INTERNATIONAL CIVIL AVIATION ORGANIZATION
South American Office

MEETING OF AIR NAVIGATION AND FLIGHT SAFETY DIRECTORS OF THE SAM REGION

FINAL REPORT

Lima, Peru, 21 to 22 October 2013

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HISTORY OF THE MEETING

ii-1 PLACE AND DURATION OF THE MEETING

The Meeting of Air Navigation and Flight Safety Directors of the SAM Region was held at the premises of the ICAO South American Regional Office in Lima, Peru, from 21 to 22 October 2013.

ii-2 OPENING CEREMONY AND OTHER MATTERS

Mr. Franklin Hoyer, Regional Director of the ICAO South American Office, greeted the participants for the continuous support provided to the regional activities developed by the South American Office, as well as the civil aviation authorities and national and private organizations of the ICAO South American Region for the continuous support. In addition, he highlighted the importance that at the end of the Meeting the implementation priorities for the SAM Region have been defined, with the respective goals and related metrics to form part of the final draft Declaration of Bogota, document to be written up in this Meeting.

ii-3 SCHEDULE, ORGANIZATION, WORKING METHODS, OFFICERS AND SECRETARIAT

The Meeting agreed to hold its sessions from 08:30 to 15:00 hours, with appropriate breaks. The work was done with the Meeting as a single committee and in working groups.

Ms. Gabriela Logatto, delegate from Argentina, was unanimously elected as Chairman, Air Navigation Services, and Mr. German Ramiro García Acevedo, delegate from Colombia, was elected as Chairman, Air Safety.

Mr. Onofrio Smarrelli, RO/CNS SAM Office, acted as Secretary assisted by Mr. Marcelo Ureña, RO/FLS SAM Office.

ii-4 WORKING LANGUAGES

The working language of the Meeting was Spanish, with simultaneous interpretation in English, and its relevant documentation was presented in Spanish and English.

ii-5 AGENDA

The following agenda was adopted:

Agenda Item 1: Introduction to the global air navigation plan (GANP) and global air safety plan (GASP) and regional actions for the implementation of priorities in the SAM Region

Agenda Item 2: Analysis of performance indicators and metrics for the implementation of air navigation and safety efficiency and capacity improvements

Agenda Item 3: Preparation of the Declaration of Bogota

Agenda Item 4: Other business

ii-6 ATTENDANCE

The Meeting was attended by 25 participants from 8 States of the SAM Region (Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru and Uruguay). The list of participants is shown in page iii-1.

ii.7 LIST OF CONCLUSIONS

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Agenda Item 1: Introduction to the global air navigation plan (GANP) and global air safety plan (GASP) and regional actions for the implementation of priorities in the SAM Region

1.1 Under this Agenda Item, the Meeting analyzed WP/2 - *Air navigation regional objectives and priorities*, WP/3 - *Air safety regional objectives and priorities*, IP/3 – *Global Air Navigation Plan*, IP/4 – *Global Air Safety Plan* and IP/5 - *Air Navigation System Performance-Based Implementation Plan for the SAM Region*, all presented by the Secretariat.

1.2 The Meeting was informed of the global air navigation implementation priorities taken under consideration in the fourth edition of the Global Air Navigation Plan (GANP), endorsed by the Thirty-eighth Session of the ICAO Assembly (A38) (Montreal, Canada, 24 September to 4 October 2013).

1.3 In this respect, the Meeting considered that the global implementation priorities (performance based navigation (PBN), continuous descent operations (CDO), continuous climb operations (CCO), aeronautical information management (AIM), air traffic flow management (ATFM) and the estimated environmental benefits resulting from operational improvements), together with AMHS implementation, interconnection of automated systems and the implementation of national Internet Protocol Suites (IPS) networks would represent the SAM air navigation implementation priorities for the 2014-2016 period.

1.4 In addition, the Meeting deliberated that the following air safety implementation priorities in the Global Air Safety Plan (GASP), also supported by the ICAO A38 Assembly, would be adopted in the SAM Region: safety oversight, accidents, runway excursions and incursions, aerodromes certification and implementation of the Safety Management System (SMS) and State Safety Programme (SSP).

1.5 The Meeting was informed that, with the aim that ICAO can measure the progress made in the implementation of global objectives and priorities in each of the regions, the ICAO Regional Offices websites will upload *Regional Performance Dashboards* reflecting these changes through graphics and charts.

1.6 In this regard, the Meeting deemed it convenient that the afore mentioned air navigation and air safety implementation priorities be included in the SAM regional performance dashboard.

1.7 The Meeting took under consideration the suggestion of Colombia to relate the air navigation priorities with the modules of the Aviation System Block Upgrades (ASBU) methodology, in order to facilitate the relationship between the Air Navigation System Performance-Based Implementation Plan for the SAM Region (PBIP) and the States national plans, both in alignment with ASBU.

Agenda Item 2: Analysis of performance indicators and metrics for the implementation of air navigation and safety efficiency and capacity improvements

2.1 Under this Agenda Item, analyses were made to WP/04 - *Safety* and WP/05 – *Aerodromes certification,* presented by the Secretariat with regard to aviation safety, and WP/06 - *PBN regional implementation,* WP/07 - *ATFM implementation in the SAM Region,* WP/08 - *AIM implementation in the States of the SAM Region* and WP/09 - *Improvements to the Communications, Navigations and Surveillance Systems,* presented by the Secretariat in respect of the air navigation field.

GOALS AND RELATED METRICS FOR THE IMPLEMENTATION OF AIR NAVIGATION EFFICIENCY AND CAPACITY IMPROVEMENTS

2.2 The Meeting approved the following implementation priorities for the air navigation efficiency and capacity improvements presented by the Secretariat: PBN (route, terminal, approach) ATFM, AIM, AMHS interconnection, automated systems interconnection (radar data and AIDC) and national IPS networks. The Meeting analysed the goals and related metrics of each of the implementation priorities described hereunder.

PBN implementation

2.3 The Meeting, upon analysing the status of implementation of performance based navigation (PBN) in the South American Region, noted the current status of PBN implementation in the optimization of routes, terminal areas (TMAs) and instrument approach procedures (IAPs), and discussed the goals to be achieved by the SAM States for the 2014-2016 period.

Optimization of the regional ATS routes network (ATSRO)

2.4 With regard to the optimization of regional routes, observation was made that of a total of 254 routes composing the regional ATS routes network, 159 (62%) are conventional routes and 95 (38%), PBN routes.

PBN redesign of terminal areas

2.5 With regard to standard instrument arrivals and departures (STAR and SID), the Meeting analysed the results of the survey carried out by the Regional Office, as well as the information in the States AIPs.

2.6 The Meeting took note that of the 99 SAM international aerodromes in the CAR/SAM Air Navigation Plan (ANP), in the SAM Region a total of 1680 STAR and SID procedures have been designed and published, of which 878 (52%) are conventional, while 802 (48%) are PBN.

2.7 The Secretariat informed the Meeting that, with regard to continuous descent operations (CDO) and continuous climb operations (CCO) in the regional PBN STAR and SID, there are for the moment no CDO and CCO published as such in the respective AIPs, but Brazil counts with 56 STAR PBN in SBBS (Brasilia) and 24 STAR PBN in SBRF (Recife) that would have been developed applying CDO techniques, although there is no indication as such in the log.

2.8 The topic related with CCO or CDO indications in the SID or STAR log is something that at the moment, due to its importance, is under study by the planning and implementation regional groups, in order to ensure a better situational awareness of controllers and pilots.

PBN instrument approach procedures

2.9 With regard to PBN instrument procedures, the Meeting was informed on ICAO Assembly Resolution A37-11 related with global performance based navigation goals.

2.10 In addition, the Meeting received information, with respect to Resolution A37-11, that in the 114 runways in the SAM Region, instrument procedures have been developed for 175 of the existing 228 runway ends. 107 APV procedures have been implemented for these 175 runway ends, equalling to 61% runways with IFR.

2.11 Of the total procedures in the international aerodromes of the Region, the Meeting took note that in the SAM Region, there are 783 approach procedures for the 99 airports; 178 are PBN approach (counting IAPGNSS), of which 207 are RNP APCH, which equals to 14%, distributed in the following manner: 83 APV Baro-VNAV (APV) procedures, 11% and 24 RNP required authorization (RNP AR) representing 3%.

PBN goals in the SAM Region for the 2014-2016 period

2.12 With regard to standard instrument departures and arrivals (SIDs and STARs) designed under the PBN concept, the CDO and CCO operations, as well as the objectives in Resolution A37-11 regarding approach procedure with vertical guidance, the Meeting agreed upon the following regional goal for the 2014-2016 triennium:

Proposed percentages	**60% 2016**	**60% 2016**	**40% 2016**	**40% 2016**	**60% 2016**	**As per Resolution A-37/11 70% 2014 / 100% 2016**		
CAR/SAM ANP INTERNATIONAL AERODROMES	SID PBN	STAR PBN	CCO CDO In SIDs and STARS	Lower airspace PBN routes	Upper airspace PBN routes	IAP APV/L NAV	IAP RNP-AR	IAP LNAV Only

2.13 In addition and with regard to the afore indicated, the Meeting agreed on establishing a regional goal in the **reduction of CO_2 emissions to 40.000 tons per year**, mostly related with the optimization of routes, TMAS and the use of CCO and CDO techniques.

ATFM

2.14 The Meeting analysed the status of implementation of the air traffic flow management (ATFM) in the South American Region and recognized the need in the Region to establish at least one ATFM post at the area control centres, in view of the global events to be developed between 2014 and 2016.

2.15 Note was taken that to date two centralized flow managements, three flow management units or posts (FMU/FMP) had been implemented in the SAM Region, while one State is in the process of its implementation and eight are just starting activities, or have yet to start actions towards ATFM implementation. On the basis of the analysis conducted, observation was made that 36% of the SAM States have implemented FMU or FMP units.

2.16 In addition, the Meeting was informed that of the total of 99 SAM international airports, ATFM service is provided at 51 aerodromes (27 in Brazil, 8 in Colombia, 2 in Paraguay and 7 in Venezuela), that is, 52% of all regional airports. States in process of implementing this service have not been taken into account within this percentage.

2.17 The Meeting recalled that in the Region, and under the support of Project RLA/06/901, many training courses have been carried out, as well as a guidance document to carry out runway and ATC capacity calculation, to guide States in the methodology for runway and ATC sectors calculation, courses in Brazil on the ATFM centralized unit, as well as the ATFM and CDM manuals, for their application in the SAM Region.

ATFM goals in the SAM Region for the 2014-2016 period

2.18 Taking all of the above into account and given the importance of ATM in the balance management between capacity and demand, the Meeting agreed to the following ATFM goals for the 2014-2016 period:

a) 2014-2016, at least one flow management unit (FMU) or flow management post (FMP) at the ACC of each FIR; and
b) 2016, one ATFM centralized unit (ATFMC) in States with more than one FIR.

AIM implementation

2.19 With regard to AIM implementation in the SAM Region, the Meeting was informed on the status of implementation of the AIS to AIM roadmap, Phase 1, as well as on the quality assurance documents developed, which were at States disposal for implementation under the ISO 9001:2008 standard.

2.20 The Meeting took note that the 14 SAM States had completed the P-03, P-04 y P-05 elements in the AIS to AIM roadmap and, with respect to element P-17, 5 States are QMS certified: Brazil, Chile, Ecuador, French Guiana (France) and Paraguay.

2.21 It was also informed of the importance of completing Phase 1 of the AIS to AIM transition process, since in the tiered and inter-dependent system it is indispensable that one phase is completed in order to be able to pass on to the next transition phase.

2.22 In this sense, the Meeting recognized that a delay in the implementation of Phase 1 will bear an important impact on several areas depending on the quality of the aeronautical information. One of the most affected fields is ATM.

AIM PHASE I goals in the SAM Region for the 2014-2016 period

2.23 As per information provided, the Meeting agreed that for the 2014-2016 period, the following goals be proposed to States still pending AIM QMS certification:

STATE	Implementation % January 2012	Implementation % May 2013	Certification
Argentina	30 %	30%	**2015**
Bolivia	30%	30%	**2015**
Colombia	70%	90%	**2014**
Guyana	0%	25%	**2016**
Panama	70%	70%	**2015**
Peru	40%	50%	**2015**
Suriname	30%	35%	**2016**
Uruguay	90%	95%	**2014**
Venezuela	50%	50%	**2015**

AMHS interconnection

2.24 The Meeting took note that since 2005, the SAM Region started a plan to migrate the Aeronautical Fixed Service Network (AFTN) to AMHS, and that to date, practically all SAM States count with an AMHS implemented, with the exception of French Guiana (France) and Uruguay.

2.25 The objective of AMHS interconnection is to replace the current AFTN circuits by new ones that permit the transmission of a greater number of information (ATS data) at a higher speed, through REDDIG, with the aim of achieving the migration of all AFTN circuits to AMHS links.

2.26 In addition, it noted that the SAM Region requires 26 AMHS interconnections, of which four have already been implemented and the remaining would be completed by the end of 2016, with the following distribution: 1 for 2013, 11 for 2014, 5 for 2015 and 5 for 2016. The State distribution is shown in **Appendix A** to this Agenda Item.

Interconnection of automated systems

2.27 The Meeting noted that the interconnection of automated systems between adjacent ACCs has the objective of reducing the aeronautical incident risks generated by coordination activities between centres and, at the same time, improve the planning phases for a more efficient flight control from/to the corresponding Flight Information Regions (FIR).

2.28 The Meeting was informed that the desired automated systems interconnection consisted in the exchange of radar data through the use of the ASTERIX (*All Purpose Structured Eurocontrol Surveillance Information Exchange*) format and IP (Internet protocol) communications, as well as the automated flight plan transfer between centres, through the ATS interfacility data communications (AIDC).

2.29 The Meeting considered that 15 should be the target interconnections implemented by the end of 2015. The yearly (2013-2015) implementation distribution was the following: 1 for 2013, 8 in 2014 and 6 in 2015. The implementation distribution per State is shown in **Appendix B** to this Agenda Item.

National IPS networks

2.30 The Meeting noted that the implementation of national IPS networks will enable an increase in the aeronautical information (voice and data) transport capacity, as well as a better management of same.

2.31 In this respect, the Meeting deemed convenient that by the end of 2016, 80% of the SAM States will have implemented national IPS networks. The implementation distribution for the 2014-2016 considered was the following: 2 for 2014, 3 for 2015 and 5 for 2016. For 2018, 100% implementation was considered upon. The implementation of national IPS networks per State is presented in **Appendix C** to this Agenda Item.

Flight safety implementation goals and related metrics

2.32 With regard to the safety implementation goals and related metrics, the Meeting deemed convenient that same would be applied to safety oversight, accidents, runway excursions and incursions, aerodromes certification and Safety Management System (SMS) and State Safety Programme (SSP) implementation.

Safety oversight

2.33 With regard to air safety oversight, the Meeting analysed the global effective implementation averages versus the SAM effective application averages, as well as the audit areas and critical elements with lesser compliance percentage in every case.

2.34 On the basis of the projection of results from the latest (2011-2013) continuous monitoring approach (CMA) and taking as a basis the result from the last universal safety oversight audit programme (USOAP) cycle, the Meeting agreed upon the following goal for this area:

Reach 80% of effective implementation (EI) in the SAM Region by December 2016.

Accidents

2.35 The Meeting commented on the performance indicators and proposed goals and safety improvements related with accidents in the SAM Region during the 2005-2012 period. The performance indicators were obtained from the information available at the ICAO iSTARS site called Occurrences – Dynamic table on accident statistics. This information is limited to regular commercial air transport with aircraft over ***2250 kg.***

2.36 From the information obtained from the mentioned table, it could be appreciated that since 2005 the SAM Region went gradually reducing on the accidents, with the exception of 2008, when the accident rate increased abruptly. Also, the accident rate by the end of 2011, in spite of being over the global index, was lower than the double of said rate and, therefore, the SAM Region complied with the 2007 GASP, third objective.

2.37 With regard to the accidents category and flight phases, the Meeting observed that the accidents related with runway safety and landing are which produce the greater accident rate in the SAM Region.

2.38 In the loss of control in-flight (LOC-I) category, the Meeting was informed that four accidents were registered in an 8-year period (2005-2012), without them presenting a linear projection but more of isolated accidents. Even though these accidents are rare, they produce the greatest amount of deaths.

2.39 In the analysis conducted to the controlled flight into terrain (CFIT) category, the Meeting noted that five CFIT related accidents had been produced in the SAM Region between 2005 and 2008, nevertheless, as of 2009 and until 2012, no accident of this category has happened, therefore this is currently not a safety-related threat. Nevertheless, the Meeting was recommended to continue implementing the safety improvements necessary in order that no accident of this nature occurs.

Runway excursions and incursions

2.40 Runway excursions increased in the SAM Region during the years 2007, 2008, 2009 and 2011, nevertheless, the rates reduced in 2010 and 2012, reaching cero accidents in 2012. Consideration should be given that not all runway excursion accidents have been reported by States. In this sense, the Meeting was urged to implement or continue implementing the safety improvements necessary to avoid repeating this kind of accidents.

Other flight safety planning

2.41 The Meeting also commented that the same categories should be taken under consideration for flight safety planning, since they have an equal or higher rate to the Loss of Control In-Flight (LOC-I) and controlled flight into terrain (CFIT) categories:

a) failure or malfunctioning of the system/component (SCF);
b) other causes (OTH);
c) turbulence (TURB); and
d) unknown or undetermined cause (UNK).

Accidents and runway excursions safety-related goals

2.42 After and interesting debate regarding the methodology and calculation carried out to establish these goals, the Meeting agreed upon the following safety-related goals:

a) Accidents: *Reduce the SAM Region accident gap rate in 50% with regard to the global accident rate, by December 2016; and*
b) Runway excursions: *Reduce the runway excursion rate in 20% with regard to the SAM (2005-2012) average rate, by 2016.*

2.43 Finally, the Meeting of Safety Directors agreed to establish an air safety team for it to compile information related with serious accidents and incidents, analyse and evaluate the risks, and propose safety improvements in the SAM Region.

Aerodromes certification

2.44 Thereafter, the Meeting analysed the information in WP/05, related with the aerodromes certification indicators, determining that same would be the percentage of certified international aerodromes.

2.45 In this regard, the Meeting considered that a short term goal would be to reach 20% of the aerodromes certified by December 2016. The certified airports would also be complying with the SMS requirement completely implemented.

2.46 Regarding the latter, the Meeting requested ICAO to prepare information regarding the interpretation of the complete SMS implementation requirement for aerodrome certification, and the implementation of SMS by phases.

State Safety Programme (SSP) and Safety Management System (SMS)

2.47 Subsequently, the Meeting took note of the proposals made to verify the progress made in the implementation of the State Safety Programme (SSP) and the Safety Management System (SMS), presented in WP/12.

2.48 To measure the progress made in SSP, the six milestones or stages outlined in WP/12 were deemed appropriate and, to measure the progress made in SMS, the two milestones or stages proposed in the same working paper were considered adequate.

Goals for SSP and SMS implementation

2.49 With regard to the goals foreseen for the implementation of SSP, it was indicated that its progress was related with the progress made regarding the protection of sources of information; therefore, the SSP implementation goals would be subject to States solving this topic.

2.50 In this sense, the SSP implementation goals are the following:

To December 2016, at 67% implementation:

a) 100% available resources;
b) 100% GAP analysis (iSTAR); and
c) 100% identification of the sources of information.

2.51 The services providers SMS oversight capacity would be of 100% by 2016, in accordance with the milestones established in WP/12.

APPENDIX A / APENDICE A

AMHS INTERCONNECTION REQUIREMENTS AND DATES OF IMPLEMENTATION 2013-2016 IMPLEMENTATION GOALS / REQUERIMIENTOS DE INTERCONEXIÓN AMHS Y FECHAS DE IMPLANTACION METAS DE IMPLANTACION 2013-2016

STATE/ESTADO	AMHS INTERCONNECTION REQUIREMENT/ REQUERIMIENTO DE INTERCONEXIÓN AMHS	IMPLEMENTATION DATE/ FECHA IMPLANTACION	REMARKS/ OBSERVACIONES
Argentina	Bolivia	Mar 2016	
	Brasil	Dec 2013	
	Chile	Dec 2014	
	Paraguay	Mar 2012	Implemented/ Implantado
	Perú	Jul 2014	
	Uruguay	Dic 2015	
Bolivia	Argentina	Mar 2016	
	Brasil	Abr 2016	
	Perú	May 2016	
Brazil	Argentina	Dic 2013	
	Bolivia	Abr 2016	
	Colombia	Dic 2014	
	Guyana	Mar 2015	
	Guyana Francesa	TBD	AMHS implementation pending/ Falta implantación AMHS
	Paraguay	Jul 2014	
	Perú	Jul 2014	
	Surinam	Mar 2016	
	Uruguay	Dic 2015	
	Venezuela	Dic 2014	
Chile	Argentina	Dic 2014	
	Peru	Dic 2014	
Colombia	Brazil	Dic 2014	
	Ecuador	Dic 2014	
	Panamá	Dic 2014	
	Peru	Sep.2010	Implemented/ Implantado
	Venezuela	Mar 2015	

STATE/ESTADO	AMHS INTERCONNECTION REQUIREMENT/ REQUERIMIENTO DE INTERCONEXIÓN AMHS	IMPLEMENTATION DATE/ FECHA IMPLANTACION	REMARKS/ OBSERVACIONES
Ecuador	Colombia	Dic 2014	
	Perú	Julio 2012	Implemented/ Implantado
	Venezuela	May 2015	
French Guiana (France) Guyana Francesa (Francia)	Brazil	TBD	AMHS implementation pending/ Falta implantación AMHS
	Venezuela	TBD	AMHS implementation pending/ Falta implantación AMHS
Guyana	Brazil	Mar 2015	
	Surinam	Jun 2011	Implemented/ Implantado
	Venezuela	Dic.2014	
Panamá	Colombia	Dic.2014	
Paraguay	Argentina	Mar 2012	Implemented/ Implantado
	Brazil	Jul.2014	
Perú	Argentina	Jul 2014	
	Bolivia	May 2016	
	Brasil	Jul.2014	
	Chile	Dic 2014	
	Colombia	Sep.2010	Implemented/ Implantado
	Ecuador	Julio 2012	Implantado
	Venezuela	Dic 2014	
Suriname, Paramaribo	Brazil	Mar 2016	
	Guyana	Jun 2011	Implemented/ Implantado
	Venezuela	Mar.2016	
Uruguay, Montevideo	Argentina	Dic 2015	
	Brazil	Dic 2015	

STATE/ESTADO	AMHS INTERCONNECTION REQUIREMENT/ REQUERIMIENTO DE INTERCONEXIÓN AMHS	IMPLEMENTATION DATE/ FECHA IMPLANTACION	REMARKS/ OBSERVACIONES
Venezuela	Brazil	Dic 2014	
	Colombia	Mar 2015	
	Ecuador	May 2015	
	Guyana	Dic.2014	
	Guyana Francesa	TBD	AMHS implementation pending/ Falta implantación AMHS
	Perú	Dic.2014	
	Surinam	Mar.2016	

APPENDIX B / APENDICE B

INTERCONNECTION OF AUTOMATED SYSTEMS / INTERCONEXIÓN SISTEMAS AUTOMATIZADOS

State/ Estado	AIDC and Radar Data Interconnection Requirements/ Requerimientos de Interconexión AIDC y Datos Radar	MoU Date of Implementation/ Fecha Implantación MoU	AIDC and Radar Data Interconnection Date/ Fecha Interconexión AIDC y Datos Radar	Remarks/ Observaciones
Argentina	Bolivia	TBD	TBD	Bolivia has no automated systems/ Bolivia no cuenta con sistemas automatizados
	Brasil	2009	Aug 2014	MoU implemented/ MoU implantado
	Chile	2010	Jul 2014	MoU implemented/ MoU implantado
	Paraguay	May 2014	Dec 2014	
	Uruguay	2009	Jun 2014	MoU implemented/ MoU implantado
Bolivia	Argentina	TBD	TBD	Bolivia has no automated systems/ Bolivia no cuenta con sistemas automatizados
	Brasil	TBD	TBD	
	Chile	TBD	TBD	
	Paraguay	TBD	TBD	
	Peru	TBD	TBD	
Brazil/Brasil	Argentina	2009	Aug 2014	MoU implemented/ MoU implantado
	Bolivia	TBD	TBD	Bolivia has no automated systems/ Bolivia no cuenta con sistemas automatizados
	Colombia	Oct 2014	Jul 2015	
	Guyana	TBD	TBD	Define requirement/ Definir requerimiento
	French Guiana (France)	TBD	TBD	Define requirement/ Definir requerimiento
	Paraguay	Oct 2014	Mar 2015	
	Peru	2012	Sep 2014	MoU implemented/ MoU implantado
	Suriname	TBD	TBD	Definir requerimiento
	Uruguay	2009	Aug 2014	MoU implemented/ MoU implantado
	Venezuela	2011	Dic 2013	MoU implemented/ MoU implantado
Chile	Argentina	2010	Jul 2014	MoU implemented/ MoU implantado
	Peru	Jun 2014	Mar 2015	

State/ Estado	AIDC and Radar Data Interconnection Requirements/ Requerimientos de Interconexión AIDC y Datos Radar	MoU Date of Implementation/ Fecha Implantación MoU	AIDC and Radar Data Interconnection Date/ Fecha Interconexión AIDC y Datos Radar	Remarks/ Observaciones
Colombia	Brazil	Oct 2014	Jul 2015	
	Ecuador	May 2014	Dic 2014	
	Panamá	May 2014	Dic 2014	
	Peru	Oct 2014	Jul 2015	
	Venezuela	Dec 2014	Dic 2015	
Ecuador	Colombia	May 2014	Dic 2014	
	Peru	Oct 2013	Jun 2014	
French Guiana (France)/ Guyana Francesa (Francia)	Brasil	TBD	TBD	Define requirement/ Definir requerimiento
	Surinam	TBD	TBD	Define requirement/ Definir requerimiento
Guyana	Brazil	TBD	TBD	Define requirement/ Definir requerimiento
	Surinam	TBD	TBD	Define requirement/ Definir requerimiento
	Venezuela	TBD	TBD	Define requirement/ Definir requerimiento
Panama	Colombia	May 2014	Dec 2014	
Paraguay	Argentina	May 2014	Dec 2014	
	Bolivia	TBD	TBD	Bolivia has no automated systems/ Bolivia no cuenta con sistemas automatizados
	Brasil	Oct 2014	Mar 2015	
Peru	Bolivia	TBD	TBD	Bolivia has no automated systems/ Bolivia no cuenta con sistemas automatizados
	Colombia	Oct 2014	Jul 2015	
	Chile	Jun 2014	Mar 2015	
	Ecuador	Oct 2013	Jun 2014	
Surinam	Brasil	TBD	TBD	
	French Guiana (France)	TBD	TBD	
	Guyana	TBD	TBD	
Uruguay	Argentina	2009	Jun 2014	
	Brasil	2009	Aug 2014	MoU implemented/ MoU implantado
Venezuela	Brasil	2011	Dec 2013	MoU implemented/ MoU implantado
	Colombia	Dec 2014	Dec 2015	

APPENDIX C / APENDICE C

IMPLEMENTATION OF NATIONAL IP NETWORKS / IMPLANTACION DE REDES IP NACIONALES

STATE/ESTADO	IP APPLICATIONS IMPLEMENTED/ APLICACIONES IP IMPLANTADAS	DATE IMPLEMENTATION NATIONAL IP NETWORK FOR ALL IP APPLICATIONS/ FECHA IMPLANTACION RED IP NACIONAL PARA TODAS LAS APLICACIONES EN IP
Argentina	AMHS, DATA RADAR, IP VOICE/VOZ IP	2005
Bolivia	AMHS	2016
Brazil/Brasil	AMHS, DATA RADAR, IP VOICE/VOZ IP	2015
Chile	AMHS	2015
Colombia	AMHS, RADAR	2016
Ecuador	AMHS, RADAR	2014
French Guiana (France) / Guyana Francesa (Francia)	No	2018
Guyana	AMHS	2018
Panamá	AMHS, RADAR	2016
Paraguay	AMHS	2014
Perú	AMHS, RADAR	2016
Surinam	AMHS	2018
Uruguay	IP VOICE / VOZ IP	2016
Venezuela	AMHS	2015

Agenda Item 3: Preparation of the Declaration of Bogota

3.1 Under this Agenda Item, the Meeting analyzed WP/10 – *Preparation of the Declaration of Bogota*, presented by the Secretariat. In this regard, as a result of the analyses to Agenda Items 1 and 2, the Meeting drafted and approved the initial Declaration of Bogota document, containing the SAM 2014 to 2016 regional air navigation implementation commitment. The initial Declaration of Bogota is shown in the **Appendix** to this Agenda Item. The document will be presented at the Thirteenth Meeting of Civil Aviation Authorities of the SAM Region (RAAC/13) to be held in Bogota, Colombia, from 4 to 6 December 2013, for its review and signature by the respective civil aviation authorities. Therefore, the Meeting formulated the following conclusion:

Conclusion AN& FS/1 Approval of the initial Declaration of Bogota document

That, the initial Declaration of Bogota, approved by the Meeting of Air Navigation and Air Safety Directors of the SAM Region, be presented at the Thirteenth Meeting of Civil Aviation Authorities of the SAM Region (RAAC/13) to be held in Bogota, Colombia, from 4 to 6 December 2013, for its review and signature by the respective civil aviation authorities.

3.2 The Meeting deemed convenient that the Declaration of Bogota be also supported by the aeronautical international organizations, as part of the aeronautical community also committed in reaching the proposed goals. In this respect, the Meeting considered that the ICAO SAM Regional Office invite these organizations to RAAC/13 meeting.

APPENDIX

DECLARATION

The thirteenth meeting of Civil Aviation Authorities of the SAM Region held in Bogota, Colombia, from 4 to 6 December 2013, convened by the ICAO South American Regional Office, and counting with the participation of the ICAO Secretary General and high level officials representing 13 States and 4 international organizations:

Considering that, in accordance with Article 37 of the International Civil Aviation Convention, each contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation;

*Notin*g the objectives to be achieved through the Global Air Navigation and Safety Plans, recently approved by the Thirty-eighth Session of the ICAO Assembly;

Taking into account the paramount role civil aviation performs in the socio-economical, exchange and commerce development for regional integration;

Aware that the constant air transport growth in the region and the great worldwide events to be developed in the next years require additional efforts to improve even more the aviation safety, efficiency and security indicators;

Aware that the air transport growth poses additional challenges for the infrastructure of both airports and air navigation;

Aware that the management of regional processes towards the implementation of air navigation, safety and security operational improvements require the establishment of clear indicators and goals;

Recognizing that the South American Region has successfully implemented regional technical cooperation mechanisms adopting a joint approach in the solution of problems of common interest;

Aware that the harmonization of regional standards and procedures will facilitate a collaborative environment among States, guaranteeing an increase in the levels of air operations safety in the region and the achievement of joint goals;

Aware that regional air navigation operational improvements are more productive, and that delays from one State can negatively affect the remainder States;

Recognizing that legislation on the protection of sources of information is necessary for a better regional SSP/SMS implementation;

Aware that the safety objectives achieved to date require specific actions for their sustainment;

Recognizing the importance of developing air safety intelligence using reactive, proactive and predictive information to accompany the taking of decisions, mitigation of safety risks and continuous improvement;

Recognizing the collaborative working potential of the runway safety teams (RST) as a risk management tool; and

Considering the action plan agreed upon during the Meeting of Air Navigation and Flight Safety Directors of the SAM Region.

The thirteenth meeting of Civil Aviation Authorities of the SAM Region (RAAC/13):

DECLARES its commitment in achieving the following goals:

1. **Safety oversight**
Have 80% of effective implementation (EI) in the SAM Region.

2. **Serious accidents and incidents**
Reduce the SAM regional accident rate gap in 50% with regard to the global accident rate.

3. **Runway excursions and incursions**
Reduce the runway excursions in 20%.

4. **Aerodrome certification**
Have 20% of the international aerodromes certified.

5. **SSP/SMS Implementation**
- *Implement the State Safety Programmes (SSP) and ensure that all service providers implement a Safety Management System (SMS).*
- *Reach 67% of SSP implementation.*
- *Reach 100% of the service providers SMS oversight capacity.*

6. **PBN terminal**
Full compliance with goals established in ICAO Assembly Resolution A37-11 regarding approach procedure with vertical guidance (APV).

7. **PBN enroute**
- *60% of the international aerodromes with standard instrument departure (SID) / standard instrument arrival (STAR) PBN.*
- *60% of the routes/airspaces with performance based navigation (PBN).*

8. **CDO**
40% of the international aerodromes / terminal control areas (TMA) with continuous descent operation (CDO).

9. **CCO**
40% of the international aerodromes / TMAs with continuous climb operations (CCO).

10. **Estimated fuel savings/ C02 emissions reduction based on the ICAO fuel savings estimation tool (IFSET)**
Reach 40,000 tons of regional CO2 emissions reduction per year in en-route PBN implementation.

11. **ATFM**
100% of the area control centre (ACCs) / international aerodromes providing air traffic flow management (ATFM).

12. **AIM**
100% of the required elements in PHASE I (AIS to AIM Roadmap).

13. **AMHS interconnection**
100% of the Air Traffic Services Message Handling Services (AMHS) regionally interconnected.

14. **Interconnection of automated systems (ATS interfacility data communications (AIDC) exchange)**
100% of the automated systems interconnected.

15. **Implementation of national Internet protocol (IP) networks**
80% implementation of IP communications networks.

Signed in Bogotá, Colombia, on 6 December 2013

GLOSSARY OF TERMS

AIM	Aeronautical information management
AIDC	ATS interfacility data communications
AIS	Aeronautical information services
AMHS	Air Traffic Services Message Handling Services
APV	Approach procedure with vertical guidance
ATFM	Air traffic flow management
ATS	Air traffic services
CCO	Continuous climb operations
CDO	Continuous descent operation
EI	Effective implementation
IFSET	ICAO fuel savings estimation tool
IP	Internet protocol
PBN	Performance based navigation
SID	Standard instrument departure
SMS	Safety Management System
SSP	State Safety Programme
STAR	Standard instrument arrival
TMA	Terminal control area

Agenda Item 4: Other business

4.1 Under this Agenda Item, the Meeting examined WP/11 – *Project for the implementation of a set of Latin American aeronautical regulations (LARs) for the air navigation services (ANS) in the Region*, presented by the Secretariat.

4.2 The project includes the development of a set of air navigation services regulations, manuals for inspectors, inspection protocols, training programmes and the establishment of a group of inspectors within SRVSOP member States to be part of multinational teams capable of carrying out continuous oversight to the air navigation services providers of the Region.

4.3 In this regard, a State indicated that to improve the effective application of ANS it was presently searching for a solution to count with as soon as possible with an inspectors manual, inspection protocols, training and oversight programmes, and that it would be highly convenient that SRVSOP immediately start with the implementation of this project.

4.4 Many States agreed with the above and indicated their interest that it be under carried under SRVSOP. Brazil informed the Meeting that, in view it already counts with a domestic set of air navigation regulations, it would not be participating in the LAR ANS project, but would put at disposal its regulations to the States of the Region, as reference for the future project.

4.5 Therefore, the Meeting deemed convenient that the ICAO South American Regional Office enquire all project RLA/99/901 (SRVSOP) member States on their interest in participating in this LAR ANS project, presenting the project to the SRVSOP Focal Points and the results of the query made to the Twenty-sixth Ordinary Meeting of the General Board (JG/26) (Bogota, Colombia, 3 December 2013), for the meeting to analyze the inclusion of these activities in SRVOP.