



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**CAR/SAM PLANNING AND IMPLEMENTATION
REGIONAL GROUP (GREPECAS)**

**FIRST MEETING OF THE PROGRAMMES AND
PROJECTS REVIEW COMMITTEE
(PPRC/1)**

FINAL REPORT

**Mexico City, Mexico
25 – 27 April 2012**

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HISTORY OF THE MEETING

ii.1 Place and Duration of the Meeting

The First Meeting of the Programmes and Projects Review Committee (PPRC/1) was held at the ICAO North American, Central American and Caribbean (NACC) Regional Office, in Mexico City, Mexico, from 25 to 27 April 2012.

ii.2 Opening Ceremony and Other Matters

Mrs. Loretta Martin, Regional Director of the ICAO North American, Central American and Caribbean (NACC) Regional Office, welcomed the participants. Mr. Franklin Hoyer, Regional Director of the ICAO South American (SAM) Regional Office and Secretary of GREPECAS, addressed the participants emphasizing the need to implement the new GREPECAS work methodology. Mr. Normando Araújo de Medeiros (Brazil), Chairman of GREPECAS, highlighted the milestone that the first meeting of the PPRC represents.

ii.3 Organization, Officers and Secretariat

Mr. Normando Araújo de Medeiros (Brazil), Chairman of GREPECAS, presided over the meeting. Mr. Franklin Hoyer, Regional Director, ICAO South American Regional Office, acted as Secretary of the meeting and was assisted by the following officers from the ICAO NACC and SAM Regional Offices:

Loretta Martin	Regional Director, ICAO NACC Regional Office
Michiel Vreedenburgh	Deputy Regional Director, ICAO NACC Regional Office
Oscar Quesada	Deputy Regional Director, ICAO SAM Regional Office
Victor Hernández	Regional Officer, Air Traffic Management/Search and Rescue, ICAO NACC Regional Office
Jaime Calderón	Regional Officer, Aerodromes and Ground Aids, ICAO NACC Regional Office
Julio Siu	Regional Officer, Communications, Navigation and Surveillance, ICAO NACC Regional Office
Raúl Martínez	Regional Officer, Aeronautical Information Management, ICAO NACC Regional Office
Guillermo Vega	Regional Officer, Aeronautical Meteorology, ICAO NACC Regional Office

ii.4 Working Languages

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

ii.5 **Agenda**

The agenda was adopted as follows:

Agenda Item 1: Follow-up on the results of GREPECAS/16 Meeting

- 1.1 Review of the actions adopted by the ANC regarding GREPECAS/16 Meeting and the status of implementation of the GREPECAS/16 Conclusions and Decisions
- 1.2 Review of the status of implementation of the Conclusions and Decisions in force previous to GREPECAS/16

Agenda Item 2: Air navigation deficiencies in the CAR/SAM Regions with high risk (“U” priority)

Agenda Item 3: Review of the GREPECAS Programmes and Projects

- 3.1 Projects of the PBN Programme
- 3.2 Projects of the ATFM Programme
- 3.3 Projects of the Automation and ATM Situational Awareness Programme
- 3.4 Projects of the Ground-ground and Air-ground Telecommunications Infrastructure Programme
- 3.5 Projects of the AGA Programme
- 3.6 Projects of the AIM Programme
- 3.7 Projects of the MET Programme

Agenda Item 4: Items related to the Organization of GREPECAS

- 4.1 Review of the GREPECAS Procedural Handbook
- 4.2 Review of the Terms of Reference and Work Programme of the Programmes and Projects Review Committee
- 4.3 GREPECAS Annual Report

Agenda Item 5: Other business

ii.6 **Attendance**

The PPRC/1 Meeting was attended by 30 participants from 10 PRCC member States, 1 other GREPECAS member State of the CAR/SAM Regions, and Observers from 2 International Organizations. A list of participants is shown on page iii-1.

ii.7 **Draft Conclusions, Draft Decisions and Decisions**

PPRC records its actions in the form of Draft Conclusions, Draft Decisions, and Decisions as follows:

Draft Conclusions: Conclusions that require approval by GREPECAS prior to implementation.

Draft Decisions: Decisions that require approval by GREPECAS prior to implementation.

Decision: Decisions that deal with matters of concern to the PRCC.

ii.8 **List of Draft Conclusions**

No.	Draft Conclusion Title	Page
1/1	ACTIONS TO IMPROVE PROCESSING OF AIR NAVIGATION DEFICIENCIES	2-2

i.9 **List of Draft Decisions**

No.	Draft Decision Title	Page
1/2	GREPECAS PROCEDURAL HANDBOOK	4-1
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LIST OF PARTICIPANTS**BRAZIL / BRASIL**

José Roberto Machado e Silva
Normando Araújo de Medeiros
José Alves Candez Neto

COLOMBIA

Ana Isabel Mosquera Dupont

CUBA

Mirta Crespo Frasquiere
Norberto Cabrera Alonso
Enrique Echarri Contreras

**DOMINICAN REPUBLIC /
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Francisco Bolívar León
Johann Estrada Pelletier

HAITI / HAÏTÍ

Jean-Marc Flambert
Wesner Excelhomme
Jacques Boursiquot
Marc Paulemon

MEXICO/MÉXICO

Agustín Cano
Oscar Vargas
Héctor García
Jorge Carrión

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**TRINIDAD & TOBAGO / TRINIDAD Y
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**INTERNATIONAL ORGANIZATIONS/
ORGANIZACIONES
INTERNACIONALES****CANSO**

Javier Vanegas

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Heriberto Salazar Eguiluz
Yuri Yomel Estrada

**ICAO SECRETARIAT/SECRETARÍA
DE LA OACI**

Loretta Martin
Franklin Hoyer
Michiel Vreedenburg
Oscar Quesada
Víctor Hernández
Jaime Calderón
Julio Siu
Raúl Martínez
Guillermo Vega

iv **List of Documentation**

All meeting documentation is available at the following web link:

<http://www.lima.icao.int>, Meetings, GREPECAS, 2012

WORKING PAPERS

Number	Agenda Item	Title	Prepared and Presented by
WP/01	--	Tentative Agenda, Schedule and Proposed Working Methods (<i>Revised</i>)	Secretariat
WP/02	1.1	Follow-up of the results of GREPECAS/16 Meeting. Review of the actions adopted by the ANC regarding GREPECAS/16 Meeting and the status of implementation the GREPECAS/16 Conclusions and Decisions (<i>Revised</i>)	Secretariat
WP/03	2	Air navigation deficiencies in the CAR/SAM Regions with high risk ("U" priority)	Secretariat
WP/04	3.1	Review of the GREPECAS Programmes and Projects. Projects of the PBN Programme	Secretariat
WP/05	3.2	Review of the GREPECAS Programmes and Projects. Projects of the ATFM Programme	Secretariat
WP/06	3.3	Review of the GREPECAS Programmes and Projects. Projects of the Automation and ATM Situational Awareness Programme	Secretariat
WP/07	3.4	Review of the GREPECAS Programmes and Projects. Projects of the Ground-ground and Air-ground Telecommunications Infrastructure Programme	Secretariat
WP/08		CANCELLED	
WP/09	3.6	Review of the GREPECAS Programmes and Projects. Projects of the AGA Programme	Secretariat
WP/10	3.7	Review of the GREPECAS Programmes and Projects. Projects of the AIM Programme (<i>Revised</i>)	Secretariat
WP/11	3.8	Review of the GREPECAS Programmes and Projects. Projects of the MET Programme (<i>Revised</i>)	Secretariat
WP/12	4.1	Items related with the Organization of GREPECAS. Review of the GREPECAS Procedural Handbook	Secretariat
WP/13	4.2	Items related with the Organization of GREPECAS. Review of GREPECAS Terms of Reference and Work Programmes	Secretariat
WP/14	4.3	Items related with the Organization of GREPECAS. GREPECAS Annual Report	Secretariat
WP/15	1.2	Follow-up of the results of GREPECAS/16 Meeting. Review of the status of implementation of the Conclusions and Decisions in force previous to GREPECAS/16 (<i>Revised</i>)	Secretariat
WP/16	2	Addressing regional air navigation deficiencies – transition from five regional databases into a central database	Secretariat
WP/17	5	ICAO Spanish standard phraseology in accordance with PANS-ATM	Secretariat

INFORMATION PAPERS

Number	Agenda Item	Title	Prepared and Presented by
IP/01	--	General Information (<i>Revised</i>)	Secretariat
IP/02	--	List of Working and Information Papers (<i>Revised</i>)	Secretariat
IP/03	1.2	Follow-up of the results of GREPECAS/16 Meeting. Review of the status of implementation of the Conclusions and Decisions in force previous to GREPECAS/16. STATUS OF OUTSTANDING CONCLUSIONS AND DECISIONS OF GREPECAS MEETINGS PREVIOUS TO AND VALID AT THE END OF THE GREPECAS/16 (<i>Revised</i>)	Secretariat
NI/04	5	Plan de Navegación Aérea para Colombia (<i>Spanish only</i>)	Colombia
IP/05	5	Twelfth Air Navigation Conference (<i>English only</i>)	Secretariat
IP/06	5	Regional Performance Framework – Planning Methodologies and Tools (<i>English only</i>)	Secretariat
IP/07	5	Review of the outline and objective for revised GANP (<i>English only</i>)	Secretariat
IP/08	5	Review of the proposed revisions to the GASP (<i>English only</i>)	Secretariat
IP/09	3.6	Aerodromes wildlife control and reduction (<i>Revised</i>)	Secretariat
IP/10	5	Implementation status of the Runway Safety Team (RST) pilot programme in the CAR Region (<i>Revised</i>)	Secretariat

FLIMSY

Number	Agenda Item	Title	Prepared and Presented by
FLIMSY/01	4.2	Items related with the Organization of GREPECAS. Review of GREPECAS Terms of Reference and Work Programmes	United States

Agenda Item 1 Follow-up on the results of GREPECAS/16 meeting

Under this Agenda Item, the following working and information papers were presented:

- WP/02, WP/15 and IP/03

**1.1 Review of the actions adopted by the ANC regarding
GREPECAS/16 Meeting and the status of implementation of the
GREPECAS/16 Conclusions and Decisions**

1.1.1 The Meeting took note of the actions adopted by the Air Navigation Commission and incorporated the follow-up actions in the GREPECAS programmes and projects.

1.1.2 The Meeting noted twenty-three (23) out of forty-three (43) conclusions adopted by GREPECAS/16 were completed and five (5) of the six (6) decisions had also been completed.

**1.2 Review of the status of implementation of the Conclusions and
Decisions in force previous to GREPECAS/16**

1.2.1 The Meeting noted that twelve (12) of the seventeen (17) conclusions previous to GREPECAS/16 are completed.

1.2.2 The **Appendix** to this part of the report includes all the remaining valid conclusions and decisions.

APPENDIX

STATUS AND FOLLOW-UP OF OUTSTANDING CONCLUSIONS AND DECISIONS OF GREPECAS MEETINGS PREVIOUS TO AND VALID AT THE END OF THE GREPECAS/16 MEETING – ACTION PLAN

Conc/Dec No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C12/67	QUALITY ASSURANCE SYSTEMS FOR METEOROLOGICAL SERVICES IN THE CAR/SAM REGIONS	That CAR/SAM States/Territories/International Organizations make utmost efforts to establish quality assurance systems for meteorological services provided in support of international air navigation in the CAR/SAM Regions.	- A QMS/MET Guide for the CAR/SAM Regions was prepared; - A QMS/MET Seminar was held in the SAM Region in December 2010 - A QMS/MET Seminar was held for the NAM/CAR Regions in October 2011.	States and Territories	Implementation of MET QMS	N/A	Valid November 2012
C 13/23	DEVELOPMENT OF A GUIDE FOR THE DRAFTING OF EMERGENCY PLANS FOR AERODROMES THAT MIGHT BE AFFECTED BY VOLCANIC ASH IN THE CAR/SAM REGIONS	That the AERMET Subgroup, in coordination with the Secretariat, develops a guide for the drafting of emergency plans for aerodromes that might be affected by volcanic ash in the CAR/SAM Regions.	The draft should be translated into English for revision by English speaking members. Depends on budget availability for translation.	ICAO	Guide for the drafting of emergency plans for aerodromes that might be affected by volcanic ash in the CAR/SAM Regions.	N/A	Valid
C 13/41	NEED TO FURTHER AIS/MAP AUTOMATED SYSTEMS	That, considering the need for CAR/SAM States/Territories/International Organizations to develop automated systems for exchange of information/data and the resulting application of the aeronautical information management concept, GREPECAS consider: a) that automation of AIS services in the CAR/SAM Regions as an urgent matter necessary to make progress in line with developments related to the CNS/ATM elements that are already being implemented in these Regions; and b) urging ICAO to define the global data model for the exchange of aeronautical information as soon as possible.	Regarding item b), it is expected that ICAO define the exchange model. ICAO Headquarters has not yet provided a specific date	ICAO	Guidelines and/or SARPs for the exchange model.	N/A	Valid

Conc/Dec No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C 15/4	D-VOLMET AERONAUTICAL DATA LINK REQUIREMENTS IN THE CAR/SAM REGIONS	That the ICAO NACC and SAM Offices, in coordination with the ICAO SAM Office, amend Part VII Vol. I – ATS of the ANP to reflect the requirement for D-VOLMET aeronautical data link services in the CAR/SAM Regions.	The AERMET/SG, upon analyzing D-VOLMET implementation in the CAR/SAM Regions, proposes an amendment in ANP Volume I Basic, Part VII ATS.	ICAO	Amendment to ANP Vol I – Basic, Part VII-ATS	N/A	Valid
C 15/35	IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN MODEL	Considering that States should take measures to implement the new ICAO flight plan model pursuant to Amendment No. 1 to the 15th Edition of the PANS-ATM (Doc 4444), and in order to establish a regional strategy to facilitate global implementation of this amendment that: a) based on the guidance material to be prepared by ICAO, CAR/SAM States/Territories and International Organizations take the necessary measures to prepare for the transition to the new flight plan model; and b) the Subgroup establish a contributory body to develop a regional strategy for the transition to the new flight plan model in the CAR/SAM Regions and the provisions associated with ATS messages.	Coordination between ICAO and States/Territories/International Organizations through meetings, missions and letters for the adoption of measures on the transition to the new flight plan. GREPECAS approved the strategy and performance objective towards the transition to the new flight plan model.	a) States/ Territories and International Organizations b) CNS/ATM/SG	Regional strategy for the implementation of a new ICAO flight plan model	Recognizing that many of the regions are progressing at a different pace for migration to new ICAO flight plan, the Commission reiterated the need for global coordination by ICAO HQ so as to ensure smooth transition at regional and national levels.	a) Valid. November 2012
C 16/10 C	MONITORING OF SIGMET RECEIVED IN BRASILIA INTERNATIONAL OPMET DATABANK	That in the controls of OPMET information carried out by the Brasilia International Databank: a) priority is given to the analysis of most common errors in the headings of SIGMET; b) the results be sent to the ICAO SAM Office; and c) ICAO Lima and Mexico Offices submit the monitoring results to the corresponding States for them to take the pertinent actions to correct the deficiencies detected.	Letter on SIGMET errors was sent to States (Argentina, Bolivia, Chile, Panama, Uruguay). Included in MET Programme IAVW Project	Brasilia OPMET international data bank	SIGMET monitoring	Not analyzed by the Commission	Annual
C 16/13 C	SIGMET WV TESTS	That in order to keep a constant feedback and efficiency in the issuance of volcanic ash SIGMET starting 2010, the States, in coordination with the corresponding VAACs,	Included in MET Programme IAVW Project	CAR/SAM States/territories/ international organizations	SIGMET WV trials	Not analyzed by the Commission	Annual

Conc/Dec No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
		carry out the SIGMET WV test during the month of September. The test should have a duration of 48 hours.				n	
C 16/16 C	INSTALLATION OF AMHS USER TERMINALS IN METEOROLOGICAL UNITS WITH INTERNATIONAL OPMET REQUIREMENT	That the corresponding States, when implementing the new AMHS system in substitution of the current AFTN system, take into consideration the installation of AMHS user terminals in the MET units of the States that have international OPMET requirements, in order to increase the availability of OPMET information and to comply with GREPECAS Conclusion 6/33.	States, upon implementing the new AMHS, are considering the installation of AMHS terminals at meteorological units with international OPMET requirement	CAR/SAM States/territories/ international organizations	Installation of AMHS terminals at meteorological units with international OPMET requirement	Not analyzed by the Commission	Valid December 2013
C 16/17 C	AMENDMENT TO CAR/SAM ANP BASIC AND FASID, PART VI - MET	That: a) Part VI – MET of CAR/SAM ANP Basic and FASID Tables MET 1A and MET 2A are amended as shown in Appendix D to WP/08 of this meeting; and b) Table MET 2B of the CAR/SAM Facilities and Services Implementation Document (FASID): i. be eliminated from CAR/SAM FASID; and ii. be included as an Appendix to the CAR/SAM Guide for OPMET exchange.	Amendment to ANP Basic submitted on 6 March 2012. Amendment to ANP Basic – NACC information pending	ICAO NACC and SAM Offices Secretariat	Amendment to CAR/SAM Basic ANP, Part VI-MET	Not analyzed by the Commission	Valid June 2012
C 16/19 C	ATM/MET SEMINAR/WORKSHOP	That in order to develop a list of possible MET requirements in support of ATM for the CAR/SAM Regions, ICAO, in coordination with WMO, conduct a seminar/workshop for the CAR/SAM Regions.	To be held at NACC RO on 29-31 October 2012	ICAO Regional Offices Lima and Mexico	ICAO/WMO seminar/workshop	Noted and invited the Secretary General to request support for the organization of the seminar/workshop from WMO.	Valid October 2012
C 16/24 A	HARMONIZATION OF TAXIWAY DESIGNATION	That ICAO consider the development and provision of guidelines on the harmonization of taxiway designation in order to reduce operator confusion and to minimize runway incursions.	AGA section developed guidelines on the harmonization of taxiway	ICAO HQ	Guidelines on the harmonization of taxiway designation	Supported the development and scope of	Valid December 2013

Conc/Dec No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
			designation and is currently under review			ICAO guidelines and requested the Secretariat to include this matter in the work programme of the Aerodrome s Panel.	
C 16/31 C	AVAILABILITY OF DOCUMENTATION IN SPANISH	That the need to give priority, to the extent possible, to translating into Spanish the texts that are available only in English and that are of crucial importance for complying with ICAO SARPs, be proposed to ICAO with a view to achieving the AIS-AIM transition.	Quality Manual, Training Manual, Charting Manual, Guidelines in the Use of the Public Internet for Aeronautical Applications and eTOD Manual to be translated	ICAO HQ IIM/AIM	Text in Spanish of guidance material for AIS-AIM transition	Noted.	Valid June 2012
C 16/32 C	GENERAL GUIDANCE FOR THE IMPLEMENTATION OF A GIS SYSTEM IN AIM	GREPECAS approves as vital importance to support ICAO SARPs, the application of the General Guidance for the Implementation of a GIS System in AIM, towards achieving the transition from AIS to AIM in the States, Territories and International organizations of the CAR/SAM Regions.	CAR States are in the process of implementing the guides, which have been adopted by SAM States but in both cases, not all have purchased or developed a GIS yet	CAR/SAM States/territories/ international organizations	Apply general guidance for implementation of a GIS system in AIM	Noted.	Valid March 2012
C 16/36 C	COLLECTION OF INFORMATION ON EXISTING AND FUTURE AVIONICS IN THE CAR/SAM REGIONS	Taking into account the importance of having information on avionics already installed and to be installed on user aircraft, for purposes of planning and cost/benefit analyses, it is urged that: a) States/Territories and International Organisations are urged to collect information on avionics already installed and to be installed in non-IATA domestic fleets and other general aviation users, suggesting the adoption of a format similar to that of the IATA survey form (Appendix D to this part of	Since most States/ territories and international organizations have not informed on the results on data collection, the reception date has been extended to December 2012	CAR/SAM States/territories/ international organizations	Collection of information on existing and future avionics Inclusion of avionics information in IATA survey form	Not analyzed by the Commission	Valid December 2012

Conc/Dec No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
		the Report), the results to be sent to the respective ICAO Regional Office by December 2010; b) IATA include the aforementioned information in the IATA database, informing the ICAO CAR/SAM Regional Offices about the response to this request; and c) The information collected to date in the SAM and CAR Regions be included in the mentioned data base, as well as any information that can be provided by the avionics manufacturers.					
C 16/38 C	IMPROVEMENTS TO THE ACTIVITIES REFERRED IN ADS-B TRIALS	That States/territories/ international organizations who are carrying out ADS-B trials are urged to: a) continue with the data collection and analysis, in accordance with GREPECAS guidelines (GREPECAS/15 Report, Appendix Q); b) search for the exchange of data between States, particularly with regard to coverage superposition and analysis criteria; c) solve, with the respective airspace users, the duplicate or illegal 24-bit Address cases identified, and inform in this respect to the ICAO Regional Offices; d) inform airspace users on any anomaly in the received ADS-B messages, in preparation of future ADS-B implementation; and e) duly inform the ICAO Regional Offices on the trial results, for their publication.	Valid: These improvements and considerations are being considered at the ADS-B trials by the NAM/CAR Ad-hoc Group and the SAM/IG	CAR/SAM States/territories/ international organizations	Improvement in activities related to ADS-B trials	Noted.	Valid December 2012
C 16/40 + associated C 16/41 C	TRAINING FOR AERONAUTICAL PROFESSIONAL COMPETENCE	That CAR/SAM States/ territories and international organizations, take into consideration the list of short and mid-term and training requirements shown in Appendix D to the report of the CNS/ATM/SG/1 Meeting, so that CATCs, in coordination with civil that CAR/SAM States/territories and international organizations, aviation authorities, prepare aeronautical training programmes which contemplate regional air navigation and safety requirements.	Will be presented and discussed at next NAM/CAR training centres meeting to be held in the first semester of 2012. In the CAR Region, this listing has been presented to the consideration of States/ANPS and training centres.	CAR/SAM States/territories/ international organizations	Aeronautical training programmes taking into consideration regional requirements.	Noted.	Valid June 2012

Conc/Dec No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
			SAM States have analyzed and considered this list at the CATC meeting				
C 16/43 A	REVISED METHODOLOGY FOR THE IDENTIFICATION, ASSESSMENT AND REPORTING OF AIR NAVIGATION DEFICIENCIES	That: a) ICAO consider the proposed revised methodology for the identification, assessment and reporting of air navigation deficiencies presented in Appendix A to this part of the report; and b) in the interim, GREPECAS adopt the revised methodology as a test-bed and notify the ANC of the results.	ICAO noted the revised methodology for the identification, assessment and reporting of deficiencies and is awaiting for the results from the tests	ICAO HQ GREPE CS Secretar y	Proposed revised methodology for identification, assessment and reporting of air navigation deficiencies	Commended the work by GREPECAS proposing a revised methodology for identification, assessment and reporting of air navigation deficiencies. Any decision in this matter should wait for the results of the trials. The Secretariat is called upon to ensure that any revised methodology to identify, assess and report of air navigation deficiencies should be applied uniformly by all PIRGs and regions and to verify other proposals presented by other PIRGs.	Valid 30 April 2012

*Note: The Council agreed to three Strategic Objectives for the triennium 2011- 2013 as follows (C-DEC 188/13 refers):

Strategic Objective A: *Safety*

Strategic Objective B: *Security*

Strategic Objective C: *Environmental Protection and Sustainable Development of Air Transport*

Agenda Item 2 Air navigation deficiencies in the CAR/SAM Regions with high risk (“U” priority)

Under this Agenda Item, the following working papers were presented:

➤ WP/03, WP/16

2.1 The Meeting noted the deficiencies in the CAR and SAM Regions and also noted the very limited application of the revised methodology for processing deficiencies involving the application of the Hazard Identification and Risk Assessment (HIRA) analysis to priority “U” deficiencies. Only Brazil and Cuba had applied the procedure approved by GREPECAS/16.

2.2 Considering this situation, the Meeting exchanged different points of view on the possible reasons for States not to have applied the revised methodology. It was agreed that one of the possible causes might be limited understanding of hazard and risk assessment concepts. Remarks were also made concerning the efficiency of the GANDD database and the Secretariat process used to close the deficiencies

2.3 The Meeting deemed appropriate that the Secretariat organize related training activities without holding additional events. The Meeting agreed that this training could be offered during events already scheduled by the Secretariat, visits by States to the Regional Offices, teleconferences, correspondence, or during missions to States carried out by the Secretariat. Cuba offered to share its experience in applying the revised methodology.

2.4 The Meeting also agreed that the Secretariat shall request that States inform on the reasons why they have not processed priority “U” deficiencies using the HIRA process and that the information be provided to the corresponding Regional Office.

2.5 In addition, the Meeting noted (Ref. NE/16) the importance of having a centralized database for regional air navigation deficiencies to permit information sharing at a global level and the current status of the transition of the GANDD into the new ICAO iSTARS system. The meeting participants were asked to register through the ICAO Portal to test the interface and updating procedure for air navigation deficiencies and to provide feedback to the ICAO Regional Offices by 31 August 2012, in order to make necessary adjustments to the iSTARS application before releasing the system.

2.6 The Meeting expressed concerns regarding problems previously encountered when updating the information in the GANDD and that requests for updates were not reflected in a timely manner. The Secretariat clarified that improvement in this regard had already been considered in iSTARS and that the new database has a more user friendly interface that will allow updates to be reflected almost immediately. The iSTARS database will also allow access to multiple focal points in lieu of a single focal point, as appointed by each State, and will offer more criterion options to search and sort data.

2.7 In due course, the ICAO Regional Offices will send information to States regarding details of the transition from the GANDD to iSTARS as well as supplementary information, including a user guide, which will support the use of the application. It was clarified that even though the database application will change from the GANDD to iSTARS, the current methodology for the identification, assessment, and reporting of air navigation deficiencies and the current process for updating the status of deficiencies contained in the database will remain the same. Also, during the transition period from the GANDD to iSTARS, the GANDD will remain the application for storage, updating and reporting deficiency information.

2.8 Colombia proposed to look for regional solutions to solve common shortcomings, under the leadership of the International Civil Aviation Organization (ICAO), with the possibility of exchanging information with other States and analyzing possibilities for regional cooperation when the solution exceeds the available national resources.

2.9 The Meeting agreed to adopt the following Draft Conclusion:

DRAFT

CONCLUSION 1/1

ACTIONS TO IMPROVE PROCESSING OF AIR NAVIGATION DEFICIENCIES

That, with the aim of improving air navigation deficiency processing, ICAO:

- a) conduct training activities on the HIRA process related to deficiencies and the reporting mechanism to the Regional Offices as part of existing events, missions to States, State visits to ICAO Regional Offices, teleconferences, etc.;
- b) request States to inform on the difficulties experienced with implementing the HIRA process for the priority “U” deficiencies by **30 June 2012**; and
- c) urge States to test the centralized database on the ICAO iSTARS platform, following the guidance contained in WP/16 of the PRCC/1 and provide feedback to the ICAO Regional Office by **31 August 2012**.

Agenda Item 3 Review of the GREPECAS Programmes and Projects

Under this Agenda Item, following working papers were presented:

- WP/04, WP/05, WP/06, WP/07, WP/09, WP/10 and WP/11

3.0.1 The following two factors were identified as rendering implementation of project activities difficult:

- Late designation of project coordinators and experts
- Delay with task implementation

3.0.2 The Meeting recognized that in view of the experience faced by some projects, an initial face-to face meeting among the members of projects, the project coordinator and programme coordinator is important to define and kick-off the projects. This meeting may be held jointly with other scheduled ICAO events that involve the same experts.

3.0.3 The Secretariat explained that existing programmes and projects would be updated applying the new Aviation System Block Upgrades (ASBU) methodology once approved by the ANCONF/12 and few changes are foreseen since the current projects are based on the baseline ASBU elements.

3.0.4 The Meeting also requested the Secretariat to make working papers available to participants a minimum of 15 days before meetings. Papers that do not comply with the deadline will not be reviewed in future meetings. This requirement was indicated in the Procedural Handbook.

3.1 Projects of the PBN Programme

3.1.1 The Meeting noted the progress of Projects A-1 and A-2 on PBN implementation.

3.1.2 The following points were also mentioned:

- Modification and implementation of RNAV routes in the upper airspace as follow-up to RNP-10 implementation in the WATRS area and oceanic area of the Gulf of Mexico.
- During 2011, States have implemented RNAV-5 navigation specifications in the upper airspace of the CAR/SAM Regions.
- Proposals for amendment for the implementation and harmonization of the RNAV route structure between the CAR and SAM Regions were developed.
- The design and implementation of RNP approach procedures in line with Assembly Resolution A37-11.
- Several global and regional PBN events are being held in 2012, for which the details are available on the ICAO website.

3.1.3 As part of PBN implementation action plans, States/Territories should also develop an integral PBN airspace concept that fosters implementation, modification or elimination of RNAV routes and approach procedures in the lower and upper airspace in the CAR and SAM Regions.

3.1.4 It was noted that currently States perform certification and operational approval tasks in line with their own regulatory framework and review their respective national PBN implementation.

3.1.5 The Meeting also agreed that in future presentations of PBN implementation results, that regional performance metrics be included in accordance with ICAO guidelines. To this end, States/Territories shall develop their own PBN metrics and provide the results in a timely manner to the ICAO Regional Offices.

3.2 Projects of the ATFM Programme

3.2.1 With regard to implementation of Project B-1 on Improving Demand-Capacity Balancing (DCB), the Meeting noted that relevant progress has been achieved with development of ATFM regional procedures, periodical regional teleconferences to share operational and technical information, and calculation of the Airport Acceptance Rate (AAR) of some States.

3.2.2 The Meeting also noted that currently not all the aerodromes and airspace in the CAR/SAM Regions are saturated. For that reason, it was observed that ATFM service does not need to be implemented at all CAR/SAM international aerodromes, only those which so require.

3.2.3 Notwithstanding, some preliminary progress has been achieved, and considering the need to improve the capacity of the system and the efficiency of air operations, it is necessary to foster the calculation of ATC sector capacity, implement coordination procedures in the event of hurricanes and volcanic ash that currently are available at the ICAO NACC Regional Office web page (<http://www.mexico.icao.int/ATM/APX%20Volcanic%20Ash%20Contingency%20Procedures%2004%2030%202008.pdf>).

3.2.4 Concerning the implementation of Project B-2 on Flexible Use of Airspace (FUA), the Meeting noted that significant progress has been achieved with implementation of agreements between civil-military coordination bodies.

3.2.5 Most of the restricted airspace areas are temporarily activated through NOTAMs, achieving flexible use of these areas. An assessment of the impact of restricted airspace in the CAR and SAM Regions on civil aviation air operations management is among future tasks.

3.3 Projects of the Automation and ATM Situational Awareness Programme

3.3.1 The Meeting was informed of the progress of implementation of the activities of Programme C and its three projects: C1, C2 and C3. The objectives of this programme focus on supporting the maximum use of existing automation capacities and the interoperability and increase of automation level, implementation of enhancements to situational awareness in the ATS units, and implementation of the new ICAO Flight Plan Format.

3.3.2 In general, implementation of activities is completed in accordance with the established timeline with little delay, depending on the scheduled start dates, although there is a lack of experts for the SAM Project C2 and Project Coordinator for SAM Project C3.

3.4 Projects of the Ground-ground and Air-ground Telecommunications Infrastructure Programme

3.4.1 The Meeting was informed of the status of implementation activities of the projects of Programme D. The objectives focus on supporting the implementation of the aeronautical telecommunications network (ATN) and its ground-ground and ground-air applications. As part of the activities of SAM Region Project D1, note was taken on the activities for implementation of the new REDDIG II digital network, which is under bidding process through the ICAO Technical Cooperation Bureau to initiate its installation and operation.

3.4.2 The activities of Programme D have been performed as planned and in coordination with other Programmes. Delayed implementation of some tasks of the CAR Region Programme D projects, due to the reduced number of experts available for the planned deliverables was identified.

3.5 Projects of the AGA Programme

3.5.1 The Meeting was informed on the most relevant aspects of the CAR and SAM regional projects under the Aerodromes programme, including objective, scope, metrics, strategy, project deliverables, and implementation status.

3.5.2 A correction in the objective and scope of the CAR F3 and SAM F3 projects, both on Improvement of Runway Safety in the CAR and SAM Regions, which is focused on reducing the number of incidents/accidents due to runway incursions/excursions, was presented. The implementation of runway safety teams is a topic being addressed by a project of the Regional Aviation Safety Group – Pan America (RASG-PA) and therefore the activities related to the establishment of runway safety teams were deleted from these GREPECAS projects.

3.5.3 The Meeting was informed that the projects have their respective coordinators; nevertheless, the lack of experts to assist the project coordinator has been the reason for several projects being delayed in their activities and tasks, an aspect which is reflected in the progress of the activities of these projects. It was highlighted that the confirmation of States regarding participation of their experts in several projects is a priority to follow-up on the projects and not interrupt development.

3.5.4 Dominican Republic emphasized the importance of having joint participation by aerodrome operators and civil aviation authorities at aerodrome workshops. In the case of aeronautical studies, the service provider will be in charge of performing the study and the regulatory authority to determine its approval. Therefore, both need to have the required knowledge on the relevant aspects of an aeronautical study. The Secretariat informed the Meeting that a workshop on aeronautical studies is scheduled from 20 to 24 August 2012, in the ICAO NACC Regional Office.

3.6 Projects of the AIM Programme

3.6.1 The Meeting was informed of the work and progress performed by the AIM Programme through the projects that were carried out by the coordinators of each Project (G1, G2 and G3) in the CAR and SAM Regions and the difficulties faced by the coordinators during this first implementation period. In addition, the Meeting commented on the progress of the AIM projects in each Region with the following information:

- CAR Region: Project G1 (coordinator: COCESNA) and G3 (coordinator: Cuba) have made progress. Project G2 was delayed by the late appointment of the coordinator from Mexico, but with support from the United States and Trinidad and Tobago, some progress was achieved.
- SAM Region: Project G1 (coordinator: Uruguay), G2 Project (coordinator: Argentina) and G3 Project (coordinator; Peru) have made significant progress; however, sufficient expert resources need to be allocated to achieve the planned objectives in time.

3.6.2 The Secretariat emphasized the need for CAR and SAM States to participate in the work of the different Aeronautical Information Management (AIM) projects, and highlighted that there are key dates for implementation of tasks to allow AIM development. In this regard, there is little support in the transition to AIM stage by the Civil Aviation Authorities of most States in the Regions.

3.6.3 The Meeting also highlighted the fact that there should be greater support from ICAO Headquarters concerning AIM, taking a more systemic approach in the air navigation fields and that the importance of AIM be recognized in relation to the other air navigation fields. In this regard, the Secretariat recommended that a group of States should collaborate on a working paper to be presented at the upcoming ANConf/12 requesting ICAO to provide AIM the required importance and allocate the necessary resources.

3.6.4 The Secretariat informed the Meeting of the different work by the Transition of the AIS to AIM Study Group (AIS-AIM/SG) on the development and updating of Annexes, Documents and new AIM Manuals. The Meeting was invited to participate in the AIM Seminar that will be held in Montego Bay, Jamaica, from 23 to 27 July 2012 that integrates a syllabus with relevant aspects supporting the transition to AIM.

3.7 Projects of the MET Programme

3.7.1 The Meeting was informed on developments experienced by the Aeronautical Meteorology Programme and projects.

3.7.2 The implementation activities of the Aeronautical Meteorology Programme of the SAM Region and its associated projects were presented, which are similar to the four CAR Region projects that were developed, namely:

- Project for the implementation of WAFS (CAR/SAM)
- Project for the implementation of IAVW (for each of the regions)
- Project for the implementation of QMS/MET (for each of the regions)
- Project to optimize the OPMET exchange, including SIGMETs (for each of the regions)

3.7.3 However, because there has been some obstacles to the fulfillment of commitments on the part of some involved States, the progress of projects in the CAR Region was not portrayed because most projects have not started, with the exception of follow-up provided to the transition of the International Satellite Communications System to the new World Area Forecast System Internet File Service (WIFS) by the United States, the Provider State.

3.7.4 Cuba informed on its commitment to the QMS/MET Project with its coordinator, but reported that the lack of support by experts of other States had prevented to make progress as planned.

3.7.5 The Meeting was informed of the progress made with emphasis on the SAM Region and that they are closely related to the tasks that had previously been developed by the AERMETSG.

General Comments

3.8 The Secretariat called upon States that have provided officers who serve as Project coordinators and experts for the development and implementation of projects to show greater commitment to be able to start the work and achieve the goals set for these projects.

3.9 The Meeting praised the work performed by the programmes and projects coordinators in order to develop the projects, recognizing that they can be improved with time. Likewise, it was highlighted that in the description of the projects, a field be included to define the targets to be attained in easily quantifiable terms and the date to achieve said targets. With this information, PRCC will be able to assess the efficiency and success of the effort performed in each project, and take appropriate action.

Agenda Item 4 Items related to the Organization of GREPECAS

Under this Agenda Item, the following working papers and a flimsy were discussed:

- WP/12 Rev, WP/13, WP/14, Flimsy 01

4.1 Review of the GREPECAS Procedural Handbook

4.1.1 The Secretariat presented the last version of the draft GREPECAS Procedural Handbook for consideration by the Meeting, which was designed to contain only those procedures that are of a permanent nature in order to avoid the need for revisions. The Handbook is considered high-level and authorizes the GREPECAS Secretary to develop complementary documents for GREPECAS processes, such as handling deficiencies, the Scrutiny Group and others as required.

4.1.2 The Meeting reviewed the Handbook and suggested some minor editorial improvements that are incorporated into **Appendix A** to this part of the report. The Meeting also agreed to include the status for International Organizations as observers in paragraph 4.2, and limit the reelection of the GREPECAS Chairperson to one-time in paragraph 4.7. In paragraph 14.1, an additional item under requirements was added in order to develop statistics on trends with implementation problems of a specific standard of an ICAO Annex or specific part of the Regional Air Navigation Plan.

4.1.3 The Meeting also agreed on the need to amend the translation of item a) of the terms of reference of GREPECAS approved by the Council in order to read “continuous and coherent development of (...)” The GREPECAS Secretary will refer this request for amendment to the text in Spanish to ICAO Headquarters for consideration by ICAO Council.

4.1.4 The Meeting also requested the Secretariat to more strictly apply the procedure corresponding to working papers and information papers and even reject working papers from States or International Organizations that fall outside the GREPECAS scope as defined by the Terms of Reference. Paragraph 9.2.1 c) was modified in relation to the procedure and schedule for the processing and availability of meeting documentation.

4.1.5 With these changes incorporated in the Handbook, the Meeting adopted the following Draft Decision:

DRAFT

DECISION 1/2

GREPECAS PROCEDURAL HANDBOOK

The Sixth Edition 2012, version 1.1, of the GREPECAS Procedural Handbook is approved.

4.2 **Review of the Terms of Reference and Work Programme of the Programmes and Projects Review Committee**

4.2.1 The Secretariat presented the proposed revised Terms of Reference and Work Programme of the Programmes and Projects Review Committee (PPRC), which incorporated the list of States selected by the Directors of Civil Aviation to form PPRC membership, and some editorial corrections and improvements.

4.2.2 United States proposed including an additional introductory paragraph in the Terms of Reference on the mandate, objectives and role of the PPRC, which was discussed, modified and agreed as included in the proposed revised Terms of Reference and Work Programme presented in **Appendix B** to this part of the report and will be submitted to GREPECAS for approval. The Meeting therefore adopted the following Draft Decision:

DRAFT

DECISION 1/3

PROGRAMMES AND PROJECTS REVIEW COMMITTEE (PPRC) TERMS OF REFERENCE AND WORK PROGRAMME

The revised PPRC Terms of Reference and Work Programme presented in Appendix B to this part of the report is approved.

4.3 **GREPECAS Annual Report**

4.3.1 The Secretariat presented the proposed content for the GREPECAS Annual Report, which was prepared with reference to the GREPECAS Terms of Reference and Work Programme, GREPECAS meeting reports, comments of the ANC on the GREPECAS/16 report, PIRG reports from other regions, and in consultation with the ICAO Air Navigation Bureau.

4.3.2 Taking into consideration the results of the GREPECAS/16 Meeting and associated comments of the ANC, the future GREPECAS Annual Reports will have the following objectives:

- a) Provide annual GREPECAS reports in between the triennial GREPECAS meetings
- b) Inform on GREPECAS activities, progress and results of its programmes and projects
- c) Inform on the GREPECAS PPRC meeting results
- d) Seek guidance and approval from the ANC as applicable and when required
- e) Provide the web references to relevant supporting documents

4.3.3 If not having a triennial meetings of GREPECAS the Secretariat will prepare future GREPECAS Annual Reports based on the results of PPRC meetings, complemented with information on other relevant regional developments and results, circulated to GREPECAS member States for review, comment and approval, and then submitted to the Air Navigation Bureau for presentation to the ANC.

4.3.4 The Meeting noted that the ANC had decided that in the future it will review a single consolidated report for all PIRGs in January every year. It would therefore be opportune for the GREPECAS Annual Report to be submitted in November every year. This schedule could influence the convenient timing of future PPRC meetings to allow sufficient time for the GREPECAS Annual Report to be prepared by the Secretariat, circulated to States for comment and approval, and revised by the Secretariat, and at the same time, not be published prematurely ensuring that its content is as complete and current as possible.

4.3.5 With the exclusion of Search and Rescue (SAR) and the amendment to the section referring to coordination with RASG-PA, the Meeting agreed on the proposed content for the future GREPECAS Annual Reports as presented in **Appendix C** to this part of the report, which will be submitted to GREPECAS for approval. The Meeting therefore adopted the following Draft Decision:

DRAFT

DECISION 1/4

GREPECAS ANNUAL REPORT CONTENT

The GREPECAS Annual Report content presented in Appendix C to this part of the report is approved.

APPENDIX A



**CAR/SAM PLANNING AND
IMPLEMENTATION REGIONAL GROUP
(GREPECAS)**

PROCEDURAL HANDBOOK

Sixth Edition – 2011

Version 1.1

RECORD OF AMENDMENTS AND CORRIGENDA

[illegible]

INTRODUCTION

The CAR/SAM Planning and Implementation Regional Group (GREPECAS) was established by the ICAO Council in 1990 as recommended by the Second CAR/SAM Regional Air Navigation Meeting in 1989 (action by Council on Recommendation 14/6 of the CAR/SAM/2 RAN Meeting is set out in Supplement No. 1 to Doc 9543, CAR/SAM/2).

The Procedural Handbook contains information on the role, organization and operation of GREPECAS as well as its different programmes and projects. The Handbook will serve States and international organizations when planning and managing resources for their participation in the Group.

This Procedural Handbook provides general guidelines and is approved by GREPECAS.

The Secretary of this body may develop specific procedures and forms permitting the effective management of the GREPECAS mechanism. These procedures should not contradict this Handbook in any way.

The Handbook should be updated periodically to accommodate relevant changes and developments.

CAR/SAM PLANNING AND IMPLEMENTATION REGIONAL GROUP (GREPECAS)

1. Background

1.1 The CAR/SAM Planning and Implementation Regional Group was established by the ICAO Council (Recommendation 14/6 – SP CAR/SAM 1989, Doc 9543).

2. Terms of Reference

2.1 In accordance with C-WP/13135, Council Decisions C-DEC 183/9 dated 18 March 2008, and C-DEC 190/4 dated 28 May 2010, the terms of reference of GREPECAS are as follows:

- a) 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, consistent with ICAO SARPs and reflecting global requirements;
- b) facilitation of the implementation of air navigation systems and services as identified in the CAR/SAM Air Navigation Plan, giving due priority to air safety;
- c) identification and aiding in addressing specific deficiencies in the air navigation field; and
- d) coordination of safety issues with Regional Air Safety Groups (RASGs).

2.2 In order to meet the Terms of Reference the Group shall:

- a) 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 with providing services in the CAR and SAM Regions with their assigned task of fostering implementation of the CAR/SAM Regional Air Navigation Plan;
- c) in line with the Global Aviation Safety Plan (GASP), ensure the conduct of any necessary systems performance monitoring;
- d) identify specific deficiencies in the air navigation field, especially in the context of safety, and propose corrective action;
- e) promote the development and implementation of an action plan by States to resolve identified deficiencies, where necessary;

- f) develop amendment proposals for the update of the CAR/SAM Air Navigation Plan necessary to satisfy any changes in requirements, thus removing the need for regular regional air navigation meetings;
- g) 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;
- h) examine human resource planning and training issues and ensure that the human resource development capabilities in the Regions are compatible with the CAR/SAM Regional Air Navigation Plan;
- i) review the Statement of Basic Operational Requirements and Planning Criteria (BORPC) and recommend such changes as may be required in the light of developments to the Air Navigation Commission;
- j) invite financial institutions, as required, on a consultative basis and when considered appropriate in the planning process, to participate in this work;
- k) ensure close cooperation with relevant organizations and State groupings to optimize the use of available expertise and resources;
- l) conduct the above activities in the most efficient manner possible with a minimum of formality and documentation, and call meetings of GREPECAS only when the Secretary and the Chairperson, through the Programme and Project Review Committee, are convinced that it is necessary to do so; and
- m) coordinate with the Regional Aviation Safety Group – Pan America (RASG-PA).

3. Position in ICAO

3.1 GREPECAS is the guiding and co-ordinating body for all activities conducted within ICAO concerning the air navigation system for the CAR and SAM Regions but does not assume authority vested in other ICAO bodies, except where such bodies specifically delegate their authority. The activities of GREPECAS shall be subject to review by the ICAO Council.

4. Composition and organization of GREPECAS

4.1 GREPECAS is composed of all States providing air navigation services in the CAR/SAM Regions. However, a group of States may choose to have common representation.

4.2 The following international organizations may be invited, as observers, to participate on a regular basis: ACI, ALTA, ARINC, ASSI, CANSO, CASSOS, COCESNA, ECCAA, IAOPA, IATA, IBAC, IFALPA IFATCA, LACAC, PAIGH, SITA and WMO.

4.3 States that do not provide air navigation services in the CAR/SAM Regions may participate as observers in GREPECAS meetings.

4.4 Other CAR/SAM International Organizations and/or bodies may also participate when invited specifically by GREPECAS.

4.5 States shall ensure that the representatives designated as members of GREPECAS have knowledge and experience with regard to supplying the full range of international air navigation systems and serving in GREPECAS for a period long enough to maintain continuity of its activities. During the meetings of GREPECAS, the designated representatives maybe supported by technical advisers , if necessary..

4.6 The Group shall appoint a Chairperson and a Vice-Chairperson. The Chairperson, in close coordination with the ICAO Regional Directors from the South America and NACC Regional Offices, shall make necessary arrangements for the most efficient work of the Group.

4.7 In order to ensure necessary continuity in the work of GREPECAS, and unless otherwise determined by special circumstances, the Chairperson and the Vice-Chairperson of GREPECAS shall assume their functions at the end of the meeting at which they are elected and normally serve for a period of three years. They can also be re-elected once, if considered and approved by the Group. The Chairperson shall:

- a) attend, to the extent possible, all meetings of GREPECAS under his/her chairpersonship;
- b) participate with the Secretariat in the development of GREPECAS meeting reports; and
- c) present the GREPECAS meeting reports under his/her chairpersonship.

4.8 **Appendix A** to this document presents the structure of GREPECAS.

5. **Working methodology**

5.1 The GREPECAS work programme shall be developed through project management methodology. The GREPECAS Programmes and Projects Review Committee (PPRC) shall be the authority to be provided account of and to review the progress of each of the projects of the mechanism.

5.2 The Regional Officers will coordinate the programmes, and State experts shall coordinate the projects. The programmes cover different air navigation fields based on the Global Air Navigation Plan and the Global ATM Operational Concept, and in accordance with ICAO programmes under the Strategic Objectives *Safety* and *Environmental Protection and Sustainable Development of Air Transport*; namely, AGA, AIM, ATM, CNS, MET and SAR.

5.3 The respective CAR or SAM Regional Office will designate programme coordinators for projects under their responsibility. To assist in each project's design, follow-up and achievement of objectives, the Regional Office's programme coordinator will count with support of the project coordinators assigned among the States in its area of accreditation. Each Regional Office will use its own implementation mechanisms to achieve the objectives of the programmes and projects of its Region.

5.4 The projects relate to their generic definition, and that are not limited to the ICAO Technical Cooperation projects, which are an example of a type of project. Technical cooperation projects are an implementation tool along with working groups, Special Implementation Projects (SIP), etc. GREPECAS projects will have the following components, which must be documented in a brief project document and schedule:

- a) Objectives
- b) Description
- c) Activities
- d) Responsibilities
- e) Resources – experts and budget
- f) Results – outputs, deliverables
- g) Schedule – Programme, milestones, terms
- h) Dependencies
- i) Metric/Indicators
- j) Risks

5.5 To achieve the results of a given project resource allocation for its implementation is necessary. Components of these resources are the project coordinators and experts that the States/International Organizations provide. States/International Organizations, upon designating their coordinators and experts, must ensure that the designees are provided with the time necessary to conduct appropriate coordination and participate in the various activities of the project.

6. Programmes and Projects Review Committee (PPRC)

6.1 A key component of the organization of GREPECAS is the Programmes and Projects Review Committee (PPRC). The PPRC is the accountable authority that reviews the progress of the programmes and projects.

6.2 With the aim of complying with the work programme, the PPRC:

- a) identifies the need for new projects;
- b) prioritizes resource allocation;
- c) authorizes the establishment of new projects;
- d) recommends actions to eliminate obstacles encountered in achieving proposed objectives; and
- e) ensures that the programmes and projects are consistent with and aligned to the terms of reference of GREPECAS.

6.3 **Appendix B** presents the terms of reference and working programme of the Programmes and Projects Review Committee.

6.4 The PPRC is composed of the GREPECAS Chairperson and Vice-Chairperson, the Secretary and Co-Secretary, representatives from 16 CAR/SAM States (8 from CAR and 8 from SAM), the international organizations listed in paragraph 4.2 of this Handbook, and States from other regions invited to participate in the meetings as Observers when relevant to the order of business.

6.5 The PPRC meetings will be held as necessary, either through teleconferences or in-person, depending on efficiency and effectiveness and the GREPECAS budget. Preference will be given to teleconference meetings, and at least one annual in-person meeting will be conducted, preferably at either the CAR or SAM Regional Offices.

7. Project meetings and interregional coordination

7.1 With the aim of coordinating and exchanging information, it is possible that the various projects will require regional meetings. Priority will be given to teleconference meetings; however, in-person meetings may also be necessary. In this case, the Regional Offices will make use of existing fora in order to minimize costs, and preferably hold meetings at the Regional Offices, if feasible.

7.2 The Regional Offices programme coordinators are charged with ensuring coordination between the projects of both regions. If necessary, CAR/SAM meetings can be convened to coordinate interregional coordination topics and, preferably, existing fora will be used to avoid meeting proliferation and minimize costs.

8. Regional coordination

8.1 The Chairperson and the GREPECAS Secretary, in coordination with the Co-Secretary, shall take all necessary steps to establish and maintain a close relationship with relevant international and sub-regional organizations in all pertinent fields of aviation activity to ensure optimization of capacity and efficient development of procedures.

9. GREPECAS meetings

9.1 Languages

9.1.1 The languages of the meetings of the GREPECAS shall be English and Spanish. The meeting reports and supporting documentation for GREPECAS meetings will be prepared in English and Spanish.

9.2 Secretariat support of GREPECAS meetings

9.2.1 The GREPECAS Secretary, supported by the GREPECAS Co-Secretary, shall provide necessary secretariat assistance to the Group and serve as its communication link with all interested parties. In order to achieve this, the following actions will be taken:

- a) the meeting agenda shall be limited to those items that are sufficiently mature for a GREPECAS decision or conclusion;

- b) documentation submitted by States, international organizations, and GREPECAS Programmes for action by GREPECAS shall always include a concrete and substantiated proposal for a conclusion or a decision for GREPECAS consideration for endorsement, amendment or rejection, if applicable;
- c) documentation should be sent electronically 45 days before the meeting to permit timely processing in both English and Spanish. All documentation should be submitted 21 days before the meeting, at the latest, for proper publishing and distribution. It should be noted that those papers received after this 21-day period may not be accepted by the Secretariat, however, they may be presented as information papers. All Meeting documentation will be available on the web at least 15 days prior to meetings;
- d) in plenary session, GREPECAS meetings will approve conclusions and decisions, which shall include brief lead-in text for better understanding and a reference to which earlier Conclusion(s)/Decision(s) is superseded, if applicable, as well as noting when they can be deleted from the GREPECAS List of Valid Conclusions and Decisions;
- e) the full report will be completed by the Secretary and approved by the Chairperson for transmission within four weeks after the end of the meeting;
- f) upon completion of the meeting, a one-page summary describing the outcome will be prepared and disseminated to all Air Navigation Bureau (ANB) sections as well as relevant sections of Air Transport Bureau (ATB) and Technical Co-operation Bureau (TCB), including a detailed action plan for the implementation of the conclusions and decisions adopted by the Group; and
- g) GREPECAS relations with States and International Organizations, as well as relations with CAR or SAM bodies and organizations, will normally be conducted through the ICAO Regional Director of the Office of accreditation.

10. Meeting documentation

10.1 Distribution of the supporting documentation of GREPECAS and its Programmes, as well as the reports of the meetings, will be posted on the NACC and SAM Regional Offices websites under the GREPECAS option.

10.2 Documentation may be presented by States, International Organizations or the Secretariat, in the following formats:

- a) **Working papers** contain material with a draft decision, conclusion or invitation for the meeting to take a certain action. The content of the topics must be centered on air navigation subjects (AGA, AIM, ATM, CNS, MET and SAR), coordination aspects with RASG-PA, or GREPECAS administrative matters.

- b) **Information papers** are submitted to provide the meeting with information for which no action is required and will normally not be discussed at the meeting.
- c) **“Flimsies”** are documentation prepared on an ad hoc basis in the course of a meeting to assist the meeting with discussion on a specific matter or in the drafting of a text for a conclusion or decision.
- d) **Discussion papers** are originated and distributed during the meeting.

11. Meeting output

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

11.2 Decisions deal with matters of concern only to the GREPECAS.

Note: in order to qualify as such, a decision or conclusion shall be able to respond clearly to the “3W” criterion (What, Who and When).

12. Schedule and venue of GREPECAS meetings

12.1 GREPECAS will meet every three years; its duration will be determined by the scope of the agenda, however, a three-day standard will be endeavored, if possible. Meetings shall normally be convened at locations within the CAR and SAM Regions, alternatively. A meeting convening letter shall be sent by the Regional Offices **90** days prior to the meeting, including the draft agenda together with explanatory notes.

13. Fast-track procedure

13.1 To enable greater efficiency for the work of GREPECAS, draft conclusions and decisions can be approved through correspondence. Unless the Secretariat considers it otherwise, the usual procedure where no response indicates agreement will apply.

14. Reporting deficiencies

14.1 In order to enable GREPECAS to make detailed assessments of deficiencies, States and appropriate International Organizations, including IATA and IFALPA, are expected to provide information they have to the corresponding ICAO Regional Office for appropriate action, including action at PIRG meetings. The information should include, at a minimum:

- a) description of the deficiency
- b) requirement
- c) risk assessment
- d) solution and/or mitigating measures
- e) time-lines
- f) responsible party
- g) agreed action to be taken
- h) action already taken

14.2 On 30 November 2001, the ICAO Council approved the *Uniform Methodology for the Identification, Assessment and Reporting of Air Navigation Deficiencies*, which is presented as **Appendix C** to this Procedural Handbook.

14.3 A detailed description of the methodology is found in the document on *Uniform Methodology for the Identification, Assessment and Reporting of Air Navigation Deficiencies* published on the Regional Offices websites under the GREPECAS option.

15. Scrutiny Working Group (GTE)

15.1 The GREPECAS GTE is composed by specialists from the CAR/SAM Regions qualified in the analysis and assessment of 300 ft or more large height deviations (LHD), as defined in ICAO Document 9574.

15.2 This Group in addition fulfills an important coordination task with the regional monitoring agency (CARSAMMA) for the compilation, purging and review of data regarding LDH, by identifying deviation trends and recommending corrective actions with the aim of improving safety.

15.3 The GTE will prepare an annual executive report for the Secretary of GREPECAS, containing statistical information related with LHD, as well as recommendations on the risk mitigating measures deemed pertinent to take.

16. Coordination with RASG-PA

16.1 GREPECAS will provide the RASG-PA mechanism with a working paper containing statistical information on the process and/or projects generating valuable information on the safety of air navigation systems.

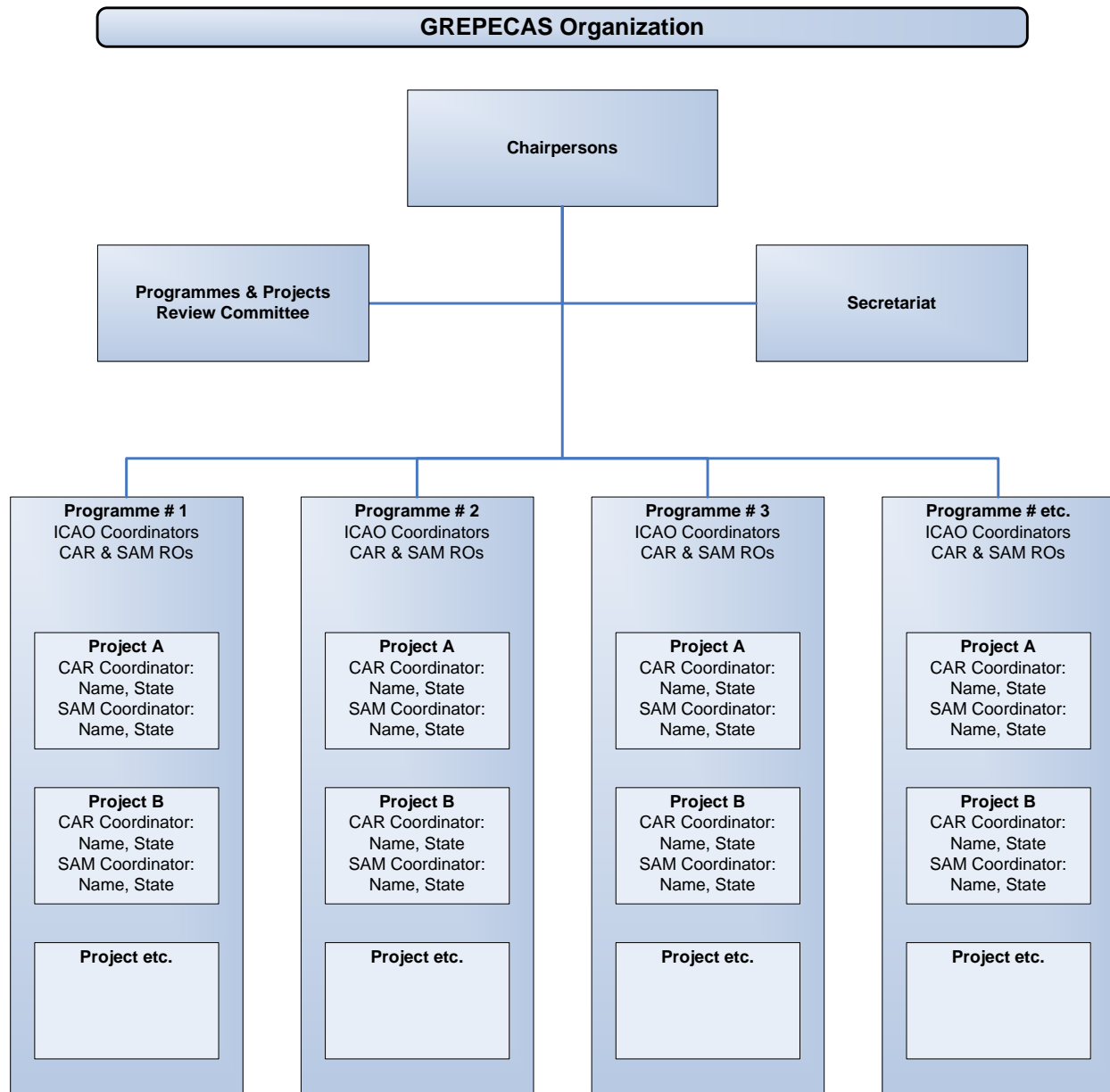
16.2 The GREPECAS and RASG-PA Secretaries will ensure efficient coordination is maintained between the two groups as necessary to avoid duplication of effort and achieve the highest level of effectiveness. As a rule and when required, the fast track approval procedure will be used.

17. Terminology

17.1 The terminology applicable to GREPECAS is included in **Appendix D**.

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APPENDIX A



APPENDIX B

PROPOSED REVISED GREPECAS PROGRAMMES AND PROJECTS REVIEW COMMITTEE TERMS OF REFERENCE AND WORK PROGRAMME

1. Introduction

PPRC activities are performed by high-level member State representatives on behalf of all GREPECAS member States. The representatives selected to the PPRC are envisioned to focus their activities on the review of GREPECAS programmes and projects with regard to objectives, implementation progress, challenges encountered results achieved and not duplicate the work performed by the technical experts. The PPRC will make recommendations for approval by GREPECAS on programme and project results, as well as the establishment, modification and termination of programmes and projects.

2. Membership

The PPRC comprises the GREPECAS Chairperson, Vice-Chairperson, Secretary and Co-Secretary, eight States of the CAR Region and eight States of the SAM Region identified by the Directors of Civil Aviation of the States¹. Other GREPECAS member States may participate in meetings if the agenda includes a topic of interest. The international organizations listed in the GREPECAS Procedural Handbook and affected States of other Regions may participate in meetings as Observers when relevant to the agenda.

3. The Terms of Reference of the Committee are:

- a) coordinate and harmonize GREPECAS administrative matters and participate in its internal management and scheduling of events;
- b) review and approve the planning, progress and execution of programmes and projects to ensure their alignment with the GREPECAS terms of reference, ICAO strategic objectives, business plan and global air navigation plan; and
- c) follow-up on high-risk safety deficiencies and take action to promote their resolution.

¹ The PPRC Member States for the CAR Region are, Cuba, Dominican Republic, Haiti, Honduras (in representation of Central America in the rotation scheme and as selected by the COCESNA Executive Committee), Jamaica, Mexico, Trinidad and Tobago and United States selected by Conclusion 4/1 of the Fourth Meeting of Directors of Civil Aviation of North America, Central America and the Caribbean (NACC/DCA/4) held in San Pedro Sula, Honduras, from 20 to 24 June 2011. The PPRC Member States of the SAM Region are Argentina, Bolivia, Brazil, Chile, Colombia, Panama, Paraguay and Venezuela as ratified at the Twelfth Meeting of Civil Aviation Authorities of the SAM Region (RAAC/12), held in Lima, Peru, from 3 to 6 October 2011 (ref. paragraph 2.3.5 of the Final Report).

4. In order to comply with its Terms of Reference the Committee shall:

- a) review and propose amendments to the GREPECAS Procedural Handbook;
- b) review the GREPECAS work methodology and propose specific actions to improve its performance;
- c) follow-up the programmes and projects on a continuous basis and, if necessary, intervene in project development to ensure that results are achieved according to approved timeframes;
- d) prepare reports on PPRC activities, progress and results of programmes and projects for each GREPECAS meeting and annual GREPECAS reports in between GREPECAS meetings;
- e) prepare the draft agenda for GREPECAS meetings; and
- f) in cases of high-risk safety deficiencies, request the respective ICAO Regional Office to request the Air Navigation Bureau to inform the Air Navigation Commission.

APPENDIX C

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 definition of deficiency is as follows:

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; and
- 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^{2*}; 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.

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 completion	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 Dec. 2..X	Coordination meeting between Terra X and Terra Y on 16 July 2..X to finalize arrangements to implementation circuit via satellite	Implementation of direct speech circuit via satellite	Terra X	20 Aug. 2..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.

APPENDIX D

TERMINOLOGY

The following is a terminology guide (in English and Spanish) to be used when preparing documentation to be presented for the review of the GREPECAS and its Contributory Bodies Meetings:

Terminology

English

Spanish

Addendum	Addenda
Ad hoc	Ad hoc
Agenda Item #	Cuestión # del Orden del Día
Agenda	Orden del Día
Appendix	Apéndice
Attachment (of an Appendix)	Adjunto (de un Apéndice)
Contributory Body	Órgano Auxiliar
Corrigendum	Corrigendo
Discussion Paper (DP)	Nota de Discusión (ND)
Draft Agenda	Orden del Día Provisional
Draft Conclusion	Proyecto de Conclusión
Draft Decision	Proyecto de Decisión
Draft Report	Informe Provisional
Explanatory Notes	Notas Aclaratorias
Final Report	Informe Final
Flimsy	Flimsy
Historical	Reseña
Information Paper (IP)	Nota de Información (NI)
International organizations	Organizaciones Internacionales
Implementation	Implantación
Order of Business (OB)	Orden del Día (OD)
Revised	Revisado
Supplement	Suplemento
Working Paper (WP)	Nota de Estudio (NE)

Note for the Secretariat in the preparation of Documentation:

Appendixes are sorted in alphabetical order: **A, B, C, D...**

In the event of surpassing the alphabet the following criteria will be used also in alphabetical order: **AA, BB, CC, DD...**

The Attachments to an Appendix will be sorted in numerical order: **1, 2, 3, 4 ...**

**CLASSIFICATION OF THE STATUS OF GREPECAS
CONCLUSIONS AND DECISIONS:**

**CLASIFICACIÓN DEL ESTADO DE LAS
CONCLUSIONES Y DECISIONES DEL
GREPECAS**

Valid	Válida
Completed	Finalizada
Superseded	Sustituida

- END -

APPENDIX B

PROPOSED REVISED GREPECAS PROGRAMMES AND PROJECTS REVIEW COMMITTEE TERMS OF REFERENCE AND WORK PROGRAMME

1. Introduction

PPRC activities are performed by high-level member State representatives on behalf of all GREPECAS member States. The representatives selected to the PPRC are envisioned to focus their activities on the review of GREPECAS programmes and projects with regard to objectives, implementation progress, challenges encountered results achieved and not duplicate the work performed by the technical experts. The PPRC will make recommendations for approval by GREPECAS on programme and project results, as well as the establishment, modification and termination of programmes and projects.

2. Membership

The PPRC comprises the GREPECAS Chairperson, Vice-Chairperson, Secretary and Co-Secretary, eight States of the CAR Region and eight States of the SAM Region identified by the Directors of Civil Aviation of the States¹. Other GREPECAS member States may participate in meetings if the agenda includes a topic of interest. The international organizations listed in the GREPECAS Procedural Handbook and affected States of other Regions may participate in meetings as Observers when relevant to the agenda.

3. The Terms of Reference of the Committee are:

- a) coordinate and harmonize GREPECAS administrative matters and participate in its internal management and scheduling of events;
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- c) follow-up on high-risk safety deficiencies and take action to promote their resolution.

¹ The PPRC Member States for the CAR Region are, Cuba, Dominican Republic, Haiti, Honduras (in representation of Central America in the rotation scheme and as selected by the COCESNA Executive Committee), Jamaica, Mexico, Trinidad and Tobago and United States selected by Conclusion 4/1 of the Fourth Meeting of Directors of Civil Aviation of North America, Central America and the Caribbean (NACC/DCA/4) held in San Pedro Sula, Honduras, from 20 to 24 June 2011. The PPRC Member States of the SAM Region are Argentina, Bolivia, Brazil, Chile, Colombia, Panama, Paraguay and Venezuela as ratified at the Twelfth Meeting of Civil Aviation Authorities of the SAM Region (RAAC/12), held in Lima, Peru, from 3 to 6 October 2011 (ref. paragraph 2.3.5 of the Final Report).

4. In order to comply with its Terms of Reference the Committee shall:

- a) review and propose amendments to the GREPECAS Procedural Handbook;
- b) review the GREPECAS work methodology and propose specific actions to improve its performance;
- c) follow-up the programmes and projects on a continuous basis and, if necessary, intervene in project development to ensure that results are achieved according to approved timeframes;
- d) prepare reports on PPRC activities, progress and results of programmes and projects for each GREPECAS meeting and annual GREPECAS reports in between GREPECAS meetings;
- e) prepare the draft agenda for GREPECAS meetings; and
- f) in cases of high-risk safety deficiencies, request the respective ICAO Regional Office to request the Air Navigation Bureau to inform the Air Navigation Commission.

APPENDIX C**PROPOSED GREPECAS ANNUAL REPORT CONTENT**

1. Introduction
 - Summary of activities over the preceding period
 - List of new conclusions and decisions
 - List of reference documents
2. Status and follow-up on previous GREPECAS conclusions and decisions
3. Status and follow-up on air navigation deficiencies with high risk (Priority “U”)
4. GREPECAS - RASG-PA coordination matters
5. Review of GREPECAS Programmes and Projects
 - 5.1 PBN Programme Projects
 - 5.2 ATFM Programme Projects
 - 5.3 ATM Automation and Situational Awareness Programme Projects
 - 5.4 Ground-Ground and Ground-Air Communications Infrastructure Programme Projects
 - 5.5 AGA Programme Projects
 - 5.6 AIM Programme Projects
 - 5.7 MET Programme Projects
6. Status and follow-up on the implementation of other key ICAO programmes (e.g., ICAO language proficiency, WGS-84, etc.)
7. Other related regional groups and activities (e.g., CARSAMMA, GTE, MEVA, REDDIG, etc.)
8. GREPECAS Organization, Terms of Reference and Work Programme
9. Other matters
10. Activities planned for the next period

Appendices

Agenda item 5**Other business**

Under this Agenda Item, the following working and information papers were discussed:

- WP/17, NI/04, IP/05, IP/06, IP/07, IP/08, IP/09 and IP/10

GREPECAS-RASG-PA Coordination Matters***Standardized ATS Phraseology in Spanish***

5.1 As a result of the work of RASG-PA, the Secretariat presented Working Paper 17 on the lack of application of Spanish phraseology in accordance with ICAO Doc 4444 among ICAO Spanish-speaking States of the CAR/SAM Regions.

5.2 The Meeting agreed that a GREPECAS initiative to standardize Spanish phraseology that concluded with an amendment to Chapter 12, Phraseologies (Spanish only), of the PANS/ATM (Doc 4444) applicable since 2009, is not sufficiently familiar to pilots and controllers.

5.3 The Meeting agreed that improper phraseology can be a contributing factor to incidents/accidents. Therefore, there is the need to promote the use of proper phraseology by air traffic controllers and pilots in accordance with the ICAO Spanish standardized phraseology in radiotelephony (Doc 4444).

5.4 The Meeting agreed on the following possible actions:

- extend the phraseology survey already conducted with pilots to air traffic controllers of the CAR/SAM Regions, review the Spanish-speaking States' regulations and mechanisms for oversight of compliance with the standardized phraseology;
- recommend training for air traffic controllers and pilots on the use of standardized Spanish ATS phraseology in accordance with Doc 4444 as a means to mitigate safety risks; and
- promote the correct application of standardized ATC Spanish phraseology by pilots and controllers in accordance with ICAO Doc 4444.

5.5 The Meeting agreed that RASG-PA should continue with its project to promote the consistent use of ATC Spanish phraseology by air traffic controllers and pilots using ICAO standardized phraseology and keep GREPECAS informed through the Secretariat coordination mechanism.

5.6 The Meeting noted RASG-PA implementation of a Runway Safety Team (RST) pilot project, which resulted in the editorial modification of the GREPECAS Aerodromes Programme - *Improvement of Runway Safety Project* objectives and scope to clarify that there is interface between the complementary activities being implemented by GREPECAS and RASG-PA, but that no overlap exists in the activities. The Secretariat will coordinate between RASG-PA and GREPECAS projects to ensure continued synergies and avoidance of duplication.

5.7 The Meeting was informed of the ALTA/IATA Bird Strike Reduction Program supported by the United States FAA and USDA, which had been proposed as a project to RASG-PA. The Secretariat identified the need to review the proposed RASG-PA project and coordinate with GREPECAS in relation to the CAR/SAM Regional Committee for Bird/Wildlife Hazard Prevention (CARSAMPAF). No duplication was identified in the planned project activities, and it was concluded that the proposed RASG-PA project and CARSAMPAF are complementary. The Secretariat recommended that IATA/ALTA coordinate with CARSAMPAF as part of the proposed RASG-PA project to ensure wide distribution of project results.

Other Matters

5.8 Under IP/05, the Meeting recalled the importance for States to attend the Twelfth Air Navigation Conference (AN-Conf/12) to be held in Montreal, Canada, from 19 to 30 November 2012, where aviation system block upgrades (ASBUs); roadmaps for the communication, navigation, surveillance and avionics for the Global Air Navigation Plan; and security and environmental issues for air navigation systems will be discussed.

5.9 The Secretariat presented IP/06 on the new ICAO web-based format for all regional ANPs called electronic ANPs (eANPs), which can be updated in real time, edited online, and viewed by all relevant partners. ICAO has also been developing a wider range of safety and air navigation tools with the regional air navigation planner in mind. These ICAO tools will be demonstrated in the exhibition area during AN-Conf/12, and simple one-page training aids will be provided online and will be distributed during the conference.

5.10 IP/07 presented the objectives and outline of the work involved in revising the Global Air Navigation Plan (GANP), reflecting a globally harmonized series of operational upgrades and operational and technical developments. This revised GANP, with incorporated roadmaps, will be presented at the AN-Conf/12.

5.11 The Meeting also noted the ICAO revision to the Global Aviation Safety Plan (GASP), which foresees a pro-active strategy to improve safety through incorporating the latest developments in safety management practices, offering at the same time a multi-disciplinary approach based on risks for the continued enhancement of safety performance.

5.12 Cuba enquired on the mechanism available to the States of the CAR/SAM Regions to discuss and agree on regional positions to be presented at the AN-Conf/12. Neither GREPECAS nor additional PPRC meetings were scheduled in the interim. The Secretary reminded the Meeting that the PPRC meetings could be held as often as required using the appropriate modality for efficiency and effectiveness and subject to budget, making full use of virtual meetings. The ICAO budget limits the PPRC meetings to be convened once a year but virtual meetings could be convened when required. Any State interested in formulating a regional position for ANConf/12 may submit its proposal to ICAO and the Secretariat and the GREPECAS Chairman will convene a PPRC virtual meeting to discuss the proposal.

5.13 In addition, CAR Region States will have an opportunity to formulate sub-regional positions during the annual sub-regional Directors of Civil Aviation meetings and the SAM Region States will have the same opportunity during the Implementation Group meeting.

5.14 The Meeting took note of the national air navigation plan developed by Colombia and the option to access it by the Internet link indicated in NI/04 and invited comments from the international aviation community.



International Civil Aviation Organization

CAR/SAM Regional Planning Implementation Group (GREPECAS)

First Meeting of the Programmes and Projects Review Committee (PPRC/1)

(Mexico City, Mexico, 25 to 27 April 2012)

DRAFT AGENDA, SCHEDULE AND PROPOSED WORKING METHODS

(Prepared by the Secretariat)

SUMMARY

This working paper presents for consideration and approval of the Meeting a Draft Agenda, schedule and working method of the PPRC/1 Meeting.

1. **Approval of the Agenda and its explanatory notes**

1.1 The Agenda and its explanatory notes, proposed for consideration and approval by the Meeting, are presented in **Appendix A**.

2. **Organization and working schedule**

2.1 Taking into consideration this working paper, as well as administrative aspects, it is suggested that the Meeting carry out its work in plenary sessions. However, working groups can be established if considered necessary by the Chairperson. **Appendix B** presents a tentative work programme.

3. **Suggested action**

3.1 The Meeting is invited to:

- a) consider and approve the Agenda presented in Appendix A; and
- b) consider and approve the organization and working programme proposed in Appendix B.

APPENDIX A

**FIRST MEETING OF THE PROGRAMMES AND PROJECTS REVIEW COMMITTEE
(PPRC/1)**

DRAFT AGENDA

(Mexico City, Mexico, 25 to 27 April 2012)

Agenda Item 1: Follow-up of the results of GREPECAS/16 Meeting

- 1.1 Review of the actions adopted by the ANC regarding GREPECAS/16 Meeting and the status of implementation the of GREPECAS/16 Conclusions and Decisions
- 1.2 Review of the status of implementation of the Conclusions and Decisions in force previous to GREPECAS/16

Agenda Item 2: Air navigation deficiencies in the CAR/SAM Regions with high risk (“U” priority)

Agenda Item 3: Review of the GREPECAS Programmes and Projects

- 3.1 Projects of the PBN Programme
- 3.2 Projects of the ATFM Programme
- 3.3 Projects of the Automation and ATM Situational Awareness Programme
- 3.4 Projects of the Ground-ground and Air-ground Telecommunications Infrastructure Programme
- 3.5 Projects of the SAR Programme
- 3.6 Projects of the AGA Programme
- 3.7 Projects of the AIM Programme
- 3.8 Projects of the MET Programme

Agenda Item 4: Items related with the Organization of GREPECAS

- 4.1 Review of the GREPECAS Procedural Handbook
- 4.2 Review of Terms of Reference and Work Programmes of the Programmes and Projects Review Committee
- 4.3 GREPECAS Annual Report

Agenda Item 5: Other business

EXPLANATORY NOTES OF THE AGENDA FOR PPRC/1 MEETING

Agenda Item 1: Follow-up of the results of GREPECAS/16 Meeting

1.1 Review of the actions adopted by the ANC regarding GREPECAS/16 Meeting and the status of implementation the GREPECAS/16 Conclusions and Decisions

Under this agenda item, the Meeting will take note of the actions taken by the ANC upon reviewing the GREPECAS/16 report (AN WP 8578, 188th Session of the ANC dated 13-9-2011) and the implementation of GREPECAS/16 Conclusions and Decisions taking the appropriate measures on this respect.

1.2 Review of the status of implementation of the Conclusions and Decisions in force previous to GREPECAS/16

Under this agenda item, the Meeting will inform the status of Conclusions and Decisions in force previous to GREPECAS/16.

Agenda Item 2: Air navigation deficiencies in the CAR/SAM Regions with high risk (“U” priority)

The Meeting will review the current situation of the deficiencies related with the implementation of air navigation high risk deficiencies in the CAR/SAM Regions. Likewise, the Meeting will carry out a follow-up on the application on the new methodology for the identification, evaluation and reporting of the air navigation deficiencies approved by GREPECAS/16 (Conclusion 16/43).

Agenda Item 3: Review of the GREPECAS Programmes and Projects

- 3.1 Projects of the PBN Programme**
- 3.2 Projects of the ATFM Programme**
- 3.3 Projects of the Automation and ATM Situational Awareness Programme**
- 3.4 Projects of the Ground-ground and Air-ground Telecommunications Infrastructure Programme**
- 3.5 Projects of the SAR Programme**
- 3.6 Projects of the AGA Programme**
- 3.7 Projects of the AIM Programme**
- 3.8 Projects of the MET Programme**

The Meeting will review and approve the planning, progress and project implementation for each of the programmes of the new organization of GREPECAS, adopted through Decision 16/45, in order to ensure their alignment with GREPECAS Terms of Reference, with ICAO strategic objectives and global plan.

- A3 -

Agenda Item 4: Items related with the Organization of GREPECAS

- 4.1 Review of the GREPECAS Procedural Handbook**
- 4.2 Review of Terms of Reference and Work Programmes of the Programmes and Projects Review Committee**
- 4.3 GREPECAS Annual Report**

The Meeting will review the changes made to the GREPECAS Procedural Handbook as a result of the comments received by some States of the CAR/SAM Regions, as well as the inclusion of the new methodology for the identification of deficiencies. Likewise, as a result of the analysis of programmes and projects regarding Agenda Item 3, the Meeting will proceed to update the working programme of the Programmes and Projects Review Committee and to elaborate the GREPECAS Annual Report.

Agenda Item 5: Other business

Under this agenda item, the Meeting will examine any other issue that may not be addressed under the preceding agenda items.

SESSIONS SUGGESTED

TIME	WEDNESDAY 25	TIME	THURSDAY 26	TIME	FRIDAY 27
08:30 09:00 09:15 09:30 10:30	Registration of participants Opening of the Meeting Adoption of draft Agenda, schedule and working method Agenda Item 1: Follow-up of the results of GREPECAS/16 Meeting 1.1 Review of the actions adopted by the ANC regarding GREPECAS/16 Meeting and the status of implementation of the GREPECAS/16 Conclusions and Decisions 1.2 Review of the status of implementation of the Conclusions and Decisions in force previous to GREPECAS/16	09:00 10:30	Agenda Item 3: Review of the GREPECAS Programmes and Projects (Cont.) 3.6 Projects of the AGA Programme 3.7 Projects of the AIM Programme 3.8 Projects of the MET Programme	09:30 10:30	Distribution and lecture of preliminary report
10:30 11:00	<i>Coffee break</i>	10:30 11:00	<i>Coffee break</i>	10:30 11:00	<i>Coffee break</i>
11:00 12:30	Agenda Item 2: Air navigation deficiencies in the CAR/SAM Regions with high risk ("U" priority) Agenda Item 3: Review of the GREPECAS Programmes and Projects 3.1 Projects of the PBN Programme 3.2 Projects of the ATFM Programme	11:00 12:30	Agenda Item 4: Items related with the Organization of GREPECAS 4.1 Review of the GREPECAS Procedural 4.2 Review of Terms of Reference and Work Programmes of the Programmes and Projects Review Committee 4.3 GREPECAS Annual Report Handbook	11:00 12:30 12:30 12:45	Review and approval of preliminary report Closing
12:30 13:00	<i>Coffee break</i>	12:30 13:00	<i>Coffee break</i>		
13:00 14:30	Agenda Item 3: Review of the GREPECAS Programmes and Projects (Cont.) 3.3 Projects of the Automation and ATM Situational Awareness Programme 3.4 Projects of the Ground-ground and Air-ground Telecommunications Infrastructure Programme 3.5 Projects of the SAR Programme	13:00 14:30	Agenda Item 5: Other business		



Agenda Item 1: Follow-up of the results of GREPECAS/16 Meeting

1.1 Review of the actions adopted by the ANC regarding GREPECAS/16 Meeting and the status of implementation the GREPECAS/16 Conclusions and Decisions

(Presented by the Secretariat)

SUMMARY	
This paper presents the actions adopted by the Air Navigation Commission with regard to the report of the sixteenth meeting of GREPECAS, as well as the status of implementation of GREPECAS/16 Conclusions and Decisions.	
REFERENCES	
GREPECAS/16 report (Punta Cana, Dominican Republic, 28 march to 1 April 2011); and AN-WP/8578 (Montreal, Canada, 27 September 2011).	
ICAO Strategic Objectives:	<i>A - Safety</i> <i>C - Environmental Protection and Sustainable Development of Air Transport</i>

1. Introduction

1.1 Following each GREPECAS meeting, the report is first reviewed by the working group of the Air Navigation Commission (ANC) followed by the ANC itself and finally by the Council. During these reviews, the ANC and the Council note the report, make comments thereon and provide guidance to GREPECAS as appropriate. Furthermore, the ANC and the Council may take specific action on certain conclusions contained therein, since the follow-up to some conclusions may require approval by the ANC or the Council. Follow-up actions by the ICAO Secretariat on conclusions and decisions of GREPECAS are then guided by the outcome of the ANC and the Council actions described above.

1.2 This working paper informs PPRC/1 of the results of the Commission on the report of the GREPECAS/16 Meeting, which was held in Punta Cana, Dominican Republic, from 28 March to 1 April 2011. **Appendix A** to this working paper presents the executive summary of the outcome of the GREPECAS/15 Meeting. The analysis of the conclusions and decisions is at **Appendix B**. Action by the Commission on selected conclusions and decisions are outlined in the **Appendix C**, which has been formatted to link the conclusions with the Strategic Objectives of the Organization.

2. **Action by the ANC on the GREPECAS/16 report**

2.1 The Commission referred the GREPECAS/16 Report to its working group for Strategic Review and Planning (WG/SRP). The review was carried out on 21 June 2011 following which the Commission itself reviewed the GREPECAS/16 Report on 27 September 2011. In the case of the GREPECAS/16 Report, as there were no specific items that required Council action, the said report was not submitted to the Council. The following are highlights of the review by the Commission.

2.1.1 **Follow-up on the results of the GREPECAS/15 meeting (Agenda Item 1)**

Safety assessment methodology

2.1.1.1 Referring to paragraph 1.1.2 and associated paragraph 3.5.20 regarding the RVSM safety assessment methodology, the WG/SRP agreed with the need for ICAO to study the use of qualitative as well as quantitative methods, such as those used in safety management systems (SMS), when assessing operational errors. The WG/SRP agreed that these matters should be referred to the Separation and Airspace Safety Panel (SASP).

2.1.2 **Flight safety and RASG-PA activities (Agenda Item 2)**

Coordination between GREPECAS and RASG-PA

2.1.2.1 With reference to Decision 16/3, the WG/SRP noted that the Secretariat will develop a coordination mechanism to avoid duplication of efforts between GREPECAS and RASG-PA, as well as a procedure for both groups when they refer actions to each other. The WG/SRP agreed that the Secretariat should ensure this coordination between both groups and to provide the necessary support.

2.1.3 **Performance framework for regional air navigation planning and implementation (Agenda Item 3)**

Best practices to prevent runway incursions and excursions

2.1.3.1 The WG/SRP noted the request from GREPECAS that States submit a report on best practices to prevent runway incursions/excursions at airports and requested the Secretariat to make available these reports (Conclusion 16/23 refers).

Harmonization of taxiway designation

2.1.3.2 The WG/SRP supported the request of GREPECAS to ICAO for the development of provisions and guidelines on the harmonization of taxiway designation to reduce operator confusion and to minimize runway incursions. The WG/SRP confirmed the request calling upon the Secretariat to include this matter in the work programme of the Aerodromes Panel. (Conclusion 16/24 refers). This work item has since been referred to the Aerodromes Panel.

Development of training programmes in technical English for AIS/MAP personnel

2.1.3.3 While discussing Conclusion 16/29, the WG/SRP agreed that these training programmes should be developed, not only for AIS/MAP, but for all personnel if appropriate to their job.

CAR/SAM ATFM Manual

2.1.3.4 The WG/SRP complimented GREPECAS for the adoption of the CAR/SAM ATFM Manual to harmonize the implementation of ATFM in CAR/SAM regions. This guidance material has been used as the basis for development of ICAO Global ATFM guidance material. (Conclusion 16/35 refers).

2.1.4 Air navigation deficiencies in the CAR/SAM (Agenda Item 4)

2.1.4.1 The WG/SRP commended the work by GREPECAS in proposing a revised methodology for identification, assessment and reporting of air navigation deficiencies. The WG/SRP noted that GREPECAS will be making trials of the revised methodology and decisions on this matter should wait for the results of these trials. The Secretariat advised that a revised methodology for air navigation deficiencies will be prepared on which all PIRGs will be consulted. The revised methodology will then be presented via the corresponding mechanism of approval. The WG/SRP called upon the Secretariat to ensure that any revised methodology to identify, assess and report air navigation deficiencies should be applied uniformly by all PIRGs and regions. The Secretariat was also requested to verify other proposals presented previously by other PIRGs (e.g. APANPIRG) to identify any differences from the GREPECAS proposal (Conclusion 16/43 refers).

2.1.5 Management of the GREPECAS mechanism (Agenda Item 5)

2.1.5.1 The WG/SRP complimented GREPECAS for the work done to implement a new GREPECAS organization for the implementation of CAR/SAM performance-based regional plans in compliance with the Global Air Navigation Plan and Global ATM Operation Concept. The WG/SRP acknowledged the revised GREPECAS terms of reference that included coordination between GREPECAS and RASG-PA (Decisions 16/45, 16/46, 16/48 and 16/49 refers).

2.1.6 Other business (Agenda Item 6)

Role of civil aviation during natural disasters:

2.1.6.1 In reference to paragraph 6.4 of the report, the WG/SRP noted and agreed with the request of GREPECAS that, due to the large variety of natural disasters and the role of aviation to support humanitarian aid operations, it is necessary that ICAO review and amend the material related to Annex 11 to allow States to develop and coordinate immediate response plans during natural disasters in a timely manner.

2.1.7 General matters related to the report

2.1.7.1 The ANC noted that the absence of attachments in some conclusions and to link the content of these conclusions to other reports of contributory bodies of GREPECAS made difficult and cumbersome to review their content. An effective way of gathering all information related to conclusions/decisions of these planning and implementation regional group (PIRG) meetings, should be incorporated in the corresponding part of the report to facilitate its review by the Commission.

3. **Action suggested**

3.1 The Meeting is invited to:

- a) note the actions taken by the Air Navigation Commission on the GREPECAS/16 Report, as outlined in this working paper and, in particular to Appendix C hereto; and
- b) include the follow-up actions in the work programme of GREPECAS.

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APPENDIX A

OUTCOME OF THE SIXTEENTH MEETING OF THE CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS/16)

(Punta Cana, Dominican Republic, 28 March to 1 April 2011)

EXECUTIVE SUMMARY

- 1- The meeting was attended by 82 participants from 22 Member States, one non-Member State and observers from nine international organizations.
- 2- As a follow-up on ANC comments on Conclusion 15/37, GREPECAS agreed that there is a need for ICAO to study the safety assessment methodology using qualitative methods and that operational errors should be assessed using safety management systems (SMS).
- 3- RASG-PA presented an update of its activities to GREPECAS. The Secretariat was requested to develop a coordination mechanism to avoid duplication of efforts between GREPECAS and RASG-PA.
- 4- GREPECAS encouraged States to develop runway safety programmes to prevent and mitigate runway-related accidents and serious incidents.
- 5- Measures will be taken in the CAR/SAM Regions to migrate from International Satellite Communication System (ISCS)-G2 to WAFS Internet File Server (WIFS).
- 6- ICAO was requested to consider development and provision of guidelines to harmonize taxiway designations to reduce operators' confusion and to minimize runway incursions.
- 7- Approved revisions to the *Manual for the Implementation of Quality Management System* and the application of guidance for the implementation of a GIS system in AIM, both toward the transition from AIS to AIM in CAR/SAM Regions.
- 8- A regional ATFM manual was approved to harmonize the implementation of ATFM in the CAR/SAM Regions.
- 9- A strategy for the implementation of Amendment 1 to the *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444) for the new flight plan format (FPL 2012) was adopted.
- 10- GREPECAS approved the documents *CAR/SAM Strategy for the Evolution of Air Navigation Systems* to support the implementation of performance-based navigation (PBN), the *Surveillance Strategy for the CAR/SAM Regions* and *CAR/SAM Regional Guidance Material on Search and Rescue Services Quality Assurance Programmes*.
- 11- States were urged to use IPv4 routing scheme for inter- and intra-regional communications links in ATN ground-to-ground applications, activities related to ADS-B trials and GNSS training.
- 12- Adoption of a performance monitoring and measurement programme for the CAR/SAM Regions.

- 13- A proposal for a revised methodology for the identification, assessment and reporting of air navigation deficiencies was approved by GREPECAS for ICAO consideration. In the interim, GREPECAS is testing the revised methodology and will notify the Commission of the results.
- 14- A new GREPECAS structure and organization was proposed to increase effectiveness, enhance efficiency, reduce cost and align the group with contemporary ICAO strategic objectives, programmes, projects, activities and tasks methodology. Although the proposal was approved in principle, written ratification by the member States is still pending.

Post meeting note: The new structure and organization of GREPECAS was approved by Member States by correspondence on 11 June 2011.

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APPENDIX B***SIXTEENTH MEETING OF THE CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS/16)*****CONCLUSIONS and DECISIONS AN ANALYSIS**

1. The GREPECAS/16 Meeting developed a total of forty-nine outputs, comprising forty three conclusions and six decisions. These forty-nine outputs reflect two levels of actions. The first level (forty-five outputs), known as –implementations plans, calls for action by ICAO Headquarters, the Regional Office, States, territories, international organizations and GREPECAS itself and features in activities that support the implementation of air navigation systems. The second level (four outputs: Conclusions 16/8, 16/24, 16/31 and 16/43), known as –implementation gaps, calls for action specifically by Headquarters and features activities involving further development of requisite provisions and/or guidance material.
 2. Out of forty-nine outputs, thirty items and two paragraphs (1.1.2 and 6.4) have been suggested for specific review by the ANC and are detailed in the Action Plan in Appendix C hereto. For ease of reference associated outputs (conclusions, decisions and paragraphs) if any, are also shown in the Action Plan. The selection criteria for the thirty outputs and two paragraphs reflect inter alia, key regional implementation issues, calls for interregional harmonization, references to ICAO global programmes or requests for specific action by ICAO Headquarters.
 3. With regard to the conclusions and decisions of the meeting which are not reflected in the Action Plan, follow-up action will be taken by the Secretary General in accordance with established practice. Each entry in the Action Plan is linked to the Strategic Objectives of the Organization.
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APPENDIX C

SELECT CONCLUSIONS/DECISIONS OF GREPECAS/16

— ACTION PLAN —

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
Paragraph 1.1.2 + associated paragraph 3.5.20 A	Safety assessment methodology	The Meeting agreed that there is a need for ICAO to study the safety assessment methodology using qualitative methods, and that operational errors should be assessed using safety management systems (SMS).	ICAO HQ CAR/SAM States/ territories	Study on safety assessment methodology using qualitative methods. Assessment of operational errors using SMS.	Agreed with the need for ICAO to study the use of qualitative as well as quantitative methods such as those used in safety management systems (SMS). It was also agreed that these matters should be referred to SASP.	December 2013 December 2012
D 16/3 A	Coordination between GREPECAS and RASG-PA	That the Secretariat develop, for consideration by GREPECAS: a) a coordination mechanism to avoid duplication of efforts between GREPECAS and RASG-PA; and b) a procedure whereby one group may propose actions to the other group.	GREPECAS Secretary/ ICAO Mexico Office	Coordination mechanism Procedure	Noted and called upon the Secretariat to ensure coordination between both groups.	January 2012 January 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/4 A, C	Support for the completion of project RLA/03/902 SACCSEA studies and participation in the test-bed implementation	In view of the first results obtained by the SACCSEA Project – Phase III-A and its contribution to the implementation of PBN, and in order to support the completion of this Project, CAR/SAM States/territories/international organizations are urged to: a) facilitate/coordinate with their corresponding national authorities access and provision of data to the SACCSEA Project from networks with 1-second GPS receiving stations with FTP or NTRIP access and RINEX files; and b) take into consideration the objectives indicated in Appendix B to Agenda Item 2 of the report of the CNS/ATM/SG/2 Meeting, consider participation in the SACCSEA-SBAS test-bed implementation by notifying ICAO Regional Offices by 30 June 2011.	CAR/SAM States/territories/international organizations	Access and provision of data to SACCSEA project. Participation in SACCSEA-SBAS test-bed implementation	Noted.	January 2012 30 June 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/5 A	CNS/ATM fields training programme for the competency of aeronautical professionals for the CAR/SAM Regions	That to train aeronautical professionals with regard to necessary competencies, CAR/SAM States/territories/ international organizations:	CAR/SAM States/territories/ international organizations	Follow-up results of NGAP Symposium and Task Force	Noted.	30 September 2011
		a) follow-up and take into consideration the recommendations of the Symposium on Next Generation Aeronautical Professionals (NGAP) and the results of the NGAP Task Force;		Training programme		30 September 2011
		b) in coordination with the ICAO regional offices, establish a training programme that responds to the performance objectives identified in the CAR and SAM Regions performance-based implementation plans for the 2012-2016 period; and c) inform the ICAO regional offices on the progress made in the development of this programme, by 30 September 2011.		Inform on progress		30 September 2011
C 16/6 + associated C 16/7 C	Migration from ISCS-G2 to WIFS	That, taking into consideration the proposed migration from ISCS-G2 to WIFS, ICAO encourage States to take appropriate measures to obtain access using the WIFS to the WAFS products provided by WAFC Washington.	CAR/SAM States/territories/ international organizations	Migration to WIFS	Noted.	March 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/8 C	WIFS User Guide	That: a) the WAFC Washington Provider State be invited to consider the possibility of providing the WIFS User Guide also in Spanish; and b) if the request in paragraph a) is not possible, ICAO take the necessary action for the translation of the referred guide.	ICAO HQ ICAO Regional Offices Lima and Mexico	WIFS User Guide in Spanish	Noted.	December 2012
C 16/9 A	Guide on the international airways volcano watch (IAVW)	That the Secretariat develop regional guidance in Spanish to explain the contents of Doc 9766, <i>Handbook on the International Airways Volcano Watch (IAVW) – Operational Procedures and Contact List</i> .	ICAO Regional Offices Lima and Mexico	Regional guidance in Spanish	Noted.	December 2011
C 16/12 C	Back-up MWOs in the CAR/SAM States	That: a) in order to comply with paragraph 14 of ANP Basic, Part VI – MET, if a MWO is temporarily not functioning another could assume its obligations; the back-up list included as Appendix B to WP/08 to this part of the report should be taken into account; b) the Secretariat make the necessary updates to CAR/SAM Regional SIGMET Guide	CAR/SAM States/territories / international organizations ICAO Regional offices Lima and Mexico	Assume temporarily MWO obligations Update CAR/SAM Regional SIGMET Guide.	Noted.	December 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/15 C	CAR/SAM guide for OPMET exchange	That in order to enable the application of ICAO procedures for OPMET information exchange, the States use the CAR/SAM Guide for OPMET Exchange included in Appendix C to WP/08 to this part of the report.	CAR/SAM States/territories/ international organizations	Application of procedures for OPMET information exchange.	Noted.	July 2011
C 16/18 C	CAR/SAM MET regional performance objectives	That the CAR/SAM MET Regional Performance Objectives and associated performance framework forms as contained in Appendix E to WP/8 of this meeting are adopted.	CAR/SAM States/territories/ international organizations	CAR/SAM MET Regional Performance Objectives	Noted.	December 2011
C 16/19 C	ATM/MET seminar/workshop	That in order to develop a list of possible MET requirements in support of ATM for the CAR/SAM Regions, ICAO, in coordination with WMO, conduct a seminar/workshop for the CAR/SAM Regions.	ICAO Regional Offices Lima and Mexico	ICAO/WMO seminar/workshop	Noted and invited the Secretary General to request support for the organization of the seminar/workshop from WMO.	December 2012
C 16/22 A	Workshops on State safety programme and safety management system (SSP and SMS) courses	That the ICAO NACC and SAM Regional Offices organize workshops on the implementation of the SSP by States and SMS for aerodrome operators during 2010.	ICAO Regional Offices Lima and Mexico	SSP and SMS workshops	Noted.	December 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/23 A	Best practices to prevent runway incursions and runway excursions	That States submit to NACC and SAM Regional Offices: a) a report on best practices used to prevent runway incursions/ excursions at airports; b) that this report be submitted no later than 30 March 2010.	CAR/SAM States/territories/ international organizations	Report on best practices to prevent runway incursions/excursions at airports.	Noted the request made by GREPECAS to States and called upon the Secretariat to obtain a copy of these reports.	Completed
C 16/24 A	Harmonization of taxiway designation	That ICAO consider the development and provision of guidelines on the harmonization of taxiway designation in order to reduce operator confusion and to minimize runway incursions.	ICAO HQ	Guidelines on the harmonization of taxiway designation	Supported the development and provision of guidelines by ICAO and requested the Secretariat to include this matter in the work programme of the Aerodromes Panel.	December 2013
C 16/25 C	Plan for the implementation of principles on human factors for AIM	That States/territories/international organizations, in support of GREPECAS Conclusion 15/30 — <i>Guide for the application of principles on human factors in AIS/MAP</i> II, adopt the — <i>Plan for the implementation of principles on human factors for AIM</i> II.	CAR/SAM States/territories/ international organizations	Adoption of plan of principles on human factors for AIM	Noted.	December 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/26 C	Approval of updates to the guidance manual for the implementation of a quality management system oriented to the aeronautical information management (AIM)	That States/territories/international organizations, approve the revisions to the Guidance Manual for the Implementation of a Quality Management System considering the transition from AIS to the Aeronautical Information Management (AIM).	CAR/SAM States/territories/ international organizations	Revisions to guidance manual for implementation of a quality management system	Noted.	January 2012
C 16/29 C	Reference for the development of training programmes in technical English language for AIS/MAP personnel in CAR/SAM States	That CAR/SAM States, territories and international organizations consider Doc 9835 AN/453 – <i>Manual on the Implementation of ICAO Language Proficiency Requirements</i> , as a reference when formulating their training programmes in the English language, adapting it as necessary based on the performance requirements for AIS personnel, in support to the ATM Operational Global Plan.	CAR/SAM States/territories/ international organizations	Training programmes in the English language for AIS personnel	While discussing Conclusion 16/29, the WG/SRP agreed that these training programmes should be developed, not only for AIS/MAP, but for all personnel if appropriate to their job.	December 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/30 C	Roadmap for the transition from AIS to AIM	That CAR/SAM States and territories: a) consider the guidelines, steps and timeline for the Transition from AIS to AIM presented in the –Roadmap for the transition from AIS to AIM; b) inform the corresponding ICAO Regional Office progress and/or difficulties on the implementation of SARPs associated to the implementation guide, not later than 5 May 2010; c) develop the corresponding AIM air navigation regional plans with the related PFFs and with the Regional Plans as a reference, according to GREPECAS conclusion 15/1 in its paragraphs a) and b), and in the AIM Roadmap; and d) inform to the ICAO CAR/SAM Regional Offices on the progress of the implementation requested in the above paragraph, no later than 29 October 2010.	CAR/SAM States/territories/ international organizations	Transition from AIS to AIM Implementation of SARPs for transition from AIS to AIM AIM air navigation regional plans with related PFFs Report progress of implementation	Noted.	January 2012 December 2011 January 2012 December 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/31 C	Availability of documentation in Spanish	That the need to give priority, to the extent possible, to translating into Spanish the texts that are available only in English and that are of crucial importance for complying with ICAO SARPs, be proposed to ICAO with a view to achieving the AIS-AIM transition.	ICAO HQ	Text in Spanish of guidance material for AIS-AIM transition	Noted.	December 2012
C 16/32 C	General guidance for the implementation of a GIS system in AIM	GREPECAS approves as vital importance to support ICAO SARPs, the application of the General Guidance for the Implementation of a GIS System in AIM, towards achieving the transition from AIS to AIM in the States, Territories and International Organizations of the CAR/SAM Regions.	CAR/SAM States/territories/ international organizations	Apply general guidance for implementation of a GIS system in AIM	Noted.	December 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/33 A, C	Adoption of performance monitoring and measurement programme for the CAR/SAM regions	Considering the importance to monitor and measure the achievement of the performance objectives defined for the CAR/SAM Regions, that States, Territories and International Organizations of CAR/SAM Regions: a) adopt the set of metrics related to key performance areas of access, capacity, cost effectiveness, efficiency, environment, flexibility, predictability and safety; described in Appendix A of this part of the report, to monitor and measure the implementation advances of the regional performance objectives; b) incorporate these metrics into their performance monitoring programmes, collect relevant data and submit to the ICAO Lima and Mexico regional offices on a regular basis; c) coordinate with ATM community members to promote information and data collection; and d) inform ICAO Regional Offices of their advances by 30 November 2010.	CAR/SAM States/territories/ international organizations	Adoption of a performance monitoring and measurement programme	Noted.	Completed

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/35 A&C	Adoption of the CAR/SAM ATFM Manual	That considering the importance to harmonize the implementation of ATFM in the CAR/SAM Regions, the States, territories and international organizations of the CAR/SAM Regions adopt the ATFM Manual shown in Appendix A to the report of the CNS/ATM/SG/1 Meeting.	CAR/SAM States/territories/ international organizations	Adopt CAR/SAM ATFM Manual	Noted and complimented GREPECAS for the adoption of the CAR/SAM ATFM Manual to harmonize the implementation of ATFM in CAR/SAM regions.	Completed
C 16/37 C	Proposed routing scheme for IPv4 for inter and intra regional communications links for ATN ground to ground	That the CAR/SAM Regions use the IPv4 routing scheme for inter and intra regional communications links in ATN ground to ground applications for described in Appendix E to the report of the CNS/ATM/SG/1 Meeting.	CAR/SAM States/territories/ international organizations	Use of the IPv4 routing scheme for CAR/SAM inter- and intra-regional communications links	Noted.	Completed

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/38 C	Improvements to the activities referred in ADS-B trials	That States/territories/international organizations who are carrying out ADS-B trials are urged to: a) continue with the data collection and analysis, in accordance with GREPECAS guidelines (GREPECAS/15 Report, Appendix Q); b) search for the Exchange of data between States, particularly with regard to coverage superposition and analysis criteria; c) solve, with the respective airspace users, the duplicate or illegal 24-bit Address cases identified, and inform in this respect to the ICAO Regional Offices; d) inform airspace users on any anomaly in the received ADS-B messages, in preparation of future ADS-B implementation; and e) duly inform the ICAO Regional Offices on the trial results, for their publication.	CAR/SAM States/territories/ international organizations	Improvement in activities related to ADS-B trials	Noted.	December 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/39 A, C	Implementation of the new flight plan format in the CAR/SAM Regions	That considering the importance of the implementation of Amendment 1 to the fifteenth edition of Doc 4444, whose application is foreseen for 2012, CAR/SAM States/territories/international organizations: a) adopt the strategy for the implementation of Amendment 1 to Doc 4444 (PANS-ATM) (15 th edition) shown in Appendix J to the report of the CNS/ATM/SG/1 Meeting; b) develop action plans, taking into account the regional strategy and the action plan based in a performance scope, which includes as Appendix J to this working paper, for the harmonious implementation of the new ICAO flight plan format and the ATS messages related; c) designate experts who participate as points of contact to coordinate with other air navigation services providers of States/territories/international organizations from adjacent flight information regions (FIRs), implementation matters of ATS messages related with the implementation of the new ICAO flight plan format (FPL); and	CAR/SAM States/territories/ international organizations	Implementation of the new flight plan format	Noted.	November 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/39 cont'd A, C	Implementation of the new flight plan format in the CAR/SAM Regions	d) send the result of this implementation to the ICAO NACC and SAM Regional Offices, not later than 30 November 2011.				
C 16/40 + associated C 16/41 C	Training for aeronautical professional competence	That CAR/SAM States/territories and international organizations, take into consideration the list of short and mid-term training requirements shown in Appendix D to the report of the CNS/ATM/SG/1 Meeting, so that CATCs, in coordination with civil that CAR/SAM States/territories and international organizations, aviation authorities, prepare aeronautical training programmes which contemplate regional air navigation and safety requirements.	CAR/SAM States/territories/ international organizations	Aeronautical training programmes taking into consideration regional requirements.	Noted.	December 2011
C 16/42 A	Resolution of air navigation deficiencies	That States/territories having difficulty in resolving priority –U air navigation deficiencies request ICAO assistance to prepare action plans and coordinate support for resolving deficiencies if required.	CAR/SAM States/territories/ international organizations	Assistance for preparation of action plans to resolve deficiencies	Noted.	December 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/43 A	Revised methodology for the identification, assessment and reporting of air navigation deficiencies	That: a) ICAO consider the proposed revised methodology for the identification, assessment and reporting of air navigation deficiencies presented in Appendix A to this part of the report; and b) in the interim, GREPECAS adopt the revised methodology as a test-bed and notify the ANC of the results.	ICAO HQ GREPECAS Secretary	Proposed revised methodology for identification, assessment and reporting of air navigation deficiencies	Commended the work by GREPECAS proposing a revised methodology for identification, assessment and reporting of air navigation deficiencies. Any decision in this matter should wait for the results of the trials. The Secretariat is called upon to ensure that any revised methodology to identify, assess and report of air navigation deficiencies should be applied uniformly by all PIRGs and regions and to verify other proposals presented by other PIRGs.	

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
C 16/44 A	Review of existing air navigation deficiencies	That: a) the revised methodology be applied to existing deficiencies contained in the GANDD within a reasonable time period but no later than 31 March 2012; b) ICAO review and improve the GANDD in order to update information on deficiencies in a timely manner; and c) ICAO review the procedures established by GREPECAS for the validation and elimination of the deficiencies contained in the GANDD.	Lima and Mexico Regional Offices Lima and Mexico Regional Offices Lima and Mexico Regional Offices	Application of revised methodology in the GANDD Improved GANDD Procedures for validation and elimination of deficiencies	Noted.	31 March 2012 30 June 2011 30 June 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
D 16/45 + associated D 16/48 and C 16/49 A	New GREPECAS organization	That in order to implement CAR/SAM performance-based regional plans in compliance with the Global Air Navigation Plan and Global ATM Operational Concept:	GREPECAS Secretary	New GREPECAS organization	Noted and complimented GREPECAS for the work done to implement a new GREPECAS organization.	30 September 2011
		a) the GREPECAS organization be modified as described in Appendix A to this part of the report; and b) the Secretariat circulate a letter to States/Territories, accompanied by an explanatory note and the revised GREPECAS Procedural Handbook, requesting ratification of the new GREPECAS organization and inviting suggestions for further refinement within 30 days, including reference to non-response being taken as acceptance without comment.	Lima and Mexico Regional Offices	Letter with explanatory note and revised GREPECAS Procedural Handbook		30 June 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Recommended to ANC	Reporting/ Completion date
D 16/46 A	Revised GREPECAS terms of reference	The revised GREPECAS terms of reference, which incorporate the ICAO Council requirement to coordinate with RASG-PA are presented in Appendix B to this part of the report.	GREPECAS Secretary	Revised terms of reference	Noted and complimented GREPECAS for the agreement to revise the terms of reference that included coordination between GREPECAS and RASG-PA.	30 June 2011
Paragraph 6.4 A	Role of civil aviation during natural disasters	The Meeting recognized that due to the large variety of natural events and their consequences, as well as the role of aviation to support humanitarian aid operations, it is also necessary that ICAO review and amend the material related to Annex 11 so that States may develop and coordinate the immediate response plans during natural disasters in a timely manner.	ICAO HQ	Amendment to Annex 11	Noted and agreed with the request of GREPECAS related to the role of aviation to support humanitarian aid operations and called upon the Secretariat to review and amend the material related to Annex 11.	November 2012

*The Council agreed to three Strategic Objectives for the triennium 2011- 2013 as follows (C-DEC 188/13 refers):

Strategic Objective A: *Safety*

Strategic Objective B: *Security*

Strategic Objective C: *Environmental Protection and Sustainable Development of Air Transport*

— END —



International Civil Aviation Organization

CAR/SAM Regional Planning and Implementation Group (GREPECAS)

First Meeting of the Programmes and Projects Review Committee (PPRC/1)

Mexico City, Mexico, 25-27 April 2012

PPRC/1 - WP/03

17/04/12

Agenda Item 2: Air navigation deficiencies in the CAR/SAM Regions with high risk (“U” priority)

MANAGEMENT OF AIR NAVIGATION DEFICIENCIES IN THE CAR/SAM REGION WITH HIGH RISK (“U” PRIORITY)

(Presented by the Secretariat)

SUMMARY

This working paper presents the action taken by the GREPECAS Secretariat through the NACC and SAM Regional Offices as a follow-up to GREPECAS/16 conclusions related “U” priority air navigation deficiencies in CAR/SAM States/Territories, as well as the results of the application of the new revised methodology based on a hazard identification and risk assessment (HIRA) process.

REFERENCES

- Report of the meeting of the GREPECAS Aviation Safety Board (ASB/10) Punta Cana, Dominican Republic, 28 March 2011
- Report of the Sixteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/16), Punta Cana, Dominican Republic, 28 March-1 April 2011
- GREPECAS Air Navigation Deficiencies Database (GANDD)

ICAO strategic objectives:

*A – Safety
C- Environmental protection and sustainable development of air transport*

1. Background

1.1 The Air Navigation Commission (ANC) is responsible for updating the uniform methodology for the identification, assessment, and reporting of air navigation deficiencies in light of the experience gained in its application. The last revision of this methodology, based on the opinions of the ALLPIRG/Advisory Group, was done in 2001, at which time the Commission developed a single definition for deficiency that was approved by the Council on 30 November 2001.

1.2 The last meeting of the GREPECAS Aviation Safety Board (ASB/10) held in Punta Cana, Dominican Republic, on 28 March 2011 analysed the shortcomings of this methodology and noted that, since many “U” priority deficiencies had not been resolved, aircraft operators were applying risk management techniques to proceed with their operations in a safe manner. At its sixteenth meeting, GREPECAS approved its new organisation, and ASB functions were taken over by the Programmes and Projects Review Committee (PPRC).

1.3 GREPECAS/16, through Conclusion 16/42, established that States/Territories having difficulty in resolving priority “U” air navigation deficiencies should request ICAO assistance to prepare action plans and coordinate support for resolving deficiencies, if required.

1.4 Likewise, through Conclusion 16/43, GREPECAS approved the use of a revised methodology as a test bed, the results of which should be notified to the ICAO ANC. This new revised methodology for the identification, assessment and reporting of air navigation deficiencies is based on the assumption that deficiencies are safety hazards, and on the application of a hazard identification and risk assessment (HIRA) process.

1.5 GREPECAS/16 reviewed the list of “U” deficiencies that required urgent corrective action by CAR/SAM States/Territories in each air navigation area. Some States noted that the GREPECAS Air Navigation Deficiencies Database (GANDD) contained deficiencies that had already been corrected, as well as others that probably should not be considered as such.

1.6 Regarding the above, GREPECAS, through Conclusion 16/44, agreed that:

- a) the revised methodology should be applied to existing deficiencies contained in the GANDD within a reasonable time period but no later than 31 March 2012.
- b) ICAO should review and improve the GANDD in order to enable the update of deficiencies information in a more timely manner; and
- c) ICAO should review the procedures for the validation and elimination of the deficiencies contained in the GANDD by 30 June 2011.

2. Discussion

2.1 As a follow-up to GREPECAS Conclusions 16/42, 16/43, and 16/44, the GREPECAS Secretariat sent, through the SAM and NACC Regional Offices, State letters inviting States to analyse deficiencies using the new approved methodology as a test bed prior approval by the ANC for such use.

2.2 Since GREPECAS/16 Meeting, in the CAR Region the information on deficiencies for Aruba, Bahamas, Barbados, Belize, Costa Rica Cuba, Dominican Republic, Guatemala, Haiti, Jamaica, Mexico, Trinidad & Tobago and United States, has been updated in the GANDD based on reports sent by States and on ICAO missions to States. **Appendix A** to this working paper shows a summary of the 45 “U” priority deficiencies and its proportion by areas for the CAR Region. As noted in the GREPECAS meeting, the majority (60%) of “U” deficiencies correspond to the area of Aerodromes (AGA), followed by those of Air Traffic Management (ATM) and Communications, Navigation and Surveillance (CNS) with 18% per area. Nevertheless, in the CAR Region only Cuba presented a report to ICAO using the revised methodology adopted by GREPECAS/16 Meeting.

2.3 In the SAM Region, Argentina and Peru have done some implementation exercises in collaboration with the regional officers of the corresponding areas. Colombia conducted an implementation exercise with guidance via teleconference. Nevertheless, the SAM Regional Office has not received the analysis of the forms used for conducting the hazard identification and risk assessment (HIRA) process on “U” deficiencies, with the exception of Brazil, which submitted the HIRA analysis of “U” deficiencies in the AIS/ATM/CNS/MET areas on 16 April 2012.

2.4 Likewise, some SAM States submitted information on the progress made in the resolution of some deficiencies, some of which were validated by the Officers of the corresponding areas by updating

the GANDD. A comparison between the December 2010 database and the March 2012 database with respect to “U” deficiencies is shown in **Appendix B** to this working paper, showing 30% progress in their resolution.

2.5 Some States have started timidly to apply this new methodology, but the number of States is not sufficient to consider it as a stabilised methodology, and not all exercises have been conducted as expected.

2.6 In order to help stabilise this application, the following actions may be considered, *inter alia*:

- a) hold a meeting/workshop to address air navigation deficiencies using the new methodology, directed to focal points of those States in both Regions where exercises can be conducted, and study the best way to implement it, establishing milestones for the resolution of deficiencies;
- b) invite States to form a specialised multidisciplinary committee to apply the HIRA methodology to deficiencies. Such committee could be located within the SMS office of each administration, and have a defined timetable; and
- c) continue striving to improve the use of the revised methodology for a more timely and efficient updating of information on deficiencies.

2.7 The GREPECAS/16 meeting took note that the lack of response by a State to a deficiency identified and presented by the respective Regional Office was proof of ineffective implementation that might increase the level of risk in a State/Territory and create the need for an ICAO audit under the new ICAO USOAP continuous monitoring approach (CMA).

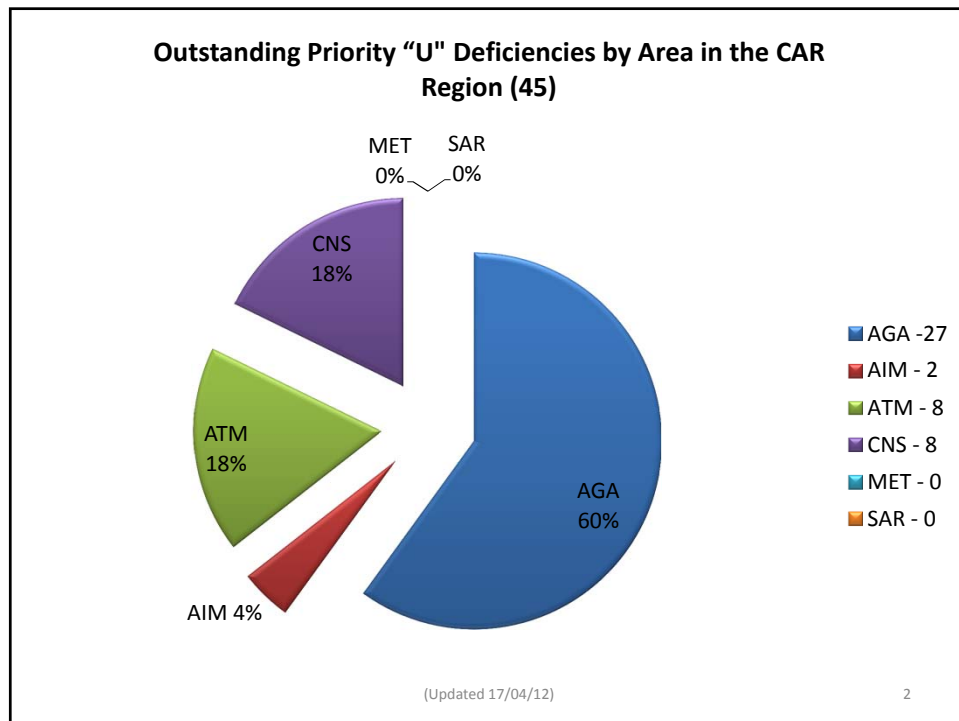
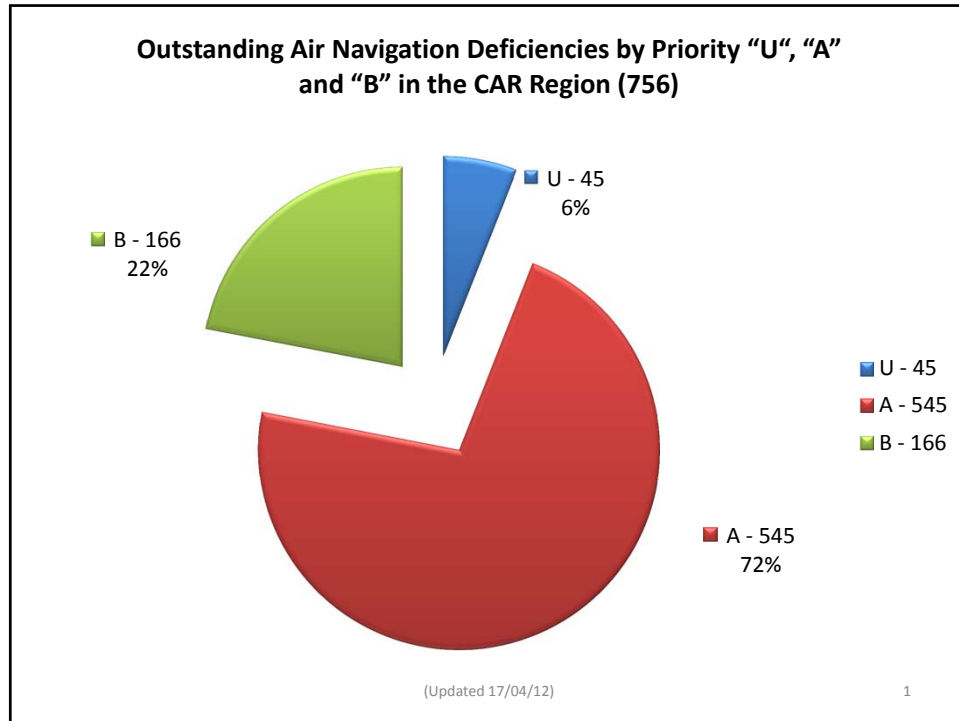
2.8 In this regard, it should be recalled that the future programme of activities of the Continuous Monitoring Office (CMO) of ICAO Headquarters contemplates deficiencies as a source of information and control for continuous monitoring management by ICAO.

3. Suggested action

3.1 The Meeting is invited to:

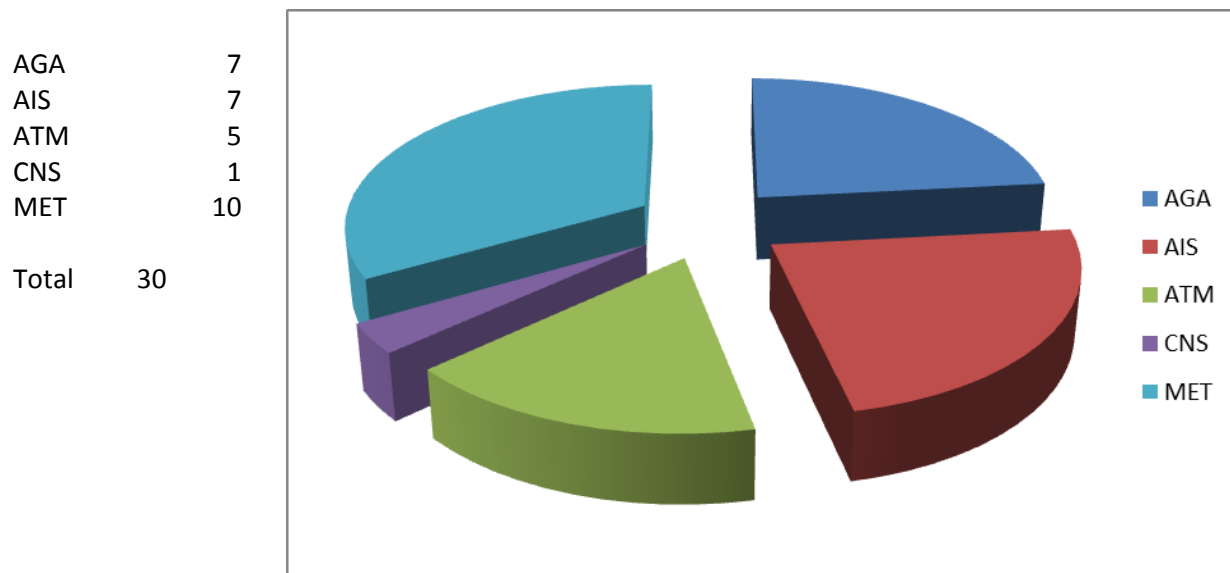
- a) take note of the information contained in **Appendices A and B** to this working paper;
- b) review the actions proposed in paragraph 2.6 of this working paper with a view to stabilising the use of the revised methodology by CAR/SAM States/Territories for the elimination/mitigation of “U” deficiencies through the application of corrective actions; and
- c) analyse other considerations that it may deem necessary in relation to this matter.

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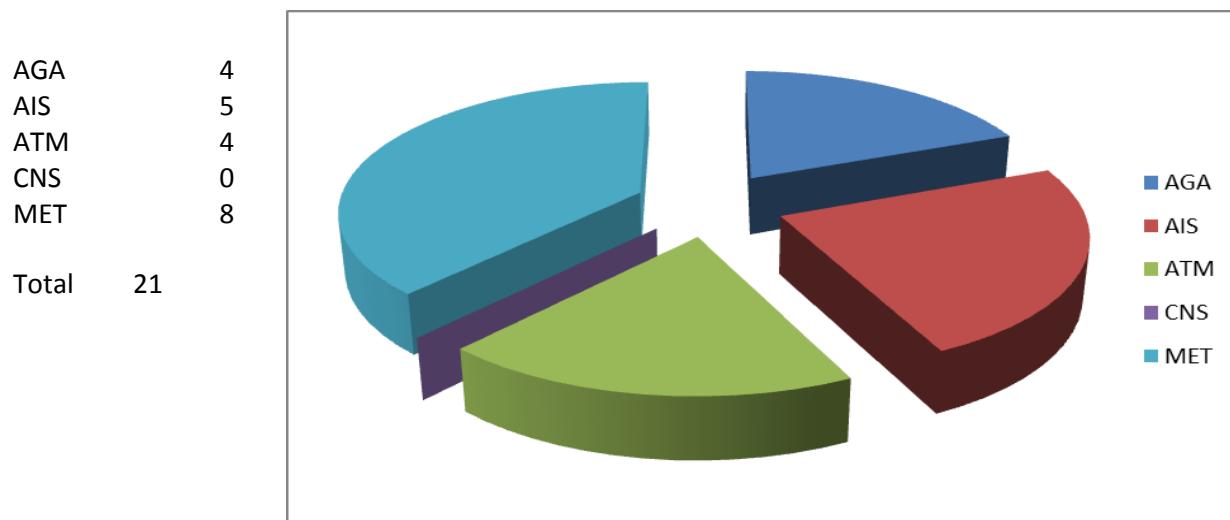


Reduction of “U” Deficiencies between December 2010 and March 2012 in the SAM Region

Status of “U” Deficiencies in December 2010 – SAM Region



Status of “U” Deficiencies in April 2012 -SAM Region



Reduction of “U” Deficiencies = 30%



Agenda Item 3: Review of GREPECAS programmes and projects

FOLLOW-UP OF ACTIVITIES OF THE PROJECTS UNDER THE PBN PROGRAMME

(Presented by the Secretariat)

SUMMARY	
This working paper presents a report of implementation activities related to the projects under the PBN programme for the CAR and SAM Regions.	
References: <ul style="list-style-type: none">• ICAO Doc 9859, PBN Manual• CAR/SAM ANP, Doc 8733• GREPECAS 16 Meeting Report• SAM ANIP/PB• PBN Implementation Programme	
ICAO Strategic Objectives	<i>This working paper is related to the following strategic objectives: A – Safety C – Environmental protection and sustainable development of air transport.</i>

1. Background

1.1 The GREPECAS/16 meeting, with a view to implementing regional performance-based plans in the CAR/SAM Regions pursuant to the Global Air Navigation Plan and the Global ATM Operational Concept, agreed to modify of GREPECAS organisation, whereby the AERMET, AGA/AOP, AIM, and CNS/ATM Subgroups and their respective task forces were eliminated and their work programmes and terms of reference transformed into programmes and projects. Accordingly, it formulated Decisions 16/45 and 16/47.

1.2 In compliance with GREPECAS Decision 15/34 and to ensure better ATM and CNS coordination and the development of CAR/SAM performance-based plans for the implementation of the ATM global concept, the CNS/ATM Subgroup had already organised its work programme in nine projects distributed in four programmes. The “*Performance-Based Navigation (PBN)*” programme has the following projects:

- a) PBN operational implementation; and
- b) Air navigation systems in support of PBN.

2. Discussion

2.1 Currently, the States, Territories, and International Organisations are conducting PBN implementation activities at airports and airspaces in accordance with the regional performance-based air navigation implementation plans in the respective CAR and SAM Regions.

2.2 Project A1, which deals with PBN operational implementation, involves not only PBN implementation but also the optimisation of the upper airspace route network with a view to establishing new RNAV routes or realigning the existing RNAV routes, by replacing or eliminating conventional routes whose paths match or are similar to proposed RNAV routes or that are not being used by users. The large scope of this programme requires a high level of commitment by all stakeholders, whether commercial, military, general aviation, service providers, or aeronautical authorities.

3. Discussion

Achievements and obstacles to PBN implementation in the CAR Region

3.1 In Project A2, related to air navigation systems in support of PBN, there are still SBAS implementation feasibility studies pending in the medium term, as well as the development of practical guides for the implementation of the SBAS system, and guidance on the use and availability of GNSS validation tools.

Achievements and obstacles to PBN implementation in the SAM Region

3.2 PBN operational implementation in the SAM Region involves the Airspace Optimisation Programme for the reorganisation of ATS route network. Following the implementation of **Phase 2**, Version 1 of the ATS route network, in March 2011, significant results were obtained in terms of fuel efficiency. Based on a predictive calculation done together with IATA in a period corresponding to 13 AIRAC cycles, with a price of **US\$ 1.06** per gallon of fuel, savings exceed **US\$ 7'600,000** and the environmental benefits resulting from reduced contaminating emissions amount to more than **22'600,000 k of CO2**.

3.3 Likewise, with respect to **Phase 1** of the SAM ATS route network optimisation programme, RNAV5 was implemented satisfactorily on RNAV routes in continental airspace on **20 October 2011**, without causing any problem. This will permit continued implementation of the route network optimisation programme through the execution of **Phase 3 of Version 2** of the SAM ATS route network optimisation programme, a phase that has already started.

3.4 During the implementation of Version 1 of the ATS route network and of RNAV5, the capacity of the aircraft fleet and air traffic services was analysed to verify the impact of both implementations on the airspace. In each case, the respective risk analysis was conducted using the methodology proposed in safety management systems (SMS).

3.5 Furthermore, the second workshop/seminar on safety monitoring of the system post-implementation of Version 1 of the SAM ATS route network was conducted, where participating States analysed some of the difficulties faced during the implementation process and which could have potentially affected safety during RNAV5 implementation.

3.6 It should be noted that a DME/DME coverage study has been conducted in the SAM Region to know the percentage of coverage offered by these systems in case of failure of the satellite-based navigation system.

3.7 As we have seen, the SAM Region has already started Phase 3 of the SAM ATS route network optimisation programme and the ATSRO/3 meeting (July 2011) recognised the convenience of collecting new statistical data in order to analyse the evolution of air traffic demand in the region. In fact, the detailed study of the SAM ATS route network in this phase might not reflect the results expected, since some States have not yet submitted the statistical data collected.

3.8 Accordingly, note should be taken of the importance of Regional Project RLA/06/901, *Assistance for the implementation of a regional ATM system taking into account the ATM operational concept and the corresponding CNS technology support*, in assistance activities to regular programmes and to the development of the global air navigation plan initiatives.

Plan of activities of the PBN Operational Implementation Project

3.9 Appendices A and B to this working paper show PBN (RNAV/RNP) implementation activities in the CAR and SAM Regions, respectively, taking into account the terms of reference and programme structure approved by GREPECAS.

4. Suggested action

4.1 The Meeting is invited to:

- a) take note of the information presented in this working paper;
- b) review and consider the projects listed in Appendices A and B; and
- c) suggest other actions it may deem appropriate.

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APPENDIX A1

PROJECT ON THE IMPLEMENTATION OF PERFORMANCE-BASED NAVIGATION (PBN)

CAR Region	PROJECT DESCRIPTION (DP)	DP N° A1	
Programme	Title of the Project	Start	End
<i>Performance-base navigation (PBN)</i> (Programme coordinator: Victor Hernandez)	<i>Performance-Based Navigation (PBN)</i> Project coordinator: Alfredo Mondragón (COCESNA)	2008	2014
Objective	Support the implementation of the project on ATS route structure optimisation in terminal airspace (SID/STAR RNAV) and en-route (RNAV), as well as the implementation of RNP approaches based on the regional performance objectives of the NAM/CAR Performance-based implementation plan (NAM/CAR RPBANIP)		
Scope	Gradual implementation of PBN in accordance with the goals established in Assembly Resolution A 37-11 and the CAR PBN Airspace Concept.		
Metrics	<ul style="list-style-type: none"> • Percentage of instrument runway ends with an approach procedure with vertical guidance (APV), (BARO-VNAV and/or augmented GNSS) either as the primary approach or as a back-up for precision approaches; • Percentage of international aerodromes that have implemented SID/STAR RNAV, RNP and continuous descent and climb operations (CDO/CCO) • Estimated fuel saved with operational improvements • Percentage of runway ends with instruments for vertical guidance approach procedure (APV), (BARO-VNAV and/or GNSS augmentation), either as primary approach or in support of precision approaches • Percentage of international airports with SID/STAR RNAV, RNP and continuous descent and climb operations (CDO/CCO) implemented • Estimated fuel savings as a result of operational improvements 		

Strategy	<p>Activities will be coordinated amongst project members, the project coordinator, and the programme coordinator. The programme and project coordinators will coordinate the requirements of other projects and NAM/CAR implementation working groups. States will draft their respective national route and approach procedure implementation programmes in accordance with the CAR PBN Airspace Concept. Experts nominated by the States, Territories, and International Organisations will be assigned to tasks as required.</p>
Rationale	<p>The Assembly Resolution A37-11, performance-based navigation (PBN) global goals, urged States to implement RNAV and RNP ATS routes and approach procedures in accordance with the ICAO Performance-based Navigation (PBN) Manual, Doc 9613, and requested the PIRGs to include in their work programme the review of status of implementation of PBN by States according to the defined implementation plans and report annually to ICAO any deficiencies that may occur.</p> <p>In addition, NAM/CAR States adopted a regional performance framework on the basis of the regional performance objectives (RPO) of the performance based air navigation implementation plan (RPB-ANIP) for NAM/CAR Regions and the Global ATM Operational Concept. The performance framework includes the implementation of a set of performance common metrics to facilitate comparative analysis of overall regional development, such as operational and economic cost-effectiveness of gate-to-gate flight operations, and the protection of the environment in the planning, implementation and operation processes of the global ATM system.</p>
Related projects	<ul style="list-style-type: none">• Improvement of demand-capacity balancing• Flexible use of airspace• Improvement of ATM situational awareness• Implementation of the new ICAO flight plan format

Project Deliverables	Relationship with the NAM/CAR RPB-ANIP	Responsible Party	Status of Implementation*	Date of Delivery	Comments
PBN Airspace Concept	RPOs 1, 2, 3	Alfredo Mondragón		2014	A comprehensive PBN airspace concept was developed for the design and implementation of a trunk route network to/from city pairs in the upper and lower airspace
Optimize the ATS route structure based on RNAV-5 implementation in the upper continental airspace	RPOs 1.1	States, Territories, International Organisations		2012	Some States have already implemented RNAV 5 in the upper airspace
Implement SIDs/STARS, CDO and CCO in terminal areas based on RNAV/1-2 and RNP1 navigation specifications	RPOs 1.2	States, Territories, International Organisations		2012	-165 SIDs implemented -126 STARS implemented -Some States have implemented CDO/CCO
Design and implement PBN APV (BARO-VNAV) approach procedures in accordance with Assembly Resolution A37-11	RPOs 1.3	States, Territories, International Organisations		2014	118 RNP approach procedures implemented
Study for the implementation of a comprehensive PBN airspace concept for the lower and upper airspace in the Central American FIR	RPOs 1, 2, 3	Alfredo Mondragón		2012	COCESNA coordinates with Central American States

PBN training programme for pilots, ATCOs, operators and regulators	RPOs 1	States, Territories, International Organisations		2012	Some States conduct their training programme in accordance with the ICAO PBN Manual, Doc 9613
Evaluate and implement ATC automated system requirements in accordance with the new ICAO Flight Plan Form requirements	RPOs 1, 3, 4, 5	States, Territories, International Organisations		15/11/2012	
Draft a proposal of amendment to the ATS route network for the implementation of RNP 10 in the oceanic area of the Gulf of Mexico, and for the implementation of RNAV 5 in continental areas	RPOs 1.1	Alfredo Mondragón, Roy Grimes		2012	Draft version of 22 RNAV routes to be implemented/realigned. Develop proposal of PBN amendment to the relevant regional documentation.
Develop a PBN Safety Assessment Programme based on the SMS methodology	RPOs 1	States, Territories, International Organisations		2010	States conduct safety assessment to implement changes in their airspace.
Implementation of random routes in defined oceanic airspace	RPOs 1.1, 3	Trinidad and Tobago		2014	Piarco implemented random routes in the oceanic airspace of the Piarco FIR
Develop a performance measurement programme	RPOs 1, 3	ICAO		2010	Implementation results were presented at NACC/DCA meetings
Monitor system performance	RPOs 1, 2, and 3	ICAO		2010	The ICAO NACC Regional Office conducts this activity
Resources needed	CAR regional project with the participation of States in support of PBN training matters.				

Grey Task not started yet
 Green Activity being implemented as scheduled
 Yellow Activity started with some delay, but expected to be implemented on time
 Red Activity not implemented on time; mitigation measures are required

APPENDIX A2

PROJECT ON AIR NAVIGATION SYSTEMS IN SUPPORT OF PBN

<i>CAR Region</i>	PROJECT DESCRIPTION (DP)	DP N° A2	
<i>Programme</i>	Title of the Project	Start	End
<i>Performance-based performance (PBN)</i> (Programme coordinator: Victor Hernandez)	<i>Air Navigation Systems in Support of PBN</i> Project coordinator: Jose Antonio Pérez y Pérez (Dominican Republic)	2009	2016
Objective	Support the implementation of GNSS navigation infrastructure for PBN based on the regional performance objectives of the NAM/CAR performance-based implementation plan (NAM/CAR RPBANIP)		
Scope	Drafting of guides and proposals for GNSS evolution and implementation in support of PBN implementation and benefits.		
Metrics	<ul style="list-style-type: none"> • Percentage of instrument runway ends with an approach procedure with vertical guidance (APV), (BARO-VNAV and/or augmented GNSS) either as the primary approach or as a back-up for precision approaches; • Percentage of international aerodromes with implanted SID/STAR RNAV, RNP and continuous descent and climb operations (CDO/CCO) • Estimated fuel saved with operational improvements • Percentage of instrument runway ends with vertical guidance approach procedure (APV), (BARO-VNAV and/or GNSS augmentation), whether as primary approach or as support to precision approaches • Percentage of international airports with SID/STAR RNAV, RNP and continuous descent and climb (CDO/CCO) operations implemented • Estimated fuel savings due to operational improvements 		

Strategy	<p>Project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator. The programme and project coordinators will coordinate the requirements of other projects and NAM/CAR implementation working groups. Experts nominated by the States, Territories, and International Organisations will be assigned to tasks as required.</p>
Rationale	<p>The Assembly Resolution A37-11, performance-based navigation (PBN) global goals, urged States to implement RNAV and RNP ATS routes and approach procedures in accordance with the ICAO Performance-based Navigation (PBN) Manual, Doc 9613, and requested the PIRGs to include in their work programme the review of status of implementation of PBN by States according to the defined implementation plans and report annually to ICAO any deficiencies that may occur.</p> <p>In addition, NAM/CAR States adopted a regional performance framework on the basis of the regional performance objectives (RPO) of the performance based air navigation implementation plan (RPB-ANIP) for NAM/CAR Regions and the Global ATM Operational Concept. The performance framework includes the implementation of a set of performance common metrics to facilitate comparative analysis of overall regional development, such as operational and economic cost-effectiveness of gate-to-gate flight operations, and the protection of the environment in the planning, implementation and operation processes of the global ATM system.</p>
Related projects	<ul style="list-style-type: none">• Improvement of demand-capacity balancing• Improvement of ATM situational awareness• Implementation of the new ICAO flight plan format• Optimisation and modernisation of the communications infrastructure

Project Deliverables	Relationship with the NAM/CAR RPB-ANIP	Responsible Party	Status of Implementation*	Date of Delivery	Comments
Analyse DME/DME and GNSS infrastructure and coverage required to support PBN implementation	RPOs 1	States, Territories, International Organisations		2012	Current DME infrastructure supports PBN approach procedure requirements. Table CNS 4: revised and updated with the current regional conventional nav aids infrastructure.
Regional feasibility study of SBAS (WAAS/SACCSA) implementation.	RPOs 1	Jose Antonio Pérez y Pérez assisted by SACCSA and WAAS		2012	Feasibility of regional application, technical aspects, operational benefits, associated costs of SBAS (WAAS/SACCSA) implementation. Implications for airborne equipment (factory delivered and retrofits) and other relevant aspects.
Practical guide for the implementation of GBAS systems	RPOs 1	Jose Antonio Pérez y Pérez assisted by SACCSA and WAAS		2014	
Guidance on the use and availability of GNSS prediction/validation tools	RPOs 1	Jose Antonio Pérez y Pérez assisted by SACCSA and WAAS		2014	
Enhance communication, navigation, and surveillance infrastructure in accordance with PBN /GNSS requirements	RPOs 1, 4, 5, 8, 9	States, Territories, International Organisations		2015	

Monitor system performance	RPOs 1	ICAO		2010	ICAO NACC Regional Office conducts this activity
Resources needed	CAR regional project with the participation of States to support PBN training issues				

Grey Task not started yet
 Green Activity being implemented as scheduled
 Yellow Activity started with some delay, but expected to be implemented on time
 Red Activity not implemented on time; mitigation measures are required

END

APPENDIX B1

PROJECT ON PBN OPERATIONAL IMPLEMENTATION

PROJECT DESCRIPTION (DP)		DP N° A1	
<i>Programme</i>	Title of the Project	Start	End
<i>Performance-based navigation (PBN)</i> (Programme coordinator: Celso Figueiredo)	PBN Operational Implementation <i>Project coordinator: Alexandre Luiz Dutra Bastos (Brazil)</i> Experts contributing to the project: <i>Jorge Fernandez (ATS consultant), Tomas Yentzch (Paraguay)</i>	2011	2018+
Objective	Support the implementation of the project on the optimisation of the ATS route structure in terminal airspace (RNAV SIDs/STARs) and en-route (RNAV), as well as the implementation of RNP approaches, associated to Result 1.1 of Immediate Objective N° 1 of Project RLA/06/901		
Scope	The project contemplates planning in three different phases: Phase 1 – Implementation of RNAV5; Phase 2 – Implementation of Version 1 of the SAM ATS route network, and Phase 3 – Implementation of Version 2 of the SAM ATS route network		
Metrics	<ul style="list-style-type: none"> • Reduction in the number of air traffic incidents for every 100,000 operations per year • Increase of ATC sector capacity • Reduction of CO² emissions per 100,000 operations per year • Percentage of international airports with RNAV and/or RNP SIDs/STARs implemented where applicable • Percentage of international airports with continuous descent and climb operations implemented • Number of air traffic incidents per 100,000 operations per year • Tonnes of CO² emissions per 100,000 operations per year • Reduction of aviation noise 		

Strategy	<p>Project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through SAM/IG meetings. The project coordinator will coordinate with the programme coordinator for the inclusion of additional experts in accordance with the tasks and work to be carried out. States must also review their respective national RNAV route implementation programmes to ensure compatibility with the SAM RNAV implementation programme. Route revision, implementation, modification, or elimination activities are foreseen in the SAM Region in order to continue with the optimisation of the ATS route structure.</p>
Rationale	<p>The 36th ICAO General Assembly requested the Council to encourage Contracting States to improve air traffic efficiency, which will result in emission savings, to report developments in this field, and to expedite the development and implementation of routings and procedures that will enable an efficient consumption of fuel in order to reduce aviation emissions.</p>
Related projects	<ul style="list-style-type: none">• Flexible use of airspace• Improvement of demand-capacity balancing• Implementation of the new ICAO flight plan format• Automation

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation *	Date of Delivery	Comments
Implementation of Version 1 of the ATS route network based on RNAV, with the required PBN values to respond to the current requirements of airspace users.	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		October 2013	The hiring of 2 experts for a period of 3 weeks during the second half of February 2012 has been foreseen to conduct a detailed study of the SAM ATS route network with a view to developing Version 2 of the route network.
Implementation of RNAV5 in the SAM Region	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		October 2011	-
Action plan for the implementation of Version 2 of the ATS route network optimisation programme	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		ATS/RO/3	-
Guidance material for the implementation of the flexible use of airspace concept	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		ATS/RO/4	A new collection of statistical data was deemed advisable to enable the analysis of the evolution of air traffic demand in the Region.
Route implementation and/or realignment proposals based on the FUA	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		SAM/IG/7	95% of the SAM fleet is eligible for RNAV5 approval. States must continue doing efforts to complete the database (Conclusion SAM/IG/4-3)

Traffic data to understand airspace traffic flows	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		SAM/IG/6	-
Navigation capacity of the fleet	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		SAM/IG/9	Information on RNAV5 approval is being sent to CARSAMMA and it is expected that operators and aircraft will be ready by the implementation date (Oct 2011). The navigation capacity database will be completed as foreseen in the SAM/IG/2 and SAM/IG/4 meeting reports (Conclusion SAM/IG/4-3). Pending updating.
List of gateways of the main SAM TMAs	PFF SAM ATM 02	Alexandre Luiz Dutra Bastos		SAM/IG/9	-
Letters of agreement and contingency with adjacent States	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		SAM/IG/10	-
Detailed study of the SAM ATS route network with a view to developing Version 2 of the route network	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		April 2012	Hiring of 2 experts for a period of 3 weeks. Period defined: 12-30 March

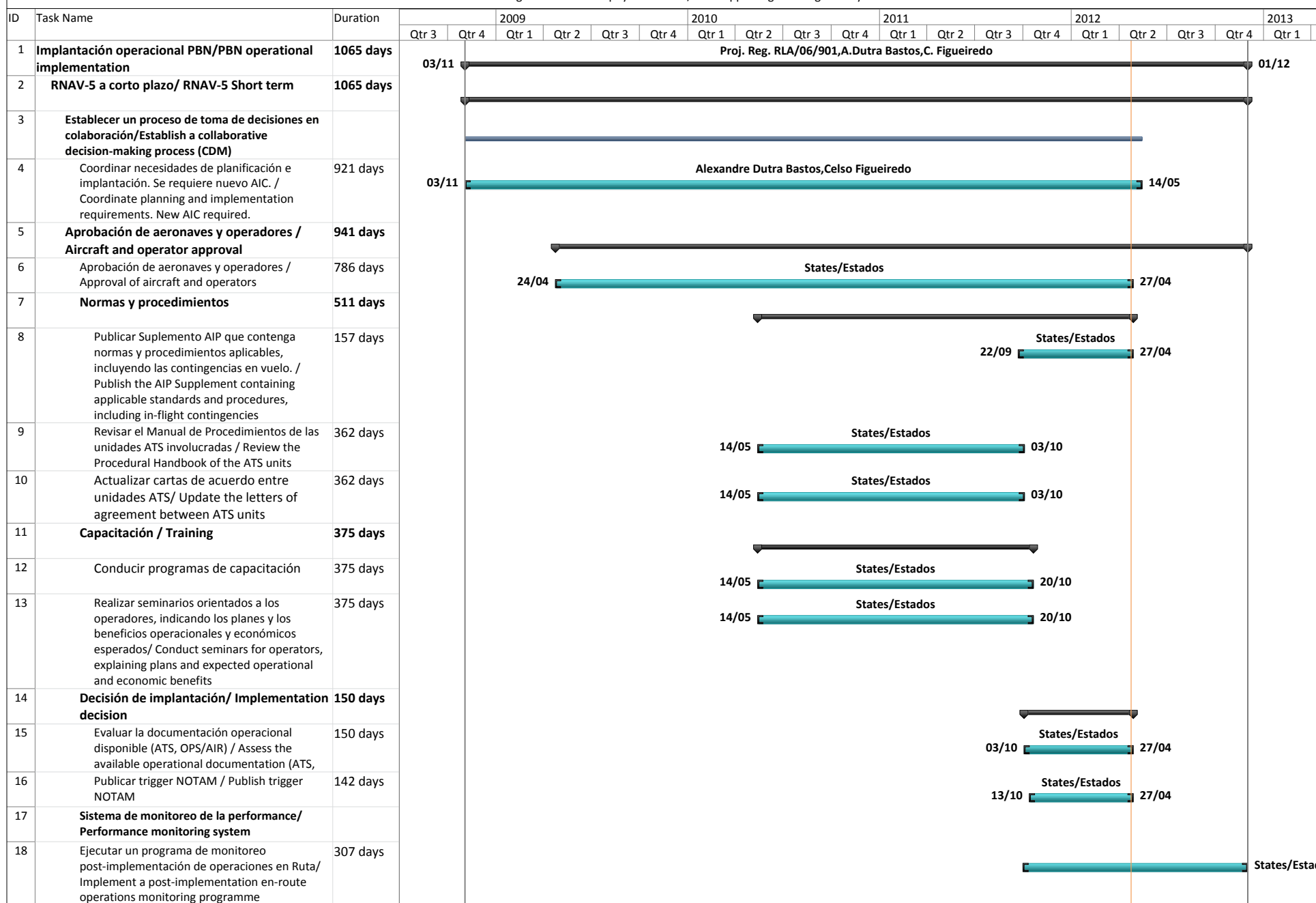
“ <i>Airspace Modelling</i> ” studies and fast-time simulation to assess the scenarios developed in the detailed study of the SAM ATS route network.	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		SAM/IG/10	-
Safety assessment of Version 2 of the SAM ATS route network using a qualitative methodology based on the SMS	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		SAM/IG/10	States shall conduct a safety analysis of changes in its terminal areas (TMA)
Proposal of amendment to the CAR/SAM Air Navigation Plan	PFF SAM ATM 01 PFF SAM ATM 02	Alexandre Luiz Dutra Bastos		August 2013	-
Drafting of Version 3 of the ATS route network, including the application of RNP 4 for oceanic routes, and RNP 2 for continental airspace	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		2015	Regional project supported by States
Implement random routes in defined continental areas	PFF SAM ATM 01	Alexandre Luiz Dutra Bastos		2018+	-
Resources needed	Designation of experts for the execution of some of the deliverables.				

*

Grey	Task not started yet
Green	Activity being implemented as scheduled
Yellow	Activity started with some delay, but expected to be implemented on time
Red	Activity not implemented on time; mitigation measures are required

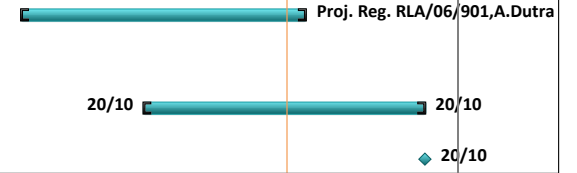
GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP

Sistema de Navegación Aérea en apoyo de la PBN/PBN Supporting air navigation Systems



GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
Sistema de Navegación Aérea en apoyo de la PBN/PBN Supporting air navigation Systems

ID	Task Name	Duration	2009				2010				2011				2012				2013			
			Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
19	Evaluar el porcentaje de operaciones RNAV5 aprobadas (espacio aéreo no excluyente) / Assess percentage of RNAV5 approved operations (non-exclusionary airspace)	266 days																				
20	Fecha de implantación Pre-operacional / Pre-operational implementation date	263 days																				
21	Fecha definitiva implantación / Definitive implementation date	0 days																				



APPENDIX B2

PROJECT ON AIR NAVIGATION SYSTEMS IN SUPPORT OF PBN

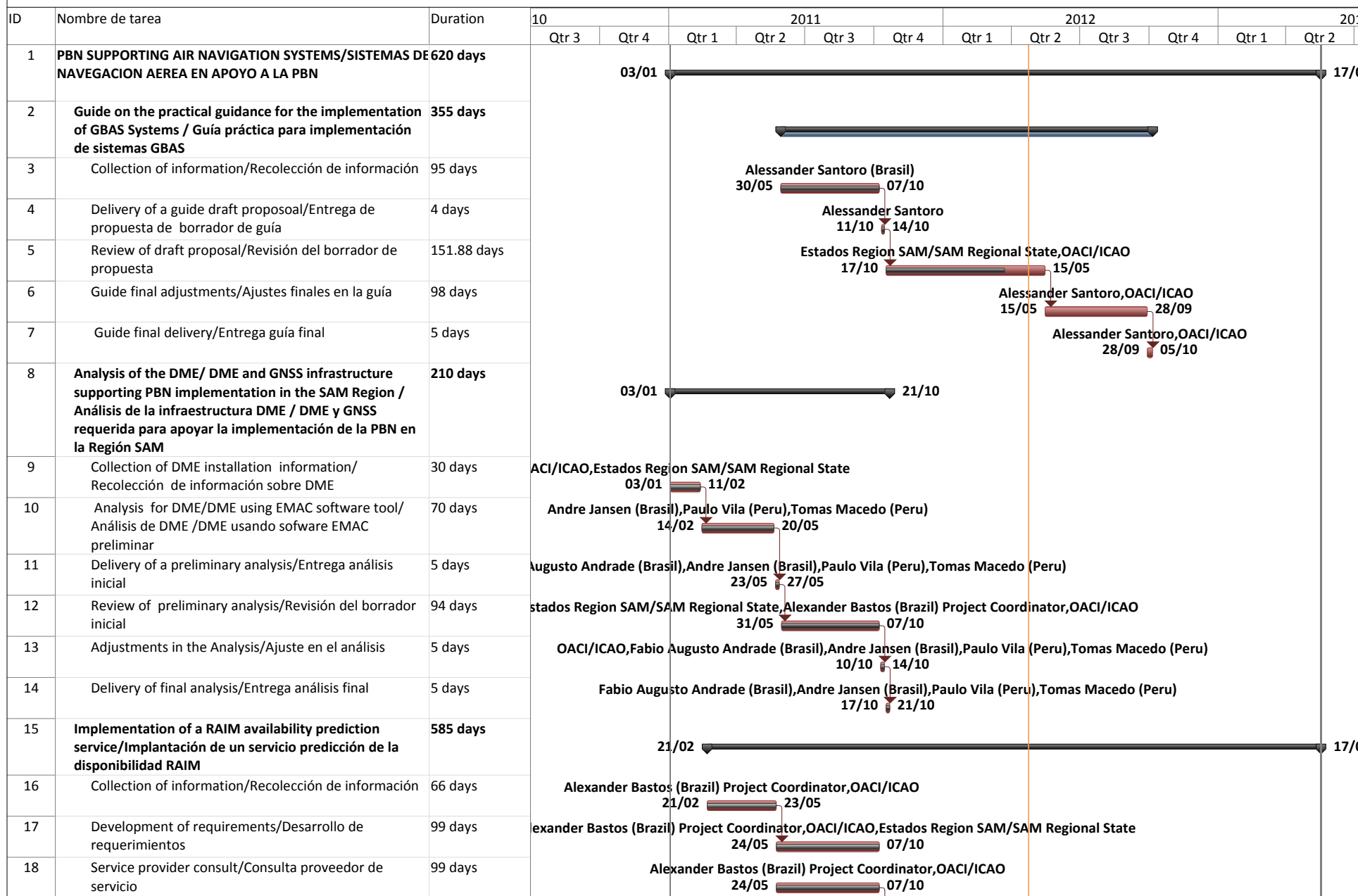
SAM Region	PROJECT DESCRIPTION (DP)	DP N° A2	
Programme	Title of the Project	Start	End
PBN (Programme coordinator: Celso Figueireido)	Air navigation systems in support of PBN <i>Project coordinator: Alexandre Luiz Dutra Bastos (Brazil)</i> Experts contributing to the project: <i>Alessander Santoro, Andre Jansen, Fabio Augusto Andrade (Brazil), Paulo Vila and Tomas Macedo (Peru) and the SAM/IG PBN Group</i>	January 2011	May 2013
Objective	Develop guides, conduct analyses, and implement services in support of PBN implementation in the SAM Region		
Scope	Support to PBN implementation in the SAM Region, which initially involves: <ul style="list-style-type: none"> • Practical GBAS system implementation guide • Analysis of DME/DME and GNSS infrastructure • Implementation of a RAIM availability prediction service 		
Metrics	<ul style="list-style-type: none"> • Drafting of a practical GBAS system implementation guide • DME/DME coverage in the SAM Region • Availability of a RAM availability prediction service 		
Strategy	<ul style="list-style-type: none"> • All tasks will be executed by experts nominated by SAM States and organisations participating in project <i>Air navigation systems in support of PBN</i> under the management of the project coordinator and under the supervision of the programme coordinator. Communications amongst project members, and between the project and programme coordinators shall be done via teleconference and the Internet. Likewise, the programme and project coordinators, as well as the contributing experts can meet during SAM/IG meetings. • Once the studies are completed, the results will be sent to the ICAO programme coordinator in the form of a final consolidated document for analysis, revision and approval of the GREPECAS PPRC. 		
Rationale	<ul style="list-style-type: none"> • The implementation of PBN procedures for approach, terminal, and en-route operations requires the implementation of air navigation systems, services, and infrastructure studies, such as the installation of DMEs to support DME/DME navigation required in case of GNSS failure, the RAIM availability prediction service that will allow the user to know RAIM availability for en-route, terminal, and approach operations, and the implementation of GBAS systems to support precision landing procedures. • This project contributes to the implementation of SAM PFFs CNS 03, ATM 01, ATM 02, and ATM 03 of the <i>SAM Performance-Based Navigation System Implementation Plan (SAM PBIP)</i> 		
Related projects	<ul style="list-style-type: none"> • Implementation of PBN operational aspects 		

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
<i>Develop a practical guide for the implementation of the GBAS system</i>					
Practical guide for the implementation of GBAS systems	SAM PFF CNS 03	Alessander Santoro (Brazil)		October 2012	The initial material for the practical guide on the implementation of GNSS systems was presented at the SAM/IG/8 meeting
<i>Analyse the DME/DME and GNSS infrastructure and coverage required to support PBN implementation</i>					
Analysis of the DME/DME and GNSS infrastructure required to support the implementation of PBN implementation in the SAM Region	SAM PFF CNS 03 SAM PFF ATM/01 ATM/02 ATM/03	Fabio Augusto Andrade and Andre Jansen (Brazil) Paulo Vilas and Tomas Macedo (Peru)		Completed	A <i>DME/DME coverage study</i> was presented to, and reviewed by the SAM/IG/7 meeting (Lima, Peru, 23-27 May 2011). The coverage study was conducted using the EMACS tool and the result was KMZ file showing DME/DME coverage over the geographical map of the SAM Region through Google Earth
<i>Development of guidelines on the use and availability of GNSS service forecast/validation tools</i>					
Implementation of a RAIM availability prediction service	SAM PFF CNS 03 SAM PFF ATM/01 ATM/02 ATM/03	Project coordinator SAM/IG PBN Group		May 2013	An initial study has been conducted on the implementation of a RAIM availability prediction service, which was presented at the SAM/IG/8 meeting (Lima, Peru, 10-14 October 2011)

¹*Grey* – Task not started yet*Green* – Activity being implemented as scheduled*Yellow* – Activity started with some delay, but expected to be implemented on time*Red* – Activity not implemented on time; mitigation measures are required

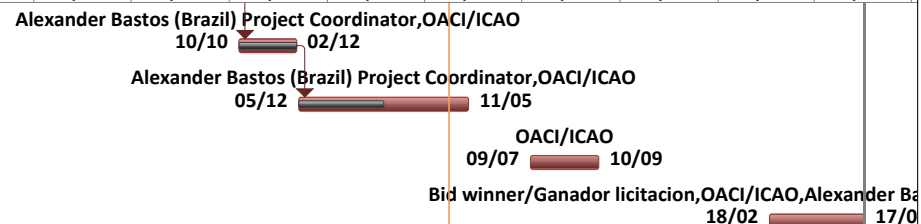
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Monitor activities for the implementation of air navigation systems in support of PBN		ICAO		January 2011 – May 2013	
Resources needed	Implementation of the RAIM availability prediction service				

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION E IMPLANTACION (GREPECAS)
PBN SUPPORTING AIR NAVIGATION SYSTEMS/SISTEMAS DE NAVEGACION AEREA EN APOYO A LA PBN



CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION E IMPLANTACION (GREPECAS)
PBN SUPPORTING AIR NAVIGATION SYSTEMS/SISTEMAS DE NAVEGACION AEREA EN APOYO A LA PBN

ID	Nombre de tarea	Duration	10		2011				2012				2013	
			Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
19	State consult for implementation/Consulta a los Estados para la implantación	40 days												
20	Drafted technical specification/Elaboración especificaciones técnicas	115 days												
21	Bid process/Proceso de licitación	46 days												
22	Implementation/Implantación	65 days												
23	Monitor PBN supporting air navigation systems activities in the SAM Region / Monitorear las actividades de implantación de los sistemas de navegación aérea de apoyo a la PBN en la Región SAM	620 days												
24	Monitor PBN supporting air navigation systems activities in the SAM Region/Monitorear las actividades de implantación de los sistemas de navegación aérea de apoyo a la PBN en la Región SAM	620 days												





International Civil Aviation Organization
CAR/SAM Regional Planning and Implementation Group (GREPECAS)
First Meeting of the Programmes and Projects Review Committee (PPRC/1)
(Mexico City, Mexico, 25-27 April 2012)

Agenda Item 3: Review of GREPECAS Programmes and Projects

3.2 Projects of the ATFM Programme

Follow-up of the Activities of ATFM Programme Projects

(Presented by the Secretariat)

SUMMARY	
<p>This working paper presents the activities for the regional implementation of the “Air traffic flow management” programme and its associated projects, “Improved demand-capacity balancing and Flexible use of airspace” approved at GREPECAS/16.</p>	
REFERENCES	
<ul style="list-style-type: none">• Report of the Fifteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/15), Rio de Janeiro, Brazil, 13-17 October 2008;• Report of the Sixteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/16), Punta Cana, Dominican Republic, 28 March-1 April 2011;• CAR/SAM AFTN Manual	
ICAO strategic objectives:	<i>A – Safety</i> <i>C- Environmental protection and sustainable development of air transport</i>

1. Background

1.1 As a result of the GREPECAS mandate and the experience of the CNS/ATM/SG, the eighth meeting of the ACG endorsed the proposal of a new ICAO organisation, which was presented at the GREPECAS/16 meeting and that involves several significant changes, such as the transformation of all subgroups into programmes and projects.

1.2 Likewise, during the GREPECAS/16 meeting where the existing subgroups were replaced with current projects, the representatives recalled that two projects were related to the ATFM Programme: Improvement of demand-capacity balancing and Flexible use of airspace.

2. Discussion

2.1 Regarding the “Air traffic flow management” Programme, the “Project for improving demand-capacity balancing” takes into account the importance of harmonising ATFM implementation in CAR/SAM States/Territories and International Organisations. In compliance with GREPECAS Decision

16/35, the meeting analysed and approved the CAR/SAM ATFM Manual, agreeing to its adoption by CAR/SAM States/Territories and International Organisations.

2.2 One of the issues identified at the SAM/IG meetings in the SAM Region was the lack of personnel specifically devoted to ATFM activities, and the fact that the persons responsible for managing ATFM in their States were involved in other functions, thus preventing continuity of tasks in this area.

2.3 Therefore, the creation or identification and maintenance of stable working groups to ensure the continuity of activities at national and regional level are deemed advisable.

2.4 Based on the above, one of the solutions found has been the inclusion in Regional Project RLA/06/901 of a Course on Runway and ATC Sector Capacity to be conducted in two phases and to be completed in May 2012, to train instructors in the performance of their activities in ATFM units.

2.5 During that same GREPECAS/16 meeting, it was noted that the “*Flexible use of airspace*” project established that the civil/military coordination philosophy facilitated the planning and conduction of military operations and providing the necessary conditions for mitigating possible adverse effects for civil aviation. The implementation of project activities will be coordinated through the drafting of a regional strategy and work programme for the implementation of the flexible use of airspace applying a phased approach, starting with a more dynamic sharing of reserved airspace, taking into account UASs.

2.6 Accordingly, with the support of Regional Project RLA/06/901, an expert has been hired to develop guidance material for the implementation of the flexible use of airspace concept, which shall be submitted in the first half of 2012.

2.7 Taking into account the importance of these projects, the States attending the SAM/IG/8 meeting agreed to report the status of implementation of ATFM in order to analyse its evolution based on the progress made at regional level, mainly with respect to factors affecting implementation, such as automation tools.

ICAO Global ATFM Manual

2.8 In many areas of the world, the main challenge is runway and ATC sector capacity, and ATFM is one solution. Since the nature of ATFM requires local solutions adapted to each operating environment, any global guidance material shall be drafted so as to provide a range of tools, procedures and recommended practices. ICAO Headquarters in Montreal, following the guidance of the D/ANB, has established a team to coordinate the development of this material entitled the ***ICAO Global ATFM Manual***. The first meeting of the group, held in Amsterdam on 5-8 March 2012, proposed and approved the use of the CAR/SAM ATFM Manual as a basis for the development of the future ICAO Global ATFM Manual.

2.9 It should be noted that progress related to project implementation is directly related to the action plans of the regional implementation groups, as approved by the States. The details of the activities related to CAR projects may be found in **Appendix A**, and to SAM projects in **Appendix B**.

3. Suggested action

3.1 The Meeting is invited to take note of the information contained in this working paper and to analyse **Appendices A and B**.

APPENDIX A1

PROJECT ON THE IMPROVEMENT OF DEMAND-CAPACITY BALANCING (DCB)

CAR Region	PROJECT DESCRIPTION (DP)	DP N° A1	
Programme	Title of the Project	Start	End
<i>Improve demand-capacity balancing (DCB)</i> (Programme coordinator: Victor Hernandez)	<i>Improve demand-capacity balancing (DCB)</i> Project coordinator: Ron Fisher (United States)	2008	2016
Objective	Support ATFM implementation based on the regional performance objectives of the NAM/CAR performance-based implementation plan (NAM/CAR RPBANIP)		
Scope	Gradual implementation of the ATFM service in the CAR Region to ensure demand-capacity balancing (DCB)		
Metrics	<ul style="list-style-type: none"> • Percentage of delayed flights • Air traffic demand • Runway and ATC sector capacity 		
Strategy	Project activities will be coordinated amongst project members, the project coordinator and the programme coordinator. The programme and project coordinators will coordinate the requirements of other projects and NAM/CAR implementation working groups. Experts nominated by the States, Territories, and International Organisations will be incorporated as needed.		

Rationale	GREPECAS supported ATFM implementation to ensure optimum air traffic flow during periods in which demand exceeds or is expected to exceed the available capacity of the ATS system.
Related projects	<ul style="list-style-type: none">• Implement performance-based navigation (PBN)• Flexible use of airspace• Improve ATM situational awareness• Implementation of the new ICAO flight plan format

Project Deliverables	Relationship with the NAM/CAR RPB-ANIP	Responsible Party	Status of Implementation*	Date of Delivery	Comments
Establish ATFM coordination procedures	RPOs 2, 3	Ron Fisher		2010	The regional ATFM manual was developed
Identify key stakeholders for purposes of coordination and cooperation, using a CDM process	RPOs 2, 3	States, Territories, International Organisations		2008	Regional coordination has been established with all stakeholders
Develop regional procedures for efficient and optimum use of aerodrome and runway capacity	RPOs 2, 3, 4, 5, 7,	States, Territories, International Organisations		2011	Regional Airport Acceptance Rate (AAR) procedures developed
Develop methods for demand/capacity forecasting;	RPOs 3	Ron Fisher		2012	
Identify and analyse traffic flow issues and develop methods for gradually improving efficiencies, as needed, through enhancements in: <ul style="list-style-type: none"> airspace organisation and management (AOM) and airway structure (unidirectional routes) 	RPOs 1, 2, 3, 9	Ron Fisher		2014	A PBN airspace concept was developed to improve airspace organisation and management (AOM)

<ul style="list-style-type: none"> communication, navigation and surveillance systems 					
Define common elements of situational awareness amongst FMUs; <ul style="list-style-type: none"> common traffic displays, common weather displays (Internet), communications (teleconferences, web), and methodology of daily advisory services through teleconferences 	RPOs 1, 2, 3, 9	States, Territories, International Organisations		2014	Regional Teleconferences are carried out on weekly basis
Identify training needs and develop the corresponding guidelines	RPOs 3	States, Territories, International Organisations		2014	Some ANSPs have developed training plans, as needed. A regional ATS Capacity workshop was held in Mexico City in 2011
Develop of ATS contingency plans and determine operational/technical considerations	RPOs 1, 2, 3	States, Territories, International Organisations		2010	Catalogue of ATS contingency plan developed, including hurricane and volcanic ash coordination procedures
Develop a strategy and framework for the implementation of ATFM units	RPOs 3	States, Territories, International Organisations		2016	
Develop a performance measuring programme	RPOs 1, 2, 3	ICAO		2010	Implementation results presented at NACC/DCA meetings
Monitor system performance	RPOs 1, 2, 3	ICAO		2010	The ICAO NACC Regional Office conducts this activity

Resources needed	CAR regional project with the participation of States, with a view to supporting ATFM training
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Grey	Tasks not started yet
Green	Activity being implemented as scheduled
Yellow	Activity started with some delay, but expected to be implemented on time
Red	Activity not implemented on time; mitigation measures are required.

APPENDIX A2

PROJECT ON THE IMPLEMENTATION OF THE FLEXIBLE USE OF AIRSPACE (FUA)

<i>CAR Region</i>	PROJECT DESCRIPTION (DP)	DP N° A2	
<i>Programme</i>	Title of the Project	Start	End
<i>Implementation of flexible use of airspace (FUA)</i> (Programme coordinator: Victor Hernandez)	<i>Implementation of flexible use of airspace (FUA)</i> Project coordinator: Ron Fisher (United States)	2008	2014
Objective	Support the implementation for optimisation, balancing and equity in the use of airspace amongst the different users, and for better civil/military coordination and cooperation, strengthening safety, based on the regional performance objectives of the NAM/CAR performance-based implementation plan (NAM/CAR RPBANIP)		
Scope	Drafting of guides for the implementation of the flexible use of airspace (FUA).		
Metrics	<ul style="list-style-type: none"> • Percentage of civil/military coordination committees implemented • Number of civil/military coordination and cooperation agreements implemented • Reduction in the number of permanently reserved airspaces 		
Strategy	Activities will be coordinated amongst project members, the project coordinator, and the programme coordinator. The programme and project coordinators will coordinate the requirements of other projects and NAM/CAR implementation working groups. Experts nominated by the States, Territories, and International Organisations will be incorporated to execute tasks, as required.		

Rationale	GREPECAS supported the implementation of the flexible use of airspace (FUA) with a view to optimising ATS airspace efficiency and air traffic flow management (ATFM).
Related projects	<ul style="list-style-type: none">• Implement PBN• Improve demand-capacity balancing• Improve ATM situational awareness

Project Deliverables	Relationship with the NAM/CAR RPB-ANIP	Responsible Party	Status of Implementation*	Date of Delivery	Comments
Regional guidance material	RPOs 2	States, Territories, International Organisations		2011	ICAO has developed guidance material on civil/military coordination to be used by States/Territories to develop national policies, procedures, and standards
Establish civil/military coordination bodies	RPOs 2	States, Territories, International Organisations		2012	Several States have established civil-military coordination bodies
Arrange for permanent liaison and close cooperation between civil ATS units and appropriate air defence units	RPOs 1, 2, 3	Ron Fisher		2014	
Conduct a regional review of special use airspace	RPOs 1, 2, 3	Ron Fisher		2014	
Full integration of civil and military aviation activities	RPOs 1, 2, 3	States, Territories, International Organisations		2016	

Monitor system performance	RPOs 2	ICAO		2010	ICAO NACC Regional Office conducts this activity
Resources needed	CAR regional project with the participation of States to support civil/military coordination for flexible use of airspace (FUA)				

Grey Task not started yet
 Green Activity being implemented as scheduled
 Yellow Activity started with some delay, but expected to be implemented on time
 Red Activity not implemented on time; mitigation measures are required.

END

APPENDIX B1

PROJECT ON IMPROVING DEMAND-CAPACITY BALANCING

PROJECT DESCRIPTION (DP)		DP N° B1	
<i>Programme</i>	Title of the Project	Start	End
<i>Air traffic flow management (ATFM)</i> (Programme coordinator: Celso Figueiredo)	Improve demand-capacity balancing <i>Project coordinator: Juarez Franklin Gouveia (Brazil)</i> <i>Experts contributing to the project: Jorge Fernandez (ATS consultant), Tomas Yentzch (Paraguay)</i>	2012	2018
Objective	Avoid overloading the ATC and airport system, strengthening safety, taking into account the reduction of delays caused by weather and traffic conditions that leads to a reduction of fuel consumption and contaminating emissions. Likewise, it seeks to improve prediction and management of excess demand for services in ATC sectors and aerodromes.		
Scope	The scope of the project defines that the implementation of the ATFM service should start with a monitoring of airports and airspace in order to identify significant increments in ground delays and in-flight holding, as well as bottlenecks (ATC sector, runway, apron, and airport facilities). Furthermore, the determination of capacity and the analysis of air traffic demand are important elements for improving demand-capacity balancing.		
Metrics	<ul style="list-style-type: none"> - Percentage of delayed flights - Air traffic demand - Runway and ATC sector capacity 		

Strategy	<p>The implementation of project activities will define ATFM implementation in the SAM Region through the analysis of airspace demand and capacity, taking into account that States in the phase of implementation shall coordinate with the ATM community the necessary actions for ATFM implementation. The infrastructure and the database, as well as the policy, standards and procedures are important components for the implementation of this project.</p>
Rationale	<p>GREPECAS considered that early implementation of ATFM shall ensure an optimum air traffic flow to or through certain areas during periods when demand exceeds or is expected to exceed available ATC system capacity. Therefore, the ATFM systems should reduce aircraft delays both in flight and on ground in order to avoid system overload.</p>
Related projects	<ul style="list-style-type: none">• Flexible use of airspace• PBN operational implementation• Implementation of the new ICAO flight plan format• Automation











Project deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation *	Date of Delivery	Comments
Assess the progress made in the ATFM implementation work programme	PFF SAM ATM 05	Juarez Franklin Gouveia		2012	-
Calculation of airspace capacity (ATC sector) of airspace regions of the States	PFF SAM ATM 05	Juarez Franklin Gouveia		SAM/IG/9	States shall submit their studies to the Secretariat before SAMIG/9. Brazil and Colombia already submitted their studies.
List of airspace sectors in which demand exceeds existing capacity during certain periods, including simulations conducted by States, if necessary.	PFF SAM ATM 05	Juarez Franklin Gouveia		SAM/IG/9 SAM/IG/10	States shall submit their studies to the Secretariat before SAMIG/9. Brazil and Colombia have already submitted their studies.
List of operational factors affecting demand and airspace capacity, with a view to optimising existing capacity, including simulations, if necessary.	PFF SAM ATM 05	Juarez Franklin Gouveia		SAM/IG/9	States shall submit their studies to the Secretariat before SAMIG/9. Brazil and Colombia already submitted their studies.








Policy, standards and procedures that define the frame of reference for the implementation of ATFM centralised units.	PFF SAM ATM 05	Juarez Franklin Gouveia		2014	-
Regional strategy for the implementation of the flexible use of airspace (FUA)	PFF SAM ATM 04	Marco Vidal		2015	-
Definition of common situational awareness elements	PFF SAM ATM 06	Paulo Vila		2012	States exchange information via web conferences. Paraguay, Colombia and Venezuela exchange information via web conferences. The States undertake to hold web conferences starting on 21 November 2011, in accordance with the implementation plan.
Personnel trained in strategic ATFM measures applicable to the airspace	PFF SAM ATM 05	Juarez Franklin Gouveia		TDB	Ongoing activity. An ATFM/CDM course was held in Brazil in 2010 with the participation of several States.
List of factors affecting the decision to implement.	PFF SAM ATM 05	Juarez Franklin Gouveia		SAM/IG/9	-

ATFM system performance oversight plan.	PFF SAM ATM 05	Juarez Franklin Gouveia		2013	-
ATFM post-implementation follow-up programme	PFF SAM ATM 05	Juarez Franklin Gouveia		August 2013	-
Resources needed	Designation of experts for the execution of some of the deliverables.				

*

Grey Task not started yet
 Green Activity being implemented as scheduled
 Yellow Activity started with some delay, but expected to be implemented on time
 Red Activity not implemented on time; mitigation measures are required

ID	Task Name	1st Half				2nd Half				
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1	B1 - IMPROVE THE BALANCE BETWEEN DEMAND AND CAPACITY/MEJORAR EL EQUILIBRIO ENTRE LA DEMANDA Y CAPACIDAD		19/10	19/10						
2	 B1.1 Airport demand/capacity (runway capacity) analysis / Análisis de la Demanda y Capacidad		30/09	States / Estados		14/05				
3	 Calculation of airport (runway capacity) and ATC sectors Capacity in the SAM Region as per the Course offered by Brazil/Cálculo de la Capacidad de Pista y Sectores ATC de acuerdo al método impartido en el Curso de Capacidad de Pista ofrecido por					States / Estados				
4	  Determine operational factors affecting airport demand/Determinar los factores operacionales que afectan la demanda y la capacidad del aeropuerto para optimizar la utilización de la capacidad existente, incluyendo simulaciones, de ser necesario					States / Estados 14/05		14/05		
5	 B1.2 Infrastructure and data base /Infraestructura y Base de Datos		States / Estados 19/10							
6	Send to the Automation Group the data base information of Brazil, United States/Enviar al Grupo de Automatización los resultados de las bases de datos de dependencias ATFM de Brasil, Estados Unidos y									
7	 B1.3 Policy, standards and procedures / Política, Normas y Procedimientos									
8	Publish AIP Supplements/ Publicar suplementos AIP									
9	 B1.4 Monitor system performance/ Monitorear performance del sistema			10/10		States / Estados		14/05		
10	 Implement the ATFM post-implementation follow-up programme at airports/Implantar programa de seguimiento pos-implantación de la ATFM en los aeropuertos			10/10		States / Estados		14/05		
11	 Execute the ATFM post-implementation follow-up programme at airports/Ejecutar programa de seguimiento pos-implantación de la ATFM en los aeropuertos			10/10		States / Estados		14/05		
12	 B1.5 Final decision for implementation / Decisión final de implementación					States / Estados 14/05		18/05		

ID		Task Name	1st Half			2nd Half		1st Half		2nd Half	
			Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
13		Review factors affecting decision to implement / Revisar factores que afectan decisión de implantación				States / Estados 14/05					
14		Declare pre-operational implementation within area defined/ declare pre-operational implantación Pre-operacional dentro de área				States / Estados 14/05					
15		Declare the final operational implementation in the defined area/ Declarar implantación operacional definitiva dentro de área definida				States / Estados 18/05					
16		B1.6 Demand and airspace capacity analysis / Análisis de la Demanda y Capacidad del Espacio Aéreo									
17		Identify airports where periods exist where demand exceeds existing capacity / Identificar aeropuertos donde existan períodos cuando la demanda es mayor a la capacidad existente		19/10		States / Estados 14/05					
18		Determine operational factors affecting airport demand and capacity. / Determinar factores operacionales que afectan la demanda y la capacidad del aeropuerto para optimizar la utilización de la capacidad existente		19/10		States / Estados 14/05					
19		Present the conclusions on existing airport capacity / Presentar las conclusiones de la capacidad aeroportuaria existente		19/10		States / Estados 14/05					

APPENDIX B2

PROJECT ON THE FLEXIBLE USE OF AIRSPACE

PROJECT DESCRIPTION (DP)		DP N° B2	
<i>Programme</i>	Title of the Project	Start	End
<i>Airspace flow management (AFM)</i> (Programme coordinator: Celso Figueiredo)	Flexible use of airspace (FUA) <i>Project coordinator: Marco Vidal</i> <i>Experts contributing to the project: Jorge Fernandez (ATS consultant), Tomas Yentzch (Paraguay)</i>	2012	2018
Objective	Optimisation, balance and equity in the use of airspace among the different users, and better civil/military coordination and cooperation, strengthening safety.		
Scope	The FUA concept will be applied harmoniously in the FIRs for which States are responsible, allowing for the short- and medium-term introduction of airspace improvements in accordance with the ATS route network optimisation programme.		
Metrics	<ul style="list-style-type: none"> • Percentage of civil/military coordination committees or similar bodies implemented • Number of civil/military coordination and cooperation agreements implemented • Reduction in the number of permanently reserved airspaces 		

Strategy	<p>The project on the implementation of the flexible use of airspace will be implemented applying a phased approach, which starts with a more dynamic sharing of the reserved airspace, taking into account UASs. Likewise, SAR activities and military exercises and activities may require joint coordination and cooperation between two or more States at a given point in time, thus the importance of having civil/military coordination and cooperation committees in place. The systematic application of this concept will be taken into account for the optimisation of the route network, especially for the definition of scenarios for the implementation of non-permanent or conditional routes.</p>
Rationale	<p>The flexible use of airspace is an airspace management concept described by the International Civil Aviation Organization (ICAO), dealing with the optimisation, balancing and equity in the use of airspace amongst the different civil and military users. This is facilitated by strategic coordination and dynamic interaction, and is based on Appendix O to Assembly Resolution A 37-15, the GPI-1 initiative of the Global Air Navigation Plan (ICAO Doc 9750) and GREPECAS conclusions.</p>
Related projects	<p>PBN operational implementation Improvement of demand-capacity balancing Implementation of the new ICAO flight plan format Automation</p>

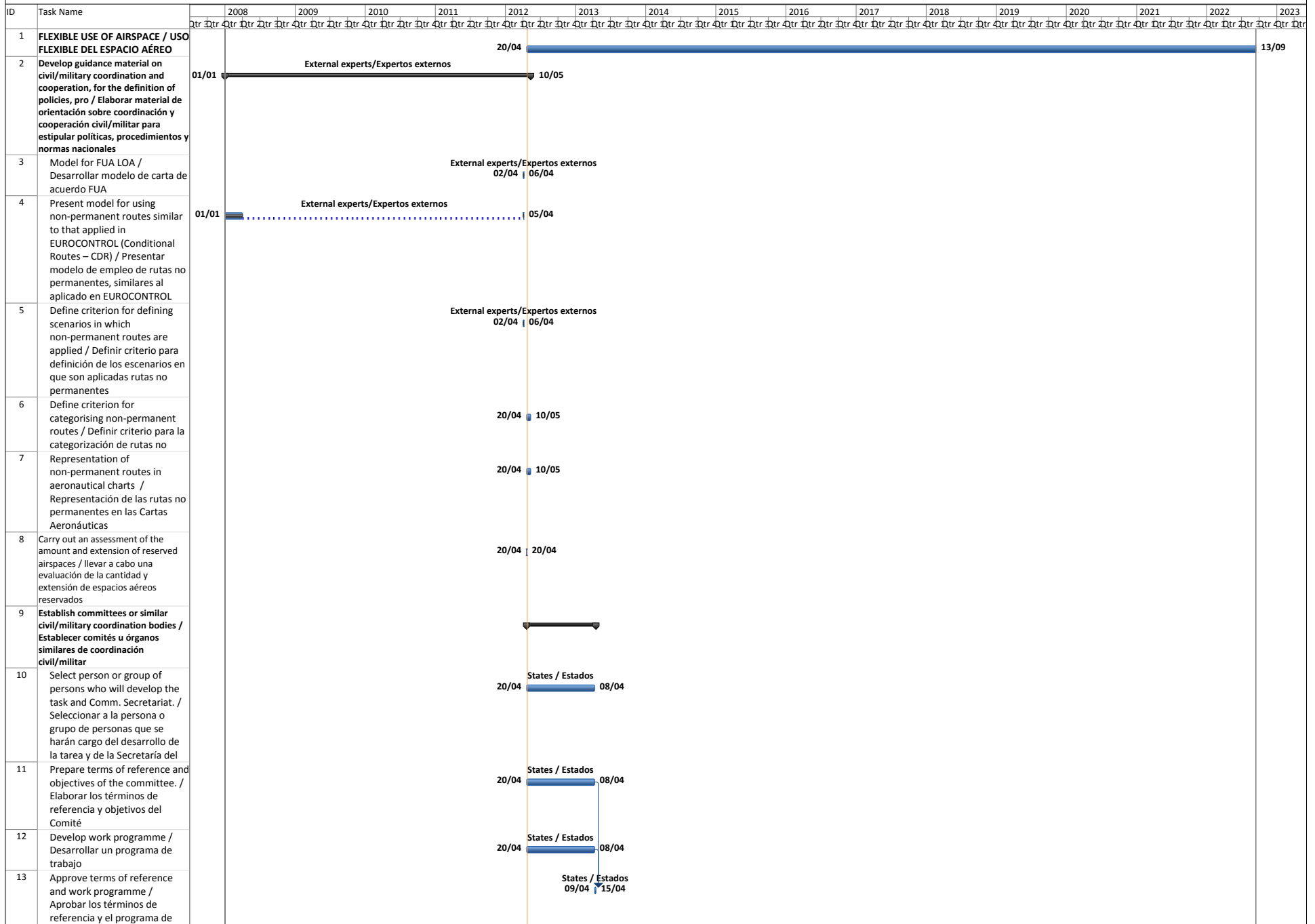
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation *	Date of Delivery	Comments
Guidance material on the flexible use of airspace concept	PFF SAM ATM 04	Marco Vidal		SAM/IG/9	Project RLA/06/901 is supporting the hiring of 2 experts for a period of 3 weeks to develop such material.
Proposals for route implementation and/or realignment based on the FUA	PFF SAM ATM 04	Marco Vidal		SAM/IG/9	-
Regional strategy and work programme for implementing the flexible use of airspace through a phased approach, starting with a more dynamic sharing of reserved airspace, taking into consideration UASs.	PFF SAM ATM 04	Marco Vidal		2018	-

Resources needed	Designation of experts in the execution of some of the deliverables.
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*

Grey	Tasks not started yet
Green	Activity being implemented as scheduled
Yellow	Activity started with some delay, but expected to be implemented on time
Red	Activity not implemented on time; mitigation measures are required.

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
FLEXIBLE USE OF AIRSPACE / USO FLEXIBLE DEL ESPACIO AEREO



CRPP01/NE-WP/05



Agenda Item 3: Review of GREPECAS Programmes and Projects

3.3 Projects of the Automation and Situational Awareness Programme

FOLLOW-UP OF ACTIVITIES OF THE AUTOMATION AND SITUATIONAL AWARENESS PROJECTS

(Presented by the Secretariat)

SUMMARY	
This working paper presents the status of implementation of the activities of projects under Programme C: <i>ATM automation and situational Awareness</i> and their deliverables.	
Reference:	
<ul style="list-style-type: none">Report of the Sixteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/16), Punta Cana, Dominican Republic, 28 March - 1 April 2011	
ICAO strategic objectives	<i>This working paper is related to strategic objectives A and C.</i>

1. Background

1.1 Through *Decision 16/45 - New GREPECAS organisation*, a new organisation was adopted for GREPECAS for the implementation of regional performance-based plans in the CAR/SAM Regions, in compliance with the Global Air Navigation Plan and the Global ATM Operational Concept. Likewise, through *Decision 16/47 – Transformation of GREPECAS Subgroups* this structure was implemented with the establishment of programmes and projects for the AERMET, AGA/AOP, AIM, and CNS/ATM Subgroups.

1.2 In this sense, with the new structure, the Programmes and Projects Review Committee (PPRC) was created through *Decision 16/48 – Terms of reference, work programme and composition of the GREPECAS Programmes and Projects Review Committee* to review and approve the planning, development and implementation of the programmes and projects so that they are aligned with GREPECAS terms of reference, and ICAO strategic objectives and global plan.

2. Discussion

2.1 In the specific case of the CNS/ATM Subgroup, at the time Decision 16/47 was formulated, four CAR/SAM programmes (PBN, ATFM, Automation and ATM situational awareness, and Ground-ground/air-ground communications infrastructure) containing nine projects already existed. In order to increase effectiveness (reduced time to approval, improved internal coordination between the various bodies, and cost reduction), GREPECAS/16 considered that the aforementioned projects and programmes will be implemented separately for the CAR and SAM Regions CAR y SAM, where CAR programmes and SAM programmes would be coordinated by the officers of the NACC and SAM Regional Offices, respectively, and where CAR projects would be coordinated by CAR experts and SAM projects would be coordinated by SAM experts.

2.2 In this sense, for Programme C, and after reviewing CAR and SAM projects, it was confirmed that projects would continue to be developed under the following denomination:

CAR Region

- C1: INTEROPERABILITY OF AUTOMATED SYSTEMS IN THE CAR REGION
- C2: IMPROVED ATM SITUATIONAL AWARENESS IN THE CAR REGION
- C3: IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN FORMAT

SAM Region

- C1: AUTOMATION
- C2: ATM SITUATIONAL AWARENESS
- C3: IMPLEMENTATION OF THE NEW FLIGHT PLAN MODEL

2.3 **Appendices A and B** describe each of the projects C1, C2, and C3 for the CAR and SAM Regions, respectively. The description includes the rationale for each project, the deliverables, activities, responsible parties, and progress made to date, including the respective work timetable in GANTT format.

2.4 Project activities have been coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“Go-to-Meeting” application) and meetings to be held from time to time in accordance with work programme activities, or face-to-face meetings scheduled at the Regional Offices, such as the NACC work group meetings.

2.5 In the SAM Region, project activities are being monitored and coordinated through web teleconferences and through the meetings of the SAM Implementation Group (SAM/IG). Since the reorganisation of GREPECAS started, two meetings have been held (SAM/IG/7, Lima, Peru, 23-27 May 2011 and SAM/IG/8, Lima, Peru, 10-14 October 2011).

2.6 Project achievements include the following:

- a) CAR Project C1:
 - Collection of Memorandum of Understanding (Mou) samples for the consolidation of an inter-regional MoU model; and
 - Draft guidelines for data sharing and ATC system interoperation.

- b) CAR Project C2:
 - Identification of progress in the Region in terms of electronic ground and in-flight alerts to improve situational awareness, ATFM development programmes, as well as surveillance system improvements like the efforts made in the region to implement ADS-B, and future production of the respective guidance material for each deliverable identified in project C2; and
 - In the last few months, coordination amongst project member has become more dynamic through the “Go-to-Meeting” meeting.
- c) CAR Project C3:
 - Identification and interconnection of systems involved in the NAM/CAR Region NAM/CAR;
 - Sample AIC in Spanish and English;
 - Proposal of system testing between States;
 - Proposal of contingency to be applied by the States; and
 - Proposal of transition from the current to the new flight plan format.
 - Training of experts in the implementation of the new flight plan format.
- d) SAM Project C1:
 - Drafting of a document on system and sub-system requirements for ATC (SSS) system automation;
 - Regional plan for the interconnection of automated systems;
 - Model MoU for the interconnection of automated systems;
 - Signing of five MoUs; and
 - One interconnection (Argentina-Uruguay) implemented and two under implementation (Brazil-Venezuela and Argentina-Chile).
- e) SAM Project C3:
 - Model national action plan for the implementation of the amendment;
 - Model AIC;
 - Regional strategy for the implementation of the amendment;
 - Safety assessment; and
 - Identification of automated systems affected by the implementation of the amendment.

2.7 Difficulties encountered for the implementation of project activities include:

2.7.1 CAR Region: The exchange and revision of information by the experts initially designated to work in the projects via teleconference has not been effective, either because of their absence or non-compliance with the agreed dates. Nevertheless, this has improved by holding face-to-face group meetings.

2.7.2 SAM Region: The lack of experts for the execution of Project C2 deliverables and of an official coordinator for Project C3 given the fact that the project coordinator initially nominated was not going to be able to perform such function in 2012. Anyway, the SAM/IG New flight plan format implementation group is doing the follow-up and implementing these activities under the supervision of the programme coordinator.

3. **Suggested action**

3.1 The Meeting is invited to:

- a) take into account the information contained in this working paper;
- b) review and approve the project description and status of implementation shown in each of the appendices;
- c) recommend actions to improve or expand as necessary the deliverables of each project; and
- d) propose improvements to overcome the difficulties encountered and described in paragraph 2.7.

- - - - -

APPENDIX A1

PROJECT ON THE INTEROPERABILITY OF ATS AUTOMATED SYSTEMS IN THE CAR REGION

CAR Region	PROJECT DESCRIPTION (DP)	DP N° C1	
Programme	Title of the Project	Start	End
<p>Interoperation of automated systems</p> <p>(ICAO programme coordinator : Julio Siu)</p>	<p>Interoperation of automated systems in the CAR Region</p> <p>Project coordinator: Carlos Jimenez (Cuba)</p> <p>Experts contributing to the project: Fidel Ara (Cuba) Julio Cesar Mejia (Dominican Republic) Dulce Roses (United States) Roger Alberto Pérez (COCESNA) Manny Góngora (IATA)</p>	2010	2014
Objective:	Support maximum use of existing automation capabilities and interoperation, and higher degree of automation in the CAR Region, based on regional performance objectives of the NAM/CAR Regional performance-based implementation plan (NAM/CAR RPBANIP)		
Scope	<p>The project contemplates the assessment and identification of the main levels of automation, the production of guides for the use of existing capabilities, and proposals of improvement to automation levels to enhance operations and safety. The intended deliverables are:</p> <ul style="list-style-type: none"> • Inter-regional MoU model for automation between States • Guidelines and considerations for automation agreements • Proposals and guidance for improving the operation and performance of the flight plan data processing system, tools for electronic transmission and automatic exchange of ATS messages • Proposals and guidance for using additional/advanced automation support tools to increase aeronautical information sharing • Proposal to update GREPECAS guidelines on ATM system automation 		
Metrics	<ul style="list-style-type: none"> • Number of States/ANSPs participating in regional automation tests • Number of States/ANSPs implementing ATC automation functionalities between systems • Proposals and guidance material completed 		

Implementation strategy:	<ul style="list-style-type: none"> Project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“Go-To-Meeting” application) and meetings to be held from time to time in accordance with work programme activities. The project coordinator will coordinate as necessary with the programme coordinator the requirements of other projects and information from NAM/CAR implementation working groups. Additional experts will be included based on tasks and specialised work to be conducted. Project deliverables will be sent to the programme coordinator sub submission to GREPECAS.
Related projects	The project is related to Programme C and D projects.

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation¹	Date of Delivery	Comments
Level of automation existing in the CAR Region	RPO 7 and 9 NAM/CAR RPBANIP	ICAO		Completed	
Sample of inter-regional MoU for automation between States	RPO 7 and 9 NAM/CAR RPBANIP	Carlos Jiménez, Cuba		Oct 2012	
Guidance material and considerations for the drafting of automation agreements	RPO 7 and 9 NAM/CAR RPBANIP	Carlos Jiménez, Cuba		Oct 2012	

¹

Grey Task not started yet

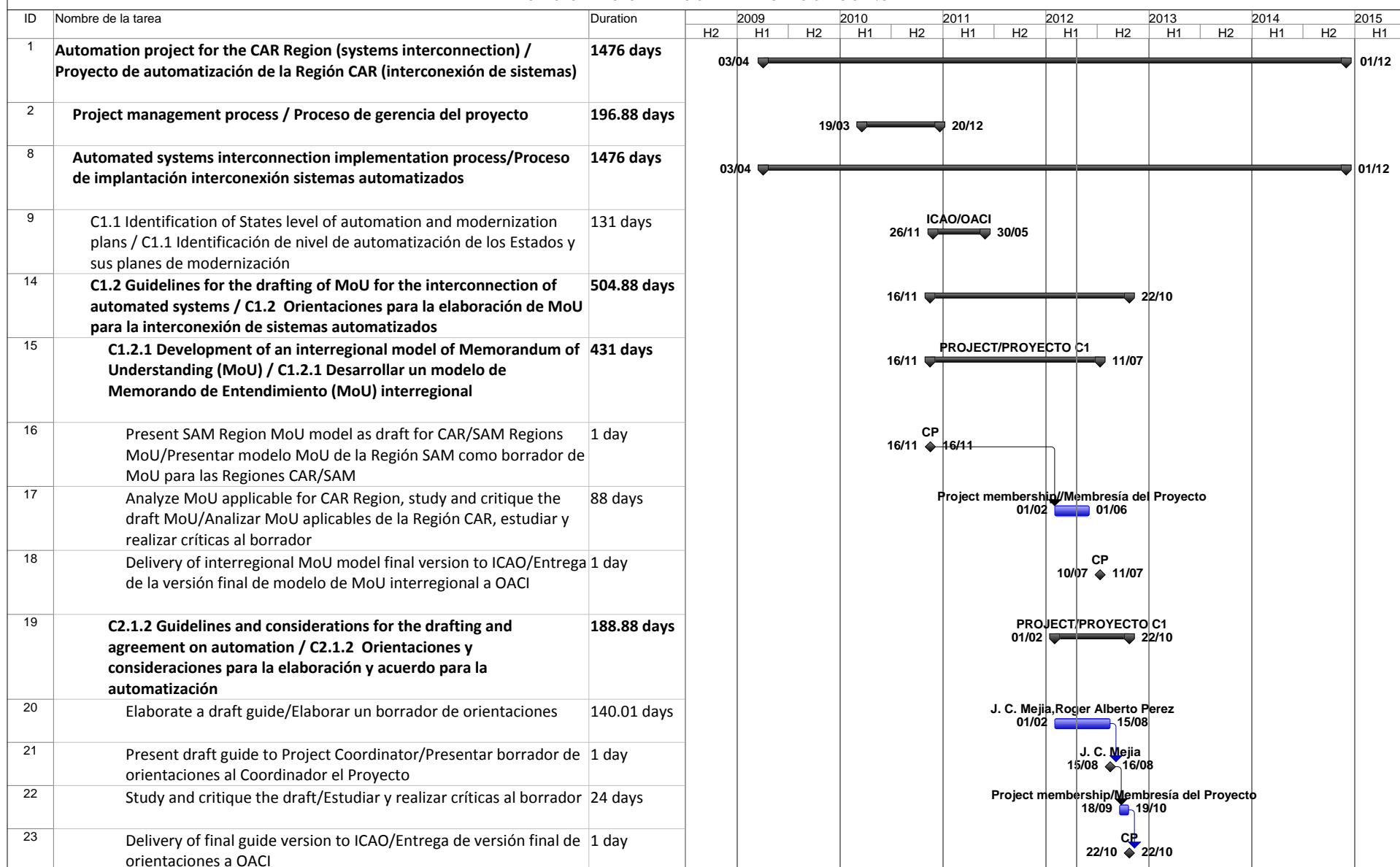
Green Activity being implemented as scheduled

Yellow Activity started with some delay, but expected to be implemented on time

Red Activity not implemented on time; mitigation measures are required

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Proposals or guidelines for improving the operation and performance of the flight plan data processing system, tools for electronic transmission and automatic exchange of ATS messages	RPO 7 NAM/CAR RPBANIP	Roger Alberto Perez COCESNA		August/2013	The implementation of the LAM CPL is suggested as a first step, as in the case of United States with Cuba and Mexico. Promote D-ATIS and other data link applications. Implement ATFM message exchange, implementation of MET/AIS terminals, and other automation considerations providing operational benefits.
Proposals and guidance on the use and benefits of additional/advanced automation support tools to increase aeronautical information sharing	RPO 7 NAM/CAR RPBANIP	Dulce, United States		December/2013	In order to make further progress, it is necessary to build upon the operational benefits attained by the FAA with respect to ATFM implementation, and the analysis of benefits and issues of automation implementation.
Monitor the implementation of ATM automation and surveillance data exchange – Progress report	RPO 7 NAM/CAR RPBANIP	Project members		March/2014	Some radar data exchange already agreed upon should be completed this year.
Resources needed	<ul style="list-style-type: none"> • Designation of experts for the implementation of deliverables. • Implementation of facilities for the interconnection of automated systems in accordance with the dates established in the respective MoUs. 				

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
CNS/ATM/SG PROJECT/PROYECTO C1
AUTOMATION PROJECT FOR THE CAR/SAM REGIONS
PROYECTO DE AUTOMATIZACION PARA LAS REGIONES CAR/SAM



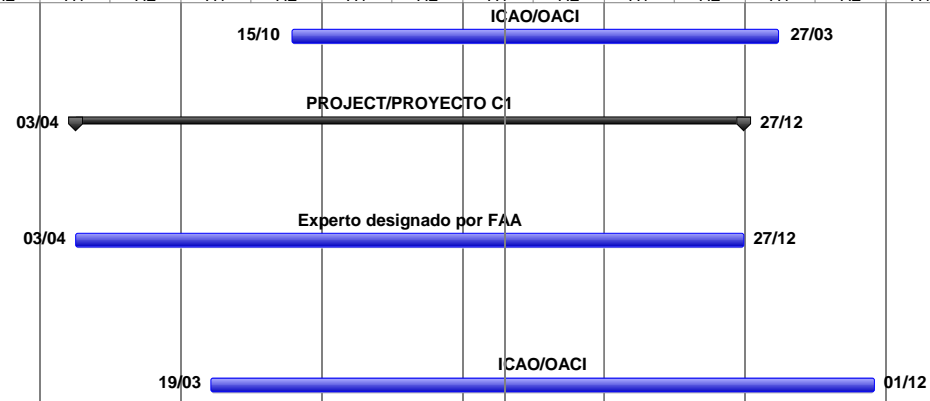
CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
CNS/ATM/SG PROJECT/PROYECTO C1
AUTOMATION PROJECT FOR THE CAR/SAM REGIONS
PROYECTO DE AUTOMATIZACION PARA LAS REGIONES CAR/SAM

ID	Nombre de la tarea	Duration	2009		2010		2011		2012		2013		2014		2015	
			H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1
24	C1.3 Monitor flight plan data process implementation, electronic transmission tools & automatic ATS message exchange / C1.3 Monitorear implantación sistema proceso datos plan vuelo, herramientas transmisión electrónica e intercambio automático msgs ATS	373.88 days									01/03	06/08				
25	C1.3 Proposals/flight plan data process implementation, electronic transmission tools & automatic ATS message exchange / C1.3 Monitorear implantación sistema proceso datos plan vuelo, herramientas transmisión electrónica e intercambio automático msgs ATS	373.88 days									01/03	06/08				
26	Identify various group States technological levels, including interconnection means/Identificar los diferentes niveles tecnológicos de grupos de Estados, incluyendo medios de interconexion	110.5 days									01/03	02/08				
27	Presentation of draft to Project Coordinator/Presentar al Coordinador de Proyecto el borrador	1 day									02/08	03/08				
28	Review of draft/Criticar el borrador	23 days									23/10	22/11				
29	Consolidation of final document at technological levels/Consolidar un documento final con los niveles tecnologicos	43 days									23/11	22/01				
30	Elaborate draft document with guidelines on improvement for each State group level/Elaborar borrador de documento con orientaciones de mejora para cada grupo de niveles de Estados	221 days									25/05	29/03				
31	Present the Project Coordinator with guidelines draft/Presentar al Coordinador de Proyecto el borrador de orientaciones	1 day									01/04	01/04				
32	Review of guidelines draft/Criticar el borrador de orientaciones	24 days									02/04	03/05				
33	Elaboration of final document/Elaborar el documento final	65 days									06/05	02/08				
34	Delivery of final document to Project Coordinator/Entregar el documento final al Coordinador de Proyecto	1 day									05/08	05/08				
35	Delivery of final document to ICAO/Entrega del documento final a OACI	1 day									06/08	06/08				

PM = Programme Manager/Gerente Programa
PC = Project Coordinator/Coordinador Proyecto

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
 CNS/ATM/SG PROJECT/PROYECTO C1
 AUTOMATION PROJECT FOR THE CAR/SAM REGIONS
 PROYECTO DE AUTOMATIZACION PARA LAS REGIONES CAR/SAM

ID	Nombre de la tarea	Duration	2009		2010		2011		2012		2013		2014		2015	
			H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1
36	C1.4 Monitor ATM automation implementaion and exchange of surveillance data/C1.4 Monitorear la implantación de automatización ATM y el intercambio de datos de vigilancia	900 days														
37	C1.5 Monitor implementation of additional/advanced automation support tools/C1.5 Monitorear implantación herramientas de apoyo adicionales/avanzadas de automatización	1236 days														
38	C1.5.1 Proposals/guidelines use and benefit additional/advanced automation support tools increase aero info sharing/C1.5.1 Propuesta/orientacion uso y beneficios herramientas apoyo adicional/avanzada automatización incremento compartición info aeronáutica	1236 days														
39	C1.6 Monitor the implementation development/C1.6 Monitorear el desarrollo de la implementación	1226 days														



APPENDIX A2

PROJECT ON THE IMPROVEMENT OF ATM SITUATIONAL AWARENESS IN THE CAR REGION

CAR Region	PROJECT DESCRIPTION (DP)	DP N° C2	
<i>Programme</i>	Title of the Project	Start	End
AUTOMATION AND ATM SITUATIONAL AWARENESS (ICAO programme coordinator :Julio Siu)	IMPROVED ATM SITUATIONAL AWARENESS IN THE CAR REGION Project coordinator: Alejandro Romero (COCESNA) Experts contributing to the project: Fidel Ara Cruz, Carlos Jimenez (Cuba), Julio Cesar Mejia (Dominican Republic), Michael Polchert (United States), Susan E. Pfingstler (IATA), Adriana Mattos (SITA)	October 2011	November 2013
Objective	Support the implementation of situational awareness improvements at ATS units in the CAR Region based on the regional performance objective of the performance-based implementation plan for the NAM/CAR Regions (RPBANIP NAM/CAR).		
Scope	<p>The project contemplates the development of studies and guidelines for automation and operational use of capabilities to attain these situational awareness improvements, supporting the implementation of different applications such as common display of traffic, common display of meteorological conditions, and communications in general, through the following deliverables:</p> <ul style="list-style-type: none"> Guidelines on improvements to electronic ground and airborne alerts, as applicable, for conflict prediction, ground proximity, MSAW, DAIW, surface movement surveillance systems. Guidelines for operational implementation of ADS-B and data exchange (initial steps for operational implementation of ADS B), ADS-B, ADS-C and/or MLAT surveillance systems in selected airspace. Guidance on the use of AIDC to reduce coordination errors, and identification of improvements to situational awareness in support of PBN and ATFM implementation, contributing to decision-making and the respective warning systems Guidance in support of the implementation of advanced automation support tools for sharing of aeronautical information. 		
Metrics	<ul style="list-style-type: none"> Number of States/ANSPs reporting a reduction of incidents as a result of the application of improvements in electronic ground and air alerts Number of States/ANSPs conducting ADS-B data or multilateral trials using the guides developed Percentage of States/ANPS participating in ATFM that report improved management as a result of the proposed guidance 		

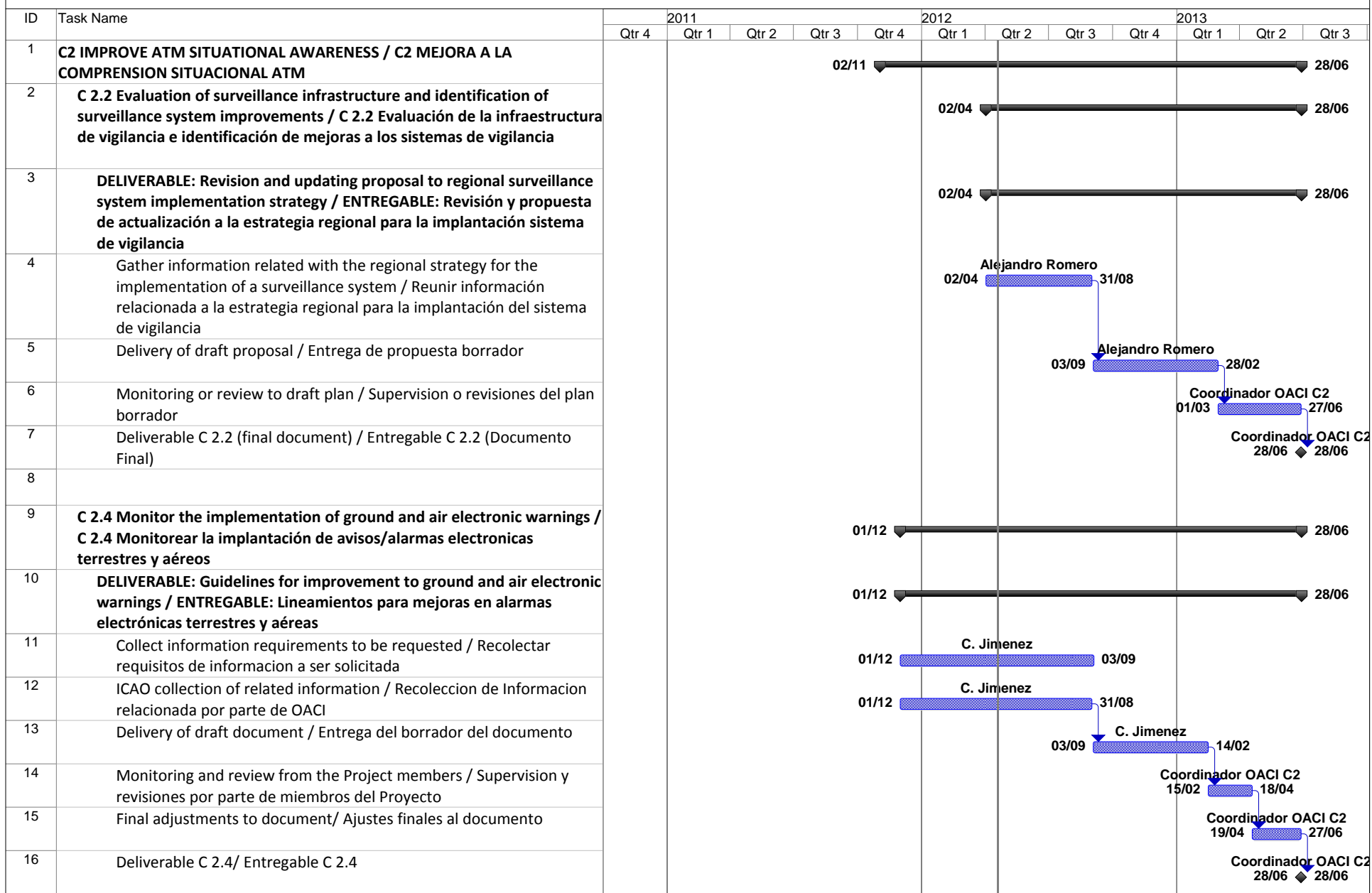
Strategy	<ul style="list-style-type: none"> Project activities were coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences and meetings held at events scheduled in the work programme. The project coordinator will coordinate with the programme coordinator the inclusion of requirements from other projects and information from the NAM/CAR implementation working groups. Additional experts were incorporated based on specialised tasks carried out. Project deliverables will be submitted to the programme coordinator for presentation to GREPECAS.
Rationale	An improved situational awareness facilitates coordination, improves efficiency and safety, and ensures that the various members of the ATM community have the same information for collaborative decision-making.
Related projects	This project is related to the projects of Programmes A (PBN), B (ATFM), C (Automation/ Situational Awareness), and D (ATN ground-ground and air-ground applications)

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation¹	Date of Delivery	Comments
Review of the Regional Implementation Oversight Strategy for systems in support of situational awareness improvement	RPOs 4 and 9, NAM/CAR RPBANIP	Alejandro		June 2013	To be reviewed in accordance with ASBU methodology. The expert for this task has been proposed.
Guidelines for improving electronic ground and airborne alerts	RPOs 4 and 9, NAM/CAR RPBANIP	Carlos Miguel Jimenez CUBA		June 2013	The expert for this task has been proposed. Information will be provided by April 2012 about electronic alerts available in the CAR Region
Guidelines on the operational implementation of ADS-B and data exchange	RPOs 4 and 9, NAM/CAR RPBANIP	Adriana Mattos SITA		October 2012	The expert for this task has been proposed.

¹ *Grey Task not started yet
Green Activity being implemented as scheduled
Yellow Activity started with some delay, but will be implemented on time
Red Activity not implemented on time; mitigation measures are required

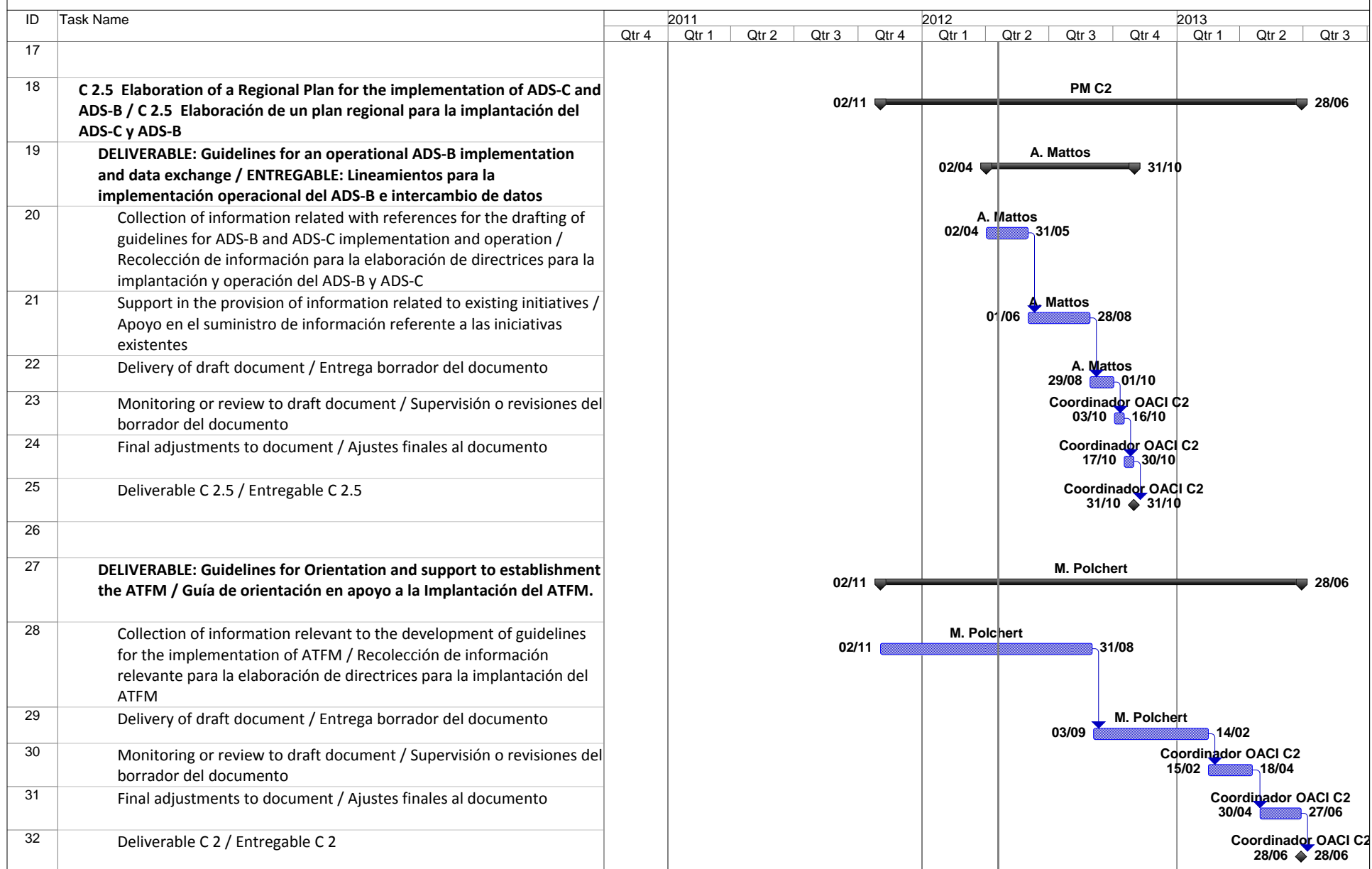
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Guidance in support of ATFM implementation	RPOs 4 and 9, NAM/CAR RPBANIP	Michael Polchert USA		June 2013	The expert for this task has been proposed.
Guidance on the use of AIDC to reduce coordination errors	RPOs 4 and 9, NAM/CAR RPBANIP	Julio Cesar Mejia RDO		November 2012	The expert for this task has been proposed. Data exchange experience obtained between Mexico and United States will be key to support activities.
Guidance on the preparation of SIGMETs in graphic format	RPOs 4, 9 y 12 NAM/CAR RPBANIP	Alejandro Romero COCESNA		November 2013	The expert for this task has been proposed.
Resources needed	Designation of experts for the implementation of some deliverables and to support some working groups (WGs)				

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
PROJECT/PROYECTO C2
IMPROVE ATM SITUATIONAL AWARENESS / MEJORA A LA COMPRENSION SITUACIONAL ATM



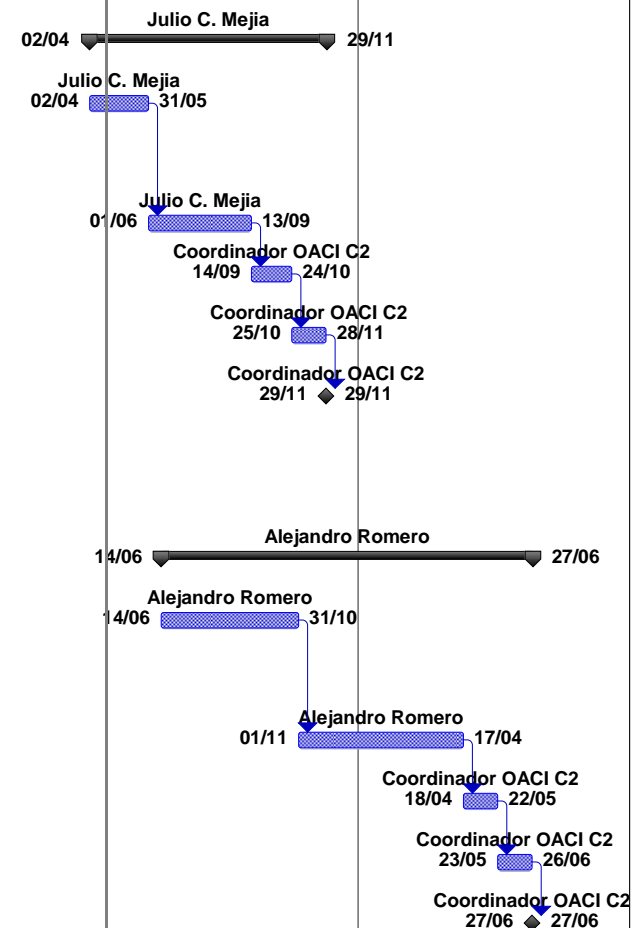
PC = Project Coordinator / Coordinador Proyecto
PM = Project Members / Miembros Proyecto
S/T = States/Territories - Estados/Territorios

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
PROJECT/PROYECTO C2
IMPROVE ATM SITUATIONAL AWARENESS / MEJORA A LA COMPRENSION SITUACIONAL ATM



CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
PROJECT/PROYECTO C2
IMPROVE ATM SITUATIONAL AWARENESS / MEJORA A LA COMPRENSION SITUACIONAL ATM

ID	Task Name	2011					2012				2013		
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
33													
34	Guide for the use of AIDC in order to reduce errors / Guía de orientación para el uso del AIDC con la finalidad de reducir errores												
35	Collection of information relevant to the development of guidelines for the use of AIDC messaging standards / Recolección de información relevante para la elaboración de directrices para el uso de la normativa de mensajería AIDC												
36	Delivery of draft document / Entrega borrador del documento												
37	Monitoring or review to draft document / Supervisión o revisiones del borrador del documento												
38	Final adjustments to document / Ajustes finales al documento												
39	Deliverable C 2 / Entregable C 2												
40													
41													
42	Guidelines for developing SIGMET in graphical format. / Guía de orientación para elaborar SIGMET en formato gráfico.												
43	Collection of relevant information to develop guidelines to implement the SIGMET in Graphical Form / Recolección de información relevante para elaborar las directrices para implementar el SIGMET Grafico												
44	Delivery of draft document / Entrega borrador del documento												
45	Monitoring or review to draft document / Supervisión o revisiones del borrador del documento												
46	Final adjustments to document / Ajustes finales al documento												
47	Deliverable C 2 / Entregable C 2												



APPENDIX A3

PROJECT ON THE IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN FORMAT

CAR Region	PROJECT DESCRIPTION (DP)	DP N° C3	
<i>Programme</i>	Title of the Project	Start	End
ATM AUTOMATION AND SITUATIONAL AWARENESS (ICAO programme coordinator: Julio Siu)	IMPLEMENT THE NEW ICAO FLIGHT PLAN FORMAT Project coordinator: Mayda Ávila (COCESNA) Experts contributing to the project: Jorge Centella (Cuba) Betty Castaing (Dominican Republic) Raymond Ahlberg (United States) Susan E. Pfingstler (IATA) Miguel Torres/Julio Ruiz (Mexico)	May 2009	April 2012
Objective	Support the implementation of the new ICAO flight plan format based on the regional performance objective of the performance-based plan for the NAM/CAR Regions (NAM/CAR RPBANIP) and in accordance with the CAR/SAM regional strategy for this implementation.		
Scope	The project contemplates the drafting of guidelines for action and the proposal of publications to facilitate the harmonious implementation of the new ICAO flight plan format by NAM/CAR States or organisations: <ul style="list-style-type: none"> • Consolidated analysis of assessments made by States s to possible impact of the implementation of the new FPL format. • Proposal of considerations for conducting trials between systems capable of processing the new flight plan. • Proposal of contingency procedures. • Proposal of technical/operational considerations for the transition. 		
Metrics	<ul style="list-style-type: none"> • Number of States/ANSPs participating in regional tests • Number of States/ANSPs that adopt contingency measures using the guide developed • Updating of agreements and publications in accordance with the technical/operational considerations proposed for the transition 		

Strategy	<p>Project activities were coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences and meetings to be held during events scheduled in the work programme, such as the meeting held immediately after the NFPL meeting in March 2012.</p> <p>The project coordinator coordinated with the programme coordinator the inclusion of requirements of other projects and information from the NAM/CAR implementation working groups. Additional experts were incorporated in accordance with the specialised tasks carried out.</p> <p>The deliverables of this project will be submitted to the programme coordinator for presentation to GREPECAS.</p>
Rationale	Support the implementation, proposing core documentation to serve as reference to the States for the transition, testing and contingencies related to the new flight plan format.
Related projects	This project is related to the projects under Programme C:

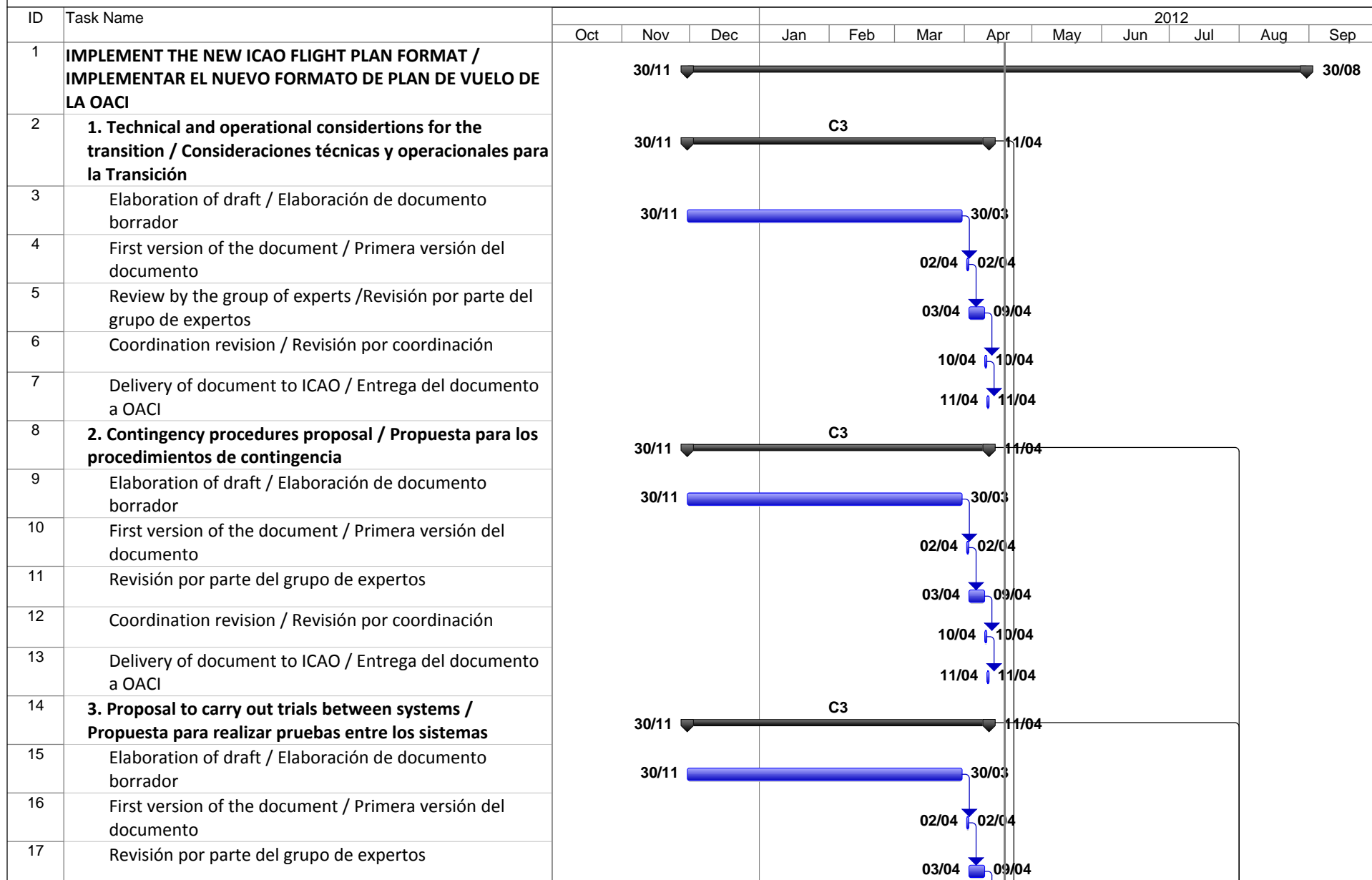
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Guides on the transition to the new filed flight plan format	RPO 5, NAM/CAR RPBANIP	ICAO		Completed	Since 2010, ICAO has provided guidelines for the transition to the new filed flight plan format
Regional strategy for the transition to the new filed flight plan format	RPO 5, NAM/CAR RPBANIP	ICAO		Completed	The strategy was approved at the GREPECAS/16 meeting

¹ *Grey *Task not started yet*
Green *Activity being implemented as scheduled*
Yellow *Actividad started with some delay, but expected to be implemented on time*
Red *Activity not implemented on time; mitigation measures are required*

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Identification of stakeholders and the possible impact of the implementation of the new flight plan format (FPL/RPL/CPL)	RPO 5, NAM/CAR RPBANIP	NACC WGs		Completed	This identification was done at the first NFPL workshop held in 2010 and has been updated at each follow-up meeting. Its status is shown in the website of the NACC Regional Office.
Consolidated analysis of the assessments made by States of possible impact of the implementation of the new FPL format.	RPO 5, NAM/CAR RPBANIP	Project C3		Completed	The impact matrix used in the Region corresponds to the work presented by Project C3 in its initial 2010 version.
Assessment of current/future flight plan processing capabilities with respect to the new flight plan format	RPO 5, NAM/CAR RPBANIP	ICAO/ NACC WGs		Completed	An initial assessment was done at the first NFPL workshop held in 2010. Information about the status of these capabilities is provided at each follow-up meeting for the adoption of relevant action.
Proposal of considerations for conducting trials between systems capable of processing the new flight plan	RPO 5, NAM/CAR RPBANIP	Project C3		April 2012	An initial review of the delivery was presented at the flight plan format implementation follow-up meeting (Mexico, 26-30 March 2012).
Trials between systems capable of processing the new flight plan	RPO 5, NAM/CAR RPBANIP	ICAO/ States/ Territories/ International organisations		August 2012	Preliminary offline tests were conducted in November 2011 and January 2012 were conducted between Mexico, COCESNA; Dominican Republic and Aeroméxico. Other regional tests are scheduled for May to August 2012 at the level of both ANSPs and airspace users.
Proposed contingency procedures	RPO 5, NAM/CAR RPBANIP	Project C3		April 2012	An initial review of the delivery was presented at the flight plan format implementation follow-up meeting (Mexico, 26-30 March 2012).

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Application of contingency procedures	RPO 5, NAM/CAR RPBANIP	States/ Territories/ International organisations		August 2012	Contingency measures were analysed since March 2012, a final decision on their application is expected for August 2012.
Publication of transition actions, trials and other publications for users and stakeholders	RPO 5, NAM/CAR RPBANIP	States/ Territories/ International organisations		November 2012	Several AIC have been published. A sample AIC is available in the NACC website. Several publications are foreseen, such as a revised AIC and NOTAMs, which are in addition to publications by the State related to this implementation.
Proposal of technical/operational considerations for the transition	RPO 5, NAM/CAR RPBANIP	Project C3		April 2012	An initial review of the delivery was presented at the flight plan format implementation follow-up meeting (Mexico, 26-30 March 2012).
Assessment and adjustment of transition actions	RPO 5, NAM/CAR RPBANIP	ICAO		July 2012	
Drafting of the transition plan	RPO 5, NAM/CAR RPBANIP	States/ Territories/ International organisations		July 2012	
Monitoring of transition activities	RPO 5, NAM/CAR RPBANIP	ICAO		January 2013	
Resources needed	Designation of experts and implementation of activities through the group of experts (WGs).				

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
PROJECT C3 / PROYECTO C3
IMPLEMENT THE NEW ICAO FLIGHT PLAN FORMAT / IMPLEMENTAR EL NUEVO FORMATO DE PLAN DE VUELO DE LA OACI



CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
PROJECT C3 / PROYECTO C3
IMPLEMENT THE NEW ICAO FLIGHT PLAN FORMAT / IMPLEMENTAR EL NUEVO FORMATO DE PLAN DE VUELO DE LA OACI

ID	Task Name	2012											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
18	Coordination revision / Revisión por coordinación												
19	Delivery of document to ICAO / Entrega del documento a OACI												
20	Assessment of technical proposal for the transition / Evaluación de propuesta técnica para la transición												
21	Application of contingency measures / Aplicación de procedimientos de contingencia												
22	Trials between systems / Ensayos entre los sistemas												

10/04
11/04
23/04
27/04

ESTADOS
01/08 30/08
ESTADOS
01/08 30/08

APENDICE B1

PROJECT AUTOMATION

SAM Region	PROJECT DESCRIPTION (DP)	PD N° C1	
Programme	Project Title	Starting Date	Ending Date
Automation and ATM Situational Awareness (Programme Coordinator: Onofrio Smarrelli)	Automation <i>Project Coordinator: Alessandro Santoro (Brazil)</i> <i>Contributing experts: Automation Group (Brazil), Omar Gouarnalusse (Argentina) and SAM/IG ATM Automation Group</i>	September 2009	December 2014
Objective	Support States of the SAM Region in the implementation of automated systems, and in their regional interconnection		
Scope	The scope of the project includes the drafting of guidelines, trials for the identification of the automation level required at the Region's ATS units, and the implementation of automation systems and their interconnection through the VSAT based South American digital network (REDDIG)		
Metrics	<ul style="list-style-type: none"> • Drafting of the following documents: <ul style="list-style-type: none"> ✓ Guidance document on automated systems requirements at ATS units (SSS) ✓ Memorandum of Understanding (MoU) model for the interconnection of automated systems • Interconnection of automated systems between: <ul style="list-style-type: none"> ✓ Argentina-Brazil ✓ Argentina-Chile ✓ Argentina-Uruguay ✓ Brazil-Uruguay ✓ Brazil-Venezuela • Reduction in number of operational errors, including LHD 		
Strategy	<ul style="list-style-type: none"> • All tasks will be conducted by experts nominated by States and organizations of the SAM Region members of the Project <i>Automation</i>, under management of the project coordinator, in coordination with the programme coordinator. Communications among project members, as well as between the project coordinator and programme coordinator, shall be carried out through teleconferences and the Internet. In addition, the programme coordinator, together with the project coordinator and the contributing experts, can convene at SAM/IG implementation meetings • Once studies are completed, the results will be submitted to the ICAO programme coordinator as a final consolidated document for its analysis, review, approval and presentation at the GREPECAS PPRC 		

Justification	<ul style="list-style-type: none">• The CAR/SAM air traffic control centres have had difficulties in duly coordinating air traffic, an important factor contributing in air traffic incidents. The air traffic control automated centres' interconnection will permit a coordinated automated air traffic for the transfer of responsibilities between CAR/SAM adjacent area control centres, thus reducing the risk in aeronautical incidents generated by undue coordination activities and improving, at the same time, the planning phases for an efficient control of flights from/to corresponding Flight Information Regions (FIR).• The interconnection of automated systems would be facilitated, in view of REDDIG (SAM VSAT regional network), which has the necessary capability to transport automated systems applications• This project contributes towards the implementation of SAM PFF CNS 04, ATM 05 and ATM 06 of the <i>Air Navigation System Performance-Based Implementation Plan for the SAM Region (SAM PBIP)</i>
Related Projects	<ul style="list-style-type: none">• ATFM• Implementation of the New ICAO Flight Plan Model• Improve ATM Situational Awareness

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
Automation level required according to the ATM service provided in airspace and international aerodromes, assessing <ul style="list-style-type: none"> operational architecture design, characteristics and attributes for interoperability, data bases and software, and technical requirements. 	PFF SAM CNS 04 PFF SAM ATM 05 PFF SAM ATM06	Project Coordinator and ATM Automation Group		Completed	The System and Subsystem Specifications (SSS) document has been drafted for the identification of automated requirements necessary at ATS units (ACC)
Guidelines for elaboration of Memorandum of Understanding (MoU) for the implementation of the automation system interconnection	PFF SAM CNS 04	Project Coordinator and Omar Gouarnalusse (Argentina)		Completed	A model MoU for the interconnection of automated systems has been developed

¹

Gray: Activity has not started

Green: Activity has or will deliver planned milestone as scheduled

Yellow: Activity is behind schedule on milestone, but still within acceptable parameters to deliver milestone on time

Red: Activity has failed to deliver milestone on time, mitigation measures need to be identified and implemented

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
Monitor the implementation of flight plan data processing system and electronic transmission tools	<p>PFF SAM CNS 04</p> <p>PFF SAM ATM 05</p> <p>PFF SAM ATM06</p>	Project Coordinator		July 2013	<p>A regional action plan to monitor automated systems interconnection between adjacent ACCs has been drafted.</p> <p>With regard to automated systems interconnection, five MoUs have been drafted and signed between SAM States: Argentina-Brazil; Argentina-Chile; Argentina-Uruguay; Brazil-Uruguay; Brazil-Venezuela.</p> <p>Radar data has been interconnected between Argentina-Uruguay using IP protocol through REDDIG.</p> <p>Flight plan and radar data exchange trials have been conducted between Brazil-Venezuela.</p> <p>It is expected that by July 2013, automated systems interconnection is completed between States having drafted and signed the MoUs, as well as new MoU developed as new automated systems are implemented in the Region</p>

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
<p>Monitor Implementation of additional/advanced automation support tools to increase aeronautical information sharing</p> <ul style="list-style-type: none"> ETMS or similar MET information AIS/NOTAM dissemination Surveillance tools to identify airspace sector boundaries Use of A-SMGC in specific aerodromes, as required 	<p>PFF SAM CNS 04</p> <p>PFF SAM ATM 05</p> <p>PFF SAM ATM06</p> <p>PFF SAM AGA04</p> <p>PFF SAM AIM 02</p> <p>PFF SAM MET 04</p>	TBD		December 2014	Activity not started
Monitor implementation progress of automation activities in the SAM Region		ICAO		September 2009-December 2014	
Resources necessary	<p>Designation of experts in the conduct of the deliverables.</p> <p>Implement facilities required to permit interconnection of automated systems in accordance with the dates established in the MoUs drafted and signed to this end</p>				



GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO DE AUTOMATIZACION ATM / ATM AUTOMATION PROJECT

[illegible]

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO DE AUTOMATIZACION ATM / ATM AUTOMATION PROJECT

ID	Nombre de tarea	2009		2010		2011		2012		2013		2014		2015
		H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1
11	Modelo de plan acción regional para interconexión sistemas automatizados (planes de vuelo y datos radar) / Regional action plan model for interconnection of automated systems (flight plan and radar data)	Proyecto), Grupo Automatizacion ATM,OACI/ICAO 01/09 - 02/10												
12	MoU revisados y firmados para interconexion de sistemas automatizados (plan de vuelo y datos radar) / Reviewed and signed MoUs for interconnection of automated systems (flight plan and radar data)	Estados SAM,OACI/ICAO,A. Santoro (Coordinador Proyecto) 19/10 - 31/05												
13	Implantacion de la interconexion de sistemas automatizados (Datos radar y datos de plan de vuelo)	Estados SAM,OACI/ICAO 20/05 - 31/12												
14	Monitorear implantación herramientas apoyo adicionales/avanzadas de automatización para incrementar compartición información aeronáutica / Monitor implementation of additional/advanced automation support tools to increase aeronautical information sharing	01/09 - 31/12												
15	Recoleccion de informacion / Collection of information	TBD 04/05 - 01/08												
16	Análisis de la información / Analysis of information	TBD 02/08 - 16/10												
17	Entrega documento borrador para apoyo implantación sistemas avanzados de automatización / Delivery of document in support of advanced automation systems implementation	TBD 17/10 - 24/10												
18	Revisión documento final / Review of final document	Coordinador Proyecto, Grupo Automatizacion ATM,OACI/ICAO 15/11 - 31/01												
19	Implantación de sistemas automatizados avanzados / Implementation of advanced automated systems	Estados SAM 30/08 - 31/12												

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO DE AUTOMATIZACION ATM / ATM AUTOMATION PROJECT

ID	Nombre de tarea	2009		2010		2011		2012		2013		2014		2015
		H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1
20	Monitorear las actividades de implantación del proyecto Automatización ATM / Monitor implementation activities of ATM Automation project													
21	Monitorear las actividades de implantación del Proyecto Automatizacion ATM / Monitor implementation activities of ATM Automation project													

APPENDIX B2

PROJECT IMPROVE ATM SITUATIONAL AWARENESS IN THE SAM REGION

SAM Region	PROJECT DESCRIPTION (PD)	PD N° C2	
Programme	Project Title	Starting Date	Ending Date
ATM Automation and Situational Awareness (Programme Coordinator: Onofrio Smarrelli)	Improve ATM Situational Awareness in the SAM Region <i>Project Coordinator: Paulo Vila (Peru)</i> <i>Contributing experts: José Rubira, Marcos Vidal, Jorge Otiniano and Daniel Gomez (Peru); Javier Vittor (Argentina)</i>	October 2011	November 2013
Objective	Develop guidelines supporting the implementation of improvements in the situational awareness of ATS units in the South American Region		
Scope	<p>Guidelines supporting the implementation of various applications, such as common traffic visualization, common meteorological conditions visualization and communications in general</p> <ul style="list-style-type: none"> • Analysis of the current surveillance infrastructure and identification of necessary improvements to support en route and terminal airspaces, airspace classification, PBN and ATFM • Implementation of ADS-B, ADS-c and/or MLAT surveillance systems at selected airspaces • Minimum common electronic information and data bases required in support of decision-making process and alert systems towards an interoperable situational awareness among centralized ATFM units • Implement flight plan data process systems (new FPL format) and data communications tools among ACC's • Implement advanced automation support tools to contribute towards the sharing of aeronautical information 		
Metrics	<p>Drafting of following documents:</p> <ul style="list-style-type: none"> • Regional surveillance strategy for the implementation of systems in support of improvement of situational awareness – revised • Evaluation of the surveillance systems coverage in the SAM Region - completed • Guideline on technical/operational considerations for ADS-B implementation - completed • Guideline on technical/operational considerations for MLAT implementation - completed • Guideline on technical considerations in support of ATFM implementation - completed • Guideline for the drafting of SIGMET in graphical format - completed 		

Strategy	<ul style="list-style-type: none"> • All tasks will be conducted by experts nominated by States and organizations of the SAM Region members of the Project <i>Improve ATM situational awareness in the SAM Region</i>, under management of the project coordinator, in coordination with the programme coordinator. Communications among project members, as well as between the project coordinator and programme coordinator, shall be carried out through teleconferences and the Internet. In addition, the programme coordinator, together with the project coordinator and the contributing experts, can convene at SAM/IG implementation meetings • Once studies are completed, the results will be submitted to the ICAO programme coordinator as a final consolidated document for its analysis, review, approval and presentation at the GREPECAS PPRC
Justification	<ul style="list-style-type: none"> • Improve situational awareness has been identified as a great support for ATM, contributing in the increase of safety and in flight efficiency • During the seventh meeting of the SAM Implementation Group (SAM/IG/7), a review was made to the project <i>Improve ATM situational awareness in the SAM Region</i>, considering the nomination of a coordinator for the SAM Region • In addition, a close relationship with the other programmes and their respective projects is necessary, with the aim of collecting the operational requirements demanded by the mentioned applications and their respective tentative implementation dates • This project contributes to the implementation of SAM PFF CNS 04, ATM 05, ATM 06 and MET 03 of the <i>Air Navigation System Performance-Based Implementation Plan for the SAM Region (SAM PBIP)</i>
Related Projects	<ul style="list-style-type: none"> • Air Navigation Systems in Support of PBN • Automation • ATFM • Implementation of the ICAO New Flight Plan Format • ATN Ground-ground and Air-ground Applications

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
<i>Evaluation of surveillance infrastructure and identification of surveillance systems improvements</i>					
Revision to regional surveillance strategy for the implementation of systems in support to improvement of situational awareness	PFF SAM CNS 04 PFF SAM ATM 06	Paulo Vila (Peru)		June 2012	An initial revision to the strategy was presented at SAM/IG/8 meeting (Lima, Peru, 10-14 October 2011)
Evaluation of current surveillance systems coverage in the SAM Region	PFF SAM CNS 04	TBD		October 2012	Some surveillance coverage diagrammes have been provided by States of the Region Designation of an expert for the conduct of the activity is pending
<i>Drafting of regional plan for ADS-B and MLAT implementation</i>					
Guideline on technical/operational considerations for ADS-B implementation	PFF SAM CNS 04 PFF SAM ATM 06	José Rubira (Peru) Marco Vidal (Peru)		June 2012	The guideline will be based on the Peruvian experience regarding the progress in the implementation of ADS-B in Pisco
Guideline on technical/operational considerations for MLAT implementation	PFF SAM CNS 04 PFF SAM ATM 06	TBD		June 2013	Designation of an expert for the conduct of the activity is pending

¹

Gray: Activity has not started

Green: Activity has or will deliver planned milestone as scheduled

Yellow: Activity is behind schedule on milestone, but still within acceptable parameters to deliver milestone on time

Red: Activity has failed to deliver milestone on time, mitigation measures need to be identified and implemented

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
Guideline on technical considerations in support of ATFM implementation	PFF SAM CNS 01 PFF SAM ATM 05	Javier Vittor (Argentina)		October 2013	The guideline will base itself on the CAR/SAM ATFM Manual approved through GREPECAS Conclusion 16/35
Guideline for the drafting of SIGMET in graphical format	PFF SAM MET 03	Jorge Otiniano (Peru) Daniel Gómez (Perú)		October 2012	The guideline will be based on the Peruvian experience in the use of meteorological information in graphical format, including the SIGMET
Monitor the implementation of improving ATM situational awareness activities in the SAM Region		ICAO		March 2010-October 2013	
Resources necessary	Designation of experts for the conduct of the deliverables				

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
MEJORA A LA COMPRESION SITUACIONAL ATM EN LA REGION SAM / IMPROVE ATM SITUATIONAL AWARENESS IN THE SAM REGION

ID	Nombre de tarea	Duration	Start	Finish								
					H2	H1	H2	H1	H2	H1	H2	
1	MEJORA A LA COMPRESION SITUACIONAL ATM EN LA REGION SAM / IMPROVE ATM SITUATIONAL AWARENESS IN THE SAM REGION	541 days	Fri 28/10/11	Mon 25/11/13	Implantación basado en performance, Proyecto C del CNS/ATM/SG, Estrategia Regional Unificada de V							
2	Evaluación de la infraestructura de vigilancia e identificación de mejoras a los sistemas de vigilancia / Develop guidelines supporting the implementaion of improvements in the situation awareness of ATS units in the South American Region	136 days	Mon 05/12/11	Tue 12/06/12			05/12		12/06			
3	Revisión estrategia regional vigilancia para implantación sistemas en apoyo a mejora comprensión situacional/Revision to regional surveillance strategy for implementation of systems in support situational awareness improvement	136 days	Mon 05/12/11	Tue 12/06/12			05/12		12/06			
4	Recolectar información / Collect information	45 days	Mon 05/12/11	Fri 03/02/12	Paulo Vila (Coordinador Proyecto), OACI/ICAO							
5	Proceso de revisión / Reviewing process	84 days	Mon 06/02/12	Fri 01/06/12	Estados SAM, OACI/ICAO							
6	Entrega documento final / Delivery of final document	7 days	Fri 01/06/12	Tue 12/06/12	01/06 12/06							
7	Evaluación de la cobertura actual en los sistemas de vigilancia / Evaluation of the current surveillance system coverage	220 days	Mon 05/12/11	Mon 08/10/12			05/12		08/10			
8	Collect information / Recolectar información	105 days	Mon 05/12/11	Mon 30/04/12	OACI/ICAO, Coordinador Proyecto, Estados SAM							
9	Entrega de propuesta de borrador / Delivery of draft proposal	85 days	Mon 30/04/12	Mon 27/08/12	30/04 TBD 27/08							
10	Revisión de la propuesta borrador / Review of draft proposal	25 days	Mon 27/08/12	Mon 01/10/12	Estados SAM, OACI/ICAO							
11	Entrega documento final / Delivery of final document	5 days	Mon 01/10/12	Mon 08/10/12	01/10 TBD 08/10							
12	Guía de orientación con consideraciones técnicas/operacionales para la implantación de la ADS-B / Guidelines on technical/operational considerations for ADS B implementaion	173 days	Fri 28/10/11	Wed 27/06/12			28/10		27/06			
13	Recolectar información / Collect information	44 days	Fri 28/10/11	Thu 29/12/11	Jose Rubira (Peru), Marco Vidal (Peru)							
14	Apoyo en el suministro de información referente a las iniciativas existentes / Support on the information supply related to current initiatives	44 days	Thu 29/12/11	Wed 29/02/12	Jose Rubira (Peru), Marco Vidal (Peru), OACI/ICAO							
15	Entrega de propuesta de borrador/Delivery of draft proposal	22 days	Wed 29/02/12	Fri 30/03/12	Coordinador Proyecto, Estados SAM, OACI/ICAO							
16	Revisión de la propuesta borrador/Review of draft proposal	13 days	Fri 30/03/12	Wed 18/04/12	Jose Rubira (Peru), Marco Vidal (Peru)							

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
MEJORA A LA COMPRESION SITUACIONAL ATM EN LA REGION SAM / IMPROVE ATM SITUATIONAL AWARENESS IN THE SAM REGION

ID	Nombre de tarea	Duration	Start	Finish	2011			2012		2013		2014	
					H2	H1	H2	H1	H2	H1	H2	H1	H2
17	Ajustes finales al documento/Final document adjustments	8 days	Wed 30/05/12	Fri 08/06/12	Jose Rubira (Peru),Marco Vidal (Peru),Coordinador Proyecto,OACI/ICAO								
18	Entrega documento final/Delivery of final document	12 days	Mon 11/06/12	Tue 26/06/12	Jose Rubira (Peru),Marco Vidal (Peru)								
19	Guía de orientación con consideraciones técnicas/operacionales para la implantación MLAT / Guideline on technical/operational considerations for MLAT implementation	405 days	Mon 07/05/12	Fri 22/11/13	07/0522/11								
20	Recolectar información/Collect information	105 days	Mon 07/05/12	Fri 28/09/12	07/05TBD28/09								
21	Entrega de propuesta de borrador/Delivery of draft proposal	130 days	Mon 01/10/12	Fri 29/03/13	01/10TBD29/03								
22	Revision de la propuesta borrador/Review of draft proposal	110 days	Mon 01/04/13	Fri 30/08/13	Coordinador Proyecto,Estados SAM,OACI/ICAO								
23	Ajustes finales al documento/Final document adjustments	55 days	Mon 02/09/13	Mon 18/11/13	02/09TBD18/11								
24	Entrega documento final/Delivery of final document	5 days	Mon 18/11/13	Mon 25/11/13	18/11TBD25/11								
25	Guia de orientación en apoyo a la implantación ATFM / Guideline in support of ATFM implementation	258 days	Mon 09/07/12	Wed 03/07/13	09/0703/07								
26	Collect information/Recolectar información	111 days	Mon 09/07/12	Mon 10/12/12	Javier Vittor (Argentina),Coordinador Proyecto,OACI/ICAO								
27	Entrega de propuesta de borrador/Delivery of draft proposal	65 days	Tue 11/12/12	Mon 11/03/13	Javier Vittor (Argentina)								
28	Revision de la propuesta borrador/Review of draft proposal	25 days	Tue 12/03/13	Mon 15/04/13	Coordinador Proyecto,Estados SAM,OACI/ICAO								
29	Ajustes finales al documento/Final document adjustments	8 days	Thu 06/06/13	Mon 17/06/13	Javier Vittor (Argentina),Coordinador Proyecto								
30	Entrega documento final/Delivery of final document	12 days	Tue 18/06/13	Wed 03/07/13	Javier Vittor (Argentina),Coordinador Proyecto								
31	Guía de orientación para elaborar SIGMET en formato gráfico/Guideline for the drafting of SIGMET in graphic format	181 days	Mon 06/02/12	Tue 16/10/12	06/0216/10								
32	Analizar las diversas ventajas que ofrece el uso del SIGMET gráfico/Analyze advantages offered by the use of graphic SIGMET	45 days	Mon 06/02/12	Mon 09/04/12	Jorge Jotiniano (Peru),Coordinador Proyecto,OACI/ICAO,Daniel Gomez (Peru)								
33	Entrega de propuesta de borrador/Delivery of draft proposal	16 days	Fri 25/05/12	Fri 15/06/12	Jorge Jotiniano (Peru),Daniel Gomez (Peru)								
34	Supervisión o revisiones del plan borrador/Supervision or revisions to draft plan	14 days	Mon 18/06/12	Thu 05/07/12	Coordinador Proyecto,Estados SAM,OACI/ICAO								
35	Ajustes finales al documento/Final document adjustments	60 days	Mon 09/07/12	Mon 01/10/12	Jorge Jotiniano (Peru),Daniel Gomez (Peru),Coordinador Proyecto								

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
MEJORA A LA COMPRESION SITUACIONAL ATM EN LA REGION SAM / IMPROVE ATM SITUATIONAL AWARENESS IN THE SAM REGION

ID	Nombre de tarea	Duration	Start	Finish	2011			2012		2013		2014		
					H2	H1	H2	H1	H2	H1	H2	H1	H2	
36	Documento final de la Guía/Final document Guide	11 days	Mon 01/10/12	Tue 16/10/12	<div>Jorge Jotiniano (Peru)01/10Daniel Gomez (Peru)16/10</div>									
37	Monitorear las actividades de implantación de la mejora a la comprensión situacional en la Región SAM/Monitor the implementation of improving ATM situational awareness activities in the SAM Region	536 days	Fri 28/10/11	Mon 18/11/13	<div>28/1018/11</div>									
38	Monitorear las actividades de implantación de la mejora a la comprensión situacional en la Región SAM/Monitor the implementaion of improving ATM situational awareness activities in the SAM Region	536 days	Fri 28/10/11	Mon 18/11/13	<div>28/1018/11</div>									

APPENDIX B3

PROJECT IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN MODEL

SAM Region	PROJECT DESCRIPTION (PD)	PD N° C3	
Programme	Project Title	Starting Date	Ending Date
ATM Automation and Situational Awareness (Programme Coordinator: Onofrio Smarrelli)	Implementation of the New ICAO Flight Plan Model <i>Project Coordinator: Jorge Ávila (Brazil) (March 2010-December 2011)</i> <i>(Currently without project coordinator)</i> <i>Contributing experts: Alessander Santoro (Brazil), Omar Gouarnalusse (Argentina) and Project RLA/06/901</i>	March 2010	November 2012
Objective	Support in the implementation of the new flight plan model in follow-up to the guidelines established in the CAR/SAM regional strategy		
Scope	The scope of the project consists in the implementation of the following main activities: <ul style="list-style-type: none"> • Guidelines on transition to the new flight plan format • Conduct of trials between systems with capability to process the new flight plan • Drafting of contingency measures and decision on technical/operational considerations for the transition 		
Metrics	<ul style="list-style-type: none"> • Guidelines on the transition to the new flight plan format • Identification of automated systems affected by the new flight plan format • Model action plan for States implementation of the new flight plan format • Model AIC for the dissemination of the new flight plan format • Trials between systems with capability to process the new flight plan • Contingency measures and technical/operational considerations for the transition • Guidance document for safety assessment 		
Strategy	<ul style="list-style-type: none"> • All tasks will be conducted by experts nominated by States and organizations of the SAM Region members of the Project <i>Implementation of the New ICAO Flight Plan Model</i>, under management of the project coordinator, in coordination with the programme coordinator. Communications among project members, as well as between the project coordinator and programme coordinator, shall be carried out through teleconferences and the Internet. In addition, the programme coordinator, together with the project coordinator and the contributing experts, can convene at SAM/IG implementation meetings • Once studies are completed, the results will be submitted to the ICAO programme coordinator as a final consolidated document for its analysis, review, approval and presentation at the GREPECAS PPRC 		

Justification	The implementation of the new flight plan format must be co-ordinately carried out in all States of the Region and, in turn, the Region should be aligned with the implementation at other regions. Therefore, the drafting of a project supporting States in said implementation becomes necessary
Related Projects	<ul style="list-style-type: none">• Automation• Improve ATM situational awareness

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
Guidelines on transition to new flight plan format	PFF SAM ATM 07	ICAO and Project Coordinator		Completed	Guidelines were drafted to: Identify the automated systems affected by the new flight plan format Model action plan for States in the implementation of the new flight plan format Guidelines for the implementation of the new flight plan format during the transition phase
Develop regional strategy for transition to new flight plan format	FF SAM ATM 07	ICAO		Completed	GREPECAS approved the application of the CAR/SAM strategy for the implementation of Amendment 1 to PANS-ATM, 15th Edition (Doc. 4444) through its Conclusion 16/39
Consolidated analysis on assessments made by States on possible impacts in the implementation of the new FPL format	PFF SAM ATM 07	ICAO and Project Coordinator		Completed	All SAM States assessed the impact on the implementation of the new format in their automated systems. The consolidated assessment analysis was presented at SAM/IG/6 meeting (Lima, Peru, 18-22 October 2010)

¹

Gray: Activity has not started

Green: Activity has or will deliver planned milestone as scheduled

Yellow: Activity is behind schedule on milestone, but still within acceptable parameters to deliver milestone on time

Red: Activity has failed to deliver milestone on time, mitigation measures need to be identified and implemented

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
Proposed considerations to conduct trials between systems with new flight plan processing capacity	PFF SAM ATM 07	Project Coordinator, Omar Gouarnalusse (Argentina) and States		June 2012	Initial considerations are indicated in the national action plans for the implementation of the new flight plan format. Additional considerations were proposed at the second seminar on the implementation of the new flight plan format (Lima, Peru, 19-20 May 2011) 40% of the States of the Region have started implementing the changes in the automated systems, carrying out local partial trials. Initial trials have started between some States of the Region
Development of contingency procedures and determination of operational/ technical considerations for the transition	PFF SAM ATM 07	ICAO, Project Coordinator, RLA/06/901 Project and States		June 2012	A safety assessment guideline was drafted, with the purpose of carrying out a qualitative risk analysis from the SAM Region point of view before the validity of Amendment 1 to ICAO PANS-ATM, 15th Edition (Doc. 4444), related with the new flight plan content (NEW format) as of 15 November 2012 and during the transition period starting on 1 July 2012, when it is expected that airspace users use both the CURRENT and NEW formats The States of the Region are using this document as orientation in the safety assessment and in the drafting of a contingency plan in this regard

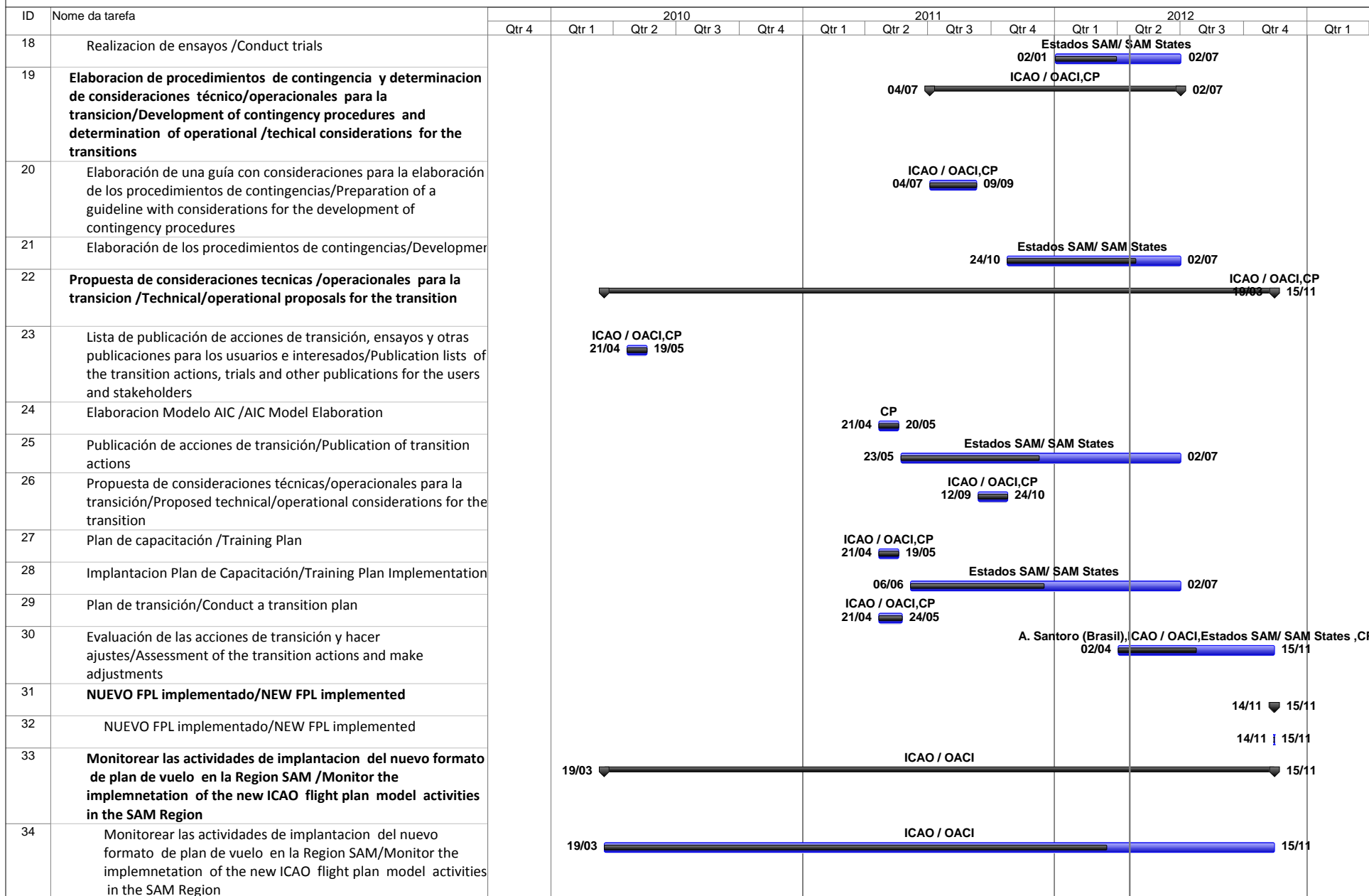
Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
<p>Technical/operational proposals for the transition</p> <p>Legislation</p> <p>Safety assessment</p> <p>Automated systems</p> <p>Training plan</p>	PFF SAM ATM 07	ICAO, Project Coordinator, Alessander Santoro (Brazil) and States		November 2012	<p><i>Legislation</i></p> <p>A model AIC for the dissemination of information on the new flight plan format implementation has been drafted. In addition, States national action plans must take into consideration amending the technical/operational documentation related with the new flight plan format. 30% of the States have started amending their national publication with regard to the new flight plan format</p> <p><i>Safety assessment</i></p> <p>(refer to information in row above)</p> <p><i>Automated systems</i></p> <p>40% of the States would be able to support the NEW and CURRENT flight plan format during the transition period</p> <p><i>Training plan</i></p> <p>70% of the States of the Region have started implementing the training plan in their national action plan for the implementation of the new flight plan format. The training is addressed to ATS, AIS operational personnel, technical personnel and users. As of April 2012, Chile will start with via web courses for national and foreign personnel interested</p>
Monitor the implementation of the new ICAO flight plan model activities in the SAM Region		ICAO		March 2010 - 15 November 2012	
Resources necessary	Funding for the implementation of changes in automated systems (AMHS / AFTN, FDP), adoption of possible contingency measures and training to personnel involved				

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
IMPLANTACION DEL NUEVO MODELO DE PLAN DE VUELO DE LA OACI / IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN MODEL

ID	Nome da tarefa	2010					2011				2012				
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1	Implantación del nuevo modelo de plan de vuelo de la OACI / Implementaion of the new ICAO Flight Plan Model		19/03												15/11
2	Project management process / Proceso de gerencia del proyecto		19/03		14/06										
3	Define Project Manager/Definir el Gerente de Proyecto		CP 19/03												
4	Identify States experts/Identificar expertos de los Estados		CP 19/03		14/06										
5	Guías sobre la transición al nuevo formato de plan de vuelo presentado / Guidelines on transition to new flight plan format		19/03		25/05										
6	Guía sobre identificación de los sistemas afectados con el NUEVO FPL/Guideline to identify the automated system affected by the NEW FPL		CP,ICAO / OACI 19/03		21/04										
7	Modelo de plan de acción para la implementación del NUEVO FPL por los Estados/Model of action plan for States in the implementation of the NEW FPL		CP,ICAO / OACI 19/03		25/05										
8	Guía sobre la implementación del NUEVO FPL durante el periodo de transición/Guidelines for the implementation of the NEW FPL during the transition phase		OACI/ICAO 19/03		24/05										
9	Elaborar una estrategia regional de transición al nuevo formato de plan de vuelo / Develop regional strategy for transition to new flight plan format		19/03							01/04					
10	Elaboración estrategia regional y aprobación por GREPECAS		19/03							CP,ICAO / OACI 01/04					
11	Análisis consolidado de las evaluaciones realizadas por los Estados de los posibles impactos de la implementación del nuevo formato de FPL/Consolidated analysis on assessments made by States on possible impacts in the implementation of the new FPL				24/05					15/10					
12	Identificación de los posibles impactos/Posible impact identification				Estados SAM/ SAM States 24/05					24/06					
13	Recolectar las evaluaciones/Collect the evaluation				Estados SAM/ SAM States 01/07					31/08					
14	Análisis consolidado de las evaluaciones realizadas por los Estados									ICAO / OACI,CP 06/09					
15	Elaboración de informe con el análisis consolidado de las evaluaciones realizadas por los Estados/Consolidated analysis on assessments made by States on possible impacts in the implementation of the NEW FPL									ICAO / OACI,CP 04/10					
16	Propuesta de consideraciones para realizar los ensayos entre sistemas con capacidad de procesamiento del nuevo plan de vuelo/Proposed considerations to conduct trials between systems with the new flight plan processing capacity														
17	Propuesta de consideraciones para realizar los ensayos entre sistemas con capacidad de procesamiento del nuevo plan de vuelo/Proposed considerations to conduct trials between systems with the capacity to process the new flight plan														

PM = Programme Manager/Gerente Programa
CP = Project Coordinator/Coordinador Proyecto

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
IMPLANTACION DEL NUEVO MODELO DE PLAN DE VUELO DE LA OACI / IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN MODEL





International Civil Aviation Organization
CAR/SAM Regional Planning and Implementation Group (GREPECAS)
First Meeting of the Programmes and Projects Review Committee (PPRC/1)
(Mexico City, Mexico, 25-27 April 2012)

Agenda Item 3: Review of GREPECAS Programmes and Projects

3.4 Projects of the Ground-Ground and Ground-Air Communications Infrastructure Programme

DESCRIPTION AND FOLLOW-UP OF THE ACTIVITIES OF THE ATN INFRASTRUCTURE (D1) AND GROUND-GROUND AND AIR-GROUND ATN APPLICATIONS (D2) PROJECTS OF THE GROUND-GROUND AND GROUND-AIR COMMUNICATIONS INFRASTRUCTURE PROGRAMME FOR THE CAR AND SAM REGIONS

(Presented by the Secretariat)

SUMMARY	
This working paper presents a brief description of the projects and updated information on the status of implementation of activities related to the ATN Architecture and ATN ground-ground and ground-air applications projects of the ATN architecture programme for the CAR and SAM Regions.	
REFERENCES	
<ul style="list-style-type: none">• Report of the Fifteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/15), Rio de Janeiro, Brazil, 13-17 October 2008;• Report of the First Meeting of the CNS/ATM Subgroup (CNS/ATM/2) Lima, Peru, 15-19 March 2010;• Report of the Second Meeting of the CNS/ATM Subgroup (CNS/ATM/2), Mexico City, 16-19 November 2010;• Report of the Sixteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/16), Punta Cana, Dominican Republic, 28 March to 1 April 2011	
ICAO strategic objectives:	<i>A – Safety C- Environmental protection and sustainable development of air transport</i>

1. Background

1.1 The GREPECAS/6 meeting, with a view to implementing performance-based regional plans in the CAR/SAM Regions pursuant to the Global Air Navigation Plan and the Global ATM Operational Concept, agreed to modify the GREPECAS organisation, whereby the AERMET, AGA/AOP, AIM and CNS/ATM Subgroups and their respective task forces were eliminated and their work programmes and terms of reference transformed into programmes and projects. Accordingly, it formulated Decisions 16/45 and 16/47.

1.2 In compliance with GREPECAS Decision 15/34 and to ensure better ATM and CNS coordination and the development of CAR/SAM performance-based plans for the implementation of the ATM global concept, the CNS/ATM Subgroup had already organised its work programme in nine projects distributed in four programmes (PBN, ATFM, automation and ATM situational awareness), serving as a reference for the new GREPECAS organisation.

1.3 In order to organise the work programme of the CNS/ATM Subgroup in projects, the Communications, Navigation, Surveillance and Air Traffic Management Subgroup held two meetings, the first one in Lima, Peru, on 15-19 March 2010, and the second one in Mexico City, Mexico, on 16-19 November 2010.

1.4 Decisions 16/45 and 16/46 maintained the nine projects distributed in the same four programmes of the CNS/ATM Subgroup, now with a view to improving effectiveness, reducing the time required for obtaining approvals, actions and results, having better internal coordination among the different bodies, participants and responsibilities, and having a project management and cost reduction methodology. GREPECAS/16 considered that the nine projects and four programmes would be implemented separately in the CAR and SAM Regions. Accordingly, officers of the NACC and SAM Regional Offices will coordinate CAR and SAM programmes, respectively.

1.5 There will be nine projects for the CAR Region and nine projects for the SAM Region. The coordinators of the CAR Region will be experts of CAR States, and the coordinators of SAM projects will be experts of the SAM Region.

1.6 As a result of this division, although in general the same titles for projects and programmes were maintained, some changes were made in project activities to be consistent with the reality of the respective region.

1.7 Planning for the implementation of activities related to ATN and its applications is contemplated in the ATN Architecture Implementation (D1) and the ATN Ground-Ground and Ground-Air Applications (D2) projects, both under the Ground-Ground and Ground-Air Communications Infrastructure Programme.

2. Discussion

2.1 At present, in the CAR Region, Project D addresses ATN architecture and its ATN ground-ground and ground-air applications, while Project D1 in the SAM Region deals with ATN ground-ground and ground-air applications. In order to facilitate the task of reviewing the projects for the CAR and SAM Regions, respectively, **Appendices A** and **B** to this working paper contain a project description document and the respective GANTT diagram.

2.2 Project description documentation contains information on objectives, scope, metrics, strategy, rationale, related projects, deliverables, responsible parties, resources needed, start and end, and a section for comments describing the status of the deliverable. The GANTT diagram shows, for each project, the time that is foreseen will be devoted to the various tasks or activities throughout the life cycle of the project.

2.3 Coordination of follow-up activities between the project coordinator and the experts nominated by the States, as well as the required coordination with the project coordinator were done *via* teleconferences or face-to-face meetings within the meeting schedule at each Regional Office.

2.4 Project achievements include the following:

- a) CAR Region: Project D assessed the technical capabilities and characteristics of CAR regional networks for ATN implementation. A third assessment involving the new MEVA III network and the MPLS IP digital network of the East Caribbean is contemplated. Likewise, assessments and preparatory work were initiated for the implementation of AMHS interconnections and their respective implementation plan.
- b) SAM Region: Project D1 conducted a study of the new ATN backbone architecture, developed the technical specifications, and started a bidding process for the implementation of a new ground- and satellite-based network that uses the IP protocol (REDDIG II) on the first half of 2012.

2.5 Difficulties encountered in the CAR Region for the implementation of project activities include the reduced number of experts, which hinders the attainment of deliverables. To the extent possible, other experts of the CAR working groups and the MEVA TMG should be available. The SAM Region currently lacks the experts to implement some of the activities, and it is expected that this situation will be resolved by the end of the first quarter of 2012.

3. **Suggested action**

3.1 The Meeting is invited to:

- a) take note of the information contained in this working paper; and
- b) review the project description and the GANTT diagram for each project described in **Appendices A** and **B** with a view to approving their planning, progress and implementation.

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APPENDIX A

PROJECT ON THE ATN INFRASTRUCTURE IN THE CAR REGION AND ITS GROUND-GROUND AND GROUND-AIR APPLICATIONS

CAR Region	PROJECT DESCRIPTION (DP)	DP N° D	
Programme	Title of the Project	Start	End
Ground-ground and air-ground communications infrastructure (ICAO programme coordinator: Julio Siu)	ATN infrastructure in the CAR Region and its ground-ground and ground-air applications <i>Project coordinator:</i> Dulce Roses (United States) <i>Experts contributing to the project:</i> Carlos Jimenez (Cuba) Fernando Casso (Dominican Republic) Roger Perez/Eduardo Vega/Mayda Avila (COCESNA) Veronica Ramdath/ Randy Gomes (Trinidad and Tobago) Susan E. Pfingstler (IATA)	March 2010	June 2015
Objective	Support the implementation of the ATN network in the CAR Region and of its ground-ground and air-ground applications, based on the regional performance objectives of the NAM/CAR performance-based implementation plan (NAM/CAR RPBANIP) and the CAR/SAM PNA CNS 1 Ba, 1Bb, and 1Bc plans.		
Scope	The project contemplates: <ul style="list-style-type: none"> • an analysis of the existing ATN implementation capacity of CAR networks • an assessment and definition of technical improvements and/or requirements for ATN implementation • guides and recommendations to expedite the implementation of ground-ground (AIDC, AMHS) and air-ground (using VDL2 and FMC WPR) applications, taking into account Doc GOLD 		
Metrics	<ul style="list-style-type: none"> • Percentage of implementation of ATN architecture and routers • Number of AMHS/AIDC applications implemented in the CAR Region • Number of guides on ATN and ATN applications completed 		
Strategy	<ul style="list-style-type: none"> • Project activities were coordinated amongst project members, the project coordinator, and the programme coordinator, mainly via teleconferences and meetings held during events contemplated in the work programme, as was the case of the meeting held immediately after the AMHS meeting in April 2012. • The project coordinator and the programme coordinator coordinated the requirements of other projects, together with information from the NAM/CAR implementation working groups. Additional experts were added as required for specialised tasks. • The deliverables of this project were sent to the programme coordinator for submittal to GREPECAS. 		

Rationale	Support implementation and propose documentation for use by States as a reference for the transition, testing, and contingencies related to the new flight plan format.
Related projects	This project is related to the projects of Programmes B, C, and MET

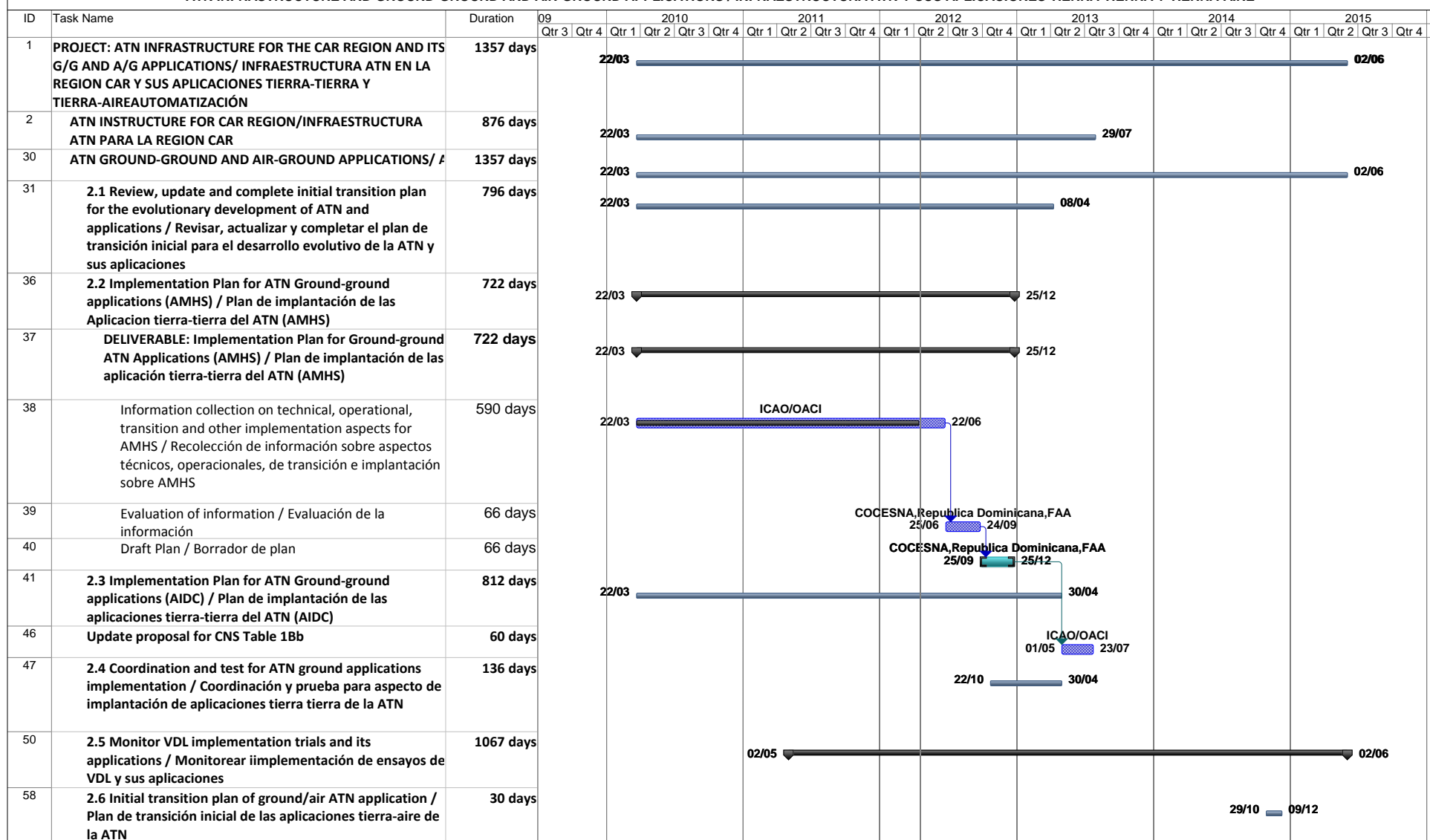
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation^{1*}	Date of delivery	Comments
Performance assessment of the MEVA II REDDIG interconnection	RPO 9, NAM/CAR RPBANIP	Project D		Completed	Assessments made during MEVA TMG meetings
Technical study of CAR networks for ATN implementation	RPO 9, NAM/CAR RPBANIP	Project D		December 2012	To be conducted in 3 parts: The first and second parts concerning the MEVA II and ECAR networks have been completed. Currently, work is being done on the third part involving MEVA III- ECAR MPLS
Assessment of preliminary test results to determine the required bandwidth for the ATN network in the CAR and SAM Regions	RPO 9, NAM/CAR RPBANIP	Project D		Completed	Completed 2010
Study for the configuration of an IP backbone network	RPO 3,9, 11, 12 NAM/CAR RPBANIP	Project D		March 2013	
Updating of the CAR/SAM regional ATN router plan	RPO 1,3,5,9,11, 12 NAM/CAR RPBANIP	ICAO		July 2013	
Study of communication requirements to support ATFM implementation	RPO 3 and 9 NAM/CAR RPBANIP	Project D		January 2013	

¹ *Grey Task not started yet
Green Activity being implemented as scheduled
Yellow Activity started with some delay, but expected to be implemented on time
Red Activity not implemented on time; mitigation measures are required

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ^{1*}	Date of delivery	Comments
Study of communication requirements to support the migration to the new OPMET format	RPO 9 and 12 NAM/CAR RPBANIP	Project D		January 2013	
Plan for the transition of ATN and ATN applications in the CAR Region	RPO 1,3,4,5,9,11 and 12 NAM/CAR RPBANIP	Project D		April 2013	
AMHS addressing plan	RPO 9, NAM/CAR RPBANIP	States/ Territories/ International Organisations		Completed	
Plan for the implementation of ATN ground-ground applications (AMHS)	RPO 1,3,5,9,11, 12 NAM/CAR RPBANIP	States/ Territories/ International organisations		December 2012	
Plan for the implementation of ATN ground-ground applications (AIDC)	RPO 9 NAM/CAR RPBANIP	Project D		April 2013	
Proposed update of Table CNS 1Bb	RPO 9 NAM/CAR RPBANIP	ICAO		July 2013	
Assessment and recommendations related to AMHS coordination and testing	RPO 9, NAM/CAR RPBANIP	ICAO		April 2013	
Plan for the implementation of VDL and its applications in the CAR Region	RPO 9, NAM/CAR RPBANIP	ICAO		July 2014	
Assessment of the results of trials on the implementation of VDL and its applications	RPO 9, NAM/CAR RPBANIP	Project D		May 2015	
Plan for the transition of ATN ground-air applications	RPO 9, NAM/CAR RPBANIP	Project D		June 2015	

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ^{1*}	Date of delivery	Comments
Monitoring of the implementation of available technology for ATN ground-air applications	RPO 9, NAM/CAR RPBANIP	ICAO/ States/ Territories		June 2015	
Resources needed	Designation of experts and implementation of activities by the group of experts (WGs).				

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
ATN INFRASTRUCTURE AND GROUND-GROUND AND AIR-GROUND APPLICATIONS / INFRAESTRUCTURA ATN Y SUS APLICACIONES TIERRA-TIERRA Y TIERRA-AIRE



APPENDIX B1

PROJECT ATN ARCHITECTURE IN THE SAM REGION

SAM Region	PROJECT DESCRIPTION (PD)	PD N° D1	
Programme	Project Title	Starting Date	Ending Date
Ground-ground and Air-ground Telecommunications Infrastructure (Programme Coordinator: Onofrio Smarrelli)	ATN Architecture in the SAM Region <i>Project Coordinator: Athayde Licério Vieira Frauche (Brazil)</i> <i>Contributing experts: Omar Gouarnalusse (Argentina), Michel Areno (France), Jose Luis Paredes (Peru), Jesús Bolívar (Venezuela), Christian Amaris de León (Colombia) and Hernando Lara (Bolivia)</i>	March 2010	June 2013
Objective	Study and implementation of optimum architecture for an IP protocol backbone network (REDDIG II) for the SAM Region		
Scope	<p>Study and implementation of an IP backbone network for the SAM Region, including an optimum configuration and considering, among other deliverables, the following:</p> <ul style="list-style-type: none"> • Technical review of the regional telecommunications networks (ground, satellite or mixed) for the implementation of ATN under a cost-benefit analysis • Holding of trials to determine the ATN bandwidth necessary to support ground applications • IP addressing scheme (IPv4 and IPv6) and analysis of the data communications infrastructure in support to ATS operational requirements in the short, medium and long term • Support in the bidding process by TCB (Montreal) and in the implementation of the IP backbone network for the SAM Region 		
Metrics	<ul style="list-style-type: none"> • Percentage concluded of the study for an IP backbone network for the SAM Region • Drafting of technical specifications for REDDIG II • REDDIG II implementation percentage 		
Strategy	<ul style="list-style-type: none"> • All tasks will be conducted by experts nominated by States of the SAM Region members of the project <i>ATN Architecture in the SAM Region</i>, under management of the project coordinator, in coordination with the programme coordinator. Communications among project members, as well as between the project coordinator and programme coordinator, shall be carried out through teleconferences and the Internet. In addition, the programme coordinator, together with the project coordinator and the contributing experts, can convene at SAM/IG implementation meetings • Once studies are completed and REDDIG II is implemented, the results will be submitted to the ICAO programme coordinator as a final consolidated document for its analysis, review, approval and presentation at the GREPECAS PPRC 		

<p>Justification</p>	<ul style="list-style-type: none"> • A study on an ATN IP backbone network for the SAM Region will permit defining the optimum communications network architecture for said Region, currently mainly based on REDDIG (satellite digital communications network). • To arrive to the conclusion on the better network infrastructure, the determining of the current applications demand in terms of band width is considered very important. In this respect, States are carrying out tests, mainly AMHS, to determine the associated space segment. The action is considered as the beginning of the network's cost-benefit relationship research. • In addition, the increasing band width requirements for new services such as automation, surveillance, ATFM and meteorology. Also, a close relationship with the other programmes and their respective projects is necessary, with the aim of collecting the operational requirements demanded by the mentioned applications and their respective tentative implementation dates • After developing all tasks necessary for determining the better network infrastructure, technical specifications for the purchasing and implementation of the SAM backbone network (REDDIG II) will be drafted • This project ends once the SAM IP backbone network (REDDIG II) is implemented • This project contributes to the implementation of SAM PFF CNS 01, CNS04, ATM 05, ATM 06, MET 04 and AIM 02 of the <i>Air Navigation System Performance-Based Implementation Plan for the SAM Region (SAM PBIP)</i>
<p>Related Projects</p>	<ul style="list-style-type: none"> • Air Navigation Systems in Support of PBN • Automation • Improve ATM Situational Awareness • Implementation of the ICAO New Flight Plan Format • ATN Ground-ground and Air-ground Applications

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
Analysis of the current SAM communications network (REDDIG)	PFF SAM CNS01	REDDIG Administration, Project Coordinator and Omar Gouarnalusse (Argentina)		August 2010	Completed
Analysis of the current MEVA II/ REDDIG interconnection	PFF SAM CNS01	REDDIG Administration		June 2011	Completed
Analysis of the AMHS band width impact on the current REDDIG satellite infrastructure	PFF SAM CNS01	Project Coordinator and Omar Gouarnalusse (Argentina)		September 2010	Completed
Long term applications requirements in the SAM Region	PFF SAM CNS01 PFF SAM CNS 04 PFF SAM MET 04 PFFs SAM ATM 05 and 06 PFF SAM AIM 02	ICAO		September 2010	Completed

¹**Gray:** Activity has not started**Green:** Activity has or will deliver planned milestone as scheduled**Yellow:** Activity is behind schedule on milestone, but still within acceptable parameters to deliver milestone on time**Red:** Activity has failed to deliver milestone on time, mitigation measures need to be identified and implemented

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
Comparative study on satellite, ground and mixed (satellite and ground) IP based network models for the SAM Region	PFF SAM CNS 01	Project Coordinator, Omar Gouarnalusse (Argentina) and REDDIG Administration		October 2010	Completed Approved by REDDIG Member States
Definition of ATN IP network infrastructure model for the SAM Region	PFF SAM CNS 01	Project Coordinator, Omar Gouarnalusse (Argentina) and REDDIG Administration		October 2010	Completed Approved by REDDIG Member States
Completion of IPv4 addressing plan for the SAM Region	PFF SAM CNS 01	Project Coordinator and Omar Gouarnalusse (Argentina)		August 2010	Completed The addressing scheme was approved through GREPECAS Conclusion 16/37
Drafting of technical specifications for REDDIG II	PFF SAM CNS01 PFF SAM CNS 04 PFF SAM MET 04 PFFs SAM ATM 05 and 06 PFF SAM AIM 02	Project Coordinator, Omar Gouarnalusse (Argentina) and REDDIG Administration		August 2011	Completed and approved by REDDIG Member States
Drafting of safety guidelines for REDDIG	PFF SAM CNS 01	REDDIG Administration		May 2012	An initial document has been drafted

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
Drafting of IP Routing Policy	PFF SAM CNS 01	Project Coordinator		October 2013	An initial document has been drafted
Support in the bidding process and in the offer evaluation		Project Coordinator, Omar Gouarnalusse (Argentina), Michel Arenó (France), José Luis Paredes (Peru), Jesus Bolívar (Venezuela), Hernando Lara (Bolivia), Christian Amaris (Colombia) and REDDIG Administration		April 2012	The bidding will be conducted by TCB, under coordination with the ICAO Regional office. The evaluation process will count with the REDDIG Administration and CNS experts selected by the REDDIG Member States
Support in the implementation of REDDIG II		REDDIG Administration, Project Coordinator and Omar Gouarnalusse (Argentina)		November 2012- December 2013	This activity is scheduled to start at the end of 2012
Monitor the ATN architecture project activities in the SAM Region		ICAO		March 2010- December 2013	
Resources necessary	Economic contribution necessary for the implementation of REDDIG II				

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
ATN ARCHITECTURE IN THE SAM REGION / ARQUITECTURA DE LA ATN EN LA REGION SAM SAM

ID	Nombre de la tarea	2009		2010		2011		2012		2013		2014	
		H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
1	ATN ARCHITECTURE IN THE SAM REGION / ARQUITECTURA DE LA ATN EN LA REGION SAM SAM			19/03								30/01	
2	PROJECT MANAGEMENT PROCESS/PROCESOS DE GERENCIAMIENTO DEL PROYECTO			19/03	12/07								
3	FORMALIZATION OF THE PROJECT FORMALIZACIÓN DEL PROYECTO			19/03	12/07								
4	DP (Description of the Project / Descripción del Proyecto)			19/03	12/07								
20	EAP			02/06	09/07								
25	PROCESS FOR THE STUDY OF A SAM ATN INFRASTRUCTURE / PROCESOS DE ESTUDIOS DE UNA INFRAESTRUCTURA DE LA ATN SAM			19/05								24/12	
26	START OF THE PROJECT / INICIO DEL PROYECTO			19/05	29/07								
27	Collect and analyze current networks infrastructure and applications/services / Levantar y Analizar la infraestructura y Aplicaciones/Servicios de las Redes Actuales			19/05	29/07								
28	Analysis of the current SAM communications network (REDDIG) / Analisis de la situación actual de la red de comunicaciones SAM (REDDIG)			O. Gouarnalusse, A. Frauche 19/05	03/08								
29	Analysis of REDDIGs current infrastructure / Análisis de la Infraestructura actual de la REDDIG			O. Gouarnalusse, A. Frauche, Administración REDDIG 19/05	22/06								
30	Analysis of bandwidth used in REDDIG / Análisis del ancho de banda utilizado en la REDDIG			O. Gouarnalusse, A. Frauche 19/05	26/07								
31	Analyze bandwidth for AFTN service / Analizar el ancho de Banda para el Servicio AFTN			O. Gouarnalusse, A. Frauche 19/05	26/07								
32	Identify and analyze traffic generated by the application / Identificar e analizar el tránsito generado por la aplicación			O. Gouarnalusse, A. Frauche, Administración REDDIG 19/05	26/07								
33	Analysis of the bandwidth used by the application / Análisis del ancho de banda utilizado por la aplicación			O. Gouarnalusse, A. Frauche, Administración REDDIG 19/05	26/07								
34	Analyze band for voice over frame relay / Analizar Banda para Voz Over Frame Relay			19/05	26/07								
35	Identify and analyze traffic generated by the application / Identificar y analizar el tránsito generado por la aplicación			O. Gouarnalusse, A. Frauche, Administración REDDIG 19/05	26/07								
36	Analysis of the bandwidth used with DAMA / Análisis del ancho de banda utilizado con la utilización de DAMA			O. Gouarnalusse, A. Frauche, Administración REDDIG 19/05	26/07								
37	Analysis of the bandwidth used with PAMA / Análisis del ancho de banda utilizado con la utilización de PAMA			O. Gouarnalusse, A. Frauche, Administración REDDIG 19/05	26/07								
38	Analyze band for surveillance/automated systems / Analizar banda para sistema de vigilancia/automatizados			19/05	26/07								

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
ATN ARQUITECTURE IN THE SAM REGION / ARQUITECTURA DE LA ATN EN LA REGION SAM SAM

ID	Nombre de la tarea	2009		2010		2011		2012		2013		2014	
		H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
39	Identify and analyze traffic generated by the application / Identificar e analizar el tránsito generado por la aplicación			O. Gouarnalusse, A. Frauche, Administración REDDIG 19/05 19/05 26/07									
40	Analysis of the bandwidth used by the application / Análisis del ancho de banda utilizado por la aplicación			O. Gouarnalusse, A. Frauche, Administración REDDIG 19/05 19/05 26/07									
41	Identify possible logistical problems in terms of equipment discontinuity / Identificar posibles problemas logísticos en términos de discontinuidad de equipos			O. Gouarnalusse, A. Frauche, Administración de la REDDIG 23/06 23/06 14/07									
42	Final report / Informe Final			O. Gouarnalusse, A. Frauche, Administración de la REDDIG 27/07 27/07 03/08									
43	Analysis of the current MEVA II/REDDIG interconnection / Analisis de la situacion atual de la Interconexión MEVA II/REDDIG												
44	Analysis of the current interconnection infrastructure / Análisis de la Infraestructura actual de interconexión												
45	MEVA II/REDDIG interconnection performance analysis / Análisis del desempeño de la interconexión MEVA II /												
46	Analysis of the bandwidth used in the interconeciton / Análisis del ancho de banda utilizado en la interconexión												
47	Analysis of bandwidth for AFTN service / Analizar el ancho de Banda para el Servicio AFTN												
48	Identify and analyze traffic generated by the application / Identificar y analizar el tránsito generado por la aplicación												
49	Analysis of the bandwidth used by the services / Análisis del ancho de banda utilizado por los servicios												
50	Analyze band for voice over frame relay / Analizar Banda para Voz Over Frame Relay												
51	Identify and analyze traffic generated by the application / Identificar e analizar el tránsito generado por la aplicación												
52	Analysis of the bandwidth used with DAMA / Análisis del ancho de banda utilizado con la utilización de DAMA												
53	Analysis of the bandwidth used with PAMA / Análisis del ancho de banda utilizado con la utilización de PAMA												
54	Analyze band for surveillance/automated systems / Analizar Banda para Sistema de Vigilancia/automatizados												
55	Identify and analyze traffic generated by the application / Identificar y analizar el tránsito generado por la aplicación												
56	Analysis of the bandwidth used by the application / Análisis del ancho de banda utilizado por la aplicación												

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
ATN ARQUITECTURE IN THE SAM REGION / ARQUITECTURA DE LA ATN EN LA REGION SAM SAM

ID	Nombre de la tarea	2009		2010		2011		2012		2013		2014	
		H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
57	Identify possible logistical problems in terms of equipment discontinuity / Identificar posibles problemas logísticos en términos de discontinuidad de equipos					Administración REDDIG 22/12	12/01						
58	Final report / Informe Final					Administración de la REDDIG 25/04	30/05						
59	Remittance of information to Programme Coordinator / Envío de las Informaciones al Coordinador de Programa					Administración REDDIG 03/06	03/06						
60	Consolidated report on the survey and analysis of the current network infrastructure and applications/services / Informe Consolidado del levantamiento y análisis de la infraestructura e Aplicaciones/Servicios de la Red Actual					Coordinador Proyecto 06/06	29/07						
61	DESARROLLO DEL PROYECTO												
62	Comunicaciones de datos en apoyo a la ATM					19/05	28/10						
63	Trials to determine the ATN bandwidth to support ATM applications / Pruebas para Determinar el Ancho de Banda de la ATN para Soportar Aplicaciones ATM					19/05	10/01						
64	Trials guideline for AMHS bandwidth / Guía de pruebas de Ancho de Banda AMHS					19/05	16/08						
65	Study the message statistics among States /Estudiar las estadísticas de mensajes entre Estados					Coordinador Proyecto 19/05	26/05						
66	Prepare the simulation script / Preparar el "script" para la simulación					Coordinador Proyecto 19/05	26/05						
67	Trials schedules / cronogramas de pruebas					O. Gouarnalusse, A. Frauche 15/07	16/07						
68	Trials types / Tipos de pruebas					A. Frauche 15/07	27/07						
69	Carry out trials between Argentina (Ezeiza) and Brazil (Manaos) / Realizar las Pruebas entre Argentina (Ezeiza) y Brasil (Manaos)					O. Gouarnalusse, A. Frauche 28/07	04/08						
70	Analysis of the data and AMHS bandwidth determination / Análisis de los Datos y Determinación del Ancho de Banda para AMHS					05/08	16/08						
71	Analysis of the trials AMHS data between Argentina (Ezeiza) nad Brasil (Manaus) Análisis de los datos de las pruebas de AMHS entre Argentina (Ezeiza) y Brasil (Manaos)					O. Gouarnalusse, A. Frauche 05/08	16/08						
72	Final report on bandwidth necessary for AMHS / Informe Final de la determinación del ancho de banda necesario para AMHS					Coordinador Proyecto 25/08	01/09						
73	Análisis del impacto del ancho de banda en la infraestructura actual satelital					01/09	10/01						
74	Inform REDDIG Administration of the trial results between Ezeiza and Manaos / Informar a la Administración de la REDDIG los resultados de las pruebas entre Manaos y Ezeiza					Coordinador Proyecto, Coordinador Programa 01/09	02/09						
75	Bandwidth in REDDIG / Ancho de Banda en la REDDIG					02/09	30/09						

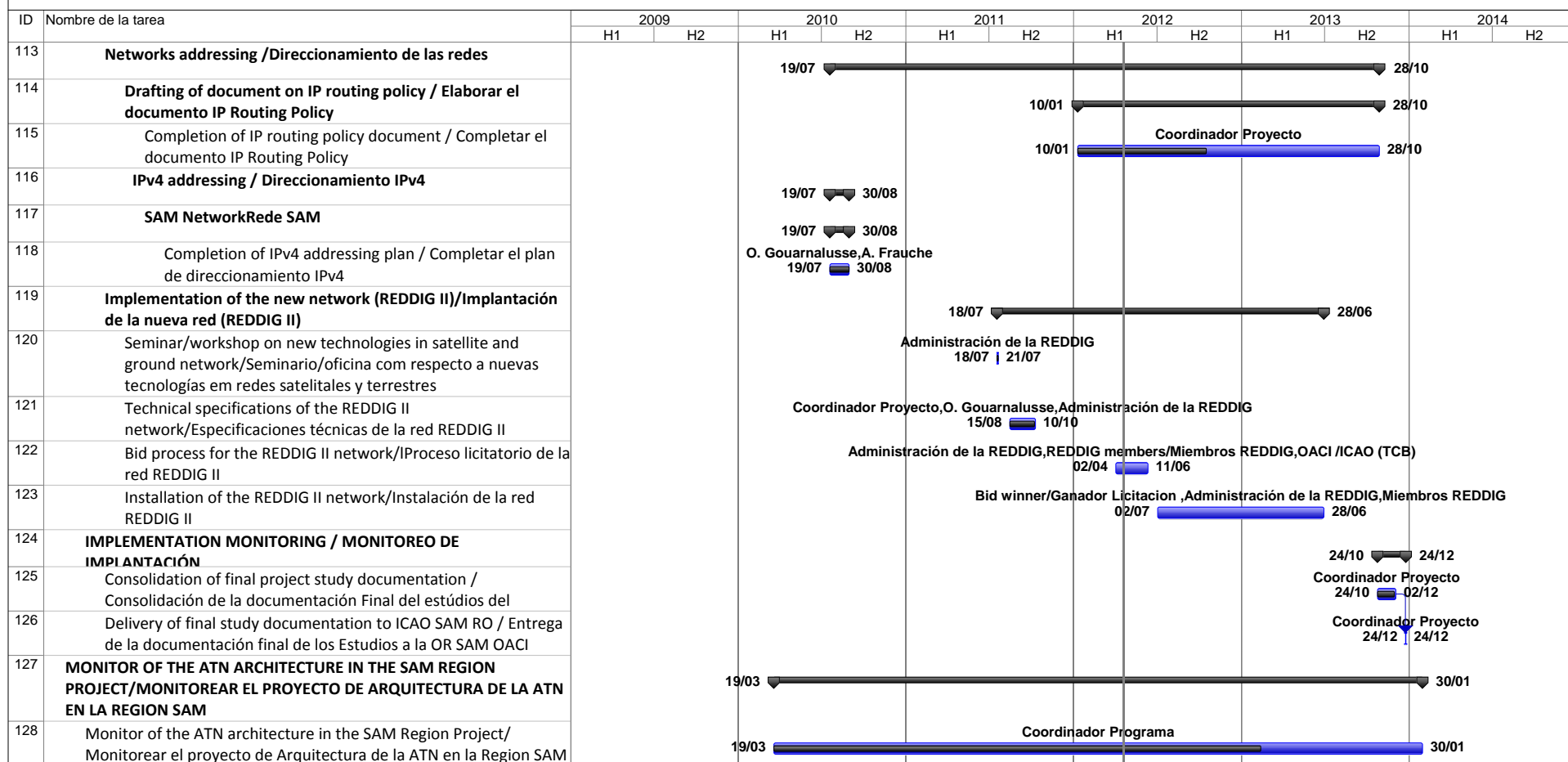
CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
ATN ARCHITECTURE IN THE SAM REGION / ARQUITECTURA DE LA ATN EN LA REGION SAM

ID	Nombre de la tarea	2009		2010		2011		2012		2013		2014	
		H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
76	Study the bandwidth necessary for AMHS under current configuration / Estudiar el ancho de banda necesario para AMHS con la configuración actual			O. Gouarnalusse, A. Frauche 02/09	23/09								
77	Determine the costs increase for AMHS / Determinar el incremento de costos para AMHS			O. Gouarnalusse, A. Frauche 23/09	30/09								
78	Study and analysis of bandwidth in the MEVAII/REDDIG interconexion / Estudio y analisis de la utilización de ancho de banda en la interconexión de las redes MEVA II/ REDDIG				01/11		10/01						
79	Study the bandwidth necessary for AMHS under current configuration / Estudiar el ancho de banda necesario para AMHS con la configuración actual			Administración REDDIG 01/11	31/12								
80	Determine the costs increase for AMHS in the MEVAII/REDDIG / Determinación de los costos para el incremento de banda en la MEVAII/REDDIG			Administración REDDIG 03/01	10/01								
81	Identify and study the new services and applications in the SAM Region / Identificar y estudiar los nuevos servicios e aplicaciones ATN en la Región SAM			19/05	08/09								
82	Long term applications requirements for the SAM Region / Requerimientos de Aplicaciones a lo largo del tiempo en la Región SAM			19/05	08/09								
83	ATM AUTOMATION AND SITUATIONAL AWARENESS / AUTOMATIZACION ATM Y CONPRENSION SITUACIONAL			19/05	08/09								
84	Automation (systems interconnection) / Automatización (Interconexión de Sistemas)			19/05	30/06								
85	Analysis of bandwidth requirements for AIDC/OLDI application / Analizar los requerimientos de ancho de banda para la aplicación AIDC/OLDI.			Coordinador Proyecto, Coordinador Programa 19/05	30/06								
86	Analizar los requerimientos de ancho de banda para la aplicación de datos radar.			Coordinador Proyecto, Coordinador Programa 19/05	30/06								
87	Improvement to the situational awareness / Mejora a la Comprensión Situacional			28/07	08/09								
88	Analysis of bandwidth requirements for ADS application / Analizar los requerimientos de ancho de banda para las aplicación ADS			Coordinador Proyecto, Coordinador Programa 28/07	08/09								
89	Analysis of bandwidth requirements for Multilateration application / Analizar los requerimientos de ancho de banda para la aplicación Multilateración.			Coordinador Proyecto, Coordinador Programa 28/07	08/09								
90	AIM			19/05	30/06								
91	Analyze the bandwidth requirements for related applications / Analizar los requerimientos de ancho de banda para las aplicaciones relacionadas			Coordinador Proyecto, Coordinador Programa 19/05	30/06								
92	ATFM			19/05	30/06								

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
ATN ARQUITECTURE IN THE SAM REGION / ARQUITECTURA DE LA ATN EN LA REGION SAM SAM

ID	Nombre de la tarea	2009		2010		2011		2012		2013		2014	
		H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
93	Analysis of bandwidth requiriements for applications in support of ATFM implementation / Analizar los requerimientos de ancho de banda para las aplicaciones em apoyo de la Implantación de la ATFM			Coordinador Proyecto, 19/05	Coordinador Programa, 30/06								
94	MET												
95	Analizar los requerimientos de ancho de banda para las aplicaciones MET			Coordinador Proyecto, 19/05	Coordinador Programa, 30/06								
96	Consolidated report on the study for new services and ATM/ATN applications in the SAM Region / Informe Consolidado del Estudio de Nuevos Servicios y Aplicaciones ATM / ATN em la Región SAM			Coordinador Proyecto, 23/08	Coordinador Programa, 06/09								
97	Study of the desired scenario / Estudio del escenario deseado												
98	SAM Network / Red SAM												
99	Infrastructure of a satellite network / Infraestructura de una Red Satélite												
100	Study on a SAM satellite IP network structure / Estudiar una estructura de rede IP SAM satelital			O. Gouarnalusse, A. Frauche, 16/08	Administración de la REDDIG, 30/08								
101	Determination of SAM satellite network costs / Determinación de los costos de Red SAM Satelital			O. Gouarnalusse, A. Frauche, 23/08	Administración de la REDDIG, 06/09								
102	Infrastructure of a ground network / Infraestructura de una Red Terrestre												
103	Study on a SAM ground IP network structure / Estudiar una estructura de rede IP SAM Terrestre			O. Gouarnalusse, A. Frauche, 16/08	Administración de la REDDIG, 30/08								
104	Determination of SAM ground network costs / Determinación de los costos de Red SAM Terrestre			O. Gouarnalusse, A. Frauche, 23/08	Administración de la REDDIG, 06/09								
105	Infrastructure of a mixed network (satellite + ground) / Infraestructura de una Red Mixta (Satélite + Terrestre)												
106	Study on a SAM mixed IP network structure (satellite + ground) / Estudiar una estructura de rede IP SAM Mixta (terrestre y satélite)			O. Gouarnalusse, A. Frauche, 16/08	Administración de la REDDIG, 30/08								
107	Determination of SAM mixed network costs / Determinación de los costos de Red SAM Mixta			O. Gouarnalusse, A. Frauche, 23/08	Administración de la REDDIG, 06/09								
108	Comparative analysis between network infrastructures / Análisis comparativo entre las infraestructuras de red.			O. Gouarnalusse, A. Frauche, 08/09	Administración de la REDDIG, 06/10								
109	Analysis of desired platform implementation costs / Análisis de costos de implementación de la plataforma deseada			O. Gouarnalusse, A. Frauche, 06/09	Administración REDDIG, 04/10								
110	Definition of desired platform / Definición de la Plataforma deseada			Miembros REDDIG, 06/10	Administración de la REDDIG, 22/10								
111	Drafting of guide on development of information security / Elaborar Guía de Desarrollo de Seguridad de la Información							10/01	31/05				
112	Completion of guide on REDDIG network communications security / Completar el guía de seguridad para la red de comunicación REDDIG					Coordinador Proyecto, 10/01	Administración de la REDDIG, 31/05						

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
ATN ARCHITECTURE IN THE SAM REGION / ARQUITECTURA DE LA ATN EN LA REGION SAM



APPENDIX B2

PROJECT ATN GROUND-GROUND AND AIR GROUND APPLICATIONS IN THE SAM REGION

SAM Region	PROJECT DESCRIPTION (PD)	PD N° D2	
Programme	Project Title	Starting Date	Ending Date
Ground-ground and Air-ground Telecommunications Infrastructure (Programme Coordinator: Onofrio Smarrelli)	ATN Ground-ground and Air-ground Applications in the SAM Region <i>Project Coordinator: Omar Gouarnalusse (Argentina)</i> <i>Contributing experts: Javier Vittor (Argentina), Andres Jansen (Brazil)</i>	May 2010	December 2014
Objective	Develop the implementation of ATN ground-ground and air-ground applications in the SAM Region		
Scope	Implementation of SAM ATN ground-ground and air-ground applications, including, at least: <ul style="list-style-type: none"> Operational integration of international AMHS connections in the SAM Region Operational integration of international AIDC connections in the SAM Region Guidelines for the implementation of DCL, DATIS, DVOLMET & CPDLC services through VDL in the SAM Region 		
Metrics	<ul style="list-style-type: none"> Number of AMHS interconnections as per CAR/SAM FASID Table 1Bb Number of AIDC interconnections as per CAR/SAM FASID Table 1Bb Drafting of following guidelines: Guideline for the use of AIDC / Guideline for the establishment of ground-air data links in terminal, approach and aerodrome areas / Guideline for the implementation of DCL, DATIS and DVOLMET systems / Guideline for the implementation of CPDLC through VDL in the SAM Region 		
Strategy	<ul style="list-style-type: none"> All tasks will be conducted by experts nominated by States and organizations of the SAM Region members of the project <i>ATN Ground-ground and Air-ground Applications in the SAM Region</i>, under management of the project coordinator, in coordination with the programme coordinator. Communications among Project members, as well as between the Project coordinator and programme coordinator, shall be carried out through teleconferences and the Internet. In addition, the programme coordinator, together with the project coordinator and the contributing experts, can convene at SAM/IG implementation meetings Once studies are completed, the results will be submitted to the ICAO programme coordinator as a final consolidated document for its analysis, review, approval and presentation at the GREPECAS PPRC 		

Justification	<ul style="list-style-type: none">• The implementation of ground-ground and air-ground data communications infrastructure will contribute to the reduction of air traffic control incidents, increasing the capacity of the transition of information with regard to the currently analogue based applications• This project contributes to the implementation of the SAM PFF SAM CNS 01, CNS 02, ATM 05, ATM 06, MET 03, MET04 and AIM 02 of the <i>Air Navigation System Performance-Based Implementation Plan for the SAM Region (SAM PBIP)</i>
Related Projects	<ul style="list-style-type: none">• Automation (systems interconnection)• ATFM• Improve ATM Situational Awareness• Implementation of the ICAO New Flight Plan Format

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
Document on regional strategy for the implementation of ground-ground and air-ground applications in the SAM Region	PFF SAM CNS 01 PFF SAM CNS 02	Omar Gouarnalusse (Argentina)		June 2012	An initial review to the strategy was presented at SAM/IG/8 meeting (Lima, Peru, 10-14 October 2011)
Guideline for the use of AIDC with the aim of reducing coordination errors	PFF SAM CNS 01 PFF SAM ATM 06	Javier Vittor (Argentina)		November 2012	The guideline will be based on the Argentinean experience in the IP AIDC implementation between the Cordoba and Ezeiza ACCs. The GREPECAS-approved <i>Interface control document</i> (ICD) for data communications among ATS units in the Caribbean and South American Regions will be reviewed.
Guideline for the establishment of ground-air data links in terminal, approach and aerodrome areas	PFF SAM CNS 02 PFF SAM ATM 06	ICAO		October 2012	An initial plan for data link implementation was drafted, and presented at SAM/IG/8 meeting. Pending is the designation of an expert for the conduct of this activity
Guideline for the implementation of DCL, DATIS, DVOLMET systems	PFF SAM CNS 02 PFF SAM ATM 06 PFFs SAM MET 03 y 04	Andrés Jansen (Brazil)		June 2013	The guideline will be based on the Brazilian experience in the implementation of these systems

¹

Gray: Activity has not started

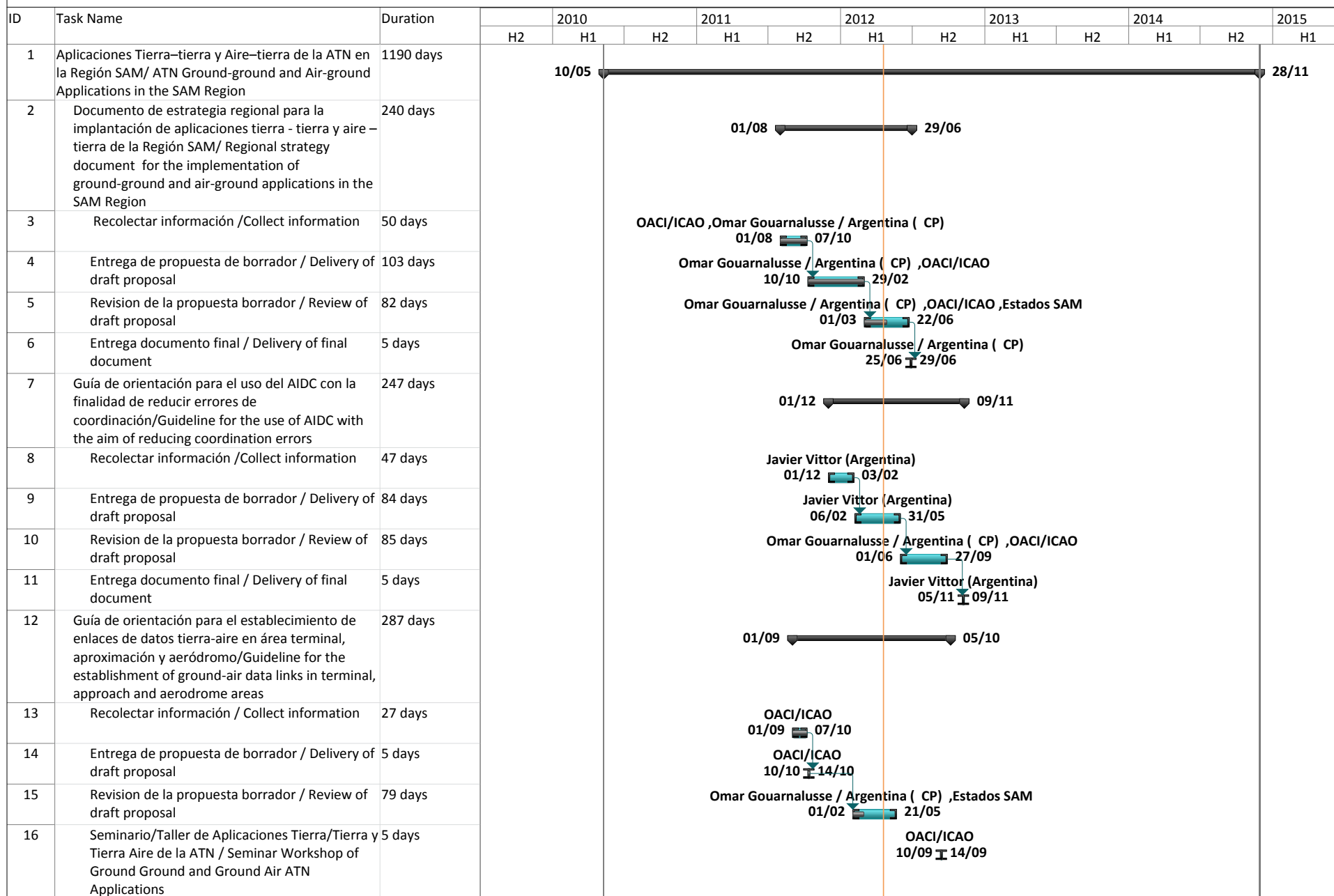
Green: Activity has or will deliver planned milestone as scheduled

Yellow: Activity is behind schedule on milestone, but still within acceptable parameters to deliver milestone on time

Red: Activity has failed to deliver milestone on time, mitigation measures need to be identified and implemented

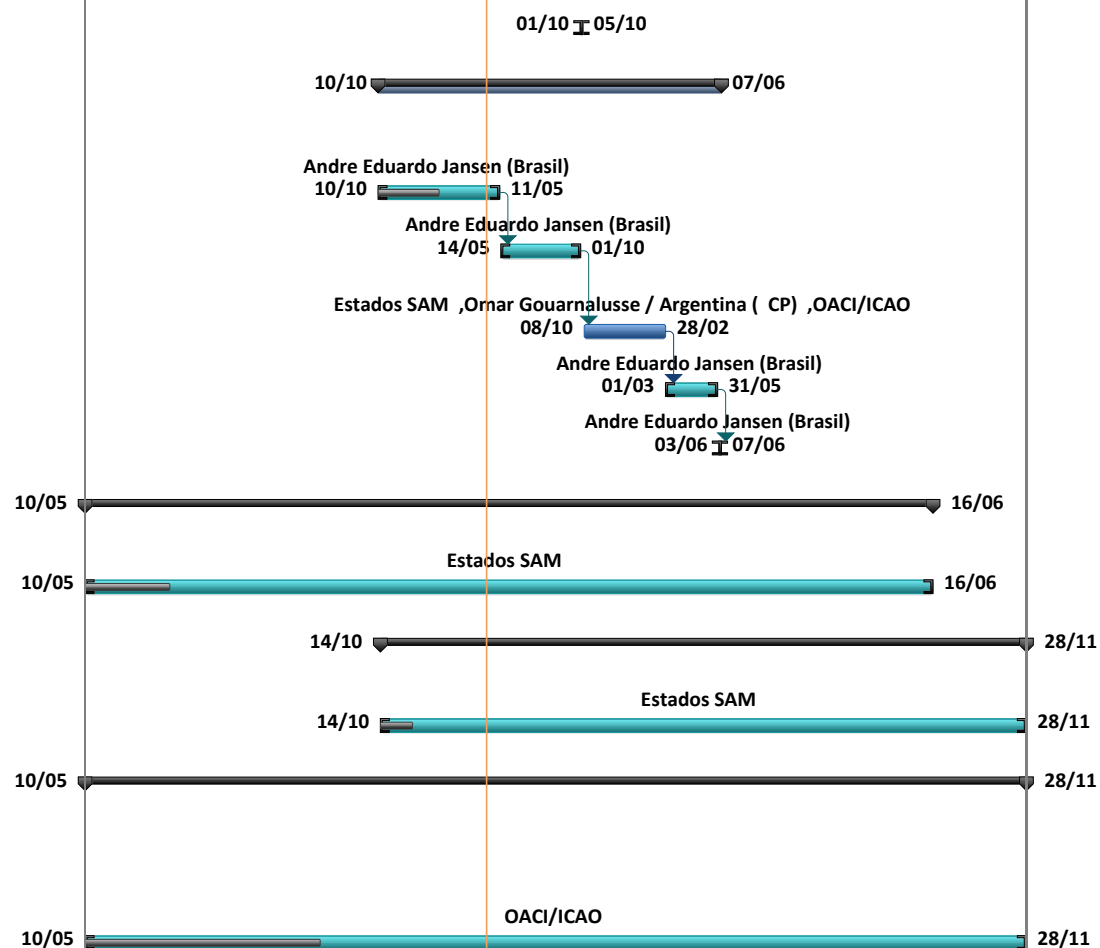
Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation ¹	Delivery Date	Remarks
Operational integration of AMHS among States	PFF SAM CNS 01 PFF SAM ATM 05 PFF SAM ATM 06 PFF SAM MET 03, PFF SAM MET 04 PFF SAM AIM 02	States / Project Coordinator / Programme Coordinator		June 2014	Of all the AMHS installed in the Region, the following are interconnected in AMHS (P1 Protocol) Peru-Colombia, Guyana-Suriname, Argentina-Paraguay Other States are in the process of implementation, having drafted and signed MoUs to this end Follow-up to the implementation of AMHS integration is carried out at SAM/IG meetings
Operational integration of AIDC service between adjacent ACCs	PFF SAM CNS 01 PFF SAM ATM 06	States / Project Coordinator / Programme Coordinator		November 2014	To date no AIDC interconnection trials have been held between the Ezeiza and Cordoba ACCs. The integration is still not being used operationally Many States of the Region have drafted and signed MoUs to carry out the integration
Monitor the implementation of ATN ground-ground and air-ground applications activities in the SAM Region		ICAO		March 2010- November 2014	
Resources necessary	Designation of experts for the conduct of some of the deliverables				

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
 APLICACIONES TIERRA-TIERRA Y AIRE-TIERRA DE LA ATN EN LA REGION SAM / ATN GROUND-GROUND AND AIR-GROUND APPLICATIONS IN THE SAM REGION



GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
APLICACIONES TIERRA-TIERRA Y AIRE-TIERRA DE LA ATN EN LA REGION SAM / ATN GROUND-GROUND AND AIR-GROUND APPLICATIONS IN THE SAM REGION

ID	Task Name	Duration	2010		2011		2012		2013		2014		2015
			H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	
17	Entrega documento final / Delivery of final document	5 days											
18	Guía de orientación para la implantación de sistemas DCL, DATIS, DVOLMET / Guideline for the implementation of DCL, DATIS, DVOLMET systems	435 days											
19	Recolectar información /Collect information	155 days											
20	Preparación y entrega de propuesta de borrador / Preparation and delivery of draft proposal	101 days											
21	Revision de la propuesta borrador / Review of draft proposal	104 days											
22	Preparación documento final / Preparation of final document	66 days											
23	Entrega documento final / Delivery of final document	5 days											
24	Integración operacional del servicio AMHS entre Estados / Operational integration of AMHS among States	1071 days											
25	Implantación de la integración operacional de sistemas AMHS	1071 days											
26	Integración operacional del servicio AIDC entre ACC's adyacentes / Operational integration of AIDC service between adjacent ACCs	816 days											
27	Implantación de la integración operacional del AIDC	816 days											
28	Monitorear las actividades de implantación de las aplicaciones tierra-tierra y aire-tierra de la ATN en la Región SAM / Monitor the implementation of ATN ground-ground and air-ground applications activities in the SAM Region	1190 days											
29	Monitorear las actividades de implantación de las aplicaciones tierra-tierra y aire-tierra de la ATN en la Región SAM / Monitor the implementation of ATN ground-ground and air-ground applications activities in the SAM Region	1190 days											





Agenda Item 3: Review of GREPECAS Programmes and Projects

3.6 Projects of the Aerodrome Programme

DESCRIPTION AND FOLLOW-UP OF AERODROME PROJECT ACTIVITIES

(Presented by the Secretariat)

SUMMARY	
<p>This working paper presents to the Meeting the projects, as well as information on the status of implementation of the activities and tasks of said projects in the field of aerodrome.</p> <p>The objectives, scope, metrics, strategy, rationale and implementation dates of each project are shown in Appendix A for the CAR Region and in Appendix B for the SAM Region.</p>	
<p>References:</p> <ul style="list-style-type: none">• Report of the AGA/AOP/SG/08 meeting, July 2011• Report of the GREPECAS/16 meeting, March 2011	
ICAO strategic objectives	<p><i>This working paper is related to the following strategic objectives:</i></p> <p><i>A – Safety</i></p> <p><i>C – Environmental protection and sustainable development of air transport</i></p>

1. Background

1.1 The results of the GREPECAS/16 meeting in relation to the new organisation and work methodology proposed by ICAO and approved by member States were presented to the AGA/AOP/SG/8 meeting.

1.2 In accordance with the new GREPECAS organisation, based on programmes and projects, the regional experts of the NACC and SAM Offices were designated as programme coordinators, and CAR and SAM State officials were designated as project coordinators and experts for the development and execution of tasks related to the aforementioned projects.

1.3 The meeting defined projects for the CAR and SAM Regions for a period extending until 2015. Initially, the programme was entitled Aerodrome and Runway Programme, but the AGA/AOP/SG/8 meeting changed it to Aerodrome Programme.

1.4 With regard to the transformation of the AGA/AOP Subgroup, its terms of reference, work programme, and task forces to the aerodrome programme and projects, the State representatives

participating in the meeting reviewed the proposed projects and agreed on adopting the following projects:

CAR Region:

- Aerodrome certification
- Safety assessment for aerodromes with non-conformities
- Improvement of runway safety

SAM Region:

- Aerodrome certification
- Safety assessment for aerodromes with non-conformities
- Improvement of runway safety
- Quality and availability of aeronautical data
- Improvement of physical and operational characteristics of aerodromes

2. Discussion

2.1 In order to facilitate the review of GREPECAS projects, Appendix A lists the projects for the CAR Region and Appendix B lists those for the SAM Region.

2.2 Project description documents contain information on the objectives, scope, metrics, strategy, rationale, related projects, deliverables, responsible parties, resources needed, start and end dates, as well as a section for comments to describe the status of deliverables. Likewise, the GANTT diagram shows, for each project, the time allocated to the various tasks or activities throughout the life cycle of each project.

2.3 The achievement of objectives under the Aerodrome Programme projects depends upon the availability of the human resources required for the fulfilment of activities and compliance with the timelines of such projects.

2.5 Pursuant to GREPECAS Conclusion 16/49, project coordinators and experts should receive support from their respective civil aviation authorities in terms of resources to participate in face-to-face meetings, teleconferences (GoToMeeting), etc. If the necessary human resources and the respective support are not available, the development of AGA projects will be interrupted and all the burden of the work will fall upon the programme coordinator.

3. Status of implementation of CAR projects

3.1 The three projects under implementation in the CAR Region are mainly related to compliance with the various specifications of Annex 14, aimed at increasing the level of safety at aerodromes, taking into account that security is part of aerodrome planning and operations. The purpose of Project F1 – Aerodrome certification improvements, is to increase the number of certified aerodromes and to improve safety oversight by civil aviation authorities.

3.2 In order to expedite the implementation of the aforementioned projects, several seminars and workshops have been scheduled: A workshop in the Caribbean for aerodrome inspectors, in English, and another one at the NACC Regional Office, in Spanish. A workshop is also being scheduled on aeronautical studies and their application in specified recommended areas.

3.3 Likewise, in order to expedite planning and the assignment of tasks and activities to each project, it is important to consider holding at least one annual meeting of AGA project coordinators and experts.

4. **Status of implementation in the SAM Region**

4.1 The five SAM projects are closely related and are designed to achieve one single objective "Project AGA F1 – Aerodrome certification." The first and most difficult task under F1 was the development of the Latin American Regulations for Aerodromes (AGA LAR). The text of the AGA LAR set (LAR 139 – Aerodrome Certification, LAR 153 – Aerodrome Operations, and LAR 154 – Aerodrome Design) has been completed. This task could be implemented thanks to funds provided by Project RLA SVRSOP 99/901.

4.2 SAM "AGA Project F2 – Safety assessment for aerodromes with non-conformities" conducted a seminar on Aeronautical Studies - RESA in August 2011, funded by Project RLA 06/901. "AGA Project F3 - Runway safety improvement," proposed a strategy for avoiding duplication of efforts and rather supporting national and international AGA initiatives. A workshop on Visual Aids – New Technologies will be held in Lima, on 7 - 11 May 2012, its objective being the reduction of runway incursions by using the appropriate signs.

4.3 SAM "AGA Project F4 – Quality and availability of aeronautical data" has not reported any progress, and SAM "AGA Project F5 – Improvement of physical and operational characteristics of aerodromes" is directly related to aerodrome capacity. Originally an ATM initiative, the methodology developed by the CGNA of Brazil has been adopted for calculating runway and ATS sector capacity. Two courses have been offered by CGNA since 2009 and one course for instructors was organised by the SAM Office. This project has received financial support from project RLA 06/901.

5. **Suggested action**

5.1 The Meeting is invited to:

- a) take note of the information provided in this working paper;
- b) review the document and GANTT diagram for each of the projects described in Appendices A and B, respectively, with a view to approving the corresponding planning, progress and implementation;
- c) take into account the human resources required for good project implementation;
- d) agree on other actions it may deem appropriate.

- - - - -

APPENDIX A1

PROJECT ON AERODROME CERTIFICATION IMPROVEMENTS IN THE CAR REGION

CAR Region	PROJECT DESCRIPTION (DP)	DP N° F1	
<i>Programme</i>	Title of the Project	Start	End
<i>Aerodromes</i> (ICAO Programme coordinator: Jaime Calderón)	Aerodrome Certification Improvements Project coordinator: Norberto Cabrera (Cuba) Experts contributing to the project: Antonio Pérez (Guatemala)	October 2011	November 2014
Objective	Aerodrome certification will ensure compliance with ICAO SARPs, providing services, equipment, and facilities in accordance with the operations intended for the aerodrome and facilitating safe and efficient aircraft operations.		
Scope	<ul style="list-style-type: none"> Identify the level of implementation of the aerodrome certification process in the CAR Region Identify training needs and draft the relevant training programmes Train aerodrome inspectors in reference documentation Prepare the corresponding certification documentation Implementation of SMS at aerodromes Aerodrome certification inspection by the aeronautical authority Issuance of the aerodrome certificate 		
Metrics	<ul style="list-style-type: none"> Number of aerodromes certified Reduction of the number of factors related to incidents/accidents Reduction of the number of deficiencies Efficient use of aerodrome resources Safe manoeuvres under all weather conditions Reduction of the number of bird/fauna strikes 		
Strategy	<ul style="list-style-type: none"> Train aerodrome inspectors in the aerodrome certification process, its implementation, the content of the aerodrome manual, SMS implementation, and exemptions Use of aeronautical studies to conduct a technical analysis that will justify a deviation from the standards, based on the possibility of achieving an equivalent level of safety through other means. And the risk analysis to ensure an equivalent level of safety Train aerodrome inspectors in their operational oversight duties in the various disciplines involved. <p>All tasks will be performed by experts nominated by CAR States and organisations, under the direction of the project coordinator. Communications amongst project members, and between the project coordinator and the programme coordinator shall be done via teleconference and the Internet.</p> <p>Once the studies are completed, the results will be sent to the ICAO programme coordinator in the form of a final consolidated document for its analysis, review, approval, and presentation to the GREPECAS PPRC.</p>		

Rationale	<ul style="list-style-type: none"> • ICAO USOAP audits reveal a large number of aerodromes that have not been certified because of lack of qualified personnel in highly specialised areas, and lack of knowledge of relevant regulations • Aerodromes that were built a long time ago with no consideration of ICAO SARPs <p>This project contributes to the implementation of CAR PFF 07 of the CAR Performance-based Air Navigation Plan (RPBANIP)</p>
Related projects	<p>The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8) and are related to the objective of this DP:</p> <ul style="list-style-type: none"> • Safety assessment for aerodromes with non-conformities • Improvement of runway safety

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
<ul style="list-style-type: none"> • Identify the level of implementation of the aerodrome certification process in the CAR Region • Develop an action plan focused on common aerodrome certification issues in the Region 	PFF CAR 07	Norberto Cabrera		December 2012	<ul style="list-style-type: none"> • Holding of the regional workshop on Facing challenges encountered in aerodrome certification, NACC Office, Mexico, 20-23 September 2011 • Some common issues were identified in the CAR Region with respect to aerodrome certification
<ul style="list-style-type: none"> • Identify training needs and develop the relevant training programmes • Train aerodrome inspectors in the reference documentation 	PFF CAR 07	Norberto Cabrera		December 2012	<p>Two workshops for aerodrome inspectors are foreseen:</p> <ul style="list-style-type: none"> • Saint Maarten on 11-15 June 2012, in English • NACC Regional Office, on 1-4 October 2012, in Spanish
Development of the corresponding certification documentation	PFF CAR 07	TBD		December 2013	Follow-up to the development of certification documentation based on training received by aerodrome inspectors
Implementation of SMS at aerodromes	PFF CAR 07	TBD		December 2013	SMS implementation courses for aerodrome inspectors

¹ *Grey Task not started yet

Green Activity being implemented as scheduled

Yellow Activity started with some delay, but expected to be completed on time

Red Activity not implemented on time; mitigation measures are required

Project Deliverables	Relationship with the regional performance -based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Inspection of aerodrome certification by the aeronautical authority	PFF CAR 07	TBD		October 2014	Before the issuance of the aerodrome certificate, aerodrome operators shall conduct audits and oversight inspections
Issuance of aerodrome certificate	PFF CAR 07	TBD		December 2014	Once the previous steps have been completed, airports may be certified
Resources needed	Designation of experts in the execution of some of the deliverables				

<p>CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION</p> <p>PROYECT/PROYECTO F1</p> <p>IMPROVEMENT ON AERODROME CERTIFICATION / MEJORAS A LA CERTIFICACION DE AERODROMOS</p>

ID	Task Name	Duration	2012				2014				
			Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	
1	PROJECT: IMPROVEMENT TO AERODROME CERTIFICATION / PROYECTO: MEJORAS A LA CERTIFICACIÓN DE AERÓDROMOS	891 days	28/10		20/04	31/08	27/03				
2	a) Identify the aerodrome certification process level of implementation in the CAR Region / Identificar el nivel de implementación del proceso de certificación de aeródromos en la región CAR	96 days									
3	Collect information through surveys, on the aerodrome certification status of implementation / Recabar información sobre el estado de implementación de la certificación de aeródromos mediante encuestas	96 days									
4	Identify and group aerodromes with common problems / Identificar y agrupar los aeródromos con problemas comunes	44 days									
5	b) Train aerodrome inspectors on reference documentation / Capacitar inspectores de aeródromos en la documentación de referencia	298 days									
6	Workshops for aerodrome inspectors and training on documents related with aerodrome certification / Talleres para inspectores de aeródromos y capacitación en los documentos relacionados con la certificación de aeródromos	298 days									
7	c) Preparation of corresponding certification documentation / Preparación de la documentación de certificación correspondiente	44 days									
8	d) SMS implementation / Implementación del SMS	320 days									
9	e) Aerodrome certification inspection by aeronautical authority / Inspección de certificación de aeródromos por la autoridad aeronáutica	51 days									
10	f) Issuance of aerodrome certification / Emisión del certificado de aeródromo	21 days									

APPENDIX A2

PROJECT ON SAFETY ASSESSMENT OF AERODROMES WITH NON-CONFORMITIES IN THE CAR REGION

CAR Region	PROJECT DESCRIPTION (DP)	DP N° F2	
<i>Programme</i>	Titulo del Proyecto	Fecha inicio	Fecha término
<i>Aerodromes</i> (ICAO programme coordinator: Jaime Calderón)	Safety Assessment for Aerodromes with Non-Conformities Project coordinator: Francia Peña (Dominican Republic) Experts contributing to the project: Jorge Andrés Parra (Costa Rica), Félix Estrada (Guatemala)	October 2011	November 2014
Objective	For aerodromes that do not comply with a standard or specified method, after conducting an aeronautical study, when permitted, and/or a risk analysis, to be able to determine the conditions and procedures required to ensure a safety level equivalent to that specified by the standard or recommended practice		
Scope	<ul style="list-style-type: none"> • Implementation of aeronautical studies in the areas where allowed by aerodrome regulations • Assessment of risk analysis • Exemption of an aerodrome operator from compliance with given provisions of aerodrome regulations 		
Metrics	<ul style="list-style-type: none"> • Number of exempted aerodromes subject to compliance with the conditions and procedures specified by the civil authority in the aerodrome certificate and that are necessary for continued safety 		
Strategy	<p>The project has three phases:</p> <ul style="list-style-type: none"> • Identify regional airports with physical and operational characteristics that do not meet some ICAO SARPs. • Implement procedures for exempting an aerodrome operator from compliance with given provisions of the aerodrome regulations. <p>All tasks will be carried out by experts nominated by States and organisations of the CAR Region, under the leadership of the project coordinator. Communications amongst project members and between the project and programme coordinators will be via teleconference and the Internet.</p> <p>Upon completion of the studies, the results will be sent to the ICAO programme coordinator as a final consolidated document for its analysis, revision and approval, and submission to the GREPECAS PPRC.</p>		
Rationale	<ul style="list-style-type: none"> • States have difficulties with aeronautical studies due to lack of guidance material for their implementation. • States have difficulties with the conduction of risk analyses in the different areas due to lack of guidance material. <p>This project contributes to the implementation of CAR PFF AGA 07 of the CAR Performance-Based Air Navigation Plan (RPBANIP).</p>		
Related projects	<p>The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8) and are related to the project described in this DP:</p> <ul style="list-style-type: none"> • Aerodrome certification • Improvement of runway safety 		

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Identify regional aerodromes with physical and operational characteristics that do not comply with any of the ICAO SARPs	PFF CAR 07	Francia Peña		October 2012	Form to be circulated to States requesting information on airports that do not comply with any standard, in order to group them based on shared issues
Develop procedures that include guidance on the assessment of non-conformities, and establish an action plan to address issues	PFF CAR 07	TBD		November 2013	Drafting of guidance material on aeronautical studies and risk analyses
Implementation of procedures for exempting an aerodrome operator from compliance with certain provisions of aerodrome regulations	PFF CAR 07	TBD		November 2014	Certify aerodromes that may be subject to exemptions by virtue of aeronautical studies and/or risk analyses showing to the State an acceptable level of safety
Resources needed	Designation of experts for the execution of some of the deliverables				

¹ *Grey Task not started yet
Green Activity being implemented as scheduled
Yellow Activity started with some delay, but expected to be implemented on time
Red Activity not implemented on time; mitigation measures are required

ID	Task Name	Duration	Start	er	4th Quarter			3rd Quarter			2nd Quarter			1st Quarter		4th Quarter	
					May	Sep	Jan	May	Sep	Jan	May	Sep	Jan	May	Sep	Jan	Jan
1	PROYECTO: EVALUACIÓN DE LA SEGURIDAD OPERACIONAL EN AERÓDROMOS CON NO-CONFORMIDADES/SAFETY ASSESSMENT IN NON-COMPLIANT AERODROMES PROJECT	815 days	Mon 17/10/11	17/10													28/11
2	a) Identificar los aeropuertos regionales con características físicas y operacionales que no cumplan con alguna SARP/Identify regional airports with physical and operational characteristics not-compliant with any SARP	161 days	Fri 20/04/12			20/04											
3	Recabar información sobre aeródromos con no conformidades con las SARPs mediante encuestas y revisión de la GANDD/Collect information on non-compliant with SARP aerodromes through surveys and GANDD revision	96 days	Fri 20/04/12			20/04											
4	Identificar/agrupar aeródromos con problemas comunes/Identify/group aerodromes with common problems	41 days	Fri 31/08/12														
5	b) Desarrollar procedimientos con orientaciones para las no conformidades/establecer medidas correctivas para resolver deficiencias identificadas/Develop procedures including non-compliance guidance/establish corrective measures to solve deficiencies	196 days	Fri 26/10/12														
6	Revisar metodologías existentes para atender los problemas de no conformidades/Review existing methodoogies to attend non-compliance problems	47 days?	Fri 26/07/13														

ID	Task Name	Duration	Start	4th Quarter			3rd Quarter			2nd Quarter			1st Quarter			4th Quarter		
				May	Sep	Jan	May	Sep	Jan	May	Sep	Jan	May	Sep	Jan			
7	Desarrollar material de orientación para la implementación de estudios aeronáuticos en las áreas específicas recomendadas/Develop guidance material for the implementation of aeronautical studies in specific recommended areas	89 days	Mon 30/09/13									30/09	<div></div>	30/01				
8	Material de orientación para la evaluación de riesgos/Guidance material for risk assessment	89 days	Mon 30/09/13									30/09	<div></div>	30/01				
9	c) Implementación de procedimientos para la exención al aeródromo del cumplimiento de determinadas disposiciones/Implementation of procedures to exempt the aerodrome of complying with certain	217 days	Thu 30/01/14											30/01	<div></div>		28/11	

APPENDIX A3

PROJECT ON THE IMPROVEMENT OF RUNWAY SAFETY IN THE CAR REGION

CAR Region	PROJECT DESCRIPTION (DP)	DP N° F3	
<i>Programme</i>	Title of the Project	Start	End
<i>Aerodromes</i> (ICAO programme coordinator: Jaime Calderón)	Improve runway safety Project coordinator: George Legarreta (Estados Unidos) Experts contributing to the project: TBD	October 2011	November 2014
Objective	The establishment of Runway Safety Teams (RSTs) with the participation of different stakeholders in aerodrome operations and service providers, with tasks enabling a reduction of the number of incidents/accidents due to runway incursions/excursions to ensure safe and efficient operations at aerodromes in the Region.		
Scope	The runway safety project is aimed at aerodromes rather than at factors related to air traffic control (ATC). This project has three parts covering: mitigation actions for runway incursions (RI), runway excursions (RE) and runway strip levelling, as well as the runway end safety area (RESA). These 3 sections are interrelated, taking into account the phase before landing on the runway, the runway landing operation, and runway excursion.		
Metrics	<ul style="list-style-type: none"> • Number of aerodromes with runway safety teams (RST) • Number of runway incursions/excursions per number of annual aerodrome operations • Reduction of the number of factors related to incidents/accidents 		
Strategy	<p>For the purpose of project execution, the following three stages are considered:</p> <ul style="list-style-type: none"> • Stage 1: Focuses on an inventory of each taxiway into the runway, the geometry of the taxiway into the runway, as well as markings, signs and lighting at the taxi-holding position (stop bars, runway safety lights), and the location of the runway holding position. This part also includes daily inspections of the movement area at the taxiway entry points, markings, signs, and lighting. • Stage 2: Focuses on actions to mitigate runway excursions by ensuring good runway surface conditions, avoiding contamination, and replacing inoperative runway lights, as well as through daily inspections. One of the main problems in runway excursions is the accumulation of rubber under wet runway surface conditions. In this regard, the project will provide guidance material that includes procedures for identifying excursions due to rubber accumulation and for its removal. • Stage 3: Focuses on actions to mitigate damage caused to aircraft exiting the runway, through provision and compliance with a levelled runway strip portion, and provision of runway end safety areas (RESA) in accordance with Annex 14, Vol. 1. In order to determine if facilities meet the standards, the GANDD will be used to gather information on specific deficiencies related to the runway strip and the RESA. The GANDD will enable grouping in deficiency type and, based on that, definition of action plans. <p>For RESAs that are insufficient and that cannot be corrected, the project will provide guidance material on the use of declared distances and possible placement of EMAS.</p> <p>All tasks will be carried out by experts nominated by CAR States and organisations, under the leadership of the project coordinator. Communication amongst project members and between the project and programme coordinators shall be via teleconference and the Internet.</p>		

	Upon completion of the studies, the results will be sent to the ICAO programme coordinator as a final consolidated document for its analysis, revision, and approval, and for submission to the GREPECAS PPRC.
Rationale	<ul style="list-style-type: none"> Some States in the CAR Region have implemented practical improvements to avoid runway incursions, but they are not practical for mitigating excursions. There is a high rate of runway excursions, and the establishment of runway safety teams (RSTs) is deemed essential. The purpose of the project is for airport operators to bring together those involved in aerodrome operations and service providers in order to take action for improving runway safety. <p>This project contributes to the implementation of PFF CAR 07 of the CAR Performance-Based Air Navigation Plan (RPBANIP)</p>
Related projects	<p>The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP:</p> <ul style="list-style-type: none"> Aerodrome certification Safety assessment of aerodromes with non-conformities

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Drafting of a form for taking inventory of each taxiway into the runway, including the geometry of the taxiway into the runway, as well as markings, signs, and lighting of the taxi-holding position (stop bars, runway safety lights), and the location of the runway-holding position.	PFF CAR 07	George Legarreta		April 2013	<ul style="list-style-type: none"> The form was developed and it will be circulated to States until 13 April 2012, requesting that information be sent by end of June. By the end of August, a report will be ready on the information received from States. As to the date of delivery, it was considered that signalling and the placement of signs might take up to one year.

¹ *Grey Task not started yet
Green Activity being implemented as scheduled
Yellow Activity started with some delay, but expected to be implemented on time
Red Activity not implemented on time; mitigation measures are required

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Implementation of actions to mitigate runway excursions by providing good runway surface conditions, avoiding contamination on its surface, introducing the recommended changes and longitudinal gradients, repainting of faded signs, and replacement of inoperative runway lights, as well as through daily inspections.	PFF CAR 07	George Legarreta		November 2013	The project will provide guidance material that includes procedures for identifying excursions due to rubber accumulation and for its removal
Implementation of actions to mitigate damage caused to the aircraft incurring in excursion, through compliance in the levelled portion of the runway strip and in the runway end safety area (RESA) with Annex 14, Vol. 1. The GANDD will enable grouping by type of deficiency and thus determining action plans.	PFF CAR 07	TBD		November 2014	For RESAs that are not sufficient and cannot be fully corrected, the project will provide guidance material on the use of the declared distances and the installation of the EMAS.
Resources needed	Designation of experts for the execution of some of the deliverables				

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
PROJECT/PROYECTO F3
IMPROVE RUNWAY SAFETY / MEJORAR LA SEGURIDAD OPERACIONAL EN PISTA

ID	Task Name	Duration	2010		2012		2014		20
			H1	H1	H1	H1	H1	H1	H1
1	PROJECT: IMPROVE RUNWAY SAFETY / PROYECTO: MEJORAR LA SEGURIDAD OPERACIONAL EN PISTA	891 days		28/10				27/03	
2	a) Mitigating actions to avoid runway incursion / Acciones de mitigación para evitar las incursiones en pista	291 days			20/04	31/05			
3	b) Mitigating actions to avoid runway excursion / Acciones de mitigación para evitar las excursiones de pista	261 days				31/05	30/05		
4	Surveys on current signalling, sign placing, etc. to prevent aerodrome runway incursions and excursions / Encuestas para conocer estado actual de la señalización, colocación de letreros, etc. para prevenir incursiones y excursiones de pista en aeródromos	71 days		20/04	27/07				
5	c) Evaluate current runway strip and RESA conditions / Evaluar las condiciones actuales de la franja de pista y RESA	306 days					30/05	31/07	

APPENDIX B1

PROJECT ON AERODROME CERTIFICATION

SAM Region	PROJECT DESCRIPTION (DP)	DP N° F1	
Programme	Title of the Project	Start	End
<i>Aerodromes</i> <i>(ICAO programme coordinator: Lia Ricalde)</i>	Aerodrome Certification <i>Project coordinator: Carlos Garcia Pepe (Uruguay)</i> <i>Experts contributing to the project: Vicente Uribe (AEROCIVIL - Colombia)</i> <i>Giovano Palma (ANAC – Brazil)</i> <i>Emilio Rodriguez Amada (DINAC Paraguay)</i>	2010	2015
Objective	Aerodrome certification will enable safer and more efficient operations through compliance with ICAO SARPs to ensure an adequate operational aerodrome management.		
Scope	Regulations and documentation in support of the implementation of ICAO SARPs with a view to the certification of aerodromes in the Region: <ul style="list-style-type: none"> • Harmonisation of the Latin American Regulations on Aerodromes (AGA LARs) with State aerodrome regulations. • Train regional aerodrome inspectors based on the Aerodrome Inspectors Manual (MIAGA). • Implementation of guides for internal auditing of aerodromes. • Certification of aerodromes at regional level and certification validated by the AGA LARs for aerodromes previously certified by States. • Implementation of safety oversight guides for aerodromes. 		
Metrics	<ul style="list-style-type: none"> • Percentage of certified aerodromes • Number of trained inspectors • Percentage of certified aerodromes validated by the AGA LAR 		

Strategy	<ul style="list-style-type: none"> • Develop the Latin American Regulations for Aerodromes (AGA LAR) • Develop the Aerodrome Inspector Manual (MIAGA) • Harmonise State regulations with the AGA LAR • Train aerodrome inspectors of the Region with the MIAGA • Establish an aerodrome internal audit process for operators, based on the SMS • Validate the existing aerodrome certification with the AGA LAR • Certification process oversight <p>All tasks will be carried out by experts nominated by CAR States and organisations, under the leadership of the project coordinator. Communication amongst project members and between the project and programme coordinators shall be via teleconference and the Internet.</p> <p>Upon completion of the studies, the results will be sent to the ICAO programme coordinator as a final consolidated document for its analysis, revision, and approval, and for submission to the GREPECAS PPRC.</p>
Rationale	<ul style="list-style-type: none"> • Airport certification difficulties in the Region are mainly due to the fact that existing airports were built before the issuance of the ICAO SARPs that establish certification requirements. • The new commercial aircraft fleet has more requirements than the critical aircraft that were used at the time of the original design. • Difficulties in the adjustment and updating of State aeronautical legislation related to aerodromes to facilitate aerodrome certification. • Lack of trained personnel within State civil aviation authorities to conduct airport certification and oversight.
Related projects	<p>The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP:</p> <ul style="list-style-type: none"> • Safety assessment for aerodromes with non-conformities • Improvement of runway safety • Quality and availability of aeronautical data • Improvement of aerodrome physical and operational characteristics

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
AGA LAR set	PFF SAM AGA 02	Carlos Garcia Pepe	90%	March 2012	The texts of the AGA LAR set (LAR 139, LAR 153, and LAR 154) have been completed and are in the approval process
Development of the MIAGA	PFF SAM AGA 02	Carlos Garcia Pepe	40%	June 2012	The support of an expert to develop the MIAGA has been requested
Training programme for aerodrome inspectors	PFF SAM AGA 02	Adolfo Medina	25%	2013	The aerodrome inspector workshop – basic (Phase I) was held on 14-18 February in Panama. The course for government aerodrome inspectors (Phase II and II) is scheduled for 2-13 July 2012 and will include the presentation of the AGA LARs and the MIAGA. It is expected that 25 regulators will be trained as aerodrome inspectors. An AGA expert has been requested to develop the programme for the course. Trained inspectors will receive OJT (Phase IV) in 2013
Harmonisation of the AGA LARs	PFF SAM AGA 02	States - Regional System		2015	It is expected that the harmonisation between the States and the AGA LARs will be carried out in accordance with the timetable approved by the General Board
Guide on aerodrome internal audits	PFF SAM AGA 02	Augusto Diaz		2013	Prior to certification, airport operators must conduct internal audits. A guide will be developed to assist airport operators with self-inspections.
Regional aerodrome certification programme	PFF SAM AGA 01, 03, 04 y 05	TBD		2015	Once the harmonisation process is underway and related projects are completed, airports in the Region may be certified based on the AGA LARs.
Validation of aerodrome	PFF SAM	TBD		2015	Aerodromes certified under the State regulations may

¹ Grey Task not started yet
Green Activity being implemented as scheduled
Yellow Activity started with some delay, but expected to be implemented on time
Red Activity not implemented on time; mitigation measures are required

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
certificates based on the AGA LARs	AGA 01, 03, 04 y 05				apply for validation of their aerodrome certificate based on the AGA LARs.
Guide on certification process oversight	PFF SAM AGA 01, 03, 04, and 05	GREPECAS		2015	
Resources needed	Designation of experts for the execution of some of the deliverables; financial resources for organising training courses, certification trials, and meetings				

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
PROYECTO CERTIFICACIÓN DE AERÓDROMOS / AERODROMES CERTIFICATION PROJECT

ID	Task Name	Duration	2011				2012				2013				2014				2015	
			Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1	PROYECTO CERTIFICACIÓN DE AERÓDROMOS / AERODROMES CERTIFICATION PROJECT	1194 days	09																	10/0
2	Conjunto LAR AGA y MIAGA / LAR AGA Set & MIAGA	469 days	09																	
3	Panel de Expertos de Aeródromos y Ayudas Terrestres (PEAGA) / AGA Expert Panel (PEAGA)	15 days	05/10																	
4	Solicitar Estados miembros del SRVSOP, designar especialistas para el Panel de Expertos de Aeródromos y Ayudas Terrestres (PEAGA) / Request States SVRSOP members to designated experts for the AGA Panel (PEAGA)	15 days	05/10																	
5	Comité Técnico (CT) del SRVSOP AGA / Technical Committee (TC) AGA SVRSOP	11 days	09																	
6	Miembros CT del SRVSOP AGA / TC members AGA SVRSOP	1 day	09																	
7	Solicitar/Contratar Especialista para desarrollar estructura del LAR AGA / Request expert to develop LAR AGA structure	1 day	09																	
8	Aceptación del Estado/Especialista para desarrollar estructura del LAR AGA / States/expert acceptance to develop LAR AGA structure	1 day	09																	
9	Desarrollo por parte del Comité Técnico de la estructura de cada LAR, incluyendo sus capítulos y secciones / Development by the CT the structure for each LAR, including chapters & sections	5 days																		
10	Desarrollar la estructura LAR AGA y elaborar tablas de referencias cruzadas del LAR AGA (Anexo 14) / Develop LAR AGA structure & make cross reference tables for LAR AGA (Annex 14)	5 days																		
11	Consulta de la estructura de cada LAR al Panel de Expertos respectivo – Primera ronda de consulta / First round of consultations	45 days																		

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
PROYECTO CERTIFICACIÓN DE AERÓDROMOS / AERODROMES CERTIFICATION PROJECT

ID	Task Name	Duration	2011				2012				2013				2014				2015	
			Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
12	Circular la estructura al Comité Técnico (CT) y a los miembros del PEAGA - Primera ronda de consulta / Circulate the structure among the CT & PEAGA members - First round of consultation	20 days																		
13	Incorporar oportunidades de mejora a la estructura en base a los comentarios del CT y PEAGA / Incorporate the opportunity for improvement of the structure based on the CT & PEAGA comments	15 days																		
14	Circular el documento que registre los comentarios y respuestas a los miembros del PEAGA, para su pronunciamiento / Circulate the document with the comments & responses from the PEAGA members	10 days																		
15	Desarrollo del texto completo de cada LAR del conjunto LAR AGA / Development of the text for each LAR from the LAR AGA set	25 days																		
16	Desarrollar borrador del texto del conjunto LAR AGA / Develop the draft text from the LAR AGA set	25 days																		
17	Consulta del texto de cada LAR al Panel de Expertos respectivo – Segunda ronda de consulta / Second round of consultation	73 days																		
18	Revisión del borrador del texto del conjunto LAR AGA / Revision of the draft text of the LAR AGA set	10 days																		
19	Desarrollo de las tareas para cada miembro del PEAGA / Development of the task for every member of PEAGA	10 days																		
20	Circulación de tareas a los especialistas del PEAGA para segunda ronda de consulta / Circulate the task assigned to the PEAGA experts for the second round of consultation	1 day																		
21	Desarrollo de las tareas por parte de cada experto del PEAGA – Segunda ronda de consulta / Second round of consultation	20 days																		

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
PROYECTO CERTIFICACIÓN DE AERÓDROMOS / AERODROMES CERTIFICATION PROJECT

ID	Task Name	Duration	2011				2012				2013				2014				2015	
			Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
22	Presentación de comentarios a través de Notas de Estudio (NE) al Comité Técnico / Presentation of comments through WP to TC	1 day																		
23	Revisión de las NE por el Comité Técnico / Revision of WP for TC	10 days																		
24	Publicación en la Web de las NE / Publication of the WP on the web	1 day																		
25	Revisión de las NE entre el Comité Técnico y los miembros del PEAGA / Revision of the WP by the CT & PEAGA	20 days																		
26	Reunión del Panel de Expertos para la revisión del conjunto LAR AGA (RPEAGA/1) / Experts Panel Meeting for the revision of the LAR AGA set (RPEAGA/1)	28 days																		
27	Convocatoria a la Primera Reunión del Panel de Expertos de Aeródromos (RPEAGA/1) / Call for the PEAGA First Meeting (RPEAGA/1)	1 day																		
28	Primera Reunión del Panel de Expertos de Aeródromos (RPEAGA/1). Presentación de NE y análisis y aceptación del LAR AGA / First PEAGA Meeting (RPEAGA/1) Presentation of the WP, analysis & acceptance of LAR AGA	5 days																		
29	Aceptación del texto completo del LAR 139 por las Autoridades de Aviación Civil (AAC) de los Estados del SRVSOP – Tercera ronda de consulta / Acceptance of the complete text LAR 139 by the SRVSOP member states CAA - Third consultation round	138 days																		
30	Circular el LAR 139 para aceptación de las AAC - Tercera ronda de consulta / LAR 139 circulation for CAA acceptance - Third round of consultation	20 days																		
31	Evaluación de los comentarios de las AAC por parte del CT / CAA comments evaluation by the TC	5 days																		

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
PROYECTO CERTIFICACIÓN DE AERÓDROMOS / AERODROMES CERTIFICATION PROJECT

ID	Task Name	Duration	2011				2012				2013				2014				2015			
			Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
32	Segunda Reunión del Panel de Expertos para la revisión de los LAR 153, LAR 154 y comentarios al LAR 139, (RPEAGA/2) / Experts Panel meeting for the evaluation of LAR 153, LAR 154 & comments to LAR 139 (RPEAGA/2)	65 days					07/11			03/02												
33	Convocatoria a la Segunda Reunión del Panel de Expertos de Aeródromos (RPEAGA/2) / Call to RPEAGA/2	1 day					07/11			07/11												
34	Segunda Reunión del Panel de Expertos de Aeródromos (RPEAGA/2). Presentación de NE y análisis y aceptación del conjunto LAR AGA / RPEAGA/2. WP presentation, analysis and acceptance of LAR AGA set	5 days					30/01			03/02												
35	Aceptación del texto completo del LAR 139 modificado, LAR 153 y LAR 154 por la AAC de los Estados del SRVSOP – Tercera ronda de consulta / Acceptance of complete text - modified LAR 139, LAR 153 & LAR 154 by the CAA - Third round of consultation	138 days																				
36	Circular el LAR 139, LAR 153 y LAR 154 para aceptación de las AAC - Tercera ronda de consulta / Circulation of LAR 139, LAR 153 & LAR 154 for CAA acceptance - Third	26 days																				
37	Evaluación de los comentarios de las AAC por parte del CT / CAA comments evaluation by the TC	5 days																				
38	Aprobación del Conjunto LAR AGA / LAR AGA Set approval	25 days																				
39	Presentación del LAR AGA y la estrategia de armonización y/o adopción a la JG24 para aprobación de los Estados por el metodo Expreso / LAR AGA presentation and armonization / adoption strategy to the JG24 for States approval using the express methodology	25 days																				

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
PROYECTO CERTIFICACIÓN DE AERÓDROMOS / AERODROMES CERTIFICATION PROJECT

ID	Task Name	Duration	2011				2012				2013				2014				2015	
			Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
40	Envío a los Estados del LAR AGA y estrategia de armonización y/o adopción para que den inicio a dicha estrategia / LAR AGA & armonization/adoption strategy delivery to the States to initiate the process	1 day							27/04	27/04										
41	Desarrollo del Manual de Inspector de Aerodromos (MIAGA) / Development of the Aerodrome Inspector Manual (MIAGA)	10 days							18/06	29/06										
42	Solicitar Especialista para desarrollar el Manual del Inspector de Aerodromos (MIAGA) / Request expert to develop the Aerodrome Inspector Manual (MIAGA)	1 day							06/03	06/03										
43	Aceptación del Estado/Especialista para desarrollar el MIAGA / Acceptance by the State/expert the development of the	1 day							04/04	04/04										
44	Desarrollar el MIAGA / MIAGA development	10 days							18/06	29/06										
45	Capacitación / Training	533 days							14/02	27/02										
46	Taller de Inspector de Aerodromos - Fase I / Aerodrome Inspector Workshop - Phase I	0 days							14/02	18/02										
47	Solicitar Especialista para desarrollar el Curso de Inspector Gubernamental de Aerodromos (GSIAGA) - Fase II & III / Request expert for the development of the the Aerodrome Inspector Course - Phase II & III (GSI AGA)	1 day							09/03	09/03										
48	Aceptación del Estado/Especialista para desarrollar el Curso GSI AGA / Acceptance by the State/Expert to develop the GSI AGA course	1 day							30/03	30/03										
49	Desarrollo del curso GSI AGA / Development of the GSI AGA course	10 days							18/06	29/06										
50	Curso de Inspector Gubernamental de Aerodromos - Fase II y III / GSI AGA Course - Phase II & III	10 days							02/07	13/07										
51	Ensayos de auditoría de certificación / Certification audit trials (OJT)	3 days															25/02	27/02		

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
PROYECTO CERTIFICACIÓN DE AERÓDROMOS / AERODROMES CERTIFICATION PROJECT

ID	Task Name	Duration	2011				2012				2013				2014				2015	
			Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
52	Finalizada la capacitación de los expertos, el CT procederá a programar los ensayos de auditoría de certificación de aeródromos (Fase IV OJT) / Once training is completed aerodrome certification audits will be scheduled (Phase IV OJT)	3 days																		
53	Armonización o adopción / Armonization or adoption	700 days																		
55	Guía de Auditorías internas para Aeródromos / Internal audit guidelines for aerodromes	76 days																		
60	Programa Regional de Certificación de Aeródromos / Regional aerodrome certification programme	253 days																		
61	Validación de Certificación de Aeródromos existente con el conjunto LAR AGA / Validation of existing aerodrome certification with LAR AGA set	253 days																		
62	Guía de vigilancia del proceso de certificación / Guideline for certification process surveillance	76 days																		

25/02 ± 27/02

06/08 → 10/08

14/05 → 27/08

16/07 → 03/07

16/07 → 03/07

23/07 → 05/11

APPENDIX B2

PROJECT ON SAFETY ASSESSMENT OF AERODROMES WITH NON-CONFORMITIES

SAM Region	PROJECT DESCRIPTION (DP)	DP N° F2	
Programme	Title of the Project	Start	End
<i>Aerodromes</i> <i>(ICAO programme coordinator: Lia Ricalde)</i>	Safety assessment of aerodromes with non-conformities <i>Project coordinator: Tárík Pereira de Souza (ANAC - Brazil)</i> <i>Experts contributing to the project: Carlos Garcia Pepe (Uruguay)</i>	2010	2015
Objective	Certification of aerodromes that do not comply with ICAO SARPs, through an aerodrome safety assessment		
Scope	Develop regulations and documentation for the safety assessment of those conditions that do not enable the aerodrome to comply with ICAO SARPs, with a view to attaining certification: <ul style="list-style-type: none"> • Aerodromes with non-conformities • Guiding manual for the certification of aerodromes with non-conformities • Aerodromes certified with non-conformities 		
Metrics	<ul style="list-style-type: none"> • Number of aerodrome inspectors training to certify aerodromes with non-conformities • Number of certified aerodromes with deviations 		
Strategy	<ul style="list-style-type: none"> • Identify the most common non-conformities in the physical and operational characteristics of the airports in the Region • Develop a procedure for the certification of aerodromes with deviations that includes guidance on the assessment of non-conformities • Train aerodrome inspectors in the assessment of aerodromes with non-conformities • Implement the procedure for certifying with deviations • Monitor the implementation of the procedure <p>All tasks will be carried out by experts nominated by CAR States and organisations, under the leadership of the project coordinator. Communication amongst project members and between the project and programme coordinators shall be via teleconference and the Internet.</p> <p>Upon completion of the studies, the results will be sent to the ICAO programme coordinator as a final consolidated document for its analysis, revision, and approval, and for submission to the GREPECAS PPRC.</p>		
Rationale	<ul style="list-style-type: none"> • The difficulties in airport certification at regional level at mainly because most of the existing airports were built before ICAO SARPs on certification requirements were issued. • The new commercial aircraft fleet has greater requirements than the critical aircraft used at the time of the original design • Difficulties for the safety and risk assessment required for each non-conformity • Lack of trained personnel within State civil aviation authorities for the conduction of the corresponding safety assessment 		

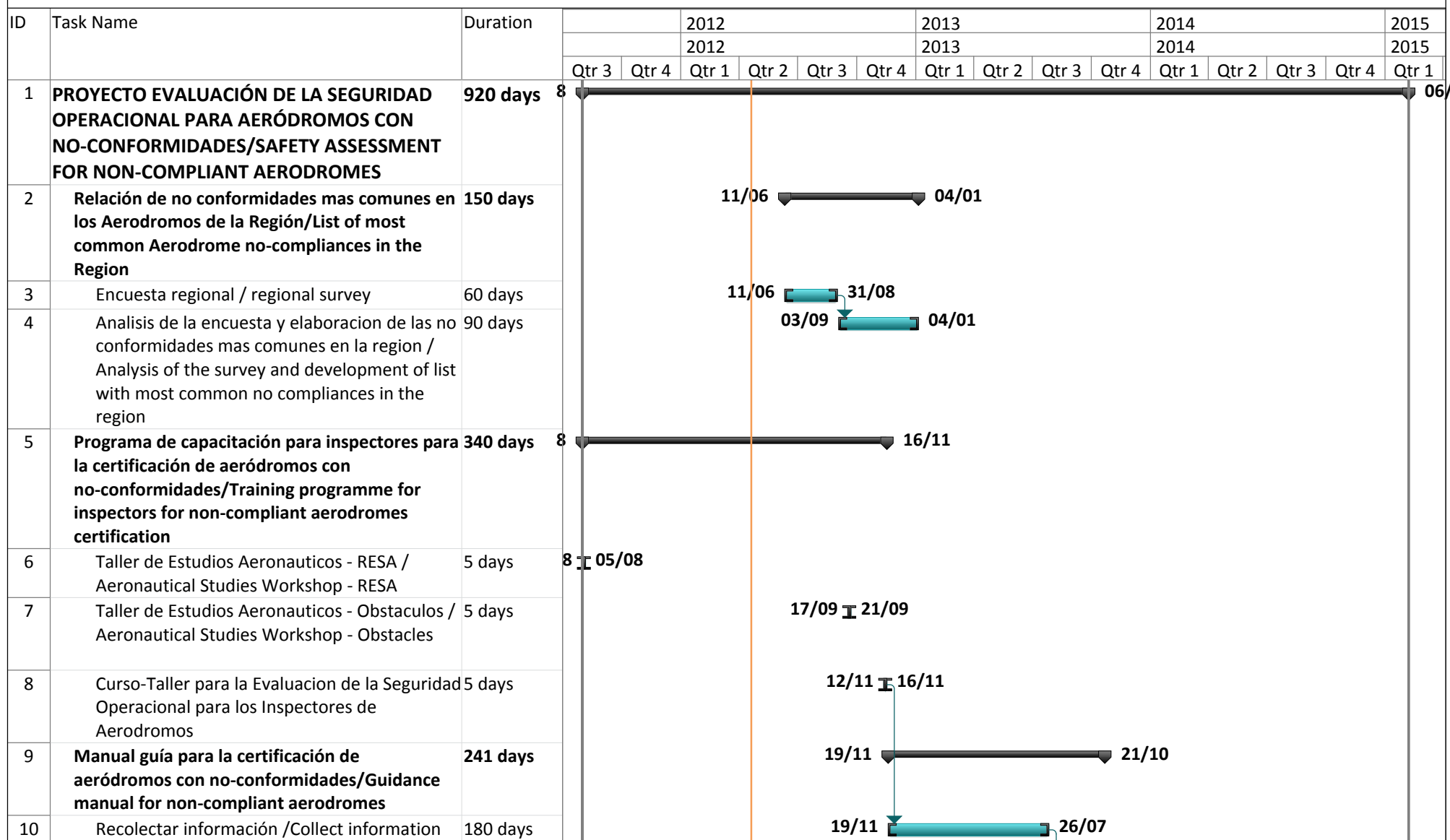
Related projects	<p>The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP:</p> <ul style="list-style-type: none"> • Aerodrome certification • Improvement of runway safety • Quality and availability of aeronautical data • Improvements to aerodrome physical and operational characteristics
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Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation¹	Date of Delivery	Comments
List of the most common non-conformities in the Region	PFF SAM AGA 03	Tarik Pereira de Souza		December 2012	Conduct a survey amongst the States, requesting information on the most common non-conformities that prevent the certification of international aerodromes
Guidance manual on the certification of aerodromes with non-conformities	PFF SAM AGA 03	Rodrigo Ribeiro		2013	The guidance manual will be developed based on the information retrieved from the questionnaire and will include available safety assessment tools for the most common non-conformities in the Region and what cases qualify for assessment for the purpose of obtaining the certification with deviations
Training programme for inspectors on the certification of aerodromes with non-conformities	PFF SAM AGA 01, 03, 04, and 05	AGA Officer		2013	Aerodrome inspectors will be trained based on the Guidance Manual developed for the certification of aerodromes with non-conformities.
Timetable for the certification of aerodromes with deviations	PFF SAM AGA 01, 03, 04, and 05	States		2015	Regional certification of previously identified aerodromes with non-conformities

¹ *Grey Tasks not started yet*
Green Activity being implemented as scheduled
Yellow Activity started with some delay, but expected to be implemented on time
Red Activity not implemented on time; mitigation measures are required

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Resources needed	Designation of experts for the execution of some of the deliverables, financial resources for organising training courses, meetings and at least two certification trials for aerodromes with deviations.				

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO EVALUACIÓN DE LA SEGURIDAD OPERACIONAL PARA AERÓDROMOS CON NO-CONFORMIDADES/SAFETY ASSESSMENT FOR NON-COMPLIANT
AERODROMES PROJECT



GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO EVALUACIÓN DE LA SEGURIDAD OPERACIONAL PARA AERÓDROMOS CON NO-CONFORMIDADES/SAFETY ASSESSMENT FOR NON-COMPLIANT
AERODROMES PROJECT

ID	Task Name	Duration	2012				2013				2014				2015			
			2012				2013				2014				2015			
			Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	
11	Entrega de propuesta de borrador / Delivery of draft proposal	30 days									29/07	06/09						
12	Revision de la propuesta borrador / Review of draft proposal	30 days									09/09	18/10						
13	Entrega documento final / Delivery of final document	1 day									21/10	21/10						
14	Cronograma de certificación de aeródromos con desviaciones	300 days									16/12							06/

APPENDIX B3

PROJECT ON IMPROVEMENT OF RUNWAY SAFETY

SAM Region	PROJECT DESCRIPTION (DP)	DP N° F3	
Programme	Title of the Project	Start	End
<i>Aerodromes</i> <i>(ICAO programme coordinator: Lia Ricalde)</i>	Improve Runway Safety <i>Project coordinator: Alfredo Chavez Baca (Peru)</i> <i>Experts contributing to the project: Hugo Vieira de Vasconcelos (Brazil)</i>	2011	2014
Objective	Reduce runway incursions/excursions at aerodromes in order to improve runway safety.		
Scope	Regulations and documentation to support the implementation of ICAO SARPs in order to improve runway safety at aerodromes in the Region: <ul style="list-style-type: none"> • Strategy to prevent and mitigate accidents and incidents due to runway incursions/excursions from the AGA perspective • AGA assistance to aerodrome safety committees (RSTs) in their runway safety tasks • Guides on aerodrome safety oversight 		
Metrics	<ul style="list-style-type: none"> • Percentage of reduction in runway incursions/excursions in the aerodromes of the Region. • Percentage of aerodromes in the Region that have aerodrome safety teams (RSTs). 		
Strategy	<ul style="list-style-type: none"> • In coordination with other bodies engaged in runway safety, analyse runway incursion/excursion statistics and prioritise AGA responsibilities • Establish a work relationship with regional AGA committees: ALACPA (pavement) and CARSAMPAF (wildlife hazard prevention) • Assist aerodrome safety committees (RSTs) in the Region and ensure the participation of the AGA component • Develop a safety management plan to prevent and mitigate runway incursions/excursions based on the analysis mentioned in the previous paragraph • Develop guides on oversight of the implementation of safety management plans in the aerodromes of the Region • Implement the safety management plan <p>All tasks will be carried out by experts nominated by CAR States and organisations, under the leadership of the project coordinator. Communication amongst project members and between the project and programme coordinators shall be via teleconference and the Internet.</p> <p>Upon completion of the studies, the results will be sent to the ICAO programme coordinator as a final consolidated document for its analysis, revision, and approval, and for submission to the GREPECAS PPRC.</p>		

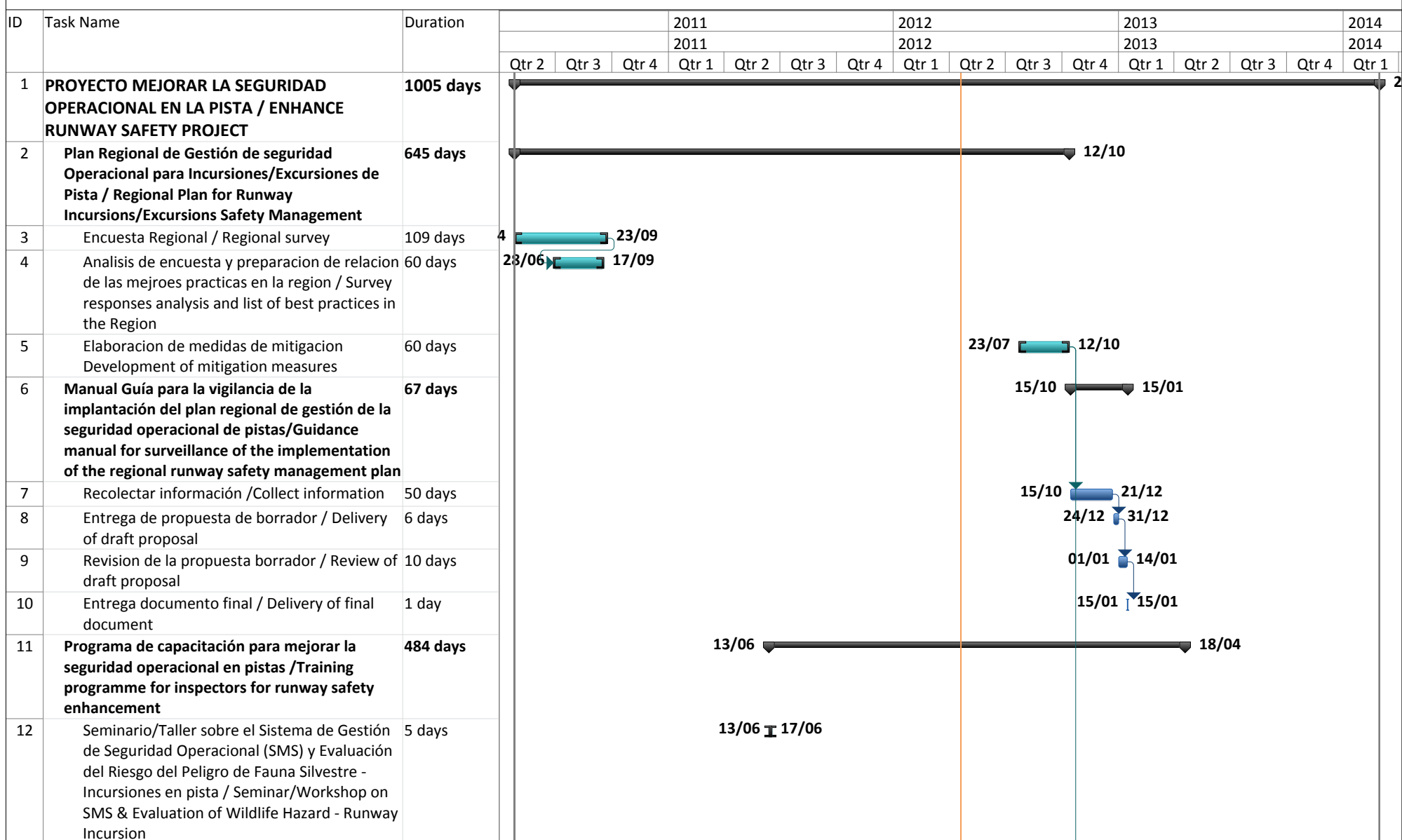
Rationale	<ul style="list-style-type: none"> Runway safety is a problem that affects all areas of air navigation Different bodies are working to improve runway safety from different perspectives. The purpose of this project is to support the existing initiatives and to work in a coordinated manner, contributing from the point of view of AGA Although there are better practices in SAM States, there is no harmonisation to expedite their implementation in the airports of the Region. The purpose of this project is to develop a strategy to be used by States to reduce runway incursions/excursions in their airports.
Related projects	<p>The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP:</p> <ul style="list-style-type: none"> Safety assessment for aerodromes with non-conformities Improve runway safety Quality and availability of aeronautical data Improvement of aerodrome physical and operational characteristics

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation¹	Date of Delivery	Comments
Regional safety management plan for runway incursions/excursions	PFF SAM AGA 01, 02, 03, 04, 05	Alfredo Chavez		December 2012	Analyse existing statistics and prioritise the main AGA factors that cause runway incursions/excursions, and develop a runway safety prevention and mitigation plan from the AGA perspective.
Guidance Manual on regional runway safety management plan implementation oversight	PFF SAM AGA 05	GREPECAS		2013	Assist RSTs in their safety oversight task from the AGA perspective
Training programme to improve runway safety	PFF SAM AGA 05	SAM AGA	60%	2013	SMS/PAF workshop on 13-17 June 2011 in Panama to prevent runway incursions. Workshop on air navigation visual aids on 7-11 May in Lima, Peru to prevent runway incursions. Workshop on the Guidance manual on oversight of the safety management implementation plan.

¹ *Grey* Task not started yet
Green Activity being implemented as scheduled
Yellow Activity started with some delay, but expected to be implemented on time
Red Activity not implemented on time; mitigation measures are required

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Timetable of implementation of mitigation measures at aerodromes	PFF SAM AGA 05	States/Aerodromes		2014	Assist RSTs in their safety prevention and mitigation tasks from the AGA perspective
Resources needed	Designation of experts in the execution of some of the deliverables, financial resources for organising training courses and meetings.				

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO MEJORAR LA SEGURIDAD OPERACIONAL EN LA PISTA / ENHANCE RUNWAY SAFETY PROJECT



GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO MEJORAR LA SEGURIDAD OPERACIONAL EN LA PISTA / ENHANCE RUNWAY SAFETY PROJECT

ID	Task Name	Duration					2011				2012				2013				2014
							2011				2012				2013				2014
			Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
13	Taller de Ayudas Visuales para la Aeronavegación - Incursiones de pista / Air Navigation Visual Aids Workshop - Runway Incursions	5 days																	
14	Taller sobre el Manual Guía para la vigilancia del plan de implantación de gestión de la seguridad operacional / Workshop on Guidance Manual for regional implementation of the runway safety management plan	3 days																	
15	Cronograma de implementación de medidas de mitigación en los aeródromos/Implementation schedule for the implementation of mitigation measures at aerodromes	360 days																	
16	Asistencia en la conformacion de los Equipos de Seguridad Operacional de los Aeropuertos (RST) / Assistance in the implementation of the Airports RWY safety teams (RST)	300 days																	
17	Cronograma de implementacion de medidas de mitigacion por los RST de los aeropuertos / Implementation schedule for the implementation of mitigation measures at aerodromes by the RST	60 days																	

APPENDIX B4

PROJECT ON QUALITY AND AVAILABILITY OF AERONAUTICAL DATA

SAM Region	PROJECT DESCRIPTION (DP)	DP N° F4	
Programme	Title of the Project	Start	End
<i>Aerodromes</i> <i>(ICAO programme coordinator: Lia Ricalde)</i>	Quality and Availability of Aeronautical Data <i>Project coordinator: Vicente Uribe (Colombia)</i> <i>Experts contributing to the project: TBD</i>	2012	2014
Objective	Efficient aerodrome operations based on aeronautical data quality assurance.		
Scope	Documentation in support of the quality and availability of aeronautical data at the aerodromes of the Region: <ul style="list-style-type: none"> • Reduction of aerodrome deficiencies related to non compliance with the CAR/SAM ANP • Regional strategy for the implementation of quality and availability of aerodrome aeronautical data • Aeronautical data provided by the airport operator to AIM with the corresponding quality requirements • Updated obstacle data at aerodromes 		
Metrics	<ul style="list-style-type: none"> • Percentage of resolved deficiencies related to Doc. 8733, Vol. II FASID, table AOP 1 • Percentage of international aerodromes with updated obstacle data based on the WGS-84 system • Percentage of international aerodromes that have a master plan 		
Strategy	<ul style="list-style-type: none"> • Develop a regional action plan to update the quality of the information contained in Doc 8733, CAR/SAM Air Navigation Plan, Vol. II FASID, Table AOP1; • Establish and implement a process to ensure the provision of aeronautical data by the airport operator to AIM, with the corresponding quality requirements • Update aerodrome obstacle data based on the WGS-84 system All tasks will be carried out by experts nominated by CAR States and organisations, under the leadership of the project coordinator. Communication amongst project members and between the project and programme coordinators shall be via teleconference and the Internet. Upon completion of the studies, the results will be sent to the ICAO programme coordinator as a final consolidated document for its analysis, revision, and approval, and for submission to the GREPECAS PPRC.		
Rationale	<ul style="list-style-type: none"> • The CAR/SAM ANP requires updating and quality of the aeronautical data of the international airports listed therein. There are many deficiencies due to non-compliance with the ANP, which, in many cases, is already obsolete and requires a comprehensive revision by States. • Aerodrome obstacles based on the WGS-84 also require updating. 		

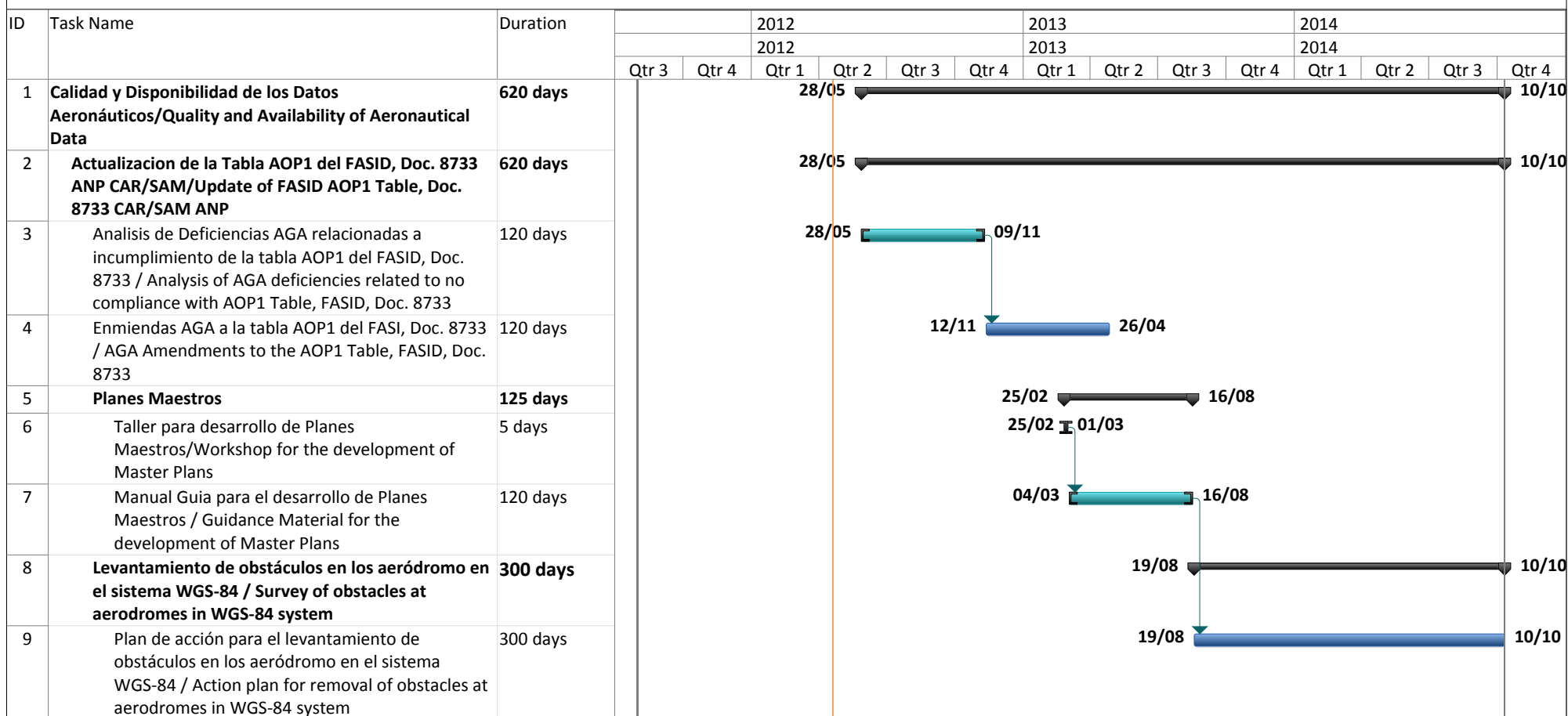
Related projects	<p>The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP:</p> <ul style="list-style-type: none"> • Aerodrome certification • Safety assessment of aerodromes with non-conformities • Improve runway safety • Improvement of aerodrome physical and operational characteristics
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Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Updating of FASID Table AOP1, Doc 8733 CAR/SAM ANP	PFF SAM AGA 01	Vicente Uribe		2013	Survey amongst States on the status of national airport development as compared to FASID Table AOP1, updating through amendments.
Master plans	PFF SAM AGA 01	States/ Aerodromes		2013	States should have an updated Airport Development Plan that includes the master plans of international airports. Training in master plans. en Planes Maestros. Development of guiding manual.
Survey of aerodrome obstacles based on WGS-84	PFF SAM AGA 01	States/ Aerodromes		2014	In collaboration with AIM
Resources needed	Designation of experts for the execution of some of the deliverables, financial resources for the purpose of organising training courses and meetings.				

¹

Grey	Task not started yet
Green	Activity being implemented as scheduled
Yellow	Activity started with some delay, but expected to be implemented on time
Red	Activity not implemented on time; mitigation measures are required

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
PROYECTO CALIDAD Y DISPONIBILIDAD DE LOS DATOS AERONÁUTICOS / QUALITY AND AVAILABILITY OF AERONAUTICAL DATA PROJECT



APPENDIX B5

PROJECT ON THE IMPROVEMENT OF AERODROME PHYSICAL AND OPERATIONAL CHARACTERISTICS

SAM Region	PROJECT DESCRIPTION (DP)	DP N° F5	
<i>Programme</i>	Title of the Project	Start	End
<i>Aerodromes</i> (ICAO programme coordinator: Lia Ricalde)	Improvement of Aerodrome Physical and Operational Characteristics Project coordinator: Eduardo Henn Bernardi (Brazil) Experts contributing to the project: Aldemar Pinzon (Colombia)	2011	2015
Objective	Develop guides and operational criteria to increase aerodrome capacity with efficiency		
Scope	Documentation to support the improvement of aerodrome physical and operational characteristics <ul style="list-style-type: none"> • Guide for calculating runway and apron capacity • Guide for calculating runway and apron capacity and demand • Training of instructors for the course on calculation of aerodrome capacity • Development of a user-friendly software/programme for calculating capacity • Guide on practical improvements for optimising runway and apron capacity 		
Metrics	<ul style="list-style-type: none"> • Number of States whose aerodrome capacity has been calculated • Number of airports with optimised runway and apron capacity • Number of aerodromes with increased capacity as a result of improvements in their infrastructure and/or procedures • Percentage of operations delayed, by aerodrome 		
Strategy	<ul style="list-style-type: none"> • Development of the methodology for calculating aerodrome capacity • Training of instructors to replicate capacity calculation procedures • Implement capacity calculation procedures, and assess those aerodromes whose installed capacity is almost saturated • Develop procedures to optimise runway and apron capacity at aerodromes • Develop environmental management procedures in coordination with regional committees • Apply the procedures for optimising runway and platform capacity at aerodromes • Establish the requirements applicable to aerodrome operators for the implementation of surface movement guidance and control systems • Monitor the optimisation of runway and apron capacity <p>All tasks will be carried out by experts nominated by CAR States and organisations, under the leadership of the project coordinator. Communication amongst project members and between the project and programme coordinators shall be via teleconference and the Internet.</p> <p>Upon completion of the studies, the results will be sent to the ICAO programme coordinator as a final consolidated document for its</p>		

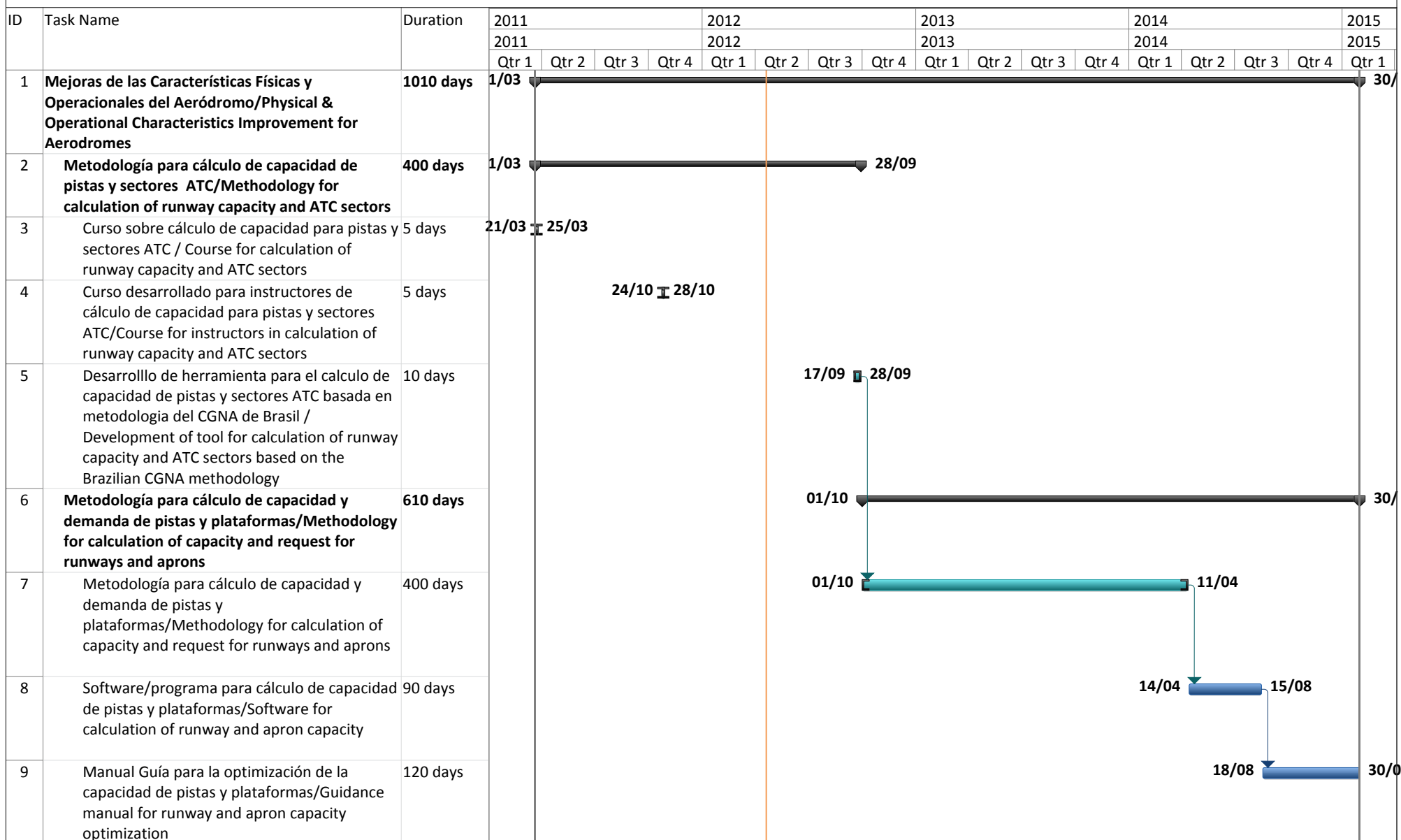
	analysis, revision, and approval, and for submission to the GREPECAS PPRC.
Rationale	<ul style="list-style-type: none"> The Region shows an unexpected increase in the volume of passenger and cargo operations, as a result of which the main airports of the Region are almost or already saturated Improving aerodrome infrastructure takes time, thus the need to optimise existing capacity It is foreseen that the new generation of wide-body aircraft will be operating at the main airports of the Region
Related projects	<p>The following projects were defined at the last meeting of the AGA/AOP Subgroup (AGA/AOP/SG/8), and are related to the project described in this DP:</p> <ul style="list-style-type: none"> Aerodrome certification Safety assessment of aerodromes with non-conformities Runway safety improvement Quality and availability of aeronautical data

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Methodology for calculating runway and ATC sector capacity	PFF SAM AGA 04	CGNA	100%	July 2011	Currently, the AGA and ATM areas are working towards the adoption of the CGNA methodology for calculating runway and ATC sector capacity
Course developed for instructors on the calculation of runway and ATC sector capacity	PFF SAM AGA 04	CGNA	75%	April 2012	A course for instructors was conducted In November 2011 and is to be concluded in April 2012. The participants that passed the course will be certified as instructors by CGNA.
Methodology for calculating runway and apron capacity	PFF SAM AGA 04	Eduardo Bernardi		2013	The part on the calculation of apron and taxiway capacity is expected to be incorporated into the methodology

¹ Grey Task not started yet
Green Activity being implemented as scheduled
Yellow Activity started with some delay, but expected to be implemented on time
Red Activity not implemented on time; mitigation measures are required

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Software/programme for calculating runway and apron capacity	PFF SAM AGA 04	Eduardo Bernardi		2013	The methodology developed should migrate towards a programme with a user-friendly interface that reduces methodological subjectivity
Methodology for calculating runway and apron capacity	PFF SAM AGA 04	Eduardo Bernardi		2014	Once the States can calculate the capacity of their aerodromes using the same method, demand calculation may be added
Guidance manual on runway and apron capacity optimisation	PFF SAM AGA 04	TBD		2015	The best practices of the Region would be used to develop a guide on runway and apron optimisation
Resources needed	Designation of experts for the execution of some of the deliverables, financial resources for organising training courses and meetings.				

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)





Agenda Item 3: Review of GREPECAS Programmes and Projects

3.7 Projects of the AIM Programme

(Presented by the Secretariat)

<p style="text-align: center;">SUMMARY</p> <p>This paper presents to the Meeting the progress made in the AIM Programme and its Projects G-1, G-2, and G3 of the CAR and SAM Regions. This document provides a strategic framework for a harmonised and integrated evolution and development of Aeronautical Information Management in the States. Likewise, it contributes to the attainment of the future objectives of the operational AIM and supports the implementation of the ICAO ATM global operational concept in coming years.</p>	
<p style="text-align: center;">REFERENCES</p> <ul style="list-style-type: none">• Report of the Fifteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/15), Rio de Janeiro, Brazil, 13-17 October 2008;• Report of the Sixteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/16), Punta Cana, Dominican Republic, 28 March – 1 April 2011• Report of the Thirteenth Meeting of the AIM Subgroup (AIM/SG/13) Mexico City, Mexico, 15-19 March 2011	
ICAO Strategic Objectives:	<i>A – Safety</i> <i>C- Environmental protection and sustainable development of air transport</i>

1. Introduction

1.1 The GREPECAS/16 meeting approved the modification of the GREPECAS organisation by replacing the AERMET, AGA/AOP, AIM, and CNS/ATM Subgroups with Programmes and Projects, and formulated the following decisions: **DECISION 16/45 NEW GREPECAS ORGANISATION** and **DECISION 16/47 TRANSFORMATION OF GREPECAS SUBGROUPS**, with a view to the implementation of performance-based regional plans in the CAR and SAM Regions, in compliance with the Global Air Navigation Plan and the Global ATM Operational Concept.

1.2 The thirteenth meeting of the AIM Subgroup approved the projects of the AIM Programme, which contained high-level activities and tasks related to the AIS-to-AIM transition in accordance with the ICAO AIS-AIM Transition Roadmap, with a view to improving effectiveness, minimising time to deliver results, better coordination between participants and their responsibilities, and applying a project management methodology for cost reduction. Thus, the AIM Programme would be coordinated in the CAR Region by the Officer of the NACC Regional Office, and by the Officer of the SAM Regional Office in the SAM Region.

1.3 GREPECAS/16 considered that, under the AIM Programme, projects G-1, G-2, and G-3 could each be implemented in the CAR Region, in the SAM Region, and, if applicable, in both the CAR and SAM Regions. Thus 3 projects were defined for the CAR Region and 3 for the SAM Region, where experts from CAR States would coordinate projects in the CAR Region, and experts from SAM States would coordinate SAM projects. Based on this separation, although in general the same guidelines and titles were applied to the Programme and projects, project activities were adjusted to the reality of the respective region.

2. Discussion

2.1 The considerable support and interest by CAR and SAM States participating in this GREPECAS methodology is appreciated. However, there are difficulties for the implementation of project activities in both Regions, mainly due to lack of experts. It is expected that this situation will be resolved in the coming months of 2012.

2.2 The AIM programme coordinators of the CAR and SAM Regions have coordinated and exchanged information for harmonisation purposes where required.

AIM Projects in the CAR Region

2.3 At the AIM/SG/13 meeting, the Secretariat defined the allocation of human resources to the AIM Programme, which included a series of AIM tasks to be performed in accordance with the requirements of the GREPECAS programme- and project-based methodology. Accordingly, the meeting designated the coordinators (already ratified by their corresponding administrations) for the projects under the AIM Programme (see **Appendices A1, A2, and A3**) in the CAR Region as follows:

- The delegate of COCESNA, Mr. José Alfredo Santos M., as coordinator of Project G1 – *Provision of electronic terrain and obstacle data (e-TOD) in CAR and SAM States*
- Mexico (DGAC/SENEAM) will provide as soon as possible the coordinator of Project G2 – *Aeronautical information/data management*
- The delegate of Cuba, Mr. Enrique Echarri C., as coordinator of Project G3 – *Development of quality specifications applicable to the AIM digital environment*

2.4 In the CAR Region, the panels that do the follow-up of the various tasks related to Regional Project RBPANIP are the C/CAR/WG and the CA/ANE/WG, which in March 2012 held their C/CAR//WG/9 and CA/ANE/WG/7 meetings, respectively, at the NACC Regional Office. Together with the NACC/WG, these are the forums for discussion prior to the meetings of Directors of Civil Aviation of the NACC Region, and that will do the follow-up of the projects of the AIM Programme.

Availability of Resources

2.5 In this regard, although State experts have expressed their interest in collaborating as project coordinators and experts, States face serious limitations in terms of human and financial resources. Consequently, the support of Cuba and COCESNA to the work in Projects G-3 and G-1, respectively, has been of great significance.

2.6 It is regretful that Mexico has decided not to participate in the coordination of Project G-2, and that, despite efforts to find a coordinator amongst CAR States, it was not possible to find one. The interest and support of the United States FAA (Mr. George Semples) to this process of Project G-2 are also appreciated.

2.7 It is important to note that, to the extent experts are assigned by the States for project follow-up, their contributions and shared knowledge will represent an important resource for the advancement and implementation of each AIM project.

AIM Projects in the SAM Region

2.8 The SAM/AIM/2 meeting developed the AIM projects for the SAM Region, taking into account the integration of the AIM performance objectives of the Air Navigation Performance-Based Implementation Plan (SAM/AIM 01 and SAM/AIM/2) with the activities carried out by the various task forces of the AIM Subgroup, and the resources available in the SAM Region for furthering these initiatives, as agreed at the last meeting of the Subgroup (AIM/SG/13).

2.9 The SAM/AIM/2 meeting, as part of its action plan, decided to develop the AIM projects taking into account the specific characteristics of SAM States and incorporating tasks as necessary. The AIM projects developed in accordance with the needs in the SAM Region appear in **Appendices B1, B2, and B3** to this working paper.

Availability of resources

2.10 As to available resources, SAM experts expressed their interest in collaborating as project coordinators and experts. However, some participants noted that given the human and economic resource limitations of their Administrations, it would be advisable to secure the respective support of the States to the performance of their tasks.

2.11 During the second half of 2011 and the first quarter of 2012, the AIM coordinators of 3 SAM States (Argentina, Paraguay and Uruguay) were not able to hold the respective Project Management Course and there have been serious budgetary difficulties to attend AIM meetings.

2.12 The SAM/AIM/3 meeting decided to replace the coordinator of Project G3 on the implementation of AIM quality management, so as to prevent a negative impact on the Region and move forward with the project.

ISO 9001:2008 quality certifications

2.13 During the second half of 2011 and the first quarter of 2012, 3 more SAM States have obtained the quality management certification. In total, there are 4 States certified under ISO 9001:2008: Chile, Ecuador, Paraguay, and Brazil. In the case of Brazil, there are still two additional processes pending for full certification. It is expected that two more States will be certified in 2012.

3. Action by GREPECAS

3.1 The CRPP Meeting is invited to:

- a) take note of the information contained in this working paper;
- b) review and consider approving the projects contained in **Appendices A and B** to this working paper; and
- c) take action as it may deem appropriate.

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APPENDIX A1**PROJECT DP N° G1 – CAR**

CAR Region	PROJECT DESCRIPTION (DP)	DP N° G1	
Programme	Title of the Project	Start	End
AIM (ICAO programme coordinator: Raúl Martínez)	Provision of electronic terrain and obstacle data (e-TOD) (CAR) Project coordinator: Alfredo Santos Mondragón (COCESNA) Experts contributing to the project: CAR/AIM	26/09/11	31/12/15
Objective	Support geographic information system (GIS) management, providing support material to CAR States for the provision of e-TOD data.		
Scope	The project contemplates the assessment and identification of the status of implementation of the provision of electronic terrain and obstacle data. It contemplates the drafting of an Action Plan and the adoption of Spanish and English e-TOD implementation guides, and support to the provision of electronic obstacle data with a view to the evolution of digital terrain models (DTM) for gradually improving electronic aeronautical charts and other similar products with the support of tools such as those currently provided by geographic information system (GIS)		
Metrics	Number of States with an operational GIS and trained personnel. Number of States that have implemented an eTOD action plan. Number of States with SLAs.		

Strategy	<p>All project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“Go-To-Meeting” application) and meetings to be held from time to time in accordance with work programme activities. The project coordinator will coordinate with the programme coordinator for the inclusion of additional experts suggested by the States in accordance with the tasks and work to be carried out.</p> <p>The results will be submitted by the programme coordinator to State experts in the form of a consolidated document for their analysis, review, and approval, and for presentation to the GREPECAS CRPP.</p>				
Rationale	<p>In order to comply with the SARPs of Annexes 15 and 4 that facilitate performance-based air operations and the implementation of the AIS-AIM Transition Roadmap, a close relationship is required with other projects in order to identify their operational requirements and their tentative implementation dates.</p>				
Related projects	<p>Project AIM G1 “Provision of electronic terrain and obstacle data (eTOD) (CAR)” is related to Projects G2 “ Aeronautical information/data management” and G3 “Assessment and development of QMS applied to AIM in SAM States”</p>				
Project deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation*	Date of Delivery	Comments
Updated status of implementation of eTOD in the CAR Region.	PFF: CAR AIM/02	Raúl Martínez		31/07/12	Follow-up to CA/ANE/WG/7 and C/CAR/WG/9 meeting reports
Generate a report on eTOD implementation in the CAR Region.	PFF: CAR AIM/02	Raúl Martínez		31/08/12	Under way as scheduled.


















Adjust the Manual on obstacle and terrain data for the CAR Region	PFF: CAR AIM/02	Raúl Martínez and Alfredo S. Mondragón (COCESNA)		31/08/12	Under way as scheduled.
Define the technical specifications of a model action plan and the eTOD project.	PFF: CAR AIM/02	Raúl Martínez and Alfredo S. Mondragón (COCESNA)		23/11/12	Foreseen to start on 03/09/12
General guidance material for the implementation of an AIM geographic information system (GIS).	PFF: CAR AIM/01	Raúl Martínez		2011	Completed as scheduled in compliance with GREPECAS Conclusion 14/39
Promote eTOD training and documentation for AIM operators.	PFF: SAM AIM/02	Raúl Martínez		23/07/12	Seminar on the transition to AIM, Phases 1 to 3, eTOD, AIXM, GIS
Resources needed	Designation of experts for the implementation of some deliverables. Higher level of commitment by States to support coordinators and experts.				

Status of implementation*

	Grey	<i>Task not started yet</i>
	Green	<i>Activity being implemented as scheduled</i>
	Yellow	<i>Activity started with some delay, but will be implemented on time</i>
	Red	<i>Activity not implemented on time; mitigation measures are required</i>

Timetable in MS Project showing tasks, sub-tasks, deliverables, and responsible party

**GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
DESARROLLOS PARA EL SUMINISTRO DE LOS DATOS ELECTRÓNICOS SOBRE EL TERRENO Y LOS OBSTÁCULOS (E-TOD) (CAR)**

ID	Nombre de tarea	Duration	2011				2012				2013				2014				2015				2016			
			Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1	 Desarrollos para el suministro de los datos electrónicos sobre el terreno y los obstáculos (e-TOD) (CAR). Development for the provision of electronic terrain and obstacle database (e-TOD) (CAR)	1114 days?																								
2	  Actualización sobre estado de implantación eTOD en la Región CAR. Updating on the status of e-TOD implementation in the CAR Region.	103 days?																								
3	  Generar Informe de Implantación E-TOD en la Región CAR. Generate e-TOD implementation report in the CAR Region.	23 days?																								
4	  Adaptar Manual de Datos de obstáculos y terreno para Región CAR. Adjust the e-TOD Manual to the CAR Region.	110 days?																								
5	 Definir las especificaciones técnicas de un modelo de Plan de acción y del proyecto eTOD. Define technical specifications of an action plan and e-TOD model.	60 days?																								
6	  Material Guía general para la implementación de un	59 days?																								
7	  Promover capacitación y la documentación para operadores AIM en e-TOD. Foster training and documentation for e-TOD AIM operators.	136 days?																								
8	  Seguimiento a los desarrollos para el suministro de	1114 days?																								
9	  Dar seguimiento a los desarrollos para el suministro	1114 days?																								

OACI, Estados y Proveedores

OACI, Estados y Proveedores

APPENDIX A2**PROJECT DP N° G2 – CAR**

CAR Region	PROJECT DESCRIPTION (DP)	DP N° G2	
<i>Programme</i>	Title of the Project	Start	End
AIM (ICAO programme coordinator: Raúl Martínez)	G2: Aeronautical information/data management (CAR) Project coordinator: Mexico declined to participate No coordinator. Experts contributing to the project: None.	Dec. 2012	TBD
Objective	Prepare an action plan to be followed by States for the implementation of the aeronautical information/data exchange model, and prepare a model letter of agreement between States.		
Scope	The project contemplates the assessment and identification within the States of the level of automation required for the integration of the aeronautical information and data exchange model in the region, through surveys, the identification of data base providers, and follow-up of the progress made in the associated SARPs.		
Metrics	Number of States with an aeronautical information and data exchange model implemented. Number of States that have SLAs with other States.		










Strategy	Project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“GoToMeeting” application). Seminars/meetings are scheduled in accordance with the activities of the work programme. The project coordinator will coordinate with the programme coordinator the inclusion of additional experts if needed for the tasks and work to be done. The results of the work done will be submitted by the programme coordinator to State experts in the form of a final consolidation document for their analysis, review and approval, and for submission to the GREPECAS CRPP.				
Rationale	Integrate aeronautical information to achieve the interoperability of aeronautical information systems, mainly ATM, and other users, while safeguarding air navigation safety (PAX-operators), by implementing the aeronautical information exchange model (AIXM) in preparation for the SWIM concept of Block 30 and Block 31 (ASBU) amongst other SWIM-related Blocks.				
Related projects	It is related to Projects G1 “Provision of electronic terrain and obstacle data (e-TOD)” and G3 “Assessment and development of the QMS applied to AIM in the CAR Region”, electronic aeronautical charts (eMAP), eAIP, digital NOTAM, PBN, FMS databases, etc.				
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation*	Date of Delivery	Comments
Prepare a workshop on the AIXM concept. See 5.1	PFF: CAR AIM/02	No coordinator		TBD	Foreseen to start in Dec. 2012
Survey of AIXM agreements implemented in the region	PFF: CAR AIM/02	No coordinator		TBD	Foreseen to start in Dec. 2012
Development of the model-template of AIXM agreement between States	PFF: CAR AIM/02	No coordinator		TBD	Foreseen to start in Dec. 2012

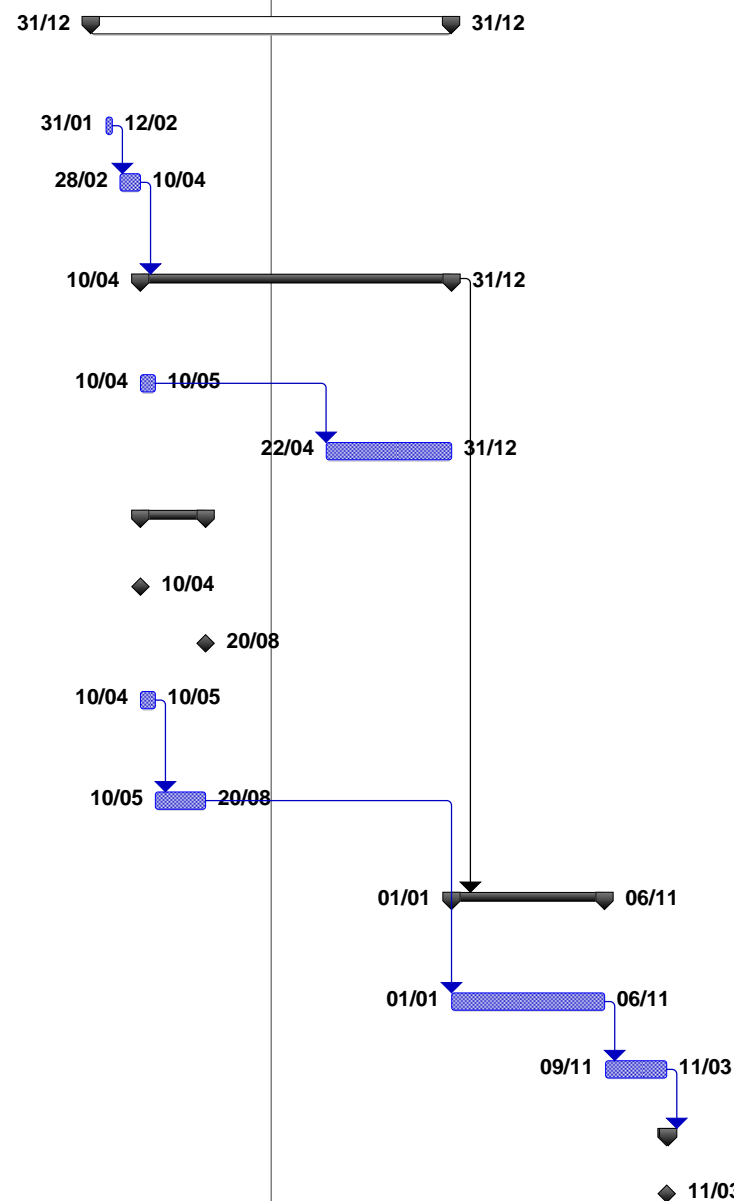
Survey of the provision of the IAIP using a table	PFF: CAR AIM/02	ICAO coordinator		TBD	No information available
Collection of information on the electronic AIP in CAR States	PFF: CAR AIM/02	ICAO coordinator		TBD	No information available
Preparation of a table in the electronic IAIP on issues not contemplated in the AIXM model	PFF: CAR AIM/02	No coordinator		TBD	Foreseen to start in Dec. 2012
Establish the procedure and protocols to ensure harmonisation among States and Regions	PFF: CAR AIM/02	No coordinator		TBD	Foreseen to start in Dec. 2012
Resources needed	Designation of the coordinator and experts to work on the deliverables. Greater commitment by CAR States to support coordinators and experts.				

**Grey Task not started yet*
Green Activity being implemented as scheduled
Yellow Activity started with some delay, but will be implemented on time
Red Activity not implemented on time; mitigation measures are required



Timetable in MS Project listing tasks, sub-tasks, deliverables, and responsible parties

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
GESTION DE INFORMACION/DATOS AERONAUTICOS / AERONAUTICAL INFORMATION MANAGEMENT

ID	Nombre de tarea	Duration	2011			2014			
			Qtr 4	Qtr 3	Qtr 2	Qtr 1	Qtr 4	Qtr 3	Qtr 2
1	 Proyecto G2 Gestión de información/datos aeronáuticos/Project G2 Aeronautical Information Management	522 days							
2	 Plan de acción/Action Plan	8.75 days							
3	 1.1 Encuesta sobre situación de implementacion del AIXM en los Estados/1.1 Survey on status of implementation of the AIXM States	29.75 days							
4	1.2 Modelo carta de acuerdo entre los Estados usuarios de DB/1.2 Model letter of agreement between the States of DB users	450.13 days?							
5	 1.2.1 Listado de proveedores de DB compatibles con el AIXM/1.2.1 Compatible with the AIXM DB providers listing	22 days							
6	 1.2.2 Monitoreo de acuerdos firmados por Estados/1.2.2 Monitoring of agreements signed by States	182 days							
7	1.3 Status de la informacion electronica por Estado/1.3 Status of electronic information by State	94.13 days?							
8	 1.3 Status de la informacion electronica por Estado/1.3 Status of electronic information by State	0 days?							
9	 1.3 Status de la informacion electronica por Estado/1.3 Status of electronic information by State	0 days?							
10	1.3.1 Encuesta en los Estados sobre los avances de la implementacion del eAIP/1.3.1 Survey in the States on the progress of the implementation of the eAIP	22 days							
11	1.3.2 Analisis de datos y formulacion de un plan de accion Regional/1.3.2 Data analysis and formulation of a Regional action plan	72 days							
12	1.4 Seminario para la implantación del modelo AIXM ver. 5.1/1.4 Seminar for the implementation of the AIXM model ver. 5.1	222 days							
13	1.4.1 Guía básica para el uso del modelo AIXM ver. 5.1/1.4.1 Basic Guide for the use of the AIXM model ver. 5.1	222 days							
14	 1.5 Informe de cierre del Proyecto/1.5 The project closure report	89.75 days							
15	<New Summary Task>	1.25 days?							
16	 <New Summary Task>	0 days?							



GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
GESTION DE INFORMACION/DATOS AERONAUTICOS / AERONAUTICAL INFORMATION MANAGEMENT

ID		Nombre de tarea	Duration	2011			2014			
				Qtr 4	Qtr 3	Qtr 2	Qtr 1	Qtr 4	Qtr 3	Qtr 2
17		<New Summary Task>	0 days?							◆ 14/03
18		<New Task>	1 day							11/03 14/03

APPENDIX A3

PROJECT ELABORATION OF THE SPECIFICATIONS OF QUALITY APPLICABLE TO THE AIM DIGITAL ENVIRONMENT

CAR Region	DESCRIPTION OF THE PROJECT (DP)	DP NO. G3	
<i>Program</i>	Project Title	Start date	Finish date
<i>AIM</i> (ICAO Coordinator of the programme: Raúl Martínez)	Elaboration of the specifications of quality applicable to the AIM digital environment. Project Coordinator: Enrique Contreras Echarri (Cuba) Contributing expert to the project: CAR/AIM	04/06/12	30/12/13
Objective	Develop and implement improvements to guidelines applicable to the system of quality management in the digital environment of the AIM in the region CAR based on the regional objectives.		
Scope	The scope of the project includes the evaluation and identification of levels of implementation associated with the management of the quality AIM services in the region, as well as the elaboration of a Plan of action for the development of the quality specifications applicable to the digital environment AIM and the implementation of the QMS.		
Metric	Number of States certified with ISO 9001: 2008.		
Strategy	The implementation of the activities of the project will be coordinated through communications between members of the project, the Project Coordinator and the Coordinator of the programme, mainly through e-mail, as well as any meetings it may be eventually, according to the activities of the programme of work. The project coordinator will coordinate the incorporation of additional experts suggested by the States, in accordance with the tasks and work to be carried out with the program coordinator. The results shall be subject by the Coordinator of the programme, for consideration by the experts from the States, in the form of consolidated document for analysis, review and approval, to be presented to the GREPECAS CRPP.		
Justification	The system of quality management in AIM services must provide users the assurance and confidence that the aeronautical information/ data distributed meet the requirements of quality in terms of its accuracy, resolution and integrity. A close relationship with other projects is necessary in order to collect the operational requirements demanded by the mentioned applications and their respective tentative dates of implementation.		
Related projects	Relates to the G1 projects "developments for the provision of data on the terrain and obstacles e-TOD" and "Aeronautical information/data management" G2		

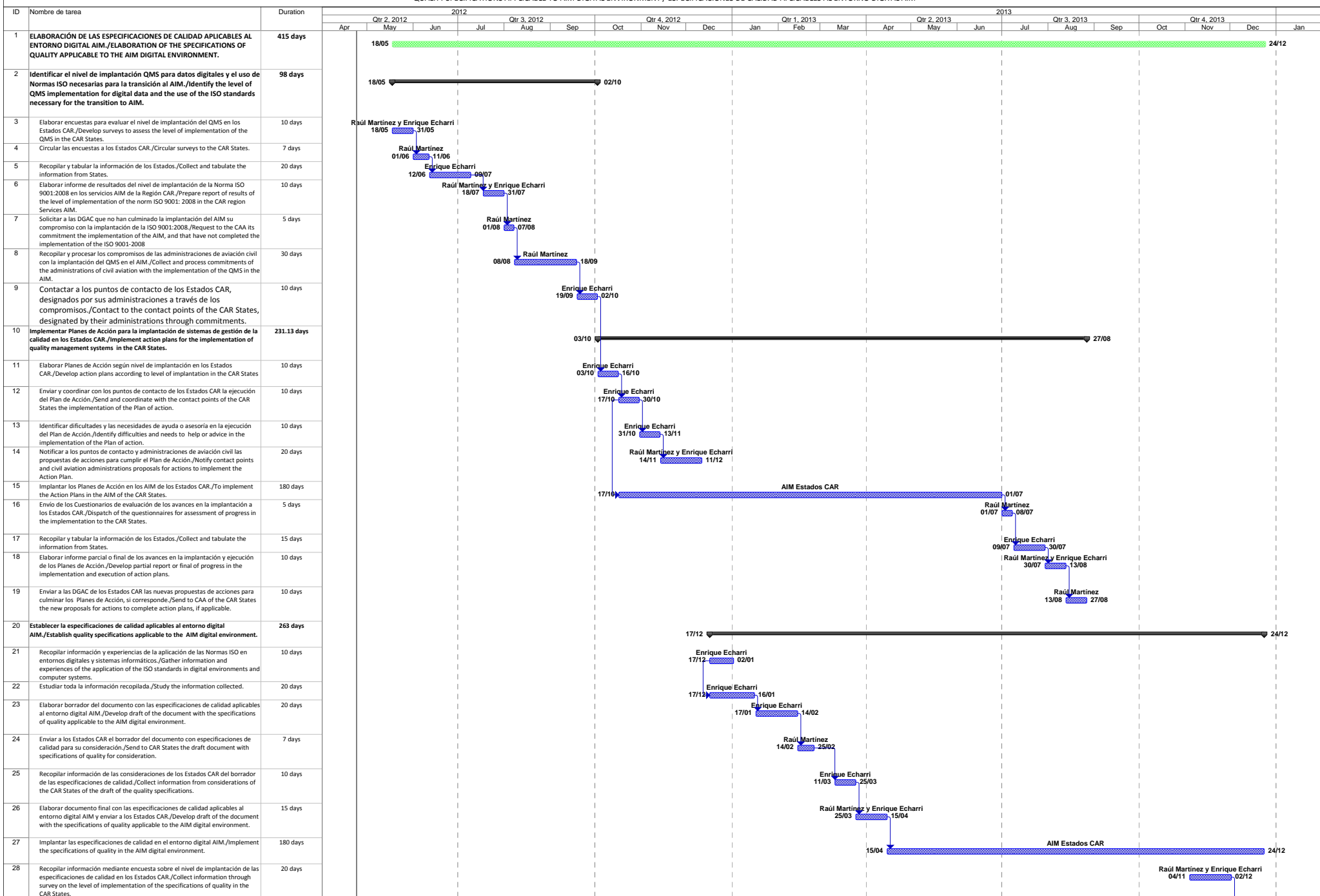
Deliverables of the project	Relationship with the Regional Plan based in performance (PFF)	Responsible for	State of Implementation¹	Date delivery	Comments
Surveys to assess the level of implementation of the QMS in the CAR States.	PFF: CAR AIM/02	Raúl Martínez and Enrique Echarri		31/05/12	
Report on results of the update of the level of implementation of the norm ISO 9001: 2008 in the CAR region AIM Services.	PFF: CAR AIM/02	Raúl Martínez and Enrique Echarri		31/07/12	
Commitments of the Civil Aviation Authorities with the implementation of the QMS and notification of contact points.	PFF: CAR AIM/02	Raúl Martínez		07/08/12	
Action Plan for the implementation of the QMS in the CAR States that have not begun the process.	PFF: CAR AIM/02	Enrique Echarri		16/10/12	
Questionnaires for assessment of progress in the implementation.	PFF: CAR AIM/02	Raúl Martínez		08/07/13	
Report of progress in the implementation and execution of action plans.	PFF: CAR AIM/02	Raúl Martínez		13/08/12	
Quality specifications applicable to the AIM digital environment.	PFF: CAR AIM/02	Raúl Martínez and Enrique Echarri		15/04/13	

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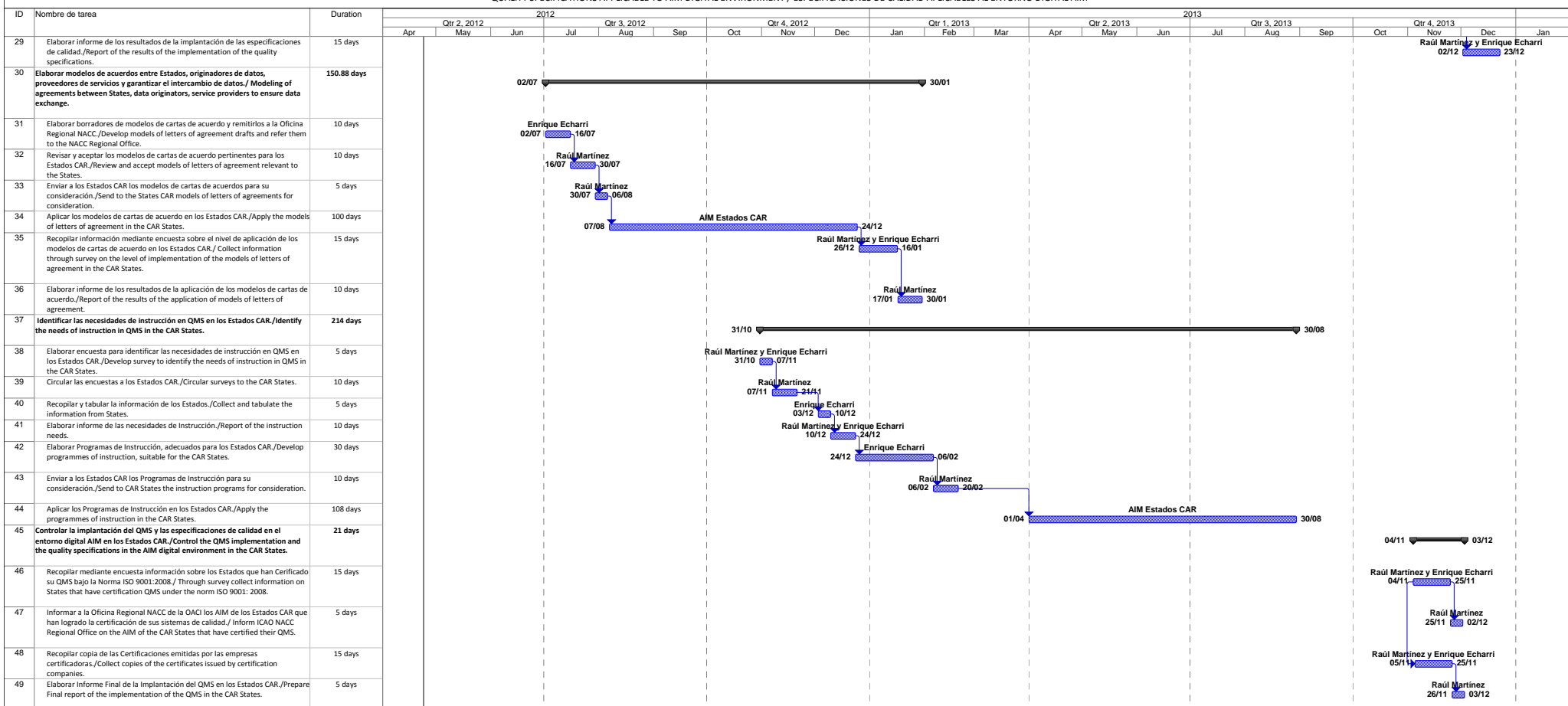
Grey	uninitialized task
Green	Activity in progress according to the timetable
Yellow	Activity initiated with some delay but would be arriving in time setting
Red	There has been the introduction of the activity within the estimated time required mitigating measures

Deliverables of the project	Relationship with the Regional Plan based in performance (PFF)	Responsible for	State of Implementation¹	Date delivery	Comments
Report of the results of the implementation of the quality in the AIM environment specifications.	PFF: CAR AIM/02	Raúl Martínez and Enrique Echarri		23/12/13	
AIM/QMS letters of agreement models to use in the CAR States.	PFF: CAR AIM/02	Enrique Echarri		16/07/12	
Report of the results of the application of models of letters of agreement in the CAR States.	PFF: CAR AIM/02	Raúl Martínez		30/01/13	
The CAR States surveys to identify the needs of training in QMS.	PFF: CAR AIM/02	Raúl Martínez and Enrique Echarri		07/11/12	
Report of the training needs.	PFF: CAR AIM/02	Raúl Martínez and Enrique Echarri		24/12/12	
Training programmes suitable for the CAR States.	PFF: CAR AIM/02	Enrique Echarri		06/02/13	
Standard certifications ISO 9001: 2008.	PFF: CAR AIM/02	Raúl Martínez and Enrique Echarri		25/11/13	
Final report of the implementation of the QMS in the CAR States.	PFF: CAR AIM/02	Raúl Martínez		03/12/13	
Resources	Designation of experts as contact points of the States with the coordination of the project and for the implementation of some of the deliverables. Greater commitment of States to support coordinators and experts working on the project.				

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
QUALITY SPECIFICATIONS APPLICABLE TO AIM DIGITAL ENVIRONMENT / ESPECIFICACIONES DE CALIDAD APPLICABLES AL ENTORNO DIGITAL AIM



CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)
QUALITY SPECIFICATIONS APPLICABLE TO AIM DIGITAL ENVIRONMENT / ESPECIFICACIONES DE CALIDAD APPLICABLES AL ENTORNO DIGITAL AIM



APPENDIX B1**PROJECT DP N° G1 – SAM**

SAM Region	PROJECT DESCRIPTION (DP)	DP N° G1	
Programme	Title of the Project	Start	End
AIM (ICAO Programme Coordinator: Roberto Arca Jaurena)	Provision of electronic terrain and obstacle data (e-TOD) (SAM) Project coordinator: Juan González (Uruguay) Experts contributing to the project: SAM/AIM IG	26/09/11	31/12/15
Objective	Support the implementation of e-TOD data provision by SAM States and provide guidance to the States for the acquisition and management of a GIS.		
Scope	The project contemplates the assessment and identification of the status of implementation related to the provision of electronic terrain and obstacle data. It contemplates the drafting of an action plan and guidance for e-TOD implementation in support of the provision of electronic terrain and obstacle data with a view to the evolution of digital terrain models (DTM) for gradual improvement of electronic aeronautical charts and other similar products with the support of tools such as geographic information systems (GIS).		
Metrics	Number of States with a GIS purchased and operational. Number of experts trained in GIS. Number of States with an e-TOD plan of action implemented. Number of States with SLAs.		

Strategy	<p>All project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“Go-To-Meeting” application) and meetings to be held from time to time in accordance with work programme activities. The project coordinator will coordinate with the programme coordinator the inclusion of additional experts suggested by the States when so required by the tasks and work to be carried out.</p> <p>The results will be submitted by the programme coordinator to the State experts in the form of a consolidated document for their analysis, review, and approval, and for submission to the GREPECAS CRPP.</p>				
Rationale	<p>Compliance with the SARPs of Annexes 15 and 4 to facilitate performance-based air operations and the implementation of the AIS-AIM Transition Roadmap. Close relationship with other projects is required in order to identify their operational requirements and tentative implementation dates.</p>				
Related projects	<p>Project G2 “Aeronautical information/data management” and Project G3 “Assessment and development of the QMS applied to AIM in SAM States”</p>				
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation*	Date of Delivery	Comments
Questionnaire on the status of implementation of e-TOD	PFF: SAM AIM/02	Juan González Uruguay		30/11/11	Completed as scheduled.
Prepare e-TOD implementation report.	PFF: SAM AIM/02	Juan González Uruguay		30/04/12	Being implemented as scheduled.

Draft the guiding document containing the objectives of the e-TOD project.	PFF: SAM AIM/02	Juan González Uruguay		31/08/12	Foreseen to start on 11/06/12
Define the technical specifications of the e-TOD project.	PFF: SAM AIM/02	Juan González Uruguay		23/11/12	Foreseen to start on 3/09/12
Draft the document containing e-TOD technical specifications.	PFF: SAM AIM/02	Juan González Uruguay		10/01/13	Foreseen to start on 30/11/12
Develop a training programme and documentation for e-TOD operators.	PFF: SAM AIM/02	TBD		26/08/12	No expert has been designated for this activity. Foreseen to start on 01/08/12
Compile the required operational concepts in a document.	PFF: SAM AIM/02	TBD		02/11/12	No expert has been designated for this activity. Foreseen to start on 04/09/12
Prepare the financial documentation.	PFF: SAM AIM/02	TBD		02/05/13	No expert has been designated for this activity. Foreseen to start on 02/05/13
Guidance for the acquisition of a geographic information system (GIS)	PFF: SAM AIM/01	Juan González Uruguay		09/03/12	Completed as scheduled.
GIS Implementation Manual	PFF: SAM AIM/01	Juan González Uruguay		09/03/12	Completed as scheduled.
Develop a training programme and documentation for GIS/AIXM operators.	PFF: SAM AIM/01	TBD		17/10/12	No expert has ben designated for this activity. Foreseen to start on 01/08/12
Define GIS operational concepts.	PFF: SAM AIM/01	TBD		28/02/13	No expert has ben designated for this activity. Foreseen to start on 28/02/13
Compile the required GIS operational concepts in a document.	PFF: SAM AIM/01	TBD		29/08/13	No expert has ben designated for this activity. Foreseen to start on 01/07/13

Resources needed	Designation of experts for the implementation of some deliverables. Greater commitment by States to support coordinators and experts.				










































- *Grey *Task not started yet*
- Green *Activity being implemented as scheduled*
- Yellow *Activity started with some delay, but will be implemented on time*
- Red *Activity not implemented on time; mitigation measures are required*

Timetable in MS Project with tasks, sub-tasks, deliverables, and responsible parties

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)														
SUMINISTRO DE DATOS ELECTRÓNICOS SOBRE TERRENO Y OBSTÁCULOS (E-TOD) + GIS / PROVISION OF TERRAIN AND OBSTACLE ELECTRONIC DATA (E-TOD) + GIS														
ID	Icono	Nombre de tarea	Duration	2010			2012			2014			2016	
				Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3		
1		Desarrollos para el suministro de los datos electrónicos sobre el terreno y los obstáculos (e-TOD) en los Estados SAM + GIS/Development for the provision of terrain and obstacle electronic data (e-TOD) in SAM States + GIS	1304 days											
2		Identificar el nivel de implantación de la Norma para la provisión de datos electrónicos sobre el terreno (e-TOD) para el Área 1 (Anexo 15, 10.1.3)/Identify the level of implementation of the Regulation for the provision of electronic terrain data (e-TOD)	118 days											
3		Generar Formulario de Consulta/Generate survey form	10 days											
4		Circular a los Estados/Circulate to States	7 days											
5		Reunir información de los Estados/Gather information from States	12 days											
6		Generar Informe de Implantación/Generate implementation report	64 days											
7		Plan de acción e-TOD/e-TOD action plan	1304 days											
8		Objetivos/Objectives	89 days											
9		Establecer y priorizar objetivos del proyecto de implantación del e-TOD (tareas, costos, plazos de ejecución, riesgos del proyecto)/Establish and prioritise objectives of e-TOD implementation project (tasks, costs, impl. Target dates, project risks)	30 days											
10		Elaborar el Documento Guía con los objetivos del proyecto/Prepare guidance document with project objectives	59 days											
11		Especificaciones técnicas/Technical specifications	94 days											
12		Definir las especificaciones técnicas y del proyecto/Define technical specifications of the project	60 days											
13		Elaborar el documento con las especificaciones técnicas/Prepare the document with technical specifications	30 days											
14		Realizar Acuerdos/Carry out agreements	90 days											
15		Definir cláusulas contractuales para el uso de la información (protección, almacenamiento, distribución, etc)/Define contract clauses for use of information, storage, distribution, etc)	30 days											
16		Firmar cartas de acuerdos, socializando los datos electrónicos de terreno y de obstáculos en las áreas comunes entre las fronteras de los Estados/Sign LOAs socialising e-TOD in common areas between States' boundaries	50 days											
17		Firmar acuerdo de nivel de servicio (SLA) entre proveedores y servicio AIS/Sign service agreement - SLA between providers and AIS service	31 days											
18		Capacitación/Training	1304 days											

Proyecto G1
-B1-5 -
CRPP/01-NE-WP/10

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
SUMINISTRO DE DATOS ELECTRÓNICOS SOBRE TERRENO Y OBSTÁCULOS (E-TOD) + GIS / PROVISION OF TERRAIN AND OBSTACLE ELECTRONIC DATA (E-TOD) + GIS

ID	Nombre de tarea	Duration	2010			2012			2014			2016	
			Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3
19	 Desarrollar un programa de capacitación y la documentación para operadores de e-TOD/Develop training programme and documentation for e-TOD operators	20 days					 TBD						
20	 Conducir programas de capacitación/Conduct training programmes	40 days			 TBD								
21	  Realizar seminarios orientados a los especialistas e-TOD, indicando los planes y los beneficios operacionales y económicos esperados/Hold seminars oriented towards e-TOD experts, indicating plans and operational and economical benefits expected.	941 days											Coordinador OACI
22	Conceptos Operacionales/Operational concepts	111 days											
23	 Definir los conceptos operacionales/Define operational concepts	67 days					 SAM/AIM/WG						
24	 Compilar en un documento los conceptos operacionales necesarios/Compile in a document necessary operational concepts	44 days					 TBD						
25	Análisis de requerimientos tecnológicos / Technological requirements analysis	146 days											
26	 Evaluación de costos del proyecto en general/General project cost assessment	87 days											
27	  Elaborar la documentación financiera/Draft financial documentation	44 days						 TBD					
28	 Presentar a la alta gerencia del documento final para su aprobación/Present the High Level Management the final document for approval	13 days						 Estados					
29	Adquisición de herramientas tecnológicas/Acquisition of technological tools	326 days											
30	  Adquirir los software, hardware y aplicativos de última tecnología/Acquire software and hardware and applications of state-of-the-art technology	152 days							 Estados				
31	  Instalar y poner en funcionamiento de las herramientas tecnológicas adquiridas/Install and put into operation technology tools acquired	132 days								 Estados			
32	  Entrenar al personal especializado en el manejo de estas herramientas/Train specialised personnel in handling these tools	43 days								 Estados			
33	Implantación propiamente dicha (bajo GIS)/Implementation itself (under GIS)	261 days											
34	  Carga de datos>Loading of data	150 days									 Estados		
35	 Verificación de carga/Check data loading	100 days										 Estados	
36	 Análisis de resultados/Analysis of the results	11 days										 Estados	
37													
38	 Desarrollo del GIS en Estados SAM para gestión de datos e-TOD, y gestionar info requerida para apoyar aplicaciones de nav aérea definidas/Development of GIS in SAM States for e-TOD and manage info required to support air nav applications	1170 days											
39	Diagnóstico/Diagnosis	224 days											

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
SUMINISTRO DE DATOS ELECTRÓNICOS SOBRE TERRENO Y OBSTÁCULOS (E-TOD) + GIS / PROVISION OF TERRAIN AND OBSTACLE ELECTRONIC DATA (E-TOD) + GIS

ID	Nombre de tarea	Duration	2010			2012			2014			2016
			Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	
40	Evaluación: costo beneficio, personal especializado, equipamiento de hardware y software/Cost-benefit assessment, specialised personnel, hardware and software	43 days				Estados						
41	Guía para la adquisición de un sistema de información geográfica/Guidance material for acquisition of a GIS	50 days				Juan González						
42	Manual Guía Implantación de un GIS/Guidance for GIS implementation	50 days				Juan González						
43	Selección y adquisición de software y hardware más adecuado/Selection and acquisition of most adequate software	174 days				Estados						
44	Realizar Acuerdos/Carry out agreements	100 days										
45	Definir cláusulas contractuales para uso de información (protección, almacenamiento, distribución, etc)/Define contracting clauses for use of information (protection, storage, distribution, etc)	30 days				Estados						
46	Firmar cartas de acuerdos, socializando los datos electrónicos de terreno y de obstáculos en las áreas comunes entre las fronteras de los Estados/Sign LOAs socialising e-TOD in common areas between States' boundaries	50 days				Estados						
47	Firmar acuerdo de nivel de servicio (SLA) entre proveedores y servicio AIS/Sign service level agreement - SLA, between AIS service providers	20 days				Coordinador OACI						
48	Capacitación/Training	253 days										
49	Desarrollar un programa de capacitación y documentación para operadores de GIS + AIXM/Develop a training programme and documentation for operators of GIS + AIXM	56 days				Juan Gonzalez/Coordinador OACI						
50	Conducir programas de capacitación/Conduct training programmes	40 days				Estados						
51	Realizar seminarios orientados a los especialistas e-TOD, indicando los planes y los beneficios operacionales y económicos esperados/Make seminars oriented to e-TOD experts indicating plans and operational and economic benefits expected	200 days				Coordinador OACI						
52	Conceptos Operacionales/operational concepts	650 days										
53	Definir los conceptos operacionales/Define operational concepts	87 days				TBD						
54	Compilar en un documento los conceptos operacionales necesarios/Compile in one document necesario operational concepts	44 days	TBD									
55	Generar base de datos/Generation of data bases	402 days										
56	Definición de bases de datos/Definition of data bases	100 days						Estados				
57	Carga de datos/Data loading	150 days						Estados				
58	Verificación de carga/Check data loading	100 days						Estados				
59	Análisis de resultados/Analysis of results	11 days						Estados				
60	Generación AIXM/AIXM Generation	40 days										
61	Generar productos basados en AIXM/Generate AIXM-based products	40 days						Estados				

SAM Region	PROJECT DESCRIPTION (DP)	DP N° G2	
Programme	Title of the Project	Start	End
AIM (ICAO Programme Coordinator: Roberto Arca Jaurena)	G2: Aeronautical information/data management (SAM) Project coordinator: Pablo Collazo (Argentina) Experts contributing to the project: SAM/AIM IG	01/03/12	01/05/13
Objective	Prepare the action plan to be followed by States for the use of the aeronautical information/data exchange model, letter of agreement model, and validation guides by mid 2013.		
Scope	The project contemplates the assessment and identification of the status of implementation associated to the integration of the aeronautical information/data exchange model in the Region by means of surveys, the identification of database providers, and the follow-up of the implementation of SARPs on this matter.		
Metrics	Number of States that have implemented data exchange systems. Number of States with SLAs.		
Strategy	All project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“Go-To-Meeting” application) and meetings to be held from time to time in accordance with work programme activities. The project coordinator will coordinate with the programme coordinator the inclusion of additional experts suggested by the States if so required by the tasks and work to be carried out. The results will be submitted by the programme coordinator to the State experts in the form of a consolidated document for their analysis, review, and approval, and for submission to the GREPECAS CRPP.		

Rationale	Integrate aeronautical information systems for the purpose of ATM system interoperability, while safeguarding safety (PAX-operators), by applying information exchange models.				
Related projects	This project is related to Projects G1 “ Provision of electronic terrain and obstacle (e-TOD) data” and G3 “Assessment and development of the AIM QMS in SAM States”				
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation*	Date of delivery	Comments
Prepare guidance material on the concept	PFF: SAM AIM/02	Pablo Collazo Argentina		07/09/12	Foreseen to start on 01/06/12
Survey on agreements implemented in the Region	PFF: SAM AIM/02	Pablo Collazo Argentina		31/08/12	Foreseen to start on 01/05/12
Agreement model-template	PFF: SAM AIM/02	Pablo Collazo Argentina		26/12/12	Foreseen to start on 01/11/12
Survey on the provision of the IAIP using a table.	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Completed as scheduled at the SAM/AIM/IG meeting
Distribution of IAIP survey to States	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Completed as scheduled at the SAM/AIM/IG meeting

Collection and updating	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Completed as scheduled at the SAM/AIM/IG meeting
Compilation of experiences on the electronic AIP in SAM States	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Completed as scheduled at the SAM/AIM/IG meeting
Review, and consider the adoption of, the corresponding specifications developed by Eurocontrol	PFF: SAM AIM/02	Pablo Collazo Argentina		01/06/12	
Prepare guidance material	PFF: SAM AIM/02	Pablo Collazo Argentina		03/12/12	Foreseen to start on 01/06/12
Prepare a table covering issues not included in the AIP model	PFF: SAM AIM/02	Pablo Collazo Argentina		03/12/12	Foreseen to start on 03/09/12
Establish a procedure to ensure harmonisation	PFF: SAM AIM/02	Pablo Collazo Argentina		30/11/12	Foreseen to start on 28/09/12
Resources needed	Designation of experts for the implementation of some deliverables. Greater commitment by States to support coordinators and experts.				

**Grey Task not started yet*

Green Activity being implemented as scheduled

Yellow Activity started with some delay, but will be implemented on time













Red Activity not implemented on time; mitigation measures are required

Timetable in MS Project showing tasks, sub-tasks, deliverables, and responsible parties

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
GESTION DE INFORMACION/DATOS AERONAUTICOS / AERONAUTICAL INFORMATION/DATA MANAGEMENT

ID		Nombre de tarea	Duration	2011				2012				2013				2014				Q1
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
1		Gestión de información/datos aeronáuticos/Aeronautical Information/data Management	344 days																	
2		Modelo de Intercambio de Información Aeronáutica (AIXM)/Aeronautical Information Exchange Management (AIXM)	218 days																	
3		Dar seguimiento al desarrollo los SARPs de la OACI sobre el modelo de intercambio de información aeronáutica/Give follow-up to the development of ICAO SARPs on the aeronautical information exchange model	218 days																	
4		Elaborar material guía acerca del concepto/Prepare guidance material about the concept	71 days																	
5		Distribuir Guía a los Estados/ Guidance distribution to States	22 days																	
6		Acuerdos con proveedores de datos/Agreements with data providers	172 days																	
7		Relevar los acuerdos implantados en la región/Review agreements implemented in the region	89 days																	
8		Desarrollar material guía/Develop guidance material	128 days																	
9		Identificación de originadores/Identify originators	88 days																	
10		Modelo-Plantilla de acuerdo/Model, agreement pattern	40 days																	
11		Identificar el estado de implantación sobre el suministro de Documentación Integrada laip/Identify status of implementation on the provision of integrated AIP documentation	263 days																	
12		Relevamiento de suministro de la IAIP mediante el uso de una tabla/Collection of IAIP provision through the use of a table	51 days																	
13		Distribución a los Estados/Distribution to States	51 days																	
14		Recolección y Actualización/Collection and updating	29 days																	
15		AIP Electrónico/Electronic AIP	244 days																	
16		Recolección de experiencias en los Estados de la Región SAM/Collection of experiences in the SAM Region States	32 days																	

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
GESTION DE INFORMACION/DATOS AERONAUTICOS / AERONAUTICAL INFORMATION/DATA MANAGEMENT

ID		Nombre de tarea	Duration	2011				2012				2013				2014				Q1
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
17	 	Estudiar para su incorporación especificaciones relativas elaboradas por Eurocontrol/Study for its incorporation into relative specifications prepared by Eurocontrol	87 days					Pablo Collazo 02/02		01/06										
18	 	Elaboración de material guía/Drafting of guidance material	132 days						Pablo Collazo 01/06		03/12									
19	 	Distribución a los Estados/Distribution to States/Distribution to States	6 days							Coordinador OACI 01/01	08/01									
20		Armonizar en la Región SAM la introducción de información no contemplada en el modelo AIP/Harmonise in the SAM Region the introduction of information not contemplated in the AIP model	173 days							03/09					01/05					
21	 	Elaboración de una tabla conteniendo temas no contemplados en el modelo AIP/Drafting of a table containing issues not contemplated in the AIP model	66 days						Pablo Collazo 03/09		03/12									
22	 	Establecer un formulario de comunicación de inclusión de temas no contemplados/Establish a communication form for inclusion of matters not contemplated	46 days						Pablo Collazo 28/09		30/11									
23	 	Establecer el procedimiento para asegurar la armonización/Establish procedure to ensure harmonisation	108 days							Coordinador OACI 03/12		01/05								

APPENDIX B3
PROJECT DP N° G3 – SAM

SAM Region	PROJECT DESCRIPTION (DP)	DP N° G3	
<i>Programme</i>	Title of the Project	Start	End
<i>AIM</i> (ICAO programme coordinator: Roberto Arca Jaurena)	Assessment and development of the QMS in the AIM environment in SAM States Project coordinator: Oscar Dioses (Peru) Experts contributing to the project: Lidia Cáceres (Peru) SAM/AIM IG David Díaz (Peru)	03/10/11	31/12/12
Objective	Support the introduction of improvements to the guides on the quality management system in the digital/electronic environment of AIM in the SAM Region, based on regional performance objectives of the regional performance-based implementation plan for the SAM Region.		
Scope	The project contemplates the assessment and identification of the status of implementation associated to quality management in AIM services in the Region. Drafting of an action plan and guides on the implementation of QMS in the digital/electronic environment of AIM.		
Metrics	Number of States with an ISO 9001:2008-certified QMS		

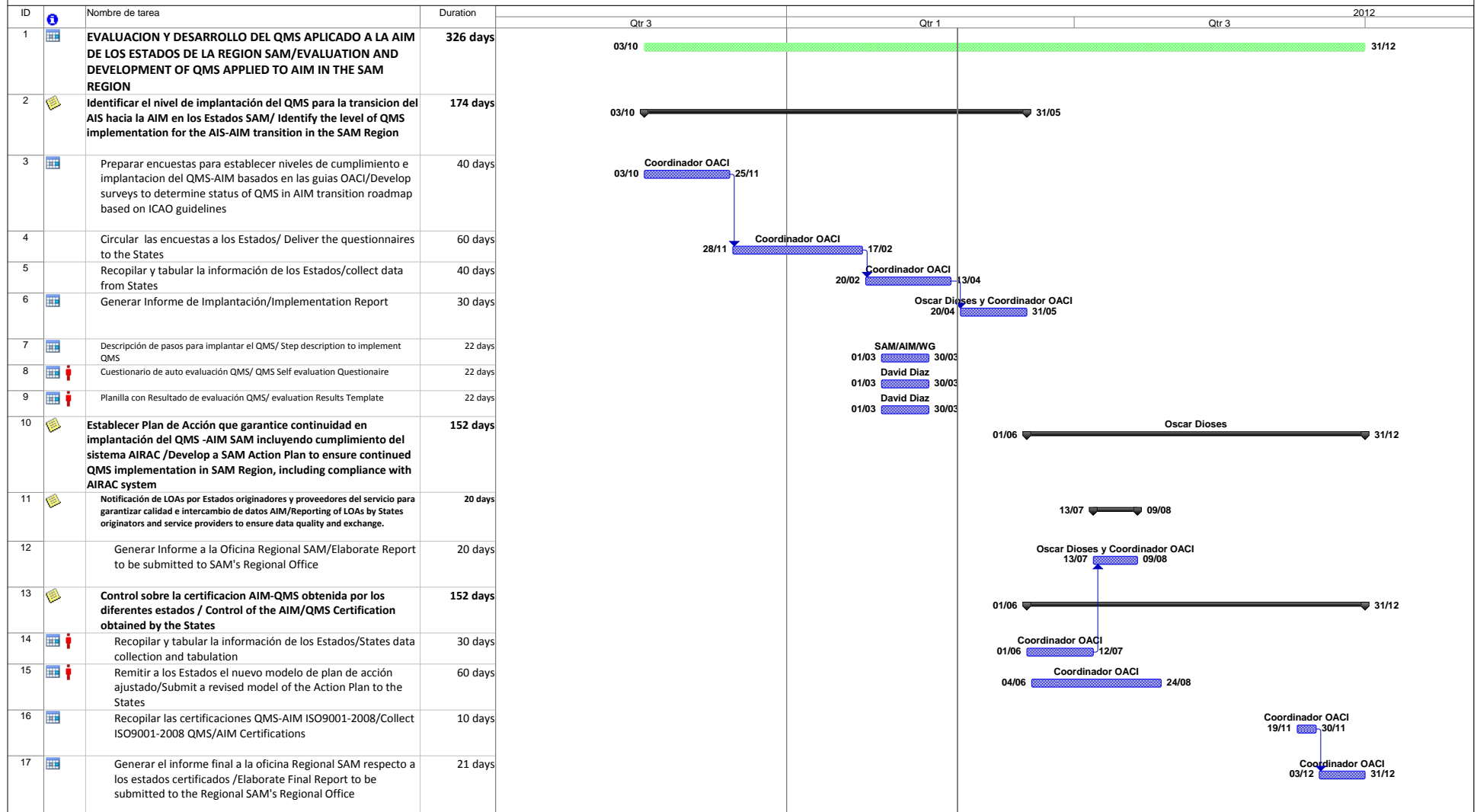
Strategy	<p>Project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“Go-To-Meeting” application) and meetings to be held from time to time in accordance with work programme activities. The project coordinator will coordinate with the programme coordinator the inclusion of additional experts suggested by the states if so required by the tasks and work to be carried out.</p> <p>The results will be submitted by the programme coordinator to the State experts in the form of a consolidated document for their analysis, review, and approval, and for submission to the GREPECAS CRPP.</p>				
Rationale	<p>The quality management system in AIM services must give users the assurance and confidence that the distributed aeronautical information/data meets quality requirements in terms of accuracy, resolution, and integrity. A close relationship with other projects is necessary in order to identify their operational requirements and their respective tentative implementation dates.</p>				
Related projects	<p>Project G1 “Provision of electronic terrain and obstacle data e-TOD” and Project G2 “ Aeronautical information/data management”</p>				
Project deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation*	Date of Delivery	Comments
Prepare surveys on the status of compliance and implementation of the AIM QMS based on ICAO guides	PFF: SAM AIM/01	ICAO coordinator		25/11/11	Completed as scheduled.
Circulate surveys to the States	PFF: SAM AIM/01	ICAO coordinator		17/02/12	Completed as scheduled.

Collect and tabulate information of States	PFF: SAM AIM/01	ICAO coordinator		13/04/12	Completed on 30/03/12.
Describe the steps towards QMS implementation	PFF: SAM AIM/01	SAM/AIM/WG		30/03/12	Completed as scheduled.
Questionnaire on QMS self-assessment	PFF: SAM AIM/01	David Diaz Peru		30/03/12	Completed as scheduled.
Template containing QMS assessment results	PFF: SAM AIM/01	David Diaz Peru		30/03/12	Completed as scheduled.
Prepare implementation report	PFF: SAM AIM/01	ICAO coordinator Oscar Diones Peru		31/05/12	Will be completed as scheduled
QMS action plan	PFF: SAM AIM/01	Oscar Diones Peru		24/08/12	Estimated to be completed as scheduled. Project deliverables may vary once the action plan is defined.
Model letter of agreement between States and service providers to ensure the quality of information and AIM data exchange.	PFF: SAM AIM/01	TBD		09/08/12	Start-up date 04/06/12. This task could be delayed because of lack of an expert. It is expected that a solution will be found before the start-up date.
Collect information on certifications and prepare report on status of ISO 9001:2008 certification in the SAM Region	PFF: SAM AIM/01	ICAO coordinator		30/11/12	Foreseen to be completed as scheduled.
Resources needed	Designation of experts for the implementation of some deliverables. Greater commitment by States to support coordinators and experts.				

- *Grey* *Task not started yet*
- Green* *Activity being implemented as scheduled*
- Yellow* *Activity started with some delay, but will be implemented on time*
- Red* *Activity not implemented on time; mitigation measures are required*

Timetable in MS Project showing tasks, sub-tasks, deliverables, and responsible parties

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
EVALUACION Y DESARROLLO QMS APLICADO A LA AIM EN LA REGION SAM / EVALUATION AND DEVELOPMENT OF QMS APPLIED TO AIM IN THE SAM REGION





Agenda Item 3: Review of GREPECAS Programmes and Projects

3.8 Projects of the MET Programme

(Presented by the Secretariat)

SUMMARY	
This working paper presents the regional implementation activities of the “Aeronautical Meteorology” Programme and its associated projects, as approved by the Eleventh Meeting of the Aeronautical Meteorology Subgroup (AERMETSG/11).	
REFERENCES	
<ul style="list-style-type: none">• Report of the Sixteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/16), Punta Cana, Dominican Republic, 28 March - 1 April 2011; and• Report of the Eleventh Meeting of the Aeronautical Meteorology Subgroup (AERMETSG/11), Lima, Peru, 28-30 November 2011.	
ICAO strategic objectives:	<i>A – Safety</i> <i>C- Environmental protection and sustainable development of air transport</i>

1. Background

1.1 The sixteenth meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/16) approved Decision 16/47, whereby the activities of the AERMET Subgroup, amongst other subgroups, and of its respective Task Forces become programmes and projects.

2. Discussion

In compliance with GREPECAS Decision 16/47, the Eleventh Meeting of the Aeronautical Meteorology Subgroup (AERMETSG/11), held on 28-30 November 2011, formulated Decision 11/06, which had been approved through the GREPECAS “fast-track” procedure, and whereby the AERMET Subgroup became the MET Programme for the CAR and SAM Regions, with the following projects:

- WAFS implementation project (CAR/SAM)
- IAVW implementation project (for each Region);
- QMS/MET implementation project (for each Region); and
- Project for the optimisation of OPMET exchange, including SIGMETs (WS, WV, and WC) (for each Region).

2.1 The Meeting should note that the projects approved by GREPECAS are closely related to the tasks that were being carried out by the AERMETSG in collaboration with the Secretariat, and that progress had been made in the tasks of various projects. In general terms, the MET programme is making progress as scheduled. The main achievements of these projects in the SAM Region, since they started, are:

- Drafting and updating of amendments up to amendment 75 to Annex 3 (November 2010), the SIGMET guide, the OPMET guide, and the QMS/MET practical guide for the preparation of ISO 9001: 2008 documentation (17 model documents);
- 19 MET experts of 11 States participated at the ICAO/WMO Seminar/Workshop on volcanic ash SIGMETs;
- Volcanic ash simulation protocols were developed in coordination with the Buenos Aires and Washington volcanic ash advisory centres;
- 6 volcanic ash simulation exercises (SIGMET tests) were carried out;
- Implementation of two OPMET data and SIGMET control processes four times a year at the Brasilia International OPMET data bank to detect errors in message headers. Likewise, annual control of OPMET exchange was implemented amongst 11 States for detecting and analysing deficiencies in the drafting and issuance of messages so that States may take immediate action to make sure that messages are received by the various users;
- Two CAR/SAM seminars/workshops on quality management in aeronautical meteorological services (QMS/MET) were held in coordination with WMO, the first one in the Dominican Republic (December 2006) and the second one in Mexico (October 2011), which provided training to 10 professionals of 8 States and 2 professionals of 2 States, respectively;
- 27 MET experts of 9 States attended the seminar/workshop on quality management in aeronautical meteorological services (QMS/MET), which was held in Spanish in Lima, Peru (December 2010) for SAM States. 97 experts of 4 States who did not attend the Lima seminar participated in their respective State.
- A lead auditor course that was attended by meteorology experts of 9 States of the Region, all of whom passed the course;
- MET “audit test” conducted in CORPAC, Peru, led by a lead auditor of a certifying company, with the participation of three of the experts who had recently passed the lead auditor course;
- Out of the 97 aerodromes listed in the CAR/SAM FASID AOP Table, 35 from three SAM States are already certified, accounting for 36% of the total, and it is expected that by 15 November 2012, when standard 2.2.3 of Annex 3 will become effective, at least 50% of the aerodromes listed in the aforementioned AOP Table will be certified.

2.2 The Meeting should take note that one State of the Region included a provision in its ISO 9001: 2008 certification contract whereby the certifying company would ask the ICAO SAM Office for MET experts in order to continue giving certified MET lead auditors an opportunity, since they can identify opportunities for improvement not only in the State being audited but also in their own State.

2.3 **Appendices A and B** contain a description of the projects and a GANTT diagram for each of the four projects of the MET Programme in the CAR and SAM Regions, respectively.

2.4 In terms of conflict management, the Meeting should note that conflict is inevitable within the context of a project. Conflict may result from scarce resources, timetable priorities, and individual working styles. Therefore, it is imperative to minimise conflict by means of basic team rules, group rules, and sound project management practices, and through communication plans and the definition of roles.

2.5 Within this context and pursuant to GREPECAS Conclusion 16/49, the implementation of projects under the MET Programme requires the necessary human resources. Consequently, the respective administrations must help project directors and members meet their commitment to project activities. This includes systems for enabling the “GoToMeeting” tool, since several project members have mentioned that the hardware and software required to use the “GoToMeeting” tool, as well as the MS Project application are not available. Administrations should guarantee their participation at any events that may be required.

2.6 Another problem we face is the fact that the WMO has projects for assisting States in the implementation, *inter alia*, of QMS/MET, thus duplicating the efforts of both ICAO and the States.

2.7 In this sense, and based on paragraph 6 of Doc 7475, *Modus Vivendi agreed between ICAO and the WMO*, “the two Organizations will consult each other about their respective plans and programmes for technical assistance in the area of meteorology in order to ensure a high level of professional training and maximum use of meteorological services in benefit of insufficiently developed countries.”

3. **Suggested action**

3.1 The Meeting is invited to:

- a) take into account the information provided in this working paper;
- b) review the information contained in Appendices A and B; and
- c) agree on any other action it may deem necessary.

APPENDIX B1

CAR/SAM PROJECT FOR THE IMPLEMENTATION OF THE WORLD AREA FORECAST SYSTEM (WAFS)

SAM Region	PROJECT DESCRIPTION (DP)	DP N° H1	
Programme	Title of the Project	Start	End
Aeronautical Meteorology <i>(Programme coordinator: Nohora Arias)</i>	Implementation of the world area forecast system (WAFS) <i>Project coordinator: Steven Albersheim (USA)</i> <i>Experts contributing to the project: Dulce Roses (United States) and Matt Strahan (United States)</i>	December 2011	November 2013
Objective	Assist States in the implementation of the WAFS and of the standards and recommended practices of Annex 3 and Part VI – MET of the CAR/SAM ANP, Basic and FASID, with regard to the use of WAFS products, and in the transition from the international satellite communications system (ISCS) to the WAFS Internet File Service (WIFS).		
Scope	The project will comprise all aerodrome offices of the SAM Region listed in Table MET 1A of the CAR/SAM FASID.		
Metrics	Number of States that receive WAFS products through the WIFS on 30 June 2012.		
Strategy	All tasks will be carried out by experts nominated by SAM States participating in the project, led by the Project Coordinator and under the supervision of the MET Programme Coordinator through the “GoTo Meeting” tool. Upon completion of the tasks, the results will be sent to the MET Programme Coordinator as a final document for submission to, and if necessary approval by, the GREPECAS CRPP through the GREPECAS fast-track procedure. For the purpose of collaborative decision-making, meetings will be held with the areas involved.		
Rationale	The introduction of the new WAFS forecasts is an improvement to the WAFS in terms of improved accuracy, timely distribution, and usefulness of forecasts to facilitate airspace optimisation.		
Related projects	<ul style="list-style-type: none"> ➤ Optimisation of the en-route airspace structure ➤ Improvement of ATM situational awareness ➤ Implementation of ATFM ➤ Implementation of the new flight plan format (FPL) ➤ Aeronautical mobile service in the SAM Region 		

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Updated WIFS user's guide	PFF SAM MET 04	MET programme coordinator and project director		November 2013	The guide was developed by the United States as the WAFS provider State. However, it shall be updated by the project.
Operational use of the WIFS	PFF SAM MET 04	MET programme coordinator and project director		30 June 2012	The ISCS will continue to operate until 30 June 2012.
Training for CAR/SAM States on the details and use of the new WAFS forecasts of convective clouds, icing, and turbulence derived from GRIB 2 data	PFF SAM MET 04	MET programme coordinator and project director		November 2012	GREPECAS Conclusion 15/5 requested that the Washington WAFC be invited to provide training to CAR/SAM States, in coordination with WMO.
Resources needed	Funds to conduct the seminar and to keep the WIFS user's guide up to date in English and Spanish. Likewise, the project coordinator and the experts must be provided with the equipment and time necessary to participate in GoTo Meetings.				

¹

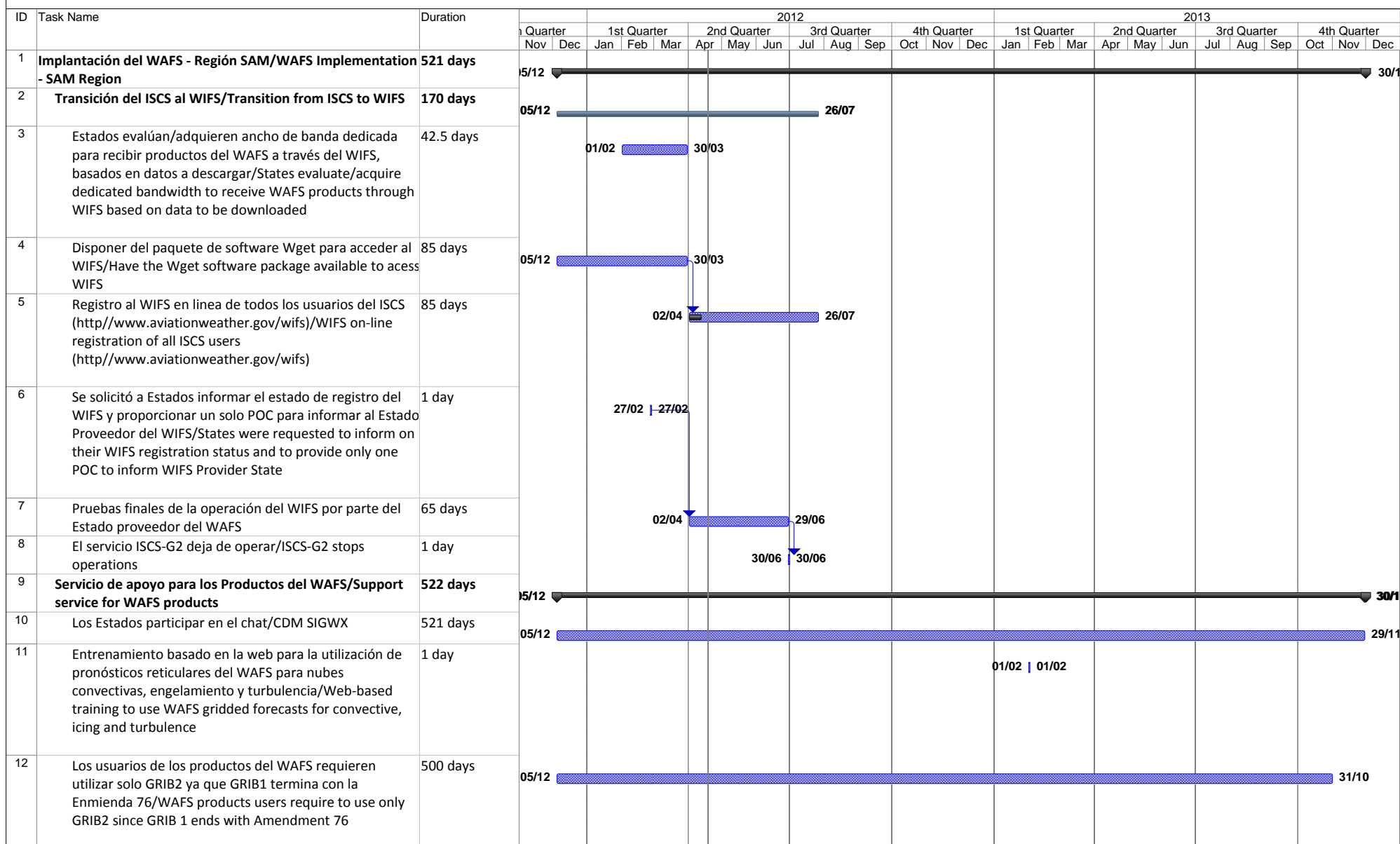
Grey Task not started yet

Green Activity being implemented as scheduled

Yellow Activity started with some delay, but will be implemented on time

Red Activity not implemented on time; mitigation measures are required

GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
 IMPLANTACION DEL WAFS EN LA REGION SAM / WAFS IMPLEMENTATION IN THE SAM REGION



APPENDIX B2

PROJECT FOR THE IMPLEMENTATION OF THE INTERNATIONAL AIRWAYS VOLCANO WATCH (IAVW)

SAM Region	PROJECT DESCRIPTION (DP)	DP N° H2	
Programme	Title of the project	Start	End
Aeronautical meteorology <i>(Programme coordinator: Nohora Arias)</i>	Implementation of the international airways volcano watch (IAVW) <i>Project coordinator: Jorge Oscar Leguizamón (Argentina):</i> <i>Experts contributing to the project: Olver Boolsen (Argentina), Walter Ríos (Bolivia), Oscar Bermudez (Colombia), Jorge Armoa (Paraguay), Lourdes Martínez (Peru)</i>	December 2011	November 2013
Objective	Assist States in the implementation of the IAVW and the standards and recommended practices of Annex 3 and Part VI – MET of the CAR/SAM ANP, Basic and FASID, concerning the issuance and distribution of en-route weather phenomena likely to affect the safety of aircraft operations, and the evolution of such phenomena in time and space (SIGMET WS, WV, WC, and WR).		
Scope	The project will comprise all meteorological watch offices (MWO) of the SAM Region listed in Table MET 1B of the CAR/SAM FASID, in coordination with the ACCs/FICs/NOFs.		
Metrics	Testing of volcanic ash SIGMETs shall result in continuous improvements once project deliverables are available to the States.		
Strategy	All tasks will be carried out by experts nominated by SAM States participating in the project, led by the Project Coordinator and under the supervision of the MET Programme Coordinator through the “GoToMeeting” tool. Upon completion of the tasks, the results will be sent to the MET Programme Coordinator as a final document for submission to, and if necessary approval by, the GREPECAS CRPP through the GREPECAS fast-track procedure. For the purpose of collaborative decision-making, meetings will be held with the areas involved.		
Rationale	The severity, persistence, and increased frequency of volcanic events with ash dispersion in the SAM Region and their repercussions on the provision of air navigation services call for tools to allow the personnel involved in the different air navigation areas to receive, properly use, and disseminate quality information related to such events. Likewise, based on Japan’s experience, contingency plans are needed not only for this type of events but also for radioactive clouds when more than one FIR in the Region is involved.		
Related projects	<ul style="list-style-type: none"> ➤ Optimisation of the en-route airspace structure ➤ Implementation of the new flight plan format (FPL) ➤ Implementation of ATFM 		

Project Deliverables	Relationship with the performance-based regional plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
SIGMET guide revised and updated	PFF SAM MET 03	MET programme coordinator and project director		November 2012	The guide will include MWO responsibility handover procedures.
Regional contingency plan for volcanic activity events	PFF SAM MET 03	MET programme coordinator and project director		November 2012	Prior to its approval by GREPECAS, the ATM, MET, and AIM personnel of the Region shall approve the plan, for which a meeting will be held.
Regional contingency plan for accidental release of radioactive material.	PFF SAM MET 03	MET programme coordinator and project director		November 2013	Prior to its approval by GREPECAS, the ATM, MET, and AIM personnel of the Region shall approve the plan, for which a meeting will be held.
Protocol for the volcanic ash SIGMET exercise	PFF SAM MET 03	MET programme coordinator and project director		November 2012	The protocol for the volcanic ash SIGMET exercise reviewed and updated.
Results of the exercise	PFF SAM MET 03	MET programme coordinator and project director		November 2012	Based on the results, values may be assigned to the quality of SIGMETs and their exchange as compared with previous exercises.
Resources needed	Funds to conduct the meetings and to translate the regional volcanic ash contingency plan and the regional contingency plan in case of accidental release of radioactive material. Likewise, participants must be given facilities to participate in GoTo Meetings.				

¹

<i>Grey</i>	<i>Task not started yet</i>
<i>Green</i>	<i>Activity being implemented as scheduled</i>
<i>Yellow</i>	<i>Activity started with some delay, but will be implemented on time</i>
<i>Red</i>	<i>Activity not implemented on time; mitigation measures are required</i>

GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
IMPLEMENTACION DE LA VIGILANCIA DE LOS VOLCANES EN LAS AEROVIAS INTERNACIONALES / IMPLEMENTATION OF INTERNATIONAL AIRWAYS VOLCANO WATCH

ID	Task Name	Duration	2011												2012											
			4th Quarter				1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter				
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr				
1	Implantación de la Vigilancia en Aerovías Internacionales (IAVW)/Implementation of International Airways Volcano Watch (IAVW)	838 days																								
2	Revisar y actualizar la Guía SIGMET/Review and update SIGMET Guide	125 days													09/01											
3	Revisar la Guía SIGMET y proponer mejoras de ser necesario/Review SIGMET Guide and propose improvements as necessary	38 days													09/01					29/02						
4	Crear la lista de puntos de contacto operativos (POC)/Create the list of points of contact (POCs)	22 days													17/01			15/02								
5	Desarrollar los procedimientos de traspaso de responsabilidades de las MWOs/Develop MWO handover procedures	33 days													15/02					30/03						
6	Revisar y mejorar, de ser necesario, el protocolo para el ejercicio SIGMET sobre cenizas volcánicas/Review and improve, as applicable, the protocol for the volcanic ash SIGMET exercise	54 days													16/01					29/03						
7	Definir procedimientos de coordinación entre las áreas afectadas/Define procedures for coordination between affected areas	81 days													81 days											
8	GoTo Meeting para revisar con la coordinadora del Prrograma MET las tareas/Go-to-Meeting to review tasks with the MET Programme coordinator	3 days																							02/05	8
9	Definir procedimientos de transferencia de responsabilidades y de asesoramiento entre el CMRE, las MWO y los ACC/Define procedures for handover and advisory activities between CMRE, MWOs and ACCs	81 days													09/01											
10	Consolidar la Guía /Consolidate the Guide	5 days																								
11	Ejercicio sobre cenizas volcánicas/Volcanic ash exercise	838 days																								
12	Adaptar el protocolo para el ejercicio sobre ceniza volcánica de los Estados SAM en coordinación con los VAAC de Buenos Aires y Washington/Adjust the volcanic ash protocol for SAM States, in coordination with VAAC Buenos Aires and Washington	19 days																								
13	Llevar a cabo el ejercicio/Carry out the exercise	1 day																								
14	Analizar los resultados del ejercicio y enviarlo a los miembros del proyecto/Analyse the results of the exercise and submit them to project members	20 days																								

GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
IMPLEMENTACION DE LA VIGILANCIA DE LOS VOLCANES EN LAS AEROVIAS INTERNACIONALES / IMPLEMENTATION OF INTERNATIONAL AIRWAYS VOLCANO WATCH

ID	Task Name	Duration	2011												2012												
			4th Quarter				1st Quarter			2nd Quarter			3rd Quarter			4th Quarter				1st Quarter			2nd Quarter				
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May				
15	Enviar a los Estados los resultados del análisis con acciones de mejora, si fuera el caso/Submit the results of the analysis to States, including improvement measures as applicable	1 day																									
16	Preparar una reunión para revisión y aprobación de la Guía SIGMET/Prepare a meeting to review and approve the SIGMET Guide	4 days																									
17	Llevar a cabo una reunión para revisión y aprobación de la Guía SIGMET/Carry out a meeting to review and approve the SIGMET Guide	3 days																									
18	Adaptar el protocolo para el ejercicio sobre ceniza volcánica de los Estados SAM en coordinación con los VAAC de Buenos Aires y Washington/Adjust the volcanic ash protocol for SAM States, in coordination with VAAC Buenos Aires and Washington	22 days																									
19	Llevar a cabo el ejercicio/Carry out the exercise	1 day																									
20	Analizar los resultados del ejercicio y enviarlo a los miembros del proyecto/Analyse the results of the exercise and submit them to project members	20 days																									
21	Enviar a los Estados los resultados del análisis con acciones de mejora, si fuera el caso/ Submit the results of the analysis to States, including improvement measures as applicable	0 days ¹¹																									
22	Revisar el borrador del Plan regional de contingencia para ceniza volcánica (RAPVA)/Review the draft regional volcanic ash contingency plan (RVACP)	838 days ⁹																									
23	Preparar la reunión para revisión y aprobación del RVACP/Prepare a meeting to review and approve the RVACP	20 days																									
24	Llevar a cabo una reunión con personal ATM, MET y AIM para revisión y aprobación del RVACP/Carry out a meeting with ATM, MET, and AIM personnel to review and approve the RVACP	1 day																									

GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
IMPLEMENTACION DE LA VIGILANCIA DE LOS VOLCANES EN LAS AEROVIAS INTERNACIONALES / IMPLEMENTATION OF INTERNATIONAL AIRWAYS VOLCANO WATCH

ID	Task Name	Duration	2011												2012									
			4th Quarter				1st Quarter			2nd Quarter			3rd Quarter			4th Quarter				1st Quarter			2nd Quarter	
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
25	Analizar los resultados del ejercicio y enviarlo a los miembros del proyecto/Analyse the results of the exercise and submit them to project members	20 days	09 15/09																					
26	Enviar a los Estados los resultados del análisis con acciones de mejora, si fuera el caso/ Submit the results of the analysis to States, including improvement measures as applicable	1 day																						
27	Adaptar el protocolo para el ejercicio sobre ceniza volcánica de los Estados SAM en coordinación con los VAAC de Buenos Aires y Washington/Adjust the volcanic ash protocol for SAM States, in coordination with VAAC Buenos Aires and Washington	22 days																						
28	Llevar a cabo el ejercicio/Carry out the exercise	1 day																						
29	Analizar los resultados del ejercicio y enviarlo a los miembros del proyecto/ Analyse the results of the exercise and submit them to project members	20 days																						
30	Enviar a los Estados los resultados del análisis con acciones de mejora, si fuera el caso/Submit the results of the analysis to States, including improvement measures as applicable	1 day																						
31	Elaborar el borrador del Plan regional de contingencia para nubes radiactivasa (RAPVA)/Prepare the draft regional radioactive cloud contingency plan (RRCCP)	19 days																						
32	Preparar una reunión con personal ATM, MET y AIM para revisión y aprobación del RAPCR/Prepare a meeting with ATM, MET, and AIM personnel to review and approve the RRCCP	2 days																						
33	Llevar a cabo una reunión con personal ATM, MET y AIM para revisión y aprobación del RAPCR	2 days																						

GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
IMPLEMENTACION DE LA VIGILANCIA DE LOS VOLCANES EN LAS AEROVIAS INTERNACIONALES / IMPLEMENTATION OF INTERNATIONAL AIRWAYS VOLCANO WATCH

ID	Task Name	Duration	2013												
			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	Implantación de la Vigilancia en Aerovías Internacionales (IAVW)/Implementation of International Airways Volcano Watch (IAVW)	838 days													29/11
2	Revisar y actualizar la Guía SIGMET/Review and update SIGMET Guide	125 days													
3	Revisar la Guía SIGMET y proponer mejoras de ser necesario/Review SIGMET Guide and propose improvements as necessary	38 days													
4	Crear la lista de puntos de contacto operativos (POC)/Create the list of points of contact (POCs)	22 days													
5	Desarrollar los procedimientos de traspaso de responsabilidades de las MWOs/Develop MWO handover procedures	33 days													
6	Revisar y mejorar, de ser necesario, el protocolo para el ejercicio SIGMET sobre cenizas volcánicas/Review and improve, as applicable, the protocol for the volcanic ash SIGMET exercise	54 days													
7	Definir procedimientos de coordinación entre las áreas afectadas/Define procedures for coordination between affected areas	81 days													
8	GoTo Meeting para revisar con la coordinadora del Prrograma MET las tareas/Go-to-Meeting to review tasks with the MET Programme coordinator	3 days													
9	Definir procedimientos de transferencia de responsabilidades y de asesoramiento entre el CMRE, las MWO y los ACC/Define procedures for handover and advisory activities between CMRE, MWOs and ACCs	81 days													
10	Consolidar la Guía /Consolidate the Guide	5 days													
11	Ejercicio sobre cenizas volcánicas/Volcanic ash exercise	838 days													29/11
12	Adaptar el protocolo para el ejercicio sobre ceniza volcánica de los Estados SAM en coordinación con los VAAC de Buenos Aires y Washington/Adjust the volcanic ash protocol for SAM States, in coordination with VAAC Buenos Aires and Washington	19 days													
13	Llevar a cabo el ejercicio/Carry out the exercise	1 day													
14	Analizar los resultados del ejercicio y enviarlo a los miembros del proyecto/Analyse the results of the exercise and submit them to project members	20 days													

GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
IMPLEMENTACION DE LA VIGILANCIA DE LOS VOLCANES EN LAS AEROVIAS INTERNACIONALES / IMPLEMENTATION OF INTERNATIONAL AIRWAYS VOLCANO WATCH

ID	Task Name	Duration	2013																							
			1st Quarter						2nd Quarter						3rd Quarter						4th Quarter					
			May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
15	Enviar a los Estados los resultados del análisis con acciones de mejora, si fuera el caso/Submit the results of the analysis to States, including improvement measures as applicable	1 day								07/01	07/01															
16	Preparar una reunión para revisión y aprobación de la Guía SIGMET/Prepare a meeting to review and approve the SIGMET Guide	4 days			15/06	20/06																				
17	Llevar a cabo una reunión para revisión y aprobación de la Guía SIGMET/Carry out a meeting to review and approve the SIGMET Guide	3 days				01/08	03/08																			
18	Adaptar el protocolo para el ejercicio sobre ceniza volcánica de los Estados SAM en coordinación con los VAAC de Buenos Aires y Washington/Adjust the volcanic ash protocol for SAM States, in coordination with VAAC Buenos Aires and Washington	22 days															01/08	30/08								
19	Llevar a cabo el ejercicio/Carry out the exercise	1 day																	25/09	25/09						
20	Analizar los resultados del ejercicio y enviarlo a los miembros del proyecto/Analyse the results of the exercise and submit them to project members	20 days																			04/11	29/11				
21	Enviar a los Estados los resultados del análisis con acciones de mejora, si fuera el caso/ Submit the results of the analysis to States, including improvement measures as applicable	0 days																								
22	Revisar el borrador del Plan regional de contingencia para ceniza volcánica (RAPVA)/Review the draft regional volcanic ash contingency plan (RVACP)	838 days																								29/11
23	Preparar la reunión para revisión y aprobación del RVACP/Prepare a meeting to review and approve the RVACP	20 days			04/06	29/06																				
24	Llevar a cabo una reunión con personal ATM, MET y AIM para revisión y aprobación del RVACP/Carry out a meeting with ATM, MET, and AIM personnel to review and approve the RVACP	1 day								25/09	25/09															

GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
IMPLEMENTACION DE LA VIGILANCIA DE LOS VOLCANES EN LAS AEROVIAS INTERNACIONALES / IMPLEMENTATION OF INTERNATIONAL AIRWAYS VOLCANO WATCH

ID	Task Name	Duration	2013																							
			1st Quarter						2nd Quarter						3rd Quarter						4th Quarter					
			May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
25	Analizar los resultados del ejercicio y enviarlo a los miembros del proyecto/Analyse the results of the exercise and submit them to project members	20 days						05/11		30/11																
26	Enviar a los Estados los resultados del análisis con acciones de mejora, si fuera el caso/ Submit the results of the analysis to States, including improvement measures as applicable	1 day							07/01		07/01															
27	Adaptar el protocolo para el ejercicio sobre ceniza volcánica de los Estados SAM en coordinación con los VAAC de Buenos Aires y Washington/Adjust the volcanic ash protocol for SAM States, in coordination with VAAC Buenos Aires and Washington	22 days															01/08		30/08							
28	Llevar a cabo el ejercicio/Carry out the exercise	1 day																	25/09		25/09					
29	Analizar los resultados del ejercicio y enviarlo a los miembros del proyecto/ Analyse the results of the exercise and submit them to project members	20 days																			04/11					29/11
30	Enviar a los Estados los resultados del análisis con acciones de mejora, si fuera el caso/Submit the results of the analysis to States, including improvement measures as applicable	1 day																								
31	Elaborar el borrador del Plan regional de contingencia para nubes radiactivas (RAPVA)/Prepare the draft regional radioactive cloud contingency plan (RRCCP)	19 days									04/02		28/02													
32	Preparar una reunión con personal ATM, MET y AIM para revisión y aprobación del RAPCR/Prepare a meeting with ATM, MET, and AIM personnel to review and approve the RRCCP	2 days												28/03		29/03										
33	Llevar a cabo una reunión con personal ATM, MET y AIM para revisión y aprobación del RAPCR	2 days																								

APPENDIX B3

PROJECT FOR THE IMPLEMENTATION OF THE MET INFORMATION QUALITY MANAGEMENT SYSTEM (QMS/MET)

SAM Region	PROJECT DESCRIPTION (DP)	DP N° H3	
Programme	Title of the Project	Start	End
Aeronautical Meteorology <i>(Programme coordinator: Nohora Arias)</i>	Implementation of the QMS/MET <i>Project coordinator: Ricardo Reyes (Peru)</i> <i>Experts contributing to the project: Olver Boolsen (Argentina), Arthur Gonçalves Ferreira (Brazil), Xenia Guardia (Panama), Roberto Salinas (Paraguay), Lourdes Martínez (Peru)</i>	December 2011	December 2013
Objective	Assist States in the implementation of the QMS/MET and certification where applicable. Update and improve the QMS/MET guide to assist States in the production of MET documentation under ISO 9001: 2008, the implementation of Annex 3 and Part VI – MET of the CAR/SAM ANP, and the conduction of audit trials.		
Scope	Establishment and application of a duly organised MET service quality system at each MET unit of all SAM aerodromes listed in the CAR/SAM ANP, and compliance with the standards and recommended practices of Annex 3 and the CAR/SAM ANP, Vol. I, Basic, and Vol. II, FASID, Part VI – MET.		
Metrics	Number of AOP aerodromes certified under ISO 9000: 2008, and list of aerodromes and their status of implementation of QMS/MET in each of their units.		
Strategy	All tasks will be carried out by experts nominated by SAM States participating in the project, led by the Project Coordinator and under the supervision of the MET Programme Coordinator through the “GoToMeeting” tool. Upon completion of the tasks, the results will be sent to the MET Programme Coordinator as a final document for submission to, and if necessary approval by, the GREPECAS CRPP through the GREPECAS fast-track procedure. For the purpose of collaborative decision-making, meetings will be held with the areas involved.		
Rationale	More accurate and timely meteorological information will optimise flight path planning and prediction, thus improving ATM safety and efficiency; improved aerodrome reports and forecasts will optimise the use of available aerodrome capacity; and meteorological information will minimise the environmental impact of air traffic. Performance management will be an important part of meteorological information quality assurance.		
Related projects	<ul style="list-style-type: none"> ➤ Automation ➤ Improved ATM situational awareness 		

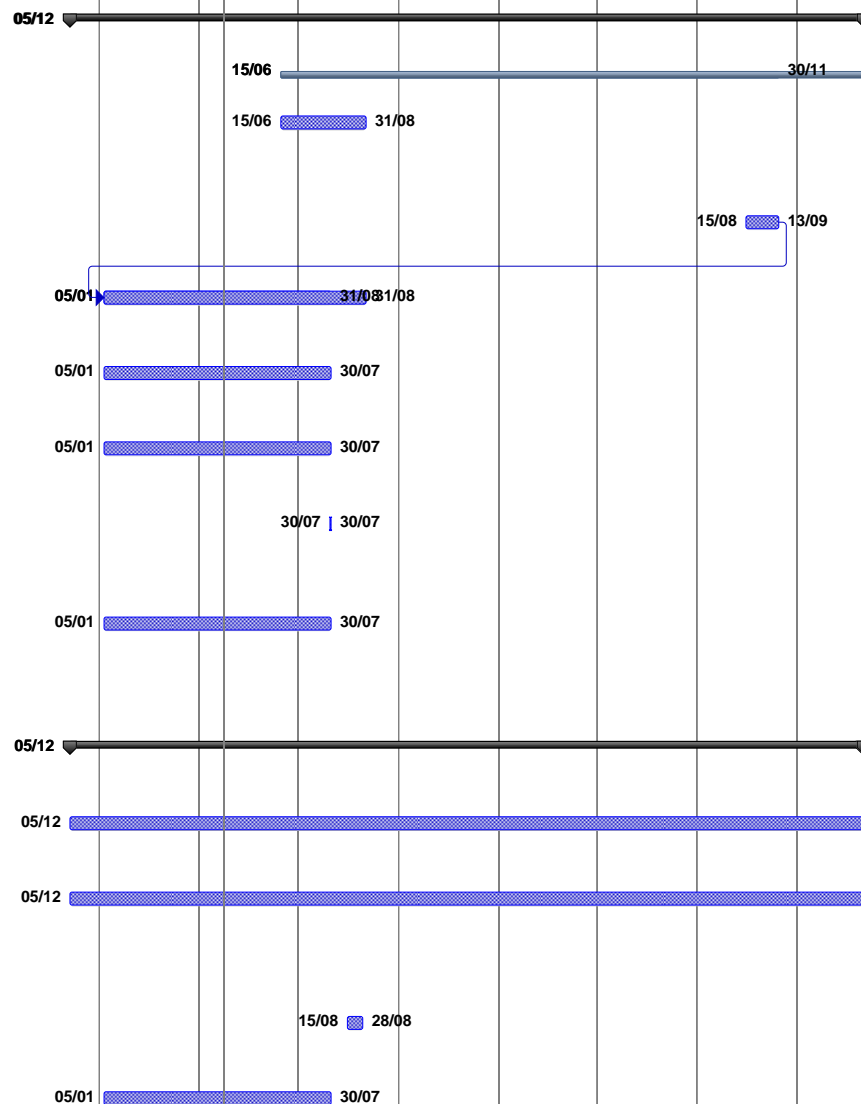
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation ¹	Date of Delivery	Comments
Revised and updated QMS/MET guide.	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		November 2013	The practical guide will facilitate the drafting of ISO 9000: 2008 documentation by MET service provider States.
Development of a State survey on MET personnel	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		November 2012	One of the main problems facing MET service provider States is the lack of personnel with the competencies required by WMO and ICAO. State requirements will be officially communicated to ICAO contracting States.
Table of compliance with Annex 3 standards and MET procedures	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		August 2012	In the first instance, strict compliance with ICAO standards related to the provision of MET services will be monitored.
Table of compliance with the CAR/SAM ANP, Part VI - MET.	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		August 2012	Close monitoring of strict compliance with Part VI- MET of the CAR/SAM ANP.
Audit trials	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		November 2013	Audit trials will be conducted to identify QMS/MET implementation issues and to propose strategies for their resolution.
Resources needed	Funds to conduct audit trials. States could cover the cost of trials by their lead auditors, since the experience obtained will contribute to improve the system. Likewise, participants must be given facilities to participate in GoTo Meetings.				

¹

<i>Grey</i>	<i>Task not started yet</i>
<i>Green</i>	<i>Activity being implemented as scheduled</i>
<i>Yellow</i>	<i>Activity started with some delay, but will be implemented on time</i>
<i>Red</i>	<i>Activity not implemented on time; mitigation measures are required</i>

GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
 IMPLANTACION DEL QMS/MET EN LA REGION SAM / QMS/MET IMPLEMENTATION IN THE SAM REGION

ID	Task Name	Duration																								
			2011				2012				2013															
			1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
			Jan Feb Mar	Apr May Jun	Jul Aug Sep	Oct Nov Dec	Jan Feb Mar	Apr May Jun	Jul Aug Sep	Oct Nov Dec	Jan Feb Mar	Apr May Jun	Jul Aug Sep	Oct Nov Dec	Jan Feb Mar	Apr May Jun	Jul Aug Sep	Oct Nov Dec	Jan Feb Mar	Apr May Jun	Jul Aug Sep	Oct Nov Dec	Jan Feb Mar	Apr May Jun	Jul Aug Sep	Oct Nov Dec
1	Implantación del QMS/MET - Región SAM/QMS/MET Implementation - SAM Region	522 days																								
2	Actualización de la Guía QMS/MET/Update of QMS/MET Guide	383 days																								
3	Actualización de la Guía con respecto a las competencias del personal MET/Update of the Guide with regard to MET personnel competencies	57 days																								
4	Actualización de la Guía con respecto a la Enmienda 76 del Anexo 3/Update of the Guide with respect to Amendment 76 to Annex 3	22 days																								
5	Requisitos para la implantación del QMS/MET/QMS/MET implementation requirements	173 days																								
6	Tabla de cumplimiento a las normas del Anexo 3 de cada uno de los Estados/Table of compliance to Annex 3 standards in each State	149 days																								
7	Tablas de cumplimiento (3) de la Parte VI - MET del ANP CAR/SAM/Tables of compliance (3) of Part VI - MET of CAR/SAM ANP	149 days																								
8	Plan de implantación del QMS/MET en los aeródromos SAM del ANP CAR/SAM/QMS/MET implementation plan in CAR/SAM ANP SAM aerodromes	1 day																								
9	Esquema documentario MET aprobado por la alta dirección de la Norma ISO 9001:2008/Documentation scheme approved by the senior management of Standard ISO 9001:2008	149 days																								
10	Tareas adicionales en apoyo a la implantación edel QMS/MET/Additional tasks in support of QMS/MET implementation	522 days																								
11	Actualización permanente del punto de contacto (POC) QMS/MET/Pemanent update of QMS/MET points of contact	521 days																								
12	GoTo Meetings para apoyar a los Estados que requieran apoyo adicional al suministrado hasta la fecha/GoToMeetings to support States requiring additional support to the one so far provided	521 days																								
13	Ensayos de auditoría a tres (3) Estados de la Región/Audit trials to three (3) States of the Region	10 days																								
14	Reporte de problemas para análisis y estrategias de solución/Report of problems for analysis and solution strategies	149 days																								



GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
IMPLANTACION DEL QMS/MET EN LA REGION SAM / QMS/MET IMPLEMENTATION IN THE SAM REGION

ID	Task Name	Duration	2011												2012				2013											
			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			
			3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter										
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
15	Supervisión y revisión continua del QMS/MET en los aeródromos SAM del ANP CAR/SAM/Continuous supervision and revision of QMS/MET in SAM aerodromes of CAR/SAM ANP	149 days																												
16	Fecha límite de implantación del QMS/MET/Target date of QMS/MET implementation	1 day																												

APPENDIX B4

PROJECT FOR THE OPTIMISATION OF OPMET EXCHANGE, INCLUDING SIGMETs (WS, WV, WC, AND WR), WARNINGS AND METEOROLOGICAL ALERTS

SAM Region	PROJECT DESCRIPTION (DP)	DP N° H4	
Programme	Title of the project	Start	End
Aeronautical meteorology (Programme coordinator: Nohora Arias)	<i>Optimisation of OPMET exchange, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts</i> <i>Project coordinator: Daniel Martins Neiva Filho (Brazil)</i> <i>Experts contributing to the project: Aníbal Castro Cárdenas (Bolivia), Valdeci Donizeti Juliar da Franca (Brazil), Domingo Torres (Ecuador), Celestino Lamboglia (Panama), Miguel Vara (Peru), Warsodikromo Truusje Soetinie (Suriname), Tjiettra Akloe (Suriname), José Ramón Pereira Bastida (Venezuela)</i>	December 2011	November 2013
Objective	Achieve at least 95% efficiency in the preparation and dissemination of OPMET information to SAM States by 31 November 2013		
Scope	Correct preparation and timely dissemination of OPMET information involves all MET service units [(EMA(s), OMA(s), MWO(s) and OPMET data banks] of all SAM aerodromes listed in the CAR/SAM ANP.		
Metrics	The percentage of OPMET messages received on time at the Brasilia International OPMET Data Bank (according to Annex 3, Appendix 10, OPMET control considers as messages received those OPMET messages with transit times of 10 minutes) and verification of proper and standard production (quality) of OPMET information at MET services [(EMA(s), OMA(s), and MWO(s)] (Annex 3, in Appendices 3, 4, 5, and 6, contains the (OPMET) message planning tables.		
Strategy	All tasks will be carried out by experts nominated by SAM States (Points of Contact – POC) and by experts contributing to the project, led by the Project Coordinator and under the supervision of the MET Programme Coordinator through State letters sent by the ICAO Lima Office, by e-mail, and the “GoToMeeting” tool. Upon completion of the tasks, the results will be sent to the MET Programme Coordinator as a final document for submission to, and if necessary approval by, the GREPECAS CRPP through the GREPECAS fast-track procedure. For the purpose of collaborative decision-making, meetings will be held with the areas involved.		
Rationale	More timely meteorological information will optimise flight path planning and prediction, thus improving ATM system safety and efficiency, pursuant to GREPECAS Conclusion 12/64 (CAR/SAM OPMET EXCHANGE CONTROLS). Meteorological information will also minimise the environmental impact of air traffic.		
Related projects	<ul style="list-style-type: none"> ➤ Automation ➤ Implementation of ATFM ➤ Installation of AMHS at MET units having an international OPMET requirement ➤ Implementation of the MET information quality management system (QMS/MET) ➤ Enhanced ATM situational awareness ➤ Implementation of the new flight plan format (FPL) 		

Project Deliverables	Relationship with the performance-based regional plan (PFF) ¹	Responsible Party	Status of Implementation ²	Date of Delivery	Comments
OPMET guide revised and updated	PFF SAM MET 02	MET programme coordinator and project coordinator		September 2012	The OPMET guide prepared by the SAM Office will include procedures for preparing OPMET data and tables containing the AFTN addresses to which OPMET information must be sent worldwide in accordance with the CAR/SAM FASID, thus facilitating the preparation and issuance of MET messages.
Results of coordinated controls of annual SIGMET WV tests	PFF SAM MET 02	POC and BR OPMET data bank		February 2013	The measurement of SIGMET WV messages received on time at the Brasilia International OPMET Data Bank will give the actual percentage of OPMET data, and the verification of the proper preparation of SIGMET WV messages at MWO(s) will permit an assessment of OPMET information quality.
Results of the analysis of coordinated controls of annual SIGMET WV tests	PFF SAM MET 02	MET programme coordinator and project coordinator		May 2013	The results obtained from the coordinated controls of annual SIGMET WV tests will allow programme and project coordinators to adopt, if necessary, corrective action for subsequent coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts.
Results of coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts	PFF SAM MET 02	POC and BR OPMET data bank		August 2013	Timely measurements at the Brasilia International OPMET data bank will provide the actual percentage of OPMET data received, and the verification of the proper preparation of OPMET information at MET services [(EMA(s), OMA(s), and MWO(s))] will permit to assess the quality of OPMET information.
Results of the analysis of coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts	PFF SAM MET 02	MET programme coordinator and project coordinator		September 2013	The results obtained from coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts will give programme and project coordinators an idea of project results.

Project Deliverables	Relationship with the performance-based regional plan (PFF) ¹	Responsible Party	Status of Implementation ²	Date of Delivery	Comments
Final project report	PFF SAM MET 02	MET programme coordinator and project coordinator		November 2013	The purpose of the final project report to be submitted by the programme coordinator is to enable the Lima SAM Office to check the achievements of the project and propose to the States future measures to maintain the level attained through OPMET controls.
Resources needed	Funds for meetings with project members in order to assess the results and propose corrective actions. States could use their human resources to conduct the foreseen OPMET tests and controls, and, if necessary, cover the financial costs, since the experience gained will result in an improvement of their own systems. Likewise, participants must be given facilities to participate in GoToMeetings.				

¹ Air navigation system Performance-Based Implementation Plan for the SAM Region

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Grey Task not started yet

Green Activity being implemented as scheduled

Yellow Activity started with some delay, but will be implemented on time

Red Activity not implemented on time; mitigation measures are required







GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
OPTIMIZACIÓN DEL INTERCAMBIO OPMET, SIGMET, AVISOS Y ALERTAS MET / OPTIMIZATION OF OPMET EXCHANGE , SIGMET, MET ADVISORIES AND WARNINGS

ID	Task Name	Duration	2012												2013											
			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Optimización del intercambio OPMET, incluyendo SIGMET (WS, WV, WC y WR), avisos y alertas Meteorológicas/Optimization of OPMET exchange, including SIGMETs (WS, WV, WC and WR), meteorological warning and alerts	480 days																								
2	Revisar y actualizar la Guía OPMET/Review and update the OPMET Guide	129 days																								
3	Revisar la Guía OPMET y proponer mejoras de ser necesario/Review the OPMET Guide and propose improvements if necessary	38 days																								
4	Actualizar la lista de puntos de contacto operativos OPMET (POC)/Update the list of OPMET operational points of contact (POC)	22 days																								
5	Revisar y, de ser necesario, proponer mejoras a la tabla para el control OPMET/Review and, if necessary, propose improvements to the table for OPMET control	33 days																								
6	GoTo Meeting para revisar con la coordinadora del Programa MET las tareas/GoToMeeting for revision of the tasks with MET Programme Coordinator	3 days																								
7	Consolidar la Guía/Consolidate the Guide	5 days																								
8	Controles de intercambio OPMET de los Estados SAM/SAM States' OPMET exchange controls	305 days																								
9	Control OPMET 2012/OPMET Control 2012	43 days																								
10	Los Estados SAM llevan a cabo el control OPMET/SAM States carry out the OPMET control	7 days																								
11	Cada Estado evalúa los resultados del control OPMET y lo envía a los demás Estados/Each State evaluates the results of OPMET control and sends it to the other States	11 days																								
12	Cada Estado envía los resultados del control y de la evaluación al director del Proyecto/Each State submits the results of the control and the evaluation to the Project director	1 day																								
13	El director del Proyecto analiza y envía al coordinador del Programa MET los resultados del control y de la evaluación/The Project director analyzes and submits to the MET Programme coordinator the results of the control and evaluation	8 days																								

GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
OPTIMIZACIÓN DEL INTERCAMBIO OPMET, SIGMET, AVISOS Y ALERTAS MET / OPTIMIZATION OF OPMET EXCHANGE , SIGMET, MET ADVISORIES AND WARNINGS

ID	Task Name	Duration	2012												2013											
			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
14	El coordinador del Programa MET analiza los resultados de las tareas realizadas/The MET Programme coordinator analyzes and results of the tasks performed	7 days							20/07	30/07																
15	GoToMeeting para revisar los resultados generales del control OPMET/GoToMeeting to review general results of OPMET control	1 day							31/07	31/07																
16	La Oficina SAM envía a los Estados los resultados del control con acciones de mejora, si fuera el caso/SAM Office submits to States the results of the control with improvement actions, if necessary	1 day							02/08	02/08																
17	Control OPMET 2013/OPMET Control 2013	41 days																10/06								
18	Los Estados SAM llevan a cabo el control OPMET/SAM States carry out the OPMET control	7 days																10/06	17/06							
19	Cada Estado evalúa los resultados del control OPMET y lo envía a los demás Estados/Each State evaluates the results of OPMET control and sends it to the other States	9 days																19/06	01/07							
20	Cada Estado evalúa los resultados del control OPMET y lo envía a los demás Estados/Each State evaluates the results of OPMET control and sends it to the other States	1 day																05/07	05/07							
21	Cada Estado envía los resultados del control y de la evaluación al director del Proyecto/Each State submits the results of the control and the evaluation to the Project director	9 days																10/07	22/07							
22	El coordinador del Programa MET analiza los resultados de las tareas realizadas/The MET Programme coordinator analyzes and results of the tasks performed	6 days																23/07	30/07							
23	GoToMeeting para revisar los resultados generales del control OPMET/GoToMeeting to review general results of OPMET control	1 day																31/07	31/07							
24	La Oficina SAM envía a los Estados los resultados del control con acciones de mejora, si fuera el caso/SAM Office submits to States the results of the control with improvement actions, if necessary	1 day																02/08	02/08							

GRUPO REGIONAL CAR/SAM DE PLANIFICACIÓN Y EJECUCIÓN / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
OPTIMIZACIÓN DEL INTERCAMBIO OPMET, SIGMET, AVISOS Y ALERTAS MET / OPTIMIZATION OF OPMET EXCHANGE , SIGMET, MET ADVISORIES AND WARNINGS

ID	Task Name	Duration	2012												2013											
			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
25	Control de datos OPMET recibidos en el Banco internacional de datos OPMET (IODB) de Brasilia/OPMET Data Control received in the Brasilia International OPMET databank (IODB)	435 days	10/03  31/10																							
26	Primer control OPMET del IODB de Brasilia en 2012/First OPMET control of the Brasilia IODB in 2012	37 days	10/03  30/04																							
27	El banco lleva a cabo el control de datos OPMET recibidos/The Bank carries out the control of the OPMET data received	6 days	10/03  16/03																							
28	El Banco analiza y evalúa el primer control/The Bank analyzes and evaluates the first control	9 days	19/03  29/03																							
29	El director del Proyecto analiza y envía al coordinador del Programa MET los resultados del control y de la evaluación/The Project director analyzes and submits to the MET Programme coordinator the results of the control and evaluation	6 days	02/04  09/04																							
30	La Oficina SAM envía a los Estados los resultados del control con acciones de mejora, si fuera el caso/SAM Office submits to States the results of the control with improvement actions, if necessary	1 day	16/04 16/04																							
31	Finalización del Proyecto 31 de octubre de 2013 (Estos controles se realizan anualmente en Marzo, Junio, Septiembre, Diciembre)/End of Project 31 October 2013 (These controls are carried out annually in March, June, September & December)	435 days	10/03  31/10																							



International Civil Aviation Organization
CAR/SAM Regional Planning Implementation Group (GREPECAS)
First Meeting of the Programmes and Projects Review Committee (PPRC/1)
(Mexico City, Mexico, 25 to 27 April 2012)

Agenda Item 4: Items related with the Organization of GREPECAS

4.1 Review of the GREPECAS Procedural Handbook

(Presented by the Secretariat)

SUMMARY

This working paper presents a proposal to modify the GREPECAS Procedural Handbook, in agreement with the new restructuring agreed upon at GREPECAS/16 meeting, and comments received from States for its improvement.

1. Background

0.1 During GREPECAS/16 meeting and in order to CAR/SAM performance-based regional plans in compliance with the Global Air Navigation Plan and Global ATM Operational Concept, Decision 16/45 was approved, modifying the GREPECAS organization and giving member States/Territories 30 days to ratify the new organization and send suggestions to modify the Procedural Handbook.

Discussion

1.1 In follow-up to GREPECAS Decision 16/4, Cuba, Dominican Republic and United States made suggestions that were commented and analyzed upon and, after an exchange of points of view, some were included for the improvement of the Procedural Handbook.

1.2 As per GREPECAS Decision 16/46, the Procedural Handbook in **Appendix** includes the revised GREPECAS terms of reference, which incorporate the ICAO Council requirement to coordinate with the Regional Aviation Safety Group – Pan America (RASG-PA).

1.3 A main component in the new GREPECAS organization is the establishment of the PPRC, to replace and take over the functions previously assigned to the Administration Coordination Group (ACG) and Air Safety Board (ASB), with the exception of the Secretariat's internal and routine responsibilities, to be undertaken by ICAO. Its main functions are described in the proposed Procedural Handbook, as well as the working methodology and the dealing of deficiencies.

1.4 This edition of the GREPECAS Procedural Handbook has been developed as a high level manual, avoiding elements of temporary nature, such as: names of people, titles of the programmes and projects, etc. Also, the possibility that the GREPECAS Secretary develop documents in support of the GREPECAS process has been included, such as the procedure for the handling of deficiencies, the Scrutiny Working Group (GTE), or any other that can be required in time. In this manner, a greater stability is expected in the Procedural Handbook, as well as to keeping it a short and easy-reading document to serve as an initial guide for a person starting contact with GREPECAS activities and, also, for easy reference for all involved.

Action suggested

2.1 The Meeting is suggested to review the GREPECAS Procedural Handbook shown in **Appendix** to this working paper and, if deemed convenient, approve it for its use in the new GREPECAS organization and for the application of its new working methodology.

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APPENDIX



CAR/SAM PLANNING AND IMPLEMENTATION REGIONAL GROUP (GREPECAS)

PROCEDURAL HANDBOOK

Sixth Edition – 2011

Version 1.1

RECORD OF AMENDMENTS AND CORRIGENDA

[illegible]

INTRODUCTION

The CAR/SAM Planning and Implementation Regional Group (GREPECAS) was established by the ICAO Council in 1990 as recommended by the Second CAR/SAM Regional Air Navigation Meeting in 1989 (action by Council on Recommendation 14/6 of the CAR/SAM/2 RAN Meeting is set out in Supplement No. 1 to Doc 9543, CAR/SAM/2).

The Procedural Handbook contains information on the role, organization and operation of GREPECAS as well as its different programmes and projects. The Handbook will serve States and international organizations when planning and managing resources for their participation in the Group.

This Procedural Handbook provides general guidelines and is approved by GREPECAS.

The Secretary of this body may develop specific procedures and forms permitting the effective management of the GREPECAS mechanism. These procedures should not contradict this Handbook in any way.

The Handbook should be updated periodically to accommodate relevant changes and developments.

CAR/SAM PLANNING AND IMPLEMENTATION REGIONAL GROUP (GREPECAS)

1. Background

1.1 The CAR/SAM Planning and Implementation Regional Group was established by the ICAO Council (Recommendation 14/6 – SP CAR/SAM 1989, Doc 9543).

2. Terms of Reference

2.1 In accordance with C-WP/13135, Council Decisions C-DEC 183/9 dated 18 March 2008, and C-DEC 190/4 dated 28 May 2010, the terms of reference of GREPECAS are as follows:

- a) 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, consistent with ICAO SARPs and reflecting global requirements;
- b) facilitation of the implementation of air navigation systems and services as identified in the CAR/SAM Air Navigation Plan, giving due priority to air safety;
- c) identification and aiding in addressing specific deficiencies in the air navigation field; and
- d) coordination of safety issues with Regional Air Safety Groups (RASGs).

2.2 In order to meet the Terms of Reference the Group shall:

- a) 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 with providing services in the CAR and SAM Regions with their assigned task of fostering implementation of the CAR/SAM Regional Air Navigation Plan;
- c) in line with the Global Aviation Safety Plan (GASP), ensure the conduct of any necessary systems performance monitoring;
- d) identify specific deficiencies in the air navigation field, especially in the context of safety, and propose corrective action;
- e) ensure the development and implementation of an action plan by States to resolve identified deficiencies, where necessary;

- f) develop amendment proposals for the update of the CAR/SAM Air Navigation Plan necessary to satisfy any changes in requirements, thus removing the need for regular regional air navigation meetings;
- g) 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;
- h) examine human resource planning and training issues and ensure that the human resource development capabilities in the Regions are compatible with the CAR/SAM Regional Air Navigation Plan;
- i) review the Statement of Basic Operational Requirements and Planning Criteria (BORPC) and recommend such changes as may be required in the light of developments to the Air Navigation Commission;
- j) invite financial institutions, as required, on a consultative basis and when considered appropriate in the planning process, to participate in this work;
- k) ensure close cooperation with relevant organizations and State groupings to optimize the use of available expertise and resources;
- l) conduct the above activities in the most efficient manner possible with a minimum of formality and documentation, and call meetings of GREPECAS only when the Secretary and the Chairperson, through the Programme and Project Review Committee, are convinced that it is necessary to do so; and
- m) coordinate with the Regional Aviation Safety Group – Pan America (RASG-PA).

3. **Position in ICAO**

3.1 GREPECAS is the guiding and co-ordinating body for all activities conducted within ICAO concerning the air navigation system for the CAR and SAM Regions but does not assume authority vested in other ICAO bodies, except where such bodies specifically delegate their authority. The activities of GREPECAS shall be subject to review by the ICAO Council.

4. **Composition and organization of GREPECAS**

4.1 GREPECAS is composed of all States providing air navigation services in the CAR/SAM Regions. However, a group of States may choose to have common representation.

4.2 The following international organizations may be invited to participate on a regular basis: ACI, ALTA, ARINC, ASSI, CANSO, CASSOS, COCESNA, ECCAA, IAOPA, IATA, IBAC, IFALPA, IFATCA, LACAC, PAIGH, SITA and WMO.

4.3 States that do not provide air navigation services in the CAR/SAM Regions may participate as observers in GREPECAS meetings.

4.4 Other CAR/SAM International Organizations and/or bodies may also participate when invited specifically by GREPECAS.

4.5 States shall ensure that the representatives designated as members of GREPECAS have knowledge and experience with regard to supplying the full range of international air navigation systems and serving in GREPECAS for a period long enough to maintain continuity of its activities. During the meetings of GREPECAS, the designated representatives may be supported by technical advisers, if necessary..

4.6 The Group shall appoint a Chairperson and a Vice-Chairperson. The Chairperson, in close coordination with the ICAO Regional Directors from the South America and NACC Regional Offices, shall make necessary arrangements for the most efficient work of the Group.

4.7 In order to ensure necessary continuity in the work of GREPECAS, and unless otherwise determined by special circumstances, the Chairperson and the Vice-Chairperson of GREPECAS shall assume their functions at the end of the meeting at which they are elected and normally serve for a period of three years. They can also be re-elected if considered and approved by the Group. The Chairperson shall:

- a) attend, to the extent possible, all meetings of GREPECAS under his/her chairpersonship;
- b) participate with the Secretariat in the development of GREPECAS meeting reports; and
- c) present the GREPECAS meeting reports under his/her chairpersonship.

4.8 **Appendix A** to this document presents the structure of GREPECAS.

5. **Working methodology**

5.1 The GREPECAS work programme shall be developed through project management methodology. The GREPECAS Programmes and Projects Review Committee (PPRC) shall be the authority to be provided account of and to review the progress of each of the projects of the mechanism.

5.2 The Regional Officers will coordinate the programmes, and State experts shall coordinate the projects. The programmes cover different air navigation fields based on the Global Air Navigation Plan and the Global ATM Operational Concept, and in accordance with ICAO programmes under the Strategic Objectives *Safety* and *Environmental Protection and Sustainable Development of Air Transport*; namely, AGA, AIM, ATM, CNS, MET and SAR.

5.3 The respective CAR or SAM Regional Office will designate programme coordinators for projects under their responsibility. To assist in each project's design, follow-up and achievement of objectives, the Regional Office's programme coordinator will count with support of the project coordinators assigned among the States in its area of accreditation. Each Regional Office will use its own implementation mechanisms to achieve the objectives of the programmes and projects of its Region.

5.4 The projects relate to their generic definition, and that are not limited to the ICAO Technical Cooperation projects, which are an example of a type of project. Technical cooperation projects are an implementation tool along with working groups, Special Implementation Projects (SIP), etc. GREPECAS projects will have the following components, which must be documented in a brief project document and schedule:

- a) Objectives
- b) Description
- c) Activities
- d) Responsibilities
- e) Resources – experts and budget
- f) Results – outputs, deliverables
- g) Schedule – Programme, milestones, terms
- h) Dependencies
- i) Metric/Indicators
- j) Risks

5.5 To achieve the results of a given project resource allocation for its implementation is necessary. Components of these resources are the project coordinators and experts that the States/International Organizations provide. States/International Organizations, upon designating their coordinators and experts, must ensure that the designees are provided with the time necessary to conduct appropriate coordination and participate in the various activities of the project.

6. Programmes and Projects Review Committee (PPRC)

6.1 A key component of the organization of GREPECAS is the Programmes and Projects Review Committee (PPRC). The PPRC is the accountable authority that reviews the progress of the programmes and projects.

6.2 With the aim of complying with the work programme, the PPRC:

- a) identifies the need for new projects;
- b) prioritizes resource allocation;
- c) authorizes the establishment of new projects;
- d) recommends actions to eliminate obstacles encountered in achieving proposed objectives; and
- e) ensures that the programmes and projects are consistent with and aligned to the terms of reference of GREPECAS.

6.3 **Appendix B** presents the terms of reference and working programme of the Programmes and Projects Review Committee.

6.4 The PPRC is composed of the GREPECAS Chairperson and Vice-Chairperson, the Secretary and Co-Secretary, representatives from 16 CAR/SAM States (8 from CAR and 8 from SAM), the international organizations listed in paragraph 4.2 of this Handbook, and States from other regions invited to participate in the meetings as Observers when relevant to the order of business.

6.5 The PPRC meetings will be held as necessary, either through teleconferences or in-person, depending on efficiency and effectiveness and the GREPECAS budget. Preference will be given to teleconference meetings, and at least one annual in-person meeting will be conducted, preferably at either the CAR or SAM Regional Offices.

7. Project meetings and interregional coordination

7.1 With the aim of coordinating and exchanging information, it is possible that the various projects will require regional meetings. Priority will be given to teleconference meetings; however, in-person meetings may also be necessary. In this case, the Regional Offices will make use of existing fora in order to minimize costs, and preferably hold meetings at the Regional Offices, if feasible.

7.2 The Regional Offices programme coordinators are charged with ensuring coordination between the projects of both regions. If necessary, CAR/SAM meetings can be convened to coordinate interregional coordination topics and, preferably, existing fora will be used to avoid meeting proliferation and minimize costs.

8. Regional coordination

8.1 The Chairperson and the GREPECAS Secretary, in coordination with the Co-Secretary, shall take all necessary steps to establish and maintain a close relationship with relevant international and sub-regional organizations in all pertinent fields of aviation activity to ensure optimization of capacity and efficient development of procedures.

9. GREPECAS meetings

9.1 Languages

9.1.1 The languages of the meetings of the GREPECAS shall be English and Spanish. The meeting reports and supporting documentation for GREPECAS meetings will be prepared in English and Spanish.

9.2 Secretariat support of GREPECAS meetings

9.2.1 The GREPECAS Secretary, supported by the GREPECAS Co-Secretary, shall provide necessary secretariat assistance to the Group and serve as its communication link with all interested parties. In order to achieve this, the following actions will be taken:

- a) the meeting agenda shall be limited to those items that are sufficiently mature for a GREPECAS decision or conclusion;

- b) documentation submitted by States, international organizations, and GREPECAS Programmes for action by GREPECAS shall always include a concrete and substantiated proposal for a conclusion or a decision for GREPECAS consideration for endorsement, amendment or rejection, if applicable;
- c) documentation should be sent electronically 45 days before the meeting to permit timely processing in both English and Spanish. All documentation should be submitted 15 days before the meeting, at the latest, for proper publishing and distribution. It should be noted that those papers received after this 15-day period may not be accepted by the Secretariat, however, they may be presented as information papers;
- d) in plenary session, GREPECAS meetings will approve conclusions and decisions, which shall include brief lead-in text for better understanding and a reference to which earlier Conclusion(s)/Decision(s) is superseded, if applicable, as well as noting when they can be deleted from the GREPECAS List of Valid Conclusions and Decisions;
- e) the full report will be completed by the Secretary and approved by the Chairperson for transmission within four weeks after the end of the meeting;
- f) upon completion of the meeting, a one-page summary describing the outcome will be prepared and disseminated to all Air Navigation Bureau (ANB) sections as well as relevant sections of Air Transport Bureau (ATB) and Technical Co-operation Bureau (TCB), including a detailed action plan for the implementation of the conclusions and decisions adopted by the Group; and
- g) GREPECAS relations with States and International Organizations, as well as relations with CAR or SAM bodies and organizations, will normally be conducted through the ICAO Regional Director of the Office of accreditation.

10. Meeting documentation

10.1 Distribution of the supporting documentation of GREPECAS and its Programmes, as well as the reports of the meetings, will be posted on the NACC and SAM Regional Offices websites under the GREPECAS option.

10.2 Documentation may be presented by States, International Organizations or the Secretariat, in the following formats:

- a) **Working papers** contain material with a draft decision, conclusion or invitation for the meeting to take a certain action. The content of the topics must be centered on air navigation subjects (AGA, AIM, ATM, CNS, MET and SAR), coordination aspects with RASG-PA, or GREPECAS administrative matters.

- b) **Information papers** are submitted to provide the meeting with information for which no action is required and will normally not be discussed at the meeting.
- c) **“Flimsies”** are documentation prepared on an ad hoc basis in the course of a meeting to assist the meeting with discussion on a specific matter or in the drafting of a text for a conclusion or decision.
- d) **Discussion papers** are originated and distributed during the meeting.

11. Meeting output

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

11.2 Decisions deal with matters of concern only to the GREPECAS.

Note: in order to qualify as such, a decision or conclusion shall be able to respond clearly to the “3W” criterion (What, Who and When).

12. Schedule and venue of GREPECAS meetings

12.1 GREPECAS will meet every three years; its duration will be determined by the scope of the agenda, however, a three-day standard will be endeavored, if possible. Meetings shall normally be convened at locations within the CAR and SAM Regions, alternatively. A meeting convening letter shall be sent by the Regional Offices **90** days prior to the meeting, including the draft agenda together with explanatory notes.

13. Fast-track procedure

13.1 To enable greater efficiency for the work of GREPECAS, draft conclusions and decisions can be approved through correspondence. Unless the Secretariat considers it otherwise, the usual procedure where no response indicates agreement will apply.

14. Reporting deficiencies

14.1 In order to enable GREPECAS to make detailed assessments of deficiencies, States and appropriate International Organizations, including IATA and IFALPA, are expected to provide information they have to the corresponding ICAO Regional Office for appropriate action, including action at PIRG meetings. The information should include, at a minimum:

- a) description of the deficiency
- b) risk assessment
- c) solution and/or mitigating measures
- d) time-lines
- e) responsible party
- f) agreed action to be taken
- g) action already taken

14.2 On 30 November 2001, the ICAO Council approved the *Uniform Methodology for the Identification, Assessment and Reporting of Air Navigation Deficiencies*, which is presented as **Appendix C** to this Procedural Handbook.

14.3 A detailed description of the methodology is found in the document on *Uniform Methodology for the Identification, Assessment and Reporting of Air Navigation Deficiencies* published on the Regional Offices websites under the GREPECAS option.

15. **Scrutiny Working Group (GTE)**

15.1 The GREPECAS GTE is composed by specialists from the CAR/SAM Regions qualified in the analysis and assessment of 300 ft or more large height deviations (LHD), as defined in ICAO Document 9574.

15.2 This Group in addition fulfills an important coordination task with the regional monitoring agency (CARSAMMA) for the compilation, purging and review of data regarding LDH, by identifying deviation trends and recommending corrective actions with the aim of improving safety.

15.3 The GTE will prepare an annual executive report for the Secretary of GREPECAS, containing statistical information related with LHD, as well as recommendations on the risk mitigating measures deemed pertinent to take.

16. **Coordination with RASG-PA**

16.1 GREPECAS will provide the RASG-PA mechanism with a working paper containing statistical information on the process and/or projects generating valuable information on the safety of air navigation systems.

16.2 The GREPECAS and RASG-PA Secretaries will ensure efficient coordination is maintained between the two groups as necessary to avoid duplication of effort and achieve the highest level of effectiveness. As a rule and when required, the fast track approval procedure will be used.

17. **Terminology**

17.1 The terminology applicable to GREPECAS is included in **Appendix D**.

APPENDIX A



APPENDIX B

GREPECAS PROGRAMMES AND PROJECTS REVIEW COMMITTEE PROPOSED TERMS OF REFERENCE AND WORK PROGRAMME

1. Membership

The GREPECAS Programmes and Projects Review Committee (PPRC) is comprised of the GREPECAS Chairperson, Vice-Chairperson, Secretary and Co-Secretary, 8 States of the CAR Region and 8 States of the SAM Region (to be identified by the Directors of Civil Aviation of the States at a later date). Other GREPECAS member States may participate in meetings if the agenda includes a topic of interest. The international organizations listed in the GREPECAS Procedural Handbook, paragraph 4.2, and affected States of other Regions will be invited to meetings as Observers when relevant to the agenda.

2. The Terms of Reference of the PPRC are:

- a) coordinate and harmonize GREPECAS administrative matters and participate in its internal management and scheduling of events;
- b) review and approve the planning, progress and execution of programmes and projects to ensure their alignment with the GREPECAS terms of reference, ICAO strategic objectives and global plan; and
- c) follow-up on high risk safety deficiencies and take action to promote their resolution.

3. In order to comply with its Terms of Reference the PPRC shall:

- a) review and propose amendments to the GREPECAS Procedural Handbook;
- b) review the GREPECAS work methodology and propose specific actions to improve performance;
- c) define new programmes and projects and follow-up on the programmes and projects a continuous basis and, if necessary, intervene in project development to ensure that results are achieved according to approved timeframes;
- d) prepare reports on PPRC activities, progress and results of programmes and projects for each GREPECAS meeting and annual GREPECAS reports in between GREPECAS meetings;
- e) prepare the draft agenda for GREPECAS meetings; and
- f) in cases of high risk safety deficiencies, request the respective ICAO Regional Office to inform the Air Navigation Commission.

APPENDIX C

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 definition of deficiency is as follows:

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; and
- 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^{1*}; 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.

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 completion	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 Dec. 2..X	Coordination meeting between Terra X and Terra Y on 16 July 2..X to finalize arrangements to implementation circuit via satellite	Implementation of direct speech circuit via satellite	Terra X	20 Aug. 2..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.

APPENDIX D

TERMINOLOGY

The following is a terminology guide (in English and Spanish) to be used when preparing documentation to be presented for the review of the GREPECAS and its Contributory Bodies Meetings:

Terminology

English

Addendum
Ad hoc
Agenda Item #
Agenda
Appendix
Attachment (of an Appendix)
Contributory Body
Corrigendum
Discussion Paper (DP)
Draft Agenda
Draft Conclusion
Draft Decision
Draft Report
Explanatory Notes
Final Report
Flimsy
Historical
Information Paper (IP)
International organizations
Implementation
Order of Business (OB)
Revised
Supplement
Working Paper (WP)

Spanish

Addenda
Ad hoc
Cuestión # del Orden del Día
Orden del Día
Apéndice
Adjunto (de un Apéndice)
Órgano Auxiliar
Corrigendo
Nota de Discusión (ND)
Orden del Día Provisional
Proyecto de Conclusión
Proyecto de Decisión
Informe Provisional
Notas Aclaratorias
Informe Final
Flimsy
Reseña
Nota de Información (NI)
Organizaciones Internacionales
Implantación
Orden del Día (OD)
Revisado
Suplemento
Nota de Estudio (NE)

Note for the Secretariat in the preparation of Documentation:

Appendixes are sorted in alphabetical order: **A, B, C, D...**

In the event of surpassing the alphabet the following criteria will be used also in alphabetical order: **AA, BB, CC, DD...**

The Attachments to an Appendix will be sorted in numerical order: **1, 2, 3, 4 ...**

CLASSIFICATION OF THE STATUS OF GREPECAS CONCLUSIONS AND DECISIONS:		CLASIFICACIÓN DEL ESTADO DE LAS CONCLUSIONES Y DECISIONES DEL GREPECAS	
Valid		Válida	
Completed		Finalizada	
Superseded		Sustituida	

- END -



International Civil Aviation Organization

CAR/SAM Planning and Implementation Regional Group (GREPECAS)

First Meeting of the Programmes and Projects Review Committee (PPRC/1)

Mexico City, Mexico, 25 - 27 April 2012

PPRC/1 – WP/13

05/04/12

Agenda Item 4: Items related to the GREPECAS Organization

4.2 Review of the GREPECAS PPRC Terms of Reference and Work Programme

PROPOSED REVISED GREPECAS PROGRAMMES AND PROJECTS REVIEW COMMITTEE (PPRC) TERMS OF REFERENCE AND WORK PROGRAMME

(Presented by the Secretariat)

SUMMARY	
<p>A proposed revision to the GREPECAS PPRC Terms of Reference and Work Programme is presented to the Meeting in the Appendix to this paper for review, comments and approval.</p> <p>Action by the PPRC: The PPRC is invited to review, comment and approve the proposed revision to the GREPECAS PPRC Terms of Reference and Work Programme as presented in the Appendix.</p>	
REFERENCES	
<ul style="list-style-type: none">• Report of the GREPECAS/16 Meeting (Punta Cana, Dominican Republic, 28 March – 1 April 2011)• Report of the Fourth Meeting of North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/4) (San Pedro Sula, Honduras, 20 - 24 June 2011)• Report of the Twelfth Meeting of Civil Aviation Authorities of the SAM Region (RAAC/12) (Lima, Peru, 3 - 6 October 2011)	
ICAO Strategic Objectives:	<i>A – Safety C – Environmental Protection and Sustainable Development of Air Transport.</i>

1. Introducción

1.1 The Programmes and Projects Review Committee (PPRC) will represent the main element of the new GREPECAS organization, approved through Decision 16/45 - *New GREPECAS Organization*.

1.2 GREPECAS/16 meeting considered that the PPRC were composed by a core group of 16 States, eight from each Region, and, in view that it was not within the authority of the representatives participating at GREPECAS/16 meeting to define the criteria determining which States will be selected, submitted this Decision to the Directors of Civil Aviation, formulating Decision 16/48 - *Terms of reference, work programme, and composition of the GREPECAS Programmes and Projects Review Committee*.

2. Analysis

2.1 As follow-up to Decision 16/48, the CAR Region defined its 8 member States through Conclusion 4/1 formulated at the Fourth Meeting of North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/4, San Pedro de Sula, Honduras, 20- 24 June 2011), adopting the criteria of inviting voluntary commitments from those States with FIRs in the CAR Region, and the possible adoption of a rotation scheme of State for Central America. Under this criteria, the CAR States selected were Cuba, Dominican Republic, Haiti, Honduras (in representation of Central America under the rotation scheme, and selected by COCESNA Executive Committee), Jamaica, México, Trinidad & Tobago and United States.

2.2 For the selection of the eight SAM States, letter SA438 of 27 July 2011 was circulated, with the aim that the SAM States inform on their interest in being members of the PPRC. At the Twelfth Meeting of Civil Aviation Authorities of the SAM Region (RAAC/12) held in Lima, Peru, from 3 to 6 October 2011, the following eight States were presented and approved for membership: Argentina, Bolivia, Brazil, Chile, Colombia, Panamá, Paraguay and Venezuela.

2.3 GREPECAS/16 meeting also recognized that the PPRC will neither exclude any State wishing to participate in any of their meetings nor will it limit the number of participants of a State; non-member States may participate in the meetings if the agenda includes a subject of interest. Furthermore, the meeting accepted that the following international organizations will participate in the PPRC as Observers when relevant to the Committee meeting agenda, as will any affected States from other Regions: ACI, ALTA, ARINC, ASSI, CANSO, CASSOS, COCESNA, ECCAA, IAOPA, IATA, IBAC, IFALPA, IFATCA, LACAC, PGH, SITA and WMO.

2.4 In this respect, the Appendix to this working paper presents a revision to the terms of reference and work programme of the GREPECAS PPRC for its examination by the Meeting and submission to GREPECAS or the fast track mechanism, for approval.

3. Action suggested

3.1 The Meeting is invited to examine, comment and approve the proposed revision to the terms of reference of the GREPECAS PPRC, for its later submission to GREPECAS or the fast track mechanism, for approval.

APPENDIX

PROPOSED REVISED GREPECAS PROGRAMMES AND PROJECTS REVIEW COMMITTEE TERMS OF REFERENCE AND WORK PROGRAMME

1. **Membership**

The GREPECAS Programmes and Projects Review Committee (PPRC) comprises the GREPECAS Chairperson, Vice-Chairperson, Secretary and Co-Secretary, eight States of the CAR Region and eight States of the SAM Region identified by the Directors of Civil Aviation of the States¹. Other GREPECAS member States may participate in meetings if the agenda includes a topic of interest. The international organizations listed in the GREPECAS Procedural Handbook and affected States of other Regions may participate in meetings as Observers when relevant to the agenda.

2. **The Terms of Reference of the Committee are:**

- a) coordinate and harmonize GREPECAS administrative matters and participate in its internal management and scheduling of events;
- b) review and approve the planning, progress and execution of programmes and projects to ensure their alignment with the GREPECAS terms of reference, ICAO strategic objectives, business plan and global air navigation plan; and
- c) follow-up on high-risk safety deficiencies and take action to promote their resolution.

3. **In order to comply with its Terms of Reference the Committee shall:**

- a) review and propose amendments to the GREPECAS Procedural Handbook;
- b) review the GREPECAS work methodology and propose specific actions to improve its performance;
- c) follow-up the programmes and projects on a continuous basis and, if necessary, intervene in project development to ensure that results are achieved according to approved timeframes;

¹ The PPRC Member States for the CAR Region are, Cuba, Dominican Republic, Haiti, Honduras (in representation of Central America in the rotation scheme and as selected by the COCESNA Executive Committee), Jamaica, Mexico, Trinidad and Tobago and United States selected by Conclusion 4/1 of the Fourth Meeting of Directors of Civil Aviation of North America, Central America and the Caribbean (NACC/DCA/4) held in San Pedro Sula, Honduras, from 20 to 24 June 2011. The PPRC Member States of the SAM Region are Argentina, Bolivia, Brazil, Chile, Colombia, Panama, Paraguay and Venezuela as ratified at the Twelfth Meeting of Civil Aviation Authorities of the SAM Region (RAAC/12), held in Lima, Peru, from 3 to 6 October 2011 (ref. paragraph 2.3.5 of the Final Report).

- d) prepare reports on PPRC activities, progress and results of programmes and projects for each GREPECAS meeting and annual GREPECAS reports in between GREPECAS meetings;
- e) prepare the draft agenda for GREPECAS meetings; and
- f) in cases of high-risk safety deficiencies, request the respective ICAO Regional Office to request the Air Navigation Bureau to inform the Air Navigation Commission.



International Civil Aviation Organization

CAR/SAM Planning and Implementation Regional Group (GREPECAS)

First Meeting of the Programmes and Projects Review Committee (PPRC/1)

Mexico City, Mexico, 25 - 27 April 2012

PPRC/1 – WP/14

05/04/12

Agenda Item 4: Items related to the GREPECAS Organization

4.3 GREPECAS Annual Report

PROPOSED CONTENT FOR THE GREPECAS ANNUAL REPORT

(Presented by the Secretariat)

SUMMARY	
A proposed content for future GREPECAS Annual Reports is presented to the PPRC for review, comments and approval.	
REFERENCES	
<ul style="list-style-type: none">• Report of the GREPECAS/16 Meeting (Punta Cana, Dominican Republic, 28 March – 1 April 2011)• Air Navigation Commission (ANC) Review of the Report of the Sixteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/16) - AN-WP/8578 - 13/9/11	
<i>ICAO Strategic Objectives</i>	<i>A – Safety C – Environmental Protection and Sustainable Development of Air Transport.</i>

1. Introduction

1.1 Since GREPECAS will meet once every three years and the ANC requires annual reports to be submitted by PIRGs, it was decided at the GREPECAS/16 meeting that in between the triennial GREPECAS meetings a GREPECAS Annual Report would be submitted to the ANC to inform on the activities, progress and results of its programmes and projects based on the results of the PPRC meetings.

2. GREPECAS/16 report

2.1 GREPECAS will meet once every three years shortly after the ICAO Assembly in order to direct and guide the work programme based on Assembly resolutions. Between meetings, the GREPECAS work programme will be directed by the Programmes and Projects Review Committee (PPRC), which will also prepare annual GREPECAS reports to be approved by GREPECAS using the fast-track mechanism and submitted by the Secretariat to the ANC, for their analysis and formulation of actions suggested.

2.2 The GREPECAS Programmes and Projects Review Committee Terms of Reference includes for the PPRC to prepare reports on PPRC activities, progress and results of programmes and projects for each GREPECAS meeting and annual GREPECAS reports in between GREPECAS meetings.

2.3 The ANC Working Group for Strategic Review and Planning (WG/SRP) reviewed the GREPECAS/16 report and considered that the absence of attachments in relation to some conclusions and the lack of links between the content of these conclusions and other reports of contributory bodies of GREPECAS made it difficult and cumbersome to review their content. The WG/SRP considered that all information related to conclusions/decisions of PIRG meetings should be incorporated in the corresponding part of the reports to facilitate its review by the Commission.

2.4 The WG/SRP also commented that it would be useful if PIRG meeting reports would provide information related to the progress on implementation of programmes such as the ICAO language proficiency requirement and WGS-84. The Secretariat was requested to provide updated information on these subjects for the CAR/SAM Regions.

3. **Future GREPECAS annual reports**

3.1 Taking into consideration the results of the GREPECAS/16 meeting and associated comments of the ANC, the future GREPECAS Annual Reports will have the following objectives:

- a) Provide annual GREPECAS reports in between the triennial GREPECAS meetings;
- b) Inform on GREPECAS activities, progress and results of its programmes and projects;
- c) Inform on the GREPECAS PPRC meeting results;
- d) Seek guidance and approval from the ANC as applicable and when required; and
- e) Provide the references to all relevant supporting documents available on the web.

3.2 The future GREPECAS Annual Reports will be prepared by the Secretariat based on the results of the PPRC meetings, circulated to GREPECAS member States for review, comments and approval, and then submitted to the Air Navigation Bureau for presentation to the ANC.

3.3 The proposed content for the future GREPECAS Annual Reports is presented in the **Appendix** for consideration by the Meeting.

4. **Action by the PPRC**

4.1 The PPRC is invited to review, comment and approve the proposed content for future GREPECAS Annual Reports presented in the Appendix.

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APPENDIX

PROPOSED CONTENT FOR FUTURE GREPECAS ANNUAL REPORTS

1. Introduction
 - Summary of activities over the preceding period
 - List of new conclusions and decisions
 - List of reference documents
2. Status and follow-up of the previous GREPECAS conclusions and decisions
3. Status and follow-up of the air navigation deficiencies with high risk (Priority “U”)
4. Relevant RASG-PA matters
5. Review of the GREPECAS Programmes and Projects
 - 5.1 PBN Programme Projects
 - 5.2 ATFM Programme Projects
 - 5.3 ATM Automation and Situational Awareness Programme Projects
 - 5.4 Ground-Ground and Ground-Air Communications Infrastructure Programme Projects
 - 5.5 SAR Programme Projects
 - 5.6 AGA Programme Projects
 - 5.7 AIM Programme Projects
 - 5.8 MET Programme Projects
6. Status and follow-up of the implementation of other key ICAO programmes (e.g. ICAO language proficiency, WGS-84, etc.)
7. Other related regional groups and activities (e.g. CARSAMMA, GTE, MEVA, REDDIG, etc.)
8. GREPECAS Organization, Terms of Reference and Work Programme
9. Other matters
10. Activities planned for the next period

Appendices

- END -



Agenda Item 1: Follow-up of the results of GREPECAS/16 Meeting

1.2 Review of the status of implementation of the Conclusions and Decisions in force previous to GREPECAS/16

FOLLOW-UP ON THE CONCLUSIONS AND DECISIONS FORMULATED BY THE SIXTEENTH MEETING OF GREPECAS

(Presented by the Secretariat)

SUMMARY	
This paper examines the actions taken by GREPECAS, States/Territories/International Organizations and ICAO, regarding the Conclusions formulated by the Sixteenth Meeting of GREPECAS.	
REFERENCES	
<ul style="list-style-type: none">• Report of GREPECAS/16 Meeting (Punta Cana, Dominican Republic, 28 March to 1 April 2011); and• AN-WP/8578 (Montreal, Canada, 27 September 2011).	
ICAO Strategic Objectives:	<i>A - Safety</i> <i>C - Environmental Protection and Sustainable Development of Air Transport</i>

1. Introduction

1.1 During its sixteenth meeting, GREPECAS adopted forty three (43) Conclusions and six (6) Decisions.

2. Discussion

2.1 The **Appendix** to this working paper presents the conclusions formulated by GREPECAS/16 Meeting, the actions taken by CAR/SAM States/Territories/International Organizations and/or ICAO Secretariat.

3. Action required

3.1 The Meeting is invited to analyze the GREPECAS/16 conclusions and decisions updating proposal contained in the Appendix to this working paper and make changes, if they correspond.

APPENDIX

FOLLOW UP TO GREPECAS/16 CONCLUSIONS AND DECISIONS - — ACTION PLAN

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/1 A&C	Action plan for the implementation of GREPECAS conclusions	That, in order to enable the Secretariat to follow-up on the implementation of GREPECAS conclusions: a) once the GREPECAS Meetings reports are received, the States, Territories and international organizations of the CAR/SAM Regions shall complete the Action Plan used for this purpose and submit it to the corresponding ICAO Regional Office within a period not greater than 30 days; and b) the ICAO NACC and SAM Regional Offices follow-up on the activities included in the action plans.	Action plan presented in this Appendix to PPRC/1-WP/15	CAR/SAM States/ territories/ international organizations	Action plan for the implementation of GREPECAS conclusions	Not analyzed by the Commission	Completed April 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
D 16/2 A&C	FOLLOW-UP ON GREPECAS OUTSTANDING CONCLUSIONS	That, starting from the GREPECAS/16 Meeting: a) the ICAO NACC and SAM Regional Offices follow-up on the activities contemplated in the action plans for the implementation of GREPECAS outstanding conclusions, in order to provide the required support to the States/Territories that so require; and b) the review of the status of implementation of outstanding conclusions corresponding to the next-to-last and previous meetings of GREPECAS be excluded from the agenda of future GREPECAS meetings and instead, be presented to States by the Secretariat as an information paper.	Result of conclusions follow-up in PPRC/1-IP/03	ICAO NACC and SAM Regional Offices	Follow-up to pending GREPECAS conclusions	Not analyzed by the Commission	Completed April 2012
D 16/3 A	Coordination between GREPECAS and RASG-PA	That the Secretariat develop, for consideration by GREPECAS: a) a coordination mechanism to avoid duplication of efforts between GREPECAS and RASG-PA; and b) a procedure whereby one group may propose actions to the other group.	The coordination mechanism and the procedure to propose actions from one group to another were drafted and introduced in the GREPECAS Procedural Handbook	GREPECAS Secretary/ ICAO Mexico Office	Coordination mechanism Procedure	Noted and called upon the Secretariat to ensure coordination between both groups.	Completed January 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/4 A&C	Support for the completion of project RLA/03/902 SACCSA studies and participation in the test-bed implementation	In view of the first results obtained by the SACCSA Project – Phase III-A and its contribution to the implementation of PBN, and in order to support the completion of this Project, CAR/SAM States/territories/international organizations are urged to: a) facilitate/coordinate with their corresponding national authorities access and provision of data to the SACCSA Project from networks with 1-second GPS receiving stations with FTP or NTRIP access and RINEX files; and b) take into consideration the objectives indicated in Appendix B to Agenda Item 2 of the report of the CNS/ATM/SG/2 Meeting, consider participation in the SACCSA-SBAS test-bed implementation by notifying ICAO Regional Offices by 30 June 2011.	a) Initial coordinations have been carried out b) Secretariat has informed States, and have taken note	CAR/SAM States/ territories/ international organizations	Access and provision of data to SACCSA project. Participation in SACCSA-SBAS test-bed implementation	Noted.	Completed a) January 2012 b) 30 June 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/5 A	CNS/ATM fields training programme for the competency of aeronautical professionals for the CAR/SAM Regions	That to train aeronautical professionals with regard to necessary competencies, CAR/SAM States/territories/ international organizations: a) follow-up and take into consideration the recommendations of the Symposium on Next Generation Aeronautical Professionals (NGAP) and the results of the NGAP Task Force; b) in coordination with the ICAO regional offices, establish a training programme that responds to the performance objectives identified in the CAR and SAM Regions performance-based implementation plans for the 2012-2016 period; and c) inform the ICAO regional offices on the progress made in the development of this programme, by 30 September 2011.	a) States have noted results and follow-up is given through NAM/CAR working group meetings and SAM director s of civil aviation training centres (CATC) meetings b) A tentative training programme was presented at NACC Directors meeting and SAM CATC meeting c) States have informed of progress in development of programmes.	CAR/SAM States/territories/ international organizations	Follow-up results of NGAP Symposium and Task Force Training programme Inform on progress	Noted.	Completed a) 30 September 2011 b) 30 September 2011 c) 30 September 2011
C 16/6 + C 16/7 C	Migration from ISCS-G2 to WIFS	That, taking into consideration the proposed migration from ISCS-G2 to WIFS, ICAO encourage States to take appropriate measures to obtain access using the WIFS to the WAFS products provided by WAFS Washington.	Letter LT 3/9.3-SA120 of 27/2/12 was sent to States urging migration from ISCS-G2 to WIFS	CAR/SAM States/territories/ international organizations	Migration to WIFS	Noted.	Valid March 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/8 C	WIFS User Guide	That: a) the WAFC Washington Provider State be invited to consider the possibility of providing the WIFS User Guide also in Spanish; and b) if the request in paragraph a) is not possible, ICAO take the necessary action for the translation of the referred guide.	The Guide in Spanish is in the WIFS web (Conclusion AERMETSG 11/01)	ICAO HQ ICAO Regional Offices Lima and Mexico	WIFS User Guide in Spanish	Noted.	Completed December 2011
C 16/9 A	Guide on the international airways volcano watch (IAVW)	That the Secretariat develop regional guidance in Spanish to explain the contents of Doc 9766, <i>Handbook on the International Airways Volcano Watch (IAVW) – Operational Procedures and Contact List</i> .	Conclusion AERMETSG 11/02, inviting ICAO to develop Doc 9766, Version 1	ICAO Regional Offices Lima and Mexico	Regional guidance in Spanish. Doc. 9766 in Spanish	Noted.	Completed December 2011
C 16/10 C	MONITORING OF SIGMET RECEIVED IN BRASILIA INTERNATIONAL OPMET DATABANK	That in the controls of OPMET information carried out by the Brasilia International Databank: a) priority is given to the analysis of most common errors in the headings of SIGMET; b) the results be sent to the ICAO SAM Office; and c) ICAO Lima and Mexico Offices submit the monitoring results to the corresponding States for them to take the pertinent actions to correct the deficiencies detected.	Letter on SIGMET errors was sent to States (Argentina, Bolivia, Chile, Panama, Uruguay). Included in MET Programme IAVW Project	Brasilia OPMET international data bank	SIGMET monitoring	Not analyzed by the Commission	Annual

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/11 C	PARTICIPATION OF STATES' MEMBERS IN THE MEETINGS OF ICAO OPERATIONS GROUPS OR STUDY GROUPS IN MONTREAL	That States that have experts in ICAO Operations Groups and Study Groups in Montreal are encouraged to make the maximum efforts for them to participate in the meetings.	AERMETSG/11 agreed that States unable to assist, inform so to Secretary General to give other States opportunity to attend	CAR/SAM States/territories/ international organizations	Participation of ICAO Operations Groups and Study Groups members	Not analyzed by the Commission	Valid
C 16/12 C	Back-up MWOs in the CAR/SAM States	That a) in order to comply with paragraph 14 of ANP Basic, Part VI – MET, if a MWO is temporarily not functioning another could assume its obligations; the back-up list included as Appendix B to WP/08 to this part of the report should be taken into account; b) the Secretariat make the necessary updates to CAR/SAM Regional SIGMET Guide.	Development of MWO transfer procedures. MET Programme IAVW Project	CAR/SAM States/territories/ international organizations ICAO Regional offices Lima and Mexico	Assume temporarily MWO obligations Update CAR/SAM Regional SIGMET Guide.	Noted.	Completed December 2011
C 16/13 C	SIGMET WV TESTS	That in order to keep a constant feedback and efficiency in the issuance of volcanic ash SIGMET starting 2010, the States, in coordination with the corresponding VAACs, carry out the SIGMET WV test during the month of September. The test should have a duration of 48 hours.	Included in MET Programme IAVW Project	CAR/SAM States/territories/ international organizations	SIGMET WV trials	Not analyzed by the Commission	Annual

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/14 C	FORMAT FOR OPMET INFORMATION EXCHANGE CONTROLS	<p>That in order to improve the OPMET exchange:</p> <p>a) the name of “coordinate controls of OPMET exchange for the CAR/SAM Regions” be changed to “COM/MET coordinated controls of OPMET exchange for the CAR/SAM Regions”; and</p> <p>b) the format for the controls of OPMET exchange be modified, in the sense of having one format for METAR and TAF exchange controls and SPECI reception on the basis of CAR/SAM FASID Table MET 2B, and another for the reception SIGMET and special air-reports, on the basis of Appendix I to the Guide for the preparation, dissemination and use of SIGMET information in the CAR/SAM Regions, including in the latter the ATS unit location indicators providing services to the FIR, UIR and SRR.</p> <p>Note. –The Secretariat will prepare the format that should be used starting the next control.</p>	New formats sent on 24 June 2010	ICAO NACC and SAM Regional Offices Secretariat	OPMET information exchange control format	Not analyzed by the Commission	Completed June 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/15 C	CAR/SAM guide for OPMET exchange	That in order to enable the application of ICAO procedures for OPMET information exchange, the States use the CAR/SAM Guide for OPMET Exchange included in Appendix C to WP/08 to this part of the report.	Sttes are adopting CAR/SAM Guide for OPMET Exchange	CAR/SAM States/territories/ international organizations	Application of procedures for OPMET information exchange.	Noted.	Completed July 2011
C 16/16 C	INSTALLATION OF AMHS USER TERMINALS IN METEOROLOGICAL UNITS WITH INTERNATIONAL OPMET REQUIREMENT	That the corresponding States, when implementing the new AMHS system in substitution of the current AFTN system, take into consideration the installation of AMHS user terminals in the MET units of the States that have international OPMET requirements, in order to increase the availability of OPMET information and to comply with GREPECAS Conclusion 6/33.	States, upon implementing the new AMHS, are considering the installation of AMHS terminals at meteorological units with international OPMET requirement	CAR/SAM States/territories/ international organizations	Installation of AMHS terminals at meteorological units with international OPMET requirement	Not analyzed by the Commission	Valid December 2013

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/17 C	AMENDMENT TO CAR/SAM ANP BASIC AND FASID, PART VI - MET	That: a) Part VI – MET of CAR/SAM ANP Basic and FASID Tables MET 1A and MET 2A are amended as shown in Appendix D to WP/08 of this meeting; and b) Table MET 2B of the CAR/SAM Facilities and Services Implementation Document (FASID): i. be eliminated from CAR/SAM FASID; and ii. be included as an Appendix to the CAR/SAM Guide for OPMET exchange.	Amendment to ANP Basic submitted on 6 March 2012. Amendment to ANP Basic – NACC information pending	ICAO NACC and SAM Offices Secretariat	Amendment to CAR/SAM Basic ANP, Part VI-MET	Not analyzed by the Commission	Valid June 2012
C 16/18 C	CAR/SAM MET regional performance objectives	That the CAR/SAM MET Regional Performance Objectives and associated performance framework forms as contained in Appendix E to WP/8 of this meeting are adopted.	States/Territories/ international organizations noted conclusion and started adoption of regional	CAR/SAM States/territories/ international organizations	CAR/SAM MET Regional Performance Objectives	Noted.	Completed December 2011
C 16/19 C	ATM/MET seminar/workshop	That in order to develop a list of possible MET requirements in support of ATM for the CAR/SAM Regions, ICAO, in coordination with WMO, conduct a seminar/workshop for the CAR/SAM Regions.	To be held at NACC RO on 29-31 October 2012	ICAO Regional Offices Lima and Mexico	ICAO/WMO seminar/workshop	Noted and invited the Secretary General to request support for the organization of the seminar/ workshop from WMO.	Valid October 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/20 C	UPDATED COURSE ON AMENDMENT 75 TO ANNEX 3 FOR MET AND ATS PERSONNEL	That the States plan an update course on Amendment 75 to Annex 3 for MET and ATS personnel, once they receive from ICAO the approval of the referred amendment.	States/Territories/ international organizations noted action suggested by Conclusion	CAR/SAM States/territories/ international organizations	Update course on Amendment 75 to Annex 3 for MET and ATS personnel	Not analyzed by the Commission	Completed
C 16/21 A	UPDATED STATUS ON AERODROME CERTIFICATION	That States submit to their respective ICAO NACC and SAM Regional Offices a report on the implementation status of airport certification no later than 28 February 2010.	Replies to NACC letter EMX0160 of 17/2/10 and SAM letter SA092 of 22/2/10 were received from Anguilla, Argentina, Barbados, Bolivia, Brazil, British Virgin Islands, Colombia, Cuba, El Salvador, Guatemala, Montserrat, Nicaragua, Paraguay, Peru, Trinidad & Tobago and United States	CAR/SAM States/territories	Updating of CAR/SAM airport certification up to 2010	Not analyzed by the Commission	Completed

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/22 A	Workshops on State safety programme and safety management system (SSP and SMS) courses	That the ICAO NACC and SAM Regional Offices organize workshops on the implementation of the SSP by States and SMS for aerodrome operators during 2010.	SAM RO: SSP and SMS Seminar/ Workshop (Lima, 11-15 July 2011) and SSP/SMS Updating Course (Lima, 19-23 November 2012). NACC RO: SMS Course (Mexico, 4-8 October 2010)	ICAO Regional Offices Lima and Mexico	SSP and SMS implementation by States and service providers, respectively	Noted	Valid December 2012
C 16/23 A	Best practices to prevent runway incursions and runway excursions	That States submit to NACC and SAM Regional Offices: a) a report on best practices used to prevent runway incursions/ excursions at airports; b) that this report be submitted no later than 30 March 2010.	Replies to NACC letter EMX0372 of 22/4/10 and SAM letter SA332 of 28/5/10 from Anguilla, Argentina, Bolivia, Brazil, British Virgin Islands, Colombia, Costa Rica, Cuba, Montserrat, United States and Paraguay	CAR/SAM States/territories	Report on best practices to prevent runway incursions/excursion at airports.	Noted the request made by GREPECAS to States and called upon the Secretariat to obtain a copy of these reports	Completed

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/24 A	Harmonization of taxiway designation	That ICAO consider the development and provision of guidelines on the harmonization of taxiway designation in order to reduce operator confusion and to minimize runway incursions.	AGA section developed guidelines on the harmonization of taxiway designation and is currently under review	ICAO HQ	Guidelines on the harmonization of taxiway designation	Supported the development and scope of ICAO guidelines and requested the Secretariat to include this matter in the work programme of the Aerodromes Panel.	Valid December 2013
C 16/25 C	Plan for the implementation of principles on human factors for AIM	That States/territories/ international organizations, in support of GREPECAS Conclusion 15/30 — <i>Guide for the application of principles on human factors in AIS/MAP</i> II, adopt the — <i>Plan for the implementation of principles on human factors for AIM</i> II.	Being applied in the SAM Region. CAR States/ territories and international organizations are incorporating these guidelines in their national legislation	CAR/SAM States/territories/ international organizations	Adoption of plan of principles on human factors for AIM	Noted.	Completed March 2012
C 16/26 C	Approval of updates to the guidance manual for the implementation of a quality management system oriented to the aeronautical information management (AIM)	That States/territories/ international organizations, approve the revisions to the Guidance Manual for the Implementation of a Quality Management System considering the transition from AIS to the Aeronautical Information Management (AIM).	Revision was completed in the CAR/SAM Regions, reporting no differences. ICAO HQ is preparing an AIM/QMS Manual. 2014 AIM Divisional Meeting	CAR/SAM States/territories/ international organizations	Revisions to guidance manual for implementation of a quality management system	Noted.	Completed January 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/27 C	CAR/SAM TRAINING GUIDE FOR THE AIM COURSE	That the AIM Subgroup: a) propose to GREPECAS the adoption of the “CAR/SAM Training Guide for the AIM Course” (*); b) coordinate with the ICAO NACC and SAM Regional Offices and the national and regional training centres, for the distribution of the guide to serve as a reference in the development of modules for the CAR/SAM AIM course; and c) consider, within the Roadmap for AIS-AIM transition, the initiation of AIM training course based on this reference guide, starting in 2011.	ICAO HQ is developing the Training Manual, to be finalized in April 2012. The guide was adopted. CAR/SAM Course 024 is only in Spanish. 2014 AIM Divisional Meeting	CAR/SAM States/territories/ international organizations NACC and SAM Regional Offices	CAR/SAM training guide for AIM course	Not analyzed by the Commission	Completed April 2012
C 16/28 C	CAR/SAM MANUAL ON HUMAN FACTORS IN THE AERONAUTICAL INFORMATION MANAGEMENT (AIM)	a) Submit the Manual on Human Factors in the Aeronautical Information Service to the consideration of GREPECAS; and b) Take into account this manual for the implementation of training programmes for AIS/MAP personnel.			CAR/SAM Manual on Human Factors in the Aeronautical Information Management (AIM)	Not analyzed by the Commission	Completed

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/29 C	Reference for the development of training programmes in technical English language for AIS/MAP personnel in CAR/SAM States	That CAR/SAM States, territories and international organizations consider Doc 9835 AN/453 – <i>Manual on the Implementation of ICAO Language Proficiency Requirements</i> , as a reference when formulating their training programmes in the English language, adapting it as necessary based on the performance requirements for AIS personnel, in support to the ATM Operational Global Plan.		CAR/SAM States/territories/ international organizations	Training programmes in the English language for AIS personnel	While discussing Conclusion 16/29, the WG/SRP agreed that these training programmes should be developed, not only for AIS/MAP, but for all personnel if appropriate to their job.	Valid December 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/30 C	Roadmap for the transition from AIS to AIM	That CAR/SAM States and territories: a) consider the guidelines, steps and timeline for the Transition from AIS to AIM presented in the Roadmap for the transition from AIS to AIM; b) inform the corresponding ICAO Regional Office progress and/or difficulties on the implementation of SARPs associated to the implementation guide, not later than 5 May 2010; c) develop the corresponding AIM air navigation regional plans with the related PFFs and with the Regional Plans as a reference, according to GREPECAS conclusion 15/1 in its paragraphs a) and b), and in the AIM Roadmap; and d) inform to the ICAO CAR/SAM Regional Offices on the progress of the implementation requested in the above paragraph, no later than 29 October 2010.	Only item c) is pending	CAR/SAM States/territories/ international organizations	Transition from AIS to AIM Implementation of SARPs for transition from AIS to AIM AIM air navigation national plans with related PFFs Report progress of implementation	Noted.	Completed a) January 2012 Completed b) March 2011 Valid c) October 2012 Completed d) March 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/31 C	Availability of documentation in Spanish	That the need to give priority, to the extent possible, to translating into Spanish the texts that are available only in English and that are of crucial importance for complying with ICAO SARPs, be proposed to ICAO with a view to achieving the AIS-AIM transition.	Quality Manual, Training Manual, Charting Manual, Guidelines in the Use of the Public Internet for Aeronautical Applications and eTOD Manual to be translated	ICAO HQ IIM/AIM	Text in Spanish of guidance material for AIS-AIM transition	Noted.	Valid June 2012
C 16/32 C	General guidance for the implementation of a GIS system in AIM	GREPECAS approves as vital importance to support ICAO SARPs, the application of the General Guidance for the Implementation of a GIS System in AIM, towards achieving the transition from AIS to AIM in the States, Territories and International organizations of the CAR/SAM Regions.	CAR States are in the process of implementing the guides, which have been adopted by SAM States but in both cases, not all have purchased or developed a GIS yet	CAR/SAM States/territories/ international organizations	Apply general guidance for implementation of a GIS system in AIM	Noted.	Valid March 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/33 A&C	Adoption of performance monitoring and measurement programme for the CAR/SAM regions	<p>Considering the importance to monitor and measure the achievement of the performance objectives defined for the CAR/SAM Regions, that States, Territories and International organizations of CAR/SAM Regions:</p> <p>a) adopt the set of metrics related to key performance areas of access, capacity, cost effectiveness, efficiency, environment, flexibility, predictability and safety; described in Appendix A of this part of the report, to monitor and measure the implementation advances of the regional performance objectives;</p> <p>b) incorporate these metrics into their performance monitoring programmes, collect relevant data and submit to the ICAO Lima and Mexico regional offices on a regular basis;</p> <p>c) coordinate with ATM community members to promote information and data collection; and</p> <p>d) inform ICAO Regional Offices of their advances by 30 November 2010.</p>	CAR/SAM States/territories/ international organizations have noted actions suggested and started their implementation	CAR/SAM States/territories/ international organizations	Adoption of a performance monitoring and measurement programme	Noted.	Completed

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/34 C	FOLLOW-UP, PARTICIPATION AND COOPERATION TO ICAO RLA/03/902 REGIONAL PROJECT	That with the objective of concluding technical-financial viability studies of the SBAS implementation within the CAR/SAM Regions, under the ICAO RLA/03/902 regional project, the States, international organizations and users are invited to: a) Participate in Phase III of the RLA/03/902 – SACCSA project and promote cooperation between national entities and make progress on development with support of educational institutions so as to provide scientific and technical support; and b) Increase coordination and exchange of information on the results obtained and experience gained in RLA/03/902 project, GBAS national projects and other initiatives regarding GNSS implementation.	a) Trinidad & Tobago has incorporated in the project b) States have taken note of the action suggested	CAR/SAM States/territories/ international organizations	CAR/SAM States participation in RLA 03/902 Phase III RLA 03/902 project coordination with national GNSS projects	Not analyzed by the Commission	Completed

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/35 A&C	Adoption of the CAR/SAM ATFM Manual	That considering the importance to harmonize the implementation of ATFM in the CAR/SAM Regions, the States, territories and international organizations of the CAR/SAM Regions adopt the ATFM Manual shown in Appendix A to the report of the CNS/ATM/SG/1 Meeting.	CAR/SAM States/territories/ international organizations have considered adopting the ATFM Manual	CAR/SAM States/territories/ international organizations	Adopt CAR/SAM ATFM Manual	Noted and complimented GREPECAS for the adoption of the CAR/SAM ATFM Manual to harmonize the implementation of ATFM in CAR/SAM regions.	Completed

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/36 C	COLLECTION OF INFORMATION ON EXISTING AND FUTURE AVIONICS IN THE CAR/SAM REGIONS	Taking into account the importance of having information on avionics already installed and to be installed on user aircraft, for purposes of planning and cost/benefit analyses, it is urged that: a) States/Territories and International Organisations are urged to collect information on avionics already installed and to be installed in non-IATA domestic fleets and other general aviation users, suggesting the adoption of a format similar to that of the IATA survey form (Appendix D to this part of the Report), the results to be sent to the respective ICAO Regional Office by December 2010; b) IATA include the aforementioned information in the IATA database, informing the ICAO CAR/SAM Regional Offices about the response to this request; and	Since most States/ territories and international organizations have not informed on the results on data collection, the reception date has been extended to December 2012	CAR/SAM States/territories/ international organizations	Collection of information on existing and future avionics Inclusion of avionics information in IATA survey form	Not analyzed by the Commission	Valid December 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
		c) The information collected to date in the SAM and CAR Regions be included in the mentioned data base, as well as any information that can be provided by the avionics manufacturers.					
C 16/37 C	Proposed routing scheme for IPv4 for inter and intra regional communications links for ATN ground to ground applications	That the CAR/SAM Regions use the IPv4 routing scheme for inter and intra regional communications links in ATN ground to ground applications for described in Appendix E to the report of the CNS/ATM/SG/1 Meeting.	IPv4 addressing scheme is being applied in inter and intra regional communications links through REDDIG, MEVA II and MEVA II / REDDIG interconnection	CAR/SAM States/territories/ international organizations	Use of the IPv4 routing scheme for CAR/SAM inter- and intra-regional communications links	Noted.	Completed

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/38 C	Improvements to the activities referred in ADS-B trials	That States/territories/ international organizations who are carrying out ADS-B trials are urged to: a) continue with the data collection and analysis, in accordance with GREPECAS guidelines (GREPECAS/15 Report, Appendix Q); b) search for the exchange of data between States, particularly with regard to coverage superposition and analysis criteria; c) solve, with the respective airspace users, the duplicate or illegal 24-bit Address cases identified, and inform in this respect to the ICAO Regional Offices; d) inform airspace users on any anomaly in the received ADS-B messages, in preparation of future ADS-B implementation; and e) duly inform the ICAO Regional Offices on the trial results, for their publication.	Valid: These improvements and considerations are being considered at the ADS-B trials by the NAM/CAR Ad-hoc Group and the SAM/IG	CAR/SAM States/territories/ international organizations	Improvement in activities related to ADS-B trials	Noted.	Valid December 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/39 A&C	Implementation of the new flight plan format in the CAR/SAM Regions	That considering the importance of the implementation of Amendment 1 to the fifteenth edition of Doc 4444, whose application is foreseen for 2012, CAR/SAM States/territories/ international organizations: a) adopt the strategy for the implementation of Amendment 1 to Doc 4444 (PANS-ATM) (15 th edition) shown in Appendix J to the report of the CNS/ATM/SG/1 Meeting; b) develop action plans, taking into account the regional strategy and the action plan based in a performance scope, which includes as Appendix J to this working paper, for the harmonious implementation of the new ICAO flight plan format and the ATS messages related; c) designate experts who participate as points of contact to coordinate with other air navigation services providers of States/territories/ international organizations from adjacent flight information regions (FIRs), implementation matters of ATS messages related with the implementation of the new ICAO flight plan format (FPL); and	a) States/ territories/ international organizations have adopted the strategy b) States/ territories/ international organizations have developed their national action plans on the basis of the CAR/SAM strategy c) CAR/SAM States/territories have informed their PoCs	CAR/SAM States/territories/ international organizations	Implementation of the new flight plan format	Noted.	Completed

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/39 cont'd A&C	Implementation of the new flight plan format in the CAR/SAM Regions	d) send the result of this implementation to the ICAO NACC and SAM Regional Offices, not later than 30 November 2011.	e) All CAR/SAM States/territories/ international organizations have nominated a focal point to coordinate new flight plan format implementation and submitted information to ICAO NACC and SAM Offices				
C 16/40 + associated C 16/41 C	Training for aeronautical professional competence	That CAR/SAM States/territories and international organizations, take into consideration the list of short and mid-term and training requirements shown in Appendix D to the report of the CNS/ATM/SG/1 Meeting, so that CATCs, in coordination with civil that CAR/SAM States/territories and international organizations, aviation authorities, prepare aeronautical training programmes which contemplate regional air navigation and safety requirements.	Will be presented and discussed at next NAM/CAR training centres meeting to be held in the first semester of 2012. In the CAR Region, this listing has been presented to the consideration of States/ANPS and training centres. SAM States have analyzed and considered this list at the CATC meeting	CAR/SAM States/territories/ international organizations	Aeronautical training programmes taking into consideration regional requirements.	Noted.	Valid June 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/42 A	Resolution of air navigation deficiencies	That States/territories having difficulty in resolving priority -U air navigation deficiencies request ICAO assistance to prepare action plans and coordinate support for resolving deficiencies if required.	States/territories/ international organizations have noted the action suggested	CAR/SAM States/territories/ international organizations	Assistance for preparation of action plans to resolve deficiencies	Noted.	Valid December 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/43 A	Revised methodology for the identification, assessment and reporting of air navigation deficiencies	That: a) ICAO consider the proposed revised methodology for the identification, assessment and reporting of air navigation deficiencies presented in Appendix A to this part of the report; and b) in the interim, GREPECAS adopt the revised methodology as a test-bed and notify the ANC of the results.	ICAO noted the revised methodology for the identification, assessment and reporting of deficiencies and is awaiting for the results from the tests	ICAO HQ GREPECAS Secretary	Proposed revised methodology for identification, assessment and reporting of air navigation deficiencies	Commended the work by GREPECAS proposing a revised methodology for identification, assessment and reporting of air navigation deficiencies. Any decision in this matter should wait for the results of the trials. The Secretariat is called upon to ensure that any revised methodology to identify, assess and report of air navigation deficiencies should be applied uniformly by all PIRGs and regions and to verify other proposals presented by other PIRGs.	Valid 30 April 2012

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
C 16/44 A	Review of existing air navigation deficiencies	That: a) the revised methodology be applied to existing deficiencies contained in the GANDD within a reasonable time period but no later than 31 March 2012; b) ICAO review and improve the GANDD in order to update information on deficiencies in a timely manner; and c) ICAO review the procedures established by GREPECAS for the validation and elimination of the deficiencies contained in the GANDD.	a) Application started b) Reviewed c) Reviewed	Lima and Mexico Regional Offices	Application of revised methodology in the GANDD Improved GANDD Procedures for validation and elimination of deficiencies	Noted.	Completed a) 31 March 2012 b) 30 June 2011 c) 30 June 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
D 16/45 + associated D 16/48 and C 16/49 A	New GREPECAS organization	That in order to implement CAR/SAM performance-based regional plans in compliance with the Global Air Navigation Plan and Global ATM Operational Concept: a) the GREPECAS organization be modified as described in Appendix A to this part of the report; and b) the Secretariat circulate a letter to States/Territories, accompanied by an explanatory note and the revised GREPECAS Procedural Handbook, requesting ratification of the new GREPECAS organization and inviting suggestions for further refinement within 30 days, including reference to non-response being taken as acceptance without comment.	a) New GREPECAS organization adopted b) CAR/SAM States/territories ratified the new GREPECAS organization and suggestions received were taken under consideration in the GREPECAS Handbook	GREPECAS Secretary Lima and Mexico Regional Offices	New GREPECAS organization Letter with explanatory note and revised GREPECAS Procedural Handbook	Noted and complimented GREPECAS for the work done to implement a new GREPECAS organization.	Completed a) 30 September 2011 b) 30 June 2011
D 16/46 A	Revised GREPECAS terms of reference	The revised GREPECAS terms of reference, which incorporate the ICAO Council requirement to coordinate with RASG-PA are presented in Appendix B to this part of the report.	Included in the GREPECAS terms of reference	GREPECAS Secretary	Revised terms of reference	Noted and complimented GREPECAS for the agreement to revise the terms of reference that included coordination between GREPECAS and RASG-PA.	Completed 30 June 2011

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Follow-up	Responsibility	Deliverable	Action by ANC	Status/ Foreseen completion date
D 16/47 A	TRANSFORMATION OF GREPECAS SUBGROUPS	That the work currently in progress by the GREPECAS AERMET, AGA/AOP, AIM and CNS/ATM Subgroups, and their respective task forces, where applicable, as presented in the Appendices B – E of WP/17 be transformed into programmes and projects.		ICAO			Completed

*The Council agreed to three Strategic Objectives for the triennium 2011- 2013 as follows (C-DEC 188/13 refers):

Strategic Objective A: *Safety*

Strategic Objective B: *Security*

Strategic Objective C: *Environmental Protection and Sustainable Development of Air Transport*

— END —



Agenda Item 2: Air navigation deficiencies in the CAR/SAM Regions with high risk (“U” priority)

**ADDRESSING REGIONAL AIR NAVIGATION DEFICIENCIES –
TRANSITION FROM FIVE REGIONAL DATABASES INTO A CENTRAL DATABASE**

(Presented by the Secretariat)

SUMMARY

The Planning and Implementation Regional Groups (PIRGs), have adopted the Council approved uniform methodology for the identification, reporting and assessment of regional air navigation deficiencies. This methodology is being supported by the deficiency database developed separately by each region. Noting that these databases are region specific, this working paper recommends for adopting a centralized database in ICAO Headquarters that would result in significant benefits to this process.

Action by GREPECAS PPRC/1 is contained in paragraph 4.

1. Introduction

1.1 The uniform methodology for the identification, assessment and reporting of air navigation shortcomings and deficiencies (henceforth referred to as Uniform Methodology) was prepared with the assistance of the planning and implementation regional groups (PIRGs) of ICAO and approved by the ICAO Council on 23 June 1998 for the efficient identification, assessment and clear reporting of air navigation deficiencies.

1.2 In 2001, in order to avoid any ambiguity, ALLPIRG proposed, in Conclusion ALLPIRG 4/11 that the definition for a shortcoming or a deficiency as contained in the Uniform Methodology be replaced with a single definition for both situations. In response to this, the Council on 30 November 2001 approved the single definition by retaining the word *deficiency* in the new single definition, as the negative connotation associated with the word had political and financial leverage to assist with the corrective action required. The amended version of the Uniform Methodology (Appendix A refers) has been consistently implemented by all PIRGs.

1.3 To support the implementation of the Uniform Methodology, every PIRG has developed its own unique deficiency database as a means of sharing safety information related to air navigation systems and viewed/used by that respective region(s) only. The sharing of safety information will become increasingly beneficial with the continued maturation of Safety Risk Management (SRM) and Safety

Assurance (SA) processes contained within State Safety Programmes as well as Safety Management Systems. In either case, data aggregation will enhance identification of emerging safety issues, the monitoring of safety trends and benchmarking of safety performance among peer organizations. To maximize their effectiveness, information sharing efforts should exercise the appropriate degree of transparency as necessary to ensure proactive resolution of air navigation safety issues without jeopardizing the voluntary exchange of information that is critical to the process. To extend this sharing safety information related to air navigation systems from regionally to globally, this working paper discusses an approach to transition from current regionally managed deficiency databases to one consolidated and centrally managed deficiency database.

2. Air navigation deficiency databases – current regional approach

2.1 Currently the APANPIRG (ASIA/PAC Air Navigation Planning and Implementation Regional Group), APIRG (Africa-Indian Ocean Planning and Implementation Regional Group), EANPG (European Air Navigation Planning Group), GREPECAS (CAR/SAM Planning and Implementation Regional Group) and MIDANPIRG (Middle East Air Navigation Planning and Implementation Regional Group) have developed, established and maintaining their respective regional air navigation deficiency databases to support the implementation of the Uniform Methodology. Each of these regional deficiency databases has its workflow, architecture, protocols and access rights. In view of region specific databases, they are not available for worldwide viewing and usage. Although this approach is satisfactory from regional perspective, it needs to be extended globally in order to be consistent with the principles of sharing safety information worldwide leading to complete transparency.

3. Air navigation deficiency databases – proposed global approach

3.1 Building on the current Planning and Implementation Regional Group (PIRG)/regional efforts, ICAO has developed a prototype system for the management of air navigation deficiencies at the global level which has been incorporated in the integrated Safety Trend Analysis and Reporting System (iSTARS) framework (Appendix B refers). Access to iSTARS is through the ICAO Secure Portal <https://portal.icao.int>. iSTARS is a web-based system which groups together different safety related datasets and allows for effective integrated safety analysis. The establishment of a centralized database for regional air navigation deficiencies on iSTARS would result in significant benefits through the harmonization of data structure and content, as well as by providing uniform access to the respective Regional Offices, Member States and other authorized users. The objective is to consolidate different regional air navigation deficiency databases, have all regions/States reporting in single database, provide consistent reporting across all regions and allow viewing of deficiencies of all States thus leading to improved information sharing and complete transparency.

3.2. This centralized system initiated in November 2011 was populated with data provided by all regions and fully supports the Uniform Methodology. The data integration process revealed instances of corrective actions that were either incomplete or inconsistent or showed incorrect completion dates. It has also been noted that for many deficiencies, the expected corrective action completion date is well passed the deadline without any indication of the deficiency being resolved. In order to be able to use the collected air navigation deficiencies for integrated safety analysis purposes, all Regional Offices were requested to review and update all respective regional deficiencies that are available on iSTARS by February 2012. On the basis of regional coordination and the feedback received, ICAO has further improved the centralized database on iSTARS and is now ready for evaluation by States. Further to comments that will be received by PIRGs/States, ICAO will mature the system for worldwide use. The attached user guide at Appendix C will assist in accessing the data from iSTARS. The complete transition from the current five regional air navigation databases to single centralized database on iSTARS is scheduled for December 2012.

4. ACTION BY GREPECAS PPRC/1

4.1 The meeting is invited to:

- a) note the approach to transfer five regional air navigation deficiency databases into a single centralized database on iSTARS platform by December 2012; and
- b) request States and International Organizations:
 - 1) to test the centralized database on iSTARS platform using the guidance in Appendix C;
 - 2) Update the data as necessary in coordination with ICAO NACC or SAM Regional Office as corresponds; and
 - 3) provide feedback to ICAO NACC or SAM Regional Office as corresponds by 31 August 2012.

APPENDIX A

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 definition of deficiency is as follows:

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.

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

^{*} 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.

report the matter to the next PIRG meeting, and that the Air Navigation Commission will report to the Council.

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 completion	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 Dec. 2..X	Coordination meeting between Terra X and Terra Y on 16 July 2..X to finalize arrangements to implementation circuit via satellite	Implementation of direct speech circuit via satellite	Terra X	20 Aug. 2..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.

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ICAO Secure Portal

ICAO Secure Portal

Profile
Access Rules
FAQ

Welcome.

You have access to the group(s) listed below.

You may also access your profile to perform the following tasks : Edit your personal information, change your password and request subscription to other groups.

Secure Sites

ICAO-NET	ICAO-NET Secure Site
ANDEF	Global Air Navigation Deficiency Database
DBRAT	Data Bank Related to Air Transport
ISTARS	Integrated Safety Trend Analysis and Reporting System

ICAO



Dataset: Deficiencies
Last updated: 11/04/2012
Items: 2419

Air Navigation

[Report a problem](#)

Air Navigation Deficiencies

Description

The list below shows all air navigation deficiencies currently managed by your region.

Region or State

Belize

[Clear filters](#)

Print View

Open a new window with a print friendly view.

Select an area: AIM

Group by: Tracking status

Document reference to be included

Go

Export Data

Help Documentation

Add Deficiencies

Status charts

SAM

AN Deficiencies by Tracking status



Total	DefId	State	Description	Date Reported	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking
1151										
1	AIM-SAM	Chile	Need to issue the AIP document under a restructured format. It is required that Enroute chart be included in AIP/ENR 6 section; and that all aeronautical charts related with the international airports, be also included in section AIP/AD 2.24.	1990-01-01	A	CAP Accepted	Implementation Plan (2006) AIP English version 25% 24 Jun 2010. Through Note DGAC-04/3113/2255 it was informed that the restructured AIP format is applied. Difference published in AIP Vol. I (CEN 1.7-13), Chapter 4, AIP 4.1.3 points out "availability of aeronautical charts in AIP is not applied." Observation: Aeronautical charts are published in AIP Volume II "Aeronautical Information points out	2011-03-31	25%	Overdue



ICAO

Air Navigation Deficiencies

ANDEF

User Guide

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[Filtering Data: Using Graph](#)

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[ANDEF- How to Report a Problem](#)

ANDEF- Access

Click on ANDEF Link on the right hand side on iStars home page




The screenshot shows the iStars home page. On the left, there is a logo for 'ICAO INTEGRATED SAFETY iStars TREND ANALYSIS AND REPORTING SYSTEM'. Below the logo is a section titled 'iSTARS Usability Survey' with a request to participate in an online survey. At the bottom left is a 'News' table. In the center, the words 'Occurrences', 'Compliance', and 'Risks' are displayed in large, light blue font, with 'Risks' having a blue vertical bar to its left. On the right side, there is a vertical list of menu items. At the top right, a dropdown menu is open, showing 'SECURE - ANDEF' and a list of names including 'Name' and 'ANDEF'. A large blue arrow points from the text above to this dropdown menu.

News	
Title	Date
Accident and incident reporting	05/11/2011

SECURE - ANDEF	
Name	
ANDEF	

ANDEF- Initial View

When you login to ANDEF this is your home page. By default the deficiencies listed will be for the AFI Region...



Dataset: Air Navigation Deficiencies
Last updated: 08/11/2011
Items: 2148

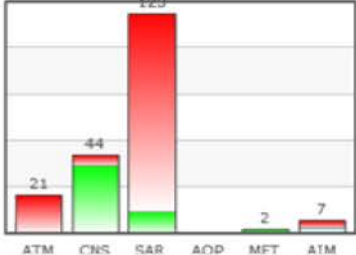
Add Deficiencies

You can add deficiencies to the current list:
[ADD NEW](#)

[Print View](#)
[Export Data](#)
[Help](#)

Status Charts

AFI Region



Category	Count
ATM	21
CNS	44
SAR	129
AOD	2
MFT	7
ATM	7

Air Navigation

Air Navigation Deficiencies

[Report a problem >](#)

Description

The list below shows all air navigation deficiencies currently managed by your region.

Region

AFI [Clear filters](#)

Show 50 entries

Total	Defid	State	Description	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking
197									
	MET/225-AFI	Angola	TAF of Luanda not regularly availab...	A	CAP Accepted	Improve reliability of telecomm.	2012-12-31	Not Determined	On-time
	ATM/226-AFI	Kenya	Prohibited area, restricted area, d...	U	CAP Accepted	Withdraw these areas.	2009-12-31	Not Determined	Overdue
	ATM/227-AFI	Somalia	Non-provision of ATC service 150 NM...	U	CAP Accepted	No action due to the present situat...	2009-12-31	Not Determined	Overdue
	ATM/228-AFI	Swaziland	Prohibited area	U	CAP Accepted	Withdraw this area - P4.	2009-12-31	Not Determined	Overdue
	ATM/229-AFI	United Republic of Tanzania	Lubumbashi - Dar-es-Salaam	U	CAP Accepted	Tanzania is coordinating with the &...		Not Determined	Overdue
	ATM/230-AFI	Algeria	Non-implementation of ATC in the up...	U	No CAP Defined			Not Determined	Overdue
			Need for SSR						

ANDEF- Select Region View

To select a different region, use the dropdown menu and choose the region you want:



▼ Add Deficiencies

You can add deficiencies to the current list
[ADD NEW](#)

► Print View

► Export Data

► Help

Status Charts

MID Region

Category	Count
ATM	48
CNS	21
SAR	12
AOP	25
MET	3
AIM	45

Region

MID ▼ Clear filters

AFI

APAC

CAR

EUR

MID

NAT

NAM

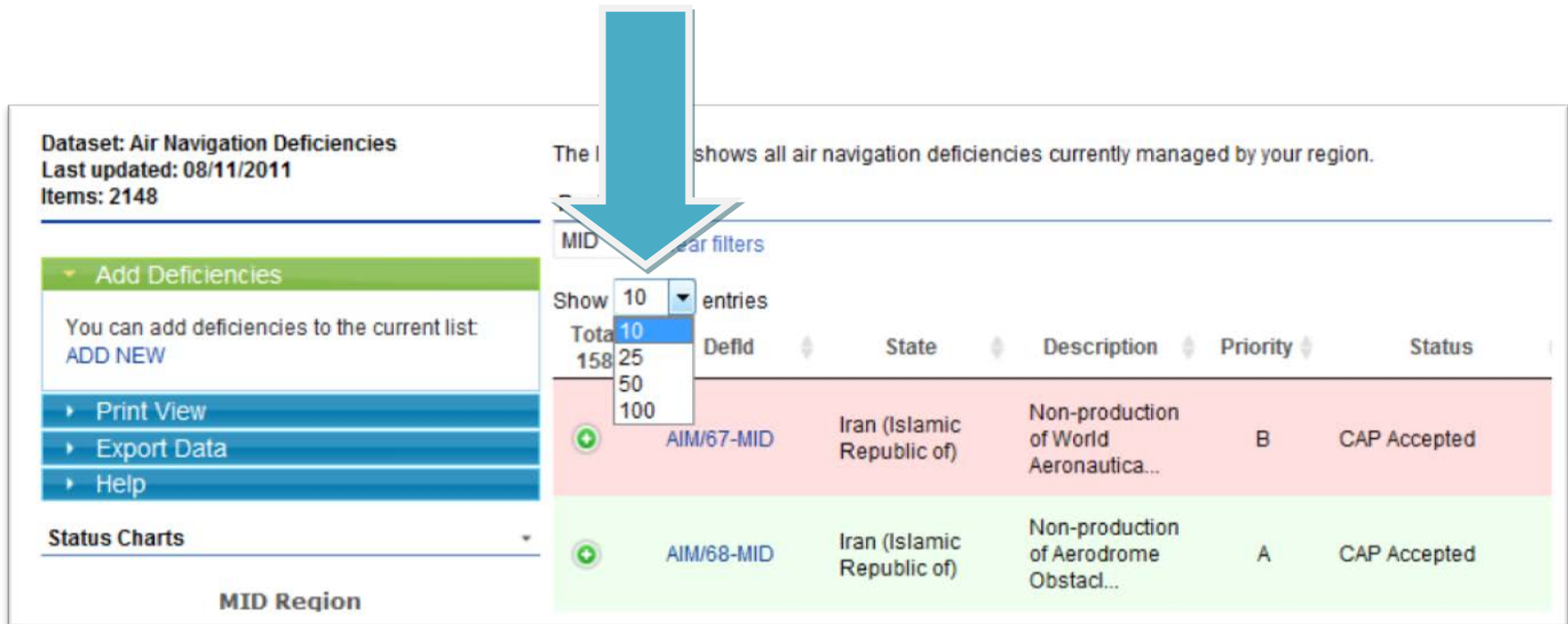
SAM

▼ entries

Defid	State	Description	Priority	Status
AIM/67-MID	Iran (Islamic Republic of)	Non-production of World Aeronautica...	B	CAP Accepted
AIM/68-MID	Iran (Islamic Republic of)	Non-production of Aerodrome Obstacl...	A	CAP Accepted
AIM/69-MID	Iran (Islamic Republic of)	Lack of AIS automation	A	CAP Accepted
AIM/70-MID	Iraq	Lack of implementation of AIRAC Sys...	U	CAP Accepted
AIM/71-MID	Iraq	Non-production of World Aeronautica...	B	CAP Accepted

ANDEF- List Deficiencies

To increase the number of entries listed you can select the number of entries you prefer from the drop down menu (Options available are: 10, 25, 50 or 100 deficiencies displayed per page).



The screenshot shows the ANDEF- List Deficiencies interface. A large blue arrow points to the 'Show' dropdown menu, which is currently set to '10' and has a list of options (10, 25, 50, 100) displayed. The interface includes a sidebar with navigation links and a main table of deficiencies.

Dataset: Air Navigation Deficiencies
Last updated: 08/11/2011
Items: 2148

Add Deficiencies
You can add deficiencies to the current list:
[ADD NEW](#)

[Print View](#)
[Export Data](#)
[Help](#)

Status Charts

MID Region

The list shows all air navigation deficiencies currently managed by your region.








Table Columns: MID, Defid, State, Description, Priority, Status

Table Data:

MID	Defid	State	Description	Priority	Status
+	AIM/67-MID	Iran (Islamic Republic of)	Non-production of World Aeronautica...	B	CAP Accepted
+	AIM/68-MID	Iran (Islamic Republic of)	Non-production of Aerodrome Obstacl...	A	CAP Accepted

ANDEF- Scroll Deficiencies

To scroll for more deficiencies listing press the arrow at the bottom of the page to go right and left

	AOP/116-MID	Iran (Islamic Republic of)	Implementation of Aerodrome Operations Safety Management	U	CAP Accepted	Need to establish a State safety programme and implement an SMS in order to achieve an acceptable level of safety in Aerodrome Operations	2011-12-31	Not Determined	On-A
<div>Search Refs Search States Search Descr   Search CAP Search TID  </div> <div>Showing 1 to 50 of 158 entries</div> <div> </div>									

The information bar at the bottom will display the number of deficiencies listed and total number of entries.

ANDEF- Expand view

By selecting a region you will have a list of all deficiencies reported in that region.

Click on the **Green button to display the full deficiency listing for that specific deficiency**



AOP/1279-SAM

Colombia

A deep V-shaped channel 80-100 m fr...

B

CAP Accepted

Deviate that channel
"PENDING ACTION PLAN"
CORRECTED (AEROCIVIL 2002-1272, 23 NOV 2004)

2009-02-28

Not Determined

Overdue



AOP/1279-SAM

Colombia

A deep V-shaped channel 80-100 m fr...

B

CAP Accepted

Deviate that channel
"PENDING ACTION PLAN"
CORRECTED (AEROCIVIL 2002-1272, 23 NOV 2004)

2009-02-28

Not Determined

Overdue

Reference:

Date reported: 1996-01-01

Reported by:

Deficiency type:

Description: A deep V-shaped channel 80-100 m from threshold RWY 30 potentially dangerous in event of RTO

Requirements: RWY end safety area (Annex 14, Vol. I, Chap. 3)

Location: Colombia, SANTAFE DE BOGOTA/Eldorado Aerodrome

Remarks: IFALPA CAR/SAM Meeting, 98REG049, Buenos Aires, 9/10 Dic. 1997, ICAO Mission to Bogotá and Rio Negro from 16 to 19 July 2001 and ICAO Regular Mission (15/16 MAY 2003, Recommended Action AGA/17 of its respective Report) ASBE: StateLetter sent Results:No results Difficulties:

Rational:

Recommendation: Deviate that channel
"PENDING ACTION PLAN"
CORRECTED (AEROCIVIL 2002-1272, 23 NOV 2004)


Corrective action: Deviate that channel
"PENDING ACTION PLAN"
CORRECTED (AEROCIVIL 2002-1272, 23 NOV 2004)

Exeacting body: COLOMBIA/AEROCIVIL

Target implementation date: 2009-02-28

ANDEF- Edit/ Update Deficiency

To update a deficiency click on the deficiency ID



Region									
MID									
Show 10									
Total 158									
		State	Description	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking
		Iran (Islamic Republic of)	Non-production of World Aeronautica...	B	CAP Accepted	Need to produce the assigned sheets...	2011-06-30	Not Determined	Overdue
		Iran (Islamic Republic of)	Non-production of Aerodrome Obstacl...	A	CAP Accepted	Need to produce Aerodrome Obstacl...	2011-12-31	Not Determined	On-time

A new window will open to perform all required updates

Attach File Delete Item Spelling...	
Region	MID ▾ ICAO Region in charge of this deficiency
State	Iran (Islamic Republic of) ▾ The State responsible for the corrective action plan
Area	AIM ▾ The technical area the deficiency is related to
Description	<div> <div> Non-production of World Aeronautical Chart – ICAO 1:1 000 000 </div> </div> <div>Describe clearly what the deficiency is about.</div>
Reported By	<input type="text"/> The organisation or person who reported the deficiency
Def Type	<input type="text"/> Subject which best categorizes the type of deficiency
Requirements	<div> <div> ANNEX 4: Para. 16.2 </div> </div> <div>Reference to ANP paragraphs or ICAO SARPS</div>

Recommendation	<div> <div> Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000 </div> </div> <div>ICAO recommendation to the State when considering corrective actions</div>
Priority	B ▾ Priority attached to the resolution of the deficiency (U=Urgent, A=Top priority, B)
Status	CAP Accepted ▾
Corrective action	<div> <div> Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000 </div> </div>
Executing Body	Iran+neighboring states
Target Implementation Date	30/06/2011
CAP Status	Not Determined ▾
Reference	<input type="text"/>
State Code	IRN
<div>OK</div> <div>Cancel</div>	

ANDEF- Clear Filters

To clear all previously applied filters just press on the “clear filters” text and it will reset all your filters back to initial view.



Add Deficiencies

You can add deficiencies to the current list:
[ADD NEW](#)

[Print View](#)

[Export Data](#)

[Help](#)

Status Charts

MID Region

MID

▼ Clear filters

Show

10

▼ entries

Total

158



DefId	State	Description	Priority	Status
AIM/67-MID	Iran (Islamic Republic of)	Non-production of World Aeronautica...	B	CAP Accepted
AIM/68-MID	Iran (Islamic Republic of)	Non-production of Aerodrome Obstacl...	A	CAP Accepted

ANDEF- Search Feature

Use the **Search box** to search by any keyword in the deficiencies list

For example to search for all deficiencies in APAC region that has the keyword WGS-84

Select APAC from the drop down region list, and type in the search field the keyword WGS-84

Region										
APAC	Clear filters									
Show	10	entries								
Total	9	Defid	State	Description	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking
	ATM/423-APAC	Solomon Islands	WGS-84 - Not implemented	A	No CAP Defined				Not Determined	Overdue
	ATM/431-APAC	Vanuatu	WGS-84 - Implemented at main airpor...	A	CAP Accepted	Implemented at main airports			Not Determined	Overdue
	ATM/434-APAC	Bhutan	WGS-84 - Not implemented	A	No CAP Defined				Not Determined	Overdue
	ATM/438-APAC	China	WGS-84 - Not implemented * implemen...	A	CAP Accepted	china advised APANPIRG/19 that WGS ...	2010-12-01		Not Determined	Overdue
	ATM/447-APAC	Democratic People's Republic of Korea	WGS-84 - Not implemented	A	CAP Accepted	DPR Korea advised ATM/AIS/SAR/SG/18...			Completed	Completed
	ATM/449-APAC	Kiribati	WGS-84 - Not implemented	A	No CAP Defined				Not Determined	Overdue
	ATM/460-APAC	Nauru	WGS-84 - Not implemented	A	No CAP Defined				Not Determined	Overdue
	ATM/470-APAC	Solomon Islands	WGS-84 - Not implemented	A	No CAP Defined				Not Determined	Overdue
	ATM/475-APAC	Vanuatu	WGS-84 - Implemented at main airpor...	A	CAP Accepted	Implemented at main airports			Not Determined	Overdue
<input type="text" value="Search Refs"/> <input type="text" value="Search States"/> <input type="text" value="Search Descr"/> <input type="text"/> <input type="text"/> <input type="text" value="Search CAP"/> <input type="text" value="Search TID"/> <input type="text"/> <input type="text"/>										
Showing 1 to 9 of 9 entries (filtered from 80 total entries)										

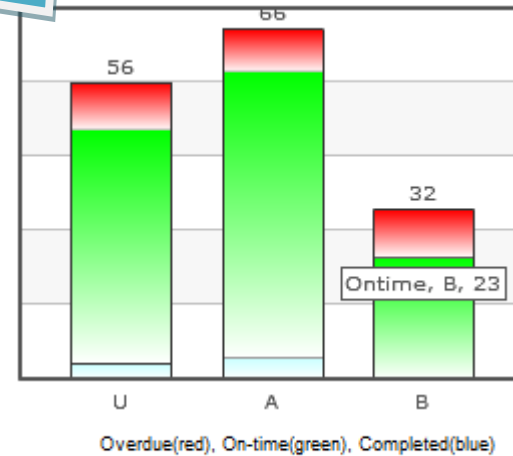
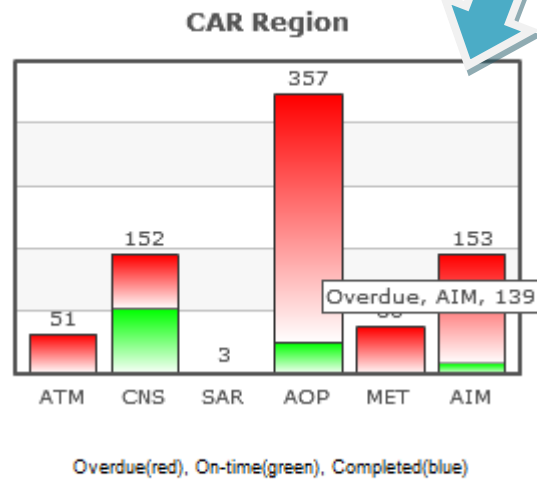


The information line at the bottom will indicate the total number of deficiencies that matched your search criteria.

ANDEF- Filtering data: Using Graphs

Click on the graph to filter data and display: completed deficiencies, on-time or overdue.

Data on the graphs is sorted by Area or by Priority.



ANDEF- Filtering Data: Using Filtering box

	AIM/84-MID	Lebanon	Implementation of a Quality System	U	CAP Accepted	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	2010-12-31	Not Determined	Overdue
	AIM/85-MID	Lebanon	Implementation of geoid undulation referenced to the WGS-84 ellipsoid.	A	CAP Accepted	Need to implement geoid undulation referenced to the WGS-84 ellipsoid.	2011-12-31	Not Determined	On-time
	AIM/86-MID	Oman	Implementation of a Quality System	U	CAP Accepted	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	2012-12-31	Not Determined	On-time
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Showing 11 to 20 of 158 entries



Filtering text boxes type a value in the appropriate field or choose a value from the list to filter your data, accordingly

ANDEF- Sorting Data

You can sort deficiencies using any of the fields in the display bar just press the arrow up/ down to sort data ascending or descending.

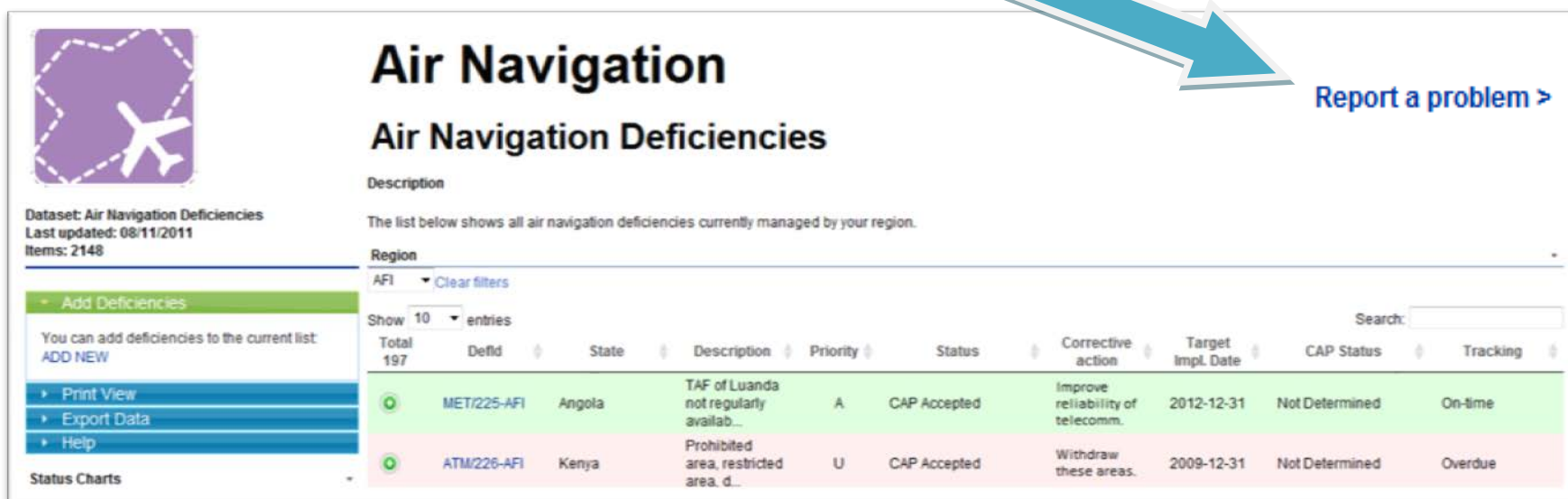
Show	50	entries	Search: <input type="text"/>							
Total 121	Defid	State	Description	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking	

Data will be automatically sorted accordingly

region										
APAC		Clear filters								
show 10 entries		Search: <input type="text"/>								
Total	Defid	State	Description	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking	
80										
	ATM/437-APAC	Bhutan	Annex 6 requirement not implemented...	U	No CAP Defined			Not Determined	Overdue	
	ATM/439-APAC	Bhutan	Annex 6 requirement not implemented...	U	No CAP Defined			Not Determined	Overdue	
	MET/481-APAC	Cambodia	Requirements for meteorological watch office (MWO) to be established at Phnom-Penh international airport have not been met.	U	CAP Accepted	Bilateral agreement Cambodia-China became effective on 1 June 2009. ATC project proposal submitted to SSCA Cambodia. In process of establishing MWO with target date of 2011.		Not Determined	Overdue	

ANDEF- Report a Problem

Facing any technical difficulty with the system, you need help with any system component or you have a general comment/ request just press the **“Report a Problem”** on the right hand side of the screen.



Air Navigation
Air Navigation Deficiencies

Dataset: Air Navigation Deficiencies
Last updated: 08/11/2011
Items: 2148

[Add Deficiencies](#)
You can add deficiencies to the current list:
[ADD NEW](#)

[Print View](#)
[Export Data](#)
[Help](#)

Status Charts

Description
The list below shows all air navigation deficiencies currently managed by your region.

Region
AFI [Clear filters](#)

Show 10 entries

Total	DefId	State	Description	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking
197	MET/225-AFI	Angola	TAF of Luanda not regularly availab...	A	CAP Accepted	Improve reliability of telecomm.	2012-12-31	Not Determined	On-time
	ATM/226-AFI	Kenya	Prohibited area, restricted area, d...	U	CAP Accepted	Withdraw these areas.	2009-12-31	Not Determined	Overdue

Search:

— END —



Agenda Item 5: Other Business

**ICAO SPANISH STANDARD PHRASEOLOGY IN ACCORDANCE
WITH PANS-ATM**

(Presented by the Secretariat)

SUMMARY	
Develop and implement a plan to promote and ensure that air traffic controllers and pilots apply to ICAO Spanish standard phraseology when using Spanish for radio telephony (R/T).	
References: <ul style="list-style-type: none"><i>Spanish version of Air Traffic Management, PANS-ATM (Doc 4444)</i>	
Strategic Objectives:	<i>This working paper is related to Strategic Objective A – Safety</i>

1. Introduction

1.1 The GREPECAS initiative focused on researching terms used in Spanish phraseology, which had ambiguity between Spanish speaking States and amending them with terms that could be understood by all. This effort, which lasted more than ten years, culminated with an amendment to Chapter 12, Phraseologies (Spanish only), of the PANS/ATM (Doc 4444), applicable since 2009.

1.2 During RASG-PA/04 Meeting a proposal was presented to develop and implement a plan to promote and ensure that air traffic controllers and pilots adhere to ICAO Spanish standard phraseology when using Spanish for radio telephony (R/T). The Meeting recalled the GREPECAS initiative to streamline ICAO phraseology.

1.3 Mexico presented an information paper that included a recently issued national mandatory circular, which was made available to RASG-PA for the purpose of assisting Spanish speaking States to establish their own Spanish phraseology handbook that conforms to the ICAO Standard phraseology in Spanish.

1.4 The Meeting noted the proposal to establish a project that would coordinate implementation efforts for the consistent use of ATC Spanish phraseology and agreed that it should at least consider the following:

- a) review the mandatory circular offered by Mexico to ensure that it meets the requirements of ICAO Doc 4444 so that it could be used as a model Spanish phraseology handbook promoted by RASG-PA,
- b) quick reference cards for air traffic controllers and pilots containing the most common terms for each phase of flight,
- c) seminars/forums to disseminate the project initiatives,
- d) training for air traffic controllers and pilots on the importance of using the standard phraseology as a means to mitigate aviation safety risks

1.5 Therefore, the RASG-PA/04 Meeting formulated the following decision:

DECISION RASG-PA/4/4 STANDARD SPANISH PHRASEOLOGY

That the RASG-PA ESC create a project to promote and develop an implementation strategy for the consistent use of ATC standard Spanish phraseology in accordance with the ICAO PANS-ATM (Doc 4444) by 15 December 2011.

2. ICAO Spanish Standard Phraseology Project Status

2.1 As part of the project to promote the standardization of Spanish ATC phraseology, Chile had agreed to review the Mexico DGAC Spanish ATC phraseology guide they had recently developed, so that it could be used as a template for other States to develop similar guidance.

2.2 During the February 2012 RASG-PA ESC teleconference, ALTA provided some preliminary results of the surveys disseminated which showed that a majority of the respondents agreeing that there is a lack of standardization within the Spanish speaking States of the Pan American region. The final results of the pilot survey in the attached **Appendix (available only in Spanish)**

2.3 The RASG-PA ESC teleconference also proposed expanding the phraseology survey to Air Traffic Controllers in the region to expand the responses and determine the extent of the problem involving standardized ATC Spanish phraseology.

3. Suggested Action

3.1 The Meeting is invited to:

- a) note the information on this working paper;
- b) promote the surveys regarding the existing problems involving standard use of ATC Spanish phraseology throughout the CAR/SAM Regions;

- c) promote the use of standard ATC Spanish phraseology in accordance with the ICAO PANS-ATM (Doc 4444); and
- d) promote future training for air traffic controllers and pilots on the importance of using the standard phraseology as a means to mitigate aviation safety risks.

- - - - -

APÉNDICE / APPENDIX

(Disponible en español solamente)
(Only available in Spanish)

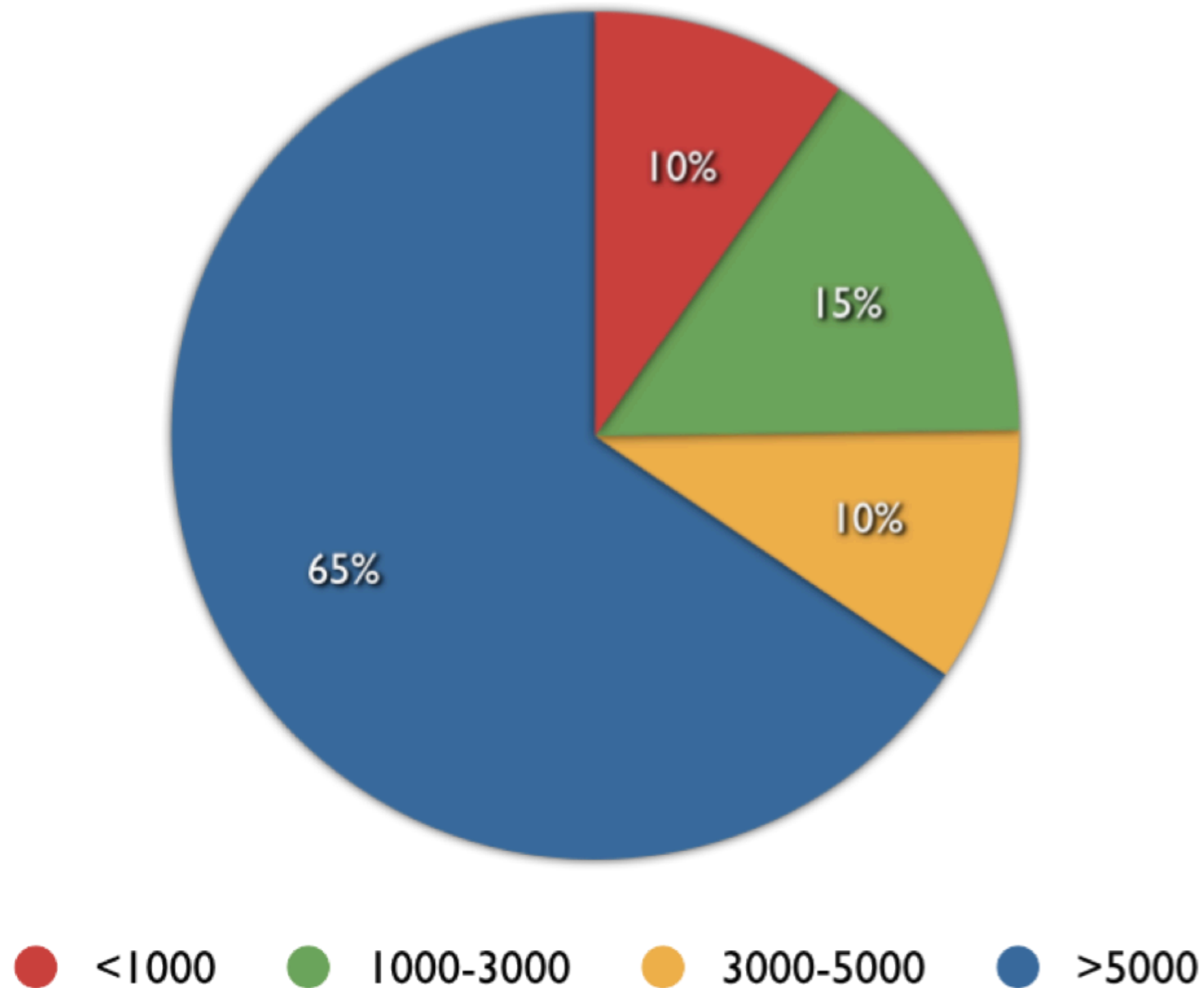
Encuesta Frasesología

Resumen a fecha: Febrero 28 de 2012

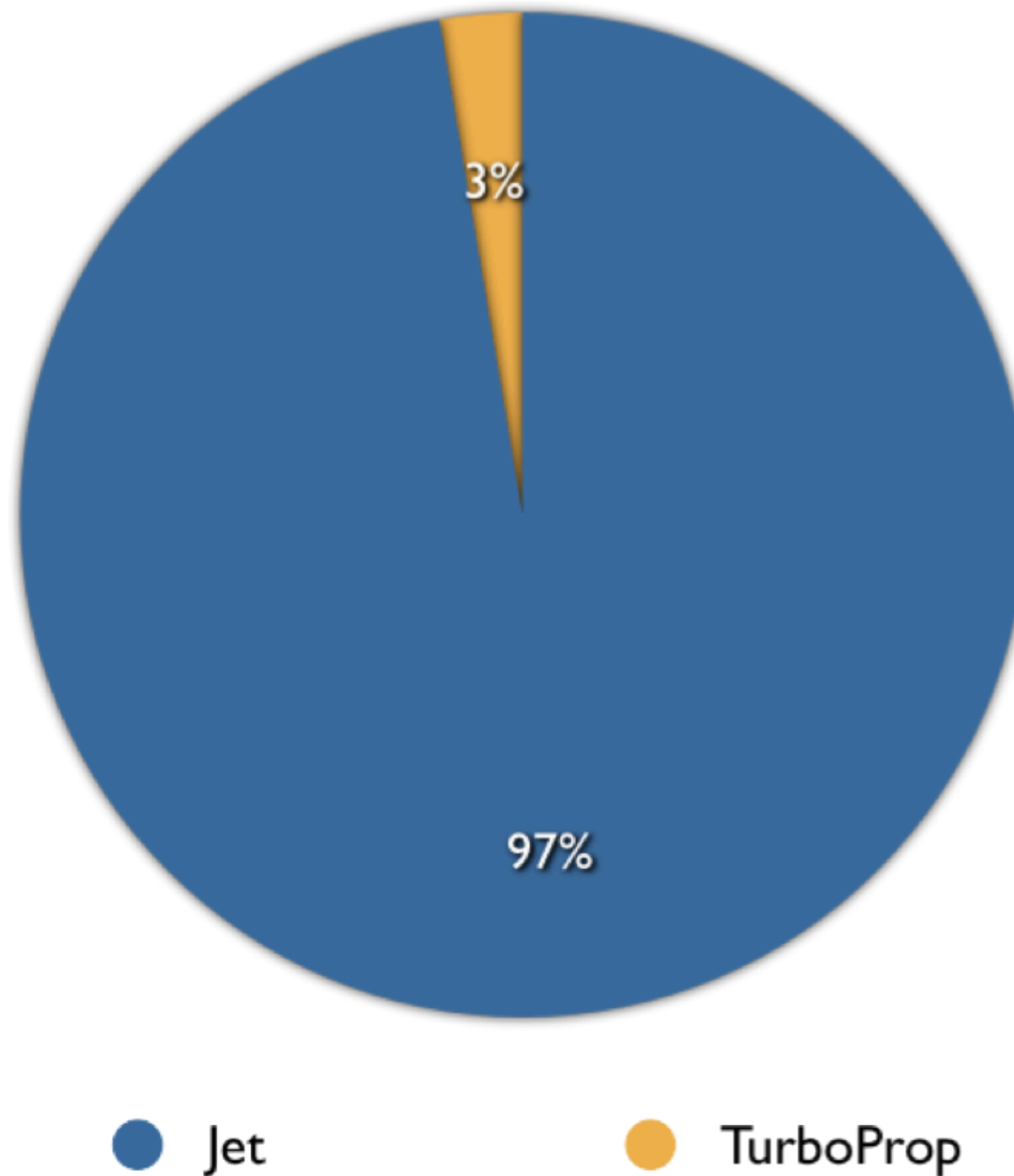
Resumen

- 113 respuestas hasta el momento
- Se están recibiendo respuestas desde el 6 de Febrero, para un promedio de 5 respuestas diarias
- Encuesta realizada en mas de 6 aerolineas
- Se esta trabajando con COCESNA en version controladores

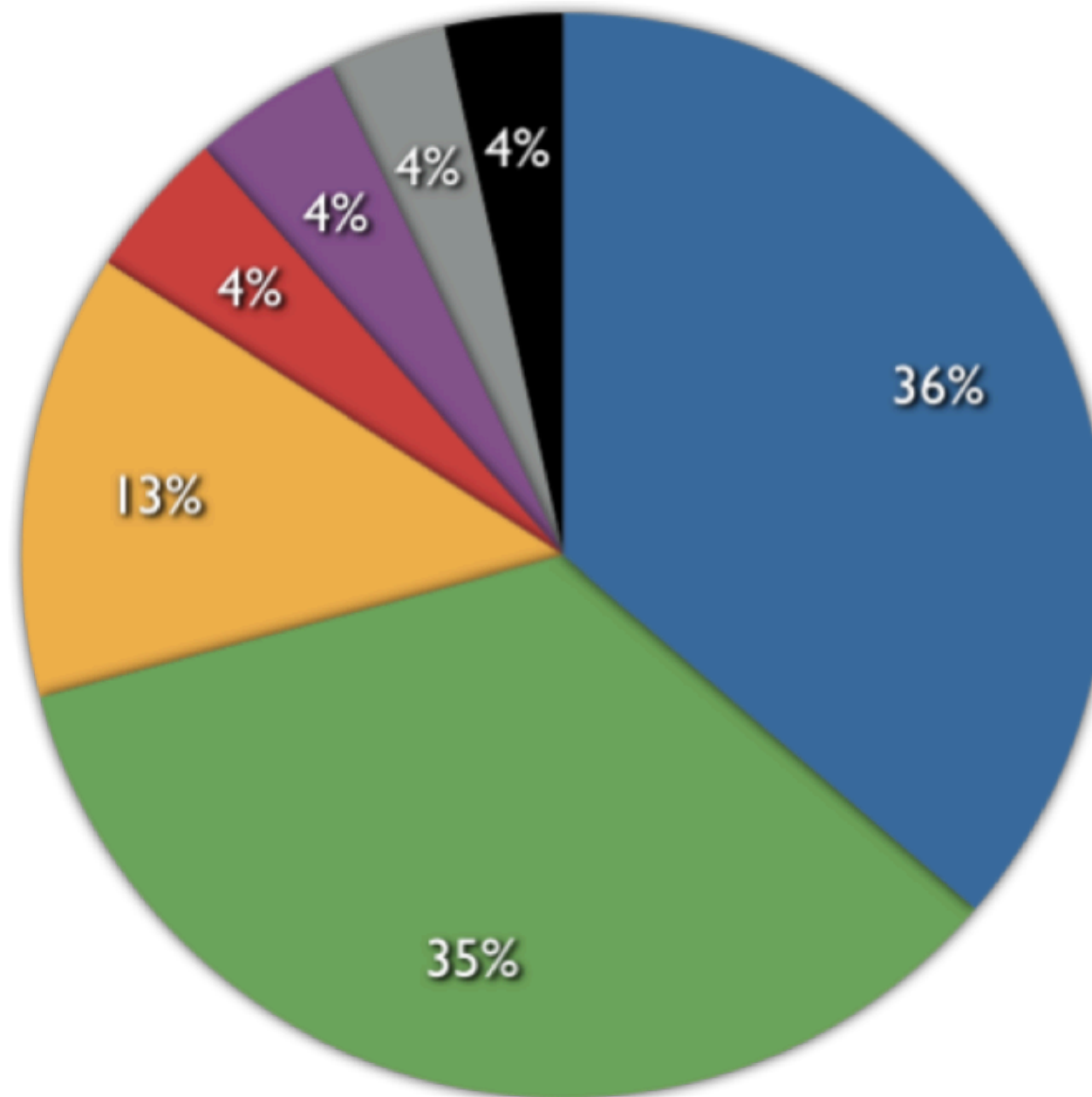
Cuántas horas de vuelo tiene acumuladas?



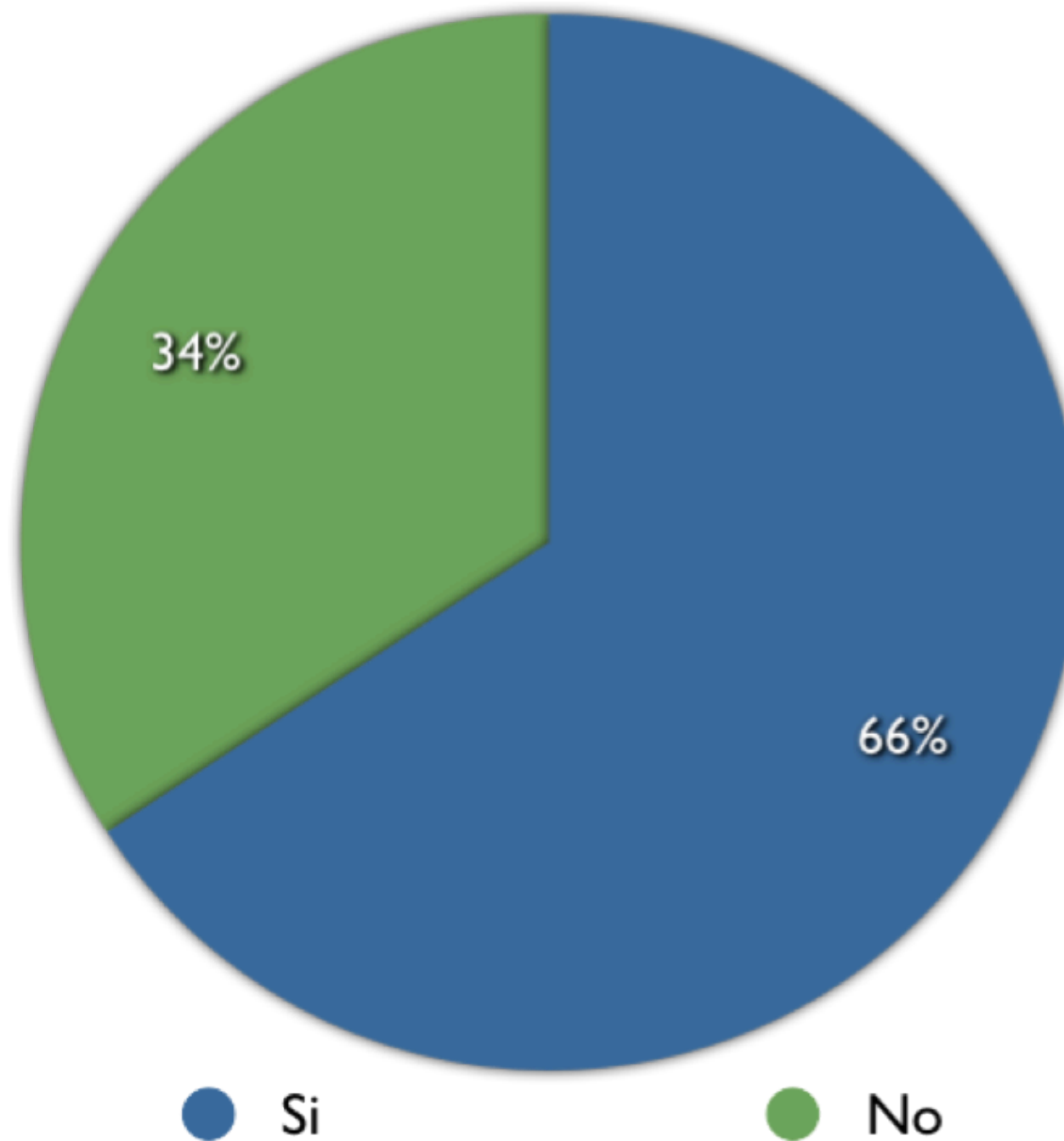
Que tipo de Aeronave Opera?



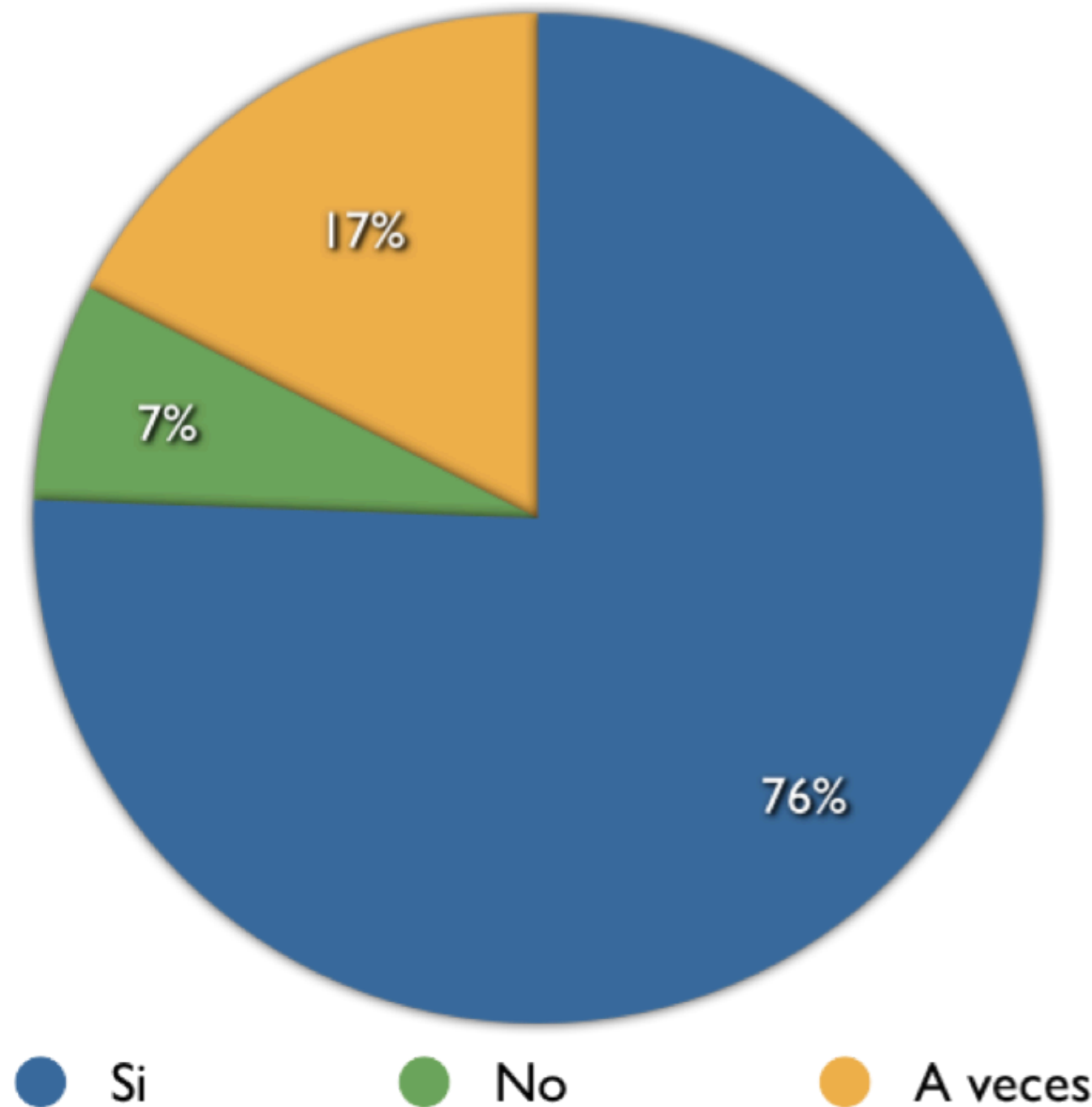
En que país esta basada su operación?



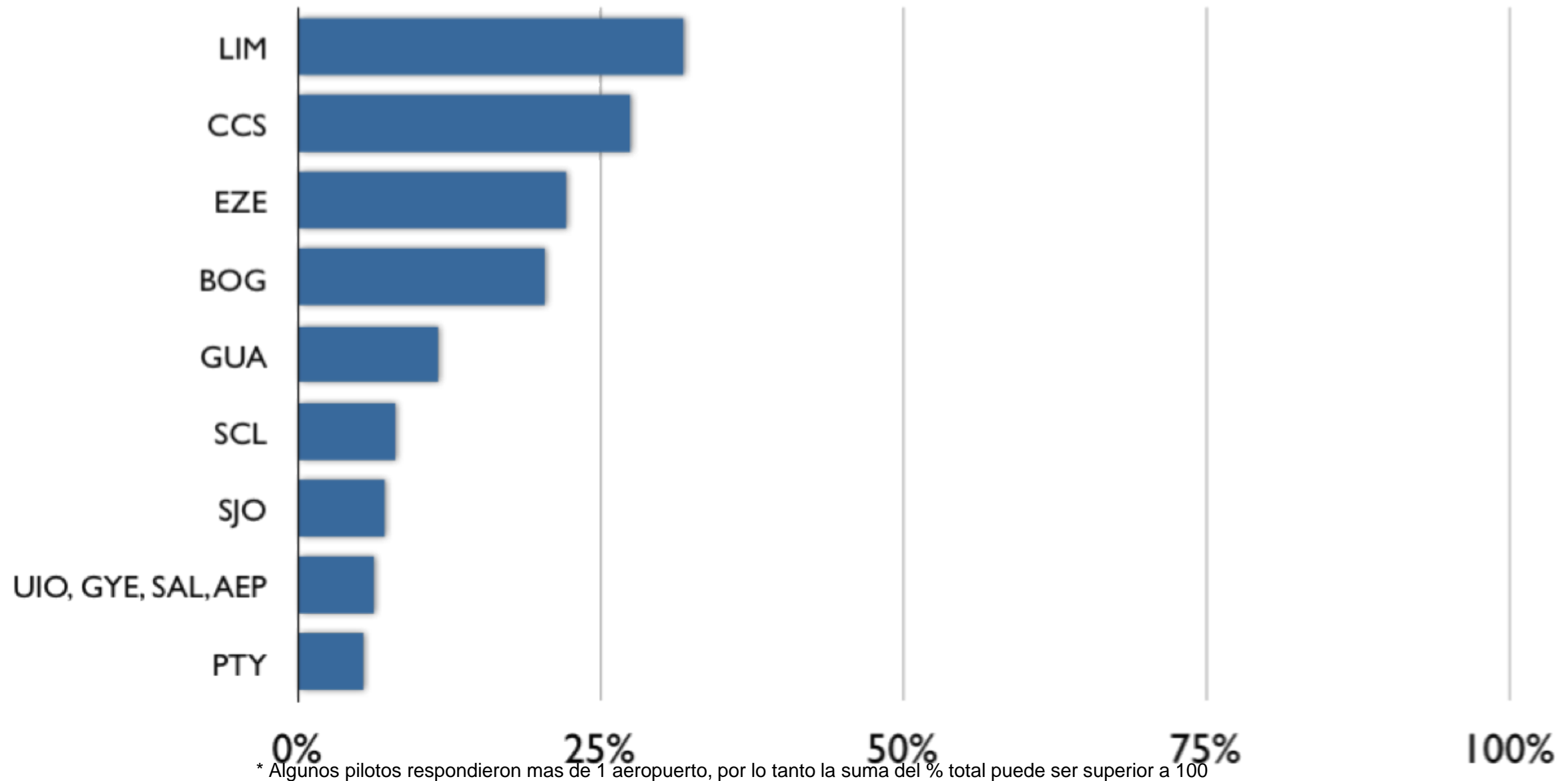
Está usted familiarizado con el Doc. 4444 de la OACI que identifica la fraseología en español correcta a ser usada en la región?



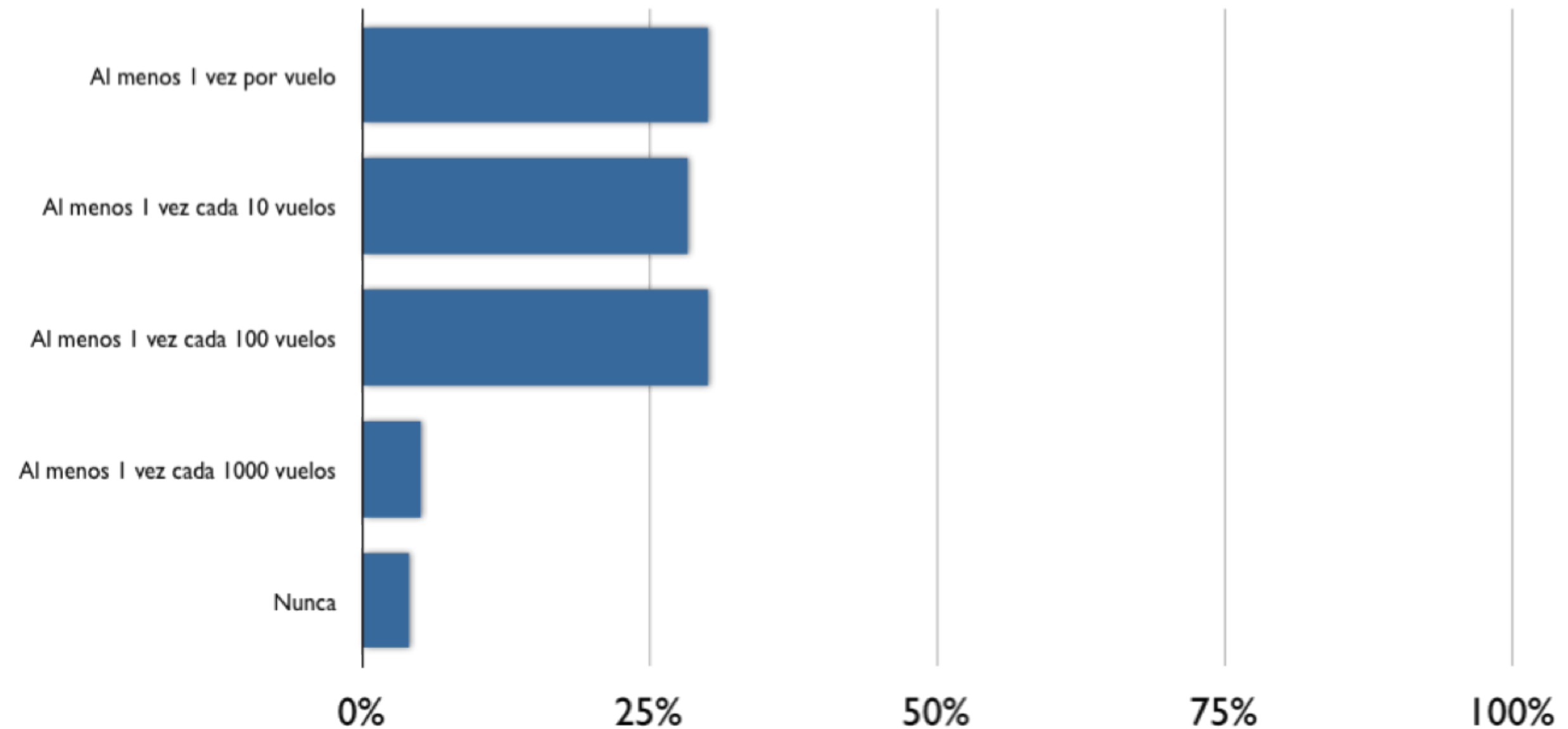
En caso de ser afirmativa la respuesta anterior, aplica usted la fraseología indicada en el Doc. 4444 de la OACI?



Con base a su experiencia, en qué aeropuerto/s y/o en vuelo, se ha podido identificar la mayor cantidad de situaciones de uso indebido de fraseología estándar en español. (ejemplo: EZE, BOG)



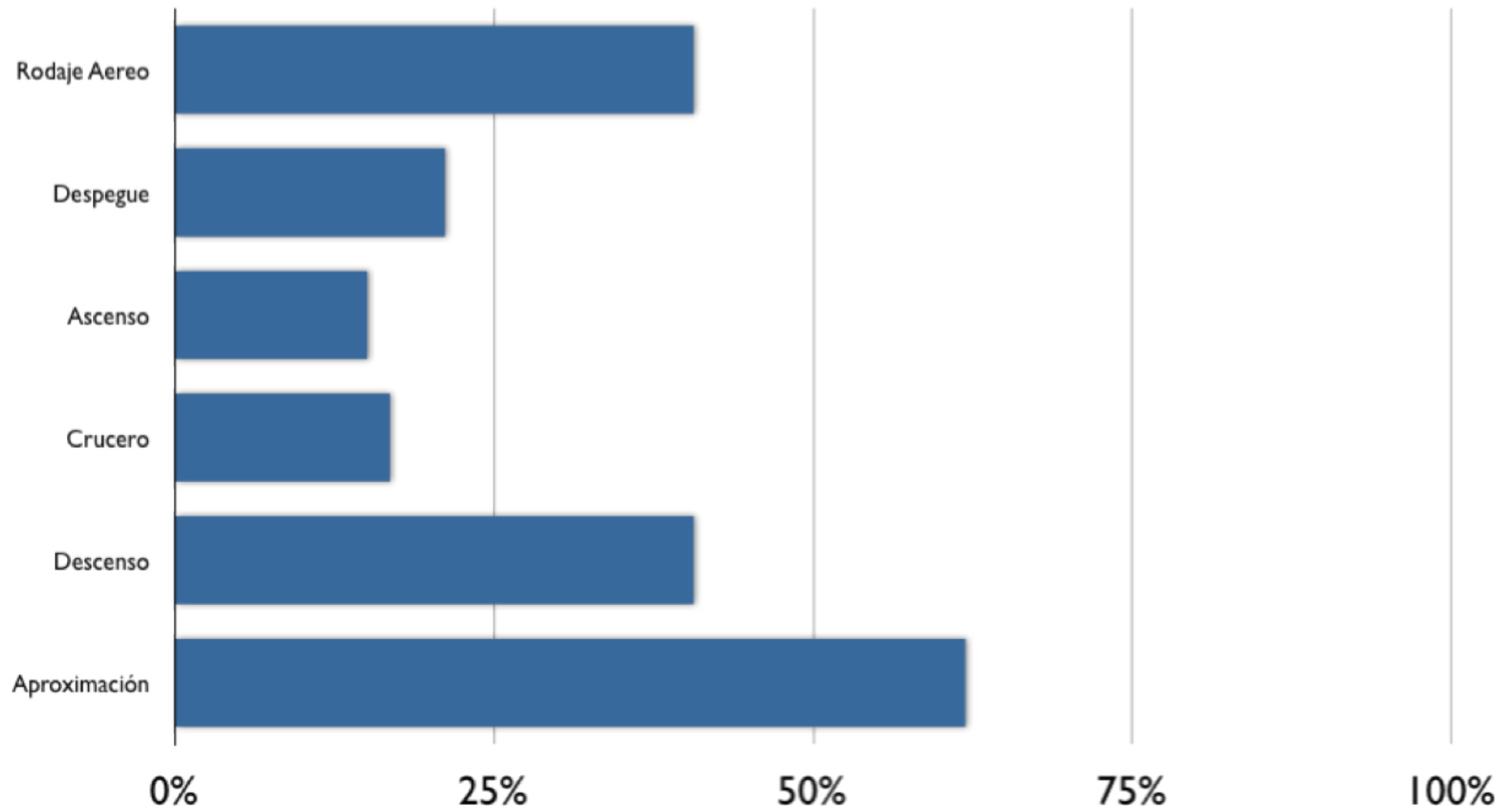
En base a su experiencia, con qué frecuencia se presentan situaciones donde ha tenido problemas por el uso incorrecto de fraseología estándar en español?



En base a la pregunta anterior, qué tipo de palabras y/o frases considera usted que son mayormente confundidas o cambiadas al momento de recibir instrucciones. (Por favor citar la mayor cantidad de ejemplos que conozca)

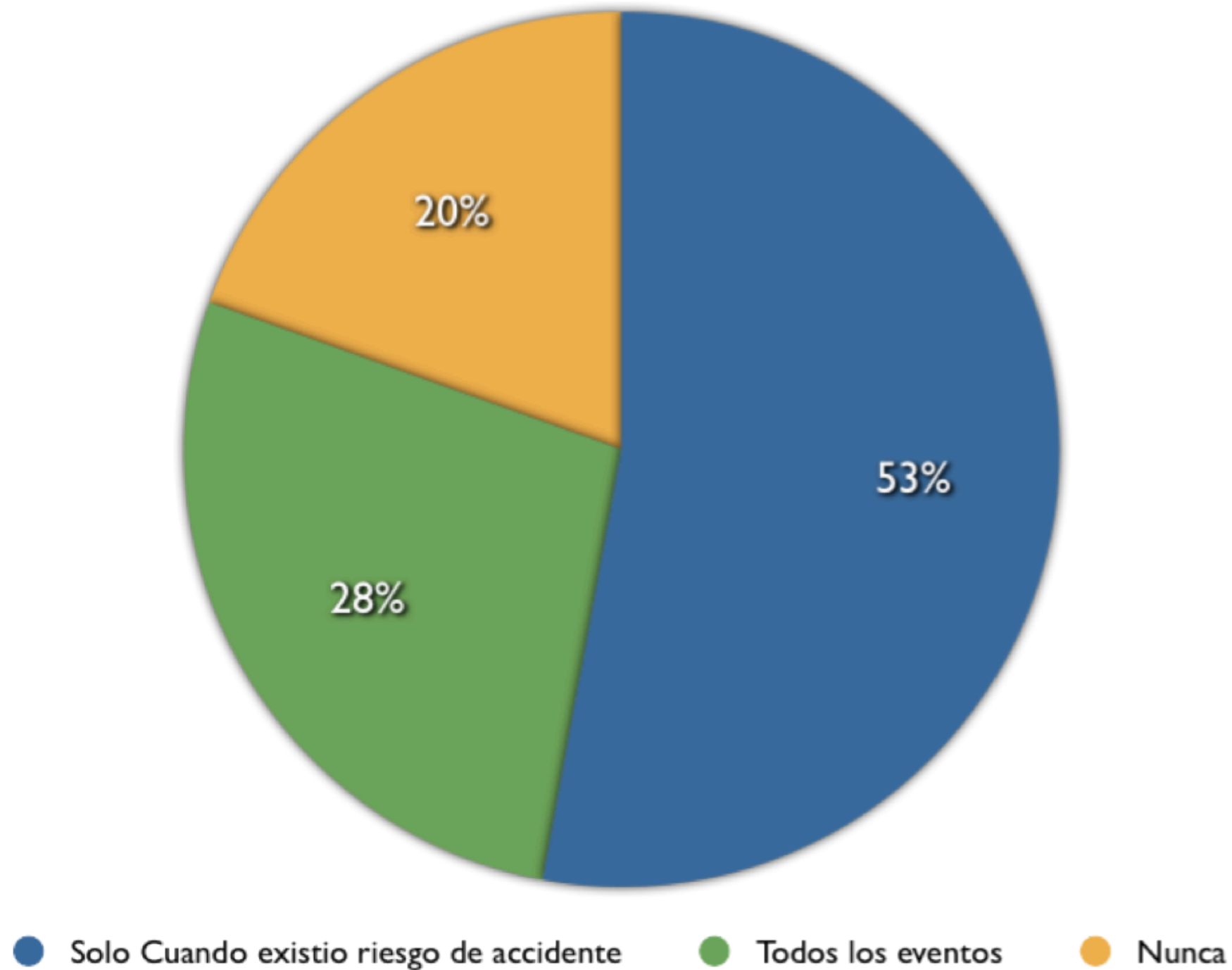
- “hacer bolitas” sobre VOR
- proceda a (vuele directo a)
- rodar a punto de espera (rodar a pista y mantener)
- Errores en código alfabético de la OACI (i.e. No
- control superficie (control terrestre)
- uso de localismos y dialectos (i.e. copiado, eeerrreeee)
- Si (afirmativo), No (negativo)
- a la cuadra (90 grados)
- comunicación no asertiva
- Conversaciones de temas no aeronáuticos entre pilotos y controladores (especialmente en CCS)
- “mantengase orbitando” (CCS)
- “holdee” en el radial XX
- rumbo a (proa a)
- “ida al aire” LIM
- viembre=Nectar, Charlie=Coca)
- ensayo de remolque” LIM

Con base a su experiencia en este tipo de situaciones, en qué fase piensa usted que existe la mayor cantidad de problemas al momento de aplicar la fraseología inadecuada?

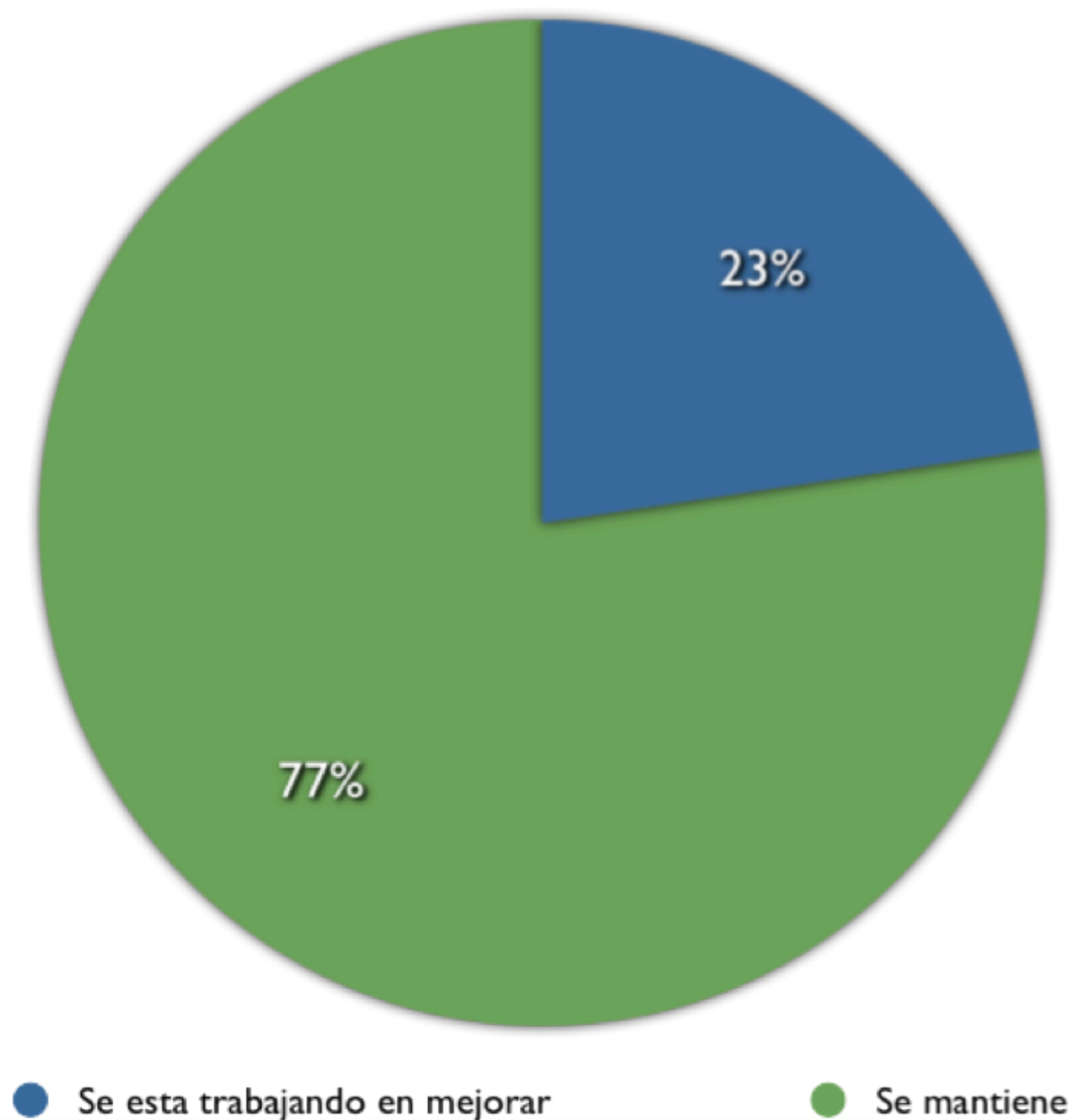


* Algunos pilotos seleccionaron mas de 1 opción, por lo tanto la suma del % total puede ser superior a 100

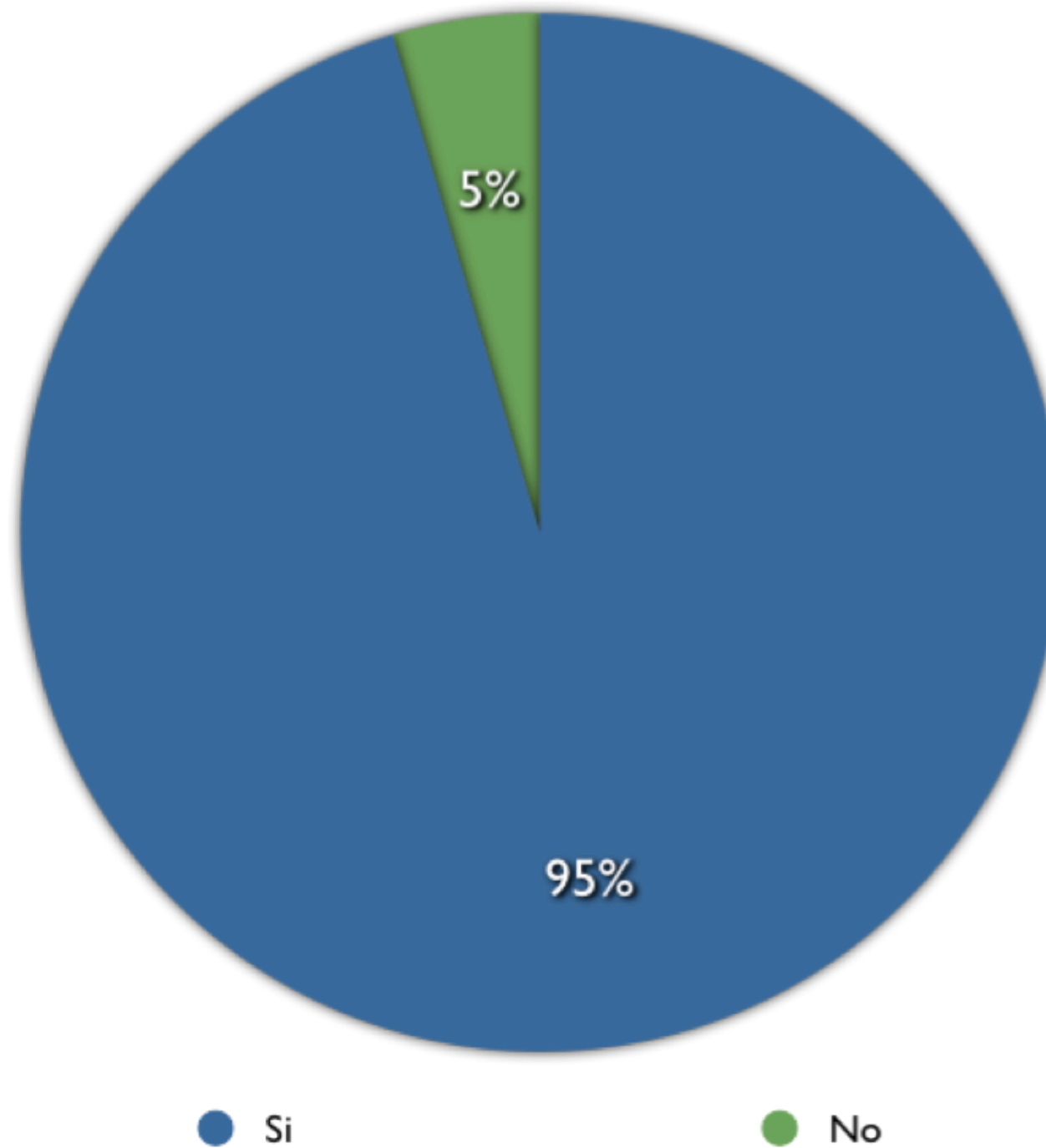
Cuándo usted reporta situaciones donde se evidenciaron problemas por mal uso de fraseología estándar en español?



En base a la pregunta anterior, en los aeropuertos y/o en vuelo donde ha evidenciado este problema, considera que este problema:



Considera usted que el uso de fraseología no estándar congestiona las frecuencias y afecta la seguridad?



APÉNDICE / APPENDIX

(Disponible en español solamente)
(Only available in Spanish)

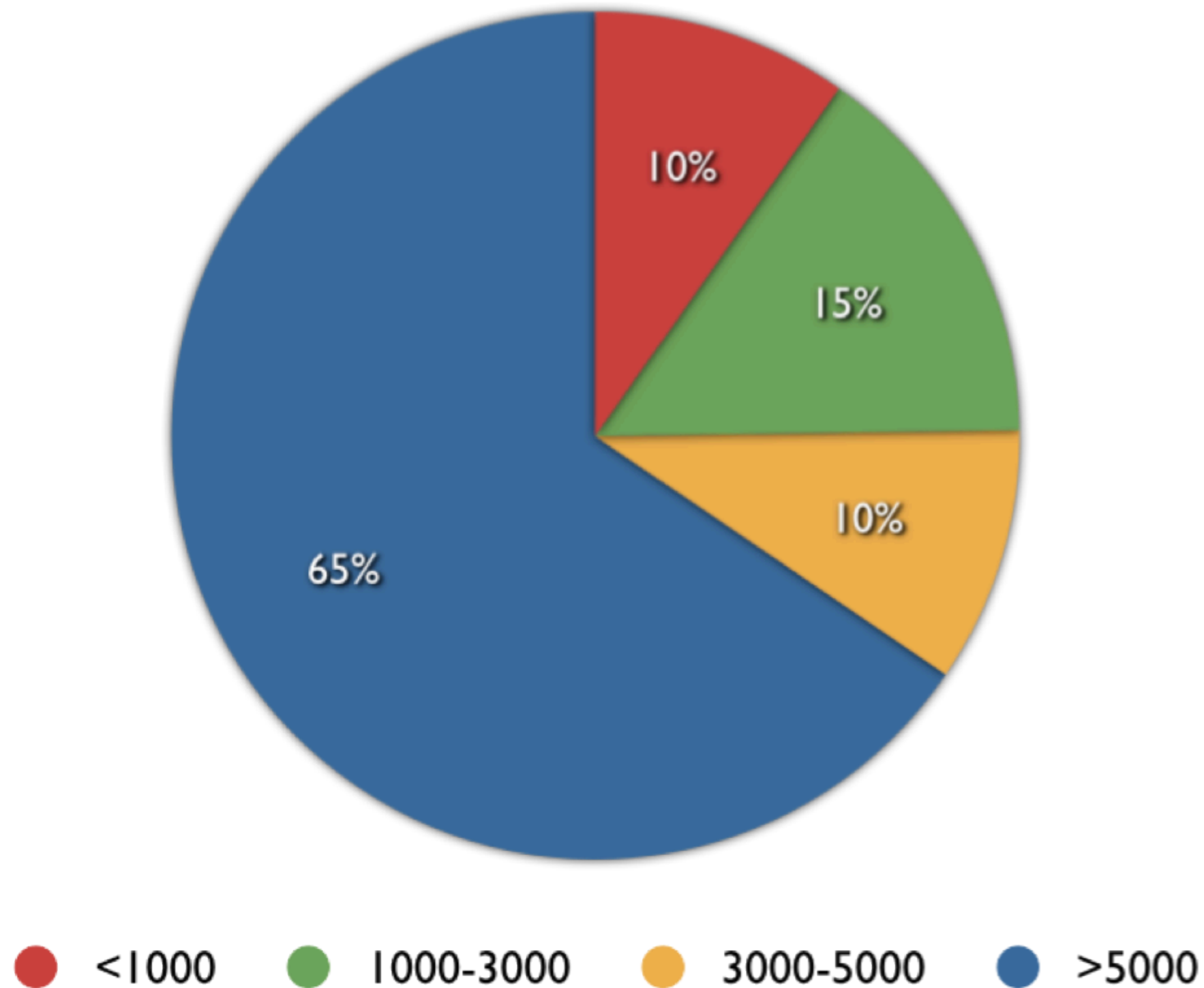
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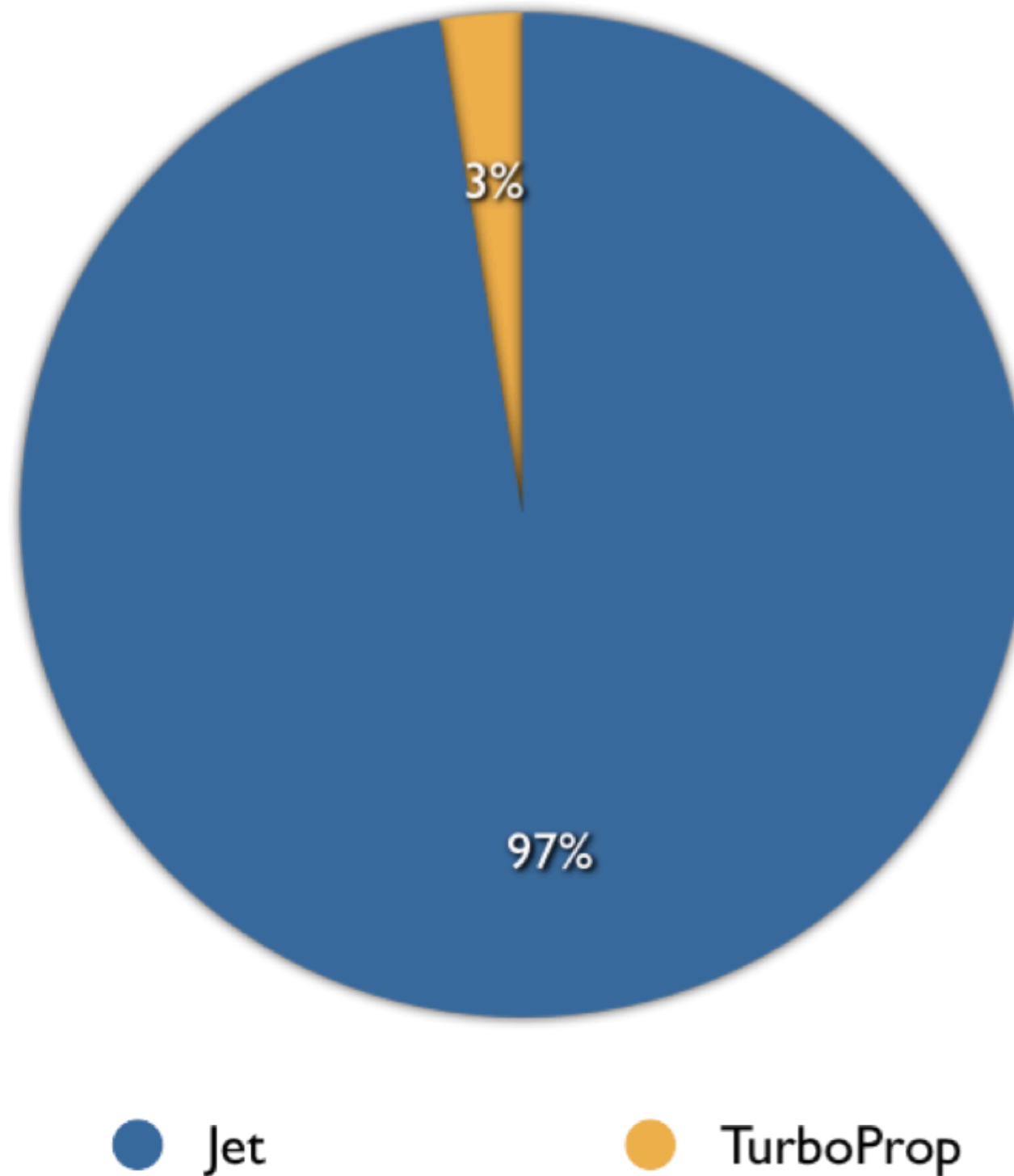
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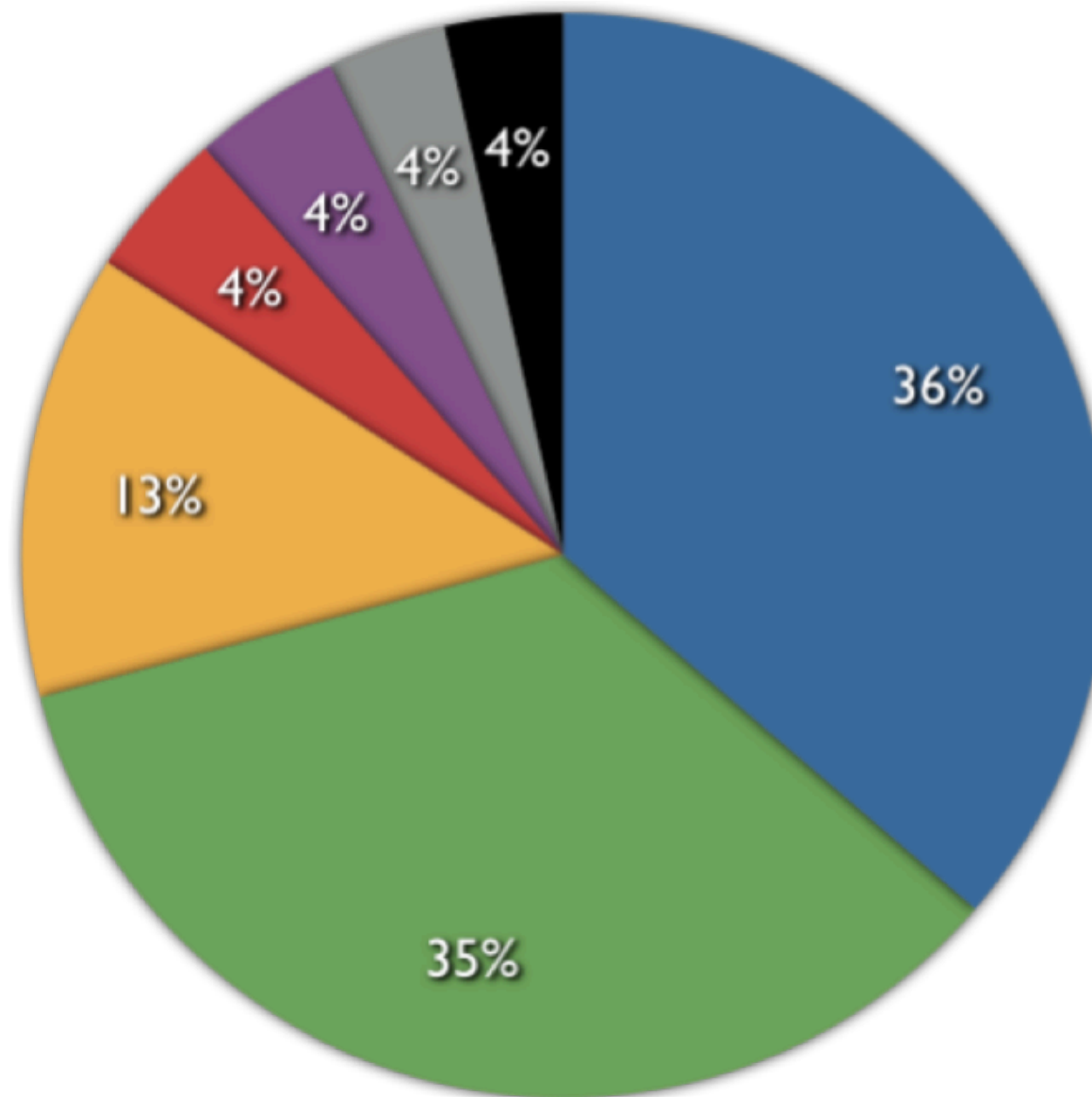
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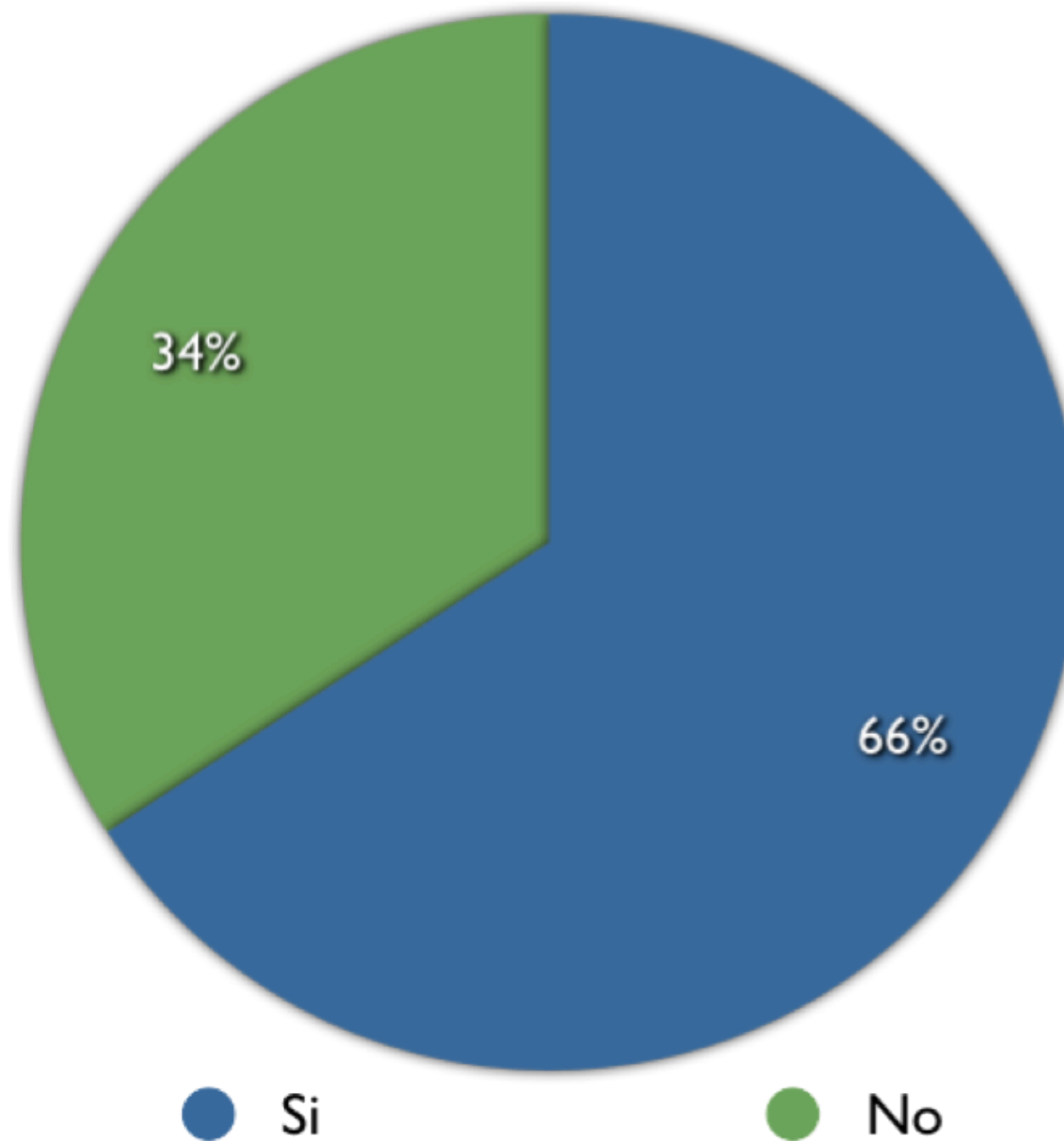
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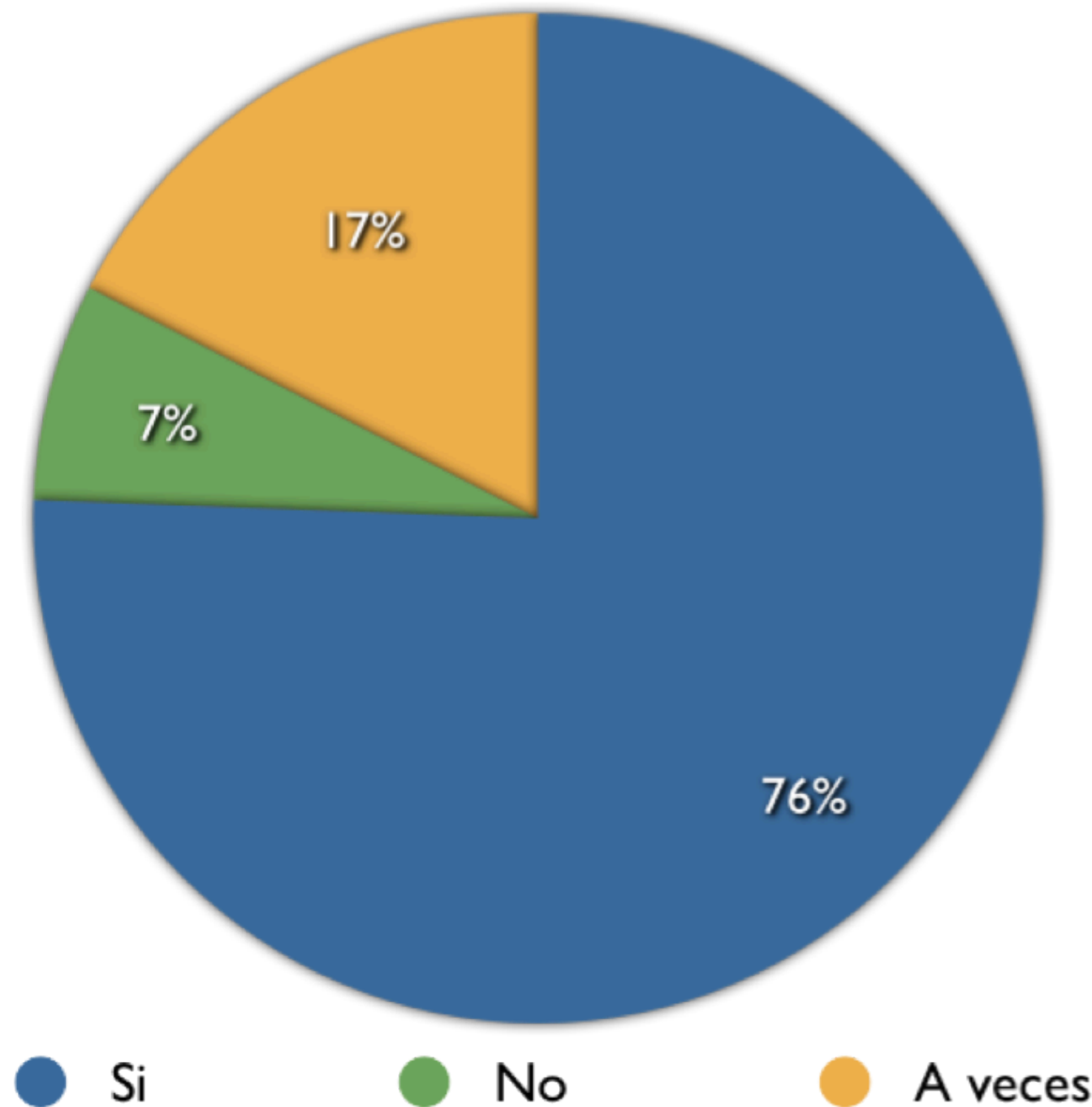
En que país esta basada su operación?



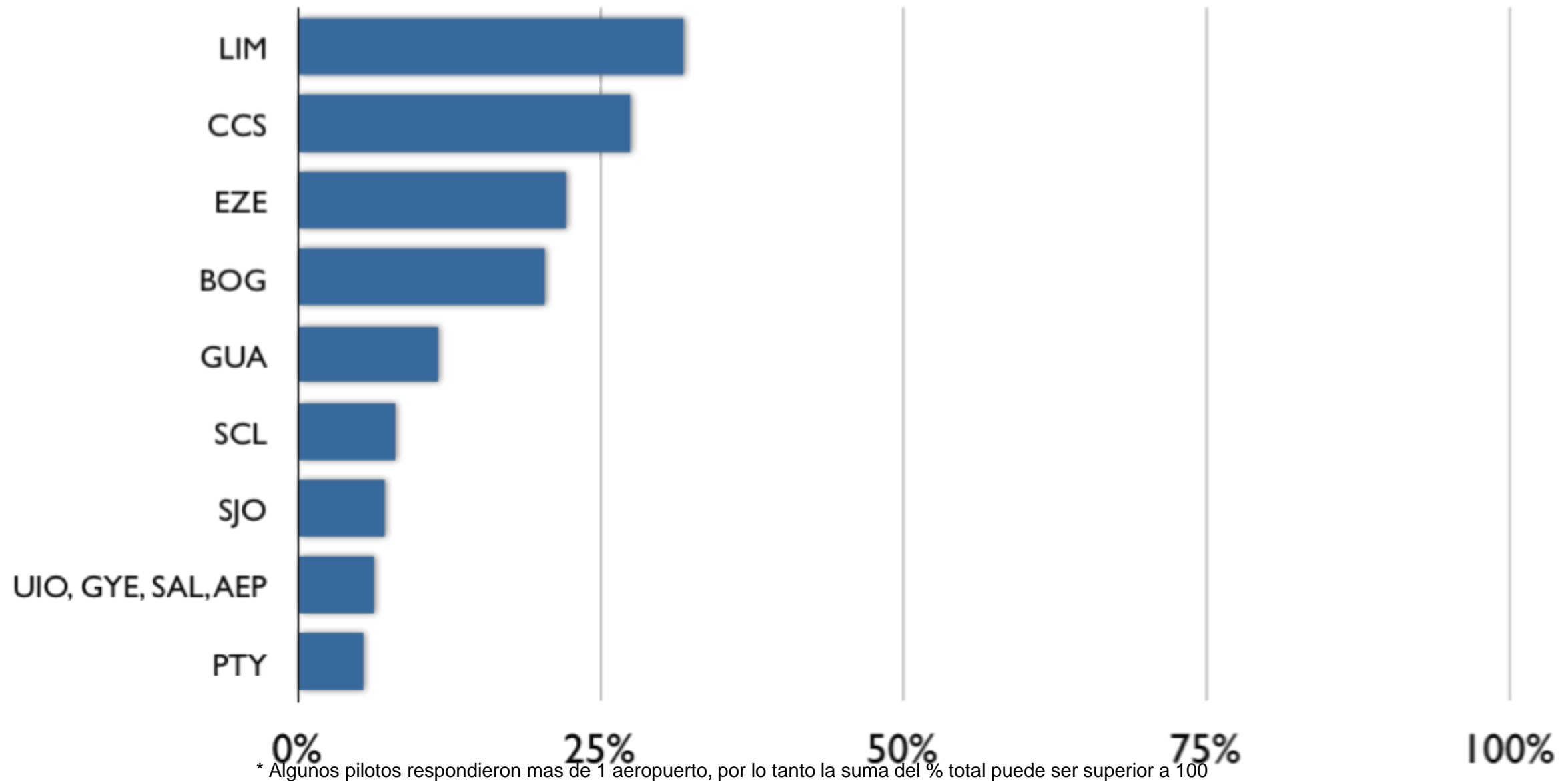
Está usted familiarizado con el Doc. 4444 de la OACI que identifica la fraseología en español correcta a ser usada en la región?



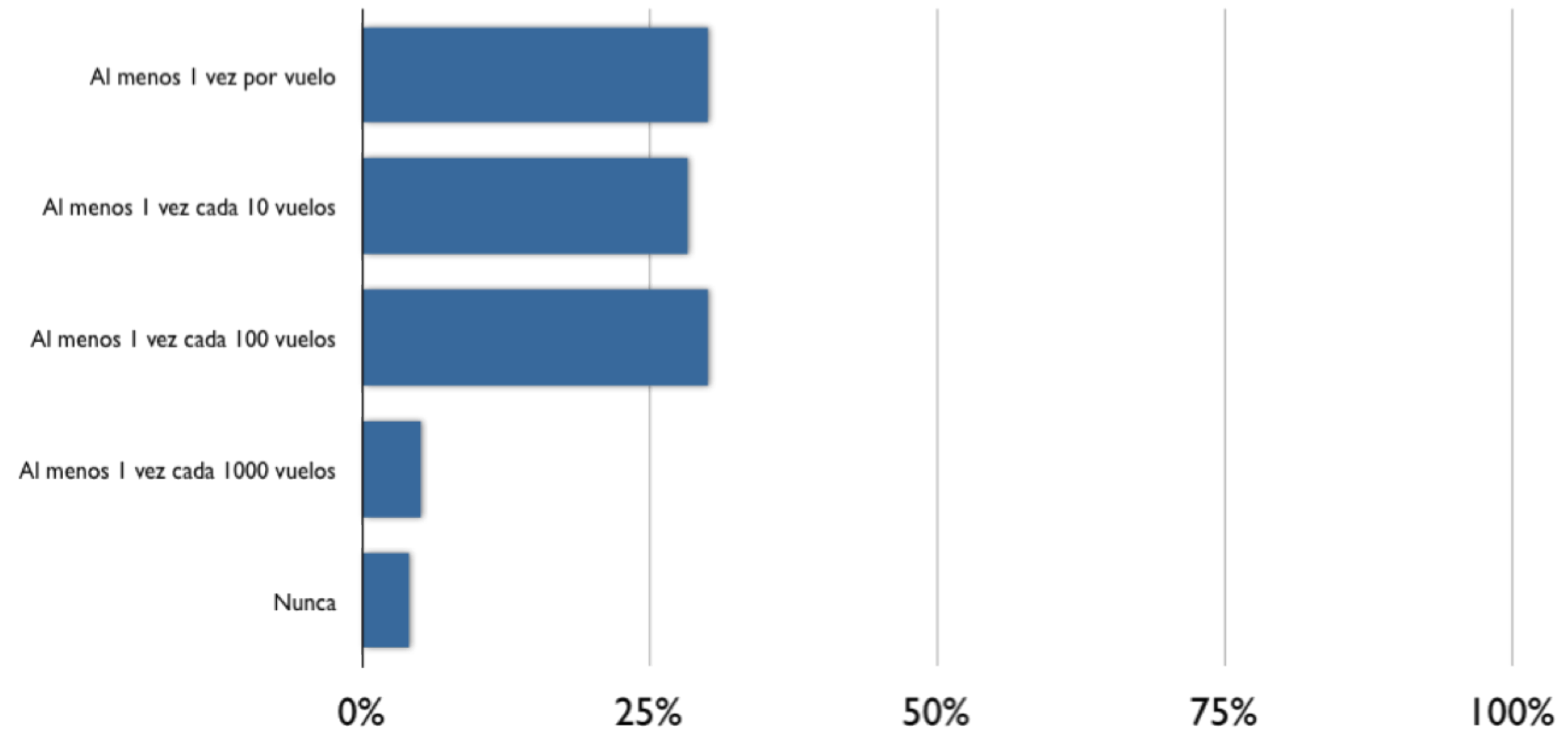
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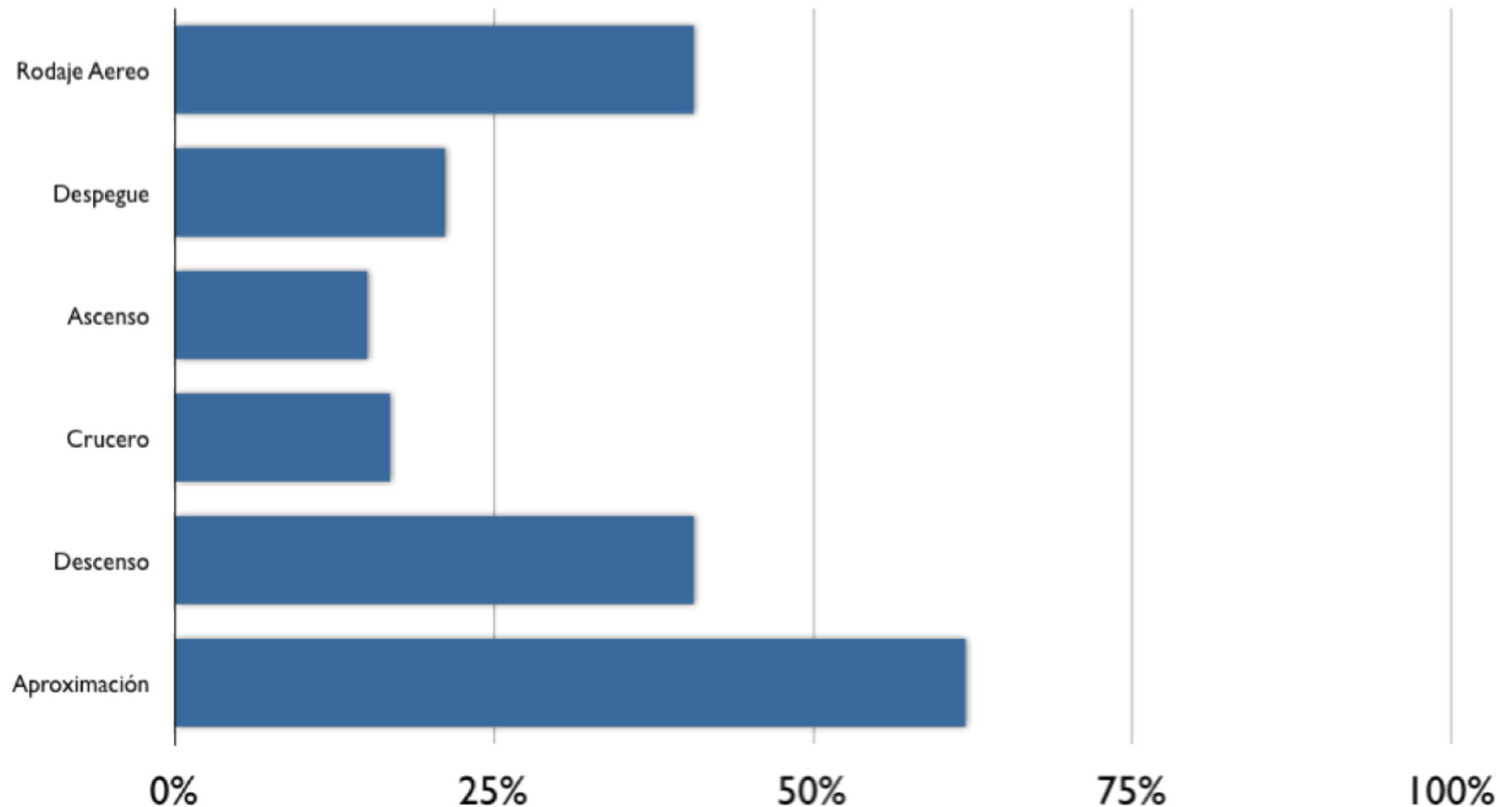
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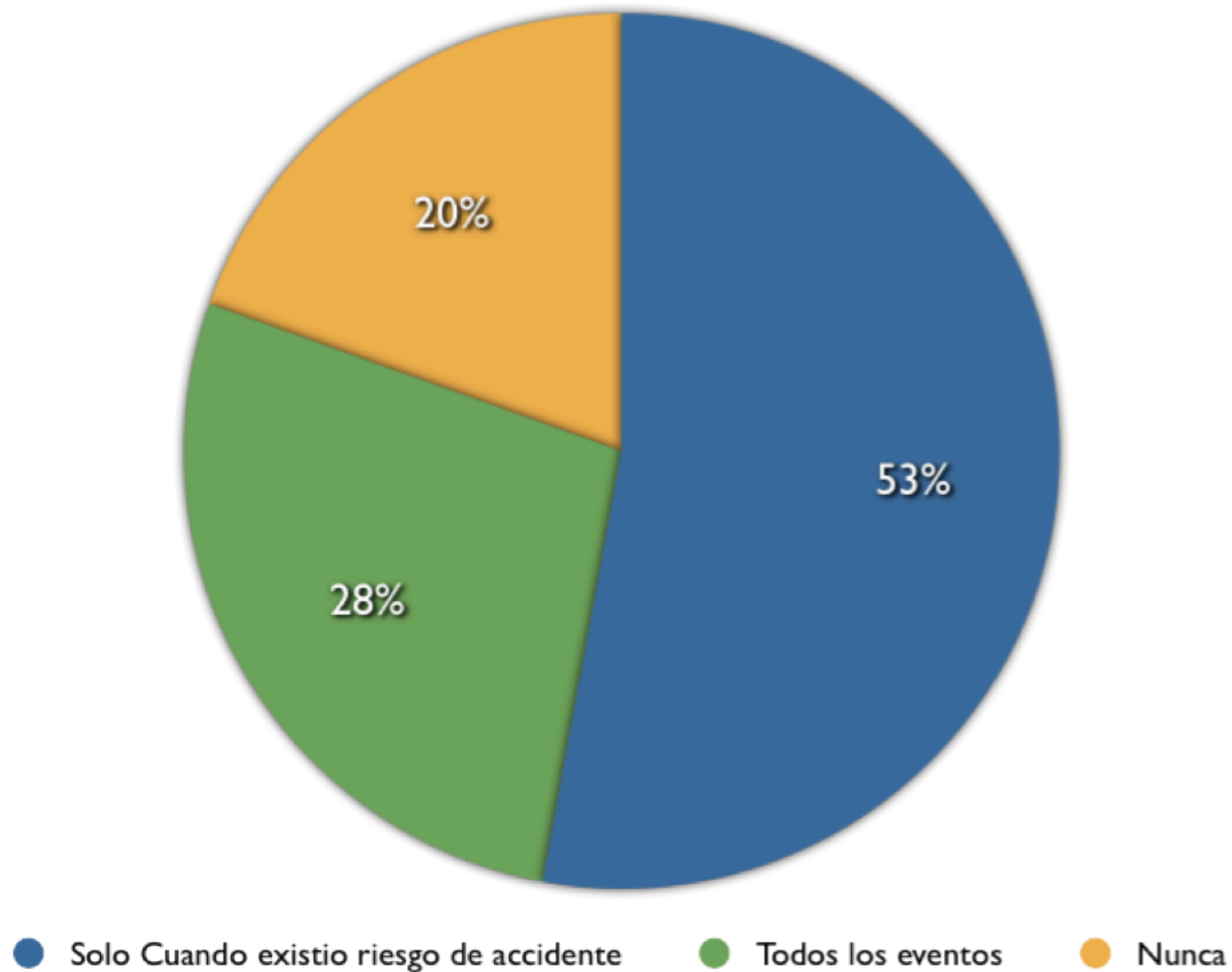
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- proceda a (vuele directo a)
- rodar a punto de espera (rodar a pista y mantener)
- Errores en código alfabético de la OACI (i.e. No
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- uso de localismos y dialectos (i.e. copiado, eeerrreeee)
- Si (afirmativo), No (negativo)
- a la cuadra (90 grados)
- comunicación no asertiva
- Conversaciones de temas no aeronáuticos entre pilotos y controladores (especialmente en CCS)
- “mantengase orbitando” (CCS)
- “holdee” en el radial XX
- rumbo a (proa a)
- “ida al aire” LIM
- viembre=Nectar, Charlie=Coca)
- ensayo de remolque” LIM

Con base a su experiencia en este tipo de situaciones, en qué fase piensa usted que existe la mayor cantidad de problemas al momento de aplicar la fraseología inadecuada?

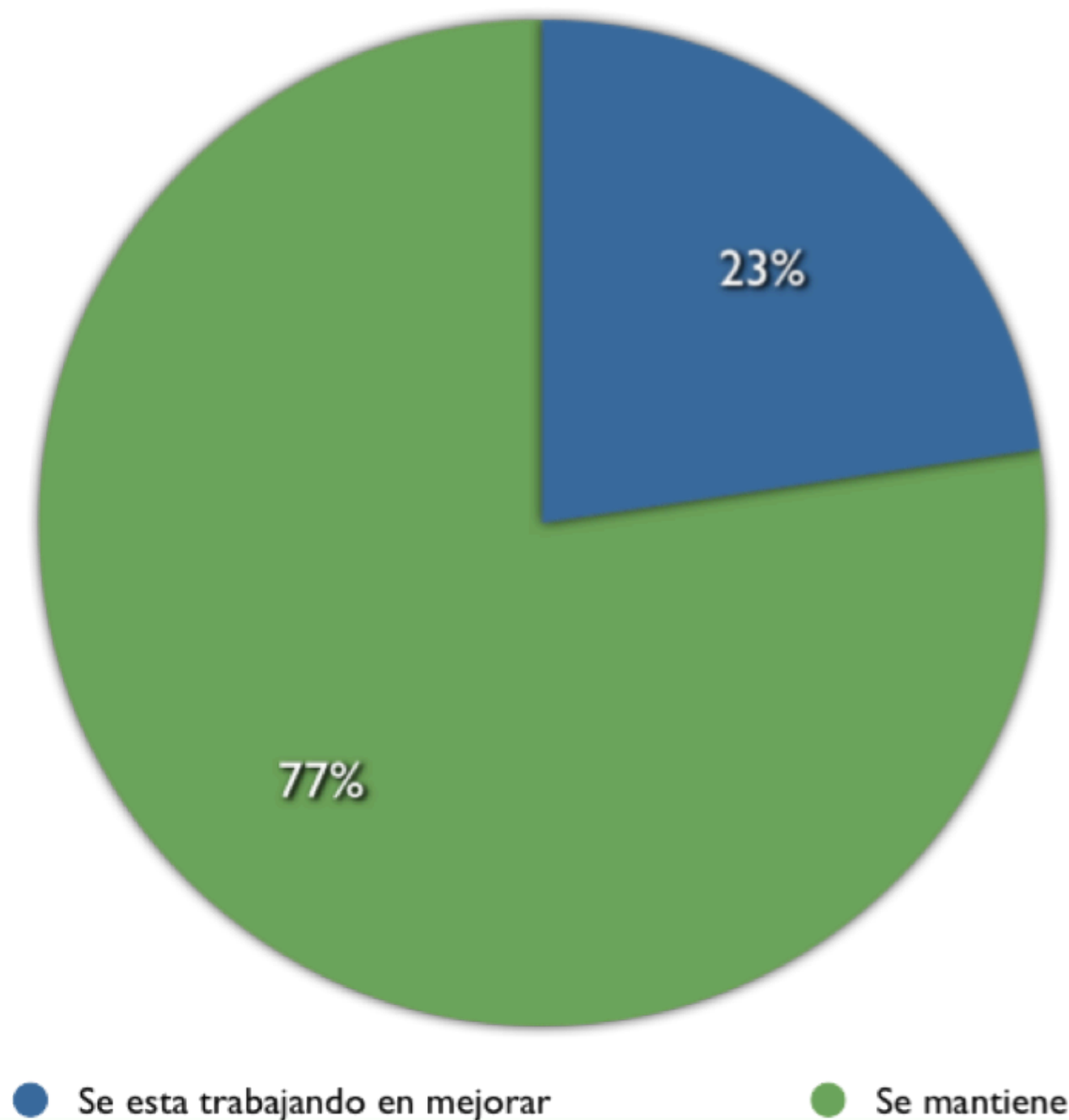


* Algunos pilotos seleccionaron mas de 1 opción, por lo tanto la suma del % total puede ser superior a 100

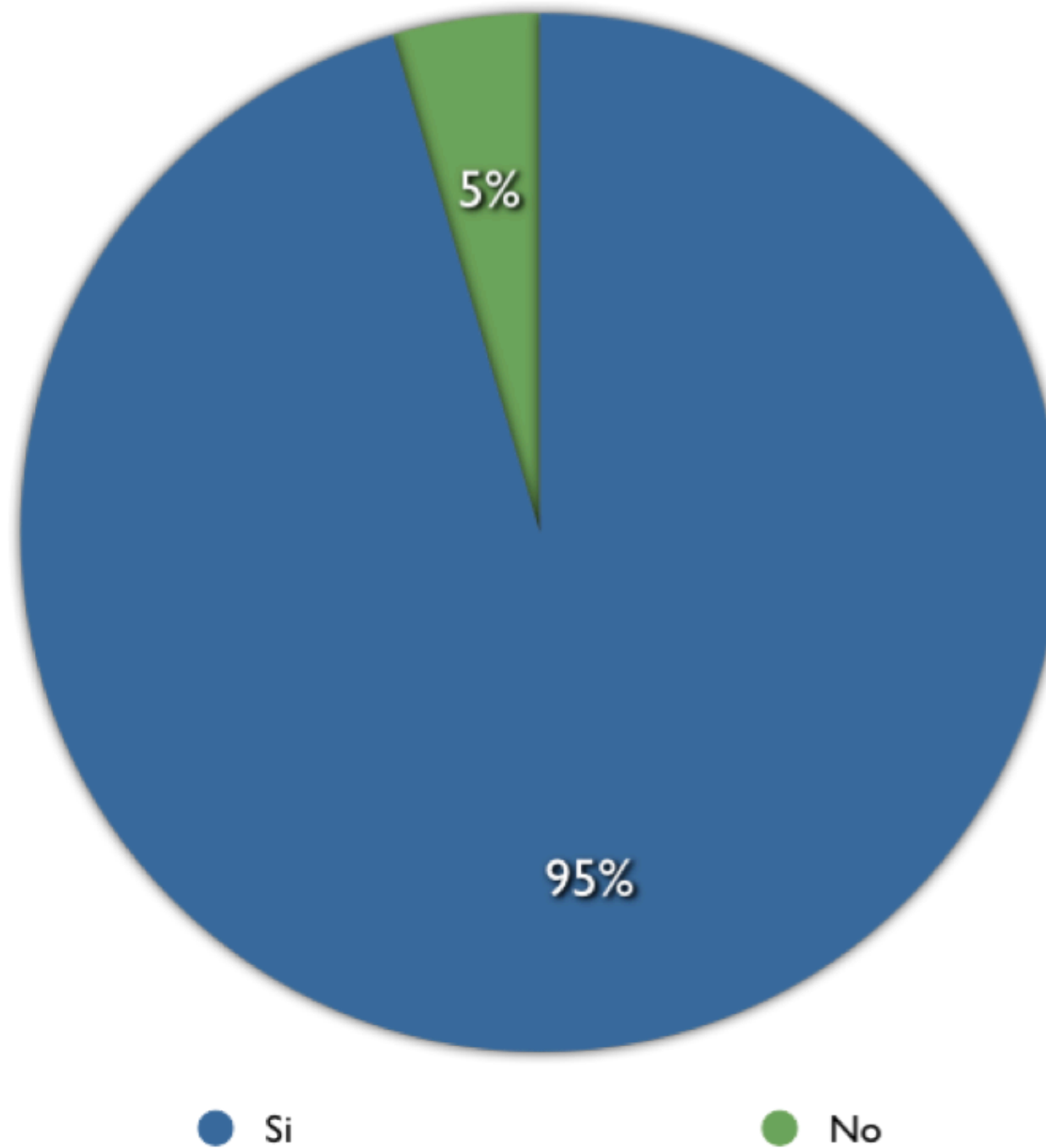
Cuándo usted reporta situaciones donde se evidenciaron problemas por mal uso de fraseología estándar en español?



En base a la pregunta anterior, en los aeropuertos y/o en vuelo donde ha evidenciado este problema, considera que este problema:



Considera usted que el uso de fraseología no estándar congestiona las frecuencias y afecta la seguridad?





International Civil Aviation Organization

CAR/SAM Planning and Implementation Regional Group (GREPECAS)

First Meeting of the Programmes and Projects Review Committee (PPRC/1)

Mexico City, Mexico, 25 - 27 April 2012

PPRC/1 - IP/01 **Rev.**

23/04/12

GENERAL INFORMATION

(Presented by the Secretariat)

1. Event Venue and Dates

The First Meeting of the Programmes and Projects Review Committee (PPRC/1) will take place at the ICAO NACC Regional Office Conference Room, from 25 to 27 April 2012.

2. Names of the Meeting's Coordinators and Assistants, E-mail, Address and Contact Numbers

Mr. Michiel Vreedenburgh, Deputy Regional Director

Ms. Claudia Riva-Palacio, Assistant

ICAO NACC Regional Office

Telephone: + 52 55 5250 3211

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Mr. Oscar Quesada, Deputy Regional Director

Ms. Iliana Giuria de Herrera, Assistant

ICAO SAM Regional Office

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oquesada@lima.icao.int

iherrera@lima.icao.int

3. Participants Registration

The delegates' registration will take place on Wednesday, 25 April 2012, from 08:30 to 08:55 hours.

4. **Accommodation, maps and general information for Mexico City and the ICAO NACC Regional Office**

The aforementioned information can be found on the “Visiting our Office?” Section of the ICAO NACC Regional Office Website located at the following address:

<http://www.mexico.icao.int/VisitorsInfo.html>

5. **Documentation Link**

The documentation will be posted on the website; participants should check our website frequently to download the documentation. All participants must bring their own set of documentation (hard copy or electronically in a laptop) to the meeting venue; there will be no hard copies available for distribution.

The instructions to log on the PPRC/1 website from the NACC and SAM sites are:

NACC Office:

<http://www.mexico.icao.int/Meetings/Meetings.html>

Click on “April / Abril”

Click on the “WPs/IPs” corresponding link located next to the “PPRC/1”

SAM Office:

<http://www.lima.icao.int/>

Click on “Próximas Reuniones”

Select “Inglés” on the upper right-hand corner of the page

Click on “PPRC/1”

- END --



International Civil Aviation Organization

CAR/SAM Planning and Implementation Regional Group (GREPECAS)

First Meeting of the Programmes and Projects Review Committee (PPRC/1)

Mexico City, Mexico, 25 - 27 April 2012

PPRC/1- IP/02

Revised

24/04/12

LIST OF WORKING AND INFORMATION PAPERS

(Information Paper presented by the Secretariat)

WORKING PAPERS

Number	Agenda Item	Title	Prepared and Presented by
WP/01	--	Tentative Agenda, Schedule and Proposed Working Methods (<i>Revised</i>)	Secretariat
WP/02	1.1	Follow-up of the results of GREPECAS/16 Meeting. Review of the actions adopted by the ANC regarding GREPECAS/16 Meeting and the status of implementation the GREPECAS/16 Conclusions and Decisions (<i>Revised</i>)	Secretariat
WP/03	2	Air navigation deficiencies in the CAR/SAM Regions with high risk ("U" priority)	Secretariat
WP/04	3.1	Review of the GREPECAS Programmes and Projects. Projects of the PBN Programme	Secretariat
WP/05	3.2	Review of the GREPECAS Programmes and Projects. Projects of the ATFM Programme	Secretariat
WP/06	3.3	Review of the GREPECAS Programmes and Projects. Projects of the Automation and ATM Situational Awareness Programme	Secretariat
WP/07	3.4	Review of the GREPECAS Programmes and Projects. Projects of the Ground-ground and Air-ground Telecommunications Infrastructure Programme	Secretariat
WP/08		CANCELLED	
WP/09	3.6	Review of the GREPECAS Programmes and Projects. Projects of the AGA Programme	Secretariat
WP/10	3.7	Review of the GREPECAS Programmes and Projects. Projects of the AIM Programme (<i>Revised</i>)	Secretariat
WP/11	3.8	Review of the GREPECAS Programmes and Projects. Projects of the MET Programme (<i>Revised</i>)	Secretariat
WP/12	4.1	Items related with the Organization of GREPECAS. Review of the GREPECAS Procedural Handbook	Secretariat
WP/13	4.2	Items related with the Organization of GREPECAS. Review of GREPECAS Terms of Reference and Work Programmes	Secretariat
WP/14	4.3	Items related with the Organization of GREPECAS. GREPECAS Annual Report	Secretariat
WP/15	1.2	Follow-up of the results of GREPECAS/16 Meeting. Review of the status of implementation of the Conclusions and Decisions in force previous to GREPECAS/16 (<i>Revised</i>)	Secretariat
WP/16	2	Addressing regional air navigation deficiencies – transition from five regional databases into a central database	Secretariat
WP/17	5	ICAO Spanish standard phraseology in accordance with PANS-ATM	Secretariat

INFORMATION PAPERS

Number	Agenda Item	Title	Prepared and Presented by
IP/01	--	General Information (<i>Revised</i>)	Secretariat
IP/02	--	List of Working and Information Papers (<i>Revised</i>)	Secretariat
IP/03	1.2	Follow-up of the results of GREPECAS/16 Meeting. Review of the status of implementation of the Conclusions and Decisions in force previous to GREPECAS/16. STATUS OF OUTSTANDING CONCLUSIONS AND DECISIONS OF GREPECAS MEETINGS PREVIOUS TO AND VALID AT THE END OF THE GREPECAS/16 (<i>Revised</i>)	Secretariat
NI/04	5	Plan de Navegación Aérea para Colombia (<i>Spanish only</i>)	Colombia
IP/05	5	Twelfth Air Navigation Conference (<i>English only</i>)	Secretariat
IP/06	5	Regional Performance Framework – Planning Methodologies and Tools (<i>English only</i>)	Secretariat
IP/07	5	Review of the outline and objective for revised GANP (<i>English only</i>)	Secretariat
IP/08	5	Review of the proposed revisions to the GASP (<i>English only</i>)	Secretariat
IP/09	3.6	Aerodromes wildlife control and reduction (<i>Revised</i>)	Secretariat
IP/10	5	Implementation status of the Runway Safety Team (RST) pilot programme in the CAR Region (<i>Revised</i>)	Secretariat

- END -



Agenda Item 1: Follow-up of the results of GREPECAS/16 Meeting

1.2 Review the Implementation Status of Outstanding Conclusions and Decisions from Meetings Previous to GREPECAS/16

STATUS OF OUTSTANDING CONCLUSIONS AND DECISIONS OF GREPECAS MEETINGS PREVIOUS TO AND VALID AT THE END OF THE GREPECAS/16

(Presented by the Secretariat)

SUMMARY

The list of Conclusions and Decisions of the meetings previous to GREPECAS/16 which were valid at the end of that meeting are presented for information in the **Appendix** to this working paper.

The status and follow-up remarks for each conclusion and decision is the result of a review completed by the Secretariat based on information available at the time of preparing this paper. The status for each conclusion and decision is designated as valid, completed or superseded.

References:

- www.lima.icao.int
- Report of the GREPECAS/12 Meeting (Havana, Cuba, 7 to 11 June 2004)
- Report of the GREPECAS/13 Meeting (Santiago, Chile, 14 to 18 November 2005)
- Report of the GREPECAS/15 Meeting (Río de Janeiro, Brasil, 13 – 17 October 2008)
- Report of the GREPECAS/16 Meeting (Punta Cana, Dominican Republic, 28 March – 1 April 2011) – Decision 16/2

Strategic Objectives

This working paper is related to Strategic Objectives A and C.

APPENDIX

PPRC/1- IP/03

Revised

STATUS AND FOLLOW-UP OF OUTSTANDING CONCLUSIONS AND DECISIONS OF GREPECAS MEETINGS PREVIOUS TO AND VALID AT THE END OF THE GREPECAS/16 MEETING – ACTION PLAN

Conc/Dec	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C12/67	QUALITY ASSURANCE SYSTEMS FOR METEOROLOGICAL SERVICES IN THE CAR/SAM REGIONS	That CAR/SAM States/Territories/International Organizations make utmost efforts to establish quality assurance systems for meteorological services provided in support of international air navigation in the CAR/SAM Regions.	- A QMS/MET Guide for the CAR/SAM Regions was prepared; - A QMS/MET Seminar was held in the SAM Region in December 2010 - A QMS/MET Seminar was held for the NAM/CAR Regions in October 2011.	States and Territories	Implementation of MET QMS	N/A	Valid November 2012
C 13/23	DEVELOPMENT OF A GUIDE FOR THE DRAFTING OF EMERGENCY PLANS FOR AERODROMES THAT MIGHT BE AFFECTED BY VOLCANIC ASH IN THE CAR/SAM REGIONS	That the AERMET Subgroup, in coordination with the Secretariat, develops a guide for the drafting of emergency plans for aerodromes that might be affected by volcanic ash in the CAR/SAM Regions.	The draft should be translated into English for revision by English speaking members. Depends on budget availability for translation.	ICAO	Guide for the drafting of emergency plans for aerodromes that might be affected by volcanic ash in the CAR/SAM Regions.	N/A	Valid
C 13/36	CLARIFICATION ON THE APPLICATION OF THE EXPRESSION “WHEREVER PRACTICABLE” IN ANNEX 14, VOLUME I	That: a) ICAO clarifies the application of the expression “wherever practicable” mentioned in standards; and b) if possible, indicate some cases where this expression could be applied and/or if this expression is only referred to physical and topographical limitations.	Coordinated by ICAO Headquarters	ICAO	Correct interpretation of standards and recommended practices in Annex 14, Vol. I	N/A	Completed

Conc/Dec	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C 13/41	NEED TO FURTHER AIS/MAP AUTOMATED SYSTEMS	That, considering the need for CAR/SAM States/Territories/International Organizations to develop automated systems for exchange of information/data and the resulting application of the aeronautical information management concept, GREPECAS consider: a) that automation of AIS services in the CAR/SAM Regions as an urgent matter necessary to make progress in line with developments related to the CNS/ATM elements that are already being implemented in these Regions; and b) urging ICAO to define the global data model for the exchange of aeronautical information as soon as possible.	Regarding item b), it is expected that ICAO define the exchange model. ICAO Headquarters has not yet provided a specific date	ICAO	Guidelines and/or SARPs for the exchange model.	N/A	Valid
C 13/51	APPLICATION OF THE HUMAN FACTORS PRINCIPLESTO AERONAUTICAL INFORMATION MANAGEMENT	That, considering the evolution of aeronautical information management, its level of automation, its effect on operational procedures, and its direct relevance to flight operations safety, the AIS/MAP Subgroup: a) take the necessary steps to develop human factors principles for aeronautical information management and for their application in the respective AIS/MAP services; b) develop a manual containing guidelines on human factors for aeronautical information management, and an implementation plan, based on the relevant ICAO documentation. The aforementioned manual and plan will be presented to the GREPECAS/14 Meeting; and c) schedule, in coordination with ICAO Regional Offices and the States/Territories and International Organizations, activities aimed at teaching and analyzing the repercussion of human factors on the new air navigation systems.	As a complement, AIS/MAP/SG Decision 10/4 was formulated so that the QM/TF develop guidelines for the application of human factors. AIM/QM/TG/3 developed principles of human factors and the concerning manual, containing guidelines for its application by States/Territories and International Organizations	AIS/MAP/SG	AIM Manual on human factors	N/A	Completed

Conc/Dec	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C 13/74	PROPOSAL OF AMENDMENT TO ATN REGIONAL PLAN	<p>That ICAO consider the amendment to the ATN Regional Plan contained in the FASID Table CNS/1B, by replacing that table format with the following:</p> <ul style="list-style-type: none"> • Table CNS 1Ba – CAR/SAM regional Plan of ATN routers • Table CNS 1Bb – CAR/SAM regional Plan of ground-ground applications • Table CNS 1Bc – CAR/SAM regional Plan of air-ground applications <p><i>Note: -The proposed Tables CNS 1Ba and CNS 1Bb formats are shown in Appendices AY and AZ respectively. The Table CNS 1Bc would be developed by the CNS Committee soon.</i></p>		ICAO	Amendment to FASID: Tables CNS 1Ba, CNS 1Bb and CNS 1Bc	Not analyzed by ANC	Completed
C 13/79	DEVELOPMENT OF NATIONAL PLANS TO PRIORITIZE THE AMHS AND AIDC IMPLEMENTATION AND CONTRIBUTE TO ATM AUTOMATION	<p>That the States/Territories/International Organizations develop their respective national plans for the prioritization of the AMHS and AIDC implementation, based on the ATN routers table, the ATN ground-ground applications plan, and the regional AMHS addressing plan, and relevant ATN – AMHS regional documentation, also contributing to the progress towards the development of ATM automation supporting air traffic services.</p>	<p>CAR/SAM States/Territories/ International Organizations should note that in the development of their performance based national plans, AMHS and AIDC implementation should be prioritized, on the basis of ATN router tables, ATN ground-ground applications plan, the AMHS addressing plan and regional documentation relevant to ATN AMHS.</p>	States/Territories/ International Organizations	National plans for AMHS and AIDC implementation	Not analyzed by ANC	Completed

Conc/Dec	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C 13/87	ADS-B TRIALS PROGRAMME IN THE CAR/SAM REGIONS	That, States/Territories/International Organizations in collaboration with the airspace users, establish and execute an ADS-B trials programme using the available technology and services, aimed at improving the ADS-B knowledge and evaluating the benefits for the Air Traffic Management in the CAR/SAM Regions.	Some CAR/SAM States/Territories/ International Organizations have carried out ADS-B trials. In the SAM Region, Brazil, Chile and Peru have carried out ADS-B tests. In the CAR/NAM Region, ADS B tests have been carried out Cuba, Jamaica, COCESNA and United States. A document on considerations to be taken into account for ADS-B trials has been prepared, and approved by GREPECAS/15. Other trials are scheduled in the short and medium term in the CAR/SAM Regions.	States/Territories/ International Organizations	ADS B trials programme	Not analyzed by ANC	Superseded by Conclusion 16/38

Conc/Dec	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C 15/1	DEVELOPMENT OF PERFORMANCE BASED REGIONAL AND NATIONAL PLANS	That, a) GREPECAS develop a performance-based regional plan in accordance with the Global Air Navigation Plan and the Global ATM Operational Concept. This plan should include identification of regional performance objectives and completion of performance framework forms for all air navigation areas such as ATM, CNS, AIM, MET and AGA/AOP; and b) States, Territories and International Organizations, taking into account user needs, develop performance-based national plans in accordance with the regional performance objectives included in the Regional Air Navigation Plan. These national plans should encompass identification of national performance objectives and completion of performance framework forms for all air navigation areas such as ATM, CNS, AIM, MET and AGA/AOP.	Within the NAM/CAR working groups, various performance objectives have been identified and extended through the C/CAR and E/CAR working groups, including same in the NAM/CAR Performance Based Air Navigation Implementation Plan. Coordination with States/Territories and International Organization to develop national plans on the basis of regional performance objectives. Many CAR/SAM States have drafted their national plan on the basis of performance objectives. The SAM Region has approved a performance based air navigation implementation plan.	GREPECAS States/Territories and international organizations	Performance based Regional AN Plans Performance based National AN plans	Noted and that GREPECAS and States are requested to take into account the user expectations in the development of performance framework forms.	Completed
C 15/4	D-VOLMET AERONAUTICAL DATA LINK REQUIREMENTS IN THE CAR/SAM REGIONS	That the ICAO NACC and SAM Offices, in coordination with the ICAO SAM Office, amend Part VII Vol. I – ATS of the ANP to reflect the requirement for D-VOLMET aeronautical data link services in the CAR/SAM Regions.	The AERMET/SG, upon analyzing D-VOLMET implementation in the CAR/SAM Regions, proposes an amendment in ANP Volume I Basic, Part VII ATS.	ICAO	Amendment to ANP Vol I – Basic, Part VII-ATS	N/A	Valid

Conc/Dec	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C 15/5	TRAINING FOR CAR/SAM STATES ON THE DETAILS AND USE OF NEW WAFS ICING, TURBULENCE AND CONVECTIVE CLOUD FORECASTS DERIVED FROM GRIB 2 DATA	That the Washington WAFC, in coordination with WMO, be invited to: a) starting in 2010 or 2011, provide computer-based training on the applications and use of the new forecasts issued by the WAFS provider States; b) assist the States in English, as necessary; and c) assess the possibility of providing future training on the operation and use of the new WAFS products in English and Spanish.	ICAO Secretary General sent the letters on 13 July 2009: • Ref.: AN 10/16.1 SWG 16/1 SWG 20/1 to the US FAA; and • Ref.: AN 10/16.1 SWG 16/1 to WMO Secretary General.	ICAO, United States and WMO	Seminar	Supported the conclusion and requested the Secretary General to call upon the WAFC Washington Provider State, in coordination with WMO, to organize the required workshop in 2010.	Completed
D 15/16	HARMONIZATION OF THE INFORMATION CONTAINED IN CAR/SAM FASID TABLE AOP 1 AND IN DOC 7910	That, in order to harmonize the information contained in Doc 7910 – “Location Indicators” and CAR/SAM FASID Table AOP 1, the ICAO NACC and SAM Offices carry out a detailed review of the information contained in both documents and, as necessary: a) update and amend CAR/SAM FASID Table AOP 1 in accordance with the ICAO amendment procedures; and b) request ICAO to update Doc 7910.	The NACC and SAM Regional Offices carried out a detailed review of the information contained in Doc 7910 – Location Indicators and Doc. 8733 (CAR/SAM ANP, Vol. II - FASID Table AOP 1) in order to harmonize the information contained in both documents. Furthermore, a proposal for amendment Doc. 8733 (CAR/SAM ANP, Vol. I and II) was prepared and circulated to States for comments, in order to update the document in accordance with amendment procedures.	NACC and SAM Regional Offices.	Harmonization of information contained in Doc. 7910 and Doc. 8733. Update the CAR/SAM Air Navigation Plan Vols. I and II.	Agreed and requested the Secretary General that the CAR/SAM AOP Table and the information contained in Doc. 7910 should be reviewed in order to harmonized the information contained in both documents.	Completed

Conc/Dec	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C 15/26	TRAINING SEMINARS/ WORKSHOPS IN SUPPORT OF THE TRANSITION FROM AIS/MAP TO AIM	That ICAO be urged to assist States/Territories with conducting at least 2 seminars and/or workshops on matters related to AIM transition and to include said events in technical cooperation projects that ICAO Regional Offices are carrying out in support of air navigation services.	NACC: Completed: 21-22 July 2011 Planned: 23-27 July 2012 SAM: Completed: 26-30 Sept. 2011 Planned: 15-19 Oct. 2012	ICAO	At least 2 seminars and/or workshops on matters related to AIM transition	Noted and requested the Secretariat to consider the conduct of seminars on AIM transition at an appropriate time using TC mechanism.	Completed
C 15/35	IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN MODEL	Considering that States should take measures to implement the new ICAO flight plan model pursuant to Amendment No. 1 to the 15th Edition of the PANS-ATM (Doc 4444), and in order to establish a regional strategy to facilitate global implementation of this amendment that: a) based on the guidance material to be prepared by ICAO, CAR/SAM States/Territories and International Organizations take the necessary measures to prepare for the transition to the new flight plan model; and b) the Subgroup establish a contributory body to develop a regional strategy for the transition to the new flight plan model in the CAR/SAM Regions and the provisions associated with ATS messages.	Coordination between ICAO and States/Territories/International Organizations through meetings, missions and letters for the adoption of measures on the transition to the new flight plan. GREPECAS approved the strategy and performance objective towards the transition to the new flight plan model.	a) States/ Territories and International Organizations b) CNS/ATM/SG	Regional strategy for the implementation of a new ICAO flight plan model	Recognizing that many of the regions are progressing at a different pace for migration to new ICAO flight plan, the Commission reiterated the need for global coordination by ICAO HQ so as to ensure smooth transition at regional and national levels.	a) Valid. November 2012 b) Completed

Conc/Dec	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C 15/44	USE OF GNSS IN THE SHORT-TERM	In order to comply with the implementation of the CAR/SAM PBN Roadmap, States/Territories/International Organizations are urged to complete the development and approval of GPS-based NPA operations, establishing regulations and procedures (NOTAM, AIC, etc.) for the use of RAIM GPS and Baro-VNAV GPS in the short-term.	Letter to States/Territories, meetings and missions. These considerations have been included in the objectives of the NAM/CAR performance based Air Navigation Plan and in the SAM PBN implementation action plans. The CAR/SAM Regions have drafted Advisory Circulars (AC) relative to aircraft and user approval for RNAV 10 operations (named and authorized as RNP 10), RNAV 5, RNAV 1, RNAV 2, basic RNP 1, RNP APCH, RNP AR APCH and APV/baro-VNAV.	States/Territories and International Organizations	Approval of GPS based NPA operations	N/A	Completed

Conc/Dec	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up and Remarks	Responsibility	Deliverable	Action by ANC	Status and Reporting/ Completion Date
C 15/46	CAR/SAM REGIONAL ACTION FOR THE PREPARATION AND SUPPORT OF THE ICAO POSITION FOR WRC-11	That CAR/SAM States and International Organizations, in preparation and support of the ICAO position for the ITU World Radio Communication Conference – 2011 (WRC-11): a) support and follow-up on the work of ICAO to prepare and update its position for WRC-11; b) appoint a focal point or a contact person to serve as a liaison with ICAO and with the national radio frequency spectrum management authority to coordinate matters concerning WRC-11; c) participate actively in the Organization of American States (OAS) CITEL meetings in preparation for WRC-11; d) participate actively in any meetings and seminars convened by ICAO to explain and analyze the position of this organization for WRC-11; e) participate actively in WRC-11 in support of the ICAO position; and f) recommend and implement other appropriate measures.	Within the NAM/CAR performance based Air Navigation Plan, a new performance objective has been included for the follow-up of this task, with the respective Points of Contact list. In the SAM Region, an action plan to prepare for the ICAO position at WRC-12 has been prepared. Also, CAR/SAM contact points have been assigned. The Regional NAM/CAR/SAM Preparatory Meeting (RNCSPM) for ITU WRC-2012 was held in Mexico, from 21 to 22 April 2010.	States/Territories/ International Organizations	a) Support from States and international organizations on the ICAO position at WRC-11 through submission of progress reports. b) Nominate focal points for WRC-2012 c) Active participation in CITEL meetings. d) Active participation in ICAO meetings on WRC-2012. e) Participate in WRC-2012. f) Recommend other measures.	Noted and requested the Secretary General to urge States to continue to participate at various levels in different form to provide support for the ICAO position.	Completed
C 15/47	FURTHER ACTIONS TO IMPLEMENT CONCLUSION ASB/8/2	In order to complete Conclusion ASB/8/2 that: a) immediately after the GREPECAS/15 Meeting, the ICAO Regional Offices forward to IATA and IFALPA the list of “U” air navigation deficiencies currently available in the GANDD; b) States that have been not yet done so carry out the “U” deficiency risk assessment and submit results to the accredited Regional Office not later than 5 January 2009; c) IATA and IFALPA carry out the “U” deficiencies risk assessment and submit the results to the ICAO Regional Offices not later than 1 March 2009; and d) ICAO conduct a special ASB Meeting at the NACC Regional Office in Mexico City in April 2009, to analyze the results of the completed exercise.	a), b) and c) as requested by the Group.	Secretary and Chairman of GREPECAS	List of “U” deficiencies reviewed with risk assessment.	N/A	Completed

PPRC/1- IP/03
Revised

- A10 -

- END -



Organización de Aviación Civil Internacional

Grupo Regional de Planificación y Ejecución CAR/SAM (GREPECAS)

Primera Reunión del Comité de Revisión de Programas y Proyectos (CRPP/1)

Ciudad de México, México, 25 al 27 de abril de 2012

CRPP/01-NI/04

16/04/12

Español únicamente

Cuestión 5 del

Orden del Día:

Otros asuntos

PLAN DE NAVEGACIÓN AÉREA PARA COLOMBIA

(Nota presentada por Colombia)

RESUMEN

El Estado Colombiano, a través de la Autoridad de Aviación Civil- Unidad Administrativa Especial de Aeronáutica Civil UAEAC- presenta la última actualización del PLAN DE NAVEGACIÓN AÉREA PARA COLOMBIA – PNA COL. Este es un esfuerzo de la Autoridad Colombiana para formular la estrategia y los lineamientos para el sector aéreo, en concordancia con el Plan Mundial de Navegación Aérea y el Plan de Navegación Aérea para las regiones CAR y SAM, donde confluyen de manera coordinada los intereses de la comunidad aeronáutica usuaria de los servicios en Colombia. Desde Diciembre del 2008, cuando se publicó la primera versión del PNA COL Volumen I: Requerimientos Operacionales, hemos ajustado el contenido hasta la actual versión 06 del PNA COL.

Referencias:

- Plan Navegación Aérea Mundial Doc 9850;
- Plan Navegación Aérea para la Región CAR y SAM, Doc 8733;
- Plan de Implantación del Sistema de Navegación Aérea basado en el rendimiento para la región SAM, ver 1.1; y
- Plan de Navegación Aérea para Colombia PNA COL ver 06.

1. Introducción

1.1 La visión de Aeronáutica Civil de Colombia para el 2019: ser una institución líder a nivel internacional, con altos estándares de seguridad operacional, infraestructura aeronáutica moderna y ambientalmente responsable, exigen un compromiso de la autoridad para guiar el camino y orientar los esfuerzos en el corto, mediano y largo plazo. El mecanismo adoptado es el Plan de Navegación Aérea para Colombia, el cual es la estrategia que establece la ruta a seguir en materia de infraestructura para satisfacer los requerimientos operacionales frente al crecimiento del transporte aéreo nacional e internacional. Esta estrategia permite mejorar la conectividad geográfica de todas las regiones del país mediante la modernización de la infraestructura aplicando nuevas tecnologías disponibles¹. Estas nuevas tecnologías de navegación satelital permiten aportar también a la sostenibilidad ambiental, mediante la disminución de emisiones de gas carbónico por parte de las aeronaves debido al logro de menores tiempos de vuelo. Existen metas muy concretas para alcanzar en el periodo 2010-2014, enunciadas en el PNA COL entre otras: a) Ofrecer una solución operacional de navegación basada en el desempeño –PBN para

¹ CNS/ATM: Comunicaciones, Navegación y Vigilancia aérea principalmente soportado en satélites.

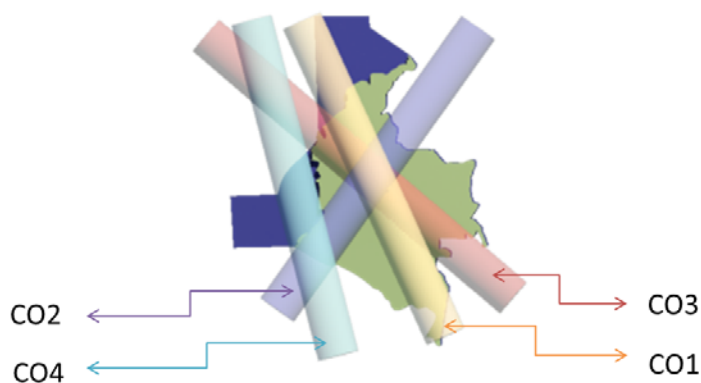
aliviar la congestión en el principal aeropuerto del país, ElDorado en Bogotá; b) Proporcionar de manera modular altos niveles de automatización para atender la creciente densidad de tránsito, con niveles establecidos de seguridad operacional; c) Mejorar la capacidad de emitir pronósticos del tiempo meteorológico para navegación aérea; d) Mejorar significativamente la capacidad de comunicación de datos, las ayudas a la navegación aérea e introducir la técnica de multilateración para vigilancia en el espacio aéreo; e) Ajustar mecanismos de cooperación interadministrativa para mejorar la coordinación para la atención de eventos de Búsqueda y Salvamento - SAR.

1.2 El PNA COL se compone de tres volúmenes. El Volumen I establece los requerimientos operacionales de los servicios a la navegación aérea, el Volumen II desarrolla las instalaciones y servicios aeroportuarios y para la navegación aérea. El Volumen III está por desarrollarse y debe presentar los ajustes a la reglamentación nacional, para atender lo consignado en el Volumen I y II del PNA Colombia, con el fin de orientar la migración progresiva de los usuarios del espacio aéreo colombiano hacia una Gestión de Tránsito Aéreo integrada, en concordancia con el Sistema Regional de Cooperación para la Vigilancia de la Seguridad Operacional - SRVSOP.

2. Desarrollo

2.1 Adoptando el método de planificación de la OACI para alcanzar los objetivos de desempeño y avanzar de forma evolutiva, Colombia ha identificado las áreas de tránsito homogéneas, espacios aéreos relacionados, estadísticas y pronósticos de movimiento de aeronaves, análisis de la infraestructura actual para fijar las estrategias y los objetivos de corto, mediano y largo plazo. A continuación se presentan las cuatro áreas homogéneas establecidas en el PNA para Colombia:

ÁREAS HOMOGÉNEAS COLOMBIA



Fuente: Plan de navegación Aérea para Colombia ver 06

Área Homogénea: Espacio aéreo con un interés de ATM en común, basado en características similares de densidad, complejidad, requerimientos de infraestructura del sistema de navegación aérea u otras consideraciones especificadas, en el que un plan detallado común fomentará la aplicación de sistemas de ATM inter funcionales.

2.2 El PNA COL presenta igualmente los pronósticos de movimiento de aeronaves en tres componentes: operación doméstica, operación internacional y operación de sobrevuelo en el espacio aéreo bajo la responsabilidad de Colombia.

OPERACIÓN DOMÉSTICA

2.3 En conjunto las operaciones domésticas presentaron un crecimiento promedio del 4,65% en el periodo 2004 a 2011, siendo la aviación general, la que obtuvo un mayor crecimiento en este periodo, alcanzando una media anual de 6,11%.

OPERACIÓN INTERNACIONAL

2.4 En conjunto las operaciones internacionales presentaron un crecimiento promedio del 4,37% en el periodo 2004 a 2011, siendo la operación comercial la de mayor crecimiento en este periodo, alcanzando una media anual de 4,69%.

OPERACIÓN EN SOBREVUELO

2.5 Para efectuar las proyecciones de vuelos, considerando los tipos de operación comercial, militar y general, se utilizaron diversos modelos estadísticos que involucraron en comportamiento de variables como el Producto Interno Bruto y las proyecciones de población del Departamento Administrativo Nacional de Estadística (DANE). El crecimiento promedio anual del PIB es cercano al 4.2%.

2.6 El resultado estadístico descompone las tasas de crecimiento promedio anual, dependiendo del tipo de aviación y del tráfico doméstico o internacional y se aplican a cada ruta, según la distribución en cada una de ellas.

2.7 Las tasas de crecimiento internacionales son coherentes con las tasas históricas promedio y también con las proyecciones establecidas en el documento PLAN DE IMPLANTACIÓN DEL SISTEMA DE NAVEGACIÓN AEREA BASADO EN RENDIMIENTO PARA LA REGION SAM, el cual estima que el tránsito entre Sur América y Europa-Norte América tendrá un crecimiento promedio cercano al 5%.

2.8 El Volumen I: Requerimiento operacionales, formula tales requisitos desde la óptica del concepto operacional del ATM para el corto, mediano y largo plazo con el fin de orientar los esfuerzos en el desarrollo de proyectos que deben ser identificados y valorados en el Volumen II, con el fin de presentar los presupuestos anuales que la Autoridad Aeronáutica debe presentar al Gobierno Nacional.

2.9 Los plazos en múltiplos de 4 años facilita la programación presupuestal y la ventana varía de acuerdo con la evolución del Plan Mundial frente al corto, mediano y largo plazo.

2.10 El actual Plan Nacional de Desarrollo 2010-2014, Ley de la República, establece que Colombia modernizará la infraestructura aeronáutica mediante el PNA COL y esto fortalece aun más este mecanismo de planificación para beneficio del transporte aéreo en Colombia.

3. Conclusión

3.1 Colombia continuará con la actualización permanente del PLAN DE NAVEGACIÓN AÉREA PARA COLOMBIA, como documento estratégico vivo que atiende los requerimientos para que el sector del transporte aéreo siga creciendo, ofreciendo servicios de calidad en un sistema integrado de navegación aérea operacionalmente seguro, eficiente y sustentable ambientalmente.

3.2 Invitamos a toda comunidad CAR / SAM a consultar y contribuir al PLAN DE NAVEGACIÓN AÉREA PARA COLOMBIA. El documento se encuentra publicado en <http://www.aerocivil.gov.co/Aerocivil/PlanGestControl/PolíticasPlanesProy/Paginas/PINaAeronaveg.aspx>.



Agenda Item 5: Other business

TWELFTH AIR NAVIGATION CONFERENCE

(Presented by the Secretariat)

<p>SUMMARY</p> <p>This paper presents information related to the convening of the Twelfth Air Navigation Conference (AN-Conf/12) to be held in Montreal, from 19 to 30 November 2012 to discuss subjects related to air navigation systems.</p> <p>Action by GREPECAS PPRC/1 is in paragraph 3.</p>	
<p><i>Strategic Objective(s)</i></p>	<p><i>This working paper is related to Strategic Objective(s)</i></p> <p><i>A – Safety</i></p> <p><i>C – Environmental Protection and Sustainable Development of Air Transport.</i></p>

1. Introduction

1.1 The Air Navigation Commission, at the fifth meeting of its 185th session on 1 December 2010, agreed that Contracting States and appropriate international organizations be consulted through State letter ST/13/1-11/10, dated 31 March 2011, on the convening of the Twelfth Air Navigation Conference (AN-Conf/12) to discuss subjects related to air navigation systems.

1.2 On 6 October 2011, the Air Navigation Commission, at the third meeting of its 188th session, reviewed the comments received from Contracting States and international organizations and confirmed that there was a need for an AN-Conf/12 and agreed to recommend to Council that the meeting be held in Montreal from 19 to 30 November 2012.

1.3 The AN-Conf/12 will address the aviation system block upgrades (ASBUs) that were introduced to the international community at the Global Air Navigation Industry Symposium (GANIS) held at Montreal from 20-23 September 2011 and will consider the communication, navigation, surveillance and avionics roadmaps for the Global Air Navigation Plan.

1.4 Security and environment will be addressed within the scope of the AN-Conf/12 as they have an important influence on the air navigation system. However, the larger issues related to security and the environment is addressed in other forms related to these fields of expertise such as the Committee for Aviation Environmental Protection (CAEP) and the Aviation Security Panel (AVSECP). The primary expertise required are air navigation experts in the fields of aerodromes, air routes and ground aids (AGA), aeronautical information management (AIM), air traffic management (ATM), communications, navigation and surveillance (CNS), meteorology (MET), operations (OPS) and search and rescue (SAR). The Conference would also benefit from expertise in air navigation related security and environment issues.

2. **State letter**

2.1 On 22 December 2011, State letter ST 13/1-11/71 with the invitation to the Twelfth Air Navigation Conference (AN-CONF/12) to be held in Montreal from 10 to 30 November 2012, was dispatched to all member States and International Organizations. The State letter and its appendices are attached as an appendix to this information paper.

3. **Action by GREPECAS PPRC/1**

3.1 The Meeting is invited to note the developments related to the convening of the 12th Air Navigation Conference in November 2012.

— END —



Agenda Item 5 Other business

**REGIONAL PERFORMANCE FRAMEWORK – PLANNING
METHODOLOGIES AND TOOLS**

(Presented by the Secretariat)

SUMMARY

Problem/Opportunity Statement: The regional planning and implementation process is facilitated through formulation of regional Air Navigation Plans (ANPs) which are developed through the Planning and Implementation Regional Groups (PIRGs). This information paper presents the strategic planning principles and next steps needed to align the regional plans with the global plan and the aviation system block upgrade methodology. It also provides an introduction to a new web-based format for all regional ANPs, called electronic ANPs (eANPs), which can be updated in real time, edited online, viewed by all relevant partners, which will result in far more up-to-date and accurate data.

Action: The meeting is invited to note the information provided in reference to the transition to eANPs presented in this information paper.

References:

- Doc 7474, Air Navigation Plan — Africa-Indian Ocean Region
- Doc 7754, Air Navigation Plan — European Region
- Doc 7910, Location Indicators
- Doc 8733, Air Navigation Plan — Caribbean and South American Regions
- Doc 9634, Air Navigation Plan — North Atlantic Region
- Doc 9635, Facilities and Services Implementation Document (FASID) — North Atlantic Region
- Doc 9673, Air Navigation Plan — Asia and Pacific Regions
- Doc 9708, Air Navigation Plan — Middle East Region

**Strategic
Objective(s)**

This information paper relates to the Safety Strategic Objective by strengthening the policy framework for ICAO's activities in the air navigation field and simplifying the reporting process.

1. **Introduction**

1.1 The regional Air Navigation Plans (ANPs) detail the facilities, services and procedures required for international air navigation within a specified geographical area. The development of these regional plans is undertaken by ICAO's six Planning and Implementation Regional Groups (PIRGs) in coordination with States and supported by ICAO's regional offices and the Air Navigation Bureau. The six PIRGs are: ASIA/PAC Air Navigation Planning and Implementation Regional Group (APANPIRG); AFI Planning and Implementation Regional Group (APIRG); European Air Navigation Planning Group (EANPG); CAR/SAM Regional Planning and Implementation Group (GREPECAS); Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG); and North Atlantic Systems Planning Group (NAT SPG). The plans associated with each PIRG are listed in the table above under references.

2. **Planning methodologies**

2.1 Guided by the Global Air Navigation Plan, the regional planning process starts by identifying the homogeneous ATM areas, major traffic flows and international aerodromes. An analysis of this data should lead to the identification of opportunities for performance improvement. Modules from the Aviation System Block Upgrades (ASBU) would be evaluated to identify which best provide the needed operational improvements. Depending on the complexity of the module, additional planning steps may need to be undertaken including regional financing (if appropriate) possible regional training needs and special emphasis work groups. Finally, regional implementation plans would be developed. This is an iterative planning process which may require repeating several steps until a final plan is in place. This planning requires interaction between regulators, users of the aviation system, the Air Navigation Service Providers (ANSP's) and Aerodrome operators, this ensuring commitment by all States and ANS partners for its implementation.

2.2 The online planning tools described below will assist planners in carrying out the above steps.

2.3 In order to support PIRGs/States in their planning, templates and guidance for all Block 0 modules will be available in Volume II – FASID of each regional ANP. The successful implementation of the modules will depend on a common understanding with all stakeholders. Consequently, ICAO undertook significant efforts to familiarize States, Regulators, Service Providers, Airline Operator and international organizations on the concept of ASBUs; the effort was twofold. ICAO conducted a high-level briefing for each region, in connection with another high-level meeting or symposium. Also, each region received/will receive a five-day detailed ASBU implementation workshop including hands-on exercises for the benefit of States.

2.4 To keep the focus on the continuing process of aligning the regional plans to the GANP, it is suggested the following next steps:

- a) States and PIRGs focus on initially implementing ASBU Block 0 modules; and
- b) PIRGs finalize the development of their aligned regional plans by May 2014

2.5 The collective Regional Plans which will serve as the basis for the first Global Air Navigation Report, planned to be released in December 2014.

3. **Electronic tools to support the planning and implementation process at the global and regional levels**

3.1 The modern planning environment in general, and the realization of the alignment between the GANP and the regional plans specifically, requires the implementation of a data-based online format to ensure that all stakeholders are connected to the same up-to-date information. To that end, ICAO has implemented a series of Air Navigation planning and reporting tools as outlined below.

3.2 **Regional Air Navigation Plans – current paper-based format**

3.2.1 In February 1997, the Council decided that the ANPs should be published in all ICAO languages comprising of two volumes; Volume I – Basic ANP and Volume II – Facilities and Services Implementation Document (FASID). The intent was to simplify the amendment process to ensure currency of information. Amendments to the Basic ANP go through an approval process by the governing body whereas the FASID is updated by the Secretariat. In July of 2011, the amendment process was automated to further reduce the process time within ICAO. But despite all these improvements, the challenge remained to keep the paper-based regional ANPs updated, particularly in view of continuous air navigation technological developments. To address this issue, an online format of the regional ANPs, called eANPs, has been launched.

3.3 **Regional Air Navigation Plans – new online format**

3.3.1 While the structure and table of contents of eANPs are the same as that of paper-based ANPs salient features of the new eANPs system are:

- a) a user-friendly, robust, web-based planning and editing tool for States, ICAO and, PIRGs to ensure centralization and currency of data;
- b) an immediate and collaborative approach to air navigation planning so that all partners share the quality and quantity of data and can distribute (or subscribe to) new versions or updates quickly and easily;
- c) updated versions of the text and tables of ATS routes of Volume I, the Basic ANP; and
- d) the FASID tables in Volume II are user friendly tables of CNS, AIM, AOP and MET. These FASID tables will be standardized and harmonized across all regions and aligned with Aviation System Block Upgrades (ASBU) methodology.

3.3.2 To simplify its introduction, all procedures that apply to the current paper-based ANPs will continue for the eANPs. However, to make full use of the online system, ICAO will continue to simplify the workflows related to the amendment process, and related to the data within the eANP, to increase the efficiency, accuracy, and accessibility in maintaining the narrative and data in the ANPs.

4. **Integration of all air navigation planning tools into a single user interface**

4.1 In addition to the ANPs in their electronic format, ICAO has been developing a wider range of Safety and Air Navigation Tools with the regional air navigation planner in mind. These tools include:

- a) a growing gallery of interactive maps that provides a high-level overview of the implementation status of global and regional priorities (see the Appendix on the implementation status of the new Flight Plan at the time of writing). These tools will also allow much of the current paper-based reporting to be made obsolete as decision makers will have access to real-time information on a continuous basis; and
- b) an online tool for managing location indicators and other air navigation data not contained in the ANPs, which will include the ability of air navigation planners to request new or submit amendments to existing indicators online.

4.2 These ICAO tools will be demonstrated in the exhibition area during the Twelfth Air Navigation Conference (AN-Conf/12) and simple one-page training aids will be provided online and will be distributed during the Conference. Each Regional office will have these tools in place, and the Regional Officers trained, by December 2012.

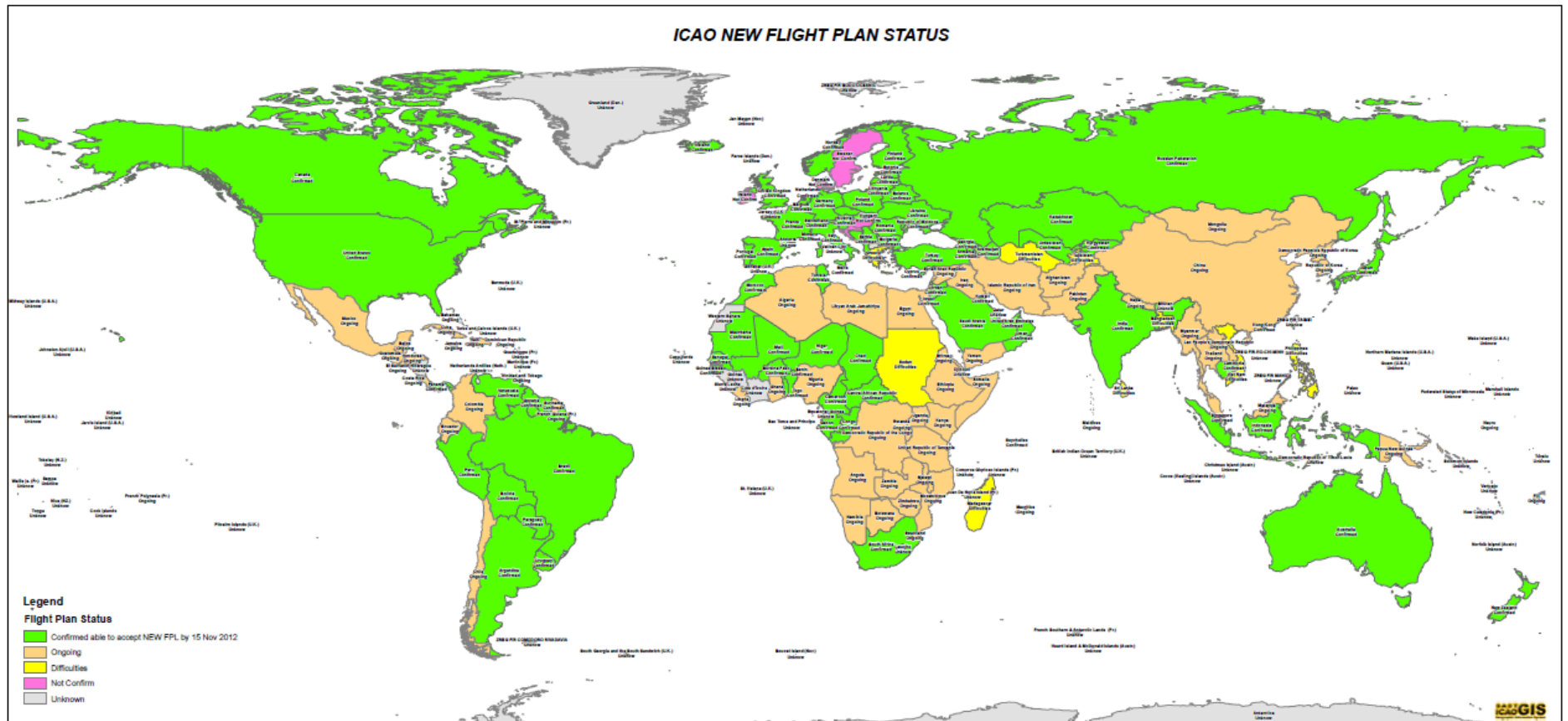
5. **Action by GREPECAS PPRC/1**

5.1 The Meeting is invited to note the progress of the transition to eANPs and regional performance framework for the implementation of air navigation infrastructure.

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APPENDIX

STATUS OF IMPLEMENTATION OF THE NEW FLIGHT PLAN (AS OF 27/2/2012)



— END —



Agenda Item 5: Other business

REVIEW OF THE OUTLINE AND OBJECTIVE FOR REVISED GANP

(Presented by the Secretariat)

SUMMARY The 37th Session of the Assembly requested ICAO to review the Global Air Navigation Plan (GANP) (Resolutions A37/4 and A37/12 refer). The GANP document was last updated in 2005. This working paper presents the objectives of and outlines the work involved in revising the GANP. Action by GREPECAS PPRC/1 is in paragraph 3.	
References: <ul style="list-style-type: none">• Doc 9854, Global Air Traffic Management Operational Concept;• Doc 9750, Global Air Navigation Plan	
Strategic Objective(s)	<i>This working paper is related to Strategic Objective A – Safety</i>

1. Introduction

1.1 *Global framework:* ICAO strives to achieve the goal of a safe and orderly development of civil aviation through cooperation among Contracting States and other stakeholders. Recognizing the importance of a global framework to support ICAO's Strategic Objectives for the safety and sustainability of the air transportation system, the Organization developed the Global Air Navigation Plan (GANP) in 2006. This working paper presents the objectives for the revision of this global document and outlines the revision work involved.

2. Revision of the global air navigation plan (GANP) — objectives

2.1 *Need for review:* The GANP, which was accepted by the Council in November 2006, has also been very successful as a high-level strategic document and has guided the efforts of States, planning and implementation regional groups (PIRGs) and international organizations in enhancing the efficiency of air navigation systems. The Global Plan contains near- and medium-term guidance on air navigation system improvements necessary to support a uniform transition to the global air traffic management (ATM) system envisioned in the operational concept the *Global Air Traffic Management Operational Concept* (Doc 9854). The long term initiatives of the operational concept, however, are maturing and the Global Plan needs to be updated to be relevant to the user community. The 37th Session of the Assembly (Resolutions A37-4 and A37-12 refer) instructed the Council to ensure that, in light of further operational and technical developments, the GANP is continuously maintained up to date in close collaboration with

States and other stakeholders. The Assembly also directed the Council to update the GANP reflecting a globally harmonized series of operational upgrades. The intended timeframe to deliver the revised GANP, with the roadmaps incorporated, is the Twelfth Air Navigation Conference (AN-Conf/12) planned to be held in Montréal in November 2012. The revision work on the GANP is outlined in the Appendix.

3. **Action by GREPECASPPRC/1**

3.1 The meeting is invited to:

- a) note the summary of the proposed revision to the GANP in Appendix to this paper;
- b) recognize that work on revising the GANP is underway; and
- c) take into account in planning and implementation of regional air navigation systems.

APPENDIX

GLOBAL AIR NAVIGATION PLAN (GANP) Outline of the revision work

1. An updated and enhanced GANP will be a strategic document focusing, as before, on the implementation of a harmonized global ATM system and will outline a stepwise set of globally harmonized operational block upgrades which have been coordinated with States through a series of events planned for 2011 and 2012. This coordination will also take into consideration the reality that the pace of development and implementation within different States and regions will vary.
2. The revised GANP will provide roadmaps in support of the Global ATM Operational Concept that will bring some certainty to the investment decisions and actions on infrastructure, equipage and regulatory approval by States, air navigation service providers (ANSPs), aerodromes and operators. It will identify global operational trials which can serve to validate operational improvements and assist in the development of procedures as well as assist those States in introducing improvements for their growth demands.
3. A new format and structure is proposed for the revised GANP. Guiding principles and other enduring information will be contained in the body of the Plan. It is expected, however, that much will change before the next planned air navigation conference and, therefore, means are proposed to adapt the GANP to changing needs and circumstances. This, in fact, is one of the purposes of the roadmaps where such changes will be captured. The roadmaps will be presented in Appendices to the GANP, where more frequent changes will be possible, and will link to electronic versions of the regional air navigation plans, which will provide information on the regional plans and their implementation status. The resulting enhanced GANP will remain a top-down strategic document for States, PIRGS and international organizations.

— END —



Agenda Item 5: Other business

REVIEW OF THE PROPOSED REVISIONS TO THE GASP

(Presented by the Secretariat)

SUMMARY	
This information paper presents a summary of the proposed revisions to the GASP, including targets and Global Safety Initiatives (GSIs).	
Reference: <ul style="list-style-type: none">• Assembly Resolution A37-4	
Strategic Objective(s)	<i>This working paper is related to Strategic Objective(s) A – Safety</i>

1. Introduction

1.1 The 37th Session of the ICAO Assembly, held in 2010, resolved that ICAO shall implement and keep current to update the GASP and the Global Air Navigation Plan (GANP) to support the relevant strategic objectives of the International Civil Aviation Organization (Assembly Resolution A37-4, refers).

1.2 The relation of the GANP and GASP, as strategic planning documents, includes a series of global initiatives for use by States and the international aviation community to continuously improve efficiency and safety. Recognizing the complexity of the contemporary air transport system and the corresponding need for a strategy that is global both geographically and in a multi-disciplinary context, the GANP and GASP facilitate coordination of activities undertaken by all stakeholders.

1.3 In view of the latest developments in safety management practices, it has become necessary to update the GASP accepted by the Council in July 2007. The proposed edition provides a proactive strategy to improve aviation safety through incorporation of the latest developments related to safety management practices, providing a multi-disciplinary and, risk-based approach to achieve continuous improvement in global safety performance.

2. Discussion

2.1 The purpose of the GASP is to provide a strategic framework for the aviation community to continuously improve aviation safety. It is designed to leverage the benefits of cooperation among aviation stakeholders; therefore being applicable to ICAO, its Member States, international and regional organizations, as well as product and service providers involved in the continuous enhancement of aviation safety performance. This enhancement is proposed to be achieved by reducing the level of risk in the international air transport system that can result in the loss of life, serious injury or property damage.

2.2 The proposed GASP includes global safety targets (a general target and 4 supporting targets) that serve as high-level indicators used to measure success in attaining the overall GASP goal. The general target is to reduce the number of accidents and related fatalities worldwide irrespective of the volume of traffic. The following supporting targets aim to address the areas of highest safety risk that are known to be present.

- a) Significantly reduce the rate of runway safety related accidents and serious incidents;
- b) Significantly reduce the rate of loss of control in-flight related accidents and serious incidents;
- c) Significantly reduce the rate of accidents and serious incidents associated with system component failures; and
- d) Continue to lower the rate of controlled flight into terrain (CFIT) related accidents and serious incidents.

2.3 To achieve the enhancement of aviation safety performance and meeting the global safety targets, the revised GASP proposes the following GSIs, which comprise a high-level strategy designed to assist the international community in its implementation.

GSI 1 – Improving standardization and harmonization

GSI 2 – Establishment and management of State safety oversight systems

GSI 3 – Access to sufficient numbers of qualified personnel for States and industry

GSI 4 – Establishment and management of accident and incident investigation systems

GSI 5 – Alignment and coordination of safety initiatives

GSI 6 – Continuous monitoring and enhancement of aviation safety performance

GSI 7 – Implementation of safety management practices

GSI 8 – Proactive use and sharing of safety intelligence

GSI 9 – Use of technology to enhance safety

2.4 The implementation of the GSIs to continuously improve aviation safety performance will require collaboration among aviation stakeholders to provide the necessary support while minimizing duplication of efforts at the global, regional and national levels. In addition, the GASP recognizes that targeted investment remains essential to assure the continuous improvement of safety performance.

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Agenda Item 3: Review of GREPECAS Programmes and Projects
3.6 AGA Programme Projects

**IMPLEMENTATION STATUS OF
THE RUNWAY SAFETY TEAM (RST) PILOT PROGRAMME
IN THE CAR REGION**

(Presented by Secretariat)

SUMMARY

One of the outcomes of the ICAO/FAA/IFATCA Regional Runway Safety Seminar for the NAM/CAR/SAM Regions held in October 2011 was to support the establishment of local Runway Safety Teams (RSTs) to address the prevention and mitigation of runway excursions, runway incursions and other occurrences related to runway safety.

The RASG-PA/4 Meeting supported this initiative, and the Mexico DGCA is leading the pilot programme for the implementation of the RST at Mexico City International Airport (MMMX) with the support of the ICAO NACC Regional Office and other stakeholders.

This RASG-PA activity must be coordinated with GREPECAS to eliminate the duplication of efforts and resources and to coordinate future activities.

References:

- Annex 6 — *Operation of Aircraft*
- Annex 11 — *Air Traffic Services*
- Annex 13 — *Aircraft Accident and Incident Investigation*
- Annex 14 — *Aerodromes*
- ICAO Doc 9870 – *Manual for prevention of runway incursions*
- RASG-PA/04 Meeting Report

**Strategic
Objective(s)**

*This information paper is related to Strategic
Objective(s) A – Safety*

1. Introduction

1.1 Aviation data indicates that runway excursions (RE) and runway incursions (RI) accidents are still a safety risk factor. The ICAO Runway Safety Programme has evolved to include the

prevention and mitigation of RE, RI and other occurrences related to runway safety. This Programme is envisioned to provide a forum for regulators, aircraft operators, air navigation services providers, aerodrome operators and aircraft manufacturers to address runway safety issues across operational fields.

1.2 RASG-PA addresses REs in its work programme by means of related Safety Enhancement Initiatives (SEIs) and consequently with the associated Detailed Implementation Plans (DIPs).

2. Discussion

2.1 ICAO organized the first Regional Runway Safety Seminar (RRSS) in the world for the NAM/CAR/SAM Regions, in Miami, United States, from 12 to 14 October 2011, sponsored by the United States FAA and IFATCA, and supported by the Miami International Airport, ACI, and IATA.

2.2 The outcomes from the ICAO/FAA/IFATCA RRSS were presented and approved by RASG-PA/04 meeting as Conclusion RASG-PA/4/6 - Regional Runway Safety Teams (RSTs).

2.3 The Conclusion states in part, that RASG-PA supports launching the RST pilot project at MMMX, supported by the Mexican DGCA, local and international stakeholders.

2.4 The ICAO NACC Regional Office has coordinated RST implementation activities with the Mexico DGCA, Aeropuerto Internacional de la Ciudad de México (AICM) and main stakeholders, beginning in January 2012.

2.5 As a result of this coordination, three meetings have been held at AICM in 2012, in order to first define the focal points, the terms of reference, and the methodology to be followed for developing a runway safety action plan at this airport. The work is on-going and the outcome of the pilot programme will be presented in the RASG-PA/ESC/13 Meeting to be held on 19 June 2012 in Bogotá, Colombia.

2.6 As an additional mandate in Conclusion RASG-PA/4/6, the RASG-PA Aviation Safety Training Team (ASTT) included an overview of the RST implementation plans and runway safety best practices in the RASG-PA Aviation Safety Workshops to be conducted in 2012.

2.7 The RASG-PA/ESC/12 did not consider the allocation of funding for RST Go Teams under the ICAO leadership and the participation of ICAO's Runway Safety Partners to assist States with the establishment of RSTs as endorsed in Conclusion RASG-PA/4/6 - Regional Runway Safety Teams (RSTs) due to the lack of resources.

3. Suggested Action

3.1 The Committee is invited to consider the coordination of the RASG-PA activities regarding the RSTs with GREPECAS, in order to eliminate the duplication of efforts and resources and to coordinate future activities in the CAR/SAM Regions.

— END —



Agenda Item 5: Other business

AERODROMES WILDLIFE CONTROL AND REDUCTION

(Presented by the Secretariat)

SUMMARY

This working paper presents to the meeting the diverse ongoing activities undertaken by the GREPECAS Regional Committee CARSAMPAF and the Regional Group RASG-PA with regards to bird and wildlife strike prevention at aerodromes.

In order to avoid duplication of efforts it is recognize the need for coordination between the Regional Committee and the Regional Group for future plans and programmes.

References:

- AGA/AOP/SG/7 Final Report (Buenos Aires, Argentina, from 9 to 13 November 2009)
- AGA/AOP/SG/8 Final Report (Mexico City, Mexico, from 19 to 21 July 2011)
- RASG-PA ESC/12 Meeting WP/13 presented by IATA/ALTA (Montego Bay, Jamaica, 14 to 15 March 2012)
- www.carsampaf.org , web page

Strategic Objective(s)	<i>This working paper is related to Strategic Objective(s) A – Safety C – Environmental Protection and Sustainable Development of Air Transport.</i>
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1. Introduction

1.1 The CAR/SAM Regional Committee on bird/wildlife strike prevention (CARSAMPAF) at aerodromes was created during the GREPECAS AGA/AOP Subgroup meetings, initially as a task force and then as a Regional Committee currently composed of a Board of Directors and with more than 150 members, including civil aviation authorities, airport personnel and experts.

1.2 The objective of this Regional Committee is to provide airport staff with the information necessary to develop and implement an effective bird/wildlife control organization for their aerodromes. This in support to Annex 14 requirement to actions to be taken to decrease the risk to aircraft operations by adopting measures to minimize the likelihood of collisions between wildlife and aircraft.

2. Discussion

2.1 The CARSAMPAF conferences generally focus on matters dealing with the reasons why bird/wildlife strike occur at an aerodrome, the organization and composition of a national committee to combat potential bird/wildlife hazards to aircraft operations, and the modifications to be carried out at an aerodrome to remove the features which attract birds/wildlife.

2.2 As a reference the following events were carried out in the past 4 years:

- The Fifth International Conference on the Prevention of Bird/Wildlife Strike, was held in Guayaquil, Ecuador, on 1-5 October 2007, pursuant to the new terms of reference of the CARSAMPAF Regional Committee and the election of the new Board of Directors for the next four years, from 2008 to 2011.
- The Sixth International Conference on the Prevention of Bird and Wildlife Strike, was held concurrently with the first joint conference of the International Bird Strike Committee (IBSC) and the CAR/SAM Regional Committee for the Prevention of Bird and Wildlife Strike (CARSAMPAF), was organised by the Aeronautical Accident Investigation and Prevention Centre (CENIPA) together with the Bird Strike Control Committee of Brazil (CCPAB). The event was held in Brasilia, Brazil, on 24-28 November 2008.
- The Seventh International Conference on the Prevention of Bird and Wildlife Strike was held in Grenada in 2009 with the support of the FAA and USDA.
- The Eight International Conference on the Prevention of Bird and Wildlife Strike was held in San José, Costa Rica, in 2010.
- The Ninth International Conference on the Prevention of Bird and Wildlife Strike was held in Medellín, Colombia, with the support of the FAA and USDA, in 2011.

2.3 Regarding the Programme on the reduction of the risks associated with bird hazard developed by IATA and ALTA, attached as **Attachment** to this working paper is the information provided in relation with the pilot programme and the airports selected to visit and based on the results expand the programme to other aerodromes.

3. Suggested actions

The meeting is invited to:

- a) Take note of the information provided in the working paper;
- b) the need for coordination between ALTA/IATA and CARSAMPAF and involvement of ICAO to avoid duplication of efforts between Regional Groups and Committees; and
- c) RASG-PA to invite CARSAMPAF in the development of plans and future projects on the subject of wildlife and bird hazard management.



International Civil Aviation Organization
Twelfth Meeting of the Regional Aviation Safety Group
– Pan America (RASG-PA) Executive Steering Committee
RASG-PA ESC/12



Montego Bay, Jamaica, 14 to 15 March 2012

Agenda Item 7: Other Matters

BIRD STRIKE RISK REDUCTION PROGRAM

(Presented by ALTA/IATA)

SUMMARY

IATA and ALTA have been working closely on a Bird Strike Risk Reduction program for airports based in the Latin America & Caribbean Regions.

Twenty five Airlines have provided IATA/ALTA their historical bird strike data in order to produce a data-driven approach for the program and create awareness of the problem in the region.

ALTA/IATA have partnered with the FAA and USDA to use their expertise in our region with a pilot program. Two airports were selected for the pilot. Based on the pilot results, the model will then be exported to other airports in the region applying any lessons learned and best practices found.

Strategic Objective

This working paper is related to Strategic Objective A – Safety

1. Introduction

1.1 During the last ALTA Safety Summit held in Mexico City, airlines were presented with the compilation of historical bird strike data from 25 carriers to highlight the current situation (**Appendix**). The collaborative program between IATA and ALTA, with expertise from FAA and USDA, was presented to the participants. After general discussion the initiative was accepted.

1.2 A Bird Strike Sub-committee was created to drive the program, headed by IATA and ALTA, with the participation of representatives from COPA, Avianca and LAN.

2. Program Activities

2.1 The Sub-committee met four times (conference call and as a group) to share experiences with bird strike programs and to design the Bird Strike Risk Reduction Program. The meeting was attended by representatives and bird strike experts from the FAA, USDA, Boeing, Airbus, IFALPA, ACI-LAC, LACSA, LAN Airlines, LAN Peru, LAN Ecuador, Avianca, Copa, Copa Colombia, ALTA and IATA.

2.2 After considering the proposal of the FAA/USDA and the available data, it was decided that a pilot program would be initiated at Panama's Tocumen and Ecuador Guayaquil International Airports. They were chosen based on their high bird strike incident rates, support from airlines and aeronautical authorities, and the similar situation of their natural environments.

2.3 A tentative schedule for the pilot program was presented and accepted by the participants (**Appendix B**).

2.4 A team of local champions was created to help drive current and future initiatives in key airports that will benefit from lessons learned during the pilot program. The list of champions is listed in **Appendix C**).

2.5 The FAA and USDA have allocated funds for this project in 2012 and letters signed by the FAA, USDA, ALTA, IATA & ACI-LAC were sent to Guayaquil and Panama DGCAs and airport concessionaires to present the program.

2.6 The local DGCAs, airport concessionaires and Local Airlines Association of Panama and Guayaquil approved the project and provided the necessary support and funding to carry out the first phase of the project.

3. Next Steps

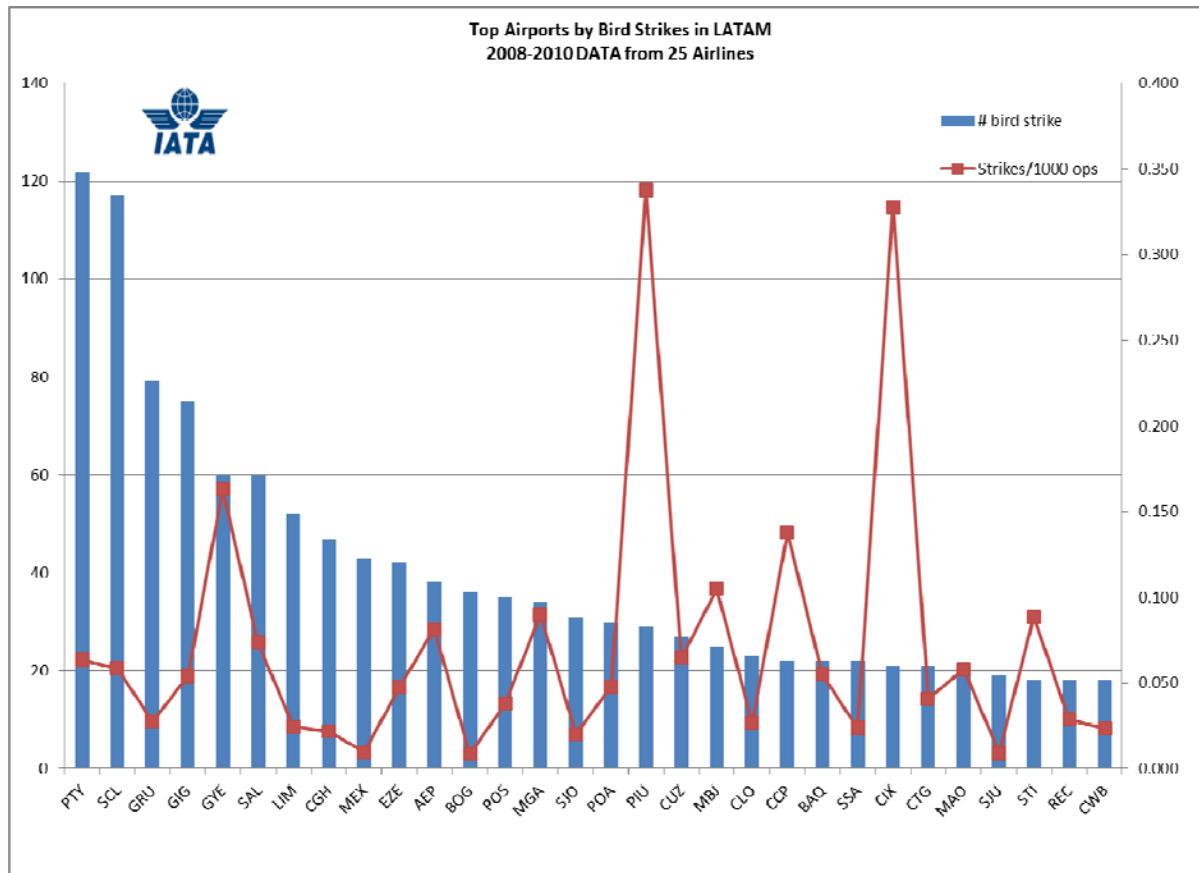
3.1 The FAA and USDA are working on schedules for their bird strikes experts in order to set a date for the first visit to the two airports. Once a date is agreed upon, initial preparations will commence to supply all the necessary data to the experts prior to their visit and arrange the logistics.

4. Suggested Action

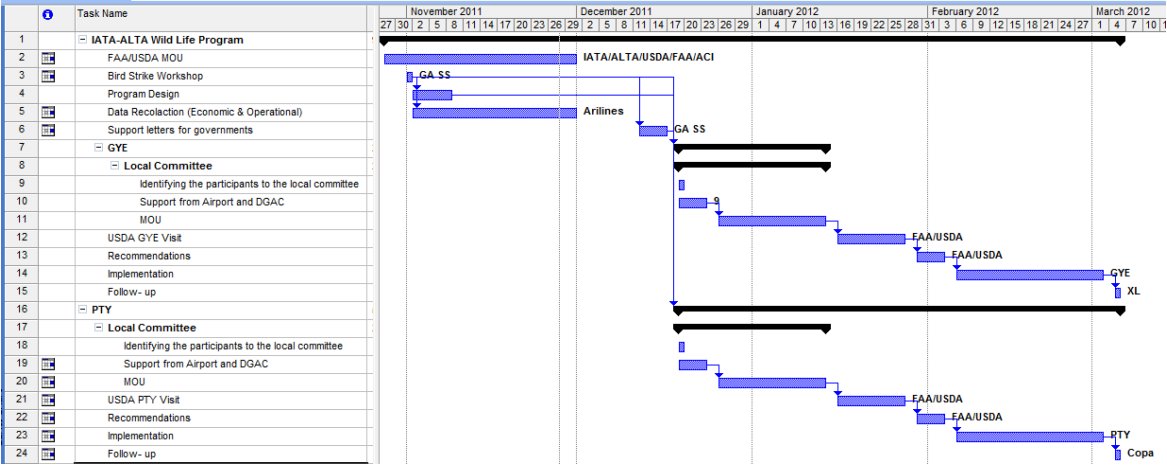
4.1 The RASG-PA ESC/12 is requested to:

- a) take note of the information provided in this working paper;
- b) to make this an official RASG-PA project and invite its members to join the projects Sub-committee; and
- c) provide assistance and/or identify potential resources in order to ensure the success of this initiative.

APPENDIX A / APÉNDICE A



APPENDIX B / APÉNDICE B



APPENDIX C / APÉNDICE C

Country or region	Airports	Airline Leader		Airline support	
Panamá	PTY	Copa Airlines	Adriana Molina	N/D	
Ecuador	GYE	LAN	Octavio Perez	AviancaTaca	TBC
Chile	SCL	LAN	Raul Cuadra	N/D	
Colombia	BOG	AviancaTaca	Edickson Santamaria	Copa Airlines	Adriana Molina
Perú	LIM, PIU, CIX	LAN	Jaime de Souza	N/D	
Centro América	SJO, MGA, SAL	AviancaTaca	Cesar Miranda	Copa Airlines	Adriana Molina

— END / FIN —



International Civil Aviation Organization

CAR/SAM Regional Planning and Implementation Group (GREPECAS)

First Meeting of the Programmes and Projects Review Committee (PPRC/1)

Mexico City, Mexico, 25-27 April 2012

PPRC/1 - FLIMSY/01

26/04/12

Agenda Item 4:

Items related with the Organization of GREPECAS

**4.2 Review of Terms of Reference and Work Programme of the
Programmes and Projects Review Committee**

PROPOSED ADDITION TO THE PPRC TORS

(Presented by United States)

"Mandate/Objectives

The PPRC directs, coordinates and provides oversight for the work performed by GREPECAS under the project based mechanism. The PPRC is a leadership body supported by high-level Executives from its member States and has the authority to review and provide oversight of the GREPECAS programs and projects. The steering committee concept is based on its member representative States having the responsibility for reviewing, amending, and establishing programs and projects for GREPECAS. The members do not work the technical issues, but instead consider all programs and projects in an impartial manner from the project objectives, implementation and results perspective. As projects mature, the PPRC ensures the work is prepared for presentation to, review and approval by GREPECAS. If projects are viewed as not ready for plenary review, they are considered not mature and need to either continue their work, make changes to the project parameters, or end the project."

- END -