

RAAC/14



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
South American Regional Office**

**FOURTEENTH MEETING OF CIVIL AVIATION
AUTHORITIES OF THE SAM REGION**

RAAC/14

DRAFT REPORT

(Santiago, Chile, 27, 28 and 30 October 2015)

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HISTORY OF THE MEETING

ii-1 PLACE AND DURATION OF THE MEETING

The Fourteenth Meeting of Civil Aviation Authorities of the SAM Region was held in Santiago, Chile, on 27, 28 and 30 October 2015.

ii-2 OPENING CEREMONY AND OTHER MATTERS

Dr. Fang Liu, ICAO Secretary General, thanked the participants for their attendance and referred to the progress made in the Region concerning safety and air navigation improvements. Likewise, Dr. Liu thanked Mr. Hoyer, Regional Director of the ICAO SAM Office, for his good work leading this Office, in view of his forthcoming retirement from the Organization. Air Force General Maximiliano R. Larraechea, General Director of Civil Aviation of Chile, opened the meeting.

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

Air Force General Maximiliano R. Larraechea (Chile) was elected Chairperson of the Meeting and Dr. Alejandro Agustín Granados, Administrator of ANAC (Argentina), was elected Vice-Chairperson. Mr. Franklin Hoyer, Regional Director, acted as Secretary of the Meeting. Dr. Liu participated in the session held on 27 October 2015.

Mr. Franklin Hoyer was assisted by the following Officers of the SAM Regional Office:

Oscar Quesada	Deputy Regional Director
Onofrio Smarrelli	CNS Regional Officer
Verónica Chávez	TAO Regional Officer

Likewise, the Meeting acknowledged the presentations made by EASA and AIRBUS, as well as the participation of EMPIC, SAAB and VAISALA, as meeting sponsors, for presenting their activities in the field of air navigation systems, and exhibiting their products.

ii-4 WORKING LANGUAGES

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

ii-5 AGENDA

The following agenda was adopted:

Agenda Item 1: Follow up on conclusions adopted by previous RAAC meetings

Agenda Item 2: Global and regional civil aviation requirements and challenges

- a) Follow up of results of the Second Safety Oversight Conference; and
- b) State-Industry collaborative process for the transition from the existing air navigation support systems to those specified in the ASBU.

Agenda Item 3: Review of results obtained in the SAM Region on security matters

- a) Results of the Universal Safety Audit Programme (USAP);
- b) Results of the AVSEC Training Programme; and
- c) FAL activities in the Region.

Agenda Item 4: Follow up on Bogota Declaration

- a) Priorities for the implementation of safety improvements; and
- b) Priorities for the implementation of improvements in air navigation.

Agenda Item 5: ICAO regional technical cooperation tools for the implementation of air navigation and safety improvements**Agenda Item 6: Priorities of implementation for the period 2017-2019****Agenda Item 7: Other matters****ii-6 ATTENDANCE**

13 States of the SAM Region, 2 States of the NAM/CAR Region, 9 International Organizations and 3 representatives from the Industry, totalling 68 participants, attended the meeting. The list of participants is shown in page iii-1.

ii-7 LIST OF CONCLUSIONS

N°	Title	Page
14/1	Improve the efficiency in the certification and oversight of approved maintenance organisations	2-3

LISTA DE PARTICIPANTES / LIST OF PARTICIPANTS**ARGENTINA**

1. Alejandro A. Granados
2. Esteban Gorlero
3. Marcelo Fernando Clivio
4. Omar Gouarnalusse

BOLIVIA

5. Edgar Pereyra Quiroga
6. Franz Tamayo de la Rocha
7. Oscar Arauco Frías
8. Erik Piérola Miranda
9. Francisco Santiago Pergolesi

BRASIL / BRAZIL

10. Marcelo Pacheco dos Guarany
11. Carlos Vuyk de Aquino
12. Gustavo Camargo de Oliveira
13. Daniel Vieira Soares

CHILE

14. Maximiliano R. Larraechea
15. Duncan Silva Donoso
16. Lorenzo Sepúlveda Biget
17. Fernando González
18. Alonso Lefno
19. Ricardo Gutiérrez R.

COLOMBIA

20. Gustavo A. Lenis Steffens
21. Eduardo Tovar
22. Freddy A. Bonilla Herrera

CUBA

23. Carlos Pérez A.
24. Alejandro Milián Pérez

ECUADOR

25. Byron Carrión
26. Sandra Reyes
27. Fidel Guitarra

ESTADOS UNIDOS / UNITED STATES

28. Christopher Barks
29. Lorrie Fussell
30. Mariely Loperena
31. Anna María Colom

FRANCIA/FRANCE

32. Cyril Coste

GUYANA

33. Chaitrani Heeralall
34. Amanza Walton-Desir

PANAMA

35. Julio A. Martinis Guerra

PARAGUAY

36. Luis M. Aguirre Martínez
37. Aurora Torres
38. Roque Díaz Estigarribia
39. Walter Amaro

PERU

40. Verónica Pajuelo Salazar

URUGUAY

41. Antonio Alarcón
42. Marcos Revetria

VENEZUELA

43. Jorge Luis Montenegro
44. José Jardines
45. Yuraima Avendaño
46. David Romero

AIRBUS

47. David Zwegers
48. Andreas W. Kohn
49. Sebastien Borel

ALTA

52. Eduardo Iglesias

BOEING COMPANY

50. Rob Noges

CANSO

51. Javier Alejandro Vanegas

CLAC/LACAC

52. Marco Ospina Yépez

EASA

53. Luc Tytgat
54. Juan de Mata Morales López

EMPIC

55. Julio Crovetto

IATA

56. Carlos Cirilo
57. Peter Cerdá
58. Filipe Reis

IFALPA

59. Osvaldo Lopes Neto

ROCKWELL COLLINS

60. Manny Gongora

SAAB DO BRAZIL

61. Sergio Martins

SITA

62. Adriana Mattos

VAISALA

63. Nick Demetriades

OACI / ICAO

64. Fang Liu

65. Franklin Hoyer

66. Oscar Quesada Carboni

67. Onofrio Smarrelli

68. Verónica Chávez

Agenda Item 1: Follow up on conclusions adopted by previous RAAC meetings

1.1 Under this Agenda Item, the following working paper was presented:

- WP/02 – *Follow-up to conclusions adopted by previous RAAC meetings* (presented by the Secretariat).

1.2 The Secretariat presented WP/02 to the Meeting, containing the actions agreed in the form of conclusions, and which have received the direct attention of the States/ICAO/users.

1.3 Upon reviewing Appendix A to WP/02, containing the status of implementation of the conclusions, the Meeting considered that all conclusions had been completed.

1.4 Finally, after reviewing Appendix B to WP/02, containing the conclusions still valid to date, the Meeting considered that Conclusion 13/3, *Support to the ICAO USAP CMA*, and Conclusion 13/4, *AVSEC training activities*, had been implemented, since the States of the Region were meeting the requirements concerning support to seminars, signing of MoUs, updating of action plans, seconding of State experts to the USAP CMA, and improvement of oversight systems (Conclusion 13/3). The Meeting also took note that the States of the Region had reaffirmed their commitment to the AVSEC training programme, replicated at national level the training received from ICAO, addressed the requirement to increase the number of AVSEC training centres, and requested ICAO that the courses on facilitation include the machine-readable passport, advance passenger information (API), and the passenger name record (PNR). The **Appendix** to this agenda item contains the list of valid conclusions of the RAAC meetings.

APPENDIX

REVIEW OF RAAC VALID CONCLUSIONS

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
9/5 A, C	EXCHANGE OF SECONDARY RADAR DATA	That the SAM States assign high priority to the exchange of SSR radar data among adjacent ATC units and develop the necessary bilateral agreements on this matter.	As part of RLA/06/901 project activities, and in follow-up to RLA/98/003 project on automated systems implementation activities, and to GREPECAS guidelines, documentation on the interconnection of automated systems, MoUs between SAM States having automated systems installed, and an action plan for their implementation, have been drafted. Radar data interconnection between Argentina and Uruguay, using IP protocol through REDDIG, was completed in March 2011.	ICAO Regional Office	Valid	Exchange of SSR radar data and flight plans (OLDI and AIDC) implemented	Dec 2016
10/1 A	SUBSCRIPTION OF CERTIFICATION RECOGNITION AGREEMENTS	States are urged to facilitate the subscription of certification recognition agreements and to continue making efforts to harmonise and/or adopt* standards and procedures, as a means to strengthen regional safety oversight activities and to avoid duplication of efforts.	RAAC/12 meeting established the Administrative Agreement for the acceptance of aircraft maintenance organizations and aircraft components among the civil aviation authorities of the SRVSOP member States. In this regard, Bolivia, Chile, Colombia, Ecuador and Peru have signed it.	Civil aviation authorities	Valid	SRVSOP standards and procedures harmonized and adopted. Three States are pending to sign the CIAC/CEAS	Undefined

ICAO Strategic Objectives:

A: Safety - Enhance global civil aviation safety

B: Security - Enhance global civil aviation security

C: Environmental Protection - Minimize the adverse effect of global civil aviation on the environment

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
		<p><i>* For purposes of all the work to be carried out under the SRVSOP within the framework of the “harmonisation” and “adoption” of LARs, the General Board defined the scope of these terms as follows:</i></p> <p><i>Harmonisation: Harmonisation is understood to be the set of reforms that must be introduced by the member States of the Regional System in their national regulations and procedures, based on the LARs and related documents, in order to achieve, within a period of time defined by each State and reported to the General Board, an environment in which all States have similar requirements and conditions for the issuance of a certification or aeronautical license, and thus a single certification issued by any Aeronautical Authority of an SRVSOP member State would be acceptable to the other member States. Additional requirements may be established, provided they are reported to other States through an Appendix to the LAR, for consultation by any Aeronautical Authority of the SRVSOP member States at the time of issuing a certificate in this harmonised environment.</i></p>	<p>Subsequently, 6 more States were included in the AMOs Multinational Technical Cooperation Agreement LAR 145: Argentina, Cuba, Panamá, Paraguay, Uruguay and Venezuela. State pending to sign the AMOs Agreement is Brazil.</p> <p>During RAAC/13 Meeting (Bogota, Colombia, 4 to 6 December 2014) Amendment 1 to AMOs Agreement was approved.</p> <p>In the same Meeting (RAAC/13) the Multinational technical cooperation agreement for the certification of civil aviation training centres (CIAC/CEAC) was signed, among civil aviation authorities of SRVSOP States, signatory of this agreement, based on the certification process report of the SRVSOP multinational certification team”. This Agreement was originally signed Argentina, Colombia, Cuba, Ecuador, Paraguay, Peru, and Uruguay. Subsequently Bolivia and Venezuela signed the</p>			<p>and CMAE agreements. In AMOs, one State is pending. Also the SRVSOP is working in the harmonization for the mutual recognition of licenses, which will result in a pending Agreement, and, on the other hand, the recognition of the multinational qualification of flight simulators is also programmed, thus, the recognition of certifications is an important issue for SRVSOP.</p>	

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
		<p><i>Adoption: Adoption is understood to be the set of reforms that must be introduced by the members of the Regional System in order to accomplish, in a period of time defined by the General Board, and in an absolutely voluntary fashion, a harmonised environment, without any additional requirements.</i></p>	<p>Agreement. States pending to sign the CIAC/CEAC Agreement are: Brazil, Chile and Panama.</p> <p>In addition, the Multinational technical cooperation agreement for the certification of aviation medical examining centres among civil aviation authorities of the SRVSOP States signatory of this agreement, based on the certification process report of the SRVSOP multinational certification team. This Agreement was originally signed by Argentina, Cuba, Ecuador, Paraguay, Peru, and Uruguay. Subsequently Bolivia and Venezuela signed the Agreement.</p> <p>States pending to sign the CMAE Agreement are: Brazil, Chile, Colombia and Panama.</p>				

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
11/1 A, C	GRADUAL IMPLEMENTATION OF GNSS TECHNOLOGY	That the SAM States gradually implement GNSS technology in keeping with regional PBN implementation programmes and their respective national plan.	<p>SAM States have started GNSS implementation in support to en route, terminal and non precision approach navigation procedures (RNAV 5, RNP APCH, RNP APC AR).</p> <p>Brazil has implemented a GBAS system, currently on pre-operational phase.</p> <p>States will comply with goals established in ICAO Assembly Resolution A37/11 regarding APV procedures.</p>	Civil aviation authorities	Valid	GNSS implementation	<p>Dec 2016</p> <p>En route GNSS 60% implemented</p> <p>A37/11 GNSS approach is APV 100% implemented</p>
11/7 A	COMMITMENT TO THE OBJECTIVES OF THE REGIONAL SYSTEM	<p>That the Directors of Civil Aviation of the South American Region reaffirm their commitment to the initiatives of the Regional Safety Oversight System, through:</p> <p>a) Tangible support to its work programme;</p> <p>b) Improving the rate of commitment with the Regional System, as shown in Appendix B to this working paper; and</p> <p>c) Compliance with the target dates defined by the General Board for the harmonisation and/or adoption of the LARs.</p>	<p>Bolivia, Paraguay and Uruguay have adopted the LARs.</p> <p>Peru and Ecuador has completed the transition process of its national regulations harmonized with the LARs.</p> <p>The remainder SRVSOP States are progressing in the harmonization of their national regulations with the LARs, with good results, with the compromise of completing the LAR harmonization process in March 2017.</p>	States	Valid	Commitment with SRVSOP.	Dec 2017

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
12/1 A, C	PERFORMANCE-BASED AIR NAVIGATION IMPLEMENTATION PLAN FOR THE SAM REGION (SAM PBIP)	<p>The States of the ICAO South American Region and the international organisations involved:</p> <p>a) approve the Performance-based Air Navigation Implementation Plan for the SAM Region shown in Appendix A, for its implementation at regional level;</p> <p>b) encourage those States that have not done so to prepare their national performance-based air navigation plan in accordance with the guidelines contained in the cited implementation plan; and</p> <p>c) request the ICAO South American Regional Office to review Project RLA 06/901 in order to align it with the performance objectives established in the cited implementation plan.</p>	<p>a) States approved the PBIP. As consequence of the approval of the Global Air Navigation Plan (GANP), fourth edition, the PBIP was amendment to align it with the new GANP edition.</p> <p>b) Some States have started drafting their national plans in alignment with PBIP.</p> <p>c) Project RLA/06/901 is being amended in alignment with PBIP.</p>	States, international organizations, ICAO SAM RO	Items a) and b) Completed	<p>Approval of PBIP.</p> <p>National implementation plans aligned with PBIP.</p> <p>RLA/06/901 project aligned with PBIP.</p>	<p>a) Dec 2013</p> <p>b) Dec 2014</p> <p>c) Mar 2014</p>

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
12/4 A, C	STRATEGY FOR THE INSTITUTIONALI ZATION OF REDDIG AND SRVSOP	That, with the aim of giving continuity to the implementation of the Air Navigation and Safety Organization, the activities taken under consideration in the strategy shown in Appendix A be implemented.	The activities in the strategy will be considered at the RLA/03/901 (REDDIG) and RLA/99/901 (SRVSOP) RCC meetings. Meanwhile, States have agreed that the coordination of the indicated projects continue through ICAO. Project document RLA/03/901 (REDDOG), Version Q, approved ICAO management until 2018. Likewise with project RLA/99/901 (SRVSOP).	ICAO, States	Valid	Strategy for the institutionaliza- tion of REDDIG and SRVSOP	Dec 2018

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
12/7 A, C	ACTIONS TO PROMOTE THE EFFECTIVE IMPLEMENTATION OF SAFETY MANAGEMENT SYSTEMS	<p>That the States of the Region, in order to achieve an effective implementation of safety management systems:</p> <p>a) make the necessary efforts to assign human and material resources to SSP;</p> <p>b) use the results of the SSP analysis to define safety risk mitigation policies;</p> <p>c) avoid designating SSP coordinators on an ad-hoc basis;</p> <p>d) support the participation of their SSP coordinators in the cycle of SSP seminars/workshops to be scheduled by the Regional Office in the years 2012 and 2013;</p> <p>e) request their SSP coordinators to develop a short and concise annual safety report covering the following aspects:</p> <ul style="list-style-type: none"> - an executive report; - reactive information analysis; - proactive information analysis; - predictive information analysis; <p>f) present the results of their annual safety reports at the SSP seminar/workshops to be organised by ICAO South American Regional Office; and</p> <p>g) regarding items c) and f), the different working groups that were being organised should be harmonised to avoid duplication of efforts and resources.</p>	<p>Very few States have carried out actions to promote effective SSP implementation.</p> <p>SSP coordinators meetings are being held in the SAM Region since 2012, in order to assist States in SSP implementation.</p> <p>In order to measure the progress in SSP implementation and reach the goals established in the Bogota Declaration for December 2016 (67%), a survey with the main regional indicators, has been developed.</p>	States	Valid	State safety management system implemented	Dec 2016

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
12/8 B	SUPPORT TO THE ICAO/LACAC NAM/CAR/SAM AVIATION SECURITY AND FACILITATION REGIONAL GROUP	That the States make their utmost to support the work being carried out by the ICAO/LACAC NAM/CAR/SAM Aviation Security and Facilitation Regional Group, giving facilities to the designated officers for conducting the activities of the projects of the ICAO/LACAC NAM/CAR/SAM Aviation Security and Facilitation Regional Group.	ICAO/LACAC NAM/CAR/SAM AVSEC/FAL RG/3 meeting was held in the ICAO SAM RO, from 19 to 21 June 2013	States	Valid	Aviation security and facilitation activities implemented	Undefined
12/9 A	REGIONAL CONTINGENCY PLAN TO ADDRESS NATURAL DISASTERS AND/OR CATASTROPHIC EVENTS	That ICAO, in cooperation and coordination with the States of the South American Region, develop a Regional Contingency Plan to address natural disasters and/or catastrophic events, with a view to minimising the impact on civil aviation and restore the operation of air navigation and airport services as soon as possible.	The regional contingency plan has not been completed. A guide in support of the Region has been prepared in the event of a volcanic ash contingency. The same has been circulated to States for review and comments. Once all comments are received, it will be published in SAM Regional Office website to be available for users.	ICAO	Valid	Regional contingency plan to address natural disasters and/or catastrophic events.	End of 2014
12/10 A	SAM ATS ROUTE NETWORK OPTIMISATION PROGRAMME (ATS/RO)	That, taking into account the significant fuel savings and the reduction in CO2 emissions into the atmosphere as a result of the phased implementation of the ATS route network optimisation programme, it is essential to continue supporting the implementation of the subsequent phases of the ATS/RO programme in order to improve	Under the routes optimization programme, Version 01 (March 2011), 15 new RNAV routes were implemented, 19 were realigned and 18 conventional and RNAV routes, with a CO2 annual savings of 22,600,000 savings. Version 02 foresees for 2013 and 2014 fuel savings that, at	States	Valid	SAM ATS routes optimized	Dec 2016 (60% of the ATS optimized routes implemented)

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
		<p>efficiency and environmental protection in the South American Region.</p>	<p>US\$1.57 per litre, would amount to US\$2,713,902 per month, equalling to an annual CO₂ reduction of approximately 54,572 tons.</p> <p>For 2016, 60% of the optimized ATS routes are planned to be implemented.</p> <p>In 2014, the following PBN events were held:</p> <ul style="list-style-type: none"> - First Workshop on SAM PBN airspace design (Bogota 12-23 May); - Second Workshop on SAM PBN airspace design (Lima, 08-12 September); - Sixth Meeting for ATS network optimization SAM-ATSRO/6 (Lima 27-30 October); - Fourteenth Workshop/Meeting of the SAM Implementation Group SAM/IG/14 (Lima, 10-14 November); and - Three (3) experts were hired to develop Version 03 of the SAM Routes Network. <p>The result of these events did not reach the expected</p>				

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
			<p>outcomes, mainly with regard to PBN/2 Workshop, taking into account that from the PBN redesigns presented, only two TMAs were considered sufficiently mature to start the validation process: Asuncion and Santiago.</p> <p>Lima and Rio de Janeiro TMAs, which PBN redesigns have already been made by Peru and Brazil, respectively, are the only ones ready to involve with Stage 2 of Version 03 of the SAM Routes Network.</p> <p>Santiago and Sao Paulo TMAs, which were also matter of the PBN redesign project, developed by Chile and Brazil, respectively, will be affected by ongoing projects in both States.</p> <p>The implementation of Version 03 of the Routes Network depends on a consistent and harmonized implementation in SAM TMAs and the delay in one or more States could affect the others, as well as the PBN Implementation Regional</p>				

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
			<p>Project as a whole and, consequently, the compliance of the different goals of the Bogota Declaration.</p> <p>While it is not possible to develop the complete Version 3 of the Routes Network, the ATSRO Meeting has decided to implement a first stage of this version, with a view to reach the possible benefits, based on the current structure of the main South American TMAs.</p>				
13/3 B	SUPPORT TO THE ICAO USAP CMA AUDIT PROGRAMME	<p>That the States of the Region continue supporting the ICAO audit programme (USAP CMA), and:</p> <ul style="list-style-type: none"> a) attend the regional seminars held on the USAP-CMA; b) sign the new <i>Memorandum of Understanding</i> (MoU) concerning the USAP CMA when so requested; c) submit updates on the status of implementation of their corrective action plans; d) contribute through the secondment of security experts to participate in USAP CMA activities; and e) continue improving their security oversight systems, 	<p>Follow up for the States to participate in the regional USAP CMA seminars.</p> <p>Support the States to:</p> <ul style="list-style-type: none"> Sign the MoU related to the USAP. Update corrective action plans and continue in the improvement of their safety oversight systems. 	SAM States	Completed	Assistance to regional USAP CMA seminars, prepare for the USAM-CMA Audits, which will start in 2015 in the SAM Region	Continuous Continuous cycle

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
		<p>taking into account, <i>inter alia</i>, the findings and recommendations of the second USAP cycle, so as to strengthen compliance with Annex 17 standards and security-related provisions of Annex 9.</p>					
13/4 B	AVSEC TRAINING ACTIVITIES	<p>That SAM States:</p> <p>a) Reaffirm their commitment to the ICAO AVSEC training programme through the participation of their delegates at seminars, courses and workshops;</p> <p>b) Continue providing AVSEC training to their experts at national level by disseminating the training received from ICAO;</p> <p>c) Request the ICAO SAM Regional Office to make arrangements with its headquarters to consider the possibility of increasing the AVSEC training centres (ASTC) and inform States on the result of same; and</p> <p>d) Request ICAO that the training in the facilitation field include as a minimum: machine readable travel documents, advanced passengers information (API) and passengers name registration</p>	<p>Follow up in order that the States could participate, through their experts, in the AVSEC training programmes and disseminate the instruction at a national level.</p> <p>The SAM Office made coordinations with HQ to analyze the possibility of preparing courses in the Facilitation area for the SAM Region.</p> <p>Continuous development activities.</p> <p>Work is required in the Facilitation area.</p>	SAM States ICAO SAM Office	Completed	<p>Participation of the States in AVSEC training activities.</p> <p>National experts trained and information disseminated at a national level.</p> <p>Increase of training workshops and seminars in Facilitation in the SAM Region.</p> <p>la Región SAM</p> <p>Training in Facilitation area that includes, at least: Machine readable travel</p>	<p>a) continuous b) continuous d) continuous</p>

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
		(PNR).				documents, advanced passengers information (API) and passengers name registration (PNR).	
13/5 A, B, C	SAM PERFORMANCE-BASED NAVIGATION IMPLEMENTATION PLAN (SAM PBIP) AS ALIGNED WITH THE ASBU	<p>That the States of the ICAO South American Region and the international organisations involved:</p> <p>a) approve the SAM performance-based navigation implementation plan (SAM PBIP) as aligned with the ASBU for its regional application, as shown in Appendix A to Agenda Item 4 of the RAAC/13 meeting; and</p> <p>b) encourage those States that have not done so yet to amend their national performance-based air navigation plans in accordance with the guidelines contained in the aforementioned SAM PBIP.</p>	<p>Approved the SAM Performance-Based Navigation Implementation Plan (SAM PBIP) aligned with ASBU</p> <p>Follow up so that States complete the update of the air navigation national plans to be aligned with ASBU.</p>	States	<p>a) Completed</p> <p>b) Valid</p>	<p>SAM Performance-Based Navigation Implementation Plan (SAM PBIP) aligned with ASBU approved.</p> <p>Performance-based air navigation national plans to be aligned with SAM PBIP</p>	<p>a) Completed</p> <p>b) July 2016</p>

Conc/Dec Strategic Objective	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Status	Deliverable	Target date
13/8 A	IMPLEMENTATION OF AIR NAVIGATION AND SAFETY OVERSIGHT PRIORITIES	That the States of the SAM Region implement the air navigation and safety oversight priorities in accordance with the regional goals agreed for the period 2014 – 2016 in the Bogota Declaration and that the International Organizations support the implementation of the States' priorities.	<p>Follow up air navigation and safety implementation by the States of the Region in accordance with the goals of 2014-2016.</p> <p>AGA January 2015- 13% certified aerodromes (12) and 15% in process (14).</p> <p>AIM Start Phase II transition to the AIM; Reduction of CO² in 2015 6.740 Tons.</p> <p>ATM PBN: PBN National Implementation Plans; Optimization of the SAM Routes Network; TMA; APP. ATFM: FMU/FMP; Calculation of sectors and runway.</p> <p>CNS Implementation of AMHS interconnection 20%; Implementation of AIDS interconnection 12%; Implementation of national IP Networks 46%;</p> <p>FLS Effective implementation level 71.45%; Reduction of the accident rate in the SAM Region 1%; Reduction of runway excursions in the Region 0%.</p>	States	Valid	Implementation of air navigation and safety priorities.	Dec 2016

Agenda Item 2: Global and regional civil aviation requirements and challenges

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

- WP/03 – *SAM Region follow-up on results of the Second High Level Safety Conference (HLSC 2015)* (Ecuador);
- WP/14 – *Process development for resolution of safety issues amongst aviation authorities: pilot deviations* (United States);
- WP/15 – *Assuring compliance with international oversight obligations without duplication; shared surveillance of approved maintenance organizations* (United States);
- WP/04 – *Activities of the Regional Air Navigation and Safety Planning and Implementation Groups (GREPECAS and RASG-PA)* (Secretariat);
- WP/05 – *Follow-up on eANP implementation* (Secretariat);
- WP/17 – *Best Practice Guide to Crossing Flight Information Region Boundaries* (CANSO);
- WP/18 – *Recommended Key Performance Indicators for measuring ANSP operational performance* (CANSO);
- WP/19 – *Remotely Piloted Aircraft Systems (RPAS)* (CANSO); and
- IP/03 – *Status of the Project: State-Industry Collaborative Process for the Transition from existing Systems to those specified in the ASBU* (IATA)

Follow-up to the results of the Second Safety Conference

2.2 The Meeting took note of the results of the *Second High-Level Safety Conference (HLSC 2015)* and the commitments assumed in the Declaration of Montreal. Note was made of the outstanding participation of the 13 South American States at the HLSC 2015, highlighting that, for the first time and in a unanimous and collaborative manner, they had endorsed the position and viewpoints of the Region, which constituted a regional and global milestone in the aeronautical environment. Likewise, the State representatives had duly coordinated with the representatives of Europe and Central America to obtain the needed support to the position assumed by South American States in their working papers.

2.3 The main topics were: progress made by the SRVSOP and creation of the ARCM; support to the need to clearly define concepts regarding type of information, sources to be protected, scope of protection, and levels and limits of protection desired. The Meeting also endorsed the need for guidelines, tools, communication and training initiatives in relation to the new provisions that might emerge from HLSC 2015, and discussed the gradual integration of the 8 CEs and the SSP framework.

2.4 This information was reviewed by the Second Meeting of Safety Directors, which recommended that, for future ICAO meetings in which the SAM Region was to participate, support to its working papers should be coordinated with the representatives of other regions of the world.

2.5 Within this context, the Meeting recognised that the SRVSOP had allowed for coordination of the presentations, underlining the importance of continued collaboration and joint discussion of aeronautical issues for the sake of South American aviation.

2.6 Furthermore, the Meeting stressed the importance of consistency with the positions set forth at the HLSC, especially during consultations with the States. In this sense, the Meeting agreed on the importance to continue cooperating proactively to jointly address aeronautical issues in order to put forward a consensual position and thus provide global leadership.

2.7 Likewise, the Meeting highlighted the importance that SAM States follow up the conclusions of the 2015 HLSC, upholding the position set forth therein.

2.8 The Meeting agreed to continue coordinating joint SAM positions at ICAO global forums and during consultations on amendments to ICAO SARPs, and to continue participating in a proactive manner and to improve coordination procedures before and during such meetings and consultations, and to subsequently uphold the coordinated positions at all forums and related activities.

2.9 Next, United States submitted a proposal on international cooperation among aeronautical authorities for the resolution of safety issues, specifically pilot deviations. The proposal consisted in the development, through ICAO, of a survey for contracting States to collect information on pilot deviations, the reporting process, and the resolution of safety deviation issues. The information would then be used to work in collaboration with contracting States to resolve any deficiencies.

2.10 In this regard, the Meeting considered that it was an interesting proposal, especially since it was an issue that had been identified in the States, thus the importance of exchanging experiences and addressing it at regional level. Likewise, regarding the exchange of safety information, it was recalled that the SRVSOP already had two mechanisms that shared information in the Region, namely IDISR and the Dangerous Goods Coordinated Oversight Programme. Accordingly, it agreed to address this issue at the regional level through the SRVSOP and, once a regional position had been established, to present it at the next ICAO Assembly.

2.11 Regarding the proposal concerning shared oversight of approved maintenance organisations (OMAs) presented by United States, the Meeting took note that maintenance organisations of the international/transnational aeronautical industry were subject to oversight by a large number of regulatory jurisdictions given the many different certifications they held. Consequently, oversight activities had become increasingly frequent, and additional audits did not necessarily increase the level of safety. Accordingly, the States and the industry should work together to achieve significant changes in this field, identifying ways to mitigate oversight duplication, while keeping in mind their national obligations.

2.12 The Meeting took note of the requirement of the FAA to elaborate proposals and best practices that may be taken into account in an attempt to reduce the duplicate oversight burden of both the States and the industry. In order to improve the efficiency and effectiveness of these programmes, the States should try, inasmuch as possible, to harmonise their requirements regarding AMO certificates. This could be facilitated through a Regional Safety Oversight Organisation (RSOO) or other cooperation mechanism. Consequently, at international level, and in collaboration with ICAO and the industry, the States could develop a shared AMO oversight framework, which would be of great benefit for the States and the industry.

2.13 In this sense, the Meeting welcomed the comments made by United States, which are in alignment with the work done in the last few years by the Region with the SRVSOP and the AMO recognition agreement. In this regard, after an exchange of opinions, the Meeting agreed to the following:

Conclusion RAAC/14-1 Improve the efficiency in the certification and oversight of approved maintenance organisations

That actions be initiated through SRVSOP, for the identification of efficiencies among FAA, EASA and the SRVSOP in the processes of certification and oversight of approved maintenance organisations, thus avoiding duplication of efforts.

2.14 Finally, EASA noted that, within these activities, it would be important to consider the harmonisation of regulations.

Follow-up to GREPECAS activities

2.15 The Meeting recalled that the objective of the CAR/SAM Regional Planning and Implementation Group (GREPECAS) was to ensure the continuous and consistent development of the CAR/SAM Air Navigation Plan and other relevant regional documents in a harmonised manner with adjacent Regions, in accordance with ICAO SARPs and based on global requirements; facilitate the implementation of air navigation systems and services identified in the CAR/SAM Air Navigation Plan, prioritising safety; identify and help in the resolution of specific air navigation deficiencies; and coordinate safety matters with the Regional Aviation Safety Groups (RASGs).

2.16 The Meeting also recalled that, since the restructuring of GREPECAS at the GREPECAS/16 meeting (March 2011), the air navigation systems and services being implemented in the SAM Region through GREPECAS were being executed through programmes and projects.

2.17 In this regard, the Meeting took note of the progress made in the implementation of activities under the GREPECAS programmes and projects since the Thirteenth Meeting of Civil Aviation Authorities (RAAC/13), as shown in **Appendix A** to this agenda item.

2.18 Finally, the Meeting took note of the difficulties encountered in the conduction of project activities, especially the failure of civil aviation authorities (CAAs) to comply with their commitment to support GREPECAS programme projects with the human resources required for timely conduction of activities in accordance with project timetables.

Follow-up to RASG-PA activities

2.19 The Meeting recalled that the Regional Aviation Safety Group – Pan America (RASG-PA) was established in November 2008 to support the development and operation of a performance-based safety system in the Pan American Region, its mission being to improve civil aviation safety and efficiency in the Pan American Region through coordination and collaboration of all aviation stakeholders under the leadership of ICAO.

2.20 In this sense, the Meeting took note of the progress made in the implementation of RASG-PA activities since the Thirteenth Meeting of Civil Aviation Authorities (RAAC/13), as shown in **Appendix B** to this agenda item.

2.21 The Meeting noted the little participation of SAM States in RASG-PA meetings. In view of the good results obtained in those meetings in terms of safety maintenance in the Region, the Meeting urged the States of the Region to actively participate therein.

Follow-up to eANP implementation

2.22 The Meeting was informed that, pursuant to Recommendation 6/1 - *Regional performance framework - Planning methodologies and tools regarding the alignment of regional air navigation plans with the fourth edition of the Global Air Navigation Plan (GANP) (Doc 9750)* of the Twelfth Air Navigation Conference (AN-Con/12), ICAO had established a working group (eANP WG), composed of representatives of the ICAO Regional Offices and ICAO Headquarters, for the drafting of proposals of change to regional ANPs, including the development of a new structure, format and contents of the ANP.

2.23 The Meeting took note that the eANP WG had developed a format for the electronic Regional Air Navigation Plan (eANP), consisting of three volumes:

- Volume I, containing the stable elements of the plan, whose amendment require approval by the Council;
- Volume II, containing the dynamic elements of the plan, whose amendment does not require approval by the Council (approval is by regional agreement of the relevant PIRGs); and
- Volume III, containing the dynamic/flexible elements of the plan, providing guidance for air navigation systems implementation and modernisation, taking into account emerging programmes, such as ASBU, and the associated technological roadmaps described in the GANP.

2.24 In order to expedite the process of development and incorporation of information in the eANP, the Meeting took note that points of contact (PoCs) had been established in the CAR/SAM Regions by each aeronautical administration to facilitate the respective coordination for the collection of information in the various areas.

2.25 In this regard, the Meeting took note that the first electronic version of Volumes I and II of the new eANP had been circulated among CAR/SAM States on 26 August 2015 for their review and approval through the GREPECAS fast-track mechanism, obtaining answers from very few States of the Region.

2.26 Regarding Volume III of the eANP, the Meeting took note that the NACC and SAM Regional Offices were integrating the required information of the regional performance-based implementation plans of the CAR (RPBANIP) and SAM (SAM/IP) Regions for the purpose of planning the implementation and modernisation of air navigation systems, reflecting emerging programmes such as ASBU and the associated technological roadmaps described in the GANP. It was estimated that it would be ready for circulation to the States on the first half of November 2015, and the States would have 30 days for its approval through the GREPECAS fast-track mechanism.

Guides developed by CANSO for improving safety and efficiency

2.27 The Meeting took note of the following guides developed by CANSO to enhance air navigation safety and efficiency:

- Guide on best practices - Crossing FIR boundaries
- Guide on recommended performance indicators to measure the operations of air navigation service providers
- Guide on ANSP considerations for the integration of RPAS operations

2.28 These guides can be downloaded respectively from the following websites:

- <https://www.canso.org/best-practice-guide-crossing-flight-information-region-boundaries>
- <https://www.canso.org/recommended-key-performance-indicators-measuring-ansp-operational-performance>
- <https://www.canso.org/ansp-considerations-rpas-operations>

2.29 In this sense, the Meeting acknowledged CANSO for the work done in the drafting of the guides, which were considered to be of help in the planning of improvements to air navigation systems and services.

State-Industry collaborative process for the transition from the existing air navigation support systems to those specified in the ASBU

2.30 In this regard, the Meeting took note of information paper (IP/03) presented by IATA, containing information on the status of project *State-Industry collaborative process for the transition from the existing air navigation support systems to those specified in the ASBU*. IATA noted that they were still looking for a State to implement this project since it had not been possible to do so at regional level due to lack of the necessary economic resources.

APPENDIX A

PROGRESS MADE IN THE DEVELOPMENT OF GREPECAS PROGRAMMES AND PROJECTS ACTIVITIES

Projects under the PBN Programme

1. The main activities carried out under the “*PBN implementation in the SAM Region*” Project (Project A1) have been the updating of national PBN plans; a significant reduction of CO₂ that exceeds annual figures contemplated in the Declaration of Bogota for 2014; implementation of RNAV routes, reaching the implementation percentage contemplated for 2016 in the Declaration of Bogota; development of Action Plans for the redesign of selected airspaces using PBN, almost reaching the goal foreseen for 2015; implementation of PBN SIDs/STARs, exceeding the goal foreseen in the Declaration of Bogota; and a not too significant progress in the application of CDO and CCO operational techniques with respect to the Declaration of Bogota.
2. Regarding training programmes, four airspace PBN redesign workshops were conducted in the SAM Region. These workshops focused on supporting States in the processes required for effective implementation of airspace PBN design and validation.
3. Regarding the implementation of the “*Air navigation systems in support of PBN*” Project (Project A2), the implementation of the web-based RAIM availability prediction service in support of PBN operations in the SAM Region (September 2014), available in www.satdis.aero, is worth noting.

Projects under the ATFM Programme

4. Regarding the “*Flexible use of airspace - SAM Region*” Project (Project B1), the following activities were conducted: two training events: a theoretical/practical course on ATFM procedures (November 2014 in Rio, Brazil) and a Workshop on the implementation of Air Traffic Flow Management (ATFM) for the CAR and SAM Regions, Panama City, Panama (May 2015); runway and ATC sector capacity calculations in 21% of the States of the Region. With respect to the implementation of ATFM positions and units, there has been no progress regarding the goal foreseen in the Declaration of Bogota.
5. With respect to the “*ATM automation*” Project (Project C1), note should be made of the operational implementation of AIDC between the Lima ACC and the Guayaquil ACC; pre-operational implementation between the Guayaquil ACC and the Bogota ACC, the Bogota ACC and the Lima ACC, and the Bogota ACC and the Panama ACC. Likewise, 160 controllers were trained through practical AIDC courses for controllers of the Bogota, Guayaquil, Lima, Panama, and Santiago ACCs.
6. Regarding the “*Improved ATM situational awareness in the SAM Region*” Project (Project C2), the development of the Guide on technical/operational considerations for full implementation of MLAT and the action plan for ADS B implementation in the SAM Region are noteworthy. Activities corresponding to this project, for the time being, are related to the drafting of guides to support the implementation of situational awareness improvements.

Projects under the Ground-ground/air-ground communications infrastructure Programme

7. In the “*ATN architecture*” Project (Project D1), the implementation and successful operation of the REDDIG II digital network (first week of February 2015) should be highlighted. The new REDDIG II digital network is a mixed satellite and ground network fully based on IP technology. Likewise, the new interconnection between the REDDIG II and MEVA III VSAT networks was completed in April 2015. No progress was made in the execution of activities corresponding to the *SAM ATN ground-ground and air-ground applications* project (Project D2).

Projects under the Aerodromes Programme

8. Regarding the “*Aerodrome certification in the SAM Region*” Project (Project F1), currently there are 12 international airports certified in the SAM Region (12%) compared to the 8 originally registered, that is, a 50% increase. The goal proposed in the Declaration of Bogota is 20% of international airports certified in the Region by December 2016. With the introduction of the PANS LAR AGA, it is expected that States will be capable of significantly increasing the percentage of certification. There has been no progress in the “*Improved runway safety in the SAM Region*” Project (Project F2).

Projects under the AIM Programme

9. Regarding activities under the “*Development for the provision of electronic terrain and obstacle data (eTOD) in the States*” Project (Project G1), there has been some slight progress in implementation in areas 1 and 2. Several SAM States agreed that eTOD implementation for area 2 by 12 November 2015 was very difficult to meet, taking into account technical, training, and staffing difficulties and the impact of high implementation costs. In this sense, it was deemed advisable to ask States, through the GREPECAS fast-track mechanism, about their expectations in terms of compliance by the date set forth in Annex 15.

10. Regarding the “*Implementation of Information Exchange Systems*” Project (Project G2), it has started to show some progress based on a large contribution of human resources by some States. The *Implementation of the Quality Management System in AIM units* project (Project G3) has seen some progress in terms of pre-certification activities; however, no concrete progress has been made in terms of certification, which is the requirement defined as an objective.

Projects under the Aeronautical Meteorology Programme

11. The “*Implementation of the world area forecast system (WAFS)*” Project (Project H1), corresponding to the transition from the international satellite communications systems (ISCS) to the WAFS Internet file service (WIFS), was successfully completed. The “*Implementation of international airways volcano watch (IAVW)*” Project (Project H2) conducted a volcanic ash exercise on 11 and 12 December 2014. Regarding the “*Implementation of MET quality management (QMS/MET)*” Project (Project H3), 9 States and 1 Territory have implemented the MET/QMS. Of these, 7 have certified the MET/QMS, and only 1 of the other 3 has started the certification process. The States that have not yet implemented the MET/QMS are Guyana, Panama, Uruguay, and Venezuela.

APPENDIX B

PROGRESS MADE IN THE IMPLEMENTATION OF RASG-PA ACTIVITIES

1. Since the RAAC/13 meeting to date, two RASG-PA meetings (RASG-PA/7 and 8) and several meetings of the RASG-PA working groups and the Executive Steering Committee have been held.
2. Amongst the most outstanding activities of RASG-PA are the drafting and approval of the Fourth Edition of the Annual Safety Report (2014 edition) and the Fifth Edition of the Annual Safety Report (2015 edition).
3. For drafting the Fifth Edition of the Air Safety Report (ASR), safety information provided by ICAO, Boeing, IATA, and the Caribbean and South American Monitoring Agency (CARSAMMA) was used for the different sections of the report. In particular, this edition has an expanded predictive data section, based on the maturity of the safety information capture and analysis process in the Pan American Region.
4. In the Fifth Edition of the ASR, a change was made compared to previous versions, since proactive and predictive information precursors are prominent in the categories of interest, such as:
 - (RE) precursor: unstable approaches.
 - CFIT precursor: events related to the enhanced ground proximity warning system.
 - MAC precursor: Traffic collision avoidance system - Resolution advisory (TCAS-RA).
5. The reactive section of the ASR, Fifth Edition, contains valuable information on accident statistics of the last ten years; and the proactive section contains State compliance outcomes of the Universal Safety Oversight Audit Programme (USOAP). A section was also included on the results of the IATA Operational Safety Audit (IOSA) Programme.
6. All ASR editions are available in: <http://www.icao.int/RASGPA/Pages/asrt.asp>.
7. Aviation safety seminars have been carried out including a seminar on exchange of safety information to mitigate the risk areas identified in the Pan American Region, as well as a seminar on Flight Data analysis program (FDAP). They have also included information from ICAO on the improvement of safety oversight systems.
8. Likewise, a seminar on runway excursion (RE) and the first workshop “Training the trainer in standard RASG-PA phraseology based on ICAO Doc 4444” (Mexico City, Mexico, 28-29 October 2014, sponsored by CANSO) were held.
9. Regarding RASG-PA projects, the work plan and progress of the pilot project for the development of metrics to measure institutional strengths of civil aviation authorities, now taken over by ICAO Headquarters to turn it into a global project, must be highlighted.

10. Regarding safety initiatives, RASG-PA/8 considered that the Aviation Safety Training Team (ASTT) should provide guidance to RASG-PA member States seeking assistance for effective and sustainable compliance with safety oversight obligations, and formulated a conclusion in that respect.

Agenda Item 3: Review of results obtained in the SAM Region on security matters

3.1 Under this agenda item, the following working papers were presented:

- WP/06 – *Implementation of the Universal Security and Safety Planning and Implementation Groups (GREPECAS and RASG-PA)* (Secretariat);
- WP/07 – *Results of the AVSEC training programme* (Secretariat);
- WP/08 – *Reporting on NAM/CAR and SAM AVSEC/FAL/RG panel activities* (Secretariat);
- WP/22 – *Passenger data (API/PNR)* (IATA);
- WP/16 – *Cyber Security and Risk Assessment Guide* (CANSO);

a) Results of the Universal Security Audit Programme (USAP)

3.2 The Meeting took note of the activities carried out regarding the USAP-CMA audit programme in the SAM Region, in addition to the activities carried out during the transition to the USAP-CMA.

3.3 The Meeting was also reminded of the need for States of the Region to continue supporting the audit programme (USAP-CMA), by signing the new USAP-CMA Memorandum of Understanding when so required, submitting updates to the implementation of action plans, and collaborating through the secondment of security experts to USAP CMA activities.

b) Results of the AVSEC Training Programme

3.4 Next, the results of the AVSEC training programme were presented, noting that the Region had two Aviation Security Training Centres (ASTCs): ETAC in Quito, Ecuador, and CIPE in Buenos Aires, Argentina. The ASTCs trained a total of 69 officials of 16 NACC and SAM States in 2013, and a total of 66 officials of 15 NACC and SAM States in 2014.

3.5 It was also noted that a new agreement had been signed this year with *Transport Canada*, entitled “*Improving global civil aviation security*”, for a period of three years, one of whose objectives was to support training of AVSEC personnel in the Region.

c) FAL Activities in the Region

3.6 Information was then provided on the activities carried out by the ICAO/LACAC AVSEC/FAL Regional Group pursuant to its terms of reference, especially the establishment of a cooperation agreement between ICAO and LACAC, whereby the AVSEC/FAL/RG would report on its activities, tasks, and results to the Directors of Civil Aviation and to the corresponding aviation security authority. Details of the activities carried out are shown in WP/08 corresponding to this agenda item.

3.7 Likewise, in order to help States standardise procedures, exchange experiences, achieve best practices to improve aviation security systems, and achieve best practices in the area of facilitation, the Meeting agreed to promote the implementation of the Project on passenger and carry-on baggage screening procedures, which is in phase 2, and which will facilitate the experience at airports, as well as the One Stop Security (OSS) System. IATA expressed its support and highlighted their importance.

3.8 Likewise, the Meeting took note of the List of Prohibited Items prepared on the basis of a risk assessment conducted by each State, with a view to developing common criteria for passengers, luggage and air cargo in the Region, and help improve and update the procedures developed, based on experience.

Other aviation security considerations

3.9 Next, IATA presented a working paper (WP/22) concerning the advance passenger information system (API) and the guidelines on the passenger name record (PNR). This paper highlighted the importance for States to apply the SARPs contained in Annex 9. It also stressed the need for collaboration between the States and the industry in order to align passenger data programmes with Annex 9 and international guidelines, which required both international and inter-agency cooperation y the commitment of States to provide funding.

3.10 Passenger data programmes can have a significant impact on airline operations and costs. They also improve facilitation, as well as the travel experience of passengers. In this sense, the Meeting took note of the information provided, and of the fact that the implementation of these systems could take approximately 18 months, reason why precautions needed to be taken.

3.11 The Meeting also took note of the information provided regarding the Cyber Security and Risk Assessment Guide developed by CANSO, which is at the disposal of all States at the following website: <https://www.canso.org/canso-cyber-security-and-risk-assessment-guide>.

3.12 Finally, Unites States presented a working paper on the insider risk in civil aviation (WP/24), indicating that the Transportation Security Administration (TSA) has attempted to raise awareness of insider risk and has made significant efforts to educate stakeholders on how to mitigate this risk.

3.13 The Meeting took note that insiders—security screening inspectors, employees, vendors, or contractors at an airport—can use their trusted position and access to commit a malicious, complacent, or ignorant act. Their privileged access and knowledge of vulnerabilities offer them a greater likelihood of success if there are no policies or procedures in place to mitigate this risk. The insider risk can exist in any organisation, and it is critical to recognise the various risks, conductors, and motivations of insiders. By raising awareness and sharing best practices, States will be able to more adequately and effectively address vulnerabilities and mitigate the insider risk.

Agenda Item 4: Follow up on Bogota Declaration

4.1 Under this agenda item, the following working papers were presented:

- WP/09 – *Progress on the implementation of safety oversight improvement* (Secretariat);
- WP/25 – *Evaluation of the Safety Oversight Goal established in the Declaration of Bogota* (Chile);
- IP/04 – *CMA-USOAP IVA Missions* (Secretariat);
- WP/10 – *Status of implementation of air navigation improvement priorities* (Secretariat);
- WP/21 – *Optimization and harmonization of the Longitudinal Separation Minima in the SAM FIRs boundaries* (IATA);
- WP/23 – *ATC slots and airport slots* (IATA);
- NI/08 – *Avances en operaciones óptimas mediante trayectorias en rutas mejoradas (only in Spanish)* (Colombia);
- NI/09 – *Avances en la implantación de la ATFM en Colombia (only in Spanish)* (Colombia); and
- NI/10 – *Avances en la implantación de la interconexión AIDC en Colombia (only in Spanish)* (Colombia).

a) Priorities for the implementation of safety improvements

4.2 The Meeting took note of the status of implementation of safety improvements defined as goals in the Declaration of Bogota in the areas of safety oversight, accidents, runway excursions, aerodrome certification, and implementation of the State safety programme (SSP) and the safety management system (SMS).

Safety oversight: 80% effective implementation (EI) in the SAM Region

4.3 From November 2011 to August 2015, ICAO carried out six (6) ICAO coordinated validation missions (ICVM) to the following South American States: Colombia (2011); Ecuador and Suriname (2012); Argentina and Venezuela (2013) and Uruguay (2014). Likewise, two (2) CMA audits were conducted in Bolivia (2013) and Peru (2014), and one (1) *ex situ* activity for Brazil (2015).

4.4 During this period, 8 out of the 9 SAM States improved their EI, raising the average EI for the SAM Region from 66.31% in 2011 to 72.08% in August 2015, that is, a 5.77% increase, which represents an average improvement of approximately 0.64% per activity. However, this result could vary based on the results the latest CMA activities carried out this year.

4.5 The areas that show low effective implementation are AIG, ANS, and AGA, and the critical element with the lowest EI is CE4 – Technical personnel qualification and training, whose improvement requires States to implement an effective competence definition and control system.

4.6 The Meeting also took note that CMA audits would not be carried out in the Region in 2016. Accordingly, the percentage of effective implementation could be improved through ICAO coordinated validation missions (ICVM), whether scheduled or at the request of the States, and upon request of *ex situ* activities, in order to help the SAM Region attain the 80% goal.

4.7 In this regard, it was noted that, given the existing conditions, it was possible that the percentage of compliance agreed in the Declaration of Bogota would not be achieved. One of the factors mentioned was the fact that the methodology currently use in USOAP CMA activities was more thorough.

4.8 The strategy proposed for specific safety improvements in SAM States and member States of the Regional Safety Oversight Cooperation System (SRVSOP) is shown in Appendix A to WP/09.

4.9 Accordingly, several States, especially Uruguay, Guyana, and Bolivia, informed of the hard efforts they were making to significantly improve their effective implementation.

4.10 Additionally, a question was raised regarding the application of the 91 SSP and SMS questions in the USOAP audit protocol. In this sense, it was noted that this would probably not be implemented in 2016¹, and thus would not affect the Declaration of Bogota. However, this was an important aspect to consider for maintaining and continuously improving current levels of compliance in the SAM Region.

4.11 In this regard, the States were reminded that SMS and SSP implementation requirements contained in the Annexes became applicable since 2010, but the USOAP audit protocol still did not contain the questions to check their implementation in the States. Consequently, the application of the new protocol questions on the SSP did not depend directly on the current proposals of amendment to Annex 19.

4.12 Finally, after an extensive debate on the subject, the Meeting felt the need to analyse the situation again by mid next year and, if necessary, reformulate the goal. Support would continue to be provided to activities proposed for implementation by the SRVSOP next year.

Accidents: Reduce the accident rate gap of the SAM Region with respect to the global accident rate by 50%

4.13 In 2014, the goal was to reduce the gap to 0.35; however, the gap that year was 0.5, that is, 0.15 above the goal. For 2015, the goal is to reduce the gap to 0.25. Until 31 August, the gap was 1.7 in favour, since no accidents had been reported until that date in the SAM Region. However, these values will vary based on the incidents/accidents that have recently occurred. Appendix B to WP/09 presents an analysis of indicators, goals and mitigation measures to improve aviation accidents.

¹	2013	2014	2015
SAM rate	3.6	4.6	0
Global rate	2.9	4.1	1.7
Gap	0.7	- 0.5	+ 1.7
50% of the gap	- 0.35	- 0.25	

¹ Following the RAAC/14 meeting, ICAO circulated Electronic Bulletin EB2015/56 advising that the audit of the new PQs concerning the SSP would be postponed until January 2018.

² Data obtained from the ICAO SPACE iSTARS 2.0 website, using as a basis 2013 data for aircraft above 5 700 kg in scheduled commercial air transport operations.

Results	Start of exercise	0.15 above goal	Goal exceeded until 31 August 2015
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Runway excursions: Reduce the runway excursion rate with respect to the average rate of the SAM Region by 20% (2007-2012)

4.14 The average runway excursion rate² between 2007 and 2012 was 2.24 accidents per million departures. If the rate of 2.24% is reduced by 20% the goal for the SAM Region is adjusted to a rate of 1.80 accidents per million departures.

4.15 Upon analysing the information on indicators for the SAM Region, an accident reduction may be noted between 2007 and 31 August 2015, obtaining a rate of 0 in 2012, 1.56 in 2013, 0.51 in 2014 and 0 until 31 August 2015. Accordingly, the SAM Region is attaining the goal established in the Declaration of Bogota for runway excursions. Appendix C to WP/09 describes the analysis of this indicator.

Aerodrome certification: 20% of international aerodromes certified

4.16 To date, 12% of aerodromes have been certified. Likewise, Venezuela reported that the Maiquetía airport had been certified, which will increase the percentage of attainment of this goal. Furthermore, with the implementation of the PANS Aerodromes and the definition of initial certification, it is possible that the aerodrome certification plan will become more ambitious in the medium term. Appendix D to WP/09 contains the proposed aerodrome certification plan.

Implementation of the State safety programme (SSP) and the safety management system (SMS):

- ✓ *Attain 67% SSP implementation.*
- ✓ *Attain 100% capacity to oversee the SMS of service providers.*

4.17 According to the Fourth Annual Meeting of Coordinators of the National Safety Programme (Lima, 16-18 March 2015), SSP implementation reached a regional average of 42%, requiring a 15% improvement by December 2016.

4.18 At that same meeting, the States reported 83% progress in SMS implementation. Accordingly, 17% remained to be attained by December 2016 in order to meet the goal established in the Declaration of Bogota. It should be noted that both SSP and SMS measurements are the perceived estimates by the States, which have not been audited. Appendix G to WP/09 contains a table summarising SSP and SMS implementation, by milestone and by State.

4.19 In this regard, the Meeting took note that the Second Meeting of Air Navigation and Safety Directors (Lima, Peru, 14-16 September 2015) had agreed that the Secretariat should send a survey to SAM States to measure exactly the level of progress of, and compliance with, the SSP and SMS in the Region with respect to the 91 protocol questions.

³ Performance indicators for runway excursions were obtained from the ADREP application at the ICAO SPACE iSTARS 2.0 website, for all types of operations with aircraft above 5 700 kg and for accidents occurred between 2007 and 31 August 2015, by State of occurrence.

USOAP CMA IVA missions

4.20 The Meeting took note of a new activity entitled “Integrated Validation Activities” (IVAs) that could be included in the USOAP CMA to validate the development and implementation of the CAPs. These could be conducted by ICAO Regional Offices, through missions of experts to validate what had been done only in a given area or taking advantage of the visit of an ICAO Officer conducting other official activities not necessarily related to CMA and who is duly authorized to conduct IVA and collect the necessary evidence to resolve USOAP findings. In this regard, the aeronautical authorities could consider the conduction of IVAs as an additional strategy to increase the percentage of EI.

b) Priorities for the implementation of air navigation improvements

4.21 The Meeting took note of the progress made in the implementation of the ten air navigation implementation priorities focused on PBN in TMA, PBN en route, CDO, CCO, fuel savings/reduction of CO₂ emissions, ATFM, AIM, AMHS interconnection, interconnection of automated systems (AIDC), and implementation of national IP networks.

PBN in terminal area

4.22 Regarding the implementation of APV procedures pursuant to Resolution A 37/11 of the ICAO 37th Assembly, the status of implementation was 65.88%, out of the 100% foreseen for the end of 2016.

PBN en route

4.23 The implementation of PBN en route (RNAV in the upper airspace) had reached 60%, achieving the goal established in the Declaration of Bogota (60%).

Implementation of CDO and CCO

4.24 The rate of implementation of continuous descent (CDO) and continuous climb (CCO) operational techniques was 4.52% above the 40% goal foreseen for the end of 2016.

Fuel savings/reduction of CO₂ emissions

4.25 As a result of the SAM route network optimisation process, the annual goal of 40,000 tonnes of CO₂ reduction established in the Declaration of Bogota was exceeded in 2014 by more than 11,000 tonnes, reaching 51,132 tonnes of CO₂ reduction. So far in 2015, the reduction of CO₂ emissions has been negatively affected by delays of some States in the PBN redesign of their terminal areas (TMAs), which has prevented them from providing, in due time, the new entry and exit points to connect the optimised routes that generate these savings.

ATFM implementation

4.26 Implementation of air traffic flow management (ATFM) has not been as expected. Only 42% of the States of the Region have implemented ATFM, and 58% is still pending compliance with the Declaration of Bogota.

AIS-to-AIM transition

4.27 Good progress has been made in the implementation of quality management in AIM. To date, 6 SAM States have certified their quality system in AIM: Brazil, Chile, Ecuador, French Guiana, Paraguay, and Uruguay, while the remaining States have already started or are about to start the certification process. The 2016 goal is for all SAM States to have their AIM quality systems certified.

AMHS interconnection

4.28 To date, none of the AMHS interconnections foreseen in the Declaration of Bogota have been implemented. Out of the 26 interconnections that should be implemented by the end of 2016, only the following have been implemented: Peru-Colombia, Peru-Ecuador, Guyana-Suriname, and Argentina-Paraguay, which were installed between 2010 and 2013, prior to the Declaration of Bogota.

AIDC interconnection

4.29 Out of the 15 interconnections foreseen in the Declaration of Bogota, only the AIDC between the Lima ACC and the Guayaquil ACC is in operation since the beginning of August 2015. Regarding the remaining AIDC interconnections, there are two in the pre-operational stage since the beginning of May 2015 between the Lima ACC and the Bogota ACC, and between the Guayaquil ACC and the Bogota ACC, expecting them to become operational on the last quarter of 2015.

Implementation of national IPS networks

4.30 Regarding the implementation of national IP networks, these have been installed in Argentina, Brazil, Chile, Ecuador, Paraguay, and Uruguay. This represents 55% of total implementation foreseen by the end of 2016.

Implementation goals concerning air navigation priorities

4.31 The Meeting, taking into account the progress made in the implementation of air navigation priorities, considered that the goals established for the end of 2016 in the Declaration of Bogota should be maintained.

Optimisation and harmonisation of the minimum longitudinal separation at FIR boundaries in the SAM Region

4.32 The Meeting took note of a proposal made by IATA for the optimisation and harmonisation of the minimum longitudinal separation at FIR boundaries in the SAM Region, starting with an optimisation from 80 MN to 40 MN, and a subsequent migration to a separation of 20 NM and 10 NM. In this regard, it was noted that, within the planning of air navigation implementation priorities for the period 2017-2019, as discussed at the sixteenth workshop/meeting of the SAM Implementation Group (SAM/IG/16), consideration was given to the implementation of such optimisation and harmonisation, establishing 100% implementation of a longitudinal separation of 10 MN in the Region as the goal for 2019.

ATC and airport slots

4.33 The Meeting took note that, with traffic growth in the Region and increased demand, some airports were getting congested to a level where demand exceeded capacity. In order to address this issue in the Region, airport administrations and ANSPs were using ATC slots. However, in some cases,

obligations and concepts were getting mixed up, generating some activities such as the misuse of slots, deviating from the best practices of the industry, as defined in the Worldwide Slot Guidelines (WSG).

4.34 The Meeting considered that SAM States should adopt the international best practices concerning the use of airport slots, using as a reference the IATA WSG. It also agreed that the SAM/IG should review aspects concerning airport and ATC slots, as well as the standardisation in the use of ATC slots in the Region.

Activities for the implementation of air navigation priorities in Colombia

4.35 The Meeting took note of the level of achievement in Colombia of the goals established in the Declaration of Bogota concerning air navigation priorities for the implementation of PBN en route through enhanced operations using paths on improved routes, ATFM implementation and AIDC interconnections. Information on this progress can be found in information papers 8, 9, and 10.

Agenda Item 5: ICAO regional technical cooperation tools for the implementation of air navigation and safety improvements

5.1 Under this agenda item, the following working paper was presented:

- WP/11 – Regional projects managed by the SAM Regional Office (Secretariat).

5.2 The Secretariat presented information on the activities and progress made in the three regional projects managed by the SAM Regional Office:

- RLA/99/901 – Regional Safety Oversight Cooperation System (SRVSOP);
- RLA/03/901 – REDDIG management system and satellite segment administration;
- RLA/06/901 – Assistance for the implementation of a regional ATM system based on the ATM operational concept and the corresponding technological communication, navigation, and surveillance (CNS) support

5.3 These projects are the regional tools for the implementation of air navigation and safety improvements.

5.4 In summary, it was noted that the three regional projects had achieved a level of implementation of 76% in 2014 and 2015. Through them, 148 missions had been organised; training activities were attended by approximately 1300 participants; work meetings were attended by 603 participants, with a total of 125 fellowships granted, as shown in **Appendix A**¹. According to the evaluation made, the level of satisfaction in these three projects had reached an average of 4 over a maximum of 5, which showed that the Region was satisfied with these projects.

5.5 Regarding Project RLA/03/901, the successful operation of the new IP-based South American digital network (REDDIG II), which started operating in early February 2015, must be highlighted.

5.6 Finally, it was recognised that these projects were useful tools for the Region, since they supported air navigation and safety enhancements and thus were critical for achieving the objectives and goals of the Declaration of Bogota.

¹ See Appendix A to WP/11

Appendix A

Budget and total number of missions conducted in 2014

Projects	Scheduled GB/RCC	Projected + additional activities financed by the States	Expenditures	%	Missions conducted	Course participants	Meeting participants	Scholarships issued
RLA/99/901	\$ 597,694	\$ 798,855	\$ 749,119	94%	57	637	145	0
RLA/06/901	\$ 638,009	\$ 479,928	\$ 469,207	98%	13	221	194	79
RLA/03/901	\$ 5,800,437	\$ 5,800,437	\$ 2,141,829	37%	7	54	50	7
Total		\$ 7,079,220	\$ 3,360,155.00	76%	77	912	389	86

Budget and total number of missions conducted in 2015 (until September)

Projects	Scheduled GB/RCC	Projected + additional activities financed by the States	Expenditures	%	Missions conducted	Course participants	Meeting participants	Scholarships issued
RLA/99/901	\$ 642,389	\$ 864,874	\$ 740,117	86%	35	330	111	1
RLA/06/901	\$ 405,190	\$ 443,450	\$ 375,952	85%	29	85	82	28
RLA/03/901	\$ 1,416,982	\$ 3,955,119	\$ 1,908,070	48%	7	21	21	10
Total		\$ 5,263,443	\$ 3,024,139.00	73%	71	436	214	39

Agenda Item 6: Priorities of implementation for the period 2017-2019

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

- WP/12 - *Safety implementation priorities proposal* (Bolivia);
- WP/13 - *Proposal of air navigation implementation priorities* (Secretariat); and
- WP/20 - *Implementation of ICAO's policies on charges, contained in Doc 9082* (IATA).

Safety implementation priorities for the period 2017-2019

6.2 Regarding safety implementation priorities, the proposal was made to the Meeting to maintain the five safety indicators established in the Declaration of Bogota, suggesting new goals for the period 2017 – 2019.

6.3 In this sense, the Meeting had an extensive debate on the proposals made. Taking into account that the analysis of future priorities for the Region is just starting, the Meeting noted the following:

Safety oversight: % effective implementation (EI) in the SAM Region

6.4 Proceeding with the extensive discussion about this indicator under Item 4, it was felt that the 80% goal should be maintained, considering that it was not appropriate to reduce the goal established in the Declaration of Bogota, despite the difficulties encountered.

6.5 In this regard, both Argentina and Brazil offered their support to the States for the planning of future USOAP CMA activities, focusing on what could provide the greatest benefits for the Region. Likewise, human resources were offered to support the States wishing to increase their level of compliance above the regional average.

Accidents: Reduce the accident rate in the SAM Region

Runway excursions: Reduce the runway excursion rate

6.6 Regarding accident indicators, the request was made for the RASG-PA to assess and propose an accident indicator, taking into account the operations in the Region, in order to design a metric more in line with those used by RASG-PA. It should be noted that this proposal must include the analysis of all international operations conducted by the Region and not only scheduled international air transport operations.

Aerodrome certification: % of certified international aerodromes

6.7 In principle, the proposed goal of 100% certified aerodromes by 2019 was considered appropriate.

Implementation of the State safety programme (SSP) and the safety management system (SMS)

- ✓ % SSP implementation
- ✓ % of capacity to oversee the SMS systems of service providers

6.8 Regarding SSP indicators, the Meeting requested consistency with that established at regional level by the 2015 HLSC, in the sense that the Region was at a very early SSP implementation level and it was felt that the SSP would be implemented only by 2020. It was also recalled that Annex 19 was being revised, and thus it would not be appropriate to set the implementation date so soon.

6.9 In this regard, this indicator required further analysis and reformulation based on regional agreements and that established in the GASP.

Air navigation implementation priorities for the period 2017-2019

6.10 The Meeting took note that the priorities set forth in the Declaration of Bogota responded to the requirements of the Region for the period 2014-2016 and that they did not reflect all the air navigation requirements of the Global Plan and the Regional Plan (PBIP) for attaining the integration, interoperability and harmonisation of systems in support of the “single sky” concept for international civil aviation.

6.11 In this regard, the Meeting took note of an initial proposal of air navigation implementation priorities for the period 2017-2019, based on the ASBU modules (Aviation System Block Upgrades) and which responded to the global air navigation requirements, the ICAO strategic objectives, and two of the post-2015 sustainable development objectives established by the United Nations for the next 15 years. **Appendix A**¹ to this agenda item contains the initial air navigation implementation priorities for the period 2017- 2019.

Implementation of ICAO’s policies on charges for airports and air navigation services, contained in Doc 9082

6.12 The Meeting was informed about ICAO’s policies on charges contained in Doc 9082, which establish the basic principles on which cost recovery for the provision of airport and air navigation facilities, through the collection of charges, should be based. Doc 9082 underlines four key principles for determining charges: non-discrimination, relationship with costs, transparency, and consultation with the airlines. The incorporation of these four key principles for charge determination into the national legislation, regulations or policies ensures their enforcement by airport operators and air navigation service providers.

6.13 In this regard, the Meeting agreed to consider the implementation of ICAO’s policies on charges, contained in Doc 9082, as an implementation priority for the period 2017-2019 in the SAM Region.

Improvement of the USAP Programme

6.14 Also within the implementation priorities for the period 2017 – 2019, it was agreed to include the improvement metric of the ICAO USAP Programme²

¹ See Appendix A to WP/13

² See WP/06 on Agenda Item 3

APPENDIX A

AIR NAVIGATION PRIORITY IMPLEMENTATION PLAN PERIOD 2017- 2019

APPROVED TEMPLATES IN THE ATFM AREA

<i>B0 - CCO and B0 - CDO: Improve efficiency and flexibility in climb and descent profiles applying continuous climb operations (CCO) and continuous descent operations (CDO) 2017-2019</i>				
ELEMENTS	SCOPE	INDICATORS/ METRICS	GOALS: % / Date	STATUS
1- PBN SIDs and PBN STARs <u>SIDs/STARs in International Airports considered in 2014: 1680</u>	All States	Indicator: % of International Airports with SID or STAR PBN. Support metrics: Number of International Airports that have implemented SID or STAR PBN. (Note: This refers to International Airports listed in table AOP-1 of the CAR/SAM ANP).	80% by 2017 100% by 2018	64% of International Airports with PBN SIDs or STARs implemented (Nr. of airports)
	NOTE	For the 2017-2019 period metrics and indicators will be refined considering one specific metric for SID and another for STAR. The metric for STAR should consider only International Airports with regular international operations.		
2- Design of TMAs applying PBN. <u>2015 baseline: 34 TMAs selected</u>	All States	Indicator: % of TMAs selected for implementation of the PBN airspace concept that serve International Airports. Support metrics: Number of TMAs selected for implementation of the PBN airspace concept that serve International Airports. (Note: this refers to international airports listed in Table AOP-1 of the CAR/SAM ANP).	70% by 2016 80 % by 2017 100% by 2018	18% TMAs with PBN design (Nr. of TMAs)

B0 - CCO and B0 - CDO: Improve efficiency and flexibility in climb and descent profiles applying continuous climb operations (CCO) and continuous descent operations (CDO) 2017-2019				
ELEMENTS	SCOPE	INDICATORS/ METRICS	GOALS: % / Date	STATUS
3- Applications of CCO and CDO techniques to departures and arrivals <u>Considered in 2013:</u> 99 international airports Note: The number of international airports considered will be updated in 2016.	All States	Indicator: % of International Airports with arrivals and departures applying CCO and CDO. Support metrics: Number of International Airports with arrivals and departures applying CCO and CDO. (Note: this refers to international airports listed in Table AOP-1 of the CAR/SAM ANP).	40 % CCO/CDO by 2018 50% CCO/CDO by 2019	4,52% of International Airports with CCO/CDO implemented. (Nr. of airports)
	NOTE	Data associated to CDO and CCO implementation metric should be based on information supplied by SAM States. States should undertake a complete assessment of the application of such techniques, based on the guides of ICAO CDO and CCO Manuals to consider airports with CDO and CCO implemented.		
4- PBN routes Note: Analyse implementation of RNP-2 routes (for Continental and Oceanic areas) routes <u>Routes considered in 2015:</u> 165 routes of upper airspace.	All States	Indicator: % of RNP- 2 routes implemented in the upper airspace of the Region. Support metrics: Number of RNP-2 routes implemented in the upper airspace of the Region.	20 % by 2019*	% RNP 2 routes (Number of RNP 2 routes in the upper airspace)
	NOTE	*Subject to a feasibility study		
5- Application of the conventional longitudinal separation from 80 to 40 NM	All States	Indicator: % of States applying longitudinal separation of 40 NM at FIR boundaries. Support metrics: Number of States applying a longitudinal separation of 40 NM at FIR boundaries.	50% by 2016 100% by 2017	XX% (Nr. of States)

B0 - CCO and B0 - CDO: Improve efficiency and flexibility in climb and descent profiles applying continuous climb operations (CCO) and continuous descent operations (CDO) 2017-2019				
ELEMENTS	SCOPE	INDICATORS/ METRICS	GOALS: % / Date	STATUS
6- Application of the conventional longitudinal separation from 40 to 20 NM	All States	Indicator: % of States applying a longitudinal separation of 20 NM at FIR boundaries. Support metrics: Number of States that apply a longitudinal separation of 20 NM at FIR boundaries.	2nd Semester 2018	XX % (Nr. of States)
7. – Optimisation of the longitudinal separation from 20 to 10 NM using ATS surveillance systems	All States	Indicator: % of States applying a longitudinal separation of 10 NM. Support metrics: Number of States applying a longitudinal separation of 10 NM and number of SAM States with adequate ATS surveillance coverage in FIR boundaries with neighbors States.	100% by 2nd Semester 2019	XX % (Nr. of States)

B0 - NOPS: Improve traffic flows through the implementation of ATFM 2017-2019				
ELEMENTS	SCOPE	INDICATORS/ METRICS	GOALS: % / Date	STATUS
1- Implementation of regional ATFM	All States	Indicator: % of ACC FMUs/FMPs interconnected in a network Metrics: Number of ACC FMUs/FMPs interconnected in a network.	50% by 2017 100% by 2018	XX % (Nr. of FMPs/FMUs)

AIM AREA

B0 - DATM: Service improvement through digital aeronautical information management 2017-2019				
ELEMENTS	SCOPE	INDICATORS/ METRICS	GOALS: % / Date	STATUS
1- AIXM	All States	Indicator: % of States that have implemented AIXM on an AIS database. Metrics: Number of States that have implemented AIXM on an AIS database.	2016 trials (4 States: ARG, BRA, PAN, URU) 28% by 2017 49% by 2018 100% by 2019	XX% (Nr. of States)
2- Electronic AIP	All States	Indicator: % of States that have implemented an IAID to manage the production of the electronic AIP (eAIP). Metrics: Number of States that have implemented an IAID to manage the production of the electronic AIP (eAIP).	28% by 2017 56% by 2018 100% by 2019	XX% (Nr. of States)
3- Electronic terrain and obstacle data (e-TOD)	All States	Indicator: % of States that have implemented the Terrain data set. Metrics: Number of States that have implemented the Terrain data set. Indicator: % of International Airports by State that have implemented the Obstacle data set. Metrics: Number of States that have implemented the Obstacle data set. Indicator: % of International Airports by State that have implemented the data set for Terrain and Obstacles that penetrate the terrain and obstacle data collection surface. Metrics: Number of International Airports by State that have implemented the data set for Terrain and Obstacles that penetrate the terrain and obstacle data collection Surface.	Area 1: Terrain: 100% by 2016 Obstacles: 28% by 2016 49% by 2017 100% by 2018 Area 2b, 2c and 2d Terrain: 28 % by 2017 49 % by 2018 100 % by 2019 Obstacles: 28 % by 2017 49 % by 2018 100 % by 2019	Area 1: Terrain: XX% (Nr. of States) Obstacles: XX% (Nr. of States) Area 2b, 2c and 2d Terrain: XX% (Nr. of Int. Airports by States) Obstacles: XX% (Nr. of Int. Airports by States)

<i>B0 - DATM: Service improvement through digital aeronautical information management 2017-2019</i>				
ELEMENTS	SCOPE	INDICATORS/ METRICS	GOALS: % / Date	STATUS
4- Digital NOTAM	All States	<p>Indicator: % of States that have included the digital NOTAM in their National AIS-to-AIM Transition Plan.</p> <p>Metrics: Number of States that have included the digital NOTAM in their National AIS-to-AIM Transition Plan.</p>	<p>28% by 2017 56% by 2018 100% by 2019</p>	<p>XX% (Nr. of States)</p>
5- Integrated aeronautical information databases (IAID)	All States	<p>Indicator: % of States that have developed integrated aeronautical information databases (IAID).</p> <p>Metrics: Number of States that have developed integrated aeronautical information databases (IAID).</p>	<p>28% by 2017 56% by 2018 100% by 2019</p>	<p>XX% (Nr. of States)</p>

CNS AREA

<i>B0 – FICE: Increased interoperability, efficiency and capacity through ground-ground integration</i>						
ELEMENTS	SCOPE	INDICATORS / METRICS	GOALS: %/ Date			STATUS
			2017	2018	2019	
AMHS implementation/ interconnection	All States	Indicator: % of AMHS systems interconnected Support metrics: Number of AMHS systems interconnected 13 AMHS systems interconnected by the end of 2019	5	5	3	26 AMHS interconnections will be available by the end of 2016
Implementation of AIDC interconnections between adjacent ACCs	All States	Indicator: % of interconnections implemented between adjacent ACCs Support metrics: Number of AIDC interconnections implemented between adjacent ACCs Implementation of 26 AIDCs by the end of 2019	13	6	7	
Implementation of domestic IP networks	All States	Indicator: % of States that have implemented domestic IP networks Support metrics: Number of domestic IP networks implemented 7 States implemented by the end of 2019	3	2	2	

<i>B0 – SUR: Initial ground surveillance capability</i>						
ELEMENTS	SCOPE	INDICATORS / METRICS	GOALS: %/ Date			STATUS
			2017	2018	2019	
Implementation of ADS B	All States	Indicator: % of ADS B and/or multilateration coverage implemented for higher air navigation levels Goal to 2019: 10% of domestic implementation of ADS-B and/or Multilateration coverage for higher air navigation levels	6%	8%	10%	Current status 5% of ADS B and/or Multilateration coverage ADS B Systems installed in Colombia (13), Guyana (1) and Paraguay (6) Multilateration in Colombia and Ecuador (2)
Surveillance interconnection systems	All States	Indicator: % of coverage of surveillance in flight transferring control area between adjacent AAC of the Region Goal to 2019: 30% of coverage of surveillance in flight transferring control area between adjacent AAC of the Region	10%	20%	30%	5% of surveillance coverage in flight transferring control area between adjacent AAC of the Region There is radar coverage in the radar transferring between AAC Montevideo and AAC Ezeiza
Implementation of the ACC automation system	All States	Indicator: % of ACC automation systems implemented Goal: 100% of ACC automation systems implemented 2019	95%	100%		90% of automated systems implemented in AAC

<i>B0-SURF: Safety and efficiency of surface operations (A-SMGCS Level 1-2)</i>						
ELEMENTS	SCOPE	INDICATORS / METRICS	GOALS: %/ Date			STATUS
			2017	2018	2019	
A-SMGCS Level 1*		<p>Indicator: % of applicable international aerodromes that have implemented A-SM GCS Level 1</p> <p>Support metrics: Number of applicable international aerodromes that have implemented A-SMGCS Level 1</p> <p>4 A-SMGCS Level 1* by the end of 2019</p>		2	2	New implementation
A-SMGCS Level 2*		<p>Indicator: % of applicable international aerodromes that have implemented A-SMGCS Level 2</p> <p>Support metrics: Number of applicable international aerodromes that have implemented A-SMGCS Level 2</p> <p>2 A-SMGCS Level 2* by the end of 2019</p>			2	New implementation

<i>B0 – TBO: Improved safety and efficiency through the initial application of data link en-route</i>						
ELEMENTS	SCOPE	INDICATORS / METRICS	GOALS: %/ Date			STATUS
			2017	2018	2019	
Implementation of ADS C	All States with oceanic FIRS	Indicator: % of oceanic FIRs with ADS C requirement implemented Goal to 2019: 100% of oceanic FIRs with ADS C implemented	90%	100%		To date 82% ADS C implemented in oceanic FIRS
Implementation of CPDLC	All States	Indicator: % of CPDLC systems implemented in FIRs oceanic and continental areas Goal to 2019: 100% of CPDLC systems implemented in oceanic FIRs 5% of CPDLC implemented in continental area		2		To date 82% of oceanic FIRs with CPDLC implemented 0% of CPDLC implemented in continental area

MET AREA

<i>B0 – AMET: Meteorological information supporting enhanced operational efficiency and safety</i>						
ELEMENTS	SCOPE	INDICATORS / METRICS	GOALS: %/ Date			STATUS
			2017	2018	2019	
MET/QMS in accordance with ISO 9001:2015	All States	Indicator: % of States that have implemented MET QMS (100% by the end of 2019) Support metrics: Number of States that have implemented MET QMS	70%	86%	100%	All States should update their MET/QMS documentation to align it with ISO 9001. Currently, 7 States have implemented and certified the MET/QMS in their aeronautical meteorological services.
Implementation of SIGMET messages in graphical format	All States	Indicator: % of international aerodromes/MWOs that have implemented graphical procedures. Support metrics: Number of international aerodromes/MWOs that have implemented graphical SIGMET procedures.	43%	57%	86%	Currently, 3 States have implemented SIGMET messages in graphical format.
Implementation of the IAVW procedure	All States	Indicator: % of international aerodromes/MWOs that have implemented IAVW procedures. Support metrics: Number of international aerodromes/MWOs that have implemented IAVW procedures	50%	64%	86%	

B0 – AMET: Meteorological information supporting enhanced operational efficiency and safety						
ELEMENTS	SCOPE	INDICATORS / METRICS	GOALS: %/ Date			STATUS
			2017	2018	2019	
Implementation of OPMET messages in XML/GML format	All States	Indicator: % of States that have implemented OPMET messages in XML/GML format. Support metrics: Number of States that have implemented OPMET messages in XML/GML format.	29%	43%	64%	
Implementation of tropical cyclone watch procedures	States requiring this procedure	Indicator: % of international aerodromes/MWOs that have tropical cyclone watch services Support metrics: Number of international aerodromes/MWOs that have tropical cyclone watch services	40%	60%	80%	Only Colombia, Guyana, French Guiana, Panama, Suriname, and Venezuela could be affected by tropical cyclones in the SAM Region.
Implementation of surveillance procedures concerning the release of radioactive material	All States	Indicator: Percentage of Meteorological Watch Offices (MWOs) that have implemented surveillance procedures concerning the release of radioactive material Support metrics: Number of MWOs that have operational cooperation agreements with ACCs for the transmission of reports on the release of radioactive material	14%	29%	50%	<ul style="list-style-type: none"> • Brazil has a domestic contingency plan. • Panama has agreements with the Administration of the Panama Canal regarding transportation of dangerous goods (where radioactive material are included)
Implementation of wind shear warning and alert procedures	All States	Indicator: Percentage of international aerodromes /AMOs that have implemented wind shear warning and alert procedures Support metrics: Number of international aerodromes /AMOs that have implemented wind shear warning and alert procedures.	43%	64%	86%	

AGA AREA

B0 – A-CDM: Optimized airport operations through Airport-CDM						
ELEMENTS	SCOPE	INDICATORS / METRICS	GOALS: %			STATUS
			2017	2018	2019	
Standard calculation of airport capacity	All States	Indicator: % of aerodromes registered in the CAR/SAM Air Navigation Plan with movement of more than 7 million passengers per year and with airport capacity (runway/taxiways/ apron) calculated using the same methodology in the region. Support metrics: Number of aerodromes with movement of more than 7 million passengers per year with airport capacity (runway/taxiways/ apron) calculated using the same methodology in the region.	3	7	10	0%
Implementation of A-CDM	All States	Indicator: % of aerodromes registered in the CAR/SAM Air Navigation Plan with movement of more than 7 million passengers per year and that have started A-CDM implementation Support metrics: Number of aerodromes with movement of more than 7 million passengers per year that have implemented A-CDM	3	7	10	1%

Agenda Item 7: Other matters

7.1 Under this agenda item, the following working papers were presented:

- IP/05 - *Runway excursion mitigation* (United States) (**English only**);
- IP/06 - *United States Greenhouse gas emissions reduction plan* (United States) (**English only**); and
- IP/07 – *NEXTGEN modernization and its alignment with the aviation system block upgrade program* (United States) (**English only**).

7.2 Under this agenda item, the Meeting took note of the information presented by United States on runway excursion mitigation, the United States greenhouse gas emissions reduction plan, and the NEXTGEN modernisation and its alignment with the aviation system block upgrade programme.

Runway excursion mitigation

7.3 The Meeting took note of IP/05 presented by United States on the technical solutions applied at aerodromes to mitigate runway excursions, such as rubber removal, longitudinal grading of final ¼ of runways, distance-remaining signs; markings and lighting; runway grooving; and runway end safety areas.

Greenhouse Gas Emissions Reduction Plan

7.4 The Meeting took note of the United States Greenhouse Gas Emissions Reduction Plan of June 2015, for the reduction of greenhouse gas emissions in aviation. Information related to the plan can be found at: http://www.icao.int/environmental-protection/Lists/ActionPlan/Attachments/30/UnitedStates_Action_Plan-2015.pdf

NEXTGEN modernization and its alignment with the Aviation System Block Upgrade programme

7.5 The Meeting was informed of the progress made in the implementation of the United States NEXTGEN programme, including PBN, ADS B that will be mandatory in 2020, SWIM, and en-route automation modernization (ERAM). Information on the NEXTGEN plan can be found at:

- <https://www.faa.gov/nextgen/>
- <http://www.faa.gov/nextgen/media/NextGenUpdate2014.pdf>
- http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/ato_intl/media/pdf/2014_ato_int_strategic_plan_core.pdf