



**Fifth Meeting of the Programmes and Projects Review Committee (PPRC/5)**  
 Mexico City, Mexico, 16 to 18 July 2019

**Agenda Item 5: Review of GREPECAS Programmes and Projects and Subsidiary Groups**  
**5.8 Progress report of the Scrutiny Group (GTE)**

**FOLLOW-UP OF THE ACTIVITIES OF THE GREPECAS SCRUTINY GROUP**

(Presented by Secretariat)

<b>EXECUTIVE SUMMARY</b>	
<p>This Working Paper presents a summary of the activities developed by the Scrutiny Group (GTE) since the Eighteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/18), held in Punta Cana, Dominican Republic, 9 to 14 April 2018.</p>	
<b>Action:</b>	Suggested actions are included in Section 5.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"> <li>• Safety</li> <li>• Air Navigation Capacity and Efficiency</li> </ul>
<i>References:</i>	<ul style="list-style-type: none"> <li>• Doc 9574 – Manual on a 300 m (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive</li> <li>• Final Report of the Eighteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/18), Punta Cana, Dominican Republic, 9 to 14 April 2018</li> <li>• Final Report of the CAR/SAM Planning and Implementation Regional Group (GREPECAS) Eighteenth Scrutiny Working Group Meeting (GTE/18), Mexico City, Mexico, 22 – 26 October 2018</li> </ul>

**1. Introduction**

1.1 The GREPECAS Scrutiny Group (GTE) is composed of CAR/SAM Regions experts in the analysis and evaluation of the 300 feet or more Large Height Deviations (LHDs), as defined in ICAO Doc 9574.

1.2 This Group also fulfils an important task of coordination with the CAR/SAM Monitoring Agency (CARSAMMA) for the compilation, filtering and review of LHDs data, identifying trends in deviations and recommending corrective actions in order to improve safety.

1.3 The GTE meets annually, alternating its meetings between the ICAO NACC and SAM Regional Offices, with the purpose of reviewing the problems that affect the Target Level of Safety (TLS) in the Reduced Vertical Separation Minimum (RVSM) airspace of the CAR/SAM Regions, based in the information provided by the States and the corresponding International Organizations.

1.4 The data validated by the GTE, in addition to be used to determine the TLS, support the States and ICAO in the identification of sensitive safety areas (hot spots) for decision-making related to the improvement of safety in the RVSM airspace. These data are also an important input of the annual safety report published by the Regional Aviation Safety Group—Pan America (RASG-PA).

## 2. Discussion

2.1 The CAR/SAM Planning and Implementation Regional Group (GREPECAS) Eighteenth Scrutiny Working Group Meeting (GTE/18) was carried out in Mexico City, Mexico, from 22 to 26 October 2018.

2.2 This meeting reviewed the results on 2017 safety assessment (CRM) in RVSM airspace, statistics on LHD events in CAR/SAM Regions, and the identification of points with highest occurrences of LHD events in CAR/SAM Regions.

2.3 The Meeting took note of the following issues to be reported to GREPECAS:

- a) The lack of information from several States, regarding the compliance with the information required by CARSAMMA to perform its duties. It was mentioned that, due to the impact to the safe provision of air traffic services, the lack of compliance with CARSAMMA information request may be considered a deficiency under the GANDD.
- b) Many of the required processes for LHD identification could not be performed due to the lack of registration of aircraft in the flight plan.
- c) The Meeting considered appropriate to raise to GREPECAS the concern about the reporting by some States on the non-occurrence of LHD events (0 LHD), even when the adjacent FIRs presents a considerable number of events induced by FIRs that have reported 0 events.

2.4 Conclusion GTE/18/2 – *REDUCTION OF CODE E LHD EVENTS*, which establishes “that considering that in the classification of LHD events, the trend in code E events represents 95.03 % of the total events; and that this behavior has been maintained during the last three years, identifying several points in the CAR/SAM Regions where the reduction in the number of events has been low. Include in the GTE work programme the following actions:

- a) *the States of the CAR/SAM Regions develop the necessary strategies for the reduction of Code E events based on the information provided by CARSAMMA and NAARMO, including the necessary training for air traffic controllers, the improvement of the Communications, Navigation and Surveillance (CNS) infrastructure, including the exchange of radar data and the improvement of ATS communications among the involved FIRs among other activities;*
- b) *ICAO promotes bilateral and multilateral meetings to address specific issues between involved FIRs, especially at the border of the CAR and SAM Regions; and*
- c) *CAR/SAM States notify in the GTE meetings the results of these actions for the reduction of Code E events.”*

2.5 Following this conclusion, the ICAO NACC and SAM Regional Offices have been developing bilateral and multilateral activities to address specific areas where a large number of LHD events occur at the borders of the Flight Information Regions (FIRs). Each of the Regional Offices has identified and prioritized within its area of responsibility the main "hotspots" that must attend under this strategy.

2.6 The final objective of this initiative is to improve the RVSM airspace safety level, using the data processed by CARSAMM and validated by the GTE, promoting data based collaborative decision-making.

2.7 Until now, the SAM Regional Office has held meetings between the FIRs Córdova in Argentina and Antofagasta in Chile, and a meeting between the FIR Antofagasta and the FIR Lima.

2.8 These meetings have helped to identify and implement specific actions that have had a positive impact in the LHDs reduction. A concrete example is the FIR Córdova – Antofagasta, which was one of the areas that presented more large height deviations in the South American Region, since the implementation of the automatized transfer messages in March 2019, LHDs were completely eliminated.

2.9 Additional to the implementation of the automatized transfer messages between the ACCs, work is being done with the rest of the FIRs mentioned in paragraph 2.7, in the improvement of the ATS Inter-facility Data Communication (AIDC) utilization training, the coordination with operators in the utilization of Automatic Dependent Surveillance - Contract (ADS-C), the communications and surveillance infrastructure reinforcement, among other activities.

2.10 For its part, the NACC Regional Office has prioritized the interaction between the FIRs of Curaçao and Santo Domingo. In this sense, the air navigation service providers of these FIRs took outstanding actions to be able to address the identified trends and generally improve the levels of safety and efficiency in the provision of their services:

- a) The RADAR data sharing between the two air traffic control systems was completed, which guarantees the total surveillance coverage at the transfer of control points of both FIRs;

- b) The installation and operation of the rapid response communication line (known as "shout line"); and
- c) Operational agreement letters were reviewed to improve the interaction between both FIRs, including procedures for the revision of safety deviations among them.

2.11 Additionally, the NACC and SAM Regional Offices are carrying out combined coordination activities with States/Territories of their respective Regions, to directly address significant trends of events that occur within the boundaries of both Regions. In this sense, coordination teleconferences have been carried out between Colombia (FIR Barranquilla) and Curaçao, to agree on mitigation actions at the control transfer points between both airspaces.

2.12 As part of these initiatives to address the occurrence of the LHDs routed by the NACC and SAM Regional Offices, the root causes of these events are identified and analyzed and mitigation actions are proposed. Some of the causes have already been identified, and the safety points are taken as an additional argument for their solution. The causes and solutions may involve issues related to infrastructure, technology and operations, so multidisciplinary teams of both Regional Offices are involved to be able to look for solutions that effectively reduce the occurrence of events and improve safety levels.

### **3. Future actions**

3.1 The ICAO NACC and SAM Regional Offices have identified the possibilities that the GTE has for expanding its terms of reference to become a mechanism for measuring safety performance in the upper airspace of the CAR/SAM Regions.

3.2 Along with this initiative, the ICAO Integrated Aviation Analysis (IAA) Section has been working on the development of a pilot project in the CAR/SAM Regions for the monitoring of RVSM airspace using the ICAO Safety Information Monitoring System (SIMS). The GTE/18 Meeting agreed to motivate the States/Territories/International Organizations responsible for the provision of the ATS in the CAR/SAM Regions, to connect to the SIMS for the continuous monitoring of their safety performance and to share the data provided to CARSAMMA with ICAO. In this context, the SIMS will include indicators on LHDs.

3.3 The data provided to the SIMS can only be viewed by the State/Service Provider that provides it, but it serves to make a regional calculation of safety performance, being able to show global air navigation system behavior patterns. In addition, work is being done to collect data on operations in the RVSM airspace, using data on Automatic Dependent Surveillance - Broadcast (ADS-B) available in SIMS; this data that is collected directly from the States, sometimes manually, trying to reduce the workload so that more time can be devoted to address safety situations. Subsequently, feedback will be provided to GREPECAS on the results of this pilot project.

### **4. Conclusions**

4.1 The GTE is a multidisciplinary group that brings together personnel directly linked to the provision of air traffic services of the CAR/SAM Regions, and whose work has a direct impact on the safety and efficiency of the airspace of the abovementioned Regions.

4.2 The CAR/SAM Regions States/Territories should maintain their support for the activities of the GTE and see in them possibilities to go beyond their current terms of reference.

4.3 The data processed by CARSAMMA and validated by the GTE support the States to establish a decision-making process based on data for the development and implementation of actions that help improve the safety level in the RVSM airspace. They also support the work done by other safety related groups such as the RASG-PA.

4.4 The ICAO NACC and SAM Regional Offices will continue to work, in collaboration with States and Territories, to implement mitigating actions, supported by a data-driven decision-making approach that includes both ATM and CNS, to reduce the occurrence of LHD events and improve the level of risk in the CAR/SAM Regions.

## **5. Suggested Actions**

5.1 The Meeting is invited to:

- a) take note of the information provided in this Working Paper;
- b) support the work of CARSAMMA and the GTE in the treatment of LHD data in the CAR and SAM Regions;
- c) support the ICAO NACC and SAM Regional Offices will continue to work, in collaboration with States and Territories, to implement mitigating actions, supported by a data-driven decision-making approach; and
- d) recommend other actions deemed necessary.