



**Agenda Item 4: Monitoring and reporting of the implementation of air navigation in the CAR/SAM Regions**

**PROGRESS ON THE IMPLEMENTATION AND FOLLOW-UP ON THE AIR NAVIGATION TARGETS ESTABLISHED ON THE BOGOTA AND PORT-OF-SPAIN DECLARATIONS AND THE REGIONAL PERFORMANCE-BASED AIR NAVIGATION IMPLEMENTATION PLANS**

(Presented by Secretariat)

<b>SUMMARY</b>	
<p>This working paper presents the reporting and monitoring activities on the progress made in the air navigation targets by each ICAO Regional Office (NACC and SAM), according to the mechanism established by GREPECAS.</p>	
<b>References:</b>	
<ul style="list-style-type: none"> <li>• Report of the Seventeenth CAR/SAM Regional Planning and Implementation Group Meeting (GREPECAS/17) Report, Cochabamba, Bolivia, 21 to 25 July 2014</li> <li>• Report of the Fourteenth Workshop/Meeting of the SAM Implementation Group (SAM/IG/14) Report, Lima, Peru, 10 to 14 November 2014</li> <li>• Report of the Fifteenth Workshop/Meeting of the SAM Implementation Group (SAM/IG/15) Report, Lima, Peru, 11 to May 2015</li> <li>• Report of the Third NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/3) Report, Mexico City, Mexico, from 4 to 6 April 2016</li> </ul>	
<b>Strategic Objective(s)</b>	<p><i>This working paper is related to Strategic Objective(s)</i></p> <p><i>Safety</i></p> <p><i>Air Navigation Capacity and Efficiency</i></p> <p><i>Environmental Protection</i></p>

**1. Introduction**

1.1 The Meeting analysed the activities developed by the CAR and SAM Regions in order to foster the measurement, monitoring and reporting of the goals established in the regional plans and in the Bogota and Port-of-Spain Declarations and the development of national plans aligned with the Global Air Navigation Plan (GANP) (4th edition) and the Regional Air Navigation Performance-based Plans for NAM/CAR Region (RPBANIP) and for the SAM Region (SAM PIB).

1.2 The Meeting took note on the way GREPEAS informs the Air Navigation Commission on the operational improvement through the filling of the format to follow-up on the progress of indicators and targets detailed in the PPRC/3 WP/06. Moreover, the RPBANIP and SAM PBIP planning and implementation elements, and their respective target follow-up will be included in Volume III of the CAR/SAM Digital regional air navigation plan (eANP).

1.3 The Meeting took note that NACC Regional Office collects information on the air navigation progress through regional implementation groups, such as the NAM/CAR Air Navigation Implementation Working Group (ANI/WG) through the use of the Air Navigation Report Forms (ANRFs).

1.4 Regarding SAM Region, the Meeting took note that the progress measurement of air navigation systems and services implementation specified in the SAM PBIP are collected through the SAM Implementation Groups (SAM/IG), held twice a year.

## **2. Discussion**

2.1 According to the follow-up of the ICAO NACC Regional Office, only some States have developed their national plans aligned with the Regional Plans, as requested in PPRC/3 Conclusion 3/10 - *Development of Air Navigation Plans Aligned with the GANP and the Regional Performance-Based Air Navigation Plans*.

2.2 In order to support this monitoring and reporting process by the PPRC, the NACC and SAM Regional Offices have developed the following activities:

### ***CAR Region***

2.3 To support the accomplishment of PPRC Conclusion 3/10, an ASBU implementation workshop will be held in August 2016, with the following objectives:

1. assist States and Air navigation services providers (ANSPs) to understand the technological and procedural improvements that make up the ASBU framework.
2. assist States and ANSPs to assess ASBU Module Elements in order to determine whether or not any of them can address their specific aviation system performance requirements.
3. use of Air Navigation Report Form (ANRFs) to document ASBU assessment and implementation status.
4. use of ANRFs to document Regional Aviation System Improvement (RASI)

2.4 A survey on the implementation status of air navigation targets was conducted to all the NAM/CAR States in March 2016 and a webpage reflecting this status was developed (<http://www.icao.int/NACC/Pages/Implementation-Targets.aspx>).

2.5 An Ad-hoc group for the monitoring and reporting was formed within the Air Navigation Implementation Working Group (ANI/WG) for the application of the Air Navigation Report Form (ANRF) and assistance for the National Plan update.

***SAM Region***

2.6 In reference to the PPRC/3 Conclusion 3/10 regarding the development of the national plans aligned with the GANP (4th edition) and the SAM PBIP, in the SAM/IG meetings, Argentina, Brazil, Chile, Colombia and Venezuela have reported its completeness and other States are in process.

2.7 The status of the implementation of the Air Navigation targets in the SAM Region, specified in the Bogota Declaration on June 2016 are listed as **Appendix** of this working paper

**3. Action by GREPECAS**

3.1 The Meeting is invited to:

- a) take note of the information presented in this paper;
- b) analyse the activities undertaken by each CAR and SAM region in order to promote the measuring, monitoring and reporting of the targets established in the regional plans of the Bogota and Port-of-Spain Declarations, and the development of the national plans aligned with the GANP (4<sup>th</sup> edition) and the RPBANIP and SAM PBIP regional plans; and
- c) analyse other considerations respectively, as deemed appropriate by the Meeting.

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## APPENDIX

### PROGRESS IN THE IMPLEMENTATION OF AIR NAVIGATION GOALS OF THE BOGOTA DECLARATION

#### Performance-based navigation (PBN) in terminal areas

Regarding the achievement of goals established in ICAO Assembly Resolution A37-11 concerning approach procedures with vertical guidance (APV), implementation of 69,14% out of 100% foreseen by the Bogota Declaration was reached in 2016.

#### En route PBN

Concerning the implementation of SID and STAR, in June 2016 the goal established by the Bogota Declaration was surpassed, as indicated in following table:

Total Airports	Total SID/STAR	Total SID/STAR PBN	ICAO indicator: % of SID/STAR PBN in international airports	ICAO indicator: % of SID/STAR PBN in International airports
			June 2016	GOAL 2016
99	1680	1159	70,7 %	60%

With regard to the implementation of 60% of routes/airspace with performance-based navigation (PBN), following result has been obtained, noting that the indicator considered in the Bogota Declaration has been exceeded by June 2016, as shown in the table below:

Total ATS routes in the upper airspace	Conventional routes	PBN routes	% of PBN routes implemented	Bogota Declaration indicator: % PBN routes
145	52	93	<b>65%</b>	60%

#### CDO and CCO

Concerning the progress in CDO and CCO operational techniques application, by June 2016 it was 18% for CDO and 19% for CCO, which means an increase of 13,5% from the PPRC/3 meeting. The goal established by the Bogota Declaration is 40%.

#### Estimated fuel savings / Reduction of CO<sub>2</sub> emissions based on ICAO fuel savings estimation tool (IFSET)

As a result of the optimisation of routes network in the SAM Region during 2014, the annual goal of 40.000 tons. established by the Bogota Declaration was surpassed in more than 11.000 tons. CO<sub>2</sub> reduction, achieving 51.132 tons CO<sub>2</sub> reduction, which in 2015 reached 23.351TN. It is expected that

during 2016 more annual CO<sub>2</sub> savings will be achieved, if the implementation plans foreseen for this year are complied with. In such sense, several States have done a good job at calculating savings resulting from the optimisation of selected airspaces. Most States have used the ICAO IFSET tool; others have calculated such savings in collaboration with operators.

### **ATFM**

Achievements concerning the implementation have not been as expected. By June 2016, only 56% of States in the Region have implemented ATFM, remaining 44% to comply with the Bogota Declaration.

### **AIM**

Regarding the transition from AIS to AIM, by April 2016 70% of States in the SAM Region have implemented Phase 1, which involves the implementation of quality management, while remaining States have already started with the quality management process.

### **AMHS interconnection**

From the 26 interconnections expected to be implemented by end 2016, only five have been implemented and are operating (June 2016). AMHS interconnection trials have been conducted with positive results in three interconnections, which should be operating by end 2016. The goals of the Bogota Declaration will not be reached concerning the implementation of this priority.

### **Interconnection of automated systems (ATS interfacility data communication (AIDC))**

From the 15 AIDC interconnections expected in the Bogota Declaration, there is only one in operational phase and three in pre-operational phase. Positive trials have been conducted in four. Concerned States have informed that goal established in the Bogota Declaration will be complied by end 2016.

### **Implementation of national IP networks**

Regarding the implementation of national IP networks, in June 2016 60% implementation has been achieved out of the total expected by end of 2016.