



Agenda Item 3: Mitigating actions to ensure the target level of safety (TLS)
a) Quantitative analysis of LHD reports

**Quantitative Analysis Applying the Safety Management System
(SMS) Methodology to Large Height Deviation
(LHD) Reports in 2010**

(Presented by CARSAMMA)

Summary	
This part presents a summary of the qualitative analysis of large height deviation (LHD) reports received by CARSAMMA in 2010, associated to the SMS methodology advocated by ICAO.	
References	
<ul style="list-style-type: none">• ICAO SMS Manual• Report of large height deviations (LHD) in 2010.	
ICAO Strategic Objectives:	A - Safety

1. Background

1.1. In order to use the SMS methodology for analysing LHDs, CARSAMMA followed all the steps of this process in 2010 to produce a qualitative safety assessment in RVSM airspace.

2. Context

2.1. 892 LHDs were reviewed using the SMS methodology; 646 LHDs were validated by CARSAMMA in 2010, using the expression **VR=(Px DxG)+R+W+T**.

3. Discussion

3.1. The parameters used by CARSAMMA in the SMS-LHD analysis (likelihood, duration, severity, radar coverage/CPDLC, weather, and separation between traffic) may be less than ideal, and the GTE may propose other figures as it so desires.

3.2. Since the SMS has no “TLS” level, CARSAMMA proposes the use of a low level of risk (up to 25 points) as the target, awaiting GTE approval.

4. Summary and conclusions

4.1. Based on hazard identification and analysis, LHDs are classified as of low, medium or high risk, with the purpose of producing an ICAO/CARSAMMA safety management document (SMD-LHD), containing the number, description, cause, severity, likelihood and initial risk value of LHDs.

5. Suggested action

5.1. The Meeting is invited to:

- a) take note of the information contained in this working paper and States wishing to do so may use it as a reference for mitigating their LHDs;
- b) approve the parameters suggested for the quantitative safety analysis of LHDs;
and
- c) submit that decision to GTE members for their knowledge and approval.