



## INTERNATIONAL CIVIL AVIATION ORGANIZATION

### WESTERN AND CENTRAL AFRICA OFFICE

#### Twenty-Fourth Meeting on the Improvement of Air Traffic Services over the South Atlantic (SAT/24)

Luanda, Angola, 5-7 June 2019

#### Agenda Item 3.5: *PBCS Implementation and Monitoring*

#### 3.5.3 RMAS SUPPORTING PERFORMANCE-BASED COMMUNICATION AND SURVEILLANCE IMPLEMENTATION

*(Presented by SATMA)*

<b>SUMMARY</b>
This working paper presents amendments to SATMA Terms of reference regarding PBCS monitoring in EUR/SAM Corridor, in line with decisions agreed by ICAO Regional Monitoring Agencies Coordination Group (RMACG) and Fans interoperability Team (FIT 13) conclusions.
<p><b>REFERENCE(S):</b></p> <p>Report of the FIT13 meeting. RMACG13 meeting</p>
<p><b>Related ICAO Strategic Objective(s):</b></p> <p>The working paper relates to the Air Navigation Capacity and Efficiency Strategic Objective of ICAO.</p>

### 1. INTRODUCTION

1.1 In last Regional Monitoring Agencies Coordination Group (RMACG) meeting (Salvador, Brazil, 11 to 15 June 2018) it was clearly noted that RMAs support in Performance-based Communication and Surveillance (PBCS) in their Region might be a benefit for performance monitoring.

1.2 It was highly recommended by ICAO Secretariat that RMAs could play a valuable role in supporting safe operations in the horizontal plane in PBCS airspace by accommodating PBCS approval data and serving as a liaison between ANSPs and relevant States.

## 2. DISCUSSION

2.1 The meeting discussed the proposals and it was highlighted that State processes for issuing PBCS approvals continue to be **under development** and the method/format in which PBCS approvals are issued is not uniform. Until the exact format of approvals are known, RMAs cannot perform approval maintenance and, for some RMAs where applicable, verification.

2.2 In order to be proactive, NATCMA provided an update the RMA community with information regarding the progress and changes being made to include PBCS Approvals in RVSM Database, supporting exchange of safety information in a regional.

2.3 The following points were proposed, so RMAs may support the regional PBCS monitoring programs by:

- a) Receiving reports of non-compliance with RSP180 and RCP240 from ANSPs associated with current airspace responsibility and transmitting these reports to the respective State or the appropriate RMA;
- b) Receiving and maintaining RCP and RSP approvals issued by States of Operator/Registry associated with current State responsibility and incorporating into expanded RVSM/PBCS approvals database;
- c) Verifying compliance with State PBCS requirements (applicable to RMAs with designated areas of responsibility that include airspace where PBCS is implemented); and
- d) Sharing RCP and RSP approvals between RMAs in line with current sharing practices of RVSM approvals for the ability of States/ANSPs to verify that aircraft operators filing PBCS capabilities in the flight plan are authorized to do so.

2.4 It was further proposed that the expanded role of RMAs be coordinated with the relevant regional planning groups (PIRGs) where not already done so, a concrete action was established by RAMCG13 meeting as follows:

***“RMAs coordinate with their respective PIRGs regarding the expanded role of RMAs in the PBCS monitoring program and establishing a line of communication between ANSPs and RMAs for receiving reports of non-compliance with RSP180 and RCP240.”***

2.5 This action from RAMCG14 is in compliance with **Conclusion SAT/FIT/13/02**, that:

***“Based on the SAT FIT discussions, SATMA is requested to initiate the process to update its ToRs for PBCS monitoring in the EUR/SAM corridor; and SAT States are invited to support the PIRGs activities in updating the RMA ToRs accordingly for PBCS monitoring and enhance the coordination & collaboration between the involved RMAs, especially ARMA, CARSAMMA, DLMA”***

### 3. **Actions for SAT Group:**

**The SAT Group is invited to:**

- a) **Note the information in the working paper;**
- b) **Note the conclusions of SAT FIT/13 and RMACG/13, recommending SATMA and RMAs to support PBCS implementation;**
- c) **Review and endorse the proposed amendment of SATMA Terms of Reference to include monitoring support for PBCS in implementation in the EUR/SAM Corridor as presented in Annex A; and**
- d) **Adopt the proposed RMA ToR for SATMA for submission to APIRG and GREPACAS for consideration and amendment of ARMA and CARSAMMA Terms of Reference to include PBCS monitoring, in order to harmonize the functions of RMAs in the SAT area in support of PBCS implementation.**

## **ANNEX - A**

### **RMA TERMS OF REFERENCE (South Atlantic Monitoring Agency)**

The duties and responsibilities of SATMA, are:

- 1) Establish or add to a database of aircraft approved by the respective State authorities for operations at RVSM levels in that region.
- 2) to receive reports of those height deviations of non-compliant aircraft which are of a magnitude equal to or greater than the following criteria:
  - a) TVE – 90 m (300 ft)
  - b) ASE – 75 m (245 ft)
  - c) AAD – 90 m (300 ft)
- 3) to take the necessary action with the relevant State and operator to:
  - determine the likely cause of the height deviation; and
  - verify the approval status of the relevant operator
- 4) to recommend, wherever possible, remedial action
- 5) to analyse data to detect height deviation trends and, hence, to take action as in the previous item
- 6) to undertake such data collections as required by the RPG to:
  - a) investigate height-keeping performance of the aircraft in the core of the distribution;
  - b) establish or add to a database on the height-keeping performance of:

- the aircraft population
  - aircraft types or categories; and
  - individual airframes
- 7) to monitor the level of risk as a consequence of operational errors and in-flight contingencies as follows:
    - a) establish a mechanism for collation and analysis of all reports of height deviations of 90 m (300 ft) or more resulting from the above errors/actions;
    - b) determine, wherever possible, the root cause of each deviation together with its size and duration;
    - c) calculate the frequency of occurrence;
    - d) assess the overall risk (technical combined with operational and in-flight contingencies) in the system against the overall safety objectives (see 2.1 of Doc 9574); and
    - e) initiate remedial action as required
  - 8) to initiate checks of the “approval status” of aircraft operating in the relevant RVSM airspace (see 4.3.3 to 4.3.6 of Doc 9574), identify non-approved operators and aircraft using RVSM airspace and notify the appropriate State of Registry/State of the Operator accordingly;
  - 9) to circulate regular reports on all height-keeping deviations, together with such graphs and tables necessary to relate the estimated system risk to the TLS, employing the criteria detailed in 6.2.8 of Doc 9574, for which formats are suggested in Appendix A to Doc 9574.
  - 10) to submit annual reports regarding RVSM monitoring to the regional planning group.
  - 11) Receive reports of non-compliance (Performance Based Communication and Surveillance (PBCS) Manual (Doc 9869) refers) with RSP 180 and RCP 240, transmitting reports to the respective RMA associated with the State of the respective operator/aircraft;
  - 12) Receive and maintain records of RCP and RSP approvals issued by States of Operator/Registry associated with current State responsibility and incorporating into expanded RVSM/PBCS approvals database and follow-up as appropriate instances of non-approved aircraft being identified in PBCS airspace.
  - 13) Share records of RCP and RSP approvals between RMAs in line with current sharing practices of RVSM approvals for the ability of States/ANSPs to verify that aircraft operators filing PBCS capabilities in the flight plan are authorized to do so.
  - 14) To submit annual reports regarding PBCS monitoring to the regional planning group.
  - 15) Liaise with other Regional Monitoring Agencies (RMA) in order to achieve an exchange of height-keeping performance and RVSM/PBCS approvals among the regions. As global valid information, data will be shared in a Global RMAs Database;