



ICAO

International Civil Aviation Organization
South American Office

INFORMATION PAPER

GTE/19 — IP/11
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**CAR/SAM Planning and Implementation Regional Group (GREPECAS) Nineteenth Scrutiny Working Group Meeting
(GTE / 19)**

Barranquilla, Colombia, 18 to 22 November 2019

Agenda Item 3: Review of the results of Large Height Deviation (LHD) analysis

g) Report on the progress made by States on LHD management

ADVANCES OF THE MITIGATING ACTIONS IMPLEMENTED BY THE DOMINICAN REPUBLIC FOR THE REDUCTION OF LHD EVENTS IN THE SANTO DOMINGO FIR

(Presented by República Dominicana)

RESUMEN	
This informative note is intended to present a summary of the mitigating actions implemented by the Dominican Republic for the reduction of LHD events.	
References	
<ul style="list-style-type: none">• GTE/13• GTE/14• GTE/15• GTE/16• GTE/17• GTE/18	
ICAO Strategic Objectives:	A - Safety

1. Introduction

1.1 The Dominican Republic has actively participated in the GTE meetings, sharing the actions we have implemented for the continuous reduction of events classified as LHD, resulting in a greater awareness of the risk and the need to apply actions that contribute to a significant reduction of these events in our Region.

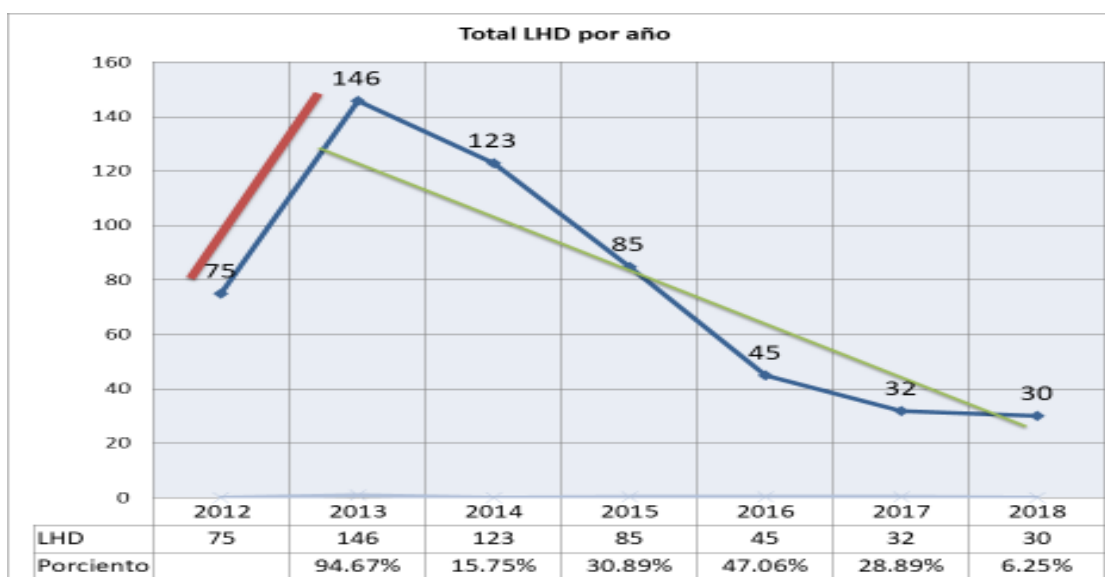
1.2 We have taken specific actions that have drastically exceeded our local goal of reducing the LHD events caused by our FIR to other adjacent States.

1.3 In our past participation in the GTE / 18, we made a presentation that covers the history of what has been the evolution of the LHD events in the Santo Domingo FIR, making a retrospective from the GTE / 13 until the months before the completion of the GTE / 18, where we show our commitment to the objectives of the Region.

2 Background

2.1 During the GTE / 13, The Dominican Republic where committed to reduce the occurrences of LHD events by 15% annually.

2.2 This goal has been significantly exceeded, referenced every year compared to the amount committed the previous year, with the number of errors of 146 LHDs in 2013, the reduction was 15% for 2014 (123), 30.89% for 2015 (85), 48% for 2016 (45), 29% for 2017 (32) and 6.3% for 2018 (30), respectively.



2.3 Although the advances have been positive, they have not stopped worrying and challenging us in search of better conditions that allow us to assume them as acceptable values.

2.4 We remain in constant supervision of the measures taken, making micro-adjustments and evaluating their implementation.

2.5 The results, with the persistent limitations, are as expected, which demonstrates the Dominican Republic's commitment to mitigate LHD events at the Regional level.

3 Desarrollo

3.1 The Dominican Republic is surrounded by four (4) FIRs, each with totally different operational characteristics, which makes harmonization efforts in the procedures applied to mitigate the occurrence of LHDs events difficult.

3.2 It's been very helpful identifying the operational characteristics of each FIR, analyzing its physical and technological infrastructures to be able to focus on better options to mitigate the occurrences of LHDs events, also to identify the hours of greatest number of occurrences to reinforce supervision in the same.

3.3 We implement measures to double and triple the responsibility for supervision, making it more effective at the times identified as the highest number of occurrences of LHD.

3.4 We also carry out training and awareness campaigns for our ATC personnel, so that they are more alert and can easily identify possible errors and that they can correct them before they become an operational deviation or an LHD event.

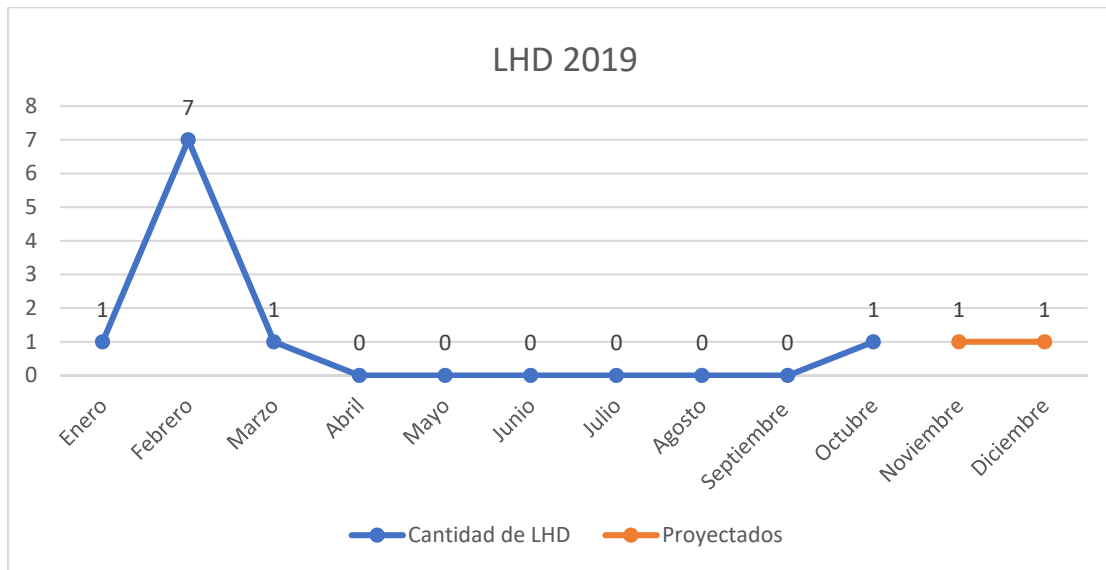
3.5 All these actions maintained the occurrences of LHD events caused by the Santo Domingo FIR to the adjacent FIRs below the acceptable level, but our attention was drawn to the results obtained during 2018, concluding that year with 30 LHDs events, with a decrease less than 7% in relation to the 32 events of 2017.

3.6 The above presented us with a new challenge at the managerial level, concluding in the implementation of a new plan, consisting of the identification of an ATC staff that has demonstrated a high level of operational competence and implementing a special schedule for those personnel to execute the coordination with the FIRs with which we evidenced the main causal factors of events, with the instruction to carry out a study and give us a report of what in his opinion were the main causes that gave rise to the occurrence of LHDs events.

3.7 The conclusions were shared by a way of complaint (with evidence) with our counterparts of the adjacent FIRs and of which we describe some below:

- Software problems in adjacent units.
- Collation errors of the accepting unit.
- Distraction, multitasking, by our staff.
- Do not anticipate events; wait for approval before giving ENTER in the system.
- Accepting agencies say received instead of read back / approving / authorizing.
- When checking the level or time, listen to the read back of the factor that is NOT revised, recommendation, even if only one factor is affected, revised everything.
- Improve aspects of communication, listening and not assuming.
- Improve relay processes, if in doubt call the adjacent center and confirm.
- The above was added to the installation of new tools with the update of our radar software, which includes:
 - RED Alert of time difference of estimates on the TCP, when the estimate calculated by system differs with the estimate coordinated with the adjacent FIR by a value above the acceptable one according to the letter of agreement.
 - RED level difference alert on TCP, when the level maintained by the aircraft differs from the level coordinated with the adjacent FIR.
 - Coordinated route deviation alert compared to the projected route of the aircraft.

3.8 The aforementioned measures give us a very positive projection for this 2019, having to date ten (10) confirmed events attributable to the FIR Santo Domingo, of which eight (8), correspond to periods prior to the implementation of the measures previously cited.



4 New plans and goals

4.1 With the update of the different letters of agreement, new procedures are projected to be implemented that should have a substantial impact on the ATS activity.

4.2 Within the new procedures we can cite:

➤ **WITH MIAMI FIR**

- AIDC Implementation fase 1 from noviembre 11 2019

➤ **WITH SAN JUAN FIR**

Update of the Letter of Agreement as of November 11 that includes:

- AIDC implementation.
- Reduction of longitudinal separation based on time from 15 and 20 minutes to 10 minutes.
- Reduction of GNSS longitudinal separation and Mach number technique from 80 NM to 40NM GNSS.
- 10 NM radar separation application.
- Shout lines implementation.
- Modification of time for revisions in radar environment.

➤ **WITH PORT AU PRINCE FIR**

- Reduction of GNSS longitudinal separation and MACH number technique from 80 NM to 40NM GNSS.

- Cooperation plan for Port-au-Prince to benefit from the progress made by Santo Domingo in the area of Air Navigation.
 - Upper airspace restructuring of the MTEG FIR.
 - Implementation Pfa1 and Pfa2 of the PBN harmonization plan.
 - New AIP platform.
 - Use of technologies.
 - Training for the application of 40NM GNSS.
 - SAR operational agreement.

➤ **WITH CURAZAO FIR**

- New Letter of Agreement as of August 1, 2019.
- Inclusion of the new routes of Pfa 1 and Pfa2 of the PBN harmonization plan.
- Data radar sharing agreement.
- 10 NM radar separation application.
- Shout lines implementation.
- Standardization of longitudinal separation based on time to 10 minutes.
- Update of the contact points of each State
- Inclusion of the application procedure of a reduced separation of 80 NM to 40 NM with GNSS applying the MACH number technique;
- The implementation of a contingency plan for cases in which one of the States declares ATC ZERO;

5 Conclusion

5.1 There is much that can be achieved in year when there is follow-up and willingness. The meeting is inviting to:

- a) Be aware of the information contained in this informative note;
- b) actively maintain the sharing of positive experiences; and
- c) recommend other actions that you consider necessary.