.

Before enacting the national SAR Plan and the operational documentation to be applied by SAR units, the director of the SAR service should obtain legal advice regarding the way in which national and international laws (directly or indirectly) affect SAR policies and procedures.

International law provides both for saving lives as well as for sovereignty issues. Neighbouring States should seek practical ways to balance these objectives in situations where the entry of foreign SAR elements into waters, airspace or territories might be necessary and appropriate.

The staff responsible for providing the SAR service must be aware of the legal aspects related to SAR operations for purposes of avoiding unfavourable situations and/or claims for damages to the national government.

Similarly as with any other activity, there are numerous legal aspects affecting search and rescue activities, which makes it necessary to supply SAR operations staff with certain general information on those legal questions which, experience has shown, are of importance before, during and after a SAR incident.

In general, the legal aspects to be considered are grouped into:

- crossing international borders and entering some other State's territory;
- entering private property;
- removing human remains, and
- custody and marking of an air accident wreckage.

In those SAR cases which demand the use of rescue units in or over some other State's territory, there are international law and protocol issues which affect two principles which might be in conflict, namely:

- the States' sovereign right to control and regulate entry and air operations within their jurisdictional areas, and
- the need to mitigate danger in the most efficient and timely fashion.

One of the purposes of International Agreements is that of solving any conflicts between these principles, to which must be added the unilateral adoption by each State of national policies with these same objectives.

It is, therefore, necessary to establish previously-agreed principles for direct relationships among the SAR agencies of the affected States.

Annex 12 – Search and Rescue – to the ICAO Convention provides the international framework. However, given the fact that legal issues pertinent to another state are involved, it is obvious that the SAR personnel, and especially those participating in the planning and implementation of search and rescue operations, need to be aware of the different requirements, depending on which State, which could affect the SAR operation.

The SAR personnel must be familiar with these and other references so that they can take prompt and appropriate action when it is felt that elements will be needed to participate in SAR operations in other countries, or *vice versa*.

Another legal aspect to be kept in mind by the national SAR service administration is that of unauthorised entry into private property, which constitutes an infringement of property rights. Hence, and as a general practice, during the course of the SAR mission, the RCC/RSC personnel in charge, as well as the rescue units, must try to obtain the private property's owner or occupant's permission before entering into it.

Normally, and to this regard, laws consider that the only thing which excuses the above is that any infringement of it is justified in view of the need to enter so as to rescue human lives, or to have elements or personnel cross the property to help an aircraft in distress.

The careful preservation of human remains has important implications for the investigation of air accidents, for legal requirements and for humanitarian purposes; the medical examination of the bodies can lead to important conclusions by accident investigators or for legal investigation purposes.

There is usually national legislation which demands that the cause of death be determined; this certification is of major importance for the solution of property and insurance issues.

In all cases, and before the bodies are removed, it is important to have police authorities or the jurisdiction's security force step in, since they shall be the ones charged with seeing to it that all legal formalities having to do with this event are complied with.

In all cases, the SAR service personnel charged with delivering the remains should get a written receipt from the person or institution accepting custody of them.

Personnel participating in a SAR mission requiring the transport of human remains across international borders must observe the local and national laws of the State involved.

Furthermore, the SAR authority must make sure that the SAR personnel have available the standards or regulations which will guide them in adopting the necessary measures so that the wreckage of the aircraft, a basic element to determine the cause of the accident, not be removed before the investigators, the only persons authorised to release the wreckage, step in.

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CHAPTER 1

Note 1: The guidelines and comments to prepare the final text are in italics

Note 2: Following the format presented, each State can adapt the proposed text to its own basic administrative structure.

Note 3: For purposes of having all the required information in the most summarised and complete manner possible, it would be convenient for the text of the Plan to be complemented by graphs, maps, etc.

1 Organisation of the National SAR System

1.1 The agency charged with facilitating the search and rescue service in the national territory and in its jurisdictional waters, as well as in any other, permanently or temporarily, internationally-agreed area, is ...*(name of the responsible agency)*, which, through its Implementation Agency known as the search and rescue Coordination Centre (RCC) and search and rescue Coordination Sub-centre (RSC), plans, coordinates and directs the actions to be carried out by the different participating agencies *(or supporting media)* which implement or cooperate in the tasks.

1.2 The SAR's area of responsibility has been identified as the ...*(name of the SAR Region or Regions)* search and rescue Region (SRR).

1.3 The national laws, decrees and provisions and international agreements which make up the legal basis for ... *(name of the agency)* being in charge of the search and rescue service administration at the national level and for it to have available its resources, policies and procedures, are the following:

(cite, identifying national laws, decrees and regulations and international agreements)

1.4 The basic functions of the National SAR System are intended for *(name of the agency nationally in charge of the SAR service administration)* to perform them as efficiently as possible using the means and personnel committed in the National SAR Plan.

1.5 The basic functions of the National SAR System are the following:

(cite all those assigned to it in keeping with national legislation)

1.6 The agencies participating in the national Plan and which, through the corresponding Letters of SAR Operational Agreement, have committed their support, are the following:

(cite all the agencies which have committed their participation in the National SAR Plan by means of a Letter of Agreement signed with the agency named to be responsible for the national SAR. For example, police, public health agencies, fire departments, NGOs, etc.)

Guidance texts: IAMSAR Manual, Volume I, Chapter I, para. 1.1 through 1.8.1 inclusive; IAMSAR Manual, Volume I, Chapter 5, para. 5.1 through 5.2.10 inclusive; para. 5.4.5 through 5.6.14 inclusive; IAMSAR Manual, Volume I, Chapter 6 – Service Improvement, para. 6.1 through 6.6 inclusive; IAMSAR Manual, Volume I, Appendix A – Sample legislation to set up a SAR organisation and Appendix H – National self-evaluation of search and rescue services (SAR). Report on the CAR/SAM/3 RAN Meeting, Recommendation 6/12 – Basic provisions for search and rescue services.

CHAPTER 2

2 Area of Responsibility

2.1 Area of responsibility of the SAR, within which search and rescue services are provided:

XXX SRR:

[describe here in detail the boundaries established for the search and rescue region (SRR) (or for each region), including a chart showing the SRR in an Appendix to the Chapter].

(In case one or more SAR Sub-regions have been established, the corresponding boundaries must be indicated and illustrated in a chart in an Appendix to the Chapter)

Responsible agency : XXX RCC

(In case more than one RCC has been established, mention each of them identifying the search and rescue region under their jurisdiction).

(In case a Sub-region has been established , the RSC in charge must also be indicated).

Available air facilities:

Available ground facilities:

Available maritime facilities:

(Describe in detail the available air, ground and maritime facilities, their respective home bases and the estimated time by which the corresponding RCC will have them available.)

Guidance texts: Annex 12, Chap. 2 - Organisation, para. 2.1, 2.2, 2.3, 2.4 and IAMSAR Manual, Volume I, Chap. 2, para. 2.3.15 – Search and rescue regions; IAMSAR Manual, Volume I, Appendix C – Sources of SAR assistance; CAR/SAM Basic ANP, Part I, para. 5 Search and Rescue.

CHAPTER 3

3 Implementation agencies

3.1 SAR coordination committee:

Listing of agencies which make it up.

Should such Committee not exist, the agency responsible for acting as national SAR authority and the organisations which by means of a Letter of Agreement have committed to participate in the National SAR Plan as implementation agencies, must be indicated.

Example:

The SAR Coordination Committee is made up of members appointed by the following agencies:

- a. A representative and an alternate from the Civil Aeronautics Bureau,*
- b. A representative and an alternate from the Air Force,*
- c. A representative and an alternate from the Navy,*
- d. A representative and an alternate from the Army,*
- e. A representative and an alternate from the National Police Service,*
- f. A representative and an alternate from the National Civil Defense System,*
- g. A representative and an alternate from the National Fire Department,*
- h. A representative and an alternate from the National Red Cross,*
- i. A representative and an alternate from the Airlines Association,*
- j. A representative and an alternate from the National Aeroclub Federation,*
- k. A representative and an alternate from the National Hospital System,*
- l. A representative and an alternate from the Coastal Radio Stations Enterprise,*
- m. A representative and an alternate from the National Parachuting Federation,*
- n. A representative and an alternate from the National Mountain Climbers Federation,*
- o. A representative and an alternate from the National Automobile Club.*

3.2 National SAR Plan implementation agencies:

Should list all the agencies which will be responsible for integrating efforts and for coordinating SAR operations within the national sphere and, if any, those support organisations which, through a Letter of Agreement, have committed themselves to being at the disposal of one of the implementation agencies during a SAR operation.

Example:

Civil Aeronautics Bureau

- *XXXX Search and rescue Coordination Centre (XXXX RCC)*

Supporting organisations:

1. CCCC
2. VVVV
3. NNNN

3.3 Facilities, personnel and equipment committed

A general description of all the means, personnel and equipment which, by means of a Letter of Agreement, each organisation participating in the National Plan has committed to place at the disposal of the SAR (implementation as well as supporting organisations).

Note: The information of this Chapter may be detailed in an Appendix to it.

Guidance texts: Appendix A - Sample of a SAR Coordination Committee mandate, Appendix B to the present document - Sample assistance agreement among national organisations supplying facilities and services to handle SAR cases; Annex 12, Chap.2 – Organisation, para. 2.5, 2.6; IAMSAR Manual, Volume I, Chap. 2, para. 2.7.1 through 2.7.5, Chap. 4, para. 4.4.7 through 4.5.22 inclusive; Chap. 5, para. 5.4.1 through para 5.4.4 y Appendix C – Sources of SAR assistance; CAR/SAM Basic ANP, Part I, para. 5 Search and Rescue and Part VII Search and rescue services; CAR/SAM FASID, Part VII SAR and Table SAR 1; Report of the CAR/SAM/3 RAN meeting, Recommendation 6/8 – Coordination with military and other authorities; Recommendation 6/12 – Basic provisions for search and rescue services.

CHAPTER 4

4 SAR Functions and responsibilities

4.1 SAR functions and responsibilities taken on by each of the organisations participating in the National SAR Plan:

A full and detailed description of each of them shall be made, identifying the responsible organisation. Those corresponding to the SAR Coordination Committee should be made first. In case it has not been set up, those corresponding to the organisation responsible for the SAR within the national sphere shall be described next. These functions and responsibilities emerge from what has been agreed upon in the Letter of Agreement signed between the SAR's Directorate (SAR Coordination Committee or Agency appointed by the State) and the reference organisation/institution.

Note: The information of this Chapter may be detailed in an Appendix to it.

Example:

The Search and Rescue Coordination Committee shall have the following objectives:

- *To provide a national forum to coordinate administrative issues and SAR operations.*
- *To serve as a contact with other national (regional) and international organisations engaged in providing emergency services.*
- *To promote the efficient use of existing SAR resources.*
- *To serve as a forum for cooperation to exchange information and to define positions and policies of common interest to the different parties to the Plan.*
- *To promote close collaboration and cooperation between civil and military authorities and other organisations so as to provide SAR services in an efficient way.*
- *To improve cooperation among aeronautical, maritime and ground SAR communities so as to provide SAR services in an efficient way.*
- *To determine other ways of improving the efficacy and general efficiency of (State) SAR services and, to the extent possible, to standardise SAR procedures and equipment.*
- *To set up SAR operational agreements with national agencies whose facilities and/or personnel are considered as necessary contributors to the National SAR Plan.*

- *To enact, coordinate with the corresponding agencies and supervise the measures needed to attract, and to provide training, qualifications and experience to the personnel of SAR units as well as to those belonging to agencies contributing to the National SAR Plan.*
- *Through the Civil Aeronautics Bureau, to enter into Mutual Assistance Arrangements and Agreements for SAR missions with neighbouring States.*

Guidance texts: Appendix A- Sample mandate of a SAR Coordination Committee, Appendix B to the present document - Sample Assistance Agreement among national agencies providing facilities and services to handle SAR cases; Annex 12, Chapter 2 -Organisation, Chapter 4, para.4.4; IAMSAR Manual, Volume I, Chapter 1, para. 1.4 – Basic functions of the system and 1.5 – System management and support; CAR/SAM Basic ANP, Part VII, para. 3.3.

CHAPTER 5

5 SAR personnel training programme

SAR personnel training programme, rating standards and skill certification procedures.

5.1 SAR training programme:

General description of the programme to attract and train SAR personnel skilled in each area, instructions for scheduling exercises (in the laboratory as well as using the facilities and personnel), including a description of the different SAR procedures, techniques and equipment to be used during such exercises. This information shall serve as a reference by those responsible for preparing and providing training to the SAR personnel assigned to the SAR units as well as to the personnel from the organisations involved in the National SAR Plan.

5.2 SAR Ratings – Certifications:

Definition of the standards to rate the performance and certify the skills of the SAR staff from each SAR area or function as an official recognition that a person has satisfactorily demonstrated his/her skills as well as the mental and physical competence for SAR work.

A listing of the agencies authorised to issue them should also be included.

Guidance Texts: Annex 12, Chapter 4, para. 4.3.1, 4.3.2 and 4.4 inclusive; IAMSAR Manual, Volume I, Chapter 3 Training, rating, granting of title or certification, and exercises; Report of the CAR/SAM/3 RAN meeting, Recommendation 6/9 – Planning of human resources and training of the personnel of rescue coordination centre and of rescue sub-centres; Recommendation 6/10 – Preparation of search and rescue (SAR) training material; CAR/SAM/2 RAN, Recommendation 7/12.

CHAPTER 6

6 Agreements with support organizations

6.1 This Chapter incorporates complete copies of each of the operational agreements entered into by ...*(name of the agency responsible for the national SAR)* and the authorities of agencies or organisations participating with resources, services and/or personnel and which will not be under the direct control of the SAR administration, but whose participation during search, rescue, or a combination of both, operations, is considered indispensable.

Incorporate a copy of each of the agreements entered into with the authorities participating with resources and services which will not be under the direct control of the SAR administration, but whose participation in the National SAR Plan is considered necessary.

To give examples: the services provided by an overland fuel transportation enterprise in a given area to ensure the normal re-supply of SAR units, or those provided by a non-governmental agency by supplying the equipment and personnel needed to evacuate survivors.

Guidance texts: Annex 12, Chapter 2, para. 2.5.1 through 2.5.2 inclusive; CAR/SAM Basic ANP, Part VII, para. 3.3, 3.4 and 3.5 inclusive; IAMSAR Manual, Volume I, Appendix I – Search and rescue agreements.-

CHAPTER 7

7 International agreements

7.1 This Chapter incorporates the complete copies of each of the operational agreements entered into by ...*(name of the organisation responsible for the national SAR)* with the authorities of the adjacent Coordination Centres (RCC) of neighbouring States.

Incorporate a copy of each of the agreements entered into with the RCC authorities of neighbouring States.

Guidance texts: Appendices C, D, E (as applicable) to the present document, Annex 12, Chapter 3, para. 3.1.1 through 3.1.9 inclusive. IAMSAR Manual, Volume I, Appendix I – Search and Rescue Agreements; Report of the CAR/SAM/3 RAN meeting, Recommendation 6/11 – Cooperation among States and creation of joint search and rescue facilities. Report of the CAR/SAM/3 RAN meeting, Recommendation 6/12 – Basic arrangements for search and rescue services.

Note: *The copies specified in Chapters 6 and 7 may be attached as Appendices to the National SAR Plan.*

Appendix A

Sample Terms of Reference for a SAR Coordinating Committee

The following text could be used as a guide in the development of a State SAR Co-ordinating Committee.(Doc. IAMSAR Vol. I ,Appendix J)

STATE SAR CO-ORDINATING COMMITTEE for [State]

1 BACKGROUND: The National SAR Plan for [State] provides for establishment of SAR co-ordinating committee on a national level.

2 OBJECTIVES: The establishment of the [State] SAR coordinating Committee is intended to accomplish the following:

- a) Provide a standing national forum for co-ordination of administrative and operational SAR matters;
- b) Provide an interface with other national, [regional,] and international organizations involved with emergency services;
- c) Oversee the SAR Plan for [State], and develop and maintain a [national] SAR Manual;
- d) Promote effective use of all available facilities for SAR;
- e) Serve as a co-operative forum to exchange information and develop positions and policies of interest to more than one Party to the National Plan;
- f) Promote close co-operation and co-ordination between civilian and military authorities and organizations for the provision of effective SAR services;
- g) Improve co-operation among aeronautical, maritime and land SAR communities for the provision of effective SAR services; and

- h) Determine other ways to enhance the overall effectiveness and efficiency of SAR services within [State] and to standardize SAR procedures and equipment where practicable.

3 MEMBERSHIP: Members will be made up of a person designated by each Party to the National SAR Plan for [State].

In addition:

- a) The Parties will each designate an alternate member; and
- b) Members will be responsible for any appropriate co-ordination with interested agencies within their respective countries and organizations.

4 PROCEDURES:

- a) General meetings of the Committee, which will held at least once per year, will be open to designated observers, advisors and visitors.
- b) Executive meetings may also be held as necessary, and working groups may be established to handle detailed work and bring proposals to the Committee.
- c) The Chairperson or any member may call a special Committee meeting when necessary.
- d) The Committee Chairperson will be [State agency] or [rotate annually among the members]. Secretariat services will normally be provided by [State agency].

AGREEMENT FOR SUPPORT: By signing the SAR Plan for [State], each Party agrees to fully support the [national/regional] Committee within its means.

APPENDIX B

SAMPLE ASSISTANCE AGREEMENT BETWEEN THE AGENCY RESPONSIBLE FOR NATIONAL SAR AND OFFICIAL OR NON-GOVERNMENTAL AGENCIES SUPPLYING FACILITIES AND SERVICES TO HANDLE SAR CASES

Note: Depending on the administrative procedures of each State, an agreement of this type, or such as the one proposed by the IAMSAR Manual, Volume I, Appendix I, could be entered into at the level of the agency responsible for expediting search and rescue services nationally.

OPERATIONAL AGREEMENT

Between the (*SAR coordination committee or agency responsible for the national SAR*) and (*official agency/non-governmental organisation*)

1. INTRODUCTION

1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by [*State*], concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, the (*official agency or non-governmental organisation*) agrees to provide assistance whenever the (*SAR Coordination Committee or agency responsible for the national SAR*) requests such assistance due to some emergency.

2. SCOPE OF THE ASSISTANCE

2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the (*name*) Search and Rescue Region (SRR) whose jurisdiction, including the respective ground and maritime areas, falls under the purview of the (*name*) Rescue Coordination Centre.

3. TERMS OF THE AGREEMENT

3.1 The (*official or non-governmental providing agency*) shall, at all times, supply the (*name*) RCC with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of *(official or non-governmental providing agency or the facility assigned by the providing agency to supply the assistance)*, the *(name)* RCC shall immediately supply information to the *(official or non-governmental providing agency)*.

4. SPECIAL PROVISIONS

4.1 The *(name)* RCC and the *(facility assigned by the providing agency)* shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by *(facility assigned by the providing agency)* shall appear as numbered Attachments to the present SAR Operational Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II – FASID, Part VII - Table SAR-1 and shall form part of the Operations Plan (Operational Guide) of the *(name)* RCC.

4.3 The *(facility assigned by the providing agency)* accepts to participate in exercises at regular intervals organised by *(SAR Coordination Committee or agency responsible for the national SAR)* and coordinated by the *(name)* RCC.

5. RELATIONSHIP BETWEEN THE *(name)* RCC AND *(facility assigned by the providing agency)*

5.1 The authorities of the *(name)* RCC and *(facility assigned by the providing agency)*, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The *(SAR Coordination Committee or the agency responsible for the national SAR)* shall be responsible for advising the other official and/or private sources forming part of *(State's)* National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed inon theday of the Month of of 20..

For *(SAR Coordination Committee or the agency responsible for the national SAR)*:

For *(official or non-governmental providing agency)*:

ATTACHMENT 1

To the SAR Letter of Operational Agreement signed between *(SAR Coordination Committee or the agency responsible for the national SAR) and (official or non-governmental providing agency)*

Note: Full text suggested for the drafting of Attachment 1 to the Agreement of Assistance between National Official or Non-Governmental Agencies providing facilities and services to handle SAR cases. The final listing must only reflect exactly the resources and/or facilities committed.

Listing of facilities and/or services that *(the providing facility)* will supply to the *(name)* RCC to handle SAR cases in the *(name)* SRR:

1. Transportation media

1.1 Airborne (fixed wings): Provide data on range of action (R/A) and search reserve hours (HB)

- ELR (extremely large range of action): (R/A) 1500NM + 2.30 (HB) *(indicate number of aircraft, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*
- VLR (very large range of action): (R/A) 1000NM + 2.30 (HB) *(indicate number of aircraft, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*
-
- LRG (large range of action): (R/A) 750NM + 2.30 (HB) *(indicate number of aircraft, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*

- MRG (medium range of action) (R/A) 400NM + 2.30 (HB) *(indicate number of aircraft, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*
- SRG (small range of action) (R/A) 150NM + ½ (HB) *(indicate number of aircraft, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*
-
- 1.2 Aircraft (amphibian): *List those air vehicles, capable of landing on water, air cushion vehicles to operate in plains, swampy areas, hovercraft, etc. (indicate number of aircraft, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*
- 1.3 Aircraft (rotary wing): Provide data on range of action (R/A) and capacity to evacuate (CE) people (P).
- 1.4 - HEL-L (maximum R/A): 100NM – CE 1 to 5 P: *(indicate number of helicopters, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*
 - HEL-M (average R/A): 100-200 – CE 6 to 15 P: *(indicate number of helicopters, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*
 - HEL-H (high R/A): + than 200NM – CE + than 15 P: *(indicate number of helicopters, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*
- 1.4 Waterborne: Provide data on range of action (R/A) and capacity to evacuate (CE) people (P).
 - RB (small R/A): coastal and/or river craft *(indicate number of craft, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*
 - RV (high R/A): seagoing ship *(indicate number of craft, hours available, acronyms, type, base of operations and estimated time before they can be available to the RCC)*
- 1.5 Overland:
 - Small hardy vehicles: *(indicate number available, license plates, data on drives, additional gear such as communications and first aid equipment, home base, and estimated time before they can be available to the RCC)*

- Medium-capacity pick-up trucks: *(indicate number available, license plates, data on drives, additional gear such as communications and first aid equipment, home base, and estimated time before they can be available to the RCC)*
- Large-capacity trucks: *(indicate number available, license plates, data on drives, additional gear such as communications, first aid and refrigeration equipment, home base, and estimated time before they can be available to the RCC)*
- Ambulances: *(indicate number available, license plates, data on first aid equipment, medical instruments, communication equipment, home base, and estimated time before they can be available to the RCC)*

1.6 Communication equipment: List the facilities which offer the possibility of being used for COM facility and service purposes:

- ATS networks, air defense and other military networks, private organisation networks;
- Ham radio clubs;
- Telephone, telex, fax, radio direction finding services;
- Coastal stations;
- Civil defense stations;
- Meteorological networks.

(indicate type of networks, operating hours, frequencies available to SAR, quantity of equipment, types of fixed, portable equipment, personnel to install, operate and provide maintenance to the equipment on site, base of operations, estimated time before they can be available to the RCC).

1.7 Medical assistance:

- Emergency medical assistance *(provide data on the location of available personnel and equipment)*

- Facilities for on site medical assistance
 - Medical evacuation (*overland; airborne*)
 - Hospitalisation (*provide data on the evaluation made as to the available resources, assistance capability by medical specialisation, availability of a blood bank, morgue capacity, estimated warning time required to get ready to receive patients*)
- 1.8 Specialised personnel: (*provide data on the availability of specialised personnel which could be placed at the disposal by the providing agency, number of people, hours/days available, areas to which they would be assigned, advance notice required from the RCC to get ready and available*)
- Rescue unit, with the necessary equipment for airborne, overland or waterborne operations; and
 - Para-SAR, Heli-SAR, submariners, divers, mountain climber (Andean, jungle) teams.
- 1.9 Stocks of crated emergency and survival equipment in suitable airports, ready to be dropped to survivors:
- *List storage areas and availability. Appoint some person in charge of prompt delivery of orders (24 hours a day).*
- 1.10 Fuel supply services for transportation resources participating in a SAR mission:
- List places and persons to be contacted, maximum quantity of liters or gallons which can be cleared per day of operations. Appoint people responsible for keeping control of supplies. Determine whether some type of form or voucher is to be used.
- 1.11 Preventive maintenance: Indicate the possibilities for:
- Airborne, overland and waterborne transportation resources;
 - Communication equipment; and
 - Other emergency equipment.
- 1.12 Other types of SAR assistance: Indicate the availability of:
- Groups of rescue volunteers specialising in mountain, jungle, desert, coastal, water zone, etc. operations;
 - Fire-fighting, aeronautical, maritime, forestry, urban, and rural services.

1.13 Cooperation: List the possibilities for support in the following specialised areas:

- Aircraft accident investigation
- AVSEC
- Radioactive prevention
- Environmental pollution, and
- Technical documentation.

- - - - -

APPENDIX C

SAMPLE OPERATIONAL AGREEMENT FOR INTER-STATE USE OF SAR FACILITIES AND SERVICES, THROUGH WHICH TWO OR MORE STATES AGREE TO COMBINE THEIR SEARCH AND RESCUE RESOURCES

***Note 1:** Depending on the administrative procedures of each State, an agreement of this type, or such as the one proposed by the IAMSAR Manual, Volume I, Appendix I, could be entered into at the level of the agency in charge of civil aviation, or at a higher level.*

OPERATIONAL AGREEMENT

concerning cooperation between the SAR services of State A and State B

***Note 2:** Should more than one RCC from each State be involved, this should be specified in the necessary form.*

1. INTRODUCTION

1.1 In keeping with the standards and recommended practices of the International Civil Aviation Organization (ICAO) concerning the provision of assistance between the SAR services of neighbouring States, the SAR services of State A and State B agree to render each other mutual assistance whenever the Rescue Coordination Center (RCC) of one State requests such assistance from the RCC of the other State.

2. SCOPE OF THE ASSISTANCE

2.1 The SAR services of State A and State B agree to render each other mutual support, combining their search and rescue resources for SAR operations along their common national boundaries and in the maritime areas of their respective SAR Regions (SRRs).

3. TERMS OF THE AGREEMENT

3.1 Each SAR Service will make sure that the other SAR Service will at all times have on hand the most recent information on the availability, conditions of use, estimated readiness time, etc., of those search and rescue facilities which form part of the resources for joint use.

3.2 Upon the occurrence of an incident within its SRR which requires, or could eventually require, the use of the facilities and services of the other SAR Service, the RCC corresponding to either of the SAR Services will immediately alert the relevant RCC of the other SAR Service.

4. SPECIAL PROVISIONS

4.1 Crossing national borders

4.1.1 To facilitate the use of the resources that are going to be jointly employed, the SAR Service of each State will do everything possible to enter into agreements with the relevant authorities so that they will allow the other State's search and rescue aircraft to fly over, or land on designated airports within their territory, without requiring any special permission to do so. Similar arrangements shall be made with respect to the use of land facilities in bordering areas, and copies of them will be exchanged between the two services for information and corresponding purposes.

4.1.2 The SAR Service of each State shall immediately notify the authorities that control entry into their territory of every occasion in which there has been a request for the search and rescue resources of the other State to operate in, or fly over, their territory (*the conditions to cross borders could be established in an Annex to this agreement*).

4.2 Implementation of SAR exercises

4.2.1 The SAR Services of State A and State B shall carry out exercises at regular intervals for purposes of training and to verify the agreed-upon procedures.

4.3 Relationship between search and rescue authorities

4.3.1 The authorities responsible for SAR Services in each State, or the persons appointed by them, are authorised, within the framework of the present agreement, to communicate directly among them so as to deal with all common search and rescue matters.

4.3.2 These authorities, and those of the major facilities and services, shall hold meetings at least once a year so as to discuss the results of the SAR operations and exercises of the previous year and, if necessary, to decide on any changes to be introduced in the plan of operations.

4.4 Cooperation with other SAR services

4.4.1 The SAR Services of State A and of State B shall advise the SAR Services of neighbouring States regarding the existence of the present agreement, and shall explore the possibility of establishing similar methods of cooperation between them.

4.5 ATS/SAR Coordination

4.5.1 The SAR service of each State shall do everything possible to set up ATS/SAR coordination agreements with the relevant authorities so that, should it become necessary, they will have available a fast and reliable alternate means to transmit SAR information in an emergency situation.

APPENDIX D

SAMPLE OPERATIONAL AGREEMENT FOR INTER-STATE USE OF SPECIFIC SAR FACILITIES AND SERVICES, THROUGH WHICH ONE STATE PROVIDES ASSISTANCE TO ANOTHER STATE

Note 1: *Depending on the administrative procedures of each State, an agreement of this type, or such as the one proposed by the IAMSAR Manual, Volume I, Appendix I, could be entered into at the level of the agency in charge of civil aviation, or at a higher level.*

OPERATIONAL AGREEMENT

concerning

Assistance in air search operations between the search and rescue services of (State A) and (State B) within their respective SAR Regions (SRR).

Note 2: *The provisions of this type of agreement can be adapted so that they can include, or deal with separately, the assistance to be provided by maritime or overland rescue units. Should more than one RCC from each State be involved, this should be specified in the necessary form.*

1. INTRODUCTION

1.1 Pursuant to the standards and recommended practices of the International Civil Aviation Organization (ICAO) concerning the provision of assistance between SAR services of neighbouring States, the SAR Service of State A binds itself to provide assistance to the SAR Service of State B, in the form specified in 2. Scope of the Assistance, immediately upon Rescue Coordination Centre (RCC) A's receiving a request for such assistance from Rescue Coordination Centre (RCC) B.

2. SCOPE OF THE ASSISTANCE

2.1 When so requested by RCC B, RCC A will place at the disposal of RCC B, circumstances permitting, one or more aircraft, as may be needed, for search and rescue operations in SRR B, involving aircraft of any nationality.

3. TERMS OF THE AGREEMENT

3.1 Upon submitting a request for help, RCC B will supply RCC A with all the information pertaining to the scope of the necessary assistance.

3.2 Upon receiving the request from RCC B, RCC A will immediately assign one or more search and rescue aircraft, as necessary, to RCC B.

3.3 During the flight, the aircraft thus assigned shall get in touch with RCC B as soon as possible reporting its status as a search and rescue aircraft, and shall request instructions.

3.4 At the end of the search and rescue mission assigned by RCC B, the aircraft shall land at the base of operations that has been determined within the SRR B, so as to supply post-flight information or, if necessary, to get ready to undertake other missions.

4. SPECIAL PROVISIONS

4.1 Overflight and landing

4.1.1 The SAR Service of State B shall make the necessary arrangements to facilitate the entry of search and rescue aircraft from State A, and to notify the authorities involved that said entry is going to take place.

4.2 Technical stops, lodging and transportation of crew members

4.2.1 The SAR Agency of State B shall cover the costs of the following services:

- a) use of the assigned aerodromes and of their facilities;
- b) fuel supply, aircraft servicing and handling operations;
- c) lodging and transportation of crew members.

4.3 Dropped supplies and survival equipment

4.3.1 The head of RCC B and the aircraft pilot shall organise the recovery of the dropped supplies and survival equipment in conditions to be used again.

4.4 Report on the operations

4.4.1 RCC B shall send RCC A two copies of the report of each search and rescue operation in which aircraft of State A have participated.

4.4.2 RCC A shall send RCC B two copies of the report prepared by the crew that participated in the operation, together with the technical comments which might be necessary.

APPENDIX E

SAMPLE AGREEMENT BETWEEN TWO STATES TO FACILITATE ENTRY OF SAR RESOURCES

Note 1: *Depending on the administrative procedures of each State, an agreement of this type, or such as the one proposed by the IAMSAR Manual, Volume I, Appendix I, could be entered into at the level of the agency in charge of civil aviation, or at a higher level.*

This agreement between State A and State B, concerning air search and rescue operations, is being implemented through an exchange of Notes.

Note 2: *This type of agreement can be adapted so that it can include, or deal with separately, the search and rescue operations carried out by maritime or overland rescue units.*

Your Excellency:

1. I'm honored to refer to the discussions held regarding the need to ensure adequate cooperation between our two Governments in search and rescue operations along our common border.
2. As a result of the conclusions arrived at during these discussions, my Government would like to propose:
 - 1) That, in the future, public aircraft from State A or from State B used in search and rescue air operations, be allowed to enter, or to leave, the territory of either country without having to go through the immigration and customs formalities usually required by our respective Governments, on condition that the Rescue Coordination Centre in charge of the search and rescue operation assume, either directly or through some other person it may delegate to, the responsibility of giving notice, either by telephone or by telegram:
 - a) To the immigration service at the point of entry closest to the area over which the search and rescue operations are about to be started, advising it of the actions to be carried out and giving details pertaining the objective of the flight, the identification markings of each aircraft, and the number of people making up the crew of each of them;
 - b) To the customs post closest to the area over which the search and rescue operations are about to be started, advising it of the actions to be carried out and giving details pertaining to the territory over which the search will take place, the possible duration of the stay of the aircraft, the identification markings of each of them, and the number of people who make up the crew of each aircraft.

- 2) That, should a public aircraft of one of the two countries land in the territory of the other in the course of search and rescue operations, the fact will be communicated, verbally or by phone, to the closest customs administrator, so that he/she may render all the assistance possible with respect to any special importation which may be needed for the search and rescue operation. This report may be made by the Rescue Coordination Centre organising the operation or by the pilots involved, whatever best contributes to the success of the operation in question.
 - 3) That any product transported from one country to the other by the aircraft in question in the course of a search and rescue operation will stay in this latter country until the operation is concluded; such products or merchandise receiving the same customs treatment normally given to imported products in that country.
3. The expression “public aircraft” as used in the present Note, identifies the aircraft from the Governments of State A and of State B, as well as any other aircraft registered in States A and B which might be placed under the operational control of a Rescue Coordination Centre in either country, for purposes of a search and rescue operation.
4. If Your Excellency’s Government is prepared to accept the above proposals, my Government would like the present Note, together with Your Excellency’s affirmative answer, constitute an agreement between both our Governments which would come into force as of the date of Your Excellency’s answer and would remain in force until expiry of a period of days as of the date in which either of the parties to the agreement notifies the other of its intention to terminate it.

I remain, Sir, your obedient servant.

(signed).....

**MODEL RESPONSE NOTE CONFIRMING THE PROVISIONS
PROPOSED IN THE NOTE FROM STATE “A”**

Your Excellency:

1. I have the honour of acknowledging receipt of your Note Number..... of..... of..... of 20..., regarding the discussions held with respect to the need for ensuring a satisfactory cooperation between our two Governments as regards search and rescue operations along our common border, which contained the following proposals:

2. *(the text of paragraph 2 of the Note from State A is copied here)*

3. *(the text of paragraph 3 of the Note from State A is copied here)*

4. In response, I have the honour of communicating to Your Excellency that my Government accepts the above proposals and agrees to consider that Your Excellency’s Note and the present response constitute an agreement between our two Governments, which will be valid up to the date in which either of the Parties to the agreement notifies the other of its desire to terminate it.

I remain, Sir, your obedient servant.

(signed).....

APPENDIX F/APÉNDICE F

BORRADOR DE MATERIAL PARA ENMIENDA TABLA SAR 1 DEL FASID DRAFT MATERIAL FOR PROPOSAL FOR AMENDMENT OF FASID TABLE SAR 1

TABLE SAR 1 — SEARCH AND RESCUE FACILITIES

EXPLANATION OF THE TABLE

Column

- 1 Name of rescue co-ordination centre (RCC) or rescue sub-centre (RSC) followed by the location of each rescue unit.
SPOC — SAR point of contact for the reception of alert messages detected by the Cospas -Sarsat* system.
- 2 Minimum requirements for other services, including parachute rescue units (PRU), mountain rescue units (MRU), mission control centres (MCC) of the Cospas -Sarsat* system and the automated mutual-assistance vessel rescue (AMVER) system.

Extra long-range (ELR) — aircraft with a radius of action of 2,780 kms (1 500 NM) or more, plus 2 ½ hours search remaining.

Very long range (VLR) — aircraft with a radius of action of more than 1850 kms (1 000 NM) plus 2 ½ hours search remaining.

Long range (LRG) — aircraft with a radius of action of 1390 kms (750 NM) plus 2 ½ hours search remaining.

Medium range (MRG) — aircraft with a radius of action of 740 kms (400 NM) plus 2 ½ hours search remaining.

Short range (SRG) — aircraft with a radius of action of 280 kms (150 NM) plus ½ hour search remaining.

Helicopter (HEL-L) — light helicopter with a radius of action for rescue purposes of up to 185 kms (100 NM) and a capacity for evacuating 1 to 5 persons.

Helicopter (HEL-M) — medium helicopter with a radius of action for rescue purposes of 185/370 kms (100/200 NM) and a capacity for evacuating 6 to 15 persons.

Helicopter (HEL-H) — heavy helicopter with a radius of action for rescue purposes of more than 370 kms (200 NM) and a capacity for evacuating more than 15 persons.

Rescue boat (RB) — short -range coastal or river craft with an approximate speed of 14 knots or higher.

Rescue vessel (RV) — seagoing craft, good manoeuvrability, long range, and relatively high speed. Patrol boats, customs and pilot launches, among others, are of particular value if assigned as high priority for search and rescue operations.

* Cospas = Space system for search of vessels in distress
Sarsat = Search and rescue satellite-aided tracking

NOTES

1. Aircraft and marine craft will be made available as required.
2. Marine craft with a greater radius of action are available whenever necessary
3. Aircraft and marine craft coverage from San Juan and Guantánamo U.S. Naval Base (Cuba).
4. Only limited service presently provided by collaboration.
5. Additional rescue units available at Cuzco HEL-L; HEL-M.
6. Additional rescue units available at Panamá RCC; David RSC and Changuinola RSC
7. Marine craft with a greater radius of action are available at Amazónico RCC; Brasilia RCC; Curitiba RCC; Recife RCC

TABLA SAR 1 — INSTALACIONES DE BÚSQUEDA Y SALVAMENTO*EXPLICACIÓN DE LA TABLA**Columna*

- 1 Nombre del centro coordinador de salvamento (RCC) o del subcentro de salvamento (RSC) y el lugar en que se encuentra cada brigada de salvamento.

SPOC -Punto de contacto SAR para la recepción de mensajes de alerta detectados por el sistema Cospas/Sarsat*.
- 2 Requisitos mínimos para otros servicios, entre otros los siguientes: brigadas paracaidistas de salvamento (PRU); brigadas alpinas (MRU);centro de control de misión (MCC) del sistema Cospas/Sarsat*; y sistema mutuo para el salvamento de buques (AMVER).

Radio de acción sumamente grande (ELR) - aeronave con un radio de acción de 2.780 kms (1500 NM) o más, más 2 ½ horas de reserva para búsqueda.

Radio de acción muy grande (VLR) - aeronave con un radio de acción de más de 1850 Kms (1000 NM) más 2 ½ horas de reserva para la búsqueda.

Gran radio de acción (LRG) - aeronave con un radio de acción de 1390 Kms. (750 NM) más 2 ½ horas de búsqueda.

Radio de acción medio (MRG) - aeronave con un radio de acción de 740 Kms (400 NM) más 2 ½ horas de búsqueda.

Pequeño radio de acción (SRG) - aeronave con un radio de acción de 280 kms (150 NM) más ½ hora de búsqueda.

Helicóptero (HEL-L) - helicópteros ligeros con un radio de acción para fines de búsqueda, de hasta 185 kms. (100 NM) y capacidad para evacuar de 1 a 5 personas.

Helicóptero (HEL-M) - helicópteros medios con un radio de acción para fines de búsqueda, de 185/370 kms. (100/200 NM) y capacidad para evacuar de 6 a15 personas.

Helicóptero (HEL-H) - helicópteros pesados con un radio de acción para fines de búsqueda superior a 370 kms. (200 NM) y capacidad para evacuar a más de 15 personas.

* Cospas -Sistema espacial para la búsqueda de naves en peligro
Sarsat -Búsqueda y salvamento por satélite

Embarcación de salvamento (RB) - embarcación costera o fluvial de corto radio de acción con una velocidad aproximada a 14 nudos o mayor.

Buque de salvamento (RV) - embarcación apta para la navegación de altura, buena maniobrabilidad, de gran radio de acción y velocidad relativamente grande. Las lanchas patrulleras, aduaneras y la de los prácticos, entre otras, son particularmente útiles si se les ha asignado alta prioridad para las operaciones de búsqueda y salvamento.

NOTAS

1. Se dispondrá de aeronaves y barcos según se requiera.
2. Se dispone de embarcaciones de mayor radio según sea necesario.
3. Aeronaves y embarcaciones estacionadas en San Juan y Guantánamo U.S. Naval Base (Cuba).
4. Actualmente sólo se presta servicio limitado por colaboración.
5. Brigada de salvamento suplementaria disponible en Cusco HEL-L; HEL-M.
6. Brigadas de Salvamento suplementarias disponibles en Panamá RCC; David RSC y Changuinola RSC.
7. Dispondrá de aeronaves y barcos disponibles en RCC Amazónica; RCC Brasilia; RCC Curitiba; RCC Recife, según ser requiera.

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

ANGUILLA (United Kingdom)

SAN JUAN RSC

Anguilla RB

RESISTENCIA RCC

Resistencia MRG RB PRU

ANTIGUA AND BARBUDAPIARCO RCC
(Trinidad and Tobago)

SRG

HEL-H

Antigua RB

ARUBA (NETHERLANDS)

CURACAO RCC

Aruba RB

ARGENTINA

COMODORO RIVADAVIA RCC

Base Marambio ELR

MRG PRU

HEL-H

Comodoro Rivadavia VLR RV PRU

HEL-H RB MRU

VLR RV

Río Gallegos SRG RB

CORDOBA RCC

Córdoba MRG PRU

SRG

Salta SRG MRU

Ezeiza RCC (SPOC)

Buenos Aires ELR RV PRU

VLR RB

HEL-H

San Carlos de Bariloche SRG RB MRU

HEL-H

MENDOZA RCC

Mendoza MRG MRU

HEL-H

BAHAMAS

MIAMI RCC (1)

Nassau

BARBADOSPIARCO RCC
(Trinidad and Tobago)

Barbados

Bridgetown SRG RB

BELIZECENTRAL AMERICAN RCC (SPOC)
(Tegucigalpa, Honduras – COCESNA)

Belize SRG RB

HEL-L

BOLIVIA

LA PAZ RCC (SPOC)

La Paz MRG

Santa Cruz HEL-M

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

BRAZIL

AMAZONICO RCC

Belém MRG RV
HEL-L RB
Manaus HEL-L

ATLÁNTICO RCC (7)

BRASILIA RCC (SPOC) MCC

Rio de Janeiro ELR RV PRU
VLR RB
MRG
HEL-H
HEL-L

CURITIBA RCC

Campo Grande MRG
HEL-M
HEL-L
Florianópolis MRG RV
Río Grande RB
Santa María HEL-L
Santos HEL-L

RECIFE RCC

Natal RV
RB
Recife HEL-L
Salvador MRG

CAYMAN ISLANDS (UNITED KINGDOM)

KINGSTON RCC

CAYMAN ISLANDS RSC

GEORGE TOWN,
GRAND CAYMAN SRG RV

CHILE

IQUIQUE RCC

Iquique SRG RV
ELR RB
HEL-L
Antofagasta SRG RV
ELR RB
HEL-M

PUERTO MONTT RCC

Puerto Montt SRG RV
ELR RB
HEL-M
Punta Arenas RCC SRG RV
ELR RB
HEL-M
Tte. Marsh SRG RB
ELR
HEL-M
HEL-H

RCC and Rescue units	Required rescue facilities
RCC et équipes de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

RCC and Rescue units	Required rescue facilities
RCC et équipes de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

Guanacaste

RB

SANTIAGO RCC (SPOC)

Santiago SRG RV
 ELR RB
 HEL-M
 HEL-M

Isla de Pascua RCC SRG RV
 ELR RB

COLOMBIA**BOGOTA RCC (SPOC)**

Bogotá MRG HEL-M
 Medellín MRG HEL-M
 Cali SRG
 Cúcuta SRG
 Villavicencio SRG
 Leticia SRG

BARRANQUILLA RCC

Barranquilla SRG RB
 San Andrés SRG RB

COSTA RICA**CENTRAL AMERICAN RCC (SPOC)**
(Tegucigalpa, Honduras – COCESNA)

San José RSC ~~MRG~~ SRG
 HEL-L

Puntarenas RV
 Puerto Limón RV

CUBA

PLAYA BARACOA HEL-H

HABANA RCC (2) (SPOC)

Holguín MRG RV

HEL-H

Santa Clara MRG RB

HEL-H

DOMINICA**PIARCO RCC**
(Trinidad and Tobago)

Fort-de-France RSC

POINTE-A-PITRE RSC

Dominica RB

DOMINICAN REPUBLIC**SANTO DOMINGO RCC**

Santo Domingo SRG RV

ECUADOR**GUAYAQUIL RCC (SPOC)**

Guayaquil LRG RV

HEL-M RB

HEL-H

Quito LRG

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

HEL-M

MRU

Caribbean Sea

RV

Pacific Ocean

RV

EL SALVADORCENTRAL AMERICAN RCC (SPOC)
(Tegucigalpa, Honduras – COCESNA)

San Salvador RSC SRG RB

FRENCH ANTILLESPIARCO RCC
(Trinidad and Tobago)

Fort-de-France RSC MRG RV

HEL-L

Pointe-a-Pitre RSC MRG RV

HEL-L

FRENCH GUIANA

CAYENNE RCC

Cayenne MRG

HEL-L RB

Saint-Laurent du Maroni RB

GRENADAPIARCO RCC
(Trinidad and Tobago)

Pointe Salines RB

GUATEMALACENTRAL AMERICAN RCC (SPOC)
(Tegucigalpa, Honduras – COCESNA)

Guatemala RSC MRG

HEL-M

GUYANA

GEORGETOWN RCC

Georgetown SRG RB

HEL-L

HAITI

PORT-AU-PRINCE RCC

Port-au-Prince SRG RB

HEL-L

HONDURASCENTRAL AMERICAN RCC (SPOC)
(Tegucigalpa, Honduras – COCESNA)

Tegucigalpa RSC MRG

HEL-M

LRG

Caribbean Sea RV

Pacific Ocean RV

JAMAICA

KINGSTON RCC (3)

Kingston SRG RV

HEL-L

Montego Bay RB

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

MÉXICO**MÉXICO RCC (4) (SPOC)**

México	MRG
Guadalajara	MRG
Mazatlán	RV
Ensenada	MRG RV
La Paz	MRG
Cozumel	MRG RV
Veracruz	MRG RV
Acapulco	ELR VLR
Puerto Vallarta	MRG

MONTserrat (United King dom)**ANTIGUA RSC**

Montserrat	RB
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NETHERLANDS ANTILLES (Netherlands)**CURACAO RCC**

Curacao	LRG RV
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NICARAGUA**CENTRAL AMERICAN RCC (SPOC)
(Tegucigalpa, Honduras – COCESNA)**

Managua RSC	MRG SRG
Caribbean Sea	RV
Pacific Ocean	RV

PANAMA**PANAMA RCC (SPOC)**

(1) (2) (6)

Panamá	MRG RV MRU
	HEL-L RB
	LRG
	SRG
David RSC (Enrique Malek)	SRG RB MRU
	HEL-L
Changuinola RSC (Manuel Niño)	SRG RB MRU

PARAGUAY**ASUNCION RCC (SPOC)**

Asunción	SRG
	HEL-L
Concepción	SRG

PERU**LIMA RCC (5) (SPOC)**

MCC

Piura	SRG RV
	HEL-L
Callao	LRG RV
	HEL-L
Arequipa	SRG RV
	HEL-L
Juanjuí	SRG

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

HEL-L

Iquitos

LRG

HEL-L

PUERTO RICO (United States)

SAN JUAN RSC

San Juan

RB AMVER

HEL-L

SAINT KITTS AND NEVIS

ANTIGUA RSC

Saint Kitts

RB

SAINT LUCIA

FORT-DE-FRANCE RSC

Saint Lucia

RB

RB

SAINT MAARTEN (Netherlands Antilles)

SAN JUAN RSC

Saint Maarten

RB

SAINT VINCENT AND THE GRENADINESPIARCO RCC
(Trinidad and Tobago)

Saint Vincent

RB

SURINAME

CAYENNE RCC (SPOC)

Zandery RSC

MRG RB

HEL-L

TRINIDAD AND TOBAGO

PIARCO RCC (SPOC)

Port-of-Spain

SRG RV

HEL-M RB

UNITED STATES

U.S. MISSION CONTROL CENTRE (SPOC)

MIAMI RCC

Cape Cañaveral

RV

RB

Clearwater

ELR

HEL-M

Key West

RV

RB

Miami
AMVER

LRG RV

HEL-L RB

Panama City

RV

RB

San Juan RSC
AMVER

HEL-L RB

St. Petersburg

RV

NEW ORLEANS RCC

Corpus Christi

LRG

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

RCC and Rescue units	Required rescue facilities
RCC et equips de sauvetage	Moyens de sauvetage requis
RCC y brigadas de salvamento	Medios exigidos para el salvamento
1	2

	HEL-L
Freeport	RB
Galveston	RV
Houston	HEL-L
Mobile	LRG
	HEL-M
New Orleans AMVER	HEL-L
Pensacola Pascagoula	RV

URUGUAY

MONTEVIDEO RCC (SPOC)	LRG	RV
Carrasco	MRG	RB
	SRG	
	HEL-L	

VENEZUELA

MAIQUETÍA RCC (SPOC)	SRG	RV
Maiquetía	MRG	RB
	HEL-L	
	HEL-M	
	HEL-H	
MARACAIBO (RSC)	SRG	RB
Zulia	HEL-H	

CIUDAD BOLÍVAR (RSC)

Bolívar	SRG
	HEL-H

BARQUISIMETO (RSC)

Lara	SRG
	HEL-L

PUERTO AYACUCHO (RSC)

Amazonas	SRG
	HEL-M

BARCELONA (RSC)

Anzoategui	SRG	RB
	HEL-L	

VIRGIN ISLANDS (United Kingdom)**SAN JUAN RSC**

Beef Island	RB
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APPENDIX G

Persons of contact of the NAM/CAR States in charge of coordinating actions on ICAO position for the ITU WRC-2003

State / International Organization Estado / Organismo Internacional	Person of contact Persona de contacto	Address / Telephone / Fax / E-mail Dirección / Teléfono / Fax / Correo electrónico
Bahamas		
Barbados		
Belize/Belice		
Canada/Canadá	John Taylor CNS/ATM Systems Technologist	Tel: (613) 993-4061 E-mail: taylorj@tc.gc.ca
Costa Rica		
Cuba	Ing. Gabino Cid Jiménez Especialista CNS	Dirección de Aeronavegación IACC Tel: (537) 55-1121 / 55-1146 Fax: (537) 55-1183 E-mail: gabino.cid@iacc.avianet.cu
Dominican Republic / República Dominicana		
El Salvador		
France / Francia		
Guatemala		
Haití		
Honduras		

State / International Organization Estado / Organismo Internacional	Person of contact Persona de contacto	Address / Telephone / Fax / E-mail Dirección / Teléfono / Fax / Correo electrónico
Jamaica		
Mexico / México	Ing. Jaime Llanes Echeverría Perito en Telecomunicaciones, SENEAM	Tel: (525) 5726-1529 / 32 E-mail: llanesecheverria@hotmail.com
Nicaragua		
Trinidad and Tobago / Trinidad y Tabago	Veronica Ramdath Telecommunications Engineer	Tel: (1868) 669-4302
United Kingdom / Reino Unido	John Mettrop Surveillance and Spectrum Management	Tel: + (044) 207 453 6531 Fax: + (044) 207 453-6565 E-mail: john.mettrop@dap.caa.co.uk
United States / Estados Unidos	George Sakai Program Director, Spectrum Policy and Management	Tel: (202) 267-9710 Fax: (202) 267-5901 E-mail: george.sakai@faa.gov
COCESNA	Ing. César Núñez Gerencia de Mantenimiento y Proyectos	Tel: (504) 234-3360 ext. 1494 Fax: (504) 234-2987 E-mail: cnunez@cocesna.hn

APPENDIX I

DETECTED AFTN CIRCUITS AND CENTRES IN THE CAR/SAM REGIONS THAT NEED TO BE IMPLEMENTED AND IMPROVED TO COMPLY WITH THE AFTN PLAN

States/International Organizations	AFTN Circuit or AFTN Centre	Remarks/Solution
Netherlands Antilles / Aruba	Aruba (S) – Curacao (S)	CNS Committee proposed the elimination of circuit from CAR/SAM ANP Plan, also proposed GREPECAS recommends to Aruba and Netherlands Antilles that, if deemed suitable, they could keep the AFTN circuit Aruba/Curacao implemented as an alternative communications means, based on a bilateral agreement.
Argentina/South Africa	Buenos Aires (M) – Johannesburg (M)	Circuit is in the implementation process.
Brazil/Suriname	Brazil (M) – Paramaribo (T)	The circuit has not been implemented. It is pending until the implementation of REDDIG.
Brazil/French Guiana	Cayenne (T) – Brazil (M)	Presents low availability. Its improvement is pending the implementation of REDDIG.
Colombia/Panama	Bogota (T) – Panama (T)	Bilateral agreement has been signed between Colombia and Panama for implementation of Colombian VSAT station. Based on the information provided by the member of Colombia, the aforementioned VSAT station was acquired through ICAO Technical Co-operation.
Guyana/Trinidad and Tobago	Georgetown (S) – Port of Spain (M)	It is implemented at 300 baud. The recommended circuit at 2400 bps, X.25 protocol and IA-5 code has not been implemented.
Mexico/COCESNA	Mexico (M) – COCESNA (M)	The circuit presents low availability due to the bad shape of the communications supports. Mexico and COCESNA are making agreements on a plan to resolve the deficiency.
Trinidad and Tobago/ Venezuela	Port of Spain (M) – Caracas (M)	It is implemented at 300 bps, ITA-2, it presents low availability and problems in the software. The recommended circuit at a 2400 bps, IA-5 code and X.25 protocol has not been implemented. It is pending until the implementation of REDDIG, also the coordination of a bilateral agreement
Paraguay	Asuncion COM AFTN Centre (T)	The equipment of the Centre is very old and presents low availability of AFTN service. Studies are being carried out to implement an AFTN/AMHS point of entrance/exit.

APPENDIX J

TABLE/TABLA CNS 1A - AFTN PLAN/PLAN AFTN

		CURRENT/ACTUAL				PLANNED/PLANIFICADO					
State/Station Estado/Estación	Cat.	Type/ Tipo	Signalling Speed/ Velocidad Señalización	Protocol/ Procolo	Code/ Código	Type/ Tipo	Signalling Speed/ Velocidad Señalización	Protocol/ Procolo	Code/ Código	Target date implementation/ Fecha implantación	Remarks/ Observaciones
1	2	3	4	5	6	7	8	9	10	11	12
ARUBA											
Aruba-S											
United States	T	SAT/d	9600	X25	IA-5						MEVA
BAHAMAS											
Nassau-S											
United States	S	SAT/d	9600	X25	IA-5						MEVA
Freeport-S											
United States	S	SAT/d	9600	X25	IA-5						MEVA
BRAZIL											
Brazil-M											
United States	M	SAT/a	9600	X.25	IA-5						
CAYMAN ISLANDS											
Cayman-S											
United States	S	SAT/d	9600	X25	IA-5						MEVA
CUBA											
Habana-T											
United States	T	SAT/d	9600	X25	IA-5						MEVA
DOMINICAN REPUBLIC											
Santo Domingo-T											
United States	T	SAT/d	9600	X25	IA-5						MEVA
HAITI											
Port-au-Prince-T											
United States	T	SAT/d	9600	X25	IA-5						MEVA
HONDURAS											
Centro America-M											
United States	M	SAT/d	9600	X25	IA-5						MEVA

		CURRENT/ACTUAL				PLANNED/PLANIFICADO					
State/Station Estado/Estación	Cat.	Type/ Tipo	Signalling Speed/ Velocidad Señalización	Protocol/ Procolo Procolo	Code/ Código	Type/ Tipo	Signalling Speed/ Velocidad Señalización	Protocol/ Procolo	Code/ Código	Target date implementation/ Fecha implantación	Remarks/ Observaciones
1	2	3	4	5	6	7	8	9	10	11	12
JAMAICA											
Kingston-T United States	T	SAT/d	9600	X25	IA-5						MEVA
MEXICO											
Mexico-M United States	M	LTT/a	600	COP	IA-5	SAT/d	9600	X25	IA-5	11/99	ARINC
NETHERLANDS ANTILLES											
Curacao-T United States	T	SAT/d	9600	X25	IA-5						MEVA
PANAMA											
Panama-T United States	T	SAT/d	9600	X25	IA-5						MEVA
PERU											
Lima-M United States	M	SAT/d	9600	X25	IA-5						
TRINIDAD AND TOBAGO											
Port-of-Spain-M United States	M	LTT	2400	X.25	IA-5						E/CAR
TURKS AND CAICOS ISLANDS											
Grand Turk-T United States	T		2400	X25	IA-5						
UNITED STATES											
United States-M											
Aruba	S	SAT/d	9600	X25	IA-5						MEVA
Brazil	M	SAT/d	9600	X.25	IA-5						
Caracas	M	LTT/d	9600	X.25	IA-5						E/CAR
Centro America	M	SAT/d	9600	X25	IA-5						MEVA
Curacao	T	SAT/d	9600	X25	IA-5						MEVA
Grand Turk	T	LLT/d	2400	X25	IA-5						
La Habana	T	SAT/d	9600	X25	IA-5						MEVA
Kingston	T	SAT/d	9600	X25	IA-5						MEVA

		CURRENT/ACTUAL				PLANNED/PLANIFICADO					
State/Station Estado/Estación		Type/ Tipo	Signalling Speed/ Velocidad Señalización	Protocol/ Procolo Procolo	Code/ Código	Type/ Tipo	Signalling Speed/ Velocidad Señalización	Protocol/ Procolo	Code/ Código	Target date implementation/ Fecha implantación	Remarks/ Observaciones
1	2	3	4	5	6	7	8	9	10	11	12
Lima	M	SAT/d	9600	X25	IA-5						
Mexico	M	LTT/a	600	COP	IA-5	SAT/d	9600	X25	IA-5	11/99	ARINC
Bahamas, Nassau	S	SAT/d	9600	X25	IA-5						MEVA
Panama	T	SAT/d	9600	X25	IA-5						MEVA
Port-au-Prince	T	SAT/d	9600	X25	IA-5						MEVA
Port-of- Spain	M	LTT	2400	X.25	IA-5						E/CAR
St. Maarten	S	SAT/d	2400	X25	IA-5	SAT/d	2400	X25	IA-5	11/99	MEVA
Santo Domingo	T	SAT/d	9600	X25	IA-5						MEVA
Tortola	S					LTT	2400	X25	IA-5	11/99	E/CAR
VENEZUELA											
Caracas-M											
United States	M	LTT/d	9600	X.25	IA-5						
VIRGIN ISLANDS											
Tortola-S											
United States	S						2400	X25	IA-5	11/99	E/CAR

APPENDIX K

ACTION PLAN FOR THE SOLUTION OF THE PROBLEMS AFFECTING THE EXCHANGE OF OPMET INFORMATION IN THE SAM REGION

State/Territory	Implementation of Conclusion 6/33	Operators	Comments
Argentina	Partly, some MET stations have teletypes.	Communications Personnel.	The complete installation of PC terminals in each one of the MET station was foreseen for the end of the first semester 2001.
Bolivia	Partly, lack of implementation of PC terminals in Trinidad.	Most of the terminals are operated by COM personnel.	Even if Viru Viru and Cochabamba have PC terminals, due to the lack of a multiplex system in these two places manual procedures are done that may introduce errors.
Brazil	It is being implemented.	With the implementation of PCs by meteorology personnel, in many places MET personnel delivers information to the COM personnel for its transmission.	PCs are being installed for communication between CCAM and MET Offices. It is expected to be finished by 2002.
Chile	Implemented.	Meteorology personnel	
Colombia	To be implemented.	Communications personnel	MET personnel sends the OPMET information via telephone to a communications station (AFTN)
Ecuador	Implanted.	Meteorology personnel	Latacunga and Manta have installed PC stations connected to the AFTN network since 1 January 2001, but they are not operational and it is considered that they will be implemented in the last quarter of 2001.
French Guiana	Implemented.	Meteorology personnel.	
Panama	To be implemented.	Communications personnel.	The acquisition was included in the budget 2001.

State/Territory	Implementation of Conclusion 6/33	Operators	Comments
Paraguay	Partly, lack of PC installation in Ciudad del Este.	MET personnel in Asunción and Communications personnel in Ciudad del Este.	A new messages switching center is required. Among the many limitations of the current CCAM is the possibility of updating tables MET and MET2A.
Peru	Implemented	Meteorology personnel.	
Suriname	To be implemented	Communications personnel.	
Uruguay	Not implemented	Communications personnel.	SIP project was informed that due to the installation process of a new CCAM studies will be carried out to install PCs in each one of the meteorology station with international OPMET requirement.
Venezuela	Not implemented.	Communications and Meteorology personnel.	Venezuela authority informed that in a six-months period beginning from the SIP mission, they would install PC terminals, but to date, this has not been implemented.

APPENDIX L

STATUS OF THE DIGITAL COMMUNICATION REGIONAL/SUBREGIONAL NETWORKS

Central Atlantic

The Central Atlantic FIRs VSAT network (CAFSAT) digital network was developed by the EUR/SAM corridor members in order to solve various communication problems between the two regions, following AFI RAN/7 Recommendation 9/20, that encouraged the use of VSAT systems for communication purposes. Four nodes have already been installed and are under operation, and other 4 nodes are being installed or under bidding process.

Central Caribbean

The Meeting took note that the MEVA VSAT telecommunications network was developed and implemented since 1996, providing critical voice and data communications for air traffic coordination between fifteen VSAT-equipped nodes in the Central Caribbean area. MEVA operates in the 46 GHz C-band on the PAS-1R satellite and uses SCPC/DAMA technology for bandwidth-on-demand communications and circuit management. CAR/SAM regional CNS planning is expected to take into consideration MEVA's current and future technical capabilities to support the region's gradual transition towards establishment of a unified regional ATN backbone network architecture made up G/G and A/G sub-networks that are capable of supporting AFTN/AMHS traffic in its early evolution, and later, the full range of ATN end-systems applications that may be needed by individual States/Territories/International Organizations of the CAR/SAM Regions. In anticipation of these requirements the MEVA Technical Management Group (TMG) is currently engaged in efforts that will upgrade the MEVA system from an SCPC/DAMA system to a TDMA system. This initiative, referred to as MEVA II, will provide technical enhancements to the MEVA system giving it the capability to be directly and seamlessly interconnected to the REDDIG TDMA VSAT system in Latin America over a common satellite.

Central America

Central American Corporation for Air Navigation Services, COCESNA, implemented a satellite telecommunications network based on Frame Relay technology named CAMSAT. The Frame Relay technology, through switching packages provides the required voice and data communications, and thanks to its MCPC (multiple channels per carrier) transmission mode, allows using smaller antennas and moderate transmission power, as well as a modular network growth and failure independency for each ground station.

Eastern Caribbean

The Eastern Caribbean (E/CAR) Aeronautical Fixed Services (AFS) Network is an ATN compatible terrestrial optic fiber ISDN open network. The E-CAR users are mainly located in the Eastern Caribbean and has one node in the SAM region (Caracas), which will facilitate its interconnection with the REDDIG and has two nodes in the NAM region. This network has a Project Plan with accelerated efforts while introducing appropriate technologies that will not only improve the efficiency of the E/CAR AFS Network but also provide a level of compatibility for connectivity with adjacent FIRs.

South America

The South American Digital Network (REDDIG) is currently in the installation phase. The stations outdoor equipment has been installed, only pending one installation in process, and the installation of the indoor equipment will soon begin. It is expected that the installation of the REDDIG will conclude by the end of March 2003.

APPENDIX M

**CIRINV 121-8
(FLIGHT INSPECTION CIRCULAR)
DECEMBER 2001**

SUMMARY

This Appendix shows the content of the Flight Inspection Circular that has been adopted in Brazil to NPA GPS flight inspection evaluation.

SUMMARY

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1. INTRODUCTION

1.1. Objective

The objective of this flight inspection circular letter (CIRINV) is to establish the procedures and tolerances to be applied in the flight inspection evaluation of procedures of approach and landing through non-precision navigation instruments using the Global Position System (GPS). It is also to describe the process for evaluating flight inspections.

1.2 Concept

The terms and expressions used in this CIRINV have the following meanings:

1.2.1. INSTRUMENTS APPROACH AND LANDING PROCEDURE

The approach and landing procedures describe several predetermined instrument led manoeuvres, that allow an aircraft to complete all the phases of approach through to landing, or until a point where it can proceed with visual references for landing or start a missed approach procedure.

1.2.2 INSTRUMENTS APPROACH PROCEDURE SEGMENTS

The instruments approach chart (IAC) shows the different instruments approach procedures segments, including:

- a) arrival;
- b) initial approach;
- c) intermediate approach;
- d) final approach; and
- e) missed approach.

1.2.3. WAYPOINT (WP)

1.2.3.1 The predetermined geographical position, defined by latitude and longitude, used for the definition of fixed, routes, terminal segments and displacement registration.

1.2.3.2 According to this CIRINV, the waypoints are classified as:

- a) Terminal Waypoints:
 - Initial approach waypoint (IAWP).
 - Initial approach step down waypoint (INITIAL STEPDOWN)
 - Intermediate approach waypoint (IWP).
 - Intermediate approach step down waypoint. (INTERMEDIATE STEPDOWN).
 - Missed approach holding waypoint (MAHWP).
 - Missed approach turning waypoint (MATWP).
- b) Approach Waypoints.
 - Final approach waypoint (FAWP).
 - Final approach step down waypoint (FINAL STEPDOWN).
 - Missed approach waypoint (MAWP).

1.2.4. HORIZONTAL FIGURE OF MERIT. (HFOM).

When a GPS receiver shows a specific position (WP), there is a 95% probability that this receiver is located on a horizontal plane in a circular area (of maximum radius 100m) with that WP located at the centre (see fig.1).

This area is called the Horizontal Figure of Merit (HFOM), being an indication of the system accuracy and integrity.

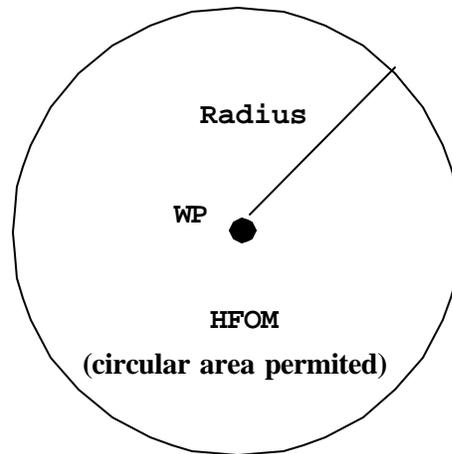


Fig. 1

1.2.5. HORIZONTAL DILUTION OF PRECISION (HDOP)

A measurement related to the degree of accuracy level of the horizontal position that the GPS operation can undergo over a certain period of time and in a specific region. This measurement is mainly a function of the geometry of available satellites at a given time.

1.2.6. VERTICAL DILUTION OF PRECISION (VDOP)

It is a measurement related to the degree of accuracy level of the vertical position that the GPS position can undergo over a certain period of time in a specific region. This measurement is mainly a function of the geometry of available satellites at a given time.

1.2.7. REQUESTING AGENCY

A DECEA section or a civilian company authorized by DECEA to deal with the subjects mentioned in this CIRINV, including the preliminary actions related to flight inspection performance for the evaluation of the IAC GPS.

1.3. Jurisdiction

A DECEA jurisdiction describing NPA GPS flight inspection rules and procedures.

2. FLIGHT INSPECTION PREPARATION

2.1 Aircraft without AFIS

2.1.1 The Flight-inspector must ensure that the procedures to be evaluated are properly drawn on compatible topographic charts (preferably on the scale of 1:50.000 - one per fifty thousand- or 1:100.000 if that is unavailable)

2.1.2 The topographic chart must contain all the procedure, the WPs, and the circular perimeters centered in each WP from the final approach segment with a radius equal to the HFOM tolerance (item 6.1).

2.2 Aircraft with AFIS

Refer to CIRINV 121-6.

2.3. Database Integrity

2.3.1 The flight-inspector must be sure that the waypoints, that appear in the database record of the aircraft receiver, match with those planned for the flight inspection. Moreover, they must ensure that the bearings and distances between wps, shown by the receiver within each segment of the procedure to be evaluated, confer with the tolerances expected on the item 6.1(referring to the bearings and distances shown in the IAC chart made by the requesting agency and approved by the ATC official).

NOTE: If the bearing and/or the distance between the WP shown by the receiver does not confer with item 6.1, the flight inspection will be canceled until the problem is solved by the requesting agency.

2.4. General

2.4.1. The flight-inspector must check, in the procedure chart (IAC), whether the WP are properly identified and if the bearings and distances between WP, in each segment, are clearly placed.

NOTE: This IAC must be given by the flight inspection requesting agency and approved by the ATC official.

2.4.2. For the flight inspection to be successful, a complete and perfect understanding between the operation teams (air traffic controllers) and the flight inspection team is essential. The flight-inspector is responsible for the coordination before, during and after the flight inspection.

2.4.3. The operation team must comply with the requests from the flight inspection team.

2.4.4. The flight inspection team must coordinate, along with the air traffic controllers, the maneuvers to be executed during the flight inspection, coordinating with local traffic.

2.4.5. The flight-inspector must perform a briefing with the parties involved to coordinate the flight inspection.

3. FLIGHT INSPECTION PROCEDURE

3.1. The objective of the flight inspection is to make sure that the IFR approach procedures are safe, practical, correctly depicted on the charts, reasonable (met the economical principle)and easily understood by a IFR qualified pilot This objective will be reached if the following criteria are met:

- a) an obstacle clearance is fulfilled;
- b) the procedure is properly and can be performed through normal maneuvers;
- c) its profile is reasonable;
- d) the cockpit work is acceptable;
- e) visual clarity is achieved;
- f) approach charts (IAC) have proper information and can be easily understood;
- g) the runway marks and lights are adequate;
- h) bilateral communications between ground and air are adequate;
- i) the GPS operates without the RAIM alarm; and
- j) there is no trace of interference on the propagation frequency of the GPS signals.

NOTE: Where there is any trace of interference as described in “J” above, the procedure must be cancelled.

4. CHECKLIST

4.1. This checklist specify the items to be verified in each type of inspection.

TYPE OF CHECKING	REF. (ITEM)	FLIGHT INSPECTION	
		COM	PER
Checking the bearings and distances between WP (all segments)	5.1	X	X
Instrument Approach and Landing performance procedure	5.2	X	X
Obstacle Clearance	5.3	X	(1)
Waypoint Accuracy (Final Segment)	5.4	X	(1)
RAIM function Prediction	5.5	X	X
Interference Traces	5.6	X	X
Nightly Checking	5.7	X	X

OBS.: (1) Surveillance

Legend: COM – Commissioning

PER - Periodical

5. DETAILED PROCEDURES

All the waypoints related to proposed new procedures must be verified in the GPS database receiver to be used in commissioning flight inspections.

5.1. Checking Bearings and Distances between Waypoints (All Segments)

Checking must be done before the flight inspection begins, according to the procedures described in item 2.3, and will be considered satisfactory if values are within tolerance levels described later in 6.1.

5.2. Instruments Approach and Landing Performance Procedure

5.2.1 This procedure must be performed at the beginning of the flight. A complete flight must be undertaken to verify flyability.

5.2.2 The performance procedure is verified by undertaking the following analyses:

- a) Profile reasonability
- b) Ease of performance
- c) Cockpit work
- d) Final approach alignment
- d) Missed approach pull out safety

5.2.3 The flight-inspector must ensure that the procedures carry the aircraft correctly to a MAPT (MAWP).

5.2.4 For the missed approach segment, the flight-inspector must decide if the pull out procedure is safe and adequate to the aircraft rank.

NOTE 1: In cases where any parameter is non-compatible with the safety procedures performed during periodical flight inspections, a commissioning must be undertaken.

NOTE 2: When an aircraft with AFIS is used, the flight-inspector must select the flyby procedure, in order to inspect the IAC “flyability”

5.3. OBSTACLE CLEARANCE

This procedure must be performed after to perform the procedure described in “5.2”.

5.3.1. The entire route must be completed during a flight inspection, maintaining altitudes that match the minimum specified in each segment, decreased of the specific quantities for the flight inspection, and that are smaller than the IAC separation quantity guidelines.

5.3.2. This procedure was adopted, once if the flight inspection was driven exactly in the separation limits considered in the standard of IAC, the aircraft would be flying in the same altitudes of the significant obstacles, with serious compromising of the flight safety

5.3.3. The following quantities reductions must be applied to check the obstacle clearance:

- a) initial segment: 800 feet
- b) intermediate segment: 300 feet; and
- c) final segment: 100 feet.

5.3.4. Examples of altitude to be flown:

1- Initial segment minimum altitude: 5.000 feet
 Decrease for flight inspection: 800 feet
 Altitude to be flown: 4.200 feet

2- Intermediate segment minimum altitude: 3500 feet
 Decrease for flight inspection: 300 feet
 Altitude to be flown: 3200 feet

3- Final segment minimum altitude (MDA) 2000 feet
 Decrease for flight inspection: 100 feet
 Altitude to be flown: 1900 feet

NOTE: Special attention must be given to this method when the final segment control obstacle is bigger than the intermediate segment, and is located too close to FAF. In those cases the flight can become dangerous.

IMPORTANT NOTE: Situations like these reinforce the visual conditions obligation for the instruments approach and landing procedure checking.

5.3.4. Obstacles clearance checking in the missed approach segment should be done maintaining the vertical profile foreseen in the IAC chart, using:

- a) the published ascending gradient; or
- b) an ascending gradient of 2,5%, if there is no an ascending gradient published.

5.3.5. When testing obstacles clearance, there is no need to maintain the bearings published in the IAC. It is more important to observe the clearance and to maintain the flight safety. The obstacle control in each approach segment must be confirmed visually in flight or through observation on the ground. If it is not possible to confirm that the control obstacle disclosed is the tallest obstacle on the segment, the location, type and elevation of the obstacles must be noted for consideration by the air traffic specialist. The flight-inspector must communicate the new obstacles found.

5.4. Waypoint Accuracy (Final Segment)

This segment should be performed after the conclusion of the procedure shown on the item 5.3.

5.4.1. Aircraft without AFIS

5.4.1.1 This checking must be done using a topographic chart made with the proper material.

5.4.1.2. This procedure consists of performing a crossing that complies with the profile procedure and should be abandoned only in cases to flight over the WP (if anticipated “Fly by”), maintaining the lowest speed and the lowest safe altitude possible, in order to obtain the best WP location determination.

5.4.1.3. The flight-inspector, seeing the chart and the ground, must check, when in the WP overhead informed by the receiver, if the aircraft is placed horizontally in the circular area (marked on the chart), in which the radius is equal the HFOM tolerance value anticipated on the item 6.1.

NOTE: As many crossings as necessary must be undertaken in order to get a correct WP drawing on the navigation chart, indicated by the receiver.

5.4.1.4. The WP accuracy will be considered fulfilled if its overhead happens in the circular area mentioned.

5.4.2. Aircraft with AFIS

5.4.2.1. Inspection profile

The IAC published must be used, in order to evaluate the non-precision GPS instrument approach and landing procedures, using the aircraft navigation system, according to item 2.9 of CIRINV 121-6.

NOTE: The flight-inspector must select the “flyover” procedure, when checking the waypoint accuracy.

5.5 RAIM Function Prediction

5.5.1. The RAIM function unavailability prediction must be checked to support the GPS approach procedure (Required Navigation Performance-RNP 0,33), during the flight inspection period.

5.5.2. If a lack of satellite signals is detected during the check, a flight inspection should not be performed in the considered period.

5.5.3. If there is an unanticipated RAIM alarm during the flight inspection, the flight-inspector must determine whether to dismiss the procedure or interrupt commissioning flight inspection, until a new flight inspection proves that the situation is redressed and shows a favorable written opinion to allow the flight inspection to continue.

5.6. Interference Traces

5.6.1. An accurate evaluation of possible interference on the GPS frequency band can only be performed using specific equipment (eg. electromagnetic spectrum analyzer). However, some parameters can indicate anomalies on the GPS signals or interference on the location of the flight, such as:

- a) HDOP above 4.0;
- b) VDOP above 4.0;
- c) Less than 5 satellites in view;
- d) HFOM above 100m;
- e) Signal/Noise Rate (SNR) underneath to 30dB; or
- f) Inconsistent signals given by the receiver.

5.6.2. If one or more of these conditions appears during the IAC procedure, it must be dismissed or a commissioning inspection flight interrupted, until a new flight inspection, performed by GEIV, proves that the causes of the anomalies and interference are redressed and shows a favorable written opinion to allow the flight inspection to continue.

5.7. Nightly Checking

5.7.1. All IAC GPS procedures in the commissioning or periodical inspection process must be checked at night, in order to verify if the effects of increased solar activity are affecting its performance (GPS signals are susceptible to these effects).

5.7.2. In addition, any IAC procedure in the commissioning inspection process, whose profile does not match another one previously determined, must also be checked at night to prove that the procedure fits the performance at night, considering parameters such as: visual difficulty and runway visibility.

IMPORTANT NOTE: This checking should be performed only after all the other flight inspections phases have been completed (ie. checking procedure performance, obstacle clearance and WP accuracy).

5.7.3. Approved procedure.

Flight inspections must be performed strictly within the specified profile and altitudes and at a speed compatible with the biggest aircraft in that class where the procedure will be used.

6. TOLERANCES

6.1. Any parameter, found outside the tolerance range during the flight inspection, will trigger a commissioning review or procedure dismissal. Re-establishment will follow the same steps as described in commissioning flight inspection.

	Parameter	ref	Tolerance Limit
1	<u>Database integrity</u> (all the segments) a) Bearing to next WP b) Distance to next WP	2.2	a) $\pm 1^\circ$ b) $\pm 0.1\text{NM}$ ($\pm 185\text{ m}$)
2	Instrument approach procedure Performance	6.2	The procedures must be safe, practical and easily explained with a minimum cockpit work.
3	Obstacle clearance	6.3	According to this item
4	Waypoint accuracy (HFOM) - Final segment	6.4	- 100 m

7. IAC GPS EVALUATION PROCESS

7.1 An IAC GPS procedure will be evaluated to receive its commissioning and, following that, to investigate, through periodical inspections, if it still serves its final objective.

7.2 Consequently, the commissioning (COM) process will be conducted through flight inspection evaluation on board a GEIV aircraft or on the requesting agency aircraft, devoted to the flight inspection mission, having in its crew a flight-inspector and a Air Traffic Specialist assigned by DECEA.

7.3 The commission of the procedure will depend on the analysis result of DECEA's flight inspection report.

7.4 The IAC GPS performance attendance, after accomplished, will happen through periodical flight inspections (PER), and will be performed yearly by a DECEA flight-inspector.

8 GENERAL ARRANGEMENTS

8.1 The flight-inspector and the ATC officer must fill out the flight inspection report at the end of each inspection.

8.2 Where there is a trace of interference on the GPS frequency, either during the flight inspection or during the usage of the ordinary procedure previously approved by flight inspection, it must be immediately dismissed and communicated to DECEA. A GEIV flight inspection aircraft, equipped with specific gear, will do the necessary checks.

9. FINAL ARRANGEMENTS

9.1 This circular letter, approved by the DECEA internal report no. 190, from October 5th, 2001, came into effect in December 27th, 2001 and replaced the CIRINV 121-8 form October 18th, 1999, approved by the DEPV internal report no. 203, from October 27th, 1999.

9.2 Cases not foreseen in this circular letter will be submitted to the DEPV Honorable sub director.

APPENDIX N

INITIAL REGIONAL GUIDELINES ON RADAR DATA SHARING IN THE CAR/SAM REGIONS

A. General planning

1. Based on the CAR/SAM regional surveillance radar systems plan contained in FASID Table CNS 4A and on the regional radar data sharing plan developed by GREPECAS, those ATC units that might derive major operational and economic benefits by sharing their radar data should be identified, as well as those ATC units lacking radar facilities and which could benefit from the availability of data provided by radar systems of neighbouring ATC units.
2. It should be avoided, to the extent possible, redundancy of close radar facilities in FIRs boundary areas or other airspaces, so as to reduce facility investment and maintenance costs by using the signal from a single radar for both airspaces.
3. The installation of close radars, one on each side of a boundary should only be justified when a radar signal is needed as backup for another due to air traffic complexity, improved coverage and ATC requirements,.
4. In order to facilitate radar data sharing/acquisition, it is necessary to achieve compatibility of radar systems already installed and/or envisaged for the short-, medium- and long-term, with a view to future connection with other surveillance systems, in this way, surveillance systems interoperability among the States/International Organisations of the Region would be ensured.
5. States/International Organisations could also consider sharing military radar facilities for the benefit of civil air navigation as a valid alternative.
6. Shared radar data could originate in a PSR (radar primary data) or SSR (radar secondary data) station, and in accordance with the technical possibilities of the system and the arrangements established between civil aviation authorities and/or the corresponding military authorities.

B. Radar coverage and service in ATS unit airspace

7. Identify those areas near FIR boundaries that have coverage at/above 10,000 feet, for use in the control of aircraft operating in TMAs and/or en-route flight.
8. Identify those areas near FIR boundaries that have coverage below 10,000 feet, for use in the control of aircraft operating in TMAs of one or more border airports.

9. In order to display the coverage described in 7 and 8 above, it is necessary to determine the operational levels of coverage, at the operation site.

C. Radar data exchange format and transmission protocol and transmission means for the radar data signals

10. Use the common radar data format/protocol recommended by GREPECAS for radar data sharing, which is ASTERIX protocol.
11. Establish cooperation agreements between the States, in which the standardisation of surveillance radar system interfaces is foreseen.
12. Establish the appropriate and feasible communication means for the transfer of radar data signals among the ATS units.
13. It is advisable that States/International Organisations, once ATN sub-networks are implemented, use the protocols set forth in the ATN SARPs already issued by ICAO, in view that it would be possible to share and standardise the regional surveillance network, with a view to implementing the CNS/ATM plan also developed by ICAO.

D. Radar data display and processing at the ATS units

14. Determine and establish the particular elements of advanced technology necessary for visualisation, such as automated systems with capability of data exchange among ATS (AIDC) units, separating radar information from other information.
15. Study the capacity of current radar data processing and display systems at ATC centres, suggesting, if necessary, short- and medium-term solutions to accommodate the signals of neighbouring radars.
16. Agree on the site where the digital data radar signal will be processed, be it at the transmission site, the reception site, or both.

E. Bilateral and multilateral arrangements

17. Consider the possibility of establishing bilateral or multilateral agreements between States/International Organisations in order to obtain operational and economic benefits from radar data sharing.
18. The bilateral or multilateral agreement format models developed by GREPECAS should be used as a guide, including the operational, technical, financial, administrative and legal aspects.

19. Within the agreements referred to in the previous paragraph, it is important to consider the suitability of radar data (availability, reliability and integrity) and service continuity (offered service period of time), according to air traffic service requirements.
20. The agreements should envisage the fact of maintaining a dynamic interaction for the assessment and exchange of detailed information on specific systems coverage, so that States may develop a common regional plan. Such information could include:
- Installation site(s).
 - Type of radar facility (PSR, SSR, SSR Mode S, etc.).
 - Transmission media and protocols used to this end.
 - Certified coverage.
 - Planned facilities and implementation times.
 - Availability and reliability parameters.
 - Life-span.

APPENDIX O

TABLE A – INFORMATION REQUIRED ON SECONDARY SURVEILLANCE RADAR (SSR) FOR RADAR DATA SHARING

RADAR FACILITY EXPLANATION OF THE TABLE

Column:

- 1 The name of the State from which the radar service is provided.
- 2 The name of the radar facility from which the radar service is provided.
- 3 Identification of the radar facility from which the radar service is provided.
- 4 WGS-84 Coordinates - latitude (degrees/minutes/seconds).
Note: If the WGS-84 coordinates are not available, please provide the geographical coordinates.
- 5 WGS-84 Coordinates - longitude (degrees/minutes/seconds).
Note: If the WGS-84 coordinates are not available, please provide the geographical coordinates.
- 6 Elevation of the terrain in meters.
- 7 Focal height of radar antenna in meters.
- 8 SSR equipment manufacturer.
- 9 SSR equipment model.
- 10 Mechanical tilt of SSR antenna (elevation degrees).
- 11 Electrical tilt of SSR antenna (elevation degrees).
- 12 Certified SSR coverage in Nautical Miles (NM).
- 13 SSR coverage outside FIR area
- 14 SSR coverage (column 13) certified
- 15 SSR data protocol and categories
- 16 SSR data time stamping
- 17 SSR modes used.
Example: A and C (A/C).
- 18 Type of antenna (standard – monopulse)
- 19 Type of SSR service or functions (en-route/terminal) as listed below:
ACC-SR-I Area radar control service up to FL250.
ACC-SR-U Area radar control service up to FL450.
APP-SR-I Surveillance radar approach control service up to FL250.
APP-SR-L Surveillance radar approach control service up to FL120.
APP-SR-U Surveillance radar approach control service up to FL450.
- 20 Last update of SSR equipment.
- 21 Remarks (includes notes on availability of graphic SSR coverage information and any other information).

APPENDIX P**TABLE B – INFORMATION REQUIRED ON THE DATA PROCESOR FOR RADAR DATA SHARING****RADAR DATA PROCESOR****EXPLANATION OF THE TABLE***Column:*

- 1 The name of the State from which the radar data service is provided.
- 2 The name of the radar data processor from which the service is provided.
- 3 Identification of the radar data processor from which the radar service is provided.
- 4 Radar data processor manufacturer.
- 5 Radar data processor model
- 6 Radar data integrating capability
- 7 Type (s) of radar data protocol (s) (used and accepted)
- 8 SSR data inputs (how many radar SSR inputs)
- 9 Last update of radar data processor
- 10 Communication channels to another FIRs availability
- 11 Remarks (includes notes on availability of coverage information and any other information).

APPENDIX Q**REVIEWED GUIDELINES FOR PLANNING AND IMPLEMENTATION OF SURVEILLANCE
RADAR SYSTEMS IN THE CAR/SAM REGIONS****General ATM Surveillance Requirements**

1. During the planning of facilities and radar systems in the CAR/SAM regions, the General Regional Guidelines for the implementation and supply of multilateral stations/services should be taken into account, as approved by the Third CAR/SAM Regional Air Navigation Meeting (CAR/SAM/3 RAN, Argentina, October 1999), through Recommendation 13/2 later amended by the Tenth Meeting of the CAR/SAM Regional Planning and Implementation Group (Ref. GREPECAS/10 Conclusion 10/5).
2. The ATM surveillance requirements will be variable with every airspace and the density and complexity of traffic. These requirements can be defined as follows:
 - a) the current surveillance systems will provide updated aircraft position reports to guarantee a safe separation;
 - 1) for oceanic and low density airspace, including remote zones, a 15-second update index is sufficient;
 - 2) for enroute high density environments 12-seconds update index is sufficient;
 - 3) for terminal areas high density environments, a 4-second update index is more appropriate;
 - b) the accuracy of the surveillance system should support the separation minima for defined airspace;
 - c) the surveillance system should permit that the ATM provides the user with the option to have enroute flight trajectory and to fully admit emergency procedures; and
 - d) the surveillance system should assist search and rescue operations.
3. The radar system to be implemented should be appropriate and adequate to maintain an acceptable level of safety in the supply of services.
4. To have equipment and logical support (software) with an open system configuration, in order to allow an easy update in the system when new requirements are identified

Primary Surveillance Radar (PSR) System

5. Primary radars are currently used for aerodromes surface movement detection, for weather detection, for precision approach radars (PARs) procedures and for en route and terminal area air traffic management.
6. The use of PSR for international civil aviation air traffic management functions will diminish, however, PSR will continue to exist, based on regional agreements, in those airspaces where there is a mix of SSR transponders-equipped aircraft with non-SSR transponders-equipped aircraft, with compatible services provided to both categories of aircrafts. PSR will also continue to be used for national applications and other purposes.
7. The selection of the implementation site of a PSR will have to be carefully done, in order to provide the adequate coverage at the required sectors. Also, the coverage of other PSRs installed in the vicinity will have to be studied, in order to use the signals of those radars, according to their feasibility and to avoid a new radar installation and maintenance costs.

Secondary Surveillance Radar (SSR) system

8. The SSR, in Modes A and C, is widely used in the CAR/SAM Regions as terrestrial line-of-sight secondary radar surveillance system. In the CAR/SAM Regions, it is foreseen that SSR will be used beyond the year 2001.
9. The accuracy, resolution and over-all performance of range and azimuth information is significantly improved by the application of monopulse techniques (including the use of large vertical aperture antennas) and other advanced processing techniques. In the CAR/SAM Regions, several monopulse SSR systems (MSSR) have been installed, and States are recommended to keep improving the secondary radar systems through the installation of MSSR system.
10. The advantageous function of SSR for surveillance purposes may be enhanced by using Mode S, which is a technique that uses a unique direction (24 bits address) for each aircraft. Thus, it permits aircraft selective interrogation in Mode S transponder-equipped aircraft, therefore eliminating garbling; it also provides for a two-way data link capability between Mode S ground stations and Mode S transponders. The interconnection of ground stations in cluster provides an improved surveillance and communications system. Mode S SSR is the appropriate surveillance instrument in high-density traffic areas. In the CAR/SAM Regions, it is not foreseen that the SSR Mode S radar surveillance be used before the year 2010; therefore, current plans within the CNS/ATM systems concept do not consider SSR Mode S requirements.
11. The acquisition and implementation secondary surveillance radar (SSR) systems will have to be done in accordance with SARPs and technical guidelines contained in Annex 10, Volume IV, Chapters 2 and 3, as well as in the Manual of the Secondary Surveillance Radar (SSR) System, Doc. 9684-AN/951.

12. CAR/SAM States, before making the decision of acquiring and implementing a SSR system to provide radar services in a determined airspace, should analyze the coverage of other SSR, neighbouring ATC and the feasibility of using the data signals of those radars through bilateral or multilateral agreements with the neighbouring CAR/SAM States/International Organizations, thus obtaining significant operational and economical advantages.
13. Also, neighbour CAR/SAM States/International that count with SSR systems according to the coverage of those radars in their respective ATC airspace should make bilateral or multi-lateral agreements to establish radar data sharing, to obtain backup for their systems and other important operational and economical advantages.
14. CAR/SAM States that establish pertinent arrangements for the use of neighbouring radar data signals or for sharing those data should use GREPECAS guidelines.

Operational and technical human resources for the PSR and SSR surveillance radar systems

15. The availability of sufficient and well-trained technical and operational human resources is essential to ensure the effectiveness, security and performance of surveillance radar systems, without neglecting operational and technical staff planning, which should be conceived and begin before the implementation of radar systems, since a radar system involves complex automated functions that require timely preparation of operational and technical staff.
16. The human being is the center of the air traffic control service process, and thus requires proper training before operating an advanced system or new procedures. In a constantly changing ATM environment towards air traffic increase, it is of utmost importance to preserve personnel capabilities.
17. Constant operational personnel training, including emergencies drills and radar control service evaluation programmes must be established to make sure that ATC controller's capabilities are maintained at a proper level.

Cost/Benefit

18. The planning and implementation of facilities and radar systems in the CAR/SAM Regions should be preceded by a cost/benefit analysis as part of the consideration.

Radar data sharing

19. Radar data sharing information shall depend primarily on the ATM benefits which the States involved could obtain, taking into consideration the air traffic flows between adjacent FIRs and/or adjacent TMAs, from which the convenience to establish corresponding bilateral/multilateral agreements would be determined.

APPENDIX R

PRELIMINARY GUIDELINES ON THE IMPLEMENTATION OF AUTOMATIC DEPENDENT SURVEILLANCE (ADS) IN THE CAR/SAM REGIONS

General ADS Requirements

1. During the planning and implementation of automatic dependent surveillance (ADS) facilities and systems the General Regional Guidelines for the implementation and supply of multilateral stations/services should be taken into account, as approved by the Third CAR/SAM Regional Air Navigation Meeting (CAR/SAM/3 RAN, Argentina, October 1999), through Recommendation 13/2 later amended by the Tenth Meeting of the CAR/SAM Regional Planning and Implementation Group (Ref. GREPECAS/10 Conclusion 10/5).
2. The ATM surveillance requirements will be variable with every airspace and the density and complexity of traffic. These requirements can be defined as follows:
 - a) the accuracy of the surveillance system should support the separation minima for defined airspace;
 - b) the surveillance system should permit that the ATM provides the user with the option to have enroute flight trajectory and to fully admit emergency procedures; and
 - c) the surveillance system should assist search and rescue operations.
3. The ADS system to be implemented should be appropriate and adequate to maintain an acceptable level of safety in the supply of services.
4. To have equipment and logical support (software) with an open system configuration, in order to allow an easy update in the system when new requirements are identified
5. ADS systems should be planned and implemented in remote oceanic and continental en-route airspaces with little air traffic density and where a SSR system installation is not possible or is uneconomic, and in accordance with the CAR/SAM Air Navigation Regional Plan.

6. In the CAR/SAM Regions, no specific dates for the implementation of automatic dependent surveillance by contract (ADS-C) system have been indicated, this kind of surveillance should appear once the conditions are given within the planning period up to the year 2010.
7. During the initial implementation period during which the ADS position reporting is introduced, the current levels of integrity, reliability and availability of the conventional positioning systems should be maintained.
8. CAR/SAM States/International Organizations and GREPECAS should take the relevant measures within ICAO's frame to ensure that the implementation of changes due to the introduction of ADS and other associated systems provides, as a result, a more efficient use of airspace.
9. CAR/SAM States/International Organizations and GREPECAS should ensure that ADS be introduced in a coordinated manner in adjacent FIRS, crossed by common air traffic flows.
10. Wherever different surveillance methods are used in adjacent FIRS, common or compatible systems should be guaranteed so that the service provided does not affect the users, being imperceptible and ensuring its inter-operability with the global system.
11. During the implementation of ADS, procedures that contribute to the fact that duly-equipped aircrafts obtain advantages of the use of preferred routes should be developed, without penalizing aircrafts not equipped with ADS.
12. CAR/SAM States/International Organizations should develop, as necessary, operational procedures in accordance with SARPs and ICAO's guidelines for the implementation of ADS in the airspaces assigned to the control of its corresponding ATM unit.
13. ADS should be introduced by steps, increasing its implementation towards airspaces of higher en-route air traffic density.
14. ADS systems should be implemented in accordance with SARPs and ICAO's technical guidelines contained in Document 9694-AN/955, which help the use of ADS as back-up or as a supplementary means to other surveillance methods.
15. ADS-C systems could be implemented through data links in ATN-compatible sub networks, in accordance with SARPS and ICAO's technical guidelines, referred to in Doc 9694-AN/955.
16. In the CAR/SAM Regions the date of implementation of the automatic dependent surveillance by broadcast (ADS-B) system is not clearly foreseen, but the possibilities and conditions of its implementation would depend on the results of GREPECAS studies. Its implementation could be done by means of the SS, Mode S extended squitter and VHF Mode 4 data link.

Technical and Operational Human resources for ADS surveillance systems

17. The availability to have properly prepared operational and technical human resources in a sufficient amount is a fundamental element to ensure the implementation, the effectiveness, safety and performance of the surveillance systems. The planning of technical and operational personnel cannot be overlooked and it should be conceived and started before the implementation of surveillance systems since an ADS system involves complex automated functions that require the timely preparation of technical and operational personnel.
18. The human being, as a basis for the air traffic control process, requires proper training before he/she can operate an advanced system or new procedures. To maintain the personnel properly updated is essential in an ATM environment that is continuously changing toward the air traffic increase.
19. The continuous training of operational personnel, including the practice of emergency simulation exercises and service control evaluation programmes using ADS, are to be established to guarantee that the capacity of the ATC Controller is maintained to a proper level.

Cost/Benefit

20. The planning and implementation of facilities and automatic dependent surveillance systems in the CAR/SAM Regions should be preceded by a cost/benefit analysis as part of consideration.

APPENDIX S**CNS MATTERS OF THE AGENDA FOR THE
ELEVENTH AIR NAVIGATION CONFERENCE (2003)****Agenda Item 5: Review of the outcome of the ITU World Radio Conference (2003) (WRC-2003) and its impact on aeronautical electromagnetic spectrum utilization**

The agenda for the ITU WRC-2003 contains more than fifteen items which may have an impact on aeronautical radionavigation and communication services. The outcome of WRC-2003 on these items will be presented for review by the conference. Subjects of particular importance include radionavigation satellite service/aeronautical radionavigation service (RNSS/ARNS) compatibility, future aeronautical utilization of the 5 GHz band in light of spectrum requirements for the microwave landing system (MLS), regulatory provisions permitting the operation of new ICAO standard systems supporting navigation and surveillance functions in the band 108-117.975 MHz and possible new requirements for ARNS and/or aeronautical mobile (R) services (AM(R)S). Additionally, the continuing availability of spectrum for aeronautical communications and navigation will be considered. The conference will also review the draft agenda of the WRC-2006 to identify any items of potential concern to aviation that would need to be addressed in preparation for that conference.

Agenda Item 6: Aeronautical navigation issues

- 6.1 Global navigation satellite system (GNSS) development status based on reports from States, service providers and industry organizations;**
- 6.2 Navigation policy issues in the light of present and envisaged GNSS services and architectures, integration and back-up options;**
- 6.3 Amendments on aeronautical navigation subjects in relevant ICAO documents including the *Global Air Navigation Plan for CNS/ATM Systems (Doc 9750)*, Annex 10 — *Aeronautical Telecommunications* and other documents as necessary; and**
- 6.4 Directions for future development of aeronautical navigation services.**

The *Global Air Navigation Plan for CNS/ATM Systems* (Global Plan, Doc 9750) indicates that successful implementation of the global navigation satellite system (GNSS) would provide seamless global navigation for all phases of flight, thus offering the possibility for many States to dismantle some or all of their ground-based navigation aids. The Special Communications/Operations Divisional Meeting (1995) (SP COM/OPS/95, Doc 9650) recommended (Recommendation 3/1) the development of SARPs, procedures and criteria to support the gradual introduction of GNSS. The meeting also developed Recommendation 5/1 proposing an amendment to Annex 10 to incorporate the ICAO strategy for introduction and application of non-visual aids to approach and landing (Annex 10, Volume I, Attachment B) which promoted GNSS as an ICAO standard aid in addition to the instrument landing system (ILS) and MLS.

In its assessment of GNSS, the SP COM/OPS/95 raised a number of concerns over system capabilities and identified issues to be addressed in validation activities and feasibility studies. Subsequently, further concerns were raised regarding the ability of GNSS to become the “sole-means” navigation system. These concerns were partially addressed through Amendment 1 to the Global Plan. However, the ability of GNSS to become the only navigation system for all phases of flight continues to be questioned, thus various back-up options have been proposed.

Developments in recent years have indicated that progress towards the objectives established in the Global Plan was slower than initially envisaged. It has also been suggested that some GNSS-related issues may not be resolved until additional civil signals or core satellite constellations are introduced. It is expected that the conference will be informed by respective States/service providers regarding their plans for modernization of the global positioning system (GPS) and the Global Navigation Satellite System (GLONASS), and deployment of the Galileo system. A status report on Category I GNSS-based operations and feasibility studies of GNSS-based Category II/III approaches and aerodrome surface operations will also be available to demonstrate GNSS capability to support all phases of flight. Thus, the future (2010 onwards) GNSS architecture will be made known to the conference together with SARPs in Annex 10, Volume I, Chapters 2 and 3 which define present and near-term GNSS with its augmentations.

After eight years of GNSS development and implementation activities (since SP COM/OPS/95), the conference will review up-to-date information on GNSS status, its future architecture and levels of service that could be provided at the various stages of system evolution. Other subjects involve system status monitoring and NOTAMs, GNSS vulnerability to intentional and unintentional interference, interference mitigation and database issues. In light of this information, the conference would also assess the role of terrestrial radio navigation aids and area navigation capability. The discussions are expected to address, in particular, the need for a back-up system(s) and conclude with updated guidelines for transition to satellite navigation. As a result, the conference is expected to recommend revisions to the navigation sections in the Global Plan, draft amendments to SARPs in Annex 10, and update the ICAO strategy for introduction and application of non-visual aids to approach and landing.

Agenda Item 7: Aeronautical air-ground and air-to-air communications

As a result of growing aeronautical communications requirements and of the potential spectrum scarcity created by claims on aeronautical spectrum by non-aeronautical parties, efficient utilization of the aeronautical spectrum by communications systems is becoming a critical aspect of air navigation planning. Over the last decade, ICAO has introduced into Annex 10 a number of new air-ground and air-to-air communication technologies, both digital (HF data link, VHF digital link, SSR Mode S and AMSS) and analogue (8.33 kHz channel spacing for VHF DSB-AM). Implementation of some of those technologies is currently underway and contributes to increasing the aggregate aviation spectrum requirements, while conventional air-ground voice communications systems continue to operate, still representing the main medium for operational communications.

It is expected that the conference will review the results of the most recent ICAO work on the optimal utilization of the terrestrial and satellite aeronautical communication bands (HF, VHF and L-band) including the development of new air-ground and air-to-air communications systems meeting evolving requirements. The planned evolution of existing systems and potential development of future systems will be considered, together with any associated proposals for changes to ICAO documents.

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Agenda Item 4: Air navigation planning and implementation deficiencies/problems in the CAR/SAM Regions

4.1 Report of the ASB/4 Meeting

4.1.1 The Meeting reviewed the work carried out by the GREPECAS Aviation Safety Board (ASB) at its fourth meeting and during the period since its third meeting held a year earlier. The main focus of the Board's work had been to assist States in the resolution of the long list of urgent deficiencies. This task continued to include real time exchanges with States to ensure that the information compiled was up to date and attempts to correct deficiencies were also on-going. The compilation of the existing deficiencies was therefore presented to the Meeting for its perusal and verification before its submission to Council as **Appendices A, B and C** to this part of the Report.

4.1.2 In addition, the Board also presented the Meeting with information on deficiencies that had been remedied in **Appendix D** to this part of the Report, how its working methods were evolving and what analytical tools it was developing. It also indicated that the Board had sought assistance from the Pan American Aviation Safety Team (PAAST) with regard to aerodromes related deficiencies in the Bahamas, Dominican Republic and Honduras.

4.1.3 The Meeting was informed that in discussing the ways and means to resolving the air navigation deficiencies, the ICAO Council had recently reiterated its request that the President of the Council and the Secretary General, in liaison with the Regional Offices, intensify their personal efforts in raising States'/International Organizations awareness of deficiencies identified by the Planning and Implementation Regional Groups (PIRGs) related to safety.

4.1.4 As a follow-up to the Council's decision, the Secretary General addressed State Letter M 6/1-02/79 dated 27 September 2002 to the Ministers of Civil Aviation of the States which are experiencing air navigation deficiencies, inviting their attention to resolving the deficiencies through the allocation of appropriate resources. The letter also requested States to prepare and submit to ICAO an Action Plan for the resolution of the deficiencies. In support of this initiative, the Meeting agreed to adopt the following Conclusion:

CONCLUSION 11/55 ACTION PLAN FOR THE RESOLUTION OF AIR NAVIGATION DEFICIENCIES

That States/Territories, with a view to resolving their respective air navigation deficiencies, especially those that might have a negative effect on safety aspects,

- a) urgently develop and implement an Action Plan, based on the format presented in the **Appendix E**, for each deficiency complying with the requirements established in the Air Navigation Plan FASID and the SARPs, specifying the corrective measures, the completion date, as well as assigning the necessary resources;
- b) inform ICAO, through the Regional Offices, on the Action Plan referred to in item a) above, no later than 30 April 2003, including any difficulties encountered; and
- c) consider establishing multinational agreements and international co-operation projects to contribute to resolving the deficiencies in the air navigation fields.

4.1.5 The Meeting was informed that in further developing its working methods and tools the Board was exploring how it could organize resources for the corrective measures associated with the urgent deficiencies it was mandated to review. The ASB was in the process of developing a methodology for this purpose and project management had already been identified as a key element to, *inter alia*, help formalize the commitment of resources to particular corrective actions. The Board felt that it could work not only from its own resources but that it could seek assistance from other sources when it came to implementing measures to correct deficiencies. In particular, it considered that it could approach the Pan American Aviation Safety Team (PAAST), GREPECAS and ICAO (including Technical Cooperation, special implementation projects (SIPs) and the newly approved International Financial Facility for Aviation Safety (IFFAS) which might have financial resources for remedial action on safety-related deficiencies).

4.1.6 The Meeting noted that the Board also agreed that, as indicated in the Council-approved *Revised Uniform Methodology* on deficiencies, risk assessment should play a key role in prioritizing corrective actions. In this specific regard, the ASB has been working to develop a safety assessment tool that would help prioritize corrective actions by providing a degree of granularity and objectivity in the analysis of deficiencies. In addition, the Meeting considered that, taken together with project management tools, the ASB had a good base to develop an adequate and necessary methodology to fulfil its mandate with regard to the resolution of deficiencies.

4.1.10 The Meeting agreed to the continued use of the database for deficiencies and the use of a new format for the presentation of deficiencies by State, listing data in each air navigation area, requested by the Secretary General, for the presentation of deficiencies to be submitted to future GREPECAS Meetings.

4.1.11 The Meeting also agreed that the GREPECAS contributory body vice-chairpersons be included in the ASB composition with the objective to increase participation in ASB meetings by State officers of the GREPECAS contributory bodies. The Meeting also felt that since many of the “Urgent” deficiencies are in the Aerodromes field, that ACI also be incorporated as a member in the composition of the ASB. These proposed changes to the composition are reflected in the Report on Agenda Item 5 and in the following Conclusion:

CONCLUSION 11/57 INVITATION TO ACI TO BECOME A MEMBER OF THE ASB

That the Secretary of GREPECAS invite ACI to become a member of the GREPECAS ASB in the composition of that contributory body.

4.2 Specific air navigation planning and implementation deficiencies in the CAR/SAM Regions

Additional actions to eliminate the deficiencies in the air navigation field in the CAR/SAM Regions

4.2.1 The Meeting adopted the reviewed uniform methodology for the identification, assessment and reporting of Air Navigation deficiencies formulated by the ICAO Council, as shown in **Appendix G** to this part of the Report.

4.2.2 The Meeting also noted the deficiencies in high priority requirements (necessary for air navigation safety) classified priority “A”, as well as deficiencies in the compliance of intermediate requirements (necessary for the regularity and efficiency of air navigation) classified priority “B”, according to the information gathered by ICAO Regional Offices and reviewed/updated by GREPECAS contributory bodies which are presented in Appendices A to D to this part of the Report. Appendices A (CAR) and B (SAM) show updated information. The tables of Appendices C (CAR) and D (SAM) include corrected or eliminated deficiencies.

4.2.3 The Meeting noticed that several deficiencies that existed in the CAR/SAM Regions were and have been corrected through the implementation of ICAO technical co-operation projects and through multi-national agreements, as well as with the assistance of Special Implementation Projects (SIPs). Still there are numerous deficiencies in the air navigation systems requiring attention.

4.2.4 Likewise, the Meeting was informed on the concern that the Air Navigation Commission and the Council had expressed on the many deficiencies and the time that these have persisted, without action being taken for their correction. While recognizing that the non-availability of funds was one of the stumbling blocks in eliminating the Deficiencies, the Council agreed that the States/Organizations should be reminded of their responsibility under Article 28 of the Chicago Convention for providing safe air navigation services, for which the CAR/SAM Regions States should consider mitigation of air navigation deficiencies identified by GREPECAS. Therefore, the Meeting agreed that States/International Organization having deficiencies be urged to develop an **Action Plan** to correct their respective deficiencies based on the format presented in Appendix E to this part of the Report as mentioned in Conclusion 11/55. Likewise the Meeting noted that the ICAO Council would assign high priority to the Special Implementation Projects (SIPs) addressed to eliminating regional air navigation deficiencies.

4.2.5 The Meeting also decided to guide its contributory bodies to identify and propose Projects that might be developed to help solving deficiencies in their respective air navigation fields. Therefore, the Meeting adopted the following Decision:

DECISION 11/58 PROPOSALS FOR REGIONAL PROJECTS TO CORRECT AIR NAVIGATION DEFICIENCIES.

That,

- a) GREPECAS contributory bodies identify and propose the implementation of Technical Co-operation Projects and Special Implementation Projects or other appropriate means to help correct deficiencies in their respective air navigation fields in the CAR/SAM Regions; and
- b) the Secretary of GREPECAS, the ACG and ICAO Regional Offices follow-up the Action Plans of the States/International Organizations, as well as the proposals for implementation of the projects mentioned in item a) above.

Aeronautical Meteorology

Participation of a WMO Member in the Composition of the AERMET Subgroup

4.2.6 The Meeting according to the *modus vivendi* between ICAO and the WMO and the need of coordinating aeronautical meteorological issues with the WMO, and taking into consideration that most States in the CAR/SAM Regions have deficiencies related with training of MET personnel, and aimed at ensuring a uniform high level of training and the maximum utilization of meteorological services for the benefit of States, considered that the participation of an WMO representative in the GREPECAS Aeronautical Meteorology Subgroup (AERMETSG) could assist in coordinating joint and effective action plans to support CAR/SAM States, in the correction of deficiencies and contribute to issues in the MET field.

4.2.7 Based on the above considerations expressed in the previous paragraph, the Meeting agreed on the following Conclusion:

CONCLUSION 11/59**INVITATION TO WMO TO BECOME A MEMBER OF THE GREPECAS AERMET SUBGROUP**

That GREPECAS invite WMO to become a member of the GREPECAS AERMET Subgroup.

ATS Quality Assurance Course offered by FAA Academy in Oklahoma

4.2.8 The Meeting noted that United States offers 6 to 8 States fellowships to the CAR/SAM Regions States and International Organizations, to participate in the prototype course on air traffic services quality assurance, at an international level, to be given at the FAA Academy, Oklahoma, United States, during March 2003. This course is based on the documentation prepared by United States on this issue, as well as on the CAR/SAM Regional Guidance Manual for air traffic services quality assurance programmes, as approved by GREPECAS/10 and in the ICAO standards and recommended practices. Those States which might be interested, should contact

FAA Academy
International Training Division
Air Traffic Training Programme Managers

Doug Andersen (405)954 0170
doug.andresen@faa.gov

Tim Schroeder (405) 954 4085
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LUT/MCC Implementation in Argentina

4.2.9 The Meeting was informed on the implementation of the search and rescue satellite alert system for COSPAS/SARSAT in Argentina. The system has two LEOLUT stations, located in Rio Grande and in Paraná; one GEOLUT station located at Ezeiza, as well as an Aeronautical Mission Control Centre (ARMCC) also located in Ezeiza. This system has been put into operation since September 2001 and it has been commissioned in October 2002.

Implementation of a new ACC at Ezeiza, Argentina

4.2.10 The Meeting noted that on 15 October 2002 Argentina inaugurated the new Ezeiza Area Control Centre, composed of subsystems, such as data processing and radar presentation, ATFM, voice switching, digital audio recorders, microwave, optical fiber, VHF-AM, UPS equipment and auxiliary units, widely covering the expectations and more demanding needs of air traffic control.

Holding of the Second CAR/SAM regional workshop on aeronautical meteorological services cost recovery

4.2.11 The Meeting recalled that the CAR/SAM/3 RAN Meeting, when discussing Agenda Item 13 – *Implementation of the CAR/SAM Air Navigation Plan, with particular emphasis on deficiencies in the air navigation field affecting safety* dealt with in paragraph 13.5.7.1 – *Allocation and recovery of meteorological services costs* was aware of the current trend towards the privatization and commercialization of meteorological services as well as of the increasing importance of environment involving the allocation and recovery of aeronautical meteorology services and facilities.

4.2.12 In order to assist States in the evaluation of the costs referred to in the above paragraph, the Meeting considered that ICAO, in coordination with the WMO, consider organizing and convening the Second Workshop on MET services costs recovery. Consequently, the Meeting adopted the following Conclusion:

CONCLUSION 11/60 SECOND CAR/SAM REGIONAL WORKSHOP ON AERONAUTICAL METEOROLOGY SERVICES COSTS RECOVERY

That ICAO, in close coordination with the WMO, organize and hold, as soon as possible, the Second Regional Workshop on aeronautical meteorology services costs recovery.

Amendment to FASID MET Tables as a result of the reorganization of the Brazilian airspace

4.2.13 The Meeting accepted the proposal of Brazil to amend FASID Tables MET IB; MET 2B; MET 3, Part I and MET 3, Part II of the CAR/SAM ANP, Volume II, as a result of the reorganization of the Brazilian airspace foreseen for the year 2003. Consequently, the Meeting adopted the following Conclusion:

CONCLUSION 11/61 **AMENDMENT OF FASID MET TABLES IN RELATION TO
THE REORGANIZATION OF THE BRAZILIAN AIRSPACE**

That ICAO amend Tables MET 1B; MET 2B; MET 3, Part I and MET 3, Part II of the CAR/SAM ANP, Volume II (FASID), as follows:

- a) under Brazil, in each of the aforementioned tables, delete the requirements for the Belem and Manaus FIRs and include the requirements for the new Amazonica FIR as shown in **Appendices H, I, J and K** to this part of the Report; and
- b) in the FASID, include Tables MET 1B*; MET 2B*; MET 3, Part I* and MET 3, Part II* as shown in **Appendices L, M, N and O** to this part of the Report.

Note: Tables MET 1B; MET 2B*; MET 3, Part I* and MET 3, Part II* reflect the MET requirements established while waiting for the reorganization of the Brazilian airspace scheduled for 2003.*

**Identification of multinational facilities and services in the CAR/SAM ANP,
Volume II (FASID)**

4.2.14 Taking into account the “*General guidelines on the establishment of multinational facilities/services in the CAR/SAM Regions*” contained in Part II – *General Planning(GEN)* of the FASID, CAR/SAM Regions (Doc 8733), and considering that multinational facilities/services are being implemented in these Regions, the Meeting adopted the following Decision:

DECISION 11/62 **INCLUSION IN THE FASID OF MULTINATIONAL
FACILITIES/SERVICES IMPLEMENTED IN THE
CAR/SAM REGIONS**

That the Institutional Aspects Task Force, as part of its work programme, study the most appropriate way of presenting the multinational facilities/services in the FASID, in order to facilitate their identification and description and the processing of future amendments, using as a reference the preliminary multinational communication system format shown in the **Appendix P** to this part of the Report.

Finalizing WGS-84 implementation and publication of information by the CAR/SAM States

4.2.15 The Meeting highlighted the importance and the urgent need that the “World Geodetic Systems 1984” (WGS-84) implementation be finalized and that resulting information be published as soon as possible, so that airspace users could efficiently use GNSS. In this respect, the Meeting identified the existence of two essential problems, one being the implementation at the States’ level and the other the difficulties for international coordination of common coordinates at the FIRs boundaries of different States/Organizations. Likewise, the ICAO Regional Directors of the NACC and SAM Regional Offices informed that they will submit for the ICAO Council and Headquarters consideration the possibility of approving the execution of a SIP aimed at this purpose.

4.2.16 Likewise, the Meeting agreed on the urgent need to complete the publication of all points of WGS-84 coordinates established in RNAV procedures, which is essential for adequate functioning of modern RNAV equipments being used in aircraft.

4.2.17 Taking into account the considerations expressed in the above paragraphs, the Meeting agreed on the following Conclusion:

CONCLUSION 11/63 URGENT ACTION BY STATES TO COMPLETE WGS-84 IMPLEMENTATION IN THE CAR/SAM REGIONS

That the CAR/SAM Region States which have not yet done so:

- a) adopt urgent actions in order to finalize the WGS-84 implementation programme as well as the publication of their information, including all points of WGS-84 coordinates established in RNAV procedures, and
- b) inform the ICAO NACC and SAM Regional Offices, on actions mentioned in paragraph a) above, as well as on any difficulty found in the implementation and publication of information on WGS-84 coordinates.

4.2.18 The Meeting also recalled that in accordance with Conclusion 11/63 of this Meeting, it is expected that the AIS/MAP Subgroup formulate recommendations through GREPECAS or the ACG on additional actions that could be undertaken in order to complete the WGS-84 implementation in the CAR/SAM Regions and complete publication of WGS-84 coordinates.

Additional ATM issues

English language at the ATC

4.2.19 The Meeting noted the work carried out so far by the Study Group on ICAO common English language Competence Requirements (PRICE SG). Based on the recommendations of this group, ICAO Secretariat circulated among States and International Organizations, a proposal for amendment to ICAO Annexes 1, 6, 10 y 11 and PANS/ATM. It is expected that once the amendment is approved, CAR/SAM States and International Organizations support and apply the regulations published in this regard.

ATS Contingency Plans

4.2.20 The Meeting noted the concern expressed by IATA with regard to the lack of adequate ATS Contingency Plans in some States/International Organizations, to be used in case of interruption of ATS services.

4.2.21 The Secretariat informed the Meeting on the activities carried out in this connection in the States and International Organizations of both regions, as well as the proposal for amendment to Annexes 11 and 15 regarding ATS contingency plans, circulated by ICAO. It also recalled Conclusion 10/8 formulated by GREPECAS, requesting States and International Organizations to take pertinent actions, in order to develop and coordinate with adjacent States their ATS National Contingency Plans.

RNP Trials and demonstrations in route UL780

4.2.22 The Meeting noted the proposal of Colombia to extend RNP trials in route UL780 and its parallel route toward the northern part of Lima, which will benefit air traffic management in the referred routes.

4.2.23 The Meeting considered that this matter is being reviewed by the ATM/CNS/SG ATM Committee, as well as by the ATM Authorities and Planners, within the framework of Project RLA/98/003, for which it deemed pertinent that this issue be submitted to the above mentioned groups for its review and pertinent actions.

DEFICIENCIES UPON WHICH THE ASB TOOK REMEDIAL ACTION**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Fencing (Annex 14, Vol. I, Chap. 8.4)	Dominican Republic, SANTO DOMINGO, Las Americas Intl	Perimeter security deficient	05/2000	ICAO Visit May 2000	Provide secure perimeter barrier	Dominican Republic	TBD	U	Referred to PAAST		
Obstacles (Annex 14, Vol. I, Chap. 4)	Guatemala, GUATEMALA, La Aurora	Obstacles exist in the approach, take-off, transitional and inner horizontal obstacle limitation surfaces	12/1999	ICAO Visit December 1999 and May 2001 IATA Letter January 2001	ASB recommended: 1. DGAC complete surveys to establish obstacles 2. DGAC remove, light and mark obstacles as appropriate 3. DGAC update AIP obstacle charts 4. DGAC update aerodrome obstacle safeguarding plan	Guatemala	TBD	U	Action taken and ongoing: 1. DGAC through IGN are implementing a survey of all obstacles affecting the aerodrome in conjunction with the WGS-84 survey 2. DGAC through the ICAO Technical Co-operation Project in Guatemala is implementing a study to evaluate the aerodrome obstacle conditions	Guatemala	
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4)	Dominican Republic, SANTO DOMINGO, Las Americas Intl	Runway surface pavement irregularities and rubber deposit accumulation.	05/2000	ICAO Visit May 2000 IATA Report June 2000	Remove rubber and upgrade pavements	Dominican Republic	TBD	U	Referred to PAAST		
Rescue and Fire Fighting Service and Airport Emergency Planning (Annex 14, Vol. I, Chap. 9.1 & 9.2 - 9.2.19, 20, 25, 31, 32 and 38)	Honduras, SAN PEDRO SULA, Intl. La Mesa	It was reported that the extinguishing agents reserves are insufficient, the rescue equipment in vehicles is insufficient, vehicles are in poor condition, communications and alert systems are deficient and the protection equipment for the personnel is innadequate	11/2001	ICAO Visit November 2001	Maintain required extinguishing agent reserves Provide the required rescue equipment in vehicles Maintain vehicles in adequate condition Maintain adequate communications and alert systems Provide personnel with required protection equipment	Honduras	TBD	U	Referred to PAAST		
Rescue and Fire Fighting Service and Airport Emergency Planning (Annex 14, Vol. I, Chap. 9.1 & 9.2)	Dominican Republic, SANTO DOMINGO, Las Americas Intl	RFFS deficient and AEP out of date	05/2000	ICAO Visit May 2000	Upgrade RFFS, update AEP and undertake emergency exercise	Dominican Republic	TBD	U	Referred to PAAST		

DEFICIENCIES UPON WHICH THE ASB TOOK REMEDIAL ACTION**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4)	Guatemala, GUATEMALA, La Aurora	No runway end safety areas are provided on both runway ends as specified in Annex 14 Vol I Section 3.4.1	12/1999	ICAO Visit December 1999 and May 2001	Provide RESAs	Guatemala	TBD	U	Action taken and ongoing: 1. ICAO provided DGAC with an illustration for the provision of RESAs through the reduction of declared distances 2. AGA/AOP/SG Task Force on RESAs evaluated Guatemala as a case study. 3. DGAC are still considering the future provision of RESAs through the reduction of runway declared distances by 90 m and the relocation of runway end lights at both runway ends.	Guatemala	
Visual Aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP 1)	Bahamas, NASSAU, Nassau Intl.	RWY and TWY markings missing or faded	1996	ICAO Visit October 2000 and May 2002 IFALPA Meeting November 2000	Require re-painting	Bahamas	2003	U	Action taken and ongoing 1. PAAST Follow-up visit undertaken and confirmed corrective action remains outstanding. 2. State reports will be corrected as part of imminent runway upgrading project.	Bahamas	
Visual Aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP 1)	Dominican Republic, SANTO DOMINGO, Las Americas Intl	Runway markings faded	05/2000	ICAO Visit May 2000	Repaint runway markings	Dominican Republic	TBD	U	Referred to PAAST.		

DEFICIENCIES UPON WHICH THE ASB TOOK REMEDIAL ACTION

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE CNS FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
ATS speech circuits plan. Table CNS 1C. Panama ACC/San Andres APP	Colombia/Panama	Direct ATS speech circuit not implemented. Currently the communications means is the ATS speech switched network and suffers of the high occupation grade of the voice terminal in San Andres	19/1993	GREPECAS/4	A bilateral agreement between Colombia and Panama has been signed for the installation of a VSAT station of the Colombian network.	Corresponding CAAs	12/02	U	To solve the problems and to implement as soon as possible the VSAT station agreed in Panama ACC	SAM Regional Office	

DEFICIENCIES UPON WHICH THE ASB TOOK REMEDIAL ACTION

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE SAR FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Search and Rescue facilities CAR/SAM/3 Rec. 6/2	Haiti SRR/RCC Port-au-Prince	SRR/RCC not implemented	Oct/95	GREPECAS/5	Needs to comply with FASID Table SAR 1	CAA Haiti	Oct. 2002	U	Verified. Situation persists. State Letter sent	NACC	State Letter required
Search and Rescue facilities CAR/SAM/3 Rec. 6/2	Trinidad and Tobago SRR Piarco	SRR partially implemented	Oct/95	GREPECAS/5	Needs to comply with FASID Table SAR 1	CAA Trinidad and Tobago	2003	U	Verified. Situation persists. State Letter sent	NACC	

DEFICIENCIES UPON WHICH THE ASB TOOK REMEDIAL ACTION

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE SAR FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Search and Rescue Facilities CAR/SAM/3 Rec. 6/2	Bolivia SRR La Paz	RCC not implemented. Lack of SAR qualified personnel. Inadequate SAR organization	Oct 95	Needs to comply with FASID Table SAR 1	A joint committee DGAC/AASANA/BAF has developed a SAR administrative and operational procedures manual based on the guidance material presented during the ATM/CNS/SG/2 Meeting. The RCC is in operation with operational functions carried out by the Bolivian Air Force. The joint commission DGAC/AASANA/BAF is working in order to obtain government financing, to complete flight material, personnel training and service operational expenses.	Bolivia CAD, AASANA and BAF	06/03	U	Mission carried out	SAM	

DEFICIENCIES UPON WHICH THE ASB TOOK REMEDIAL ACTION

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE SAR FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Search and Rescue Facilities CAR/SAM/3 Rec. 6/2	SRR Georgetown	RCC not implemented. Lack of SAR qualified personnel. Inadequate SAR organization.	Oct/95	Needs to comply with FASID Table SAR 1	A working methodology to prepare an aeronautical SAR Plan, and the possible implementation of an aeronautical RCC were suggested to the Guyana CAD. In order to carry out this task, the administration should use as guidance material, Appendix H, Vol. I of Doc 9731-AN/958. Implementtion of an aeronautical RCC is the lack of trained personnel in search and rescue services within the Guyana CAD. In order to solve this deficiency, the administration should enable at least two officials to study SAR courses abroad, who, upon their return, shall draft an aeronautical SAR plan and prepare as much personnel as possible, with SAR knowledge, who could be ATCOs; and finally, implement the RCC according to the State's needs operating on a 24-hour basis. Also, some guidelines to be adopted by the administration, where SAR requirements, functional areas and establishment of posts responsible for the implementation, were suggested (Mission L-0144, July 2001).	Guyana CAD	TBD	U	ATM/SAR/CNS experts Mission	SAM/ IATA	

DEFICIENCIES UPON WHICH ASB FOUND TO BE REGION-WIDE IN NATURE
REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR/SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Airfield maintenance (Annex 14, Vol. I, Ch. 9.4)	This problem exists in both CAR and SAM Regions.	Deficiencies in pavements, lights, markings, signs, secondary power supply and fencing.	2001	ASB/2 Meeting	Establishment and implementation of airfield maintenance programmes	States	Permanen t	U	1. AGA/AOP/SG established a Task Force on Pavements. 2. ICAO held a seminar and course on pavements in 2002 and another is planned in 2003. 3. Latin America and Caribbean Association of Airfield Pavement being established.	ICAO	
Bird Strike Hazard (Annex 14, Vol. I Ch. 9.5)	This problem exists in both CAR and SAM Regions.	Increased bird activity at the aerodrome and surrounding areas.	2000	ASB/1 Meeting	Establishment of National and Airport Bird Hazard Committees.	States	Permanen t	U	1. AGA/AOP/SG established a Task Force on Bird Hazards. 2. ICAO held a seminar in 2001. 3. CAR/SAM Regional Bird Hazard Prevention Committee being established.	ICAO	

DEFICIENCIES UPON WHICH ASB FOUND TO BE REGION-WIDE IN NATURE
REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR/SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	This problem exists both in CAR and SAM Regions	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	GREPECAS/5	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	CAR/SAM States	See App C	U	IATA will carry out a survey among its associated airlines to verify the status of this deficiency. The results will be presented in July 2003.	NACC/SAM/IA TA	
Use of the aeronautical phraseology	This problem exists both in CAR and SAM Regions	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAR/SAM States	See App C	U	ANC did not consider requests for SIP. Ongoing	NACC/SAM	

DEFICIENCIES UPON WHICH ASB FOUND TO BE REGION-WIDE IN NATURE
REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR/SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Complete WGS-84 implementation	This problem exists in the CAR/SAM Regions	Lack of completion o the WGS-84 system implementation	1998	GREPECAS AIS/MAP/SG	Need to implement the WGS-84 Geodetic System	States	TBD	U	The AIS/MAP/SG Meeting should analyze the situation in order to implement the WGS-84 Geodetic System. ICAO to undertake a survey of States to update implementation status.	ICAO	Circular Letter requesting urgent correction
Effective and regular updating of the AIS/MAP Integrated Aeronautical Information Package	This problem exists in the CAR/SAM Regions	Deficiencies in updating aeronautical information/data	2000	GREPECAS AIS/MAP/SG	Follow-up through meetings and letters to States. Implementation of AIS Quality System	States	In course	U	The AIS/MAP/SG/8 Meeting should analyze the situation to correct this deficiency. ICAO to undertake a survey of States to update implementation status	ICAO	The ASB Meeting was informed on the corrective actions adopted by the Civil Aviation Authorities of Mexico to comply with the specified requirements

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Bird Hazards (Annex 14, Vol. I, Chap. 9.5)	Guatemala, GUATEMALA, La Aurora	Birds were observed hovering above reported waste dump sites off the southern runway end	05/2001	ICAO Visit May 2001	Confirm bird hazard and implement necessary mitigation measures	Guatemala	TBD	U	State Letter sent		
Bird Hazard (Annex 14, Vol. I, Chap 9.5)	Honduras, SAN PEDRO SULA, Intl. La Mesa	Big birds were observed on the runway strip	11/2001	ICAO Visit November 2001	Confirm bird hazard and implement mitigation measures as necessary	Honduras	TBD	U	State Letter sent		
Bird Hazard (Annex 14, Vol. I, Chap 9.5)	Honduras, TEGUCIGALPA, Intl Toncontín	Several birds were observed flying over the waste disposal sites reported to be located near the northeast end of the runway and overflying the runway during aircraft operations	11/2001	ICAO Visit November 2001	Confirm bird hazard and implement mitigation measures as necessary.	Honduras	TBD	U	State Letter sent		
Bird Strike Hazards (Annex 14, Vol. I, Chap. 9.5)	Cayman Islands, CAYMAN BRAC, Gerrard Smith Intl	Bird hazard exists	10/2000	ICAO Visit October 2000	Undertake bird hazard assessment to identify mitigation measures	Cayman Islands	TBD	U	3 - State Letter sent		
Bird Strike Hazards (Annex 14, Vol. I, Chap. 9.5)	Haiti, PORT AU PRINCE, Port au Prince Intl	Bird strikes reported	03/2001	IATA Report March 2001	Undertake bird hazard assessment to identify mitigation measures	Haiti	TBD	U	3 - State Letter sent		
Fencing (Annex 14, Vol. I, Chap. 8.4 - 8.4.1 & 2)	St. Vincent and the Grenadines, KINGSTOWN, E. T. Joshua	An unauthorised person was observed crossing the runway strip at the west runway end and chickens were observed in front of the rescue and fire-fighting facility	12/2001	ICAO Visit December 2001	Ensure perimeter barrier is secure to prevent access to the airfield by animals and unauthorised persons	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Fencing (Annex 14, Vol. I, Chap. 8.4 - 8.4.1)	Guatemala, GUATEMALA, La Aurora	A dog was observed on the runway strip at the southern end	05/2001	ICAO Visit May 2001	Review perimeter fencing and gates for deficiencies and correct those identified to ensure animals can not enter the airfield. If the animals reside on the aerodrome, these should be removed.	Guatemala	TBD	U	State Letter sent		
Fencing (Annex 14, Vol. I, Chap. 8.4 - 8.4.1)	Honduras, TEGUCIGALPA, Intl Toncontín	A dog was observed on the runway	11/2001	ICAO Visit November 2001	Check for deficiencies in the perimeter fencing and gates to correct them and ensure that animals cannot enter the movement area. If animals live in the airport, to remove them	Honduras	TBD	U	State Letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Fencing (Annex 14, Vol. I, Chap. 8.4)	Bahamas, NORTH ELEUTHERA, North Eleuthera	Access of vehicles and animals to the manoeuvring area	1999	IFALPA Meeting November 2000	Repair the fence. Implement security measures	Bahamas	31/10/02	U	2 - State Letter sent		
Fencing (Annex 14, Vol. I, Chap. 8.4)	Cayman Islands, CAYMAN BRAC, Gerrard Smith Intl	Perimeter fencing incomplete - Ref. Annex 14 Vol. I Sections 8.4.1 & 2	10/2000	ICAO Visit October 2000	Complete perimeter fencing	Cayman Islands	TBD	U	2 - State Letter sent		
Fencing (Annex 14, Vol. I, Chap. 8.4)	Haiti, CAP HAITIEN, Cap Haitien Intl	No perimeter security barrier	06/2000	ICAO Visit June 2000	Install perimeter security barrier	Haiti	En process	U	2 - State Letter sent		
Fencing (Annex 14, Vol. I, Chap. 8.4, 8.4.1 & 2)	Grenada, ST. GEORGES, Point Salines Intl	Fencing incomplete around perimeter	05/2001	ICAO Visit May 2001	Provide complete perimeter security barrier	Grenada	TBD	U	State Letter sent		
Obstacles (Annex 14, Vol. I, Chap. 4 - 4.2.27)	St. Vincent and the Grenadines, KINGSTOWN, E. T. Joshua	Obstacles infringing on the Runway 07 take off climb obstacle limitation surface include fencing, roads, terrain, buildings and vegetation	12/2001	ICAO Visit December 2001	Discontinue Runway 07 St. Vincent and take-off operations with immediate effect	the Grenadines	TBD	U	State Letter sent		
Obstacles (Annex 14, Vol. I, Chap. 4 - Stolport Manual 4.2)	St. Vincent and the Grenadines, MUSTIQUE, Mustique	Take-off obstacle limitation surface contains severe infringements by terrain and vegetation based on runway take-off declared distance published in AIP	12/2001	ICAO Visit December 2001	Reduce Runway 09 take-off declared distance to reflect displaced runway end for curved departure path and publish in the AIP	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Obstacles (Annex 14, Vol. I, Chap. 4, 4.2.12 & 27)	Antigua and Barbuda, ST. JOHNS, V. C. Bird Intl	Vehicles on the public road at the east runway end are obstacles infringing on the Runway 07 take-off climb and Runway 25 approach and transitional obstacle limitation surfaces	07/2001	ICAO Visit July 2001	Reduce the runway declared distances or implement traffic control system on the public road	Antigua and Barbuda	TBD	U	State Letter sent		
Obstacles (Annex 14, Vol. I, Chap. 4, 4.2.12 & 27)	Saint Lucia, VIEUX FORT, Hewanorra Intl	Road and fence at east runway end are obstacles in the Runway 28 approach and transitional and Runway 10 take-off climb obstacle limitation surfaces	07/2001	ICAO Visit July 2001	Relocate fencing and road, implement road traffic control system, or displace east runway end and threshold and reduce the runway declared distances	Saint Lucia	TBD	U	State Letter sent		
Obstacles (Annex 14, Vol. I, Chap. 4, 4.2.27)	Saint Lucia, CASTRIES, George F. L. Charles Intl	Obstacles infringing on the Runway 09 take off climb obstacle limitation surface include fencing, roads, street lighting, terrain, buildings and vegetation	07/2001	ICAO Visit July 2001	Displace the Runway 09 end and reduce the corresponding runway declared distances	Saint Lucia	TBD	U	State Letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Obstacles (Annex 14, Vol. I, Chap. 4 - 4.2.27)	Honduras, TEGUCIGALPA, Intl Toncontín	Obstacles infringing on the take off climb surfaces include topography and vegetation, on Runway 19 also includes fencing and road	11/2001	ICAO Visit November 2001	Remove fencing and road at the southern end or reduce declared distances for Runway 19	Honduras	TBD	U	State Letter sent		
Obstacles (Annex 14, Vol. I, Chap. 4)	Haiti, CAP HAITIEN, Cap Haitien Intl	Obstacles exist in the approach, take-off and transitional obstacle limitation surfaces	06/2000	ICAO Visit June 2000	Eliminate obstacles	Haiti	TBD	U	3 - State Letter sent		
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4)	El Salvador, SAN SALVADOR, El Salvador Intl	Excessive rubber deposit on runway surface resulting in poor friction characteristics - Ref. Annex 14, Vol. I, Section 9.4.10	2000	ICAO Visit November 2000 IATA Report January 2001	Remove rubber from runway surface	El Salvador	TBD	U	2 - State Letter sent		
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4)	Haiti, PORT AU PRINCE, Port au Prince Intl	Runway surface pavement rubber deposit accumulation.	06/2000	ICAO Visit June 2000	Remove rubber	Haiti	TBD	U	2 - State Letter sent		
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4, 9.4.3, 4 & 10)	Trinidad & Tobago, PORT OF SPAIN, Piarco Intl	Runway pavement surface condition deficient. Excessive rubber deposits on the runway surface	2000	IATA Report October 2000 ICAO Visits March & December 2001	Upgrade runway pavement	Trinidad & Tobago	TBD	U	2 - State Letter sent		
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4 - 9.4.3 & 4)	St. Vincent and the Grenadines, KINGSTOWN, E. T. Joshua	Runway sides, taxiway and apron pavement surfaces severely deficient in many areas and FOD is present	12/2001	ICAO Visit December 2001	Maintain pavement surfaces clean of FOD and repair pavements	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4 - 9.4.3, 4 & 10)	Honduras, TEGUCIGALPA, Intl Toncontín	The surface of the runway has irregularities in several areas, with loose stones and rubber deposits	11/2001	ICAO Visit November 2001	Remove loose stones through continuous monitoring, remove rubber and repair the runway pavement surface	Honduras	TBD	U	State Letter sent		
Pavement surface conditions (Annex 14, Vol. I, Chap. 9.4 - 9.4.3, 4 & 9)	Cuba, HABANA, José Martí International	The runway, taxiway and Terminal I apron surfaces are failing causing irregularities and FOD in large areas.	06/2001	ICAO Visit June 2001	To remove FOD through continuous monitoring and to repair the pavement surfaces	Cuba	TBD	U	State Letter sent		
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4, 9.4.3 & 4)	Saint Lucia, CASTRIES, George F. L. Charles Intl	Runway pavement surface severely deficient in many areas and FOD is present	07/2001	ICAO Visit July 2001	Maintain runway surface clean of FOD and upgrade the runway pavement	Saint Lucia	TBD	U	State Letter sent		
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4, 9.4.4)	Antigua and Barbuda, ST. JOHNS, V. C. Bird Intl	Runway pavement surface deficient at the runway ends due to aircraft turn-arounds	07/2001	ICAO Visit July 2001	Upgrade pavements at runway ends	Antigua and Barbuda	2003	U	State Letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Rescue and Fire Fighting (Annex 14, Vol. I, Chap. 9.1 - Stolport Manual 9.1.1 & 2)	St. Vincent and the Grenadines, MUSTIQUE, Mustique	No stolport emergency plan exists	12/2001	ICAO Visit December 2001	Prepare a stolport emergency plan	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Rescue and Fire Fighting (Annex 14, Vol. I, Chap. 9.2 - 9.2.3, 5 & 6)	St. Vincent and the Grenadines, KINGSTOWN, E. T. Joshua	Rescue and fire-fighting Category should be 7, minimum 6, for B727 operations	12/2001	ICAO Visit December 2001	Discontinue B727 operations or upgrade RFFS Category to 7, or 6 minimum	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Rescue and Fire Fighting (Annex 14, Vol. I, Chap. 9.2 - Stolport Manual 9.2.2 and Annex 14 Vol. I para. 9.2.29 & 30)	St. Vincent and the Grenadines, MUSTIQUE, Mustique	The present position of the rescue and fire-fighting vehicle on the western edge of the apron is remote from personnel and does not have direct access to the runway and Security personnel double up as RFFS personnel	12/2001	ICAO Visit December 2001	Relocate position of RFFS vehicle to be close to personnel and have direct access to the runway and specify security procedures in the case of an emergency	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Rescue and Fire Fighting (Annex 14, Vol. I, Chap. 9.2, 9.2.32 & 33)	Grenada, ST. GEORGES, Point Salines Intl	Present staff levels are considered inadequate for Category 9 with 7 plus a supervisor reported	05/2001	ICAO Visit May 2001	Staff levels should be increased to 9 plus supervisor for Category 9 and 3 vehicles	Grenada	TBD	U	State Letter sent		
Rescue and Fire Fighting Service and Airport Emergency Planning (Annex 14, Vol. I, Chap. 9.1 & 9.2 - 9.2.3)	Mexico, MONTERREY, Gral. Mariano Escobedo International	The rescue and fire fighting category is deficient for occasional operations of B747, An-124 and A330 and regular operations of B767.	09/2001	ICAO Visit September 2001	To elevate the RFFS category from 7 to 8	Mexico	TBD	U	State Letter sent		
Rescue and Fire Fighting Service and Airport Emergency Planning (Annex 14, Vol. I, Chap. 9.1 & 9.2)	Bahamas, FREEPORT, Grand Bahama Intl	No RFFS facility with direct access to the runway is provided as required in Annex 14, Vol. I Section 9.2.19, 22, 25 & 26)	10/2000	ICAO Visit October 2000	Provide a RFFS facility with direct access to the runway	Bahamas	31/01/02	U	1 - State Letter sent		
Rescue and Fire Fighting Service and Airport Emergency Planning (Annex 14, Vol. I, Chap. 9.1 & 9.2)	Bahamas, FREEPORT, Grand Bahama Intl	Insufficient RFFS personnel is provided - Ref Annex 14 Vol. I Sections 9.2.32 & 33	10/2000	ICAO Visit October 2000	Provide more RFFS personnel	Bahamas	TBD	U	1 - State Letter sent		
Rescue and Fire Fighting Service and Airport Emergency Planning (Annex 14, Vol. I, Chap. 9.1 & 9.2)	Haiti, CAP HAITIEN, Cap Haitien Intl	RFFS deficient	06/2000	ICAO Visit June 2000	Upgrade RFFS	Haiti	TBD	U	1 - State Letter sent		
Rescue and Fire Fighting Service and Airport Emergency Planning (Annex 14, Vol. I, Chap. 9.1 & 9.2)	Haiti, CAP HAITIEN, Cap Haitien Intl	No AEP	06/2000	ICAO Visit June 2000	Prepare AEP and undertake emergency exercise	Haiti	TBD	U	1 - State Letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Rescue and Fire Fighting Service and Airport Emergency Planning (Annex 14, Vol. I, Chap. 9.1 & 9.2)	Trinidad and Tobago, PORT OF SPAIN, Piarco	RFFS facilities are inadequate- Ref Annex 14 Vol. I Sections 9.2.21, 22, 29 & 30	03/2001	ICAO Visits March & December 2001	Provide new RFFS facility at a location with direct access to the runway and ensuring minimum response times to both runway ends	Trinidad & Tobago	TBD	U	1 - State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4 - 3.4.1 & 7-11)	Belize, BELIZE CITY, Philip Goldson International	Runway end safety areas are not provided at both runway ends: •East runway end – vegetation, wet ground •West runway end – swamp	11/2001	ICAO Visit November 2001	Consider providing RESAs by not declaring stopways, clearing vegetation and strengthening the ground.	Belize	TBD	U	State Letter sent		
Runway end safety area (Annex 14, Vol. I, Chap. 3.4 - 3.4.1 and 7)	Mexico, CANCUN, Cancun International	The runway end safety area on the west end of the runway is not graded.	09/2001	ICAO Visit September 2001	To grade the runway end safety area.	Mexico	TBD	U	State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4 - 3.4.1)	Honduras, SAN PEDRO SULA, Intl. La Mesa	There are no runway end safety areas at both ends of the runway	11/2001	ICAO Visit November 2001	Provide RESAs by reducing stopways and declared distances	Honduras	TBD	U	State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4 - 3.4.1)	Honduras, TEGUCIGALPA, Intl Toncontin	There are no runway end safety areas at both ends of the runway	11/2001	ICAO Visit November 2001	Provide runway end safety areas by removing objects or reducing declared distances for the runway	Honduras	TBD	U	State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4 - 3.4.1)	St. Vincent and the Grenadines, KINGSTOWN, E. T. Joshua	No runway end safety area is provided at the east runway end	12/2001	ICAO Visit December 2001	Provide a runway end safety area by displacing the Runway 07 end and reducing the declared landing distance	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4 - 3.4.2 & 4)	St. Vincent and the Grenadines, KINGSTOWN, E. T. Joshua	Length and width of the runway end safety area at the west runway end is insufficient	12/2001	ICAO Visit December 2001	Correct the runway end safety area deficiencies by displacing the Runway 25 end and reducing the declared take-off distance	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4)	Bahamas, FREEPORT, Grand Bahama Intl	Northeast RESA width does not comply with Annex 14 Vol I Section 3.4.4	10/2000	ICAO Visit October 2000	Provide required RESA width	Bahamas	28/02/02	U	3 - State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4)	Cayman Islands, GRAND CAYMAN, Owen Roberts Intl	No runway end safety area is provided at the eastern runway end as specified in Annex 14 Vol I Section 3.4.1	10/2000	ICAO Visit October 2000	Provide runway end safety areas by extending the platform or reducing the declared distances	Cayman Islands	TBD	U	3 - State Letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4)	Jamaica, KINGSTON, Norman Manley Intl	No runway end safety areas are provided on both runway ends as specified in Annex 14 Vol I Section 3.4.1	10/2000	ICAO Visit October 2000	Provide runway end safety areas by extending the platform or reducing the declared distances	Jamaica	TBD	U	3 - State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4)	Jamaica, MONTEGO BAY, Sangster Intl	No runway end safety area is provided on the western runway end as specified in Annex 14 Vol I Section 3.4.1	10/2000	ICAO Visit October 2000	Provide runway end safety area by extending the platform or reducing the declared distances	Jamaica	TBD	U	3 - State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4, 3.4.1 & 7-10)	Antigua and Barbuda, ST. JOHNS, V. C. Bird Intl	Runway end safety areas are not provided at both runway ends: East runway end – fence, road & sea West runway end – fence & grading	07/2001	ICAO Visit July 2001	Provide east RESA by reducing the Runway 07 declared distances by approximately 90 m. Do not declare stopway, thereby bringing the runway strip end and RESA 60 m closer to the west runway end and prepare and grade the surface for a RESA.	Antigua and Barbuda	TBD	U	State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4, 3.4.1)	Cuba, SANTIAGO DE CUBA, Antonio Maceo	There are no runway end safety areas.	06/2001	ICAO Visit June 2001	To provide runway end safety areas possible through the reduction of declared distances.	Cuba	TBD	U	State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4, 3.4.1)	Saint Lucia, CASTRIES, George F. L. Charles Intl	No runway end safety areas are provided at both runway ends	07/2001	ICAO Visit July 2001	Reduce the aerodrome category to reference Code 2 and/or provide runway end safety areas by displacing the runway ends and reducing the declared distances for both runways	Saint Lucia	TBD	U	State Letter sent		
Runway End Safety Area (Annex 14, Vol. I, Chap. 3.4, 3.4.1)	Saint Lucia, VIEUX FORT, Hewanorra Intl	No runway end safety area is provided at east end	07/2001	ICAO Visit July 2001	Provide runway end safety area by reducing the declared distances for Runway 10	Saint Lucia	TBD	U	State Letter sent		
Runway end safety area (Annex 14, Vol. I, Chap. 3.4 - 3.4.1, 6 and 7)	Mexico, GUADALAJARA, Don Miguel Hidalgo y Costilla International	The runway end safety areas on both ends of runway 02/20 have vegetation and are not graded.	09/2001	ICAO Visit September 2001	To remove vegetation and to grade runway end safety areas	Mexico	TBD	U	State Letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Runway end safety area (Annex 14, Vol.I, Chap. 3.4 - 3.4.1, 6 and 7)	Mexico, MONTERREY, Gral. Mariano Escobedo International	The runway end safety area on the south end of runway 16/34 has vegetation and it is not graded.	09/2001	ICAO Visit September 2001	To remove vegetation and to grade the runway end safety area.	Mexico	TBD	U	State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3 - 3.3.2 & 6)	Guatemala, GUATEMALA, La Aurora	Runway end light pits and the disused localiser bases/bolts are objects in the runway strip at both runway ends	05/2001	ICAO Visit May 2001	Cover the lighting pits with aircraft load bearing covers Remove the disused localiser bases/bolts	Guatemala	TBD	U	State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3 - 3.3.2)	Belize, BELIZE CITY, Philip Goldson International	Runway strip length at western runway end is insufficient	11/2001	ICAO Visit November 2001	Do not declare stopway for Runway 25	Belize	TBD	U	State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3 - 3.3.2)	Honduras, SAN PEDRO SULA, Intl. La Mesa	Runway Strip length is insufficient	11/2001	ICAO Visit November 2001	Provide runway strip by Honduras reducing declared stopways		TBD	U	State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3 - 3.3.2)	Honduras, TEGUCIGALPA, Intl in the southern part of the runway Toncontín	Runway strip length is insufficient	11/2001	ICAO Visit November 2001	Increase runway strip length by removing objects or reducing declared distances for Runway 19	Honduras	TBD	U	State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3 - 3.3.2)	St. Vincent and the Grenadines, KINGSTOWN, E. T. Joshua	No runway strip is provided at the east runway end	12/2001	ICAO Visit December 2001	Provide the runway strip by displacing the Runway 07 end and reducing the declared landing distance	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3 - 3.3.5)	Honduras, TEGUCIGALPA, Intl Toncontín	Runway strip width is insufficient at both ends of the runway	11/2001	ICAO Visit November 2001	Increase runway strip width by removing objects or reducing runway declared distances	Honduras	TBD	U	State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3 - Stolport Manual 3.3.2.2)	St. Vincent and the Grenadines, MUSTIQUE, Mustique	Runway strip length at east runway end is insufficient	12/2001	ICAO Visit December 2001	Displace Runway 09 end and reduce the corresponding landing and take-off declared distances	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3)	Bahamas, FREEPORT, Grand Bahama Intl	Runway strip width at northeast runway end does not comply with Annex 14, Vol. I Section 3.3.3	10/2000	ICAO Visit October 2000	Widen runway strip	Bahamas	31/08/01	U	3 - State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3)	Cayman Islands, GRAND CAYMAN, Owen Roberts Intl	Runway strip length at the eastern runway end and does not comply with Annex 14 Vol. I Section 3.3.2	10/2000	ICAO Visit October 2000	Extend the runway strip or reduce declared distances	Cayman Islands	TBD	U	3 - State letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Runway Strip (Annex 14, Vol. I, Chap. 3.3)	Jamaica, KINGSTON, Norman Manley Intl	Runway strip extension length and width at both runway ends is less than specified in Annex 14 Vol. I Sections 3.3.2 and 4	10/2000	ICAO Visit October 2000	Extend and widen runway strip or reduce runway declared distances	Jamaica	TBD	U	3 - State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3)	Jamaica, MONTEGO BAY, Sangster Intl	Runway strip extension length on west runway end and width at both runway ends is less than specified in Annex 14 Vol. I Sections 3.3.2, 3 and 4	10/2000	ICAO Visit October 2000	Extend and widen runway strip or reduce runway declared distances	Jamaica	TBD	U	3 - State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3)	Jamaica, MONTEGO BAY, Sangster Intl	Runway graded strip contains ponds and does not comply with the specifications in Annex 14 Vol. I Section 3.3.16	10/2000	ICAO Visit October 2000	Remove ponds in runway strip	Jamaica	TBD	U	3 - State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3)	Saint Lucia, CASTRIES, George F. L. Charles Intl	Runway strip length at east end is insufficient	07/2001	ICAO Visit July 2001	Displace Runway 09 end and reduce the corresponding take-off declared distances	Saint Lucia	TBD	U	State Letter sent		
Runway Strip (Annex 14, Vol. I, Chap. 3.3, 3.3.2)	Saint Lucia, VIEUX FORT, Hewanorra Intl	Runway strip length at east end insufficient	07/2001	ICAO Visit July 2001	Do not declare stopway at east end	Saint Lucia	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap 5 - 5.2.2.4 & 5)	Honduras, SAN PEDRO SULA, Intl. La Mesa	Runway designation markings at both ends are incorrect because they indicate the presence of two parallel runways	11/2001	ICAO Visit November 2001	Correct the runway designation markings	Honduras	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap 5 - 5.2.8.1)	Honduras, SAN PEDRO SULA, Intl. La Mesa	Markings on the parallel taxiway are incorrect because are for a runway	11/2001	ICAO Visit November 2001	Correct the centreline marking in the parallel taxiway and remove the runway markings	Honduras	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap 5 - 7.3.1)	Honduras, SAN PEDRO SULA, Intl. La Mesa	Runway 04 has incorrect chevron markings in the area located before the threshold	11/2001	ICAO Visit November 2001	Remove the chevron markings in the area located before the threshold on Runway 04	Honduras	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap 5 - 9.4.21)	Honduras, SAN PEDRO SULA, Intl. La Mesa	Runway markings are deficient	11/2001	ICAO Visit November 2001	Repaint runway markings	Honduras	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5 - 5.2.4.10)	Belize, BELIZE CITY, Philip Goldson International	Displaced runway threshold markings are still visible at both runway ends.	11/2001	ICAO Visit November 2001	Remove runway displaced threshold markings	Belize	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5 - 5.2.8.1 & 3)	Barbados, BRIDGETOWN, Grantley Adams Intl	Taxiway centreline marking to guide aircraft turning around at the east runway end is not provided	12/2001	ICAO Visit December 2001	Provide turn-around guidance centreline markings at the runway end	Barbados	TBD	U	State Letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Visual Aids (Annex 14, Vol. I, Chap. 5 - 5.2.8.3)	Belize, BELIZE CITY, Philip Goldson International	Taxiway centreline markings to guide aircraft turning around at east runway end are not provided	11/2001	ICAO Visit November 2001	Provide turn-around guidance centreline markings at east runway end	Belize	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5 - 9.4.21)	Barbados, BRIDGETOWN, Grantley Adams Intl	Runway centreline markings are faded in the Runway 09 touchdown zone	12/2001	ICAO Visit December 2001	Re-paint runway markings	Barbados	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5 - 9.4.21)	Belize, BELIZE CITY, Philip Goldson International	PAPIs not working and runway lighting intensity reported to be deficient	11/2001	ICAO Visit November 2001	Repair PAPIs and runway lighting system	Belize	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5 - 9.4.21)	St. Vincent and the Grenadines, KINGSTOWN, E. T. Joshua	Runway 07 designation and threshold markings are faded	12/2001	ICAO Visit December 2001	Re-paint runway markings	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5 - Stolport Manual 5.3.1)	St. Vincent and the Grenadines, MUSTIQUE, Mustique	No stolport designation marking is provided at the Runway 09 threshold	12/2001	ICAO Visit December 2001	Provide stolport designation marking	St. Vincent and the Grenadines	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP 1)	Trinidad and Tobago, PORT OF SPAIN, Piarco Intl	Runway markings faded and non-standard	03/2001	ICAO Visits March & December 2001	Correct runway markings	Trinidad & Tobago	TBD	U	1 - State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP 1)	Trinidad and Tobago, PORT OF SPAIN, Piarco Intl	No displaced runway 10 end and displaced runway 28 threshold lighting is provided	03/2001	ICAO Visits March & December 2001	Install required runway lighting	Trinidad & Tobago	TBD	U	1 - State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5, 5.1.1.5)	Saint Lucia, VIEUX FORT, Hewanorra Intl	Wind direction indicator is not illuminated	07/2001	ICAO Visit July 2001	Provide illuminated wind indicator	Saint Lucia	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5, 5.2.8.1)	Antigua and Barbuda, ST. JOHNS, V. C. Bird Intl	Taxiway centreline markings to guide aircraft turning around at runway ends are not provided	07/2001	ICAO Visit July 2001	Provide turn-around guidance centreline markings at runway ends	Antigua and Barbuda	31/12/02	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5, 5.2.8.3)	Saint Lucia, VIEUX FORT, Hewanorra Intl	Taxiway centreline markings for aircraft turn-around at runway ends are not provided	07/2001	ICAO Visit July 2001	Provide taxiing guidance centreline markings for aircraft turn-arounds at both runway ends	Saint Lucia	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5, 5.2.9.1)	Saint Lucia, CASTRIES, George F. L. Charles Intl	Runway holding position marking is not provided on east taxiway and is not full width on west taxiway	07/2001	ICAO Visit July 2001	Provide runway holding markings on both taxiways	Saint Lucia	TBD	U	State Letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Visual Aids (Annex 14, Vol. I, Chap. 5, 5.3.5.1 & 3 and ANP FASID Table AOP 1)	Saint Lucia, VIEUX FORT, Hewanorra Intl	Runway 28 PAPI is not operational due to lack of electrical power supply	07/2001	ICAO Visit July 2001	Provide PAPI for Runway 28	Saint Lucia	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5, 7.1.1)	Saint Lucia, VIEUX FORT, Hewanorra Intl	No closed runway and taxiway markings are provided	07/2001	ICAO Visit July 2001	Provide closed runway and taxiway markings	Saint Lucia	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5, 9.4.21 and ANP, Table AOP1)	Mexico, MONTERREY, Gral. Mariano Escobedo International	The centreline marking on Runway 11/29 is deficient	09/2001	ICAO Visit September 2001	To repaint the runway centreline markings	Mexico	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5, 9.4.21)	Antigua and Barbuda, ST. JOHNS, V. C. Bird Intl	Runway centreline and side strip markings are faded	07/2001	ICAO Visit July 2001	Re-paint runway markings	Antigua and Barbuda	31/01/02	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Chap. 5, 9.4.21)	Antigua and Barbuda, ST. JOHNS, V. C. Bird Intl	Runway 07 approach lighting system reported to be 50 % serviceable	07/2001	ICAO Visit July 2001	Repair approach lighting system	Antigua and Barbuda	30/04/02	U	State Letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Obstacles (Annex 14, Vol. I, Chap. 4)	Colombia, SANTAFE DE BOGOTA/Eldorado Airport	There are trees at the approach zone of 13R end (South RWY)	July 2001	Detected during mission conducted by ICAO Secretariat	The trees should be cut	Colombia	TBD	U	State Letter sent		
Obstacles (Annex 14, Vol. I, Chap. 4)	Colombia, SANTAFE DE BOGOTA/Eldorado Airport	There are trees at the approach zone of 13R end (North RWY)	July 2001	Detected during mission conducted by ICAO Secretariat	The trees should be cut	Colombia	TBD	U	State Letter sent		
Obstacles (Annex 14, Vol. I, Chap. 4)	Paraguay, Aerodrome of Asuncion/Silvio Pettirossi	Open trench (0.60 m wide & 0.75 m deep) and cable boxes of concrete open near the 20 end	Sep-2001	Detected during mission conducted by ICAO Secretariat	Cover or eliminate objects from the RWY strip	Paraguay	2003	U	State Letter sent		
Obstacles (Annex 14, Vol. I, Chap. 4)	Peru, LIMA-CALLAO/Jorge Chávez Intl.	Pieces of rock, open trenches for cable installation and boxes of concrete at stopway zone of the 33 end	Nov-2001	Detected during mission conducted by ICAO Secretariat	Remove pieces of rock, close the open trenches and remove boxes of concrete	Peru	TBD	U	State Letter sent		
Rescue and Fire Fighting Service (Annex 14, Vol. I, Chap. 9)	Peru, LIMA-CALLAO/Jorge Chávez Intl.	There is a door at the parking area of the fire-fighting trucks	Nov-2001	Detected during mission conducted by ICAO Secretariat	Maintain the fire-fighting trucks ready to leave without any type of door or obstacle	Peru	TBD	U	State Letter sent		
Rescue and Fire Fighting Service and airport emergency plan (Annex 14, Vol. I, Chap.9)	Venezuela, BARCELONA, Barcelona Intl. Airport	There is currently no emergency plan available	2001	IATA Report of the Venezuela Airport Operational Assessment, March 05-08, 2001	Develop emergency plan and disseminate it among the aviation community	Venezuela	TBD	U	State Letter sent		
RWY surface conditions (Annex 14, Vol. I, Chap. 3)	Venezuela, MARGARITA/Del Caribe Aerodrome	Slippery runway surface at RWY 09, in the first 1000 m	1996	IFALPA CAR/SAM Meeting, 98REG049, Buenos Aires, 9/10 Dec. 1997	Improve the RWY surface with grooving	Venezuela	TBD	U	State Letter sent	ICAO Regional Office	
RWY surface conditions (Annex 14, Vol. I, Chap. 3)	Colombia, SAN ANDRES/Sesquicentenario	Uneven RWY surface with numerous large puddles after rainfall	May-02	IFALPA Annex 19 Part 3 19-3-SAM-1	Conduct functional & structural evaluation of the pavements and correct pavement surface	Colombia	TBD	U	State Letter sent		
RWY surface conditions (Annex 14, Vol. I, Chap. 3)	Paraguay, Aerodrome of Asuncion/Silvio Pettirossi	The main RWY pavement is in process of deterioration	1997	Detected during mission conducted by ICAO Secretariat	The repair in both ends: 1000m RWY02 and 600m RWY 20 was finalized, and to this date the overlaying of the 100% of the runway is in process. An estimate of 60 working days is estimated for the finalization of the second phase of 1.700m of runway.	Paraguay	2003	U	State Letter sent	ICAO Regional Office	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
RWY surface conditions (Annex 14, Vol. I, Chap. 3)	Venezuela, CARACAS/Maiquetia Aerodrome	Heavy rubber deposits on the runway 09/27	2001	IATA Report of the Venezuela Airport Operational Assessment, March 05-08, 2001	Remove the rubber deposits	Venezuela	TBD	U	State Letter sent		
RWY surface conditions (Annex 14, Vol. I, Chap. 3)	Venezuela, CARACAS/Maiquetia Aerodrome	Overall condition of runway 08/26 is very poor. All types of cracks, potholes, rutting, vegetation growth, ravelling do exist, runway to rough	2001	IATA Report of the Venezuela Airport Operational Assessment, March 05-08, 2001	Reconstruct runway 08/26 immediately	Venezuela	TBD	U	State Letter sent	ICAO Regional Office	
RWY surface conditions (Annex 14, Vol. I, Chap. 3)	Colombia, RIO NEGRO/Jose Maria Cordoba Airport	Rubber contamination at RWY 36	July 2001	Detected during mission conducted by ICAO Secretariat	Remove the rubber deposit at RWY 36	Colombia	TBD	U	State Letter sent		
RWY surface conditions (Annex 14, Vol. I, Chap. 3)	Colombia, SANTAFE DE BOGOTA/Eldorado Airport	Heavy rubber contamination at RWY 12 and 30	1996	IFALPA CAR/SAM Meeting, 98REG049, Buenos Aires, 9/10 Dec. 1997	Remove the rubber deposit	Colombia	TBD	U	State Letter sent	ICAO Regional Office	
Visual aids (Annex 14, Vol. I, Ch. 5 and Ch.6)	Bolivia, SANTA CRUZ/Viru Viru	RWY centerline marks are faded	Sep-2001	Detected during mission conducted by ICAO Secretariat	Repaint RWY centerline marks	Bolivia	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Ch. 5)	Uruguay, MONTEVIDEO/Carra sco Aerodrome	No PAPI at RWY 24	1996	IFALPA CAR/SAM Meeting, 98REG049, Buenos Aires, 9/10 Dec. 1997	Implement the facility	Uruguay	TBD	U	State Letter sent	ICAO Regional Office	
Visual aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP)	Venezuela, CARACAS/Maiquetia Aerodrome	There are no windsocks located near runway 27L or 26	2001	IATA Report of the Venezuela Airport Operational Assessment, March 05-08, 2001	Install a windsock for runways 27L and 26	Venezuela	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP)	Venezuela, MARGARITA, Margarita Intl. Airport	Threshold and runway designation markings are faded	2001	IATA Report of the Venezuela Airport Operational Assessment, March 05-08, 2001	Threshold and runway designation markings should be repainted	Venezuela	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP)	Venezuela, MARGARITA, Margarita Intl. Airport	No windsock is located at runway 27	2001	IATA Report of the Venezuela Airport Operational Assessment, March 05-08, 2001	Install a windsock for the runway 27	Venezuela	Venezuela	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP)	Venezuela, VALENCIA/Valencia Intl. Airport	There is no windsock located near runway 28	2001	IATA Report of the Venezuela Airport Operational Assessment, March 05-08, 2001	Install a windsock for runway 28	Venezuela	TBD	U	State Letter sent		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Visual aids (Annex 14, Vol. I, Chap. 5)	Colombia, BARRANQUILLA/Ernesto Cortissoz Airport	PAPI lights RWY 22 unserviceable	May-02	IFALPA Annex 19 Part 3 19-3-SAM-1	Replace PAPI lights RWY 22	Colombia	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5)	Colombia, BARRANQUILLA/Ernesto Cortissoz Airport	No lights for windsock	May-02	IFALPA Annex 19 Part 3 19-3-SAM-1	Provide lights for windsock	Colombia	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5)	Colombia, CALI/Alfonso Bonilla Aragon	RWY 19 PAPI out of service	May-02	IFALPA Annex 19 Part 3 19-3-SAM-1	Repair RWY 19 PAPI	Colombia	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5)	Colombia, CALI/Alfonso Bonilla Aragon	RWY 01 PAPI out of service	May-02	IFALPA Annex 19 Part 3 19-3-SAM-1	Repair RWY 19 PAPI	Colombia	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5)	Colombia, CALI/Alfonso Bonilla Aragon	RWY and TWY markings need repainting	May-02	IFALPA Annex 19 Part 3 19-3-SAM-1	Repaint RWY and TWY markings	Colombia	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5)	Colombia, SAN ANDRES/Sesquicentenario	PAPI lights not calibrated	May-02	IFALPA Annex 19 Part 3 19-3-SAM-1	Calibrate PAPI lights	Colombia	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5)	Colombia, SAN ANDRES/Sesquicentenario	No lights for windsocks	May-02	IFALPA Annex 19 Part 3 19-3-SAM-1	Provide lights for windsocks	Colombia	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5)	Colombia, SAN ANDRES/Sesquicentenario	40% of RWY edge lights are missing	May-02	IFALPA Annex 19 Part 3 19-3-SAM-1	Provide lights for RWY edge	Colombia	TBD	U	State Letter sent		
Visual aids (Annex 14, Vol. I, Chap. 5)	Colombia, SAN ANDRES/Sesquicentenario	RWY markings need repainting	May-02	IFALPA Annex 19 Part 3 19-3-SAM-1	Repaint RWY markings	Colombia	TBD	U	State Letter sent		
Visual Aids (Annex 14, Vol. I, Ch. 5)	Venezuela, MARACAIBO/La Chinita Aerodrome	No PAPI at RWY 20	1996	IFALPA CAR/SAM Meeting, 98REG049, Buenos Aires, 9/10 Dec. 1997	Implement the facility	Venezuela	TBD	U	State Letter sent		SAM
Visual Aids (Annex 14, Vol. I, Ch. 5)	Venezuela, CARACAS/Maiquetia Aerodrome	PAPI on RWY 09 unreliable	1996	IFALPA CAR/SAM Meeting, 98REG049, Buenos Aires, 9/10 Dec. 1997	Verify	Venezuela	TBD	U	State Letter sent		SAM

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Curaçao ACC Air/Ground Communications in order to give the Area Control Services	Netherlands Antilles Curaçao FIR	IATA Reports indicated difficulties to communicate in VHF with the Curaçao ACC in the NW part of the Curaçao FIR during RNAV trials in the CAR/SAM Regions	May 2001	Second Meeting/Workshop of ATM Authorities and Planners Lima, May 2001	To supply an improved coverage of the air-ground communications of the Curaçao ACC i.e. HF equipment, in the Northwest part of the Curaçao FIR according to Annex 11	DCA Netherlands Antilles	2003	U	IATA will carry out a survey on this deficiency.	NACC/IATA	
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	COCESNA	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	Oct. 95	GREPECAS/5	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks" b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	COCESNA	2003	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	Costa Rica	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	10/95	GREPECAS/5	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks" b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	CAA Costa Rica	2003	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	El Salvador	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	Oct. 95	GREPECAS/5	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks" b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	CAA El Salvador	2003	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	Guatemala	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	Oct. 95	GREPECAS/5	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks" b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	CAA Guatemala	2003	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	Honduras	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	Oct. 95	GREPECAS/5	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks" b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	CAA Honduras	2003	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	Mexico	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	Oct. 95	In 1998, Mexico instituted a programme to review and update the study programme for air traffic controllers and therefore, requires from candidates a certificate of English proficiency at an advanced level of 80%. The ATS providing agency has established a programme to encourage ATS personnel to improve their level of English through advanced courses at recognised institutions, offering the possibility of covering the cost of said courses	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks" b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	CAA Mexico	2003	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	Nicaragua	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	Oct. 95	GREPECAS/5	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks" b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	CAA Nicaragua	2003	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	
Provision of air traffic control service CAR/SAM/3 Rec. 5/33	Belize	Some segments of ATS routes of the FIR do not count yet with ATS at the required levels.	Sept./94	GREPECAS/4, Report IATA Conc. 4/10, Appendix 5	Provide ATS and improve VHF COM in the area in question.	CAA Belize	2003	U	IATA will carry out a survey on this deficiency.	NACC/IATA	
Provision of air traffic control service CAR/SAM/3 Rec. 5/33	Guatemala	Some segments of ATS routes of the FIR do not count yet with ATS at the required levels.	Sept./94	GREPECAS/4, Report IATA Conc. 4/10, Appendix 5	Provide ATS and improve VHF COM in the area in question.	CAA Guatemala	2003	U	IATA will carry out a survey on this deficiency.	NACC/IATA	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Provision of air traffic control service CAR/SAM/3 Rec. 5/33	Honduras	Some segments of ATS routes of the FIR do not count yet with ATS at the required levels.	Sept./94	GREPECAS/4, Report IATA Conc. 4/10, Appendix 5	Provide ATS and improve VHF COM in the area in question.	CAA Honduras	2003	U	IATA will carry out a survey on this deficiency.	NACC/IATA	
Provision of air traffic control service CAR/SAM/3 Rec. 5/33	Nicaragua	Some segments of ATS routes of the FIR do not count yet with ATS at the required levels.	Sept./94	GREPECAS/4, Report IATA Conc. 4/10, Appendix 5	Provide ATS and improve VHF COM in the area in question.	CAA Nicaragua	2003	U	IATA will carry out a survey on this deficiency.	NACC/IATA	
Use of the aeronautical phraseology	Anguilla	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA OECS	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Antigua and Barbuda	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA OECS	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Aruba	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Aruba	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Bahamas	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Bahamas	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Barbados	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Barbados	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Belize	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Belize	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	British Virgin Islands	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA UK	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Use of the aeronautical phraseology	Cayman Islands	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Cayman Islands	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	COCESNA	In general, the use of aeronautical phraseology in Spanish and/or English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	COCESNA	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Costa Rica	In general, the use of aeronautical phraseology in Spanish and/or English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Costa Rica	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Dominica	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA OECS	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Dominican Republic	In general, the use of aeronautical phraseology in Spanish and/or English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Dominican Republic	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	El Salvador	In general, the use of aeronautical phraseology in Spanish and/or English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA El Salvador	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Grenada	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA OECS	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Guatemala	In general, the use of aeronautical phraseology in Spanish and/or English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Guatemala	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Use of the aeronautical phraseology	Haiti	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	OFNAC Haiti	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Honduras	In general, the use of aeronautical phraseology in Spanish and/or English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Honduras	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Jamaica	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Jamaica	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Mexico	In general, the use of aeronautical phraseology in Spanish and/or English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	Although no document has been approved containing a standard phraseology for adoption by the States in the Region, Mexico has developed a Manual on Aeronautical Phraseology for use by ATS personnel and pilots. This document is constantly being reviewed.	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Mexico / SENEAM	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Montserrat	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA UK	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Netherlands Antilles	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Netherlands Antilles	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Nicaragua	In general, the use of aeronautical phraseology in Spanish and/or English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Nicaragua	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Saint Kitts and Nevis	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Saint Kitts	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Use of the aeronautical phraseology	Saint Lucia	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA OECS	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Saint Vincent and the Grenadines	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA OECS	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Trinidad and Tobago	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Trinidad and Tobago	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Turks and Caicos	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents.	Sept./2000	ATS/SG/9	Continuous training and supervision in the use of aeronautical phraseology is required.	CAA Turks and Caicos	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	

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REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Argentina	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	A continuous English language training plan is being implemented for air traffic controllers. Estimated date of implementation: first half of 2003. The following measures have been taken: 1) Incorporate personnel with a good level of colloquial English. 2) Incorporation of a CTA course, 1 month intensive colloquial English in a language center. 3) Implementation of a Training, Improvement of the English language for ATCOs (PCPIIC).	CRA Argentina	2003	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Bolivia	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	Through communication No. DGAC-0-1-176 dated 4 February 2002, the Bolivian administration informed SAM Office that the following corrective actions were taken: a) course on ATS procedures, English phraseology, in charge of instructors from FAA, USA (Dec 2001/Feb 2002); b) as of 2002 it has been established as essential requirement for CTA postulants, knowledge of the English language, with presentation of certificate and exams; c) during 2001 updating courses for CTAs were developed.	CAD Bolivia	2000	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Brazil	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	Brazil has taken following measures to fulfill this requirement: 1) Publication of a new phraseology chapter in the Brazilian Document on Rules of the Air and Air Traffic Services, based on Doc 4444 and on the ICAO Manual on Radiotelephony (Doc 9432; 2) Through an English phraseology course, Brazil is implementing a quality improvement programme for aeronautical phraseology of ATCs. 3) ATC simulators practices are being carried out in order to solve this deficiency (ATM Committee, July 2001).	CERNAI Brazil	2000	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Chile	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	By letter dated 7 May received by the SAM Regional Office, the CAD informed that there is an Improvement Programme for the English Language for air traffic controllers. The first state of the programme will cover 98 ATCs from most important ATS units who use language. Second State, 2003, shall cover the rest of ATS units.	CAD Chile	2003	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Colombia	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	During mission L-0111 by RO/ATM/SAR SAM, on the need for a regular training programme on phraseology and English conversation, it was suggested measure ATM/9 (Mission L-0111, April 2001).	UAEAC Colombia	2000	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Ecuador	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	During mission L-0169 by RO/ATM/SAR SAM, on the need for a regular training programme on phraseology and English conversation, it was suggested measure ATM/7 (Mission L-0112, November 2001)	CAD Ecuador	2000	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	French Guyana	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	There is a National Programme in place that consists if the following: 1) Define the minimum average English proficiency level; 2) Assess the level of each ATC controller and after, 3) Definition of an English language programme in three areas: a) Phraseology, b) Aeronautical English, and c) General English (25th E/CAR IWG Meeting, May 2001).	CAD French Guyana	2000	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Panama	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	During mission L-0169 by RO/ATM/SAR SAM, on the need for a regular training programme on aeronautical phraseology and English conversation, was indicated (Mission L-0169, November 2001)	CAD Panama	2000	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Paraguay	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	The Paraguayan Administration has initiated a programme for all ATC personnel through fellowships in private and governmental centres in the period 2000/2001, which was suspended due to lack of funds. These courses have been reinitiated in 2002, using INAC resources. The first level finished in November 2002.	During mission L-0112 by RO/ATM/SAR SAM, on the need for a regular training programme on aeronautical phraseology and English conversation, it was suggested measure ATM/10 (Mission L-0112, September 2001). The training process for the English language proficiency has been initiated since 2000 and is programmed to finalize in 2005. With this not only a high level use of phraseology is expected but also a wide practical knowledge of this language.	DINAC Paraguay	2005	U	Follow-up	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Peru	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	The Peruvian administration has continued with the programme established to reach the advanced English language level. All personnel will be evaluated on December 2002 to correct deficiencies. The personnel that reaches an advanced level will participate in permanent conversation workshops. Completion date: February 2004	CAD Peru	2004	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Uruguay	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	Through fax No 025/02 dated 20 March 2002, the Uruguayan administration requested SAM Office to study the possibility to reinitiate improvement English courses for controllers, planning aeronautical phraseology courses for controllers with bilingual requirements in Spanish and English.	DINACIA Uruguay	2002	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services, CAR/SAM/3 Rec. 5/35	Venezuela	The proficiency in the English language of some ATC units is below the desired level and could be a contributory factor for the occurrence of incidents and/or aeronautical accidents.	Oct/1995	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks". b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	The training programme in English language was implemented from 1996 and continues. Several Air traffic controllers have been sent to Miami in order to take radar and English courses. The percentage of trained personnel is of 84%. It is expected to have more courses during 2002. (ATM/1 Committee, July 2001)	DGTA Venezuela	03/02	U	Referred to PAAST. Problem of such magnitude that PAAST could not assist	NACC/SAM	
Use of the aeronautical phraseology	Argentina	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	The Argentinean Administration emphasized training to air traffic controllers on the correct use of ICAO aeronautical phraseology. The verification of a correct use was initiated through tapes listening, and also a high level of non-compliance by crews was also detected. A Training, Improvement and Continuous Updating Plan (PCPAC) has been implemented	CRA Argentina	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Use of the aeronautical phraseology	Bolivia	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC, and similar courses are programmed during 2002; and recommendations were issued to ATC units on the use of aeronautical phraseology and close supervision by the responsible persons.	CAD Bolivia	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Brazil	In general, the use of aeronautical phraseology in English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC. Brazil is implementing, through an English phraseology course, a quality improvement programme for aeronautical phraseology of air traffic controllers. Also, ATC simulators practices are being carried out in order to solve this deficiency (ATM/I Committee, July 2001).	CERNAI Brazil	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Chile	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	CAD Chile	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Colombia	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	UAEAC Colombia	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Use of the aeronautical phraseology	Ecuador	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	CAD Ecuador	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	French Guyana	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	The national phraseology (English and French) has been reviewed by a Working Group in France. The result is the publication of a new official phraseology (English and French); this phraseology has been distributed to each ATC who has received complementary training (25th E/CAR IWG/May 2001).	CAD French Guyana	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Guyana	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	CAD Guyana	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Panama	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	CAD Panama	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Paraguay	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	The Paraguayan Administration has initiated a training programme for all the ATCOs through fellowships in private and official governmental centres during 2000/2001, which was suspended due to lack of budgetary availability. These courses have been reinitiated in 2002, using INAC's own financial resources	The training process is expected to be finalized by 2005. The aim of this objective is not only to obtain a high command of the English Aeronautical phraseology, but also a practical wide knowledge of this language.	DINAC Paraguay	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Use of the aeronautical phraseology	Peru	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	The Manual on Aeronautical phraseology is being revised, emphasizing in Spanish phraseology. A voice recording random reviewing programme has been initiated, to help in identifying the misuse of aeronautical phraseology. Completion date: May 2003.	CAD Peru	2003	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Suriname	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	CAD Suriname	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Uruguay	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	DINACIA Uruguay	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	
Use of the aeronautical phraseology	Venezuela	In general, the use of aeronautical phraseology in Spanish and English does not meet the required levels and it is a relevant factor with regard to ATS incidents	Sep/2000	Continuous training and supervision in the use of aeronautical phraseology is required.	Aeronautical phraseology will have to be widely disseminated so it may be studied, learnt and well applied by ATC.	DGTA Venezuela	TBD	U	ANC did not consider request for SIP. Ongoing	NACC/SAM	

OTHER SPECIFIC DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE CNS FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
VHF/HF-AMS Communications Plan (Table CNS 2A) TTZP Piarco HF Voice	Trinidad and Tobago/CAR-A(3), CAR-B(1), SAM-2(2)	Several reports of pilots indicated that Piarco ACC was not available via HF frequencies. The Piarco centre has not implemented all required frequency, so it does not have 24 hours a day communication availability.	03/01	Reported by the CAR/SAM AIS/ATM/CNS 02/00 Informal Meeting and examined by the 26th Eastern Caribbean Informal Working Group.	To implement transmission and reception facilities in all HF frequencies required. New HF equipment and radio operation staff are contemplated as a provisional solution. It has been agreed that airlines contact Piarco ACC through ARINC's HF radio facilities in New York. It is suggested that once the temporary solution is implemented, the priority "U" be changed to priority "A".	CAA Trinidad and Tobago.	30/09/02	U	Deficiency verified. State Letter sent	NACC RO	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE CNS FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Aeronautical Mobile Service Plan. Table CNS 1A. Lack of HF communications coverage in the Ezeiza FIR, Oceanic Sector	Argentina	Deficiencies in the HF communications have been identified in the oceanic part of the Ezeiza FIR.	09/1994	GREPECAS/4. IATA Report.	Argentina informed at ATM/CNS/SG/2 meeting that, within the modernization process of equipment for Ezeiza FIR, the acquisition of HF equipment has been taken into consideration	Argentina CAA	12/02	U			SAM Regional Office
Aeronautical Mobile Service Plan. Table CNS 1A. Lack of VHF communications in the Maiquetia FIR	Venezuela	Due to the lack of VHF coverage in some segments of ATS routes crossing the Maiquetia FIR, ATS is not yet provided in the required level	05/2001	AP/ATM/2 meeting.	A VHF communications system was acquired for installation at San Carlos de Río Negro and Santa Elena de Uairen, to complete the coverage in the South area of Maiquetia FIR.	Venezuela CAA	12/02	U	CAA commitment to correct by September 2001		
AFTN circuits Cayenne (T) - Brazil (M)	Brazil/French Guiana (France)	This AFTN channel was implemented as part of a speech plus data circuit, and currently this channel presents a low availability	19/07/01	The deficiency was presented by France during the ATM/CNS/SG/1 meeting and supported by Brazil	Implementation of the circuit through the REDDIG.	Brazil and France CAAs	03/03	U	It is expected that REDDIG will be implemented in October 2002 correcting this deficiency. ASB should follow up the digital network implementation process		SAM Regional Office
ATS speech circuits plan. Table CMS 1C. Belem ACC/Paramaribo ACC	Brazil/Suriname	This circuit was not yet implemented. Its implementation was planned as part of the ATS speech switched network	08/1989	SAM 35/89 ATS/COM Informal Meeting	The implementation of this circuit will be made once the REDDIG network is implemented	SAM CAAs and RLA/98/019 Project	March 2003	U	It is expected that REDDIG will be implemented in March 2003 correcting this deficiency. ASB should follow up the digital network implementation process		Ongoing

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE CNS FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
ATS speech circuits plan. Table CNS 1C. Rochambeau ACC/Belem ACC	Brazil/French Guiana (France)	This voice channel was implemented as part of a speech plus data circuit linking Rochambeau and Brasilia. The ATS speech circuit Rochambeau ACC/Belem ACC is a switched circuit using the switching services of the Brasilia voice switch. Currently the voice communication service is deficient due to problems at Brasilia associated with the TOYAMA MUX equipment	19/7/01	The deficiency was presented by France during the ATM/CNS/SG/1 meeting and supported by Brazil.	The deficiency in the operation of this circuit could be made once the REDDIG is implemented.	Brazil and France CAAs	03/03	U	It is expected that REDDIG will be implemented in March 2003 correcting this deficiency. ASB should follow up the digital network implementation process	SAM Regional Office	Ongoing

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE MET FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
CAR/SAM ANP requirements, Part VI, para. 6 and Annex 3 provision, Chapter 7, para. 7.2.1.	Dominican Republic	There is no follow-up on local procedures for issuance of SIGMETs.	22/05/96	MWOs should review the local procedures for the issuance of SIGMETs and control of its issuance on a periodical basis.	Ensure the correct elaboration of SIGMETs and their dissemination in accordance with the requirements of Table MET 2A.	States	04/03	U	ICAO SIP Project. Ongoing	AERMETSG	
CAR/SAM ANP requirements, Part VI, para. 6 and Annex 3 provision, Chapter 7, para. 7.2.1.	Haiti	There is no follow-up on local procedures for issuance of SIGMETs.	22/05/96	MWOs should review the local procedures for the issuance of SIGMETs and control of its issuance on a periodical basis.	Ensure the correct elaboration of SIGMETs and their dissemination in accordance with the requirements of Table MET 2A.	State	04/03	U	ICAO SIP Project. Ongoing	AERMETSG	
CAR/SAM ANP requirements, Part VI, para. 6 and Annex 3 provision, Chapter 7, para. 7.2.1.	Jamaica	There is no follow-up on local procedures for issuance of SIGMETs.	22/05/96	MWOs should review the local procedures for the issuance of SIGMETs and control of its issuance on a periodical basis.	Ensure the correct elaboration of SIGMETs and their dissemination in accordance with the requirements of Table MET 2A.	State	04/03	U	ICAO SIP Project. Ongoing	AERMETSG	
CAR/SAM ANP requirements, Part VI, para. 6 and Annex 3 provision, Chapter 7, para. 7.2.1.	Netherlands Antilles	There is no follow-up on local procedures for issuance of SIGMETs.	22/05/96	MWOs should review the local procedures for the issuance of SIGMETs and control of its issuance on a periodical basis.	Ensure the correct elaboration of SIGMETs and their dissemination in accordance with the requirements of Table MET 2A.	State	04/03	U	ICAO SIP Project. Ongoing	AERMETSG	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE MET FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
CAR/SAM ANP requirements, Part VI, para. 6 and Annex 3 provision, Chapter 7, para. 7.2.1	Argentina	There is no follow-up on local procedures for issuance of SIGMETs	22/05/96	MWOs should review the local procedures for the issuance of SIGMETs and for the control of its issuance on a periodical basis	Ensure the correct preparation of SIGMETs and their dissemination, in accordance with Table MET 2A requirements	State	04/03	U	ICAO SIP Project. Ongoing	AERMETSG	
CAR/SAM ANP requirements, Part VI, para. 6 and Annex 3 provision, Chapter 7, para. 7.2.1	Chile	There is no follow-up on local procedures for issuance of SIGMETs	22/05/96	MWOs should review the local procedures for the issuance of SIGMETs and for the control of its issuance on a periodical basis	Ensure the correct preparation of SIGMETs and their dissemination, in accordance with Table MET 2A requirements	State	04/03	U	ICAO SIP Project. Ongoing	AERMETSG	
CAR/SAM ANP requirements, Part VI, para. 6 and Annex 3 provision, Chapter 7, para. 7.2.1	Colombia	There is no follow-up on local procedures for issuance of SIGMETs	22/05/96	MWOs should review the local procedures for the issuance of SIGMETs and for the control of its issuance on a periodical basis	Ensure the correct preparation of SIGMETs and their dissemination, in accordance with Table MET 2A requirements	State	04/03	U	ICAO SIP Project. Ongoing	AERMETSG	
CAR/SAM ANP requirements, Part VI, para. 6 and Annex 3 provision, Chapter 7, para. 7.2.1	Ecuador	There is no follow-up on local procedures for issuance of SIGMETs	22/05/96	MWOs should review the local procedures for the issuance of SIGMETs and for the control of its issuance on a periodical basis	Ensure the correct preparation of SIGMETs and their dissemination, in accordance with Table MET 2A requirements	State	04/03	U	ICAO SIP Project. Ongoing	AERMETSG	
CAR/SAM ANP requirements, Part VI, para. 6 and Annex 3 provision, Chapter 7, para. 7.2.1	Guyana	There is no follow-up on local procedures for issuance of SIGMETs	22/05/96	MWOs should review the local procedures for the issuance of SIGMETs and for the control of its issuance on a periodical basis	Ensure the correct preparation of SIGMETs and their dissemination, in accordance with Table MET 2A requirements	State	TBD	U	Referred to AERMET/SG for further action.	AERMETSG	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Annex 15, Chap. 4, Para. 4.2.9; Doc. 8733, Basic ANP, Part VIII, Paras 36 to 37	Jamaica	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	Need to keep updated the information/data contained in the AIP	State	TBD	U	AIS/MAP/SG/8 Meeting has to analyze situation in order to solve this deficiency	NACC / SAM / IATA	On going
Annex 15, Chap. 4, Para. 4.2.9; Doc. 8733 ANP Básico, Parte VIII, Paras 33 a 37	Haiti	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	Need to keep updated the information/data contained in the AIP	State	TBD	U	AIS/MAP/SG/8 Meeting has to analyze situation in order to solve this deficiency	NACC / SAM / IATA	On going
Annex 15, Chap. 4, Para. 4.2.9; Doc. 8733, Basic ANP, Part VIII, Paras 33 to 37	Bahamas	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	Need to keep updated the information/data contained in the AIP	State	TBD	U	AIS/MAP/SG/8 Meeting has to analyze situation in order to solve this deficiency	NACC / SAM / IATA	On going
Annex 15, Chap. 4, Para. 4.2.9; Doc. 8733, Basic ANP, Part VIII, Paras 33 to 37	Belize	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	Need to keep updated the information/data contained in the AIP	State	TBD	U	AIS/MAP/SG/8 Meeting has to analyze situation in order to solve this deficiency	NACC / SAM / IATA	On going
Annex 15, Chap. 4, Para. 4.2.9; Doc. 8733, Basic ANP, Part VIII, Paras 36 to 37	El Salvador	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	Need to keep updated the information/data contained in the AIP	State	TBD	U	AIS/MAP/SG/8 Meeting has to analyze situation in order to solve this deficiency	NACC / SAM / IATA	On going
Annex 15, Chap. 4, Para. 4.2.9; Doc. 8733, Basic ANP, Part VIII, Paras 36 to 37	Guatemala	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	Need to keep updated the information/data contained in the AIP	State	TBD	U	AIS/MAP/SG/8 Meeting has to analyze situation in order to solve this deficiency	NACC / SAM / IATA	On going
Annex 15, Chap. 4, Para. 4.2.9; Doc. 8733, Basic ANP, Part VIII, Paras 36 to 37	Honduras	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	Need to keep updated the information/data contained in the AIP	State	TBD	U	AIS/MAP/SG/8 Meeting has to analyze situation in order to solve this deficiency	NACC / SAM / IATA	On going
Annex 15, Chap. 4, Para. 4.2.9; Doc. 8733, Basic ANP, Part VIII, Para. 33 to 35	Mexico	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	Need to keep updated the information/data contained in the AIP	State	TBD	U	ASB Meeting was informed about the corrective actions that the Mexican Civil Aviation Authorities have taken in order to comply with the specified requirements	NACC / SAM / IATA	On going

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Bahamas	Timely distribution of the information through NOTAM	25/10/00	GREPECAS AIS/MAP Subgroup	Need to disseminate on time all operational information through NOTAM	State	TBD	U	Consultation with AIS/MAP/SG indicated that AIS services should be automated and AIS Quality Assurance programme be implemented.	NACC / SAM /AIS/ MAP /SG	On going
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Cayman Islands	Timely distribution of the information through NOTAM	25/10/00	GREPECAS AIS/MAP Subgroup	Need to disseminate on time all operational information through NOTAM	State	TBD	U	Consultation with AIS/MAP/SG indicated that AIS services should be automated and AIS Quality Assurance programme be implemented.	NACC / SAM /AIS/ MAP /SG	On going
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Haiti	Timely distribution of the information through NOTAM	25/10/00	GREPECAS AIS/MAP Subgroup	Need to disseminate on time all operational information through NOTAM	State	TBD	U	Consultation with AIS/MAP/SG indicated that AIS services should be automated and AIS Quality Assurance programme be implemented.	NACC / SAM /AIS/ MAP /SG	On going
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Jamaica	Timely distribution of the information through NOTAM	25/10/00	GREPECAS AIS/MAP Subgroup	Need to disseminate on time all operational information through NOTAM	State	TBD	U	Consultation with AIS/MAP/SG indicated that AIS services should be automated and AIS Quality Assurance programme be implemented.	NACC / SAM /AIS/ MAP /SG	On going
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Mexico	Timely distribution of the information through NOTAM	25/10/00	GREPECAS AIS/MAP Subgroup	Need to disseminate on time all operational information through NOTAM	State	TBD	U	Consultation with AIS/MAP/SG indicated that AIS services should be automated and AIS Quality Assurance programme be implemented.	NACC / SAM /AIS/ MAP /SG	On going

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Turks and Caicos Islands	Timely distribution of the information through NOTAM	25/10/00	GREPECAS AIS/MAP Subgroup	Need to disseminate on time all operational information through NOTAM	State	TBD	U	Consultation with AIS/MAP/SG indicated that AIS services should be automated and AIS Quality Assurance programme be implemented.	NACC / SAM / AIS/ MAP /SG	On going
Annex 15, Chapter 4, Para. 4.2.9; Doc. 8733, ANP, Part VI, 3.2	Netherlands Antilles	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	Need to keep updated the information/data contained in the AIP	State	TBD	U	ASB Meeting was informed about the corrective actions that the Mexican Civil Aviation Authorities have taken in order to comply with the specified requirements	NACC / SAM / IATA	On going
Annex 15, Chapter 4, Para. 4.2.9; Doc. 8733, Basic ANP, Part VIII, Paras 33 to 37	Nicaragua	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	Need to keep updated the information/data contained in the AIP	State	TBD	U	AIS/MAP/SG/8 Meeting has to analyze situation in order to solve this deficiency	NACC / SAM / IATA	On going
Annex 15, Chapter 4, Paras. 4.2.8 and 4.3.4., Chapter 6; Doc 8733 Basic ANP Part VIII, Paras. 45 to 49	Nicaragua	Lack of effective compliance with the AIRAC system requirement	06/12/00	Records/files NACC RO; ICAO visit December 2000	Need for an effective application of AIRAC requirements	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Aruba	Implementation of the WGS-84 is on going	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Bahamas	Implementation of the WGS-84 is on going	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Belize	Lack of implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Cayman Islands	Implementation of the WGS-84 is on going	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Costa Rica	Partial implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Dominican Republic	Partial implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States, Was informed on a new WGS 84 suvey project (enc. 131 file NE-58-3/mar-15-2002)	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	El Salvador	Partial implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Guatemala	Partial implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Haiti	Lack of implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Honduras	Partial implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Jamaica	Lack of implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Mexico	Lack of implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Netherlands Antilles	Lack of implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 15, Para. 3.6.4; Annex 4, Para. 2.18; Doc. 8733, Basic ANP, Part VIII, Paras 50 to 58, FASID Table AIS 5	Nicaragua	Lack of implementation of the WGS-84	01/01/98	GREPECAS AIS/MAP Subgroup Survey to States	Need to implement the WGS-84 Geodetic System	State	TBD	U	ASB Meeting was informed about activities carried out under RLA/98/003 Project. State Letter sent	GEN NACC /SAM	
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	British Virgin Islands	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; GREPECAS and AIS/MAP/SG reports.	Need for effective production of aeronautical charts of this series according to the ICAO specifications.	State	TBD	U	Referred to AIS/MAP/SG for further action		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Cuba	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; GREPECAS and AIS/MAP/SG reports.	New AIP includes aeronautical charts of seven international aerodromes according to the ICAO specifications. Three international aerodromes are in survey process	State	09/03	U	Referred to AIS/MAP/SG		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Guatemala	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; GREPECAS and AIS/MAP/SG reports.	Need for effective production of aeronautical charts of this series according to the ICAO specifications.	State	TBD	U	Referred to AIS/MAP/SG for further action		

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Haiti	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; GREPECAS and AIS/MAP/SG reports.	Need for effective production of aeronautical charts of this series according to the ICAO specifications.	State	TBD	U	Referred to AIS/MAP/SG for further action		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Mexico	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; GREPECAS and AIS/MAP/SG reports.	Need for effective production of aeronautical charts of this series according to the ICAO specifications.	State	TBD	U	Referred to AIS/MAP/SG for further action		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Netherlands Antilles	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; GREPECAS and AIS/MAP/SG reports.	Need for effective production of aeronautical charts of this series according to the ICAO specifications.	State	TBD	U	Referred to AIS/MAP/SG for further action		
Doc 8733 Basic ANP, Part VIII, Paras. 59 k), 61, 62, 64 7) and FASID Table AIS 7.	Honduras	Lack of production of the World Aeronautical Chart ICAO 1:1000 000	06/01/94	Records/files NACC RO; GREPECAS reports	Need for implementation of AIRAC requirements	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 61 to 64, FASID Table AIS 7	Dominican Republic	Lack of production of the World Aeronautical Chart ICAO 1:1000 000	01/11/94	Records/files NACC RO; GREPECAS reports	Need of production of the World Aeronautical Chart ICAO 1:1000 000	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 61 to 64, FASID Table AIS 7	French Antilles	Lack of production of the World Aeronautical Chart ICAO 1:1000 000	01/11/94	Records/files NACC RO; GREPECAS reports	Need of production of the World Aeronautical Chart ICAO 1:1000 000	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 61 to 64, FASID Table AIS 7	Mexico	Lack of production of the World Aeronautical Chart ICAO 1:1000 000	01/11/94	Records/files NACC RO; GREPECAS reports	Need of production of the World Aeronautical Chart ICAO 1:1000 000	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	Aruba	Lack of highest priority for printing of AIS publications.	18/09/96	Records/files NACC RO; GREPECAS reports	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	Bahamas	Lack of highest priority for printing of AIS publications.	18/09/96	Records/files NACC RO; GREPECAS reports	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	Belize	Lack of highest priority for printing of AIS publications.	27/04/01	Records/files in NACC RO; ICAO visit April 2001	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	El Salvador	Lack of highest priority for printing of AIS publications.	18/09/96	Records/files NACC RO; GREPECAS reports	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	Guatemala	Lack of highest priority for printing of AIS publications.	18/09/96	Records/files NACC RO; GREPECAS reports	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	Haiti	Lack of highest priority for printing of AIS publications.	18/09/96	Records/files NACC RO; GREPECAS reports	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	Honduras	Lack of highest priority for printing of AIS publications.	18/09/96	Records/files NACC RO; GREPECAS reports	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	Jamaica	Lack of highest priority for printing of AIS publications.	18/09/96	Records/files NACC RO; GREPECAS reports	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	Netherlands Antilles	Lack of highest priority for printing of AIS publications.	18/09/96	Records/files NACC RO; GREPECAS reports	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	Nicaragua	Lack of highest priority for printing of AIS publications.	18/09/96	Records/files NACC RO; GREPECAS reports	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	
Doc. 8733 Basic ANP, Part VIII, Paras. 9 to 12	Turks and Caicos Islands	Lack of highest priority for printing of AIS publications.	18/09/96	Records/files NACC RO; GREPECAS reports	Need to provide a higher priority for the printing of AIS publications	State	TBD	U	Referred to AIS/MAP/SG for further action	NACC /SAM AIS /MAP /SG	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Annex 15, Chapter 4, Paras. 4.2.8 and 4.3.4. Doc 8733 ANP, Part VI, Chapter 8.	Colombia	Lack of effective compliance with the AIRAC System requirement.	01/11/94	Records and files in SAM Regional Office. GREPECAS Reports.	Need for effective compliance with the AIRAC System requirement.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Annex 15, Chapter 4, Paras. 4.2.8 and 4.3.4. Doc 8733 ANP, Part VI, Chapter 8.	Ecuador	Lack of effective compliance with the AIRAC System requirement.	01/11/94	Records and files in SAM Regional Office. GREPECAS Reports.	Need for effective compliance with the AIRAC System requirement.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Annex 15, Chapter 4, Paras. 4.2.8 and 4.3.4. Doc 8733 ANP, Part VI, Chapter 8.	Guyana	Lack of effective compliance with the AIRAC System requirement.	01/11/94	Records and files in SAM Regional Office. GREPECAS Reports.	Need for effective compliance with the AIRAC System requirement.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Annex 15, Chapter 4, Paras. 4.2.8 and 4.3.4. Doc 8733 ANP, Part VI, Chapter 8.	Venezuela	Lack of effective compliance with the AIRAC System requirement.	01/11/94	Records and files in SAM Regional Office. GREPECAS Reports.	Need for effective compliance with the AIRAC System requirement.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Doc 8733 ANP, Part VI, Chapter 2, Para. 2.3.	Argentina	Lack of highest priority for printing of AIS publications.	18/09/96	Records and files in SAM Regional Office. GREPECAS Reports. Eliminated as per Comando de Regiones Aereas' fax 286 of 30/10/02.	Need to provide a highest priority for printing of AIS publications. Requirement fulfilled since year 2000.	State	2000	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Doc 8733 ANP, Part VI, Chapter 2, Para. 2.3.	Bolivia	Lack of highest priority for printing of AIS publications.	18/09/96	Records and files in SAM Regional Office. GREPECAS Reports.	Need to provide a highest priority for printing of AIS publications.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Doc 8733 ANP, Part VI, Chapter 2, Para. 2.3.	Colombia	Lack of highest priority for printing of AIS publications.	18/09/96	Records and files in SAM Regional Office. GREPECAS Reports.	Need to provide a highest priority for printing of AIS publications.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Doc 8733 ANP, Part VI, Chapter 2, Para. 2.3.	Guyana	Lack of highest priority for printing of AIS publications.	18/09/96	Records and files in SAM Regional Office. GREPECAS Reports.	Need to provide a highest priority for printing of AIS publications.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Doc 8733 ANP, Part VI, Chapter 2, Para. 2.3.	Paraguay	Lack of highest priority for printing of AIS publications.	18/09/96	Records and files in SAM Regional Office. GREPECAS Reports.	Need to provide a highest priority for printing of AIS publications. A photocopy machine and a laser printer were acquired in 1998. It is planned to acquire new machines of higher capacity	Paraguay	2003	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	

OTHER SPECIFIC DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Doc 8733 ANP, Part VI, Chapter 2, Para. 2.3.	Peru	Lack of highest priority for printing of AIS publications.	18/09/96	Records and files in SAM Regional Office. GREPECAS Reports. Eliminated as per letter MTC/CORPAC GG985.2002 of 07/10/02.	Need to provide a highest priority for printing of AIS publications. Fulfilled with the acquisition of a printer.	State	October 20	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Doc 8733 ANP, Part VI, Chapter 2, Para. 2.3.	Suriname	Lack of highest priority for printing of AIS publications.	18/09/96	Records and files in SAM Regional Office. GREPECAS Reports.	Need to provide a highest priority for printing of AIS publications.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Doc 8733 ANP, Part VI, Chapter 2, Para. 2.3.	Venezuela	Lack of highest priority for printing of AIS publications.	18/09/96	Records and files in SAM Regional Office. GREPECAS Reports.	Need to provide a highest priority for printing of AIS publications.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Doc 8733 ANP, Part VI, Chapter 8, Para. 8.2.	Ecuador	Lack of implementation of AIRAC System.	01/11/94	Records and files in SAM Regional Office. GREPECAS Reports.	Need for implementation of AIRAC requirements.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Doc 8733 ANP, Part VI, Chapter 8, Para. 8.2.	Guyana	Lack of implementation of AIRAC System.	01/11/94	Records and files in SAM Regional Office. GREPECAS Reports.	Need for implementation of AIRAC requirements.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	
Doc 8733 ANP, Part VI, Chapter 8, Para. 8.2.	Suriname	Lack of implementation of AIRAC System.	01/11/94	Records and files in SAM Regional Office. GREPECAS Reports.	Need for implementation of AIRAC requirements.	State	TBD	U	Referred to AIS/MAP/SG for further action.	SAM RO. AIS/MAP/SG	

CORRECTED DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Bird Strike Hazards (Annex 14, Vol. I, Chap. 9.5)	Costa Rica, ALAJUELA, Juan Santamaria Intl	Bird strikes reported, sanitary landfills located in the vicinity of airport	2000	ASB/4 Review	Undertake bird hazard assessment to identify mitigation measures	Costa Rica	2002	U	3 - State Letter sent. PAAST Team conducted visit. No problems identified. ICAO recommended studies not carried out.		Eliminated
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4)	Bahamas, FREEPORT, Grand Bahama Intl	Runway and apron pavement is deficient in strength and surface irregularities - Ref Annex 14, Vol. I Sections 9.4.3 & 4	10/2000	ICAO Visit October 2000	Upgrade runway and apron pavements	Bahamas	2002	U	Corrected		
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4)	Cayman Islands, CAYMAN BRAC, Gerrard Smith Intl	Runway, pavement surface deficient - Ref. Annex 14 Vol. I Section 9.4	10/2000	ICAO Visit October 2000	Upgrade runway pavement	Cayman Islands	2002	U	2 - Corrected		
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4)	Costa Rica, ALAJUELA, Juan Santamaria Intl	Excessive rubber deposit on runway surface resulting in poor friction characteristics - Ref. Annex 14, Vol. I, Section 9.4.10	2000	IATA Report December 2000	Remove rubber from runway surface	Costa Rica	2002	U	2 - Corrected		
Pavement Surface Conditions (Annex 14, Vol. I, Chap. 9.4)	Jamaica, MONTEGO BAY, Sangster Intl	Runway and older taxiway pavements have failed resulting in severe deficiencies in the pavement surface condition - Ref Annex 14, Vol. I Section 9.4.3	10/2000	IATA Visit Nov 2002	Upgrade pavements	Jamaica	2002	U	Corrected		
Radio Aids (ANP, Table AOP 1)	Bahamas, NASSAU, Nassau Intl	VOR regularly out of service	2002	ICAO Visit October 2000 IATA Report September 2000 IFALPA Meeting November 2000	Repair or replace VOR	Bahamas	30/09/01	U	Corrected		
Visual Aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP 1)	Bahamas, FREEPORT, Grand Bahama Intl	Deficient RWY markings	10/2000	ICAO Visit October 2000	Require re-painting	Bahamas	2002	U	Corrected		
Visual Aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP 1)	Bahamas, NASSAU, Nassau Intl.	All approach lighting systems not serviceable	1996	ICAO Visit October 2000 IFALPA Meeting November 2000	Repair the facilities.	Bahamas	2002	U	Corrected		
Visual Aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP 1)	Bahamas, NASSAU, Nassau Intl.	All PAPIs except RWY 14 unserviceable	1996	ICAO Visit October 2000 IFALPA Meeting November 2000	Repair the facilities.	Bahamas	2002	U	Corrected		

CORRECTED DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Visual Aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP 1)	Cayman Islands, CAYMAN BRAC, Gerrard Smith Intl	Runway markings faded - Ref. Annex 14 Vol. I Section 5.2.2 - 4	10/2000	ICAO Visit October 2000	Re-paint runway markings	Cayman Islands	2002	U	Corrected		
Visual Aids (Annex 14, Vol. I, Chap. 5 and ANP, Table AOP 1)	Haiti, CAP HAITIEN, Cap Haitien Intl	Runway markings non-standard and faded	2000	ICAO Visit June 2000	Repaint markings	Haiti	2002	U	Corrected		

CORRECTED DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AGA FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Visual aids (Annex 14, Vol. I, Ch. 5)	Panama/Tocumen	Vasis system out of service	12/2000	IATA/e-mail sent to SAM Office in December 7, 2000. IATA Report	To install a PAPI system	Panama	2002	U	Corrected		
Visual aids (Annex 14, Vol. I, Ch. 5)	Argentina, BUENOS AIRES/Ezeiza Aerodrome	No PAPI at RWY 17	1996	IFALPA CAR/SAM Meeting, 98REG049, Buenos Aires, 9/10 Dec. 1997	Deficiency eliminated. PAPI was installed during repavement works and extension of runway 17/35, verified and published.	Argentina		U	Corrected	SAM	

CORRECTED DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	Cuba	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	10/95	Proficiency in the English language is required to take controller training courses. Specialized English courses are also provided to existing personnel when deficiencies are detected	a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks" b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme. c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.	CAA Cuba	2000	U	ASB/4 Reviewed. Referred to PAAST. Problem of such magnitude that PAAST could not assist.	NACC/SAM	Corrected

CORRECTED DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	Dominican Republic	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	Oct. 95	GREPECAS/5	<p>a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks"</p> <p>b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme.</p> <p>c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.</p>	CAA Dominican Republic	2000	U	ASB/4 Reviewed. Referred to PAAST. Problem of such magnitude that PAAST could not assist.	NACC/SAM	Corrected

CORRECTED DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	French Antilles	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	Oct. 95	GREPECAS/5	<p>a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks"</p> <p>b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme.</p> <p>c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.</p>	CAA French Antilles	2000	U	ASB/4 Reviewed. Referred to PAAST. Problem of such magnitude that PAAST could not assist.	NACC/SAM	Corrected

CORRECTED DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
English proficiency in Air Traffic Services CAR/SAM/3 Rec. 5/35	Haiti	The proficiency in the English language of some ATC units is below the desired level and could be a contributing factor for the occurrence of incidents and/or aeronautical accidents.	Oct. 95	GREPECAS/5	<p>a) After the effective date of Amendment to Annex 1, which establishes that the English level required for ATC personnel, the States/Territories/International Organizations, should evaluate the personnel of their ATC units and further provide information regarding the deviation level required in the box "Remarks"</p> <p>b) In order to reach and maintain the English language level required, the States/Territories/International Organizations shall establish a permanent and continuous training plan of ATC units, which contemplates the follow-up of the improvements of personnel of ATC units and shall implement in the same, the ATS quality assurance programme.</p> <p>c) The States/Territories/International Organizations shall demand the personnel who works in ATC units, the English language knowledge to be required by ICAO Annex 1.</p>	CAA Haiti	2000	U	ASB/4 Reviewed. Referred to PAAST. Problem of such magnitude that PAAST could not assist.	NACC/SAM	Corrected

CORRECTED DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE ATM FIELD IN THE SAM REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Provision of air traffic control service CAR/SAM/3, Rec 5/33	Guyana	Due to air traffic volume at Georgetown FIR area control provision is required	NA	Finalized	The ICAO SAM Regional Office, through a Technical Cooperation project, assisted Guyana in the implementation of the Georgetown ACC, implemented on 21 March 2002.	CAA Guyana	Mar 2002	U	ASB/4 reviewed	NACC/SAM	Corrected

CORRECTED DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE CNS FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Radio navigation Aids (Table CNS 3) - VOR	Bahamas, Nassau, Nassau Intl.	VOR is regularly out of service.	Sept. 2000	- IATA report Sept. 2000 - ICAO Visit, Oct. 2000 - IFALPA Meeting, Nov. 2000	Corrected A new VOR equipment was implemented.	Bahamas	2002	U			

CORRECTED DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE CNS FIELD IN THE SAM REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Aeronautical Mobile Service Plan. Table CNS 1A. Lack of VHF communications coverage in the Manaus, Porto Velho and Recife FIRs	Brazil	Due to the lack of VHF coverage in some segments of ATS routes crossing the Manaus, Porto Velho and Recife FIRs, ATS is not yet provided in the required level.	09/1994	GREPECAS Conclusion 4/10. IATA Report	Brazil informed at ATM/CNS/SG/2 meeting that: a) implementation process of VHF stations at Manaus and Porto Velho FIRs is in final stage; b) to complete VHF coverage at Recife FIR, VHF stations are being installed in accordance with a plan foreseeing that last station will be operational by end of 2003. In addition, since February 2002 an HF AMS communications system is operational, permitting communications with aircraft at zones without VHF coverage, as well as in all the area of this FIR. IATA was requested that aircraft validate the current operational status of VHF and HF communications coverage, with the aim that ASB/4 meeting consider the possibility of changing the priority of this deficiency from "U" to "A".	Brazil CAA	12/02 b)12/03	U	ASB/4 reviewed	SAM Regional Office	Corrected
Aeronautical mobile service plan. Table CNS 1A. Lack of HF communications coverage in the Brasilia FIR, Oceanic Sector	Brazil	Deficiencies in the HF communications have been identified in the oceanic part of the Brasilia FIR	09/1994	GREPECAS/4. IATA Report.	Brazil informed at ATM/CNS/SG/2 meeting that the HF equipment in Recife has been improved, site where the control of the Oceánica FIR will be carried out instead of Brasilia.	Brazil CAA	2002	U	ASB/4 reviewed	SAM Regional Office	Corrected

CORRECTED DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE MET FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
CAR/SAM ANP requirements, Part VI, para. 6 and Annex 3 provision, Chapter 7, para. 7.2.1.	Honduras	There is no follow-up on local procedures for issuance of SIGMETs.	22/05/96	MWOs should review the local procedures for the issuance of SIGMETs and control of its issuance on a periodical basis.	After coordination with the Washington VAAC, ICAO's HQs and COCESNA, the deficiency was corrected and the corresponding SIGMETs are now disseminated by Honduras.	State	Corrected	U			Corrected

CORRECTED DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Annex 15, Chap. 4, Para. 4.2.9	Costa Rica	Lack of regular and effective updating of the AIP Document	24/10/00	GREPECAS AIS/MAP Subgroup	The record of Amendments shows that the information/data contained in the AIP is updated	State	08/12/2000	U	Corrected		
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Belize	Timely distribution of the information through NOTAM	25/10/00	COCESNA assumes control of the NOF/CA and implement the NOTAM Data Base in CA	COCESNA's NOF improved the timely dissemination of all operational information through NOTAM.	State/COCESNA	27/04/2001	U	Corrected		
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Costa Rica	Timely distribution of the information through NOTAM	25/10/00	COCESNA assumes control of the NOF/CA and implement the NOTAM Data Base in CA	COCESNA's NOF improved the timely dissemination of all operational information through NOTAM.	State/COCESNA	08/12/2000	U	Corrected		
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	El Salvador	Timely distribution of the information through NOTAM	25/10/00	COCESNA assumes control of the NOF/CA and implement the NOTAM Data Base in CA	COCESNA's NOF improved the timely dissemination of all operational information through NOTAM.	State/COCESNA	30/11/2000	U	Corrected		
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Guatemala	Timely distribution of the information through NOTAM	25/10/00	COCESNA assumes control of the NOF/CA and implement the NOTAM Data Base in CA	COCESNA's NOF improved the timely dissemination of all operational information through NOTAM.	State/COCESNA	28/11/2000	U	Corrected		
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Honduras	Timely distribution of the information through NOTAM	25/10/00	COCESNA assumes control of the NOF/CA and implement the NOTAM Data Base in CA	COCESNA's NOF improved the timely dissemination of all operational information through NOTAM.	State/COCESNA	04/12/2000	U	Corrected		
Annex 15, Chapter 3, Paras. 3.1.5 and 3.1.6; Chapter 5, Paras. 5.1.1.1 and Sec. 5.3	Nicaragua	Timely distribution of the information through NOTAM	25/10/00	COCESNA assumes control of the NOF/CA and implement the NOTAM Data Base in CA	COCESNA's NOF improved the timely dissemination of all operational information through NOTAM.	State/COCESNA	06/12/2000	U	Corrected		

CORRECTED DEFICIENCIES**REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR REGION**

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Anguilla	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; New AIP Edition (May-01)	New AIP includes aeronautical charts of this series according to the ICAO specifications.	State	17/05/2001	U	Corrected		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Antigua and Barbuda	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; New AIP Edition (May-01)	New AIP includes aeronautical charts of this series according to the ICAO specifications.	State	TBD	U	Corrected		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Cayman Islands	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; New AIP Edition (Jan-01)	New AIP includes aeronautical charts of this series according to the ICAO specifications.	State	01/01/2001	U	Corrected		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Dominica	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; New AIP Edition (May-01)	New AIP includes aeronautical charts of this series according to the ICAO specifications.	State	17/05/2001	U	Corrected		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Grenada	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; New AIP Edition (May-01).	New AIP includes aeronautical charts of this series according to the ICAO specifications.	State	17/05/2001	U	Corrected		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Saint Kitts and Nevis	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; New AIP Edition (May-01)	New AIP includes aeronautical charts of this series according to the ICAO specifications.	State	17/05/2001	U	Corrected		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Saint Lucia	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; New AIP Edition (May-01)	New AIP includes aeronautical charts of this series according to the ICAO specifications.	State	17/05/2001	U	Corrected		
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Saint Vincent and the Grenadines	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; New AIP Edition (May-01)	New AIP includes aeronautical charts of this series according to the ICAO specifications.	State	17/05/2001	U	Corrected		

CORRECTED DEFICIENCIES

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE AIS FIELD IN THE CAR REGION

Identification		Deficiencies			Corrective Action			ASB Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Comp. date	P	ASB remedial action	Executing body	Results
Annex 4 Chap. 3; Doc. 8733 Basic ANP, Part VIII, Paras. 59 a) and 64 1); FASID Table AIS 6	Trinidad and Tobago	Partial application of ICAO requirements for the production of Aerodrome obstacle chart-ICAO Type A.	06/01/94	Records/files in NACC RO; New AIP Edition (May-01)	New AIP includes aeronautical charts of this series according to the ICAO specifications.	State	17/05/2001	U	Corrected		
Doc. 8733 Basic ANP, Part VIII, Paras. 61 to 64, FASID Table AIS 7	Cuba	Lack of production of the World Aeronautical Chart ICAO 1:1000 000	01/11/94	Records/files NACC RO; GREPECAS reports	Corrected - IACC Official communication dated 15/11/02	State		U	Corrected		

APPENDIX E

**ACTION PLAN FOR RESOLVING EACH OF THE REGIONAL AIR NAVIGATION DEFICIENCIES
PLAN DE ACCIÓN PARA RESOLVER CADA UNA DE LAS DEFICIENCIAS REGIONALES DE NAVEGACIÓN AÉREA**

State/Intl. Organization:

Estado/Org. Internacional:

Date/Fecha:

Deficiency/ Deficiencia	Corrective Action/ Acción correctiva	Date of Correction/ Fecha de corrección	Difficulties encountered/ Dificultades encontradas

APPENDIX F**ASB PROJECT OUTLINE FOR THE COMMITMENT OF RESOURCES TO THE CORRECTION OF DEFICIENCIES IN AIR NAVIGATION SERVICES****1. DESCRIPTION OF THE DEFICIENCY**

[To be developed (automatically) from the standard table of deficiencies columns 1 through 4]

2. ASB RISK ASSESSMENT AND SAFETY PRIORITY RATING

LOW MEDIUM HIGH

Safety Priority Rating based on a qualitative risk assessment of the probability and severity of an accident occurring as a direct or indirect result of the deficiency:

3. DESCRIPTION OF THE REQUIRED CORRECTIVE ACTION

[To be developed (automatically) from the standard table of deficiencies columns 6 through 8]

4. RESOURCE REQUIREMENT

4.1 Estimate of required human resources (in man-days and time frame):

4.2 Estimate of required financial resources (in dollars and time frame):

5. ASB RECOMMENDED RESOURCE SOURCES

	YES	NO
Responsible STATE	<input type="checkbox"/>	<input type="checkbox"/>
If yes, details:		
ASB	<input type="checkbox"/>	<input type="checkbox"/>
If yes, details:		
PAAST	<input type="checkbox"/>	<input type="checkbox"/>
If yes, details:		
Other CAR/SAM States	<input type="checkbox"/>	<input type="checkbox"/>
If yes, details:		

	YES	NO
GREPECAS observer organizations If yes, details:	<input type="checkbox"/>	<input type="checkbox"/>
ICAO Secretariat (HQs/ROs) If yes, details:	<input type="checkbox"/>	<input type="checkbox"/>
ICAO SIP/IFFAS/TC Project If yes, details:	<input type="checkbox"/>	<input type="checkbox"/>
OTHERS If yes, details:	<input type="checkbox"/>	<input type="checkbox"/>

6. ASB FEASIBILITY ASSESSMENT

[Qualitative statement of how feasible ASB considers the successful implementation of this project to be including its affordability]

7. ASB FINANCIAL VIABILITY ASSESSMENT

[Qualitative statement of how financially viable ASB considers this project to be]

8. ASB COMMITMENT

[Contractual statement of the scope and timing of ASB's commitment of resources and/or support to this project]

9. OTHER COMMITMENTS

[Contractual statement of the scope and timing of the commitment of resources and/or support from other interested and appropriate parties to this project].

APPENDIX G**PROPOSED AMENDMENTS****UNIFORM METHODOLOGY FOR THE IDENTIFICATION, ASSESSMENT
AND REPORTING OF AIR NAVIGATION DEFICIENCIES**

(Approved by the Council on 30 November 2001)

1. INTRODUCTION

1.1 Based on the information resulting from the assessment carried out by ICAO on the input received from various regions regarding deficiencies in the air navigation field, it became evident that improvements were necessary in the following areas:

- a) collection of information;
- b) safety assessment of reported problems;
- c) identification of suitable corrective actions (technical/operational/financial/organizational), both short-term and long-term; and
- d) method of reporting in the reports of ICAO planning and implementation regional groups (PIRGs).

1.2 This methodology is therefore prepared with the assistance of ICAO PIRGs and is approved by the ICAO Council for the efficient identification, assessment and clear reporting of air navigation deficiencies. It may be further updated by the Air Navigation Commission in the light of the experience gained in its utilization.

1.3 For the purpose of this methodology, the following is the definition of deficiency:

A deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

2. COLLECTION OF INFORMATION

2.1 Regional office sources

2.1.1 As a routine function, the regional offices should maintain a list of specific deficiencies, if any, in their regions. To ensure that this list is as clear and as complete as possible, it is understood that the regional offices take the following steps:

- a) compare the status of implementation of the air navigation facilities and services with the regional air navigation plan documents and identify facilities, services and procedures not implemented;
- b) review mission reports with a view to detecting deficiencies that affect safety, regularity and efficiency of international civil aviation;
- c) make a systematic analysis of the differences with ICAO Standards and Recommended Practices filed by States to determine the reason for their existence and their impact, if any, on safety, regularity and efficiency of international civil aviation;
- d) review aircraft accident and incident reports with a view to detect possible systems or procedures deficiencies;
- e) review inputs, provided to the regional office by the users of air navigation services on the basis of Assembly Resolution A33-14, Appendix M;
- f) assess and prioritize the result of a) to e) according to paragraph 4;
- g) report the outcome to the State(s) concerned for resolution; and
- h) report the result of g) above to the related PIRG for further examination, advice and report to the ICAO Council, as appropriate through PIRG reports.

2.2 States' sources

2.2.1 To collect information from all sources, States should, in addition to complying with the Assembly Resolution A31-10, establish reporting systems in accordance with the requirements in Annex 13, paragraph 7.3. These reporting systems should be non-punitive in order to capture the maximum number of deficiencies.

2.3 Users' sources

2.3.1 Appropriate international organizations, including the International Air Transport Association (IATA) and the International Federation of Air Line Pilots' Associations (IFALPA), are valuable sources of information on deficiencies, especially those that are safety related. In their capacity as users of air navigation facilities they should identify facilities, services and procedures that are not implemented or are unserviceable for prolonged periods or are not fully operational. In this context it should be noted that Assembly Resolution A33-14, Appendix M and several decisions of the Council obligate users of air navigation facilities and services to report any serious problems encountered due to the lack of implementation of air navigation facilities or services required by regional plans. It is emphasized that this procedure, together with the terms of reference of the PIRGs should form a solid basis for the identification, reporting and assisting in the resolution of non-implementation matters.

3. REPORTING OF INFORMATION ON DEFICIENCIES

3.1 In order to enable the ICAO PIRGs to make detailed assessments of deficiencies, States and appropriate international organizations including IATA and IFALPA, are expected to provide the information they have to the ICAO regional office for action as appropriate, including action at PIRG meetings.

3.2 The information should at least include: description of the deficiency, risk assessment, possible solution, time-lines, responsible party, agreed action to be taken and action already taken.

3.3 The agenda of each PIRG meeting should include an item on air navigation deficiencies, including information reported by States, IATA and IFALPA in addition to those identified by the regional office according to paragraph 2.1 above. Review of the deficiencies should be a top priority for each meeting. The PIRGs, in reviewing lists of deficiencies, should make an assessment of the safety impact for subsequent review by the ICAO Air Navigation Commission.

3.4 In line with the above, and keeping in mind the need to eventually make use of this information in the planning and implementation process, it is necessary that once a deficiency has been identified and validated, the following fields of information should be provided in the reports on deficiencies in the air navigation systems. These fields are as follows and are set out in the reporting form attached hereto.

a) Identification of the requirements

As per ICAO procedures, Regional Air Navigation Plans detail *inter alia* air navigation requirements including facilities, services and procedures required to support international civil aviation operations in a given region. Therefore, deficiencies would relate to a requirement identified in the regional air navigation plan documents. As a first item in the deficiency list, the requirements along with the name of the meeting and the related recommendation number should be included. In addition, the name of the State or States involved and/or the name of the facilities such as name of airport, FIR, ACC, TWR, etc. should be included.

b) Identification of the deficiency

This item identifies the deficiency and would be composed of the following elements:

- i) a brief description of the deficiency;
- ii) date deficiency was first reported;
- iii) appropriate important references (meetings, reports, missions, etc)

c) Identification of the corrective actions

In the identification of the corrective actions, this item would be composed of:

- i) a brief description of the corrective actions to be undertaken;
- ii) identification of the executing body;
- iii) expected completion date of the corrective action^{*}; and
- iv) when appropriate or available, an indication of the cost involved.

* It should be noted that a longer implementation period could be assigned in those cases in which the expansion or development of a facility was aimed at serving less frequent operations or entailed excessive expenditures.

4. ASSESSMENT AND PRIORITIZATION

4.1 A general guideline would be to have three levels of priority organized on the basis of safety, regularity and efficiency assessment as follows:

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

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

“A” priority = Top priority requirements necessary for air navigation safety.

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

“B” priority = Intermediate requirements necessary for air navigation regularity and efficiency.

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

5. MODEL REPORTING TABLE FOR USE IN THE REPORTS OF PIRGS

5.1 Taking the foregoing into account, the model table at the Appendix is for use by PIRGs for the identification, assessment, prioritization etc. of deficiencies. It might be preferred that a different table would be produced for each of the different topics i.e. AGA, ATM, SAR, CNS, AIS/MAP, MET. However, all tables should be uniform.

6. ACTION BY THE REGIONAL OFFICES

6.1 Before each PIRG meeting, the regional office concerned will provide advance documentation concerning the latest status of deficiencies.

6.2 It is noted that the regional offices should document serious cases of deficiencies to the Air Navigation Commission (through ICAO Headquarters) as a matter of priority, rather than waiting to report the matter to the next PIRG meeting, and that the Air Navigation Commission will report to the Council.

APPENDIX G

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE FIELD IN THE REGION

Identification		Deficiencies			Corrective action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Date of complete	Priority for action*
Requirement of Part ... paragraph (table) .. of the air navigation plan	Terra X Terra Y	Speech circuits not implemented Villa X - Villa Y	12/02/2..X	Co-ordination meeting between Terra X and Terra Y on 16/07/2..X to finalize arrangements to implementation circuit via satellite	Implementation of direct speech circuit via satellite	Terra X	August 20..X	A

* Priority for action to remedy a deficiency is based on the following safety assessments:

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

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

“A” priority = Top priority requirements necessary for air navigation safety.

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

“B” priority = Intermediate requirements necessary for air navigation regularity and efficiency.

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

MET

VI-MET 1B-3

MWO location Emplacement du MWO Lugar de la MWO	ICAO loc.ind. Ind. d'empl. OACI Ind. lugar OACI	Area served/Région desservie/Zona atendida		Remarks Remarques Observaciones
		Name Nom Nombre	ICAO loc. ind. Ind. d'empl. OACI Ind. lugar OACI	
1	2	3	4	5
ARGENTINA				
BUENOS AIRES/ Aeroparque, Jorge Newbery	SABE	Ezeiza FIR/SRR	SAEF	
BUENOS AIRES/Ezeiza Ministro Pistarini	SAEZ	Ezeiza UIR	SAEU	
COMODORO RIVADAVIA/General Mosconi	SAVC	Comodoro Rivadavia FIR/SRR Comodoro Rivadavia UIR	SAVF SAVU	
CORDOBA/Ing. Aer. A.L. Taravela	SACO	Córdoba FIR/SRR Córdoba UIR	SACF SACU	
MENDOZA/EI Plumerillo	SAME	Mendoza FIR/SRR Mendoza UIR	SAMF SAMV	
RESISTENCIA/ Resistencia	SARE	Resistencia FIR/SRR Resistencia UIR	SARR SAEU	
BOLIVIA				
LA PAZ/EI Alto Intl	SLLP	La Paz FIR/SRR	SLLP	
BRAZIL				
<u>AMAZÓNICO/Eduardo Gomes</u>	<u>SBAZ</u>	<u>Amazónica FIR/UIR/SRR</u>	<u>SBAZ</u>	MWO Amazonico and MWO Atlantico will provide services for the new FIRs Amazonica and Atlantica replacing Belén and Manaus MWOs as of the year 2003/ Les MWO Amazonico et Atlantico desserviront les nouvelles FIR Amazonica et Atlantica remplacement les MWOs Belén et Manaus à compter de 2003/A partir de 2003, les MWO Amazonico y Atlantico proporcionarán servicios a las nueva s FIR Amazonica y Atlantica .
BELEM/Val de Caes	SBBE	Belem FIR/SRR	SBDL	
BRASILIA/Brasília Intl	SBBR	Brasilia FIR/SRR	SBBS	Brasilia FIR/SRR also served by MWO Rio de Janeiro and MWO Sao Paulo/ FIR/SRR Brasilia desservie aussi par les MWO de Rio de Janeiro et de Sao Paulo/FIR/SRR Brasilia también atendida por la MWO Rio de Janeiro y la MWO Sao Paulo.
CURITIBA/Afonso Pena	SBCT	Curitiba FIR/UTA/SRR	SBCW	
<u>MANAUS/Eduardo Gomes</u>	<u>SBEG</u>	<u>Manaus FIR/UIR/SRR</u>	<u>SBMU</u>	
		Porto Velho FIR	SBPH	
RECIFE/Guararapes	SBRF	Recife FIR/SRR	SBRE	

MET**VI-MET 3 I-3**

Tropical cyclone advisory centre Centre d'avis de cyclones tropicaux Centro de avisos de ciclones tropicales	Area of responsibility Zone de responsabilité Zona de responsabilidad	Period of operation Période de fonctionnement Periodo de operación	MWO to which advisory information is to be sent MWO auquel les renseignements consultatifs doivent être communiqués MWO a la que debe enviarse información de asesoramiento
1	2	3	4
Miami (United States) (États-Unis) (Estados Unidos)	Tropical Atlantic, Caribbean Sea, Gulf of Mexico Relevant parts of the Pacific East of 180EE Atlantique tropical, mer des Caraïbes, golfe du Mexique Parties concernées du Pacifique à l'est de 180EE Atlántico Tropical, Mar del Caribe, Golfo de México Partes pertinentes del Pacífico al este de los 180EE	1 June B 30 November 1 ^{er} juin B 30 novembre 1 de junio B 30 noviembre	Amazónico Belem Bogotá Caracas Cayenne Georgetown Habana Kingston Mexico Panama Port of Spain Port-au-Prince San Juan, Puerto Rico Santo Domingo Tegucigalpa Willemstad Zandery

MET

VI-MET 3 II-3

Volcanic ash advisory centre Centre d'avis de cendres volcaniques Centro de avisos de cenizas volcánicas	Area of responsibility Zone de responsabilité Zona de responsabilidad	MWO to which advisory information is to be sent MWO auxquels les renseignements consultatifs doivent être communiqués MWO a la que debe enviarse información de asesoramiento	ACC to which advisory information is to be sent ACC auxquels les renseignements consultatifs doivent être communiqués ACC a la que debe enviarse información de asesoramiento	
1	2	3	Name Nom Nombre	ICAO loc. Ind. Ind. d'empl. OACI Ind. lugar OACI
			4	5
Buenos Aires (Argentina)	SAM Region: South of 10°S between 30°E and 90°E Région SAM: Sud de 10°S entre 30°E et 90°E Región SAM: Al sur de los 10°E entre 30°E y 90°E	<u>Amazónico</u> Antofagasta Asunción Brasilia Buenos Aires (Aeroparque) Buenos Aires (Ezeiza) Comodoro Rivadavia Cordoba Curitiba Florianopolis La Paz Lima-Callao Porto Alegre Manaus Mendoza Montevideo Puerto Montt Punta Arenas Recife Resistencia Rio de Janeiro-Galeao Santiago Sao Paulo-Guarulhos	<u>Amazónica</u> Antofagasta Asunción Brasilia Buenos Aires (Ezeiza) Comodoro Rivadavia Cordoba Curitiba La Paz Lima Manaus Mendoza Montevideo Puerto Montt Punta Arenas Recife Resistencia Santiago	<u>SBAZ</u> SCFZ SGFA SBBS SAEF SAVF SACF SBCW SLLF SPIM SBMU SAMV SUEO SCTZ SCCZ SBRE SARR SCEZ
Washington (United States) (États-Unis) (Estados Unidos)	CAR/SAM Regions: North of 10°S Région CAR/SAM: Nord de 10°S Regiones CAR/SAM: Al norte de los 10°S New York Oceanic* Oakland Oceanic* United States Continental FIRs*	<u>Amazónico</u> Belem Bogotá Caracas Cayenne Georgetown Guayaquil Habana Kingston Lima-Callao Manaus Mexico Panama Port of Spain Port-au-Prince Recife San Juan, Puerto Rico Santo Domingo Tegucigalpa Willemstad Zandery	<u>Amazónica</u> Belem Barranquilla Bogotá Curaçao Georgetown Guayaquil Habana Kingston Lima Manaus Maiquetía Mazatlán Mérida México Monterrey Nassau Panamá Paramaribo Piarco Port-au-Prince Porto Velho Recife Rochambeau San Juan, Puerto Rico Santo Domingo Cenamer	<u>SBAZ</u> SBBL SKEC SKED TNCF SYGC SEGU MUFH MKJK SPIM SBMU SVZM MMZT MMID MMEX MMTY MYNA MPZL SMPM TTPP MTEG SBPH SBRE SOOO TJZS MDSD MHTG

* Requirement shown in NAM, NAT and PAC Regional Air Navigation Plans/
Besoin indiqué dans les plans régionaux de navigation aérienne NAM, NAT et PAC/
Requisito mostrado en los planes regionales de navegación aérea NAM, NAT y PAC.

Table MET 1B* C Tableau MET 1B* C Tabla MET 1B*

**METEOROLOGICAL WATCH OFFICES (BRAZIL)
CENTRES DE VEILLE MÉTÉOROLOGIQUE (BRÉSIL)
OFICINAS DE VIGILANCIA METEOROLÓGICA (BRASIL)**

EXPLANATION OF THE TABLE

Column

- | | |
|---|--|
| 1 | Location of the meteorological watch office (MWO) |
| 2 | ICAO location indicator, assigned to the MWO |
| 3 | Name of the FIR, UIR and/or Search and Rescue Region (SRR) served by the MWO |
| 4 | ICAO location indicator assigned to the ATS unit serving the FIR, UIR and/or SRR |
| 5 | Remarks |

Note. C Unless otherwise stated in Column 5, the MWO listed in Column 1 is the designated collecting centre for the air-reports received within the corresponding FIR/UIR listed in Column 3.

* This Table reflects the MET requirements established while waiting for the reorganization of the Brazilian airspace scheduled for 2003.

EXPLICATION DU TABLEAU

Colonne

- | | |
|---|--|
| 1 | Emplacement du centre de veille météorologique (MWO) |
| 2 | Indicateur d'emplacement OACI du MWO |
| 3 | Nom de la FIR, de l'UIR et/ou de la région de recherches et de sauvetage (SRR) desservie(s) par le MWO |
| 4 | Indicateur d'emplacement OACI des organismes ATS desservant la FIR, l'UIR et/ou les SRR |
| 5 | Remarques |

Note. C Sauf indication contraire dans la colonne 5, le MWO indiqué dans la colonne 1 est le centre collecteur désigné des comptes rendus en vol reçus dans la FIR/UIR figurant dans la colonne 3.

VI-MET 1B*-2**CAR/SAM FASID**

EXPLICACIÓN DE LA TABLA

Columna

- 1 Lugar de la oficina de vigilancia meteorológica (MWO)
- 2 Indicador de lugar de la OACI asignado a la MWO
- 3 Nombre de las FIR, UIR o región de búsqueda y salvamento (SRR) a las que presta servicio la MWO
- 4 Nombre del indicador de lugar asignado a la dependencia ATS que presta servicio a las FIR, UIR o SRR
- 5 Observaciones

Nota.C Salvo indicación distinta en la Columna 5, la MWO que figura en la Columna 1 es el centro colector designado para las aeronotificaciones recibidas en las FIR/UIR correspondientes reseñadas en la Columna 3.

* Esta Tabla refleja los requerimientos MET requerimientos establecidos mientras se espera por la reorganización del espacio aéreo de Brasil previsto para el 2003.

MET

VI-MET 1B-3

MWO location Emplacement du MWO Lugar de la MWO	ICAO loc.ind. Ind. d=empl. OACI Ind. lugar OACI	Area served/Région desservie/Zona atendida		Remarks Remarques Observaciones
		Name Nom Nombre	ICAO loc. ind. Ind. d=empl. OACI Ind. lugar OACI	
1	2	3	4	5
BRAZIL				
BELEM/Val de Caes	SBBE	Belem FIR/SRR	SBBL	
BRASILIA/Brasília Intl	SBBR	Brasília FIR/SRR	SBBS	Brasília FIR/SRR also served by MWO Rio de Janeiro and MWO Sao Paulo/ FIR/SRR Brasília desservie aussi par les MWO de Rio de Janeiro et de Sao Paulo/FIR/SRR Brasília también atendida por la MWO Rio de Janeiro y la MWO Sao Paulo.
CURITIBA/Afonso Pena	SBCT	Curitiba FIR/UTA/SRR	SBCW	
MANAUS/Eduardo Gomes	SBEG	Manaus FIR/UIR/SRR	SBMU	
		Porto Velho FIR	SBPH	
RECIFE/Guararapes	SBRF	Recife FIR/SRR	SBRE	
RIO DE JANEIRO/ Galeao, Antonio Carlos Jobim Intl	SBGL	Brasília FIR/SRR	SBBS	Brasília FIR/SRR also served by MWO Brasília and MWO Sao Paulo/ FIR/SRR Brasília desservie aussi par les MWO de Brasília et de Sao Paulo/ FIR/SRR Brasília también atendida por la MWO Brasília y la MWO Sao Paulo.
SAO PAULO/Guarulhos Intl	SBGR	Brasília FIR/SRR	SBBS	Brasília FIR/SRR also served by MWO Brasília and MWO Rio de Janeiro/ FIR/SRR Brasília desservie aussi par les MWO de Brasília et de Rio de Janeiro/FIR/SRR Brasília también atendida por la MWO Brasília y la MWO Rio de Janeiro.

VI-MET 2B*-1

Table MET 2B* C Tableau MET 2B* C Tabla MET 2B***EXCHANGE OF SIGMET AND SPECIAL AIREP MESSAGES (BRAZIL)
ÉCHANGE DE MESSAGES SIGMET ET DE MESSAGES AIREP SPÉCIAUX (BRÉSIL)
INTERCAMBIO DE MENSAJES SIGMET Y AIREP ESPECIALES (BRASIL)**

EXPLANATION OF THE TABLE

S = SIGMET, SIGMET with OUTLOOK (for volcanic ash and/or tropical cyclones) and special AIREP

s = SIGMET and special AIREP

s' = SIGMET with OUTLOOK (for volcanic ash and/or tropical cyclones)

Note. C The first column refers to Meteorological Watch Offices (MWOs).

* This Table reflects the MET requirements established while waiting for the reorganization of the Brazilian airspace scheduled for 2003.

EXPLICATION DU TABLEAU

S = SIGMET, SIGMET avec OUTLOOK (pour les cendres volcaniques et les cyclones tropicaux) et AIREP spéciaux

s = SIGMET et AIREP spéciaux

s' = SIGMET avec OUTLOOK (pour les cendres volcaniques et les cyclones tropicaux)

Note. C La première colonne indique le centre de veille météorologique (MWO).

EXPLICACIÓN DE LA TABLA

S = SIGMET, SIGMET con PROYECCIÓN (para cenizas volcánicas y ciclones tropicales) y AIREP especiales

s = SIGMET y AIREP especiales

s' = SIGMET con PROYECCIÓN (para cenizas volcánicas y ciclones tropicales)

Nota. C La primera columna se refiere a las Oficinas de vigilancia meteorológica (MWO).

* Esta Tabla refleja los requerimientos MET requerimientos establecidos mientras se espera por la reorganización del espacio aéreo de Brasil previsto para el 2003.

VI-MET 3 I*-1

Table MET 3, Part I* C Tableau MET 3, Partie I* C Tabla MET 3, Parte I*

TROPICAL CYCLONE ADVISORY CENTRE (BRAZIL)
CENTRE D=AVIS DE CYCLONES TROPICAUX (BRÉSIL)
CENTRO DE AVISOS DE CICLONES TROPICALES (BRASIL)

EXPLANATION OF THE TABLE

Column

- 1 Location of the tropical cyclone advisory centre (TCAC).
- 2 Area of responsibility for the preparation of advisory information on tropical cyclones by the TCAC in Column 1.
- 3 Period of operation of the TCAC.
- 4 MWO to which the advisory information on tropical cyclones should be sent.

Note. C ICAO location indicators for MWOs are shown in Table MET 1B.

* This Table reflects the MET requirements established while waiting for the reorganization of the Brazilian airspace scheduled for 2003.

EXPLICATION DU TABLEAU

Colonne

- 1 Emplacement du centre d=avis de cyclones tropicaux (TCAC).
- 2 Zone pour laquelle le TCAC indiqué dans la colonne 1 doit produire les renseignements consultatifs sur les cyclones tropicaux.
- 3 Période de fonctionnement du TCAC.
- 4 MWO auxquels les renseignements consultatifs sur les cyclones tropicaux devraient être communiqués.

Note. C Les indicateurs d=emplacement OACI des MWO figurent dans le Tableau MET 1B.

EXPLICACIÓN DE LA TABLA

Columna

- 1 Lugar del centro de avisos de ciclones tropicales (TCAC).
- 2 Zona de responsabilidad para la preparación de la información de asesoramiento sobre ciclones tropicales por el TCAC en la Columna 1.
- 3 Período de operación del TCAC.
- 4 MWO a la que debe enviarse la información de asesoramiento sobre ciclones tropicales.

Nota.C Los indicadores de lugar OACI de las MWO se presentan en la Tabla MET 1B.

* Esta Tabla refleja los requerimientos MET requerimientos establecidos mientras se espera por la reorganización del espacio aéreo de Brasil previsto para el 2003.

MET

VI-MET 3 I*-3

Tropical cyclone advisory centre Centre d'avis de cyclones tropicaux Centro de avisos de ciclones tropicales	Area of responsibility Zone de responsabilité Zona de responsabilidad	Period of operation Période de fonctionnement Período de operación	MWO to which advisory information is to be sent MWO auquel les renseignements consultatifs doivent être communiqués MWO a la que debe enviarse información de asesoramiento
1	2	3	4
Miami (United States) (États-Unis) (Estados Unidos)	Tropical Atlantic, Caribbean Sea, Gulf of Mexico Relevant parts of the Pacific East of 180EE Atlantique tropical, mer des Caraïbes, golfe du Mexique Parties concernées du Pacifique à l'est de 180EE Atlántico Tropical, Mar del Caribe, Golfo de México Partes pertinentes del Pacífico al este de los 180EE	1 June B 30 November 1 ^{er} juin B 30 novembre 1 de junio B 30 noviembre	Belem Bogotá Caracas Cayenne Georgetown Habana Kingston Mexico Panama Port of Spain Port-au-Prince San Juan, Puerto Rico Santo Domingo Tegucigalpa Willemstad Zandery

Table MET 3, Part II* C Tableau MET 3, Partie II* C Tabla MET 3, Parte II*

**VOLCANIC ASH ADVISORY CENTRE (BRAZIL)
CENTRE D'AVIS DE CENDRES VOLCANIQUES (BRÉSIL)
CENTRO DE AVISOS DE CENIZAS VOLCÁNICAS (BRASIL)**

EXPLANATION OF THE TABLE

Column

- 1 Location of the volcanic ash advisory centre (VAAC).
- 2 Area of responsibility for the preparation of advisory information on volcanic ash by the VAAC in Column 1.
- 3 MWOs to which the advisory information on volcanic ash should be sent.
- 4 ACC to which the advisory information on volcanic ash should be sent.
- 5 ICAO location indicator assigned to the ACC in Column 4.

Note. C ICAO location indicators for MWOs are shown in Table MET 1B.

* This Table reflects the MET requirements established while waiting for the reorganization of the Brazilian airspace scheduled for 2003.

EXPLICATION DU TABLEAU

Colonne

- 1 Emplacement du centre d'avis de cendres volcaniques (VAAC).
- 2 Zones pour lesquelles le VAAC indiqué dans la colonne 1 doit produire les renseignements consultatifs sur les cendres volcaniques.
- 3 MWO auxquels les renseignements consultatifs sur les cendres volcaniques devraient être communiqués.
- 4 ACC auxquels les renseignements consultatifs sur les cendres volcaniques devraient être communiqués.
- 5 Indicateur d'emplacement OACI de l'ACC indiqué dans la colonne 4.

Note. C Les indicateurs d'emplacement OACI des MWO figurent dans le Tableau MET 1B.

EXPLICACIÓN DE LA TABLA

Columna

- 1 Lugar del centro de avisos de cenizas volcánicas (VAAC).
- 2 Zona de responsabilidad para la preparación de la información de asesoramiento sobre cenizas volcánicas por el VAAC en la Columna 1.
- 3 MWO a la que debe enviarse información de asesoramiento sobre cenizas volcánicas.
- 4 ACC a la que debe enviarse información de asesoramiento sobre cenizas volcánicas.
- 5 Indicador de lugar OACI del ACC en la Columna 4.

Nota. C Los indicadores de lugar OACI de las MWO se presentan en la Tabla MET 1B.

* Esta Tabla refleja los requerimientos MET requerimientos establecidos mientras se espera por la reorganización del espacio aéreo de Brasil previsto para el 2003.

MET

VI-MET 3 II*-3

Volcanic ash advisory centre Centre d'avis de cendres volcaniques Centro de avisos de cenizas volcánicas	Area of responsibility Zone de responsabilité Zona de responsabilidad	MWO to which advisory information is to be sent MWO auxquels les renseignements consultatifs doivent être communiqués MWO a la que debe enviarse información de asesoramiento	ACC to which advisory information is to be sent ACC auxquels les renseignements consultatifs doivent être communiqués ACC a la que debe enviarse información de asesoramiento	
1	2	3	Name Nom Nombre	ICAO loc. Ind. Ind. d'empl. OACI Ind. lugar OACI
			4	5
Buenos Aires (Argentina)	SAM Region: South of 10ES between 30EW and 90EW Région SAM: Sud de 10°S entre 30°W et 90°W Región SAM: Al sur de los 10ES entre 30EW y 90EW	Antofagasta Asunción Brasilia Buenos Aires (Aeroparque) Buenos Aires (Ezeiza) Comodoro Rivadavia Cordoba Curitiba Florianopolis La Paz Lima-Callao Porto Alegre Manaus Mendoza Montevideo Puerto Montt Punta Arenas Recife Resistencia Rio de Janeiro-Galeao Santiago Sao Paulo-Guarulhos	Antofagasta Asunción Brasilia Buenos Aires (Ezeiza) Comodoro Rivadavia Cordoba Curitiba La Paz Lima Manaus Mendoza Montevideo Puerto Montt Punta Arenas Recife Resistencia Santiago	SCFZ SGFA SBBS SAEF SAVF SACF SBCW SLLF SPIM SBMU SAMV SUEO SCTZ SCCZ SBRE SARR SCEZ
Washington (United States) (États-Unis) (Estados Unidos)	CAR/SAM Regions: North of 10ES Région CAR/SAM: Nord de 10°S Regiones CAR/SAM: Al norte de los 10ES New York Oceanic* Oakland Oceanic* United States Continental FIRs*	Belem Bogotá Caracas Cayenne Georgetown Guayaquil Habana Kingston Lima-Callao Manaus Mexico Panama Port of Spain Port-au-Prince Recife San Juan, Puerto Rico Santo Domingo Tegucigalpa Willemstad Zandery	Belem Barranquilla Bogotá Curaçao Georgetown Guayaquil Habana Kingston Lima Manaus Maiquetía Mazatlán Mérida México Monterrey Nassau Panamá Paramaribo Piarco Port-au-Prince Porto Velho Recife Rochambeau San Juan, Puerto Rico Santo Domingo Cenamer	SBBL SKEC SKED TNCF SYGC SEGU MUFH MKJK SPIM SBMU SVZM MMZT MMID MMEX MMTY MYNA MPZL SMPM TTPP MTEG SBPH SBRE SOOO TJZS MDSO MHTG

* Requirement shown in NAM, NAT and PAC Regional Air Navigation Plans/
Besoin indiqué dans les plans régionaux de navigation aérienne NAM, NAT et PAC/
Requisito mostrado en los planes regionales de navegación aérea NAM, NAT y PAC.

APPENDIX P/APENDICE P

CNS MULTINATIONAL INSTALLATIONS/SERVICES
INSTALACIONES/SERVICIOS MULTINACIONALES CNSSOUTH AMERICAN DIGITAL NETWORK - REDDIG
RED DIGITAL SUDAMERICANA – REDDIG

1. Main Characteristics /Características Principales

An open architecture Multiservice/Multiprotocol network, implemented in a Frame Relay platform and aimed at supporting the implementation of applications related with the ICAO CNS/ATM systems and using as primary transmission media satellite communications with TDMA access and as secondary means, the ISDN public network

Red de arquitectura abierta Multiservicio/Multiprotocolo implantada en base a una plataforma Frame Relay con miras a dar apoyo a la implantación de aplicaciones de los sistemas CNS/ATM de la OACI y que utiliza como medio primario de transmisión comunicaciones vía satélite con acceso TDMA y como medio secundario la Red Pública ISDN.

2. Communications Services / Servicios de Comunicaciones

NODES/NODOS	SERVICES (Situation to be implemented) / SERVICIOS (Situación a implantarse)										
	AFTN	ATS-D	ATS-A	ATN	SBAS Support/ Apoyo SBAS	SSR Data/ Datos SSR	ADM	Management/Gestión		MANT	Other/Otros
								NCC	MNS		
1	2	3	4	5	6	7	8	8	9	11	12
Ezeiza	X	X	X		X	X	X	X		X	
Santiago	X	X	X		X		X		X	X	
Montevideo	X	X	X			X	X		X	X	
Asunción	X	X	X				X		X	X	
La Paz	X	X	X		X		X		X	X	
Curitiba	X	X	X				X		X	X	
Recife	X		X				X		X	X	
Manaus	X	X	X				X		X	X	
Lima	X	X	X		X		X	X	X	X	
Bogotá	X	X	X		X		X		X	X	
Guayaquil	X	X	X				X		X	X	
Caracas	X	X	X				X		X	X	
Georget own	X		X				X		X	X	
Paramaribo	X		X				X		X	X	
Cayenne	X		X				X		X	X	

Agenda Item 5: Management of the GREPECAS Mechanism**5.1 ACG Activities and Report of the 2nd Meeting**

5.1.1 The Meeting reviewed the work carried out by the GREPECAS Administration Coordination Group (ACG) at its second meeting and during the period since the GREPECAS/10 meeting. The ACG had dealt with the issue of inclusion of Aviation Security activities in the GREPECAS Work Programme as stipulated in GREPECAS Decision 10/67. ACG had reviewed the results of the 12th AVSEC Panel Meeting as well as those of the High-level Ministerial Conference on Aviation Security held at ICAO Headquarters in February 2002 and considered the following options:

- Establishment of a new AVSEC contributory body reporting to the AGA/AOP Subgroup;
- Establishment of a new AVSEC contributory body reporting directly to GREPECAS;
- Expansion of the terms of reference of the Aviation Safety Board to include AVSEC matters.

5.1.2 Based on the discussion, the ACG determined that the option of an AVSEC entity subordinate to the AGA/AOP Subgroup was the more feasible. The Meeting decided that the AVSEC body be a Committee to provide it with the status warranted by the importance of its function and strong commitment from the States and International Organizations. The AVSEC Committee held its first meeting as reported under Agenda Item 3.1 and concluded that it should be a separate contributory body reporting directly to GREPECAS. The Meeting noted the developments and adopted the following Conclusion:

CONCLUSION 11/64 AVIATION SECURITY COMMITTEE (AVSEC/COMM)

That,

- a) GREPECAS establish an AVSEC Committee with the strong commitment from the CAR/SAM States and international organizations for its composition and activities;
- b) the AVSEC Committee determine its work programme at its 2nd Meeting, to be submitted to GREPECAS for approval;
- c) ICAO Headquarters provide the necessary support and assistance to the AVSEC Committee, particularly while the ICAO Regional Offices do not have AVSEC officers; and
- d) GREPECAS modify its Terms of Reference to reflect the inclusion of AVSEC matters in its work programmes.

5.1.3 The Meeting recalled that GREPECAS/9 in establishing the ACG had included in its mandate the possibility of taking decisions from its Meetings as well as from work developed by GREPECAS Contributory Bodies and provided to the ACG, assessing and circulating them to GREPECAS Members for timely approval.

5.1.4 The Group, in keeping with its responsibility of monitoring the work of the GREPECAS and its Contributory Bodies, reviewed the work programmes of the AERMET, AGA/AOP, AIS/MAP and ATM/CNS Subgroups and Committees and agreed to standardizing the format of the presentation of the Contributory Bodies Work Programme based on Project Management software MS Project and utilizing this software to monitor and analyze their progress. The Meeting noted a work methodology encompassing Project Management concepts to be used by the GREPECAS Mechanism to monitor and analyze the progress of activities and decided to initiate a Pilot Project incorporating the following steps:

- Step 1 – Training of the contributory bodies Secretariat personnel to use the MS-Project as a tool for project management;
- Step 2 – Adaptation of the ongoing GREPECAS activities (projects) to the MS-Project programme;
- Step 3 – Insertion of all the new GREPECAS activities (Projects) into the MS-Project programme;
- Step 4 – Continuous improvement of the suggested work methodology until the next ACG meeting;
- Step 5 – Consolidation of the suggested work methodology until the next ACG meeting; and,
- Step 6 – Approval of the final work methodology during the next ACG meeting.

5.1.5 The Meeting adopted the following Decision:

**DECISION 11/65 WORK PROGRAMME MANAGEMENT AND
PRESENTATION USING MS PROJECT**

That each GREPECAS Subgroup/Committee prepare its respective Work Programme using MS Project and present this to the ACG/3 Meeting.

5.1.6 The Meeting reviewed the GREPECAS Tentative Meeting Schedule for 2003 - 2004. The Secretary of GREPECAS informed the Group in respect of the responsibility of the ACG to prepare the Meeting Schedule on the basis of progress on the work of each Contributory Body, their planned work programmes, and other requirements determined by each Contributory Body or by the ACG itself. He also commented in respect to the still prevailing tight budget situation of the GREPECAS Mechanism.

5.1.7 The Meeting noted that the HRT/SG/1 meeting was scheduled to be held in 2002. Due to the lack of specialized personnel in the Lima and Mexico City Offices, the work of the Human Resources and Training Subgroup could not commence.

5.1.8 The Meeting also noted that the AIS/MAP/SG had not met in 2002 as planned due to the insufficient interest expressed by States in holding the meeting, although several States and International Organizations did confirm. This had delayed the progress by the Subgroup on some of the AIP/MAP/SG work programme tasks. The Meeting was reminded that work in the Contributory Bodies could progress by communications through electronic means between members and that any draft decisions and conclusions could be submitted through the ACG for approval by GREPECAS without need to wait for meetings to be held. Nevertheless, the Meeting was informed that the next AIS/MAP/SG meeting is planned to be held in March 2003. The Meeting felt that, in general, some States were not sufficiently committed to the work of the Contributory Bodies and to attending its meetings, in particular in the AIS and MET fields. The Meeting therefore adopted the following Conclusion:

**CONCLUSION 11/66 COMMITMENT BY STATES TO THE GREPECAS
CONTRIBUTORY BODIES**

That States/Territories/International Organizations;

- a) commit to actively support the work of the GREPECAS Contributory Bodies by enabling their appropriate personnel to contribute to the work and attend the meetings, as required; and
- b) confirm their attendance, or regrets, to the ICAO Regional Offices in a timely manner to ensure meetings are not cancelled or postponed due to the lack of registered interest in participation.

5.1.9 The Meeting agreed that to avoid Contributory Body meetings being cancelled due to the lack of participation by States which are members in the composition but who do not attend the meetings nor contribute to its work, the ACG should develop criteria for removing such States/International Organizations from the composition of contributory bodies and include such procedures in the next revision to the GREPECAS Procedural Handbook. The Meeting provisionally adopted the following Conclusion in this regard:

CONCLUSION 11/67 CONTRIBUTORY BODY COMPOSITION

That the Secretary of GREPECAS send a letter to those States/Territories/International Organizations who do not attend two consecutive Meetings requesting confirmation of their intention to continue forming part of the contributory bodies.

5.1.10 An element to be taken into consideration in scheduling the next GREPECAS meeting was the holding of the Eleventh Air Navigation Conference scheduled for October 2003, therefore, it would be prudent to await the output from the Air Navigation Conference before holding a GREPECAS meeting.

5.1.11 To permit all of the GREPECAS Contributory Bodies to further develop their work in 2003 it was suggested that all of the Contributory Bodies hold a meeting in 2003. It was proposed that the GREPECAS/12 consider the reports of its Contributory Bodies and the results of the 11th Air Navigation Conference in early 2004. The Meeting approved the Meeting Schedule for 2003 - 2004 as shown in the **Appendix A** to this part of the Report.

5.1.12 In view of the above, the Meeting adopted the following Conclusion:

**CONCLUSION 11/68 GREPECAS MECHANISM MEETING SCHEDULE
2003 - 2004**

That the GREPECAS Mechanism Meeting Schedule for 2003 - 2004 be planned as shown in the Appendix A to this part of the Report.

5.1.13 The Meeting noted that the ACG had reviewed the GREPECAS Procedural Handbook, and decided that in light of the new AVSEC activities within the GREPECAS Mechanism, it was prudent to conduct a thorough review of the Handbook after the GREPECAS/11 considered the results of the AVSEC Committee's first Meeting. A revised draft of the Handbook will be presented to ACG/3 meeting for consideration.

5.1.14 Additional activities of the ACG subsequent to its Meeting included receipt, analysis, and the electronic distribution to GREPECAS Members for their consideration and approval of Conclusions developed by the various Contributory Bodies for their consideration and approval.

5.1.15 In this regard, a WAFS Task Force Special Meeting was held in April 2002. The results were submitted to the ACG through the AERMET/SG Secretary. The following Conclusions were circulated by the ACG and approved by GREPECAS Members on 7 October 2002.

**CONCLUSION 11/69 TRANSITION PLAN FOR FINAL PHASE OF WAFS IN
THE CAR/SAM REGIONS**

That States adopt the Transition Plan to implement the final phase of WAFS in the CAR/SAM Regions as included in **Appendix B** to this part of the Report.

CONCLUSION 11/70 REQUIREMENTS FOR SWM CHARTS FOR THE CAR/SAM REGIONS

Since there are no requirements for significant weather medium-level charts, the Washington WAFS will not produce SWM charts for limited areas of the CAR/SAM Regions.

CONCLUSION 11/71 PROCUREMENT OF WAFS WORKSTATIONS IN THE CAR/SAM REGIONS.

That States are required to:

- a) procure new workstations taking into account technical functional specifications as provided by WAFS Washington as included in **Appendix C** to this part of the Report, in order to comply with the Transition Plan for the Final Phase of WAFS; and
- b) obtain a maintenance service agreement to support the operation of the WAFS workstation.

CONCLUSION 11/72 TRAINING FOR WAFS WORKSTATIONS

- a) that the AERMETSG WAFS Task Force, in consultation with the WAFS Washington, identify the level of training required to operate new workstations;
- b) that the WAFS Washington Provider State arrange for appropriate training to operate workstations; and
- c) that States establish an appropriate training programme for MET personnel for the operation of the WAFS workstation to make full and proper use of GRIB and BUFR codes.

5.1.16 The Secretary of the ATM/CNS/SG had also requested that a draft conclusion of the ATM/COMMITTEE/2 Meeting, be processed electronically through the GREPECAS ACG mechanism. Comments from States were received, and the GREPECAS Members approved the conclusion on 18 November 2002. The conclusion 11/23 is included in the report of Agenda Item 3.2.

5.2 Increasing the efficiency and effectiveness of PIRGs

5.2.1 The Meeting noted that the President of the Council of ICAO expressed concerns with regard to the role and activities of planning and implementation regional groups (PIRGs). The President indicated that, for some time now, he had noticed that the deficiencies listed in some PIRG reports had not changed much and seemed to be carried over from one report to another. Among other issues, the President made a reference to the size of certain PIRG reports and questioned the justification for annual PIRG meetings, as well as their cost efficiency. The President suggested that perhaps more time should be allowed between PIRG meetings to develop issues on the basis of which the PIRGs could meet. He stated that he would like to see the PIRGs focus more on implementation issues rather than planning aspects and acknowledged that, to do that, it may be necessary to revise the terms of reference of planning and implementation regional groups.

5.2.2. Against this background, the role and working methods of GREPECAS was reviewed. In relation to size of the GREPECAS report, the Meeting agreed that the Secretariat could submit to ICAO HQ only the report without the appendices and guidance material, as determined by ICAO Headquarters. However, in order to meet regional requirements, the meeting requested the Secretariat to continue to bring out the GREPECAS Report using the current approach that will contain all the appendices and guidance material.

5.2.3 The Meeting noted that the demands on PIRGs has been changing; GREPECAS had adopted a wider range of responsibilities and expanded their role and activities in the regional planning process. More recently, and in light of experience gained with the air navigation planning groups, ICAO had determined that regional air navigation planning groups are a better mechanism for the management of regional plans than the traditional regional air navigation meetings, which tend to be held infrequently. Consequently, regional air navigation plans are continuously updated by means of periodic reviews undertaken by PIRGs.

5.2.4 In relation to justification for periodicity and duration of GREPECAS meetings, it was noted that this aspect is determined by the Administration Coordination Group of GREPECAS taking into account the established criteria such as the additional responsibilities delegated from RAN meetings to PIRGs, the need to allow enough time for development between each PIRG meeting, and the need to conduct activities in the most cost effective manner with the minimum of formality and documentation.

5.2.5 With the above in mind and responding to the concerns expressed by the President of the Council, the meeting considered necessary to revise the terms of reference of GREPECAS. The revised draft terms of reference, available at **Appendix D** to this part of the Report, takes into account all aspects in enhancing the efficiency and effectiveness of PIRGs. Accordingly the meeting formulated the following Conclusion:

CONCLUSION 11/73 REVISED TERMS OF REFERENCE OF GREPECAS

That ICAO Council approve the revised of terms of reference of GREPECAS, available at Appendix D to this part of the Report.

5.2.6 Under Agenda Item 3, the Meeting noted that the AVSEC Committee and the Institutional Aspects Task Force of the ATM/CNS/SG had been transferred to GREPECAS as Contributory Bodies reporting directly to GREPECAS. It also noted the changes to its work programme proposed by the CNS Committee. The Group then accepted a proposal for the incorporation of Cuba into the composition of the AVSEC Committee. Consequently, it adopted the following Decision:

DECISION 11/74 AMENDMENT TO THE TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE GREPECAS CONTRIBUTORY BODIES

GREPECAS approved the Terms of Reference, Work Programme and Composition of its Contributory Bodies as shown in **Appendices E to M** to this part of the Report.

5.2.7 The Meeting expressed its concern for the lack of participation throughout this year by the members of the Subgroups and, especially, by the members of the Task Forces. The States were urged to give the necessary facilities to their representatives before GREPECAS, so that they may have sufficient time to devote to these activities and to meet their commitments on a timely basis.

APPENDIX B**Tasks to be Completed to Support Transition to the Final Phase of WAFS**

Task	Description of task	Date
1	WAFS Washington to provide global gridded W/T data in GRIB code	Completed
2	WAFS Washington to produce SWH charts	Completed
3	ICAO NACC and SAM Regional MET officers survey states ability to produce wind/temperature charts from GRIB data for the purpose of assessing training needs.	Completed
4	ICAO to coordinate with States and users if there is validated regional requirement for SWM Charts for limited geographical area.	Completed
5	U.S. to provide BUFR decode software to the workstation manufactures	Completed
6	Provide the technical functionality specifications for the purpose of acquiring new WAFS workstations	June 2002
7	Buenos Aires and Brasilia RAFC close	July 2002
8	States to initiate a process to procure new workstations, service agreements, and training to support these stations with a planned installation of workstations by November 2003.	July 2002
9	Establishment of back-up distribution arrangements for WAFS products	November 2002
10	Training to be completed on existing workstations provided to States who need assistance to produce wind/temperature charts from GRIB data in support of Task 14*	May 2003
11	Provision of test BUFR coded SIGWX forecasts on satellite broadcasts	mid-2002
12	All states that receive GRIB products capable of converting GRIB forecasts to Wind/Temp charts*	mid-2003
13	Training in the operational conversion of BUFR to SIGWX charts	late-2003 to late-2004
14	Removal of T4 wind/temperature charts from satellite broadcast*	mid-2003
15	Satellite distribution of global SWH and SWM in BUFR format	late-2003
16	States have the ability to operate the decoding and presentation software to convert BUFR SIGWX forecasts into operational graphical products	mid-2004
17	Removal of T4 SIGWX products from satellite broadcast	late-2004
WAFS Transition to Final Phase Completed		

APPENDIX C**WAFS Functional Specifications**

Comments	Available Y/N	Comments
1. Display of OPMET data		
2. GRIB decoder and display package		
3. BUFR decoder and display package		
4. Display and ability to prompt users of the arrival of chart amendments		
5. Display and ability to prompt users of the arrival of SADIS administrative messages		
6. Display of tropical cyclone advisory statements		
7. Display of volcanic ash advisory statements		
8. Display of volcanic ash trajectory/dispersion charts		
9. Display bulletin contents from the WMO header		
10. Display of Special AIREPS		
11. Ability to receive SADIS products via FTP		

Please refer to the accompanying notes that detail the requirements

Requirements

The numbers of the notes below correspond to the numbers of the 11 items listed in the table above. For a software package to receive a "Y" as opposed to a "N" in the "Available Y/N" column on the table, all of the functions detailed below need to be satisfied for each functionality item.

For every workstation provider that is happy for their software to be tested under these criteria, it our intention is to make the information available to all existing and prospective SADIS users via the SADIS web page.

1.

- The ability to receive and display OPMET data (including TAFs, METARs, SPECIs and SIGMETs) from PVC 2.
- The ability for a user to display OPMET for aerodromes specified by the user
- Prompt users of the arrival of a SIGMET and SPECI.

2.

- The ability to receive and display GRIB data, sourced from Bracknell and Washington*, from PVC1.
- The functionality to enable a user to produce a wind and temperature chart from GRIB data over a user-specified area. Global coverage is required.
- A "zooming facility" for GRIB chart areas.
- A de-clutter facility, whereby the quantity of data plotted over an area is appropriate to the size of the area, and hence maximizes the clarity of the end product.
- The ability to produce a wind and temperature chart from GRIB encoded data that is identical to a standard T4 wind and temperature chart for the same area. The product must clearly display whether the data is Bracknell or Washington GRIB.

3.

- The ability to receive and display BUFR data, sourced from Bracknell and Washington** (when it is made available) from PVC3.
- The functionality to enable a user to produce a SIGWX chart from BUFR data over a user-specified area. Global coverage is required.
- A "zooming facility" for BUFR chart areas.
- A de-clutter facility for tropopause heights, whereby the quantity of tropopause data plotted over an area is appropriate to the size of the area, and hence maximises the clarity of the end product.
- The ability to produce a SIGWX chart from BUFR encoded data that is identical to a standard T4 SIGWX chart for the same area. The product must clearly display whether the data is Bracknell or Washington BUFR.

4.

- The ability to receive (via PVC2), display and prompt users of the arrival of chart amendments. These amendments are text messages issued with the following WMO headers:

FXUK65 EGRR	T4 SIGWX chart amendments
FXUK66 EGRR	T4 Wind & Temperature Chart amendments

5.

- The ability to receive (via PVC2), display and prompt users of the arrival of SADIS administrative messages.

These amendments are text messages issued with the following WMO headers:

NOUK10 EGRR
NOUK11 EGRR
NOUK12 EGRR
NOUK13 EGRR
NOUK31 EGGY
NOBX99 EBBR

6.

- The ability to receive (via PVC2), display and prompt users of the arrival of tropical cyclone advisory statements. These bulletins are text, and the WMO headers of those currently available for dissemination on SADIS are shown below. Basically they are of the form FK**** XXXX.

FKIO20 FMEE
FKPQ30 RJTD
FKPQ31 RJTD
FKPQ32 RJTD
FKPQ33 RJTD
FKPQ34 RJTD
FKPQ35 RJTD

7.

- The ability to receive (via PVC2), display and prompt users of the arrival of volcanic ash advisory statements. These bulletins are text, and the WMO headers of those currently available for dissemination of SADIS are listed below. These bulletins are of the form FV**** XXXX.

FVAK20 PANC
FVAK21PANC
FVAK22 PANC
FVAK23 PANC
FVAK24 PANC
FVUK01 EGRR
FVXX20 KWBC
FVXX21 KWBC
FVXX22 KWBC
FVXX23 KWBC
FVXX24 KWBC
FVXX25 KWBC
FVXX26 KWBC
FVXX27 KWBC
FVXX28 KWBC
FVXX29 KWBC
FVAZ01 LFPW
FVCM01 LFPW

FVCR01 LFPW
FVCV01 LFPW
FVET01 LFPW
FVGQ01 LFPW
FVGR01 LFPW
FVIC01 LFPW
FVIY01 LFPW
FVKN01 LFPW
FVRE01 LFPW
FVSD01 LFPW
FVST01 LFPW
FVSY01 LFPW
FVTN01 LFPW
FVYE01 LFPW
FVZR01 LFPW
FVSV30 FDMS
FVFE01 RJTD
FVCN01 CWAO
FVCN02 CWAO
FVCN03 CWAO
FVCN04 CWAO
FVAU01 ADRM
FVPS01 NZKL

8.

- The ability to receive (via PVC3) and display volcanic ash trajectory and dispersion charts (VAG). These charts are in standard T4 format. The products currently available for dissemination on SADIS have the following WMO headers:

PFXB00 CWAO
PFXD00 CWAO
PFXG00 CWAO
PFXI00 CWAO
PFXB00 CWAO
PFXD00 CWAO
PFXG00 CWAO
PFXI00 CWAO
PHBE10 KWBC
PHBI10 KWBC
PURG00 LFPW
PVRE00 LFPW
PVRD00 LFPW
PUAG00 EGRR
PVAG00 EGRR

Additional (VAG) bulletins over and above those listed above will be broadcast on SADIS as they become available.

9.

- The functionality to enable a user to display the contents of a single bulletin (including all types of bulletins except GRIB and BUFR encoded bulletins) by typing in the WMO header of the bulletin.

10.

- The ability to receive (via PVC2), display and prompt users of the arrival of special AIREPS. These bulletins are text, and the WMO headers of the bulletins currently available for dissemination on SADIS are listed below. The bulletins are of the form UA**** XXXX

UANT90 EGRR

UAUK90 EGRR

11.

- The ability to receive all of the operational SADIS data (detailed in items 1 - 10 above) via FTP over the Internet, and to display it using the same interface.

*It should be noted that there are some subtle differences between Bracknell and Washington GRIB data. Washington GRIB would only be transmitted over SADIS if there was a major problem with the production of Bracknell GRIB. It would only have the purpose of forming a backup to the Bracknell GRIB in the event of problems with disseminating the former.

**Washington BUFR (when it is made available to Bracknell - it is currently under development) would only be disseminated on SADIS if there was a major problem with the production of Bracknell BUFR. It would only have the purpose of forming a backup to the Bracknell BUFR in the event of problems with disseminating the former.

APPENDIX D**GREPECAS**

1. The ~~Objectives~~Terms of Reference of the Group are ~~to~~:
 - a) ~~ensure the continuous and coherent development of the CAR and SAM Regional Plans as a whole and in relation to those of adjacent regions~~ ensure the continuous and coherent development of the CAR/SAM Air Navigation Plan and other relevant regional documentation in a manner that is harmonized with adjacent regions and consistent with global requirements;
 - b) identify specific problems in the air navigation field and propose, in appropriate form, action aimed at solving these problems; and
 - c) take into account, with due observance to the primacy of air safety and security, cost/benefit relationships of the implementation options available and the need to facilitate financing of the preferred options, to facilitate the implementation of installations and services identified in the CAR/SAM air navigation plan.

2. In order to meet the ~~objectives~~Terms of Reference the Group shall:
 - a) ~~keep under~~ review, and propose when necessary, the target dates for implementation of facilities, services and procedures to ensure the coordinated development of the Air Navigation System in the CAR and SAM Regions;
 - b) assist the ICAO Regional Offices providing services in the CAR and SAM Regions in their assisted task of fostering implementation of the CAR/SAM Regional Air Navigation Plan;
 - c) ~~review any shortcomings and deficiencies in the CAR and SAM Regional Air Navigation System and develop recommendations for remedial action~~ in line with the Global Aviation Safety Plan (GASP), ensure the conduct of any necessary systems performance monitoring, identify specific problems in the Air Navigation field, especially in the context of safety and security, and propose corrective action;
 - d) ensure the development and implementation of an action plan by States to resolve identified deficiencies, where necessary;
 - e) ~~d)~~ since aviation security has synergy with aviation safety in the air navigation systems, to promote, support and facilitate the regional implementation of AVSEC provisions;

- ~~f) originate and coordinate, as necessary, proposals for amendments to the Plan for the CAR and SAM Regions; develop amendment proposals for the update of the CAR/SAM Air Navigation Plan necessary to satisfy any changes in the requirements, thus removing the need for regular regional air navigation meetings;~~
- ~~ge) monitor new developments in the air navigation field and when these have an effect on the CAR and SAM Regions, develop proposals to meet the requirements resulting from these developments in a timely and evolutionary manner; monitor implementation of air navigation facilities and services and where necessary, ensure interregional harmonization, taking due account of cost/benefit analysis, business case development, environmental benefits and financing issues;~~
- ~~hf) examine human resource planning and training issues as they related to the implementation of all elements of the CAR/SAM Regional Air Navigation Plan ensuring that the human resource development capabilities in the region are compatible with the plans to implement facilities and services;~~
- ~~ig) keep under review the Statement of Basic Operational Requirements and Planning Criteria and recommend to the Air Navigation Commission such changes to them as may be required in the light of developments mentioned in ef) above;~~
- ~~jh) use an appropriate mechanism to prepare cost/benefit analyses and business cases, and to provide related guideline material as back-up to a series of “prototype” planned installations and services; and~~
- ~~ki) invite financial institutions considered convenient, on a consultative basis and at the moment of the planning process to participate in the task at hand;~~
- ~~l) ensure close cooperation with relevant organizations and State grouping to optimize the use of available expertise and resources; and~~
- ~~m) conduct the above activities in the most efficient manner possible, with a minimum of formality and documentation, and call meetings of the GREPECAS only when the Secretary and the Chairperson through the Aviation Coordination Group (ACG) are convinced that it is necessary to do so.-~~

3. Composition

Antigua and Barbuda (*representing Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and Grenadines*), Argentina, Barbados, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador (~~in rotation with Panama every two years~~), France, Mexico, Panama, Paraguay (*in rotation with Bolivia and Uruguay every two years*), Peru, Trinidad and Tobago, United Kingdom, United States and Venezuela

APPENDIX E

ADMINISTRATION COORDINATION GROUP (ACG)

1. Terms of reference

- a) To coordinate and harmonize administrative matters of GREPECAS and its contributory bodies, and to take part in the tasks relating to its internal organization, the holding of events, and the administrative supervision of the subgroups and task forces.
- b) To expedite follow-up work of the GREPECAS and its contributory bodies between plenary meetings, taking into account the work undertaken by other contributory bodies active in the air navigation field in the CAR/SAM Regions.
- c) To take follow-up action and monitoring of target dates assigned to tasks under a project management process.

2. Work Programme

Tasks	Priority	Completion
1) Review and propose amendments to the GREPECAS Procedural Handbook as required.		
2) Monitor the planning and progress of GREPECAS contributory body work programmes and meeting schedules and offer any advice thereon, as appropriate.		
3) Seek the prompt approval preferably by electronic means of draft GREPECAS Conclusions developed by GREPECAS contributory bodies on the basis of specific requests from such bodies or when the ACG deems that efficiencies could be derived.		
4) Prepare reports of ACG activities to each GREPECAS meeting, as appropriate.		
5) Review the GREPECAS working methods and propose specific actions to improve its performance.		
6) Prepare the draft Agenda for GREPECAS meetings and plan and coordinate Secretariat support work and documentation for such meetings.		

3. Composition

The Administration Coordination Group is composed by the Chairperson and Secretary of GREPECAS, the Regional Directors, a RAO representative and the Secretaries of the Subgroups. In the event of considering it necessary, the presidents of the Subgroups will be invited to participate.

APPENDIX F

AVIATION SAFETY BOARD

1. Terms of reference

- a) The Board will evaluate, validate, monitor and follow-up urgent air navigation deficiencies in the CAR/SAM regions and develop appropriate action to be taken.
- b) The Board will act as an advocate and instrument in resolving urgent (U) deficiencies.

2. Work Programme

Tasks	Priority	Completion
1) The Board will consider urgent deficiencies and develop solutions it would propose through the appropriate ICAO regional office. To achieve resolution, either an individual state/states/executing body, the Air Navigation Commission, or referral to the appropriate subgroup for further evaluation may need to be involved.	A	
2) The Board will offer, through the ICAO Regional Offices, to assist an individual state/states/executing body in identifying resources and acting as a resource in order to resolve the shortcoming/deficiency through the advocacy with relevant high-level officials and/or donor organizations.	A	

3. Priority

- A** High priority tasks, on which work should be speeded up.
- B** Medium priority tasks, on which work should be begun as soon as possible, but without detriment to priority **A** tasks.
- C** Tasks of lesser priority, on which work should be begun as time and resources allow, but without detriment to Priority **A** and **B** tasks.

4. Composition

The Aviation Safety Board is composed by the Chairperson and Secretary of GREPECAS, the Directors of the ICAO Regional Offices, a representative from the Regional Affairs Office at ICAO Headquarters, the Chairpersons and/or Vice-Chairpersons of the Subgroups and a representative from the following observer organizations: IATA, IBAC, IFALPA and IFATCA. The secretaries of the contributory bodies may participate in an advisory capacity as required.

APPENDIX G

AERONAUTICAL METEOROLOGY SUBGROUP (AERMETSG)

1. Terms of reference

- a) To promote and follow-up the implementation of the provision of MET services required in the CAR/SAM ANP and to place special emphasis on identifying, evaluating and proposing, according to established procedures, the corresponding corrective actions to the deficiencies affecting air operations;
- b) Based on a) above, to develop specific recommendations for the observation systems, forecast exchange of operational meteorological (OPMET) information and volcanic ash and propose the necessary course of action to upgrade the quality of the MET service;
- c) Ensure that the functioning, operation and use of WAFS is in consonance with Annex 3 and the CAR/SAM Regional Air Navigation Plan;
- d) Carry out permanent co-ordination with various GREPECAS contributory bodies in order to ensure appropriate integration of all tasks contributory to the implementation of the CAR/SAM ANP; and
- e) Collaborate with the AIS/MAP/SG and the ATM/CNS/SG in ensuring the provision of aeronautical MET information and supporting MET needs of the CNS/ATM systems.

2. Work Programme

Tasks	Priority	Completion
1) Evaluate the requirements of the WAFS of the CAR/SAM ANP, in accordance with the specifications of Annex 3 (SARPs); propose measures to comply with the SARPs; and develop a plan to ease the transition towards the WAFS final phase.	A	2005
2) Identify the training needs of all personnel that use MET information in their operations, including the installation, maintenance and repair of high technology electronic meteorological equipment.	A	2005
3) Assess the OPMET exchange in order to identify difficulties and propose measures to improve its efficiency.	A	2002
4) Identify and propose measures to facilitate the operation, functioning and coordination between the Volcanic Ash Advisory Centers in Buenos Aires and Washington.	A	2002
5) Develop a regional Volcanic Ash and Aircraft Operations Handbook for the CAR/SAM Regions, based on the ICAO current recommendations.	A	2001

Tasks	Priority	Completion
6) Review and propose actions to carry out the recommendations and conclusions of the CAR/SAM/3 RAN Meeting related to aeronautical meteorology.	A	2005
7) Refer urgent (U) priority deficiencies, with proposed corrective action, to the Aviation Safety Board.	A	
8) Review and propose actions to comply with the procedures of Part VI - Meteorology of the CAR/SAM ANP (Vol I Basic ANP; Vol II-FASID).	B	2003
9) Monitor activities in the CNS/ATM area and develop, in the light of human factors, criteria for personnel selection and training, considering the impact of the application of the new CNS/ATM systems and propose implementation measures.	A	2005

3. **Priority**

- A** High priority tasks, on which work should be speeded up.
- B** Medium priority tasks, on which work should be begun as soon as possible, but without detriment to priority **A** tasks.
- C** Tasks of lesser priority, on which work should be begun as time and resources allow, but without detriment to Priority **A** and **B** tasks.

4. **Composition**

Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, France, Panama, Paraguay, Peru, Spain, United States, Uruguay, Venezuela, COCESNA, IATA, IFALPA.

APPENDIX H

AERODROMES AND GROUND AIDS/AERODROME OPERATIONAL PLANNING SUBGROUP (AGA/AOP/SG)

1. Terms of reference

- a) To promote and follow-up the implementation of the AOP requirements of the CAR/SAM ANP and to place special emphasis on identifying, evaluating and proposing, according to established procedures, the corresponding timely corrective actions to the deficiencies affecting aircraft and airport operations.
- b) Develop the planning for the AOP Part of the CAR/SAM ANP.
- c) To carry out permanent co-ordination with GREPECAS contributory bodies in order to ensure appropriate integration of all tasks contributing to the implementation of the CAR/SAM ANP.
- d) To review the requirements of the AOP Part of the CAR/SAM Regional Air Navigation Plan with a view to developing any changes required to comply with new technological developments including environmental impact aspects.

2. Work Programme

Tasks	Priority	Completion
1) Review and select en-route alternate aerodromes, including the needs of extended range operations by twin-engined aircraft (ETOPS), for inclusion in column 3 of the list of regular and alternate aerodromes in the AOP Part of the Basic ANP CAR/SAM.	B	4 th Meeting
2) Review and update the Table AOP 1 of the AOP Part of the ANP/FASID CAR/SAM at regular intervals based on the greater demands on airports in relation to air traffic growth and the accommodation of aircraft with more onerous physical requirements	B	Continuous

Tasks	Priority	Completion
3) Review and follow-up the implementation of corrective actions for AGA deficiencies including: <ul style="list-style-type: none"> ▪ Objects and depressions in runway strips, principally in the graded areas ▪ Runway and taxiway separations ▪ Runway and taxiway slopes ▪ Obstacles ▪ Secondary power supply ▪ Visual aids ▪ Fencing and perimeter roads ▪ Rescue and fire-fighting services ▪ Aerodrome emergency plans ▪ Runway surface conditions ▪ Runway strips and runway end safety areas Refer urgent (U) priority deficiencies, with proposed corrective actions, to the Aviation Safety Board.	A	Continuous
4) Review the conditions generating noise pollution, air pollution, solid and liquid waste treatment and other aspects which could affect environmental conditions at airports and surrounding areas, generated by aeronautical activity and propose the measures which attenuate the effects produced for their inclusion in an Environmental Management Plan.	C	4 th Meeting
5) Review bird hazards at airports and finalise the formation of the Regional Bird Hazard Committee.	A	3 rd Meeting
6) Review demand/capacity problems at airports and develop options for alleviating airport congestion.	B	3 rd Meeting
7) Review runway incursion incidents at airports and develop guidance to reduce their occurrence.	A	3 rd Meeting

3. Priority

- A** High priority tasks, on which work should be speeded up.
- B** Medium priority tasks, on which work should be begun as soon as possible, but without detriment to priority **A** tasks.
- C** Tasks of lesser priority, on which work should be begun as time and resources allow, but without detriment to Priority **A** and **B** tasks.

4. Composition

Argentina, Barbados, Brazil, Chile, Colombia, Cuba, France, Guatemala, Haiti, Mexico, OECS, Panama, Paraguay, Peru, Trinidad and Tobago, United States, Uruguay, Venezuela, ACI, IATA, IFALPA and IFATCA.

5. Chairpersons

Chairman Gilberto Vázquez Alanís (Mexico)
 Vice-Chairman Richard Saurina (Uruguay)

APPENDIX I

AERONAUTICAL INFORMATION SERVICES AND AERONAUTICAL CHARTS SUBGROUP (AIS/MAP/SG)

1. Terms of Reference

- a) To plan and develop requirements for the electronic exchange of aeronautical information/data (including electronic aeronautical charts) based on standardized conceptual aeronautical information models, in support to the Flight Management System (FMS) and the Global Navigation Satellite System (GNSS).
- b) To promote the development of AIS standardized training programmes, in accordance with technical guidelines which for this end are established by ICAO to be oriented towards its application within the CNS/ATM environment.
- c) To orient the application of quality systems in the CAR/SAM AIS in accordance with ISO 9000.
- d) To study aspects related with the maintenance of the CAR/SAM Air Navigation Plan (Part VIII, AIS) on the basis of its effective implementation and in the evolution of global AIS/MAP requirements.
- d) To promote and follow-up the implementation of the AIS/MAP services required in the CAR/SAM ANP and to place special emphasis on identifying, evaluating and proposing, according to established procedures, the corresponding corrective actions to the /deficiencies affecting the air operations.
- e) To carry out permanent coordination with GREPECAS contributory bodies in order to ensure appropriate integration of all tasks contributing to CNS/ATM implementation

2. Work Programme

Tasks	Priority	Completion
1) Take pertinent follow-up actions for the establishment and utilization of National AIS data Banks in the CAR/SAM Regions; and analyze the existing problems and their possible solutions to achieve the referred objective.	A	2002
2) Prepare guideline material and/or relevant aids to facilitate the CAR/SAM States the implementation of standardized conceptual aeronautical information models.	A	
3) Study and develop reference technical documentation to permit the possible use in CAR/SAM Regions of ICAO broadcast (World Area Forecast System/WAFS) for the transmission of AIS information.	A	2003

Tasks	Priority	Completion
4) Study and develop technical requirements for the AIS CAR/SAM (CASADAB) data base system	A	2003
5) Development of technical requirements for the use of INTERNET technology for the aeronautical data exchange in the CAR/SAM Regions.	A	2003
6) Define general technical criteria for the automated processing of the Integrated Aeronautical Information Documentation by CAR/SAM States.	A	2004
7) Follow up the development and evolution of the concept on interconnection between the ground AIS database and the satellite systems, with the possibility of interrogating such database from aircraft in flight.	B	
8) Carry out studies for the harmonization and automated processing of AIS, MET and FLP products as support to the integrated provision of a pre- and during-flight service.	A	2004
9) Elaborate technical guidelines to promote the application of quality systems in the CAR/SAM AIS Services.	A	2004
10) Develop guidance material for the production by CAR/SAM States of electronic aeronautical charts, taking into account the Flight Management System (FMS) requirements and the operational specifications required for the Global Navigation Satellite System (GNSS).	A	
11) Establish technical guidelines for the standardized production of IFR aeronautical charts in the CAR/SAM Region in keeping with ICAO requirements.	A	2002
12) Define technical and administrative aspects to facilitate the production by the CAR/SAM States of IFR/VFR aeronautical charts based on the World Geodetic System 1984 (WGS-84)	A	
13) Take the corresponding follow up actions to develop the AIS/021-CAR/SAM Course, using a training methodology of the latest generation.	A	2003
14) Make studies, and take relevant actions in order to develop a second generation of the AIS/021-CAR/SAM Course, based on the guidelines of the AIS/MAP uniform training programmes (ISD), developed and promulgated by ICAO and oriented to the new role of the AIS personnel within the environment of the FMS and GNSS systems.	A	
15) Maintain under coordination the activity relating with the granting Professional Category Certificates and/or Licensing to AIS specialists in the CAR/SAM Regions, in accordance with that established by ICAO.	A	
16) Maintain an effective coordination with the Human Resources Subgroup for the development of AIS training programmes and for a professional career project, taking into consideration the new role of the AIS technical personnel within the environment of the FMS and GNSS systems.	A	2004
17) Refer urgent (U) priority AIS/MAP deficiencies, with proposed corrective action, to the Aviation Safety Board.	A	

3. **Priority**

- A** High priority tasks, on which work should be speeded up.
- B** Medium priority tasks, on which work should be begun as soon as possible, but without detriment to priority **A** tasks.
- C** Tasks of lesser priority, on which work should be begun as time and resources allow, but without detriment to Priority **A** and **B** tasks.

4. **Composition**

Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, France, Paraguay, Peru, Spain, Trinidad and Tobago, Uruguay, United States, Venezuela, COCESNA, IATA, and PAIGH.

5. **Chairperson**

Chairman: Mr. Sergio García Jorquera (Chile)
Vice-Chairwoman: Ms. Mirta Crespo (Cuba)

APPENDIX J

AIR TRAFFIC MANAGEMENT/COMMUNICATIONS, NAVIGATION AND SURVEILLANCE SUBGROUP (ATM/CNS/SG)

1. Terms of reference

- a) To promote and follow-up the implementation of the CNS/ATM systems required in the CAR/SAM ANP and to place special emphasis on identifying, evaluating and proposing, according to the established procedures, the corresponding corrective actions to the /deficiencies affecting air operations.
- b) To carry out permanent coordination with various GREPECAS contributory bodies in order to ensure appropriate integration of all tasks contributing to the implementation of the CAR/SAM ANP.
- c) To prepare and harmonize, in the CAR/SAM Regions, action plans to facilitate implementation of CNS/ATM systems, with the purpose to reach a consistent and coordinated implementation, especially in multinational projects of regional/inter-regional nature, taking into account homogeneous areas and main air traffic flows contained in the CAR/SAM FASID.
- d) Taking into consideration the material prepared by the different ICAO groups of experts in the CNS/ATM field, develop guidance material to upgrade the safety level, technical and operational quality for the provision of CNS/ATM services.

2. Work programme

Tasks	Priority	Completion
1) To identify requirements and recommend timely and effective ways of providing assistance to CAR/SAM States to conduct cost/benefit analyses and on technical, financial, organizational, cooperational and other institutional aspects related to the global/regional implementation of CNS/ATM systems.		
2) To establish inter- and intra-regional coordination on CNS/ATM systems applications.		
3) To follow-up the CAR/SAM regional CNS/ATM implementation plan to keep it updated as a working document.		
4) Considering technological developments, harmonize the plans elaborated by the users within the context of the CAR/SAM regional CNS/ATM implementation plan.		

Tasks	Priority	Completion
5) Refer urgent (U) priority deficiencies, with proposed corrective action, to the Aviation Safety Board.		

3. **Priority**

A High priority tasks, on which work should be speeded up.

B Medium priority tasks, on which work should be begun as soon as possible, but without detriment to priority **A** tasks.

C Tasks of lesser priority, on which work should be begun as time and resources allow, but without detriment to Priority **A** and **B** tasks.

4. **Composition**

The ATM/CNS Subgroup is composed by the joint membership of the members of the ATM and CNS Committees.

5. **Chairperson**

Chairman Mr. Drazen Gardilcic (United States)

Vice-Chairman Mr. Paulo Cesar Cunha (Brazil)

**TERMS OF REFERENCE AND WORK PROGRAMME
FOR THE ATM COMMITTEE**

1. Terms of Reference

- a) To study, analyze and propose measures that allow the improvement in the areas of airspace management (ASM), air traffic services (ATS), air traffic flow management (ATFM), and search and rescue (SAR) in the CAR/SAM Regions.
- b) To keep informed of and to analyze the guidance material developed on the ATM systems by other ICAO experts groups for its possible adoption in the CAR/SAM Regions.

2. Work Programme

Task N°	Work Programme	Priority	Start	Completion
General (GRAL)				
ATM-GRAL/100	That, based on the methodology standardized by ICAO Council, identify, assess and report, assigning priorities, the deficiencies in air navigation.	N/A	Permanent	N/A
ATM-GRAL/101	To monitor the corresponding ATM parts of the CAR/SAM Regional CNS/ATM Implementation Plan and to keep it up-to-date as a working document.	N/A	Permanent	First amendment ATMC/3
ATM-GRAL/102	To develop ATS quality assurance programmes for excellence in air traffic management.	N/A		Task concluded in ATM/1
ATM-GRAL/103	To continue the review of CNS/ATM system progress and developments in other regions, and in some States, and consider their application in the CAR/SAM Regions.	N/A	Permanent	N/A
ATM-GRAL/104	To promote among States the transfer of operational knowledge, trials, and other aspects related to CNS/ATM systems.	N/A	Permanent	N/A
ATM-GRAL/105	To analyze the material and information prepared by other groups of experts in the ATM field and develop guidance material related to the implementation of ATM services and recommend the holding of seminars and other appropriate events.	N/A	Permanent	N/A

Task N°	Work Programme	Priority	Start	Completion
Airspace Management (ASM)				
ATM-ASM/200	Development of a RNAV route network and RNAV application areas for the CAR/SAM Regions in order to develop proposals for amendment to the CAR/SAM Regional Air Navigation Plan.	A	August 2001	Phase I Finalized Phase II ATMC/4
ATM-ASM/201	Develop guidance material on RNP implementation.	A	August 2001	ATMC/4
ATM-ASM/202	Develop the RNP Implementation Plan in the CAR/SAM Regions	A	August 2001	ATMC/3
ATM-ASM/203	Develop the Reduced Vertical Separation Minima - RVSM Plan (300 m - 1000 ft) between flight levels 290 and 410 inclusive	A	August 2001	December 1 2004
ATM-ASM/204	Prepare guideline material to implement RNAV in CAR/SAM Regions TMA's	B	September 2002	ATMC/4
ATM-ASM/205	Study the preparation of an airspace strategic plan for the CAR/SAM Regions	C	March 2004	ATMC/6
Air Traffic Services (ATS)				
ATM-ATS/300	Carry out a review of the Spanish phraseology in ICAO Doc. 4444 with a view to achieving the use of commonly understood, precise and up-to-date terms.	B	August 2001	Phase I ATMC/3 Phase II ATMC/4
ATM-ATS/302	Analyze the need for VOLMET services for the CAR/SAM Regions.	C	TBD	TBD
ATM-ATS/305	Establish operational requirements for development of ATM automation.	Together with CNS Committee	September 2002	ATMC/3
ATM-ATS/306	Prepare guidance material on CARSAM airspace safety management	B	August 2004	ATMC/5
Air Traffic Flow Management (ATFM)				
ATM-ATFM/400	To develop an Air Traffic Flow Management (ATFM) system with a view to its future implementation in the CAR/SAM Regions.	B	August 2003	ATMC/6

Search and Rescue (SAR)				
ATM-SAR/502	To develop, according to the IAM/SAR manual, a quality assurance programme for the Search and Rescue (SAR) services for future implementation in the CAR/SAM Regions.	B	August 2003	ATMC/6

3. **Priority**

- A** High priority tasks, on which work should be speeded up.
- B** Medium priority tasks, on which work should be begun as soon as possible, but without detriment to priority **A** tasks.
- C** Tasks of lesser priority, on which work should be begun as time and resources allow, but without detriment to Priority **A** and **B** tasks.

4. **Composition**

Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Cuba, Dominican Republic, Ecuador, France, Guatemala, Haiti, Mexico, Panama, Paraguay, Peru, Spain, Trinidad and Tobago, United States, Uruguay, Venezuela, ARINC, COCESNA, IATA, IFALPA, IFATCA and SITA.

5. Chairman: Roberto Arca (Uruguay)
Vice-Chairman: Fidel Ara (Cuba)

**TERMS OF REFERENCE AND WORK PROGRAMME OF THE CNS COMMITTEE
OF THE ATM/CNS SUBGROUP**

1. Terms of Reference

Review, fine-tune and complete the planning of the CNS systems, recommending its incorporation in the CAR/SAM FASID ANP, based on the application of planning principles developed by the CAR/SAM/3 RAN Meeting, on the global guidelines, on the results of the inter-regional planning and co-ordination and on ICAO SARPs and technical guidelines, related with the implementation and harmonization of CNS/ATM systems. Also, to study, review and propose measures for the implementation of the CNS systems recommended in the FASID.

2. Work Programme

No.	Task	Priority	Date	
			Start	End
CNS/1	<i>General Matters</i>			
CNS/1-1	Identify, evaluate and recommend solutions with the necessary priority assignment on the deficiencies (D) of the CNS systems, based on the methodology standardized by ICAO Council.	A	Perma- nent	
CNS/1.1.1	Update and recommend solutions and priorities to the CNS systems deficiencies.	A		20/12/04
CNS/1.1.2	Analyze and recommend solutions to the deficiencies of the conventional CNS systems that support the implementation of RNAV, RNP10 and RVSM routes.	A	16/07/01	TBD
CNS/1-2	As necessary, to recommend the dissemination of ICAO's SARPs and guidance texts on CNS systems, to develop regional guidance material related with the implementation of CNS systems and to recommend the convening of seminars, workshops and other related events.	B	Perma- nent	
CNS/1-4	Provide information on the development and implementation of the CNS systems and of the industry, with the aim of contributing to a coordinated development, reducing interregional interphase problems	B		
CNS/1-5	As necessary, to provide assistance to States with regard to matters related with radio frequency spectrum management, supporting ICAO's position in each ITU's WRC-2003.	A	Perma- nent	
CNS/1-6	Develop quality service criteria applicable to CNS systems, based on ICAO SARPs, guidance material and ISO standards.	B	TBD	TBD
CNS/1-9	Propose guidelines on input related with CNS systems for the preparation of regional positions at world-wide and regional meetings as requested.	B	Perma- nent	
CNS/1-10	Review the status of implementation of CNS-related GREPECAS Conclusions and Decisions, recommending the relevant actions	A	01/07/02	

No.	Task	Priority	Date	
			Start	End
CNS/2	Communications Developments			
CNS/2-1	DEVELOP DIGITAL DATA COMMUNICATION SYSTEMS	A	16/07/01	TBD
CNS/2-1.1	Continue the development of the AFTN Network	A	16/07/01	TBD
CNS/2-1.1.1	Develop recommendations to continue the development of AFTN in accordance with the planning of the CAR/SAM FASID ANP Table CNS 1A.	A	16/07/01	TBD
CNS/2-1.2	Guide the development and inter-connection of digital communication networks	A	16/07/01	
CNS/2-1.2.1	Continue the guidance on the development of the aeronautical digital communication networks and develop regional guidelines for the inter-connection of digital communication networks of the CAR and SAM Regions.	A	16/07/01	01/12/04
CNS/2-1.3	Regional Development on VDL and HFDL Data Links implementation	B		
CNS/2-1.3.1	Study the perspectives of the implementation mode of the VDL data links.	B		
CNS/2-1.3.2	Develop regional guidelines on the implementation of VHF data links.	B		
CNS/2-1.3.3	Develop the regional plan for the implementation of VDL and air-ground applications.	B		
CNS/2-1.3.5	Draft a VDL/CPDLC trial and demonstration programme.	B		
CNS/2-1.5	Continue to guide the regional development of ATN and its applications			
CNS/2-1.5.1	Develop regional strategy for the transition of the Inter/network ATN services	A	02/05/02	
CNS/2-1.5.2	Review, fine-tune and complete the initial transition plan for the evolutionary development of the ATN and of its applications.	A	16/07/01	
CNS/2-1.5.3	Investigation and development of an ATN addressing plan	B		
CNS/2-1.5.4	Based on Table CNS 1B, develop plans for the evolutionary implementation of the ground part of ATN and the development of applications such as AIDC and AMHS.	A		
CNS/2-1.5.5	Develop recommendations on the initial operational and managerial use of ATN with regard to the implementation of:	A		
	a) air-ground applications; and	B		
	b) ground-ground applications.	A	02/05/02	
CNS/2-1.7	Study the possibilities of using the Internet services			
CNS/2-1.8	Develop communications systems for OPMET and WAFS information exchange	A		
CNS/2-1.8.1	In coordination with the AERMET Subgroup, develop the communications system for OPMET information exchange	A		
	a) CAR Region			

No.	Task	Priority	Date	
			Start	End
	b) SAM Region			
CNS/2-2	REGIONAL DEVELOPMENT OF VOICE COMMUNICATION SYSTEMS			
CNS/2-2.1	Develop plans for the application of digital signalling and voice digital transmission for ATS applications and for the improvement of AFS and AMS.	B	02/05/02	
CNS/2-2.2	Continue the development of AMS VHF and HF voice communications			
CNS/2-2.2.1	Review, fine-tune and complete the VHF AMS(R) Plan.	A		
CNS/2-2.2.2	Review the HF AMS(R) Plan.	A		
CNS/2-2.2.3	Recommend measures to improve, as necessary, the reliability and efficiency of HF communications within the coverage area of aeronautical stations.	A		
CNS/2-2.2.4	Analyze the information obtained on shortcomings and deficiencies of VHF AMS coverage and provide assistance for its solution.	A	01/10/01	01/05/02
CNS/3	Navigation Developments			
CNS/3-1	GUIDE THE IMPROVEMENT OF THE NAVAIDS IN-FLIGHT TRIALS AND THE NEW PROCEDURES FOR GNSS TRIALS.	B		
CNS/3-1.1	Recommend measures to improve the regularity and efficiency of the navaids in-flight trials, based on the guidelines contained in the new edition of Doc 8071.	B	02/02/02	
CNS/3-1.2	Study the technical aspects of the new GNSS-applicable in-flight trials procedures and formulate the subsequent recommendations in accordance with the guidelines of the new edition of Doc 8071, Volume II..	B		
CNS/3-2	REGIONAL DEVELOPMENT ON GNSS AUGMENTATION	A	16/07/01	TBD
CNS/3-2.1	Gather information on planning and implementation of GNSS augmentation.	A	16/07/01	
CNS/3-2.1.1	Information on the development in other regions.	A	16/07/01	
CNS/3-2.1.2	Information on the development in the States.	A	16/07/01	
CNS/3-2.1.3	Review the results of SBAS augmentation trials carried out in the CAR/SAM Regions	A	16/07/01	30/11/04
CNS/3-2.2	Develop regional guidelines on the GNSS augmentation systems.	A		
CNS/3-2.2.1	Study and develop a draft of the regional guidelines.			
CNS/3-2.3	Conduct a study on the proposal of a GNSS augmentation system, for the CAR/SAM Regions, developing:	A	20/09/02	

No.	Task	Priority	Date	
			Start	End
CNS/3.2.3.1	Considerations on the feasibility of regional application, technical aspects, operational benefits, related costs, implementation, implications for the on-board equipment and other relevant aspects	A	20/09/02	
CNS/3.2.3.2	Evaluate regional implementation alternatives of a SBAS/GBAS system, taking into account the evolution of global and inter-regional GNSS operational implementation.	A	20/09/02	
CNS/3.2.4	Develop a regional implementation plan on GNSS augmentation.	B		
CNS/3-3	CONTINUE THE DEVELOPMENT OF THE GNSS IMPLEMENTATION REGIONAL PLAN.	A		
CNS/3-3.1	Review and update regional guidelines and strategy on the implementation of GNSS.	A	02/01/02	06/12/03
CNS/3-3.2	Develop a nav aids transition plan and introduce pertinent deadlines for the GNSS augmentation systems in FASID Table CNS 3.	A		
CNS/3-3.3	Review, fine-tune and complete the regional navigation plan suggesting the relevant amendments to FASID Table CNS 3.	B		
CNS/4	Surveillance Development			
CNS/4-1	Continue the development of surveillance radar systems			
CNS/4-1.3	Review of the regional plan on surveillance radar systems Update FASID Table CNS 4A.	B		
CNS/4-2	DEVELOPMENT OF THE AUTOMATIC DEPENDENT SURVEILLANCE (ADS) SYSTEMS.			
CNS/4-2.2	Studies on ADS systems to be implemented in the CAR/SAM Regions, including the corresponding analysis on ADS-C and ADS-B systems.	B		
CNS/5	REGIONAL ATM AUTOMATION DEVELOPMENTS	A		
CNS/5-1	Develop a regional strategy for the implementation of ATM automation.	A	02/05/02	
CNS/5-3	Develop guidance material and regional guidelines for data exchange among ATM units taking into consideration the communications platform.	A		

3. **Priority**

- A** High priority tasks, on which work should be speeded up.
- B** Medium priority tasks, on which work should be begun as soon as possible, but without detriment to Priority **A** tasks.
- C** Tasks of lesser priority, on which work should be begun as time and resources allow, but without detriment to Priority **A** and **B** tasks.

4. **Composition**

Antigua, Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Cuba, Dominican Republic, Ecuador, France, Haiti, Jamaica, Mexico, Panama, Paraguay, Peru, Spain, Trinidad and Tobago, United States, Uruguay, Venezuela, ARINC, COCESNA, IATA, IFALPA and SITA.

The Chairperson and Vice-chairperson designated by the CNS Committee in its first Meeting are: Claudio Arellano (Mexico) and Iván Salas (Ecuador) respectively. During the Second Meeting of the CNS Committee, a second Vice-chairman was elected: Mr. Carlos Alberto Cirilo (Brazil).

APPENDIX K

HUMAN RESOURCES AND TRAINING SUBGROUP (HRT/SG)

1. Terms of reference

- a) To promote and follow-up the implementation of the CAR/SAM Regional Air Navigation Plan and to place special emphasis on identifying, evaluating and proposing, according to established procedures, the corresponding corrective actions to the deficiencies affecting the safety of air operations attributable to human resource development.
- b) To carry out permanent coordination with GREPECAS contributory bodies in order to ensure appropriate integration of all tasks contributing to implementation of the CAR/SAM Regional Air Navigation Plan.
- c) Determine regional requirements for training and the capacity of the Regions to meet the demand for skilled human resources necessary to implement the facilities and services specified in the ANP.
- d) Study and develop comprehensive regional plans to address professional/technical training of aeronautical personnel, incorporating human factors principles.
- e) Harmonize and consolidate quality assurance programmes for training in the air navigation field.

2. Work Programme

Tasks	Priority	Completion
1) Identify training needs and types of training to implement the facilities and services specified in the ANP.		
2) Gather information and evaluate training required within the Regions.		
3) Determine regional training capabilities required.		
4) Develop a planning process for rectifying shortcomings in training capacity within the Regions.		
5) Formulate a plan for the establishment of regional training capabilities.		
6) Establish a timetable for training programmes in accordance with the ANP.		
7) Update information about existing training capabilities within the Regions.		
8) Gather and evaluate existing human factors and development guidance material.		

Tasks	Priority	Completion
9) Refer urgent (U) priority deficiencies, with proposed corrective action, to the Aviation Safety Board.		

3. **Priority**

A High priority tasks, on which work should be speeded up.

B Medium priority tasks, on which work should be begun as soon as possible, but without detriment to priority **A** tasks.

C Tasks of lesser priority, on which work should be begun as time and resources allow, but without detriment to Priority **A** and **B** tasks.

4. **Composition**

Argentina, Brazil, Chile, Colombia, Panama, Paraguay, Peru, Spain, Trinidad and Tobago, United States, Uruguay, Venezuela and COCESNA.

5. **Chairperson**

The Chairperson will be designated by the Subgroup at its first meeting.

APPENDIX L

AVIATION SECURITY COMMITTEE (AVSEC/COMM)

1. Terms of Reference

- a) To foster regional cooperation among States, international organizations and industry in order to facilitate the successful implementation of ICAO Standards and Recommended Practices (SARPs) related to aviation security (AVSEC);
- b) to encourage the participation of States in the ICAO AVSEC Mechanism and Implementation Programmes to include their provision of voluntary funding and personnel when requested by ICAO;
- c) to actively support the approved ICAO AVSEC Plan of Action and other regional AVSEC initiatives; and
- d) to promulgate AVSEC awareness within the region through sponsorship of and participation in related training activities and seminars.

2. Composition

<u>Member State/Organisation</u>	<u>Representative</u>
Argentina	Gustavo Driussi
	Rodolfo Almeida
Chile	Eduardo Cerda Gómez
Cuba	To be nominated
Jamaica	Oscar Derby
Mexico	Aarón Salvador Villar Bernal
Paraguay	Cándido Méndez
Perú	César Matos Díaz
United States	Joseph O’Gorman
ACI	Juan Salas Rivera
IATA	Peter Cerda
LACAC	To be determined

3. Chairpersons

Chairman – Oscar Derby (Jamaica)
 Vice-Chairman – Eduardo Cerda Gómez (Chile)

4. Work Programme

To be developed at the Second Meeting.

APPENDIX M

TASK FORCE ON INSTITUTIONAL ASPECTS

1. **Terms of reference**

- a) Study global actions adopted by the ICAO Council and by some States on the institutional aspects of CNS/ATM implementation in the CAR/SAM Regions;
- b) Suggest ways of assisting CAR/SAM States that so require, in conducting cost-benefit analyses and studies on the technical, financial, organizational and administrative aspects of CNS/ATM implementation; and
- c) Analyse those aspects of the CAR/SAM Regional Plan for the implementation of the CNS/ATM Systems requiring legal adjustments.

2. **Work programme**

- a) Develop guidance and application proposals for the CAR/SAM Regions, on the global actions adopted by the ICAO Council on the CNS/ATM institutional aspects, as well as by States;
- b) Identify those elements in the CAR/SAM CNS/ATM Implementation Plan that require institutional arrangements for their implementation;
- c) Determine the elements requiring legal adjustments of the Institutional Aspects identified in the previous paragraph;
- d) Develop regional guidelines to assist CAR/SAM States in conducting cost-benefit studies; and
- e) Develop proposals for financial, administrative, and other pertinent arrangements for the hiring of services for the implementation of the CNS/ATM systems.

3. **Composition**

Argentina, Brazil, Chile, Cuba, Peru, United States and COCESNA.

4. **Rapporteur**

Peru.

Agenda Item 6: Review of GREPECAS Outstanding Conclusions and Decisions

6.1 In accordance with standing practice, the Meeting reviewed the status of implementation of outstanding GREPECAS conclusions and decisions on the basis of a uniform classification. It noted that as a result of action taken since GREPECAS/10, the following conclusions and decisions had been implemented or superseded:

Conclusions: 6/33, 6/36, 6/37, 7/17, 7/40, 8/36, 8/37, 8/42, 8/51, 9/6, 9/7, 9/14, 9/16, 10/2, 10/3, 10/5, 10/9, 10/12, 10/13, 10/15, 10/16, 10/17, 10/18, 10/28, 10/33, 10/34, 10/37, 10/42, 10/43, 10/44, 10/45, 10/46, 10/47, 10/48, 10/56 and 10/58.

Decisions: 9/17, 10/1, 10/4, 10/6, 10/41, 10/59, 10/60, 10/61, 10/62, 10/63, 10/64, 10/65, 10/66 and 10/67.

6.2 The Meeting also agreed that the following conclusions and decisions remain in force:

Conclusions: 6/45, 7/18, 8/5, 8/7, 8/8, 8/15, 8/20, 8/32, 8/34, 8/35, 9/1, 9/5, 9/10, 9/11, 9/15, 9/21, 10/7, 10/8, 10/10, 10/11, 10/14, 10/19, 10/20, 10/21, 10/22, 10/23, 10/24, 10/25, 10/26, 10/27, 10/29, 10/30, 10/31, 10/32, 10/35, 10/39, 10/49, 10/50, 10/51, 10/53, 10/54, 10/55 and 10/57.

Decisions: 7/28, 9/18, 9/19, 10/36, 10/38, 10/40 and 10/52.

6.3 Following the review of the above Conclusions and Decisions by the Group, a brief discussion took place in respect of the presentation to the next and future meetings of GREPECAS regarding the Decisions. The Meeting agreed that Decisions should no longer be presented to GREPECAS and therefore only the Conclusions should be brought to the attention of GREPECAS starting with the next meeting.

6.4 Under this Agenda Item the Meeting was informed of the CAR/SAM AIS/MAP database project that Brazil will present to the next meeting of the AIS/MAP Subgroup.

Agenda Item 7: Other Business**Incorporation of Uruguay as Permanent Member of GREPECAS**

7.1 The Meeting noted the request by Uruguay to become a Permanent Member of GREPECAS, rather than participating on a rotational basis. The Meeting considered that, given the active participation of Uruguay in the activities of GREPECAS and its Contributory Bodies, the request would be submitted to the ICAO Council for its approval, therefore the following Conclusion was adopted:

CONCLUSION 11/75 INCORPORATION OF URUGUAY AS PERMANENT MEMBER OF GREPECAS

That, taking into consideration the active participation of Uruguay in the activities of GREPECAS and its Contributory Bodies, the request of Uruguay to become a Permanent Member of GREPECAS be submitted to the ICAO Council for approval.

Joint meetings of the maritime and aeronautical search and rescue services

7.2 The United States informed the Meeting on the multilateral efforts carried out in the CAR Region to improve, within a cooperation spirit, the provision of search and rescue services. It also informed on the joint meetings carried out between the aeronautical and maritime search and rescue services. It also noted the initiation of coordinations, in order to tentatively carry out by October or November 2003, a workshop on the use of satellites, with peaceful purposes, which will be hosted by United Nations and United States, through the NOAA. The administrations who wish to obtain more information, should address to:

Mr. Dave Edwards
Telephone: 202 267 1552
E-mail : dedwards@comdt.uscg.mil

Study Group on Annex 12, Search and Rescue

7.3 The Meeting was informed on the works being carried out by the Study Group on Annex 12, Search and Rescue, task that has the aim to reach a standardization between aeronautical and maritime techniques and procedures in the search and rescue field. The amendments foreseen to Annex 12 have the aim to introduce substantial improvements in such document, and a draft has been proposed to ICAO to initiate the amendment process, which is expected to be completed by the end of 2003.

Election of the First Vice Chairperson of GREPECAS

7.4 Major Brigadeiro Do Ar Normando Araújo De Medeiros from Brazil was unanimously elected First Vice Chairperson of GREPECAS.

7.5 The Meeting welcomed the kind offer from Cuba to host the GREPECAS/12 Meeting in 2004.

**UNDÉCIMA REUNIÓN DEL GRUPO REGIONAL DE
PLANIFICACIÓN Y EJECUCIÓN DE LAS REGIONES CAR/SAM
(GREPECAS/11)
ELEVENTH MEETING OF THE CAR/SAM REGIONAL PLANNING
AND IMPLEMENTATION GROUP
(GREPECAS/11)**

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(Manaus, Brasil, 3 – 7 de diciembre de 2002)/
(Manaus, Brazil, 3 – 7 December 2002)**

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