



Thirty Fourth Regional Aviation Safety Group — Pan America Executive Steering Committee Meeting (ESC/34)

Teleconference – 28 y 29 de mayo de 2020

Agenda item 2: Safety management process within RASG-PA

FDAP and PBN Projects Status

(Presented by Secretariat)

EXECUTIVE SUMMARY	
This Information Paper presents information regarding the current status of the FDAP and PBN RASG-PA Projects.	
Suggested action:	The Meeting is invited to take note of the information contained in this document.
<i>Strategic objective:</i>	<ul style="list-style-type: none">• Safety
<i>Referencess:</i>	<ul style="list-style-type: none">• ESC/29• ESC/31• ESC/32

1. Introduction

1.1 As part of the ESC/29 meeting held in Mexico on November 29 and 30, 2017, the RASG-PA Executive Steering Committee agreed on Conclusion RASG-PA/ESC29/2, with the objective of expanding the scope of the flight data monitoring and analysis programs (FDMP/FDAP), and requested that the ICAO Air Navigation Commission (ANC) take note of the results of a cost-benefit study conducted under the auspices of RASG-PA, and consider the amendment to Annex 6 Part I, specifically Recommendation 3.3.1 on FDAP, and Standard 3.3.2 of Section 3.3 as follows:

3.3.1 Recommendation — All aeroplanes of a maximum certificated take-off mass over 5 700 kg should be equipped with a Quick Access Recorder (QAR). This QAR should record at a minimum the parameters recorded by the Flight Data Recorder and the operator should establish and maintain a flight data analysis programme as part of its safety management system.

3.3.2 All aeroplanes of a maximum certificated take-off mass over 5 700kg for which the individual certificate of airworthiness has been first issued on or after 1 January 2005 shall be equipped with a Quick Access Recorder (QAR). This QAR shall record at a minimum the parameters recorded by

the Flight Data Recorder and the operator shall establish and maintain a flight data analysis programme as part of its safety management system.

1.2 On the other hand, during the ESC/31 meeting held in Buenos Aires, ATR made reference to PBN approaches and its benefits for safety and efficiency. Reference was made to ICAO's mandate to implement PBN on all international IFR runways; however, it would be more beneficial to push forward the implementation of PBN on VFR runways. Converting VFR runways to IFR is much cheaper today with PBN availability, compared to conventional IFR. ATR made a proposal to work together with the RASG-PA Secretariat and present a project at ESC/32 meeting to demonstrate the benefits of converting VFR to IFR using PBN. If the case is strong enough, a proposal can be made to ICAO to expand the scope of PBN implementation. The meeting issued Decision ESC/31/D7 authorizing ATR and the Secretariat to develop the project.

1.3 At the ESC/32 meeting held in Mexico on March 19 and 20, 2019, Brazil, the United States, and CANSO expressed their interest in getting involved in the project and the possibility of contributing resources.

1.4 Finally, during the ESC/33 meeting held in Lima on September 11 and 12, 2019, it was reported that Colombia and Brazil confirmed their intention to start the implementation of PBN in visual tracks as part of the RASG-PA project, during 2019 and 2020 respectively.

2. Status of projects

FDAP

2.1 The proposed amendment has been reviewed by the ICAO Flight Operations Panel (FLTOSP) during its FLTOSP/4 meeting in December 2017 and in the FLTOSP/WG/5 in May 2018, and was subsequently referred to the Flight Recorder Specific Working Group (FLIRECSWG) for review and comments.

2.2 The FLIRECSWG/12 meeting carried out an analysis of the proposal and, after its discussions, expressed the following:

"Considering the equipment, most current flight recorder systems would be able to provide the data needed for an effective FDAP, even in aircraft of the proposed mass. Additional parameters could be made available to the operator on request, considering how the data could be accessed. Europeans experienced some business operators establishing FDAP programmes voluntarily and the EU does promote an FDAP for the operators that typically operate these aircraft. It is, however, difficult for small operators to manage an effective FDAP. It was further commented that the threshold should be between 10 000 kg and 15 000 kg MCTOM. A concern is that if equipment is fitted and is not used effectively, the resource is wasted. Retrofitting of equipment is not advisable. With modern systems in mind, the data would probably be transmitted via satellite, but back-up onboard should be considered."

2.3 Comments from FLIRECSWG/12 will be considered during the next FLTOSP Operations Panel session in the second half of 2020.

2.4 **Appendix A** includes the complete comments from FLIRECSWG/12 on the proposed amendment on FDAP.

PBN to Visual

2.5 Regarding the project “*Implementation of PBN approach on a visual runway*”, the first pilot implementation exercise is being carried out for the Guapi Airport (SKGP) in Colombia. The initial design of the procedure has already been developed, as well as the obstacle identification and assessment. Due to the disruption caused by COVID-19, it was not possible to complete the coding of the procedure and the validation in the flight simulator, that was scheduled for April 2019.

2.6 The Special Administrative Unit of Civil Aeronautics (UAEAC) of Colombia, which is in charge of carrying out these tasks, has rescheduled them for the last week of June, whenever conditions allow. Once the coding and validation in the flight simulator is completed, the in-flight validation test will be carried out and the official publication of the procedure will be published in the Colombian AIP.

3. Suggested action

3.1 The Meeting is invited to take note of the information contained in this document.

END

Appendix A

FLIRECSWG Comments on the FDAP amendment proposal

FDAP data requirements for flight data monitoring

1. INTRODUCTION

1.1 The Secretary presented FLIRECSWG/12-WP/4 addressing a proposal from the Pan-America Regional Aviation Safety Group (RASG-PA) 29th steering committee meeting (Mexico, 20 to 30 November 2017) for retro-active fitment after 1 January 2005 of quick access recorders to all aeroplanes over 5 700 kg maximum certified take-off mass (MCTOM). The proposal was reviewed by the Flight Operations Panel (FLTOSP) at its FLTOSP/4 Meeting in December 2017 and the FLTOSP/WG/5 in May 2018, and subsequently passed it on to the FLIRECSWG for review and comment.

1.2 The proposal was found to be inconsistent with the Convention on International Civil Aviation which requires a minimum of three years for implementation of provisions that mandate new equipment and is not in line with the current performance-based standards approach prescribing a specific solution. An alternative high-level proposal was made to the FLTOSP which would begin to address the safety need identified for access to FDR data. Several comments were received which in general were supportive of the proposal. However, the following alternatives were proposed: An alternative MCTOM threshold of 10 000 kg and a recommendation for between 10 000 kg and 5 700 kg; “readily available” was considered unclear to be used in practice; access to FDR data was a concern as it was considered insufficient for a thorough FDAP since a QAR would be required; and there were cost-benefit doubts about the installation of the equipment, particularly for smaller aircraft. It appeared that the proposal does have support, but the details of how to implement such a proposal for extending the scope of the FDAP provisions has to be determined. The FLIRECSWG was requested to provide comments on the viability of installing equipment as proposed and to consider current FDR provisions and what amendments were required for the availability of FDR data in such aeroplanes to manage an effective FDAP.

2. DISCUSSION

2.1 The meeting commented that considering the equipment, most current flight recorder systems would be able to provide the data needed for an effective FDAP, even in aircraft of the proposed mass. Additional parameters could be made available to the operator on request, considering how the data could be accessed. Europeans experienced some business operators establishing FDAP programmes voluntarily and the EU does promote an FDAP for the operators that typically operate these aircraft. It is, however, difficult for small operators to manage an effective FDAP. It was further commented that the threshold should be between 10 000 kg and 15 000 kg MCTOM. A concern is that if equipment is fitted and is not used effectively, the resource is wasted. Retrofitting of equipment is not advisable. With modern systems in mind, the data would probably be transmitted via satellite, but back-up onboard should be considered.

2.2 The meeting concluded that these comments are to be forwarded to the FLTOSP for further consideration.
