



ASSEMBLY — 39TH SESSION

TECHNICAL COMMISSION

Agenda Item 33: Aviation safety and air navigation monitoring and analysis

COMPLIANCE WITH THE DECLARATION OF BOGOTA

(Presented by Chile with the support of Argentina, Brazil, Colombia, Ecuador, Panama, Paraguay, Peru, Uruguay, Bolivia, Guyana, Venezuela, and Suriname)

EXECUTIVE SUMMARY

This working paper presents the progress made by SAM States in the attainment of the safety and air navigation goals set in the Declaration of Bogota for 2016.

**Action:** The Assembly is invited to:

- a) take note of the information provided with respect to the progress made in the implementation of the safety and air navigation goals established in the Declaration of Bogota; and
- b) urge ICAO to review the methodology for classifying accidents in the Regions, so that, after identifying the cause of the accident, it may be classified according to the State of the Operator and its Region, or the State of Registry and its Region, as appropriate, when the State where the accident occurred is not responsible.

<i>Strategic Objectives:</i>	This working paper relates to the Safety Strategic Objective.
<i>Financial implications:</i>	N/A
<i>References:</i>	Annex 19 — <i>Safety Management</i> Annex 13 — <i>Aircraft Accident and Incident Investigation</i>

<sup>1</sup> English and Spanish versions provided by Chile.

## 1. INTRODUCTION

1.1 ICAO has incorporated into all its processes methods for measuring performance with regard to its different strategic objectives, through the establishment of a set of indicators and metrics, and performance dashboards for each Region. The performance dashboard of the SAM Region allows States to manage safety based on measurements. This approach is based on the essential safety principles: result-based work, and measuring for the purpose of managing. In the concrete case of the Declaration of Bogota, the aeronautical authorities of the SAM Region established a set of goals to be achieved by the end of 2016, the performance of which is analysed below:

## 2. DISCUSSION

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

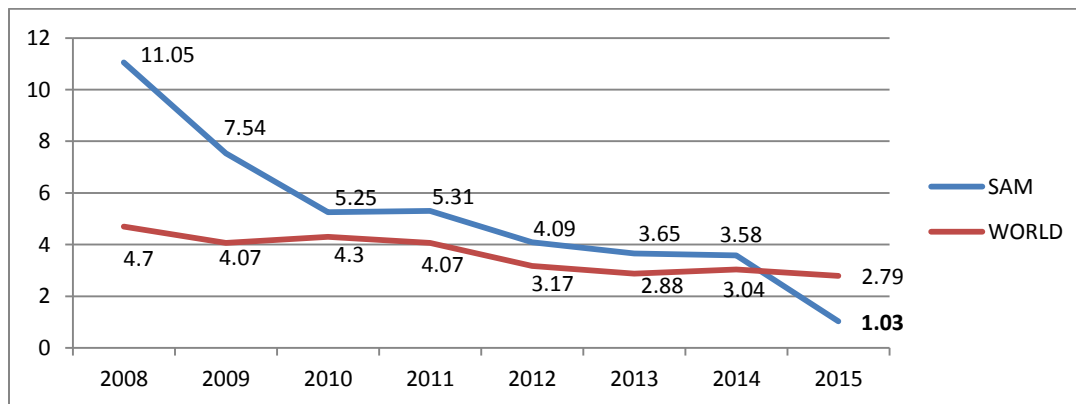
2.1 Between November 2011 and May 2016, ICAO has conducted nine (9) ICAO coordinated validation missions (ICVMs), three (3) CMA audits, and three off-site activities in the SAM Region. During this period, 8 out of the 10 States that had had a USOAP CMA activity showed significant improvement in the effective implementation of ICAO SARPs.

2.2 Based on the results obtained, the average for the SAM Region went from 66.31% in 2011 to 71.75% (+5.44%) in May 2016, still requiring an 8.25% improvement to attain the goal by the end of 2016.

2.3 The results of the three missions that ICAO will conduct starting in June 2016 until December 2016 would still need to be added. In this regard, the Region trusts that it will be able to reach the 80% goal. Seventy per cent (70%) of SAM States show an EI of SARPs above 60%.

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

2.4 The following table shows that the accident rate in South America (blue line) for aircraft above 5 700 kg conducting scheduled commercial air transport operations has been gradually decreasing, reaching a rate of **1.03** accidents per 1.000.000 departures in 2015. Based on this performance, the goal was exceeded in 2014, and for the first time the SAM rate was lower than the global average rate (red line) in 2015 (1.03).



2.5 However, it should be noted that the data on accidents occurred in scheduled commercial air transport in the SAM Region between 2008 and 2016, obtained through the ICAO iSTARS 3.0

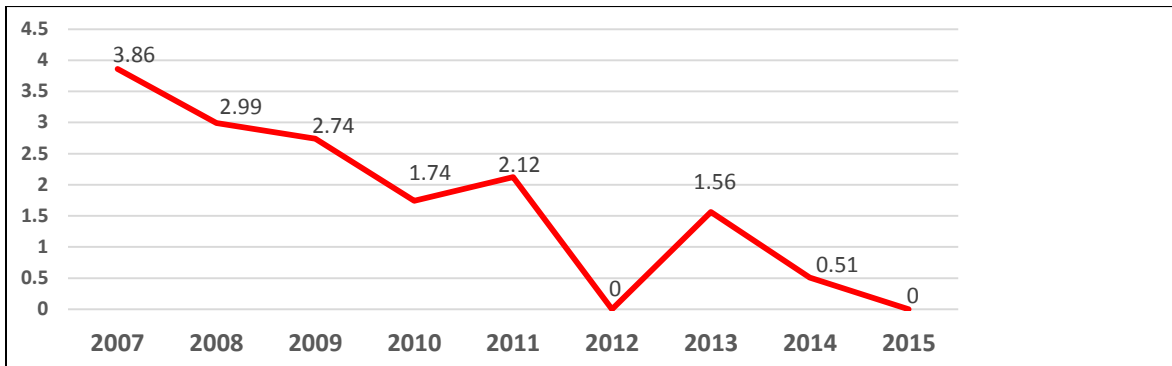
ADREP application, shows that 92 accidents occurred with aircraft above 5 700 kg, 14 of which involved aircraft of registry and operators from non-SAM States, accounting for 15% of total accidents.

2.6 In this regard, the Region requests ICAO to review the way in which accidents are classified in the Regions, so that, after identifying the cause of the accident, it should be classified by State of the Operator and its Region, or State of Registry and its Region, as applicable, when the State where the accident occurred has no responsibility.

2.7 This is mainly based on the fact that accidents involving aircraft of extra-regional operators that occur in the Region increase the perception of lack of safety, when the Region actually is not responsible for the cause of the accident, even more so, when the number of extra-regional operators exceed by far the number of operators of the Region.

***Runway excursions: Reduce the rate of runway excursions by 20% with respect to the average rate of the SAM Region (2007-2012)***

2.8 The average rate of runway excursions between 2007 and 2012 was 2.24 accidents per million departures. The 20% reduction goal represents 1.8 accidents per million departures. The following table shows that the performance of the SAM Region exceeded the goal set for 2014 and 2015.



***Aerodromes: Achieve 20% of international aerodromes certified***

2.9 The number of certified aerodromes has gone from 8 in 2013 to 19 in July 2016, reaching 18.3%. Therefore, the goal is expected to be reached by the end of 2016.

***SSP and SMS: Reach 67% implementation of the SSP and 100% implementation of the SMS of service providers***

2.10 To date, 42% SSP implementation and 83% SMS implementation has been achieved, although these percentages are subjective because they are based on State estimates. These percentage estimates will improve in 2016 through a survey and virtual meetings.

***Resolution A37-11: Achievement of goals concerning APV procedures***

2.11 Regarding compliance with approach procedures with vertical guidance (APV), 69.14% implementation was achieved by June 2016, compared to the expected 100%.

***SIDs/STARs and en-route PBN: 60% of international airports with SIDs and STARs, and 60% of en-routes with PBN***

2.12 Regarding the implementation of SIDs and STARs, the 60% goal was exceeded in June 2016, reaching 70.7% compliance.

2.13 Regarding the implementation of PBN routes/airspace, the 60% goal was exceeded in June 2016, reaching 65%.

*CCO and CDO: 40% international aerodromes with continuous descent operations (CDO) and continuous climb operations (CCO)*

2.14 Regarding the implementation of CDO and CCO, 18% and 19% was achieved by June 2016, respectively.

*Reduction of CO<sub>2</sub> emissions: Reduce CO<sub>2</sub> emissions in the Region by 40,000 tonnes through the implementation of en-route PBN*

2.15 As a result of the route network optimisation process in the SAM Region during 2014, the annual goal of 40,000 tonne reduction of CO<sub>2</sub> established in the Declaration of Bogota was exceeded by more than 11,000 tonnes, obtaining a reduction of 51,132 tonnes of CO<sub>2</sub>. In 2015, it was 23,351 tonnes of CO<sub>2</sub>. It is estimated that more CO<sub>2</sub> annual savings will be achieved during the course of 2016 if the implementation plans foreseen for this year are fulfilled. In this sense, several States have done a good job at calculating savings resulting from the optimisation of selected airspace. Most States have used the ICAO IFSET tool, while others have calculated these savings in collaboration with air service operators.

*ATFM: 100% ACCs providing ATFM service*

2.16 Progress has not been as expected. By June 2016, only 56% of the States of the Region had implemented ATFM. Consequently, 44% still remains to be completed in order to comply with the Declaration of Bogota.

*AIM: 100% of the elements required in Phase 1 of the AIS-to-AIM roadmap*

2.17 By June 2016, 70% of SAM States had implemented Phase 1 of the AIS-to-AIM transition, which involves the implementation of quality management. The remaining States have already started the quality management process.

*AMHS interconnection: 100% of AMHS interconnections in the Region implemented*

2.18 Out of the 26 interconnections that had to be implemented by the end of 2016, only six had been implemented and were operational by June 2016. AMHS interconnection tests have been conducted with positive results in three interconnections, which should be in operation by the end of 2016. The goal established for this critical implementation in the Declaration of Bogota would not be attained.

*Interconnection of automated systems: 100%*

2.19 Out of the 15 AIDC interconnections foreseen in the Declaration of Bogota, only one is in the operational phase, three are in the pre-operational phase, and 4 have been tested, with positive results. The goal set in the Declaration of Bogota for this implementation would not be reached.

***Implementation of national IP communication networks: 80%***

2.20 Regarding the implementation of national IP networks, 60% of the total implementation stipulated for the end of 2016 had been achieved by June 2016.

***Post-Declaration of Bogota***

2.21 For safety and air navigation planning after 2016 in the SAM Region, a Regional Plan to Support Air Transport in the SAM Region is being developed as a management tool to support decision-making by States to ensure the sustainable development of air transport during the next 15 years (until 2032) and thus contribute to the attainment of several sustainable development goals (SDGs) established by the United Nations to ensure the prosperity of humankind and environmental protection.

2.22 A diagnosis of the current status (applying a gap analysis) will define the activities and actions required to attain the benefits defined in the civil aviation objectives—safety, capacity, and efficiency of air navigation, aviation security and facilitation, economic development of air transport, and environmental protection. The goals, indicators, and metrics of the plan are based on the following four main axes: connectivity, capacity building, safety, and the environment.

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