



ICAO

**Twenty-Fourth Meeting of the AFI Planning and Implementation Regional Group
(APIRG/24)
(Virtual – 2 to 4 November 2021)**

Agenda Item 3. AFI AIRSPACE MONITORING

RVSM AND OPERATIONAL SAFETY

(Presented by ARMA)

SUMMARY	
This working paper presents an update on the collective Conclusions and Decisions from APIRG23 related to AFI airspace monitoring and reporting	
Action by the Meeting is in paragraph 3.	
<i>Strategic Objectives</i>	A – Aviation Safety B – Air Navigation Capacity and Efficiency
REFERENCE(S):	APIRG 23 Report

1 INTRODUCTION

- 1.1 This paper provides an update on the Conclusions and Decisions concerning AFI RVSM and PBCS Airspace Monitoring and the actions taken thereafter.

2. DISCUSSION

- 2.1. The paper recalls the following conclusions:

APIRG/23 Conclusion 23/03: RVSM data returns and Large Height Deviations reporting

That, in order to improve the level of States reporting to ARMA:

- a) States update ARMA with contact details of their national RVSM Managers and establish a mechanism to ensure that RVSM monthly data returns and incident investigation reports of large height deviations (LHDs) are provided to ARMA in a timely manner;
- b) ARMA provide to States twice a year results of the Collision Risk Assessment;
- c) ICAO and ARMA conduct on regular basis awareness workshops for State-

- appointed national RVSM Focal Points responsible for RVSM data returns to ARMA; and
- d) States carry out an in-depth incident investigation to all reported large height deviations.

APIRG/23 Conclusion 23/33: Nomination of RVSM focal points and submission of data to ARMA

That, in order to improve the submission of RVSM data to ARMA, States that have not already done so, nominate focal points for RVSM and update ARMA using an F1 form by 31 December 2020.

2.1.1 ARMA Actions/Update:

- a) Other than the collective representation from ASECNA of certain States with RVSM Data submission, the following States have not sent in nominations for their State for other RVSM related requirements like RVSM Approvals for their State registered airframes, Height Monitoring Plans:

Central African Republic
 Chad
 Djibouti
 Eritrea
 Malawi
 Niger
 Togo

- b) Table 2 below is a comparison between **CRA 13** and **CRA 14**, highlighting the risk Estimation and Target Level of Safety (TLS)

AFI Airspace – estimated annual flying hours = 552 756 hours <i>(note: estimated hours based on the 2019 traffic sample data)</i>			
Source of Risk	Risk Estimation	TLS	Remarks
<i>RMACG 13 Total Risk (PREVIOUS CRA)</i>	75.4×10^{-9}	5.0×10^{-9}	<i>Above TLS</i>
Technical Risk	7.74×10^{-10}	2.5×10^{-9}	Below Technical TLS
Operational Risk	10.2×10^{-9}	-	-
Total Risk	10.9×10^{-9}	5.0×10^{-9}	Above TLS

- 2.1.2 ARMA is in the process of confirming and verifying RVSM Data accuracy with every State for data integrity, we would not be able to conduct an awareness workshop in 2021 but will be completed in February 2022.

- 2.1.3 Reports of Large Height Deviation (LHD) have reduced however; ARMA has not received some investigations yet to be completed by some States. Majority of States when sending in RVSM Traffic Flow data only send in F4 and exclude F1, F2 and

F3.

2.2 APIRG/23 Conclusion 23/34: Implementation of SLOP as discount for CRA/15

That, in order to add the safety discount to the fifteenth Collision Risk Assessment, AFI States that have not already done so, publish AIP SUPP by 31 December 2020 for the implementation of SLOP on 25 February 2021.

2.2.1 ARMA Actions/Update:

- a) SLOP reduces the rate of collisions due to the loss of planned longitudinal and vertical separation, by 38.19 per cent. It is a safety net in both RVSM and PBCS airspace when either vertical or longitudinal separation has been lost.
- b) The Table below presents the status of SLOP implementation in the region.

FIR	Implemented SLOP (Yes/No)	NPM Replies
Accra	Yes	Yes
Addis Ababa	No	Yes
Antananarivo	Yes	Yes
Asmara	No	No
Beira	Yes	Yes
Brazzaville	Yes	Yes
Cape Town	No	Yes
Dakar Terrestrial	Yes	Yes
Dar Es Salaam	Yes	Yes
Entebbe	Yes	Yes
Gaborone	No	Yes
Harare	Yes	Yes
Johannesburg	Yes	Yes
Johannesburg Oceanic	Yes	Yes
Kano	Yes	Yes
Kinshasa	Yes	Yes
Lilongwe	No	No
Luanda	Yes	Yes
Lusaka	Pending	Yes
Mauritius	Yes	Yes
Mogadishu	Yes	Yes
Nairobi	No	Yes
N'djamena	Yes	Yes
Niamey	Yes	Yes
Roberts	Yes	Yes
Seychelles	Yes	Yes
Windhoek	No	Yes

Total Not Implemented No Response or Evidence	6	
Total Implemented	20	
Pending Implementation Awaiting Evidence	1	
Total FIR's	27	

2.3 APIRG/23 Conclusion 23/35: Adoption of new ARMA forms F2 and F3

That, in order to improve the process of RVSM and PBCS monitoring by States and ARMA, the new ARMA Form F2 and Form F3 which include both RVSM and PBCS Approvals are adopted for use by States as applicable for RVSM/PBCS approval, amendment and withdrawal.

2.3.1 ARMA Actions/Update:

- a) States have commenced with the use of the new F2 and F3 RVSM/PBCS Form.
- b) The State of Ethiopia has started to issue PBCS (RCP/RSP) Approvals to their state registered operators.

3 ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Take note of the updates and urge the States concerned to comply with the requirements.
- b) Encourage SLOP implementation across all States in their Upper Airspace for the discount to be applied in the next Collision Risk Assessment.
- c) Encourage States to commence working on issuing RSP180 & RCP240 (PBCS) Approvals and utilizing the new F2 and F3 RVSM/PBCS Forms.
- d) Urge all States to forward NPM Focal Point representation regardless of having a consolidated representative from an organization that manages their upper airspace.