



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
EASTERN AND SOUTHERN AFRICAN OFFICE**

**AIR TRAFFIC MANAGEMENT COORDINATION MEETING FOR SOUTHERN AFI FLIGHT
INFORMATION REGIONS (ATM/CM-SAF)
(JOHANNESBURG, SOUTH AFRICA, 3-5 FEBRUARY 2015)**

**Agenda Item 3: Co-ordination and Implementation of Strategic Lateral Off-Set
Procedure (SLOP) (Circular 331 AN/192 and Doc4444 Section 16.5)**

(Presented by ARMA)

Summary

This WP discusses the implementation of SLOP in the SAF Region together with the results of the implementation survey that was conducted to establish the number of FIR's that have officially implemented SLOP which is required for the annual RVSM quantitative Collision Risk Assessment for the reduction of risk. SLOP should be coordinated amongst the States involved so should therefore be considered during the coordination meeting and possibly worked into the LOP process.

Ref: ICAO Circular 331 and Doc 4444 section 16-5

Action is at paragraph 3.

1. INTRODUCTION

- 1.1 A Survey evaluating the Implementation of Strategic Lateral Offset Procedure (SLOP) in the AFI Region was conducted by ARMA in order to establish the number of FIR's that have officially published and implemented the procedure. This paper only addresses those FIR's in the SAF region. The result is required for use in the annual RVSM quantitative Collision Risk Assessment.
- 1.2 SLOP reduces the risk of aircraft passing directly over each other, passing frequency, thus the possibility of a Large Height Deviation resulting in hull losses is minimised. SLOP is not applicable in airspace covered by surveillance. Circular 331 presents the work that the SASP has completed in this regard.
- 1.3 SLOP when worked into the annual RVSM risk assessment reduces the estimated Total Vertical Risk. SLOP mitigates the increased risk created by the accuracy of GNSS navigation and thus passing aircraft directly over each other.
- 1.4 The meeting should be informed that Circular 331 AN/192 Implementation of Strategic Lateral Offset Procedures has been approved by the Secretary General and published under his authority and should be read in conjunction with ICAO Doc 4444 section 16.5 and Annex 2, 3.6.2.1.1.

2. DISCUSSION

2.1 States were requested via State Letter Ref. ES AN 4/45 - 0945 to respond not later than 28 February 2013 as to the official status of SLOP within FIR's under their management.

2.2 The meeting should recall that the under mentioned Conclusion was endorsed by APIRG 17

2.2.1 Conclusion 17/43:

Implementation of Strategic Lateral Offsets (SLOP) in the AFI Region

That, AFI States implement SLOP within their areas of responsibility, by the AIRAC effective date of 30th November 2010, in line with provisions in PANS-ATM Doc 4444 Chapter 16 and the following guidance:

- a) **SLOP will be applied in those oceanic FIRs where fixed routes are established;**
- b) **SLOP will be applied in all areas of the continental AFI Region except in those areas where ATC separation is provided by surveillance, unless approved by the State; and**
- c) **SLOP will be applied in oceanic random routing areas (AORRA and IORRA) with effect from the target date of AIRAC date of 2 June 2011**

2.3 The AFI Regional Monitoring Agency (ARMA) has a requirement to establish the number (quantity) of AFI Flight Information Regions (FIR's) in which SLOP has been implemented, pursuant to the abovementioned APIRG Conclusion. The primary objective of collecting the information on implementation is to use the data in the AFI Reduced Vertical Separation Minimum (RVSM) Collision Risk Assessments. In addition, the information will be used to assess the AFI States' status of implementation of the APIRG Conclusions. The recently released Circular 331 now adds further urgency to finalize the implementation and survey. Together with this the RVSM risk needs to be mitigated with all available tools.

2.4 The CRA is a quantitative risk assessment requiring quantities to calculate the various risks. If all FIR's did not apply SLOP the risk would be calculated as high however as soon as SLOP is introduced the risk is reduced. ARMA is aware that even if a State has not officially implemented SLOP that en route traffic is most probably anyway applying the off-set however the assumption cannot be worked into the assessment. The 2014 RVSM Risk assessment might be so structured as to include in the calculations those FIR's that have officially implemented SLOP. States should take note of Circular 331 Chapter 2 Note 2 and paragraph 2.6.

2.5 The ARMA has reviewed numerous safety events where the use of SLOP has minimized the risk of an incident/accident from taking place.

2.6 The results of the SLOP survey are presented as received from the various SAF States that responded and are reflected in Table 1 hereunder:

Implementation Status		
FIR	Implemented	Comment
Antananarivo	Yes	
Beira	No	
Cape Town	No	Full Surveillance
Dar Es Salaam	No	
Gaborone	No	
Harare	No	
Johannesburg	No	Full Surveillance
Johannesburg Oceanic	No	Full Surveillance
Lilongwe	No	
Luanda	No	
Lusaka	No	
Mauritius	No	
Seychelles	No	
Windhoek	No	

Table 1

- 2.7 It is thus evident that the response to the State Letter was not satisfactory and leaves ten FIR's where the implementation status is unknown or vague.
- 2.8 Further to the ARMA CRA requirement it would be in the States best interests to ensure that the SLOP status is adequately documented in the IAIP for the information and application of all users as per Circular 331.
- 2.9 Taking the afore mentioned into account the ARMA proposes that the ten outstanding States/FIR's indicate as soon as practically possible the implementation status of SLOP within their area of jurisdiction and where this impacts on operations that the procedure is clearly documented in the relevant LOP.
- 2.10 The contributory effect that SLOP has on the RVSM safety assessment risk estimate will be provided in the supporting power point presentation. The estimated risk could be considerably lower if SLOP is documented and applied consequently.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note and review the contents of this working paper;
 - b) Urge States/FIR's that have not responded to the survey to indicate their SLOP status in the meeting or undertake to do so within a set reasonable time period.
 - c) Obtain a copy of Circular 331 from ARMA
 - d) Where applicable document the SLOP coordination procedures within the LOP.

END