



**Nineteenth Meeting of Directors of the Civil Aviation  
Training Centers of the South American Region (CIAC/19)**  
(Virtual, 8 to 12 November, 2021)

**Agenda Item 5: Follow-up of the implementation of training activities in air navigation, safety and other aviation areas in the Region**

**FOLLOW-UP OF THE IMPLEMENTATION OF TRAINING ACTIVITIES IN THE ATM AREA**

(Presented by the Secretariat)

<b>SUMMARY</b>	
This working paper presents information on training activities related to the ATM area carried out since the CIAC/18 meeting. It also lists the training activities planned to take place in the year 2022 and the activities identified by the Secretariat for inclusion by CATCs of the Region in their programming.	
<b>References:</b>	
<ul style="list-style-type: none"> <li>• CIAC/18 meeting report (Lima, Peru, 1-5 April 2019)</li> <li>• SAMIG/25 meeting report (virtual, 2-4 November 2020)</li> <li>• SAMIG/26 meeting report (virtual, 20-23 September 2021)</li> </ul>	
<b>ICAO strategic objectives:</b>	<i>A – Safety</i> <i>B – Air navigation capacity and efficiency</i>

**1 Introduction**

1.1 Training activities in the ATM area are basically related to PBN and ATFM, as the priority focus for the SAM Region. These ATM implementations respond to a regional requirement in accordance with the SAM Performance-based air navigation implementation plan - PBIP, Version 1.5 (2017), and the Global Air Navigation Plan - GANP, 6th edition.

1.2 This paper presents the ATM training activities carried out in 2019. During the years 2020 and 2021, in view of the pandemic constraints, no specific training activities were carried out. In this regard, ATM experts participating in the regional implementation group (SAM/IG) engaged in joint activities for short-term improvement of efficiency and capacity in air navigation services and in the regional airspace structure in order to foster and support the prompt recovery of air operations in the Region and thus restore regional connectivity by air.

1.3 The SAMIG/25 (virtual, 2-4 November 2020) and SAMIG/26 (virtual, 20-23 September 2021) meeting reports present the progress made in the aforementioned implementations, at:

[https://www.icao.int/SAM/Pages/ES/MeetingsDocumentation\\_ES.aspx?m=2020-RLA06901-SAMIG25](https://www.icao.int/SAM/Pages/ES/MeetingsDocumentation_ES.aspx?m=2020-RLA06901-SAMIG25)

[https://www.icao.int/SAM/Pages/ES/MeetingsDocumentation\\_ES.aspx?m=2021-RLA06901-SAMIG26](https://www.icao.int/SAM/Pages/ES/MeetingsDocumentation_ES.aspx?m=2021-RLA06901-SAMIG26)

## 2 Discussion

### *Training activities carried out in 2019*

2.1 The PBN training activities carried out during 2019 with the support of Project RLA 06/901, "Assistance for the implementation of a regional ATM system, taking into account the ATM operational concept and the corresponding CNS technological support" were as follows:

#### *Seminar on the organisation of instrument flight procedure design (IFPD) services*

2.2 The Seminar on the organisation of instrument flight procedure design (IFPD) services was held in Lima, Peru, on 8-12 April 2019, to address the implementation of the IFPD service in accordance with ICAO Annex 11 and related documents. It was intended to strengthen the capacity of the Region to sustain PBN implementation over time. The summary of the event and teaching materials can be found at the following web link:

[https://www.icao.int/SAM/Pages/ES/MeetingsDocumentation\\_ES.aspx?m=2019-06901-IFPD](https://www.icao.int/SAM/Pages/ES/MeetingsDocumentation_ES.aspx?m=2019-06901-IFPD)

2.3 The seminar addressed the practices developed in the Region by regulators and/or civil aviation authorities for the oversight of their IFPDS providers. It was agreed that the approval of flight procedure designs should not mean a review or "reverse engineering" of the IFP as this would be a duplication of efforts. Oversight, therefore, should be aimed primarily at the quality processes of the provider, compliance with construction and design criteria, and adherence to State regulations.

2.4 Participants took note of the new PANS-AIM guidance on the aeronautical data catalogue, and data integrity and accuracy requirements. They also analysed the advantages of carrying out these activities in the AIM units of the States, as it could favour the availability of data of quality and integrity, as an input for the design of flight procedures.

#### *ATSRO/10 workshop/meeting*

2.5 The purpose of the Tenth SAM Workshop/Meeting on ATS Route Network Optimisation - SAM ATSRO/10 (Bogota, Colombia, 17-21 June 2019) was the implementation of version 5 of the SAM Route Network within the framework of the study for the optimisation of the ATS route network of the South American Region, including the interfaces with the CAR Region.

2.6 The meeting was attended by eleven States from the SAM Region: Argentina, Bolivia, Brazil, Chile, Ecuador, Colombia, Panama, Paraguay, Peru, Suriname, Uruguay and Venezuela, and two States from the CAR Region: United States and Jamaica. COCESNA also participated (via teleconference), as well as representatives of IATA and IFALPA, making a total of 43 participants. The summary and documentation of the event can be found at:

[https://www.icao.int/SAM/Pages/ES/MeetingsDocumentation\\_ES.aspx?m=2019-06901-ATSRO10](https://www.icao.int/SAM/Pages/ES/MeetingsDocumentation_ES.aspx?m=2019-06901-ATSRO10)

2.7 The meeting reviewed 51 proposals formulated in version 5 of the SAM route network, 32 corresponding to route interfaces between the CAR and SAM Regions. Airspace planners had the

opportunity to discuss and share planning criteria, and to develop joint designs to optimise intra-regional and inter-regional flows. Among others, it is worth noting the work done by Colombia and Brazil, and by Colombia and Jamaica, which enabled the implementation of parallel and/or unidirectional RNAV-5 routes in the corresponding FIR boundaries during 2020 and 2021.

*Fourth workshop on PANS-OPS implementation*

2.5 The Fourth workshop was held in Lima, Peru, on 21-25 October 2019, to continue the harmonisation and coordination of PBN instrument procedures in the SAM Region. The summary and documentation of the event can be found at:

[https://www.icao.int/SAM/Pages/ES/MeetingsDocumentation\\_ES.aspx?m=2019-06901-PANSOPS4](https://www.icao.int/SAM/Pages/ES/MeetingsDocumentation_ES.aspx?m=2019-06901-PANSOPS4)

2.6 The workshop enabled the exchange of experiences and best practices among designers and airline experts, and a review of the challenges of PBN design in complex airspaces such as Bogota, Buenos Aires and Sao Paulo.

***PBN training activities planned for 2022***

2.10 Within the framework of training planned for 2022 under the sponsorship of Project RLA 06/901, the following activities have been scheduled:

- a) Workshop/meeting on ATFM regional data management and indicators, scheduled for June 2022, will address ATFM data standardisation and the analysis of demand forecasts and indicators. Participants will practice with the Power BI application.
- b) Workshop/meeting on capacity calculation methodology for ATFM, scheduled for August 2022, aims at the application of the updated Calculation Manual. It will address planning of capacity measurement (or updating) activities in the Region.
- c) Workshop for airspace planners, to provide training in the formulation of airspace implementation/optimisation projects. Scheduled for September 2022.
- d) Workshop/meeting on flexible use of airspace (FUA) and civil-military cooperation in ATM. Aimed at the study for the implementation of the FRTO-BO/2 operational element, as well as the dissemination and review of the new ICAO Doc 10088. The course is scheduled for November 2022.

2.11 Regarding specific training activities in the area of ATM and PBN that States must conduct at their training centres in order to provide their experts with the minimum knowledge required to perform the planned implementations, the following are recommended:

- Basic and advanced courses on practices and procedures contained in Doc 9971, CDM Manual
- Global Air Navigation Plan – GANP, 6th edition
- PBN operational concept and national air navigation plans
- Courses on basic PANS-OPS design
- Course on PANS-OPS RNP design

**3 Suggested action**

3.1 The Meeting is invited to:

- a) take note of the training activities carried out since the CIAC/18 meeting;
- b) take note of the activities scheduled for 2022; and
- c) review the activities recommended in this working paper by the Secretariat for their consideration in the ATM activities to be scheduled for 2022 by civil aviation training centres of the Region.

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