**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

**Third Meeting of the APIRG Airspace and Aerodrome Operations Sub-Group (AAO/SG3), Virtual Meeting, 3 to 5 August 2020**

**Agenda Item 3: Planning and implementation**

**3.1 AIRSPACE (SAFETY, CAPACITY AND EFFICIENCY)**

# AFI RVSM COLLISION RISK ASSESSMENT 13 REPORT

*(Presented by ARMA)*


| SUMMARY |
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| **This WP provides the results of the annual Collision Risk Assessment for the year 2018 that was conducted to establish the safe use of RVSM airspace in the AFI Region.** |
| **REFRENCE(S):**<br>**ICAO Annex 6**<br>**ICAO Doc 9937**<br>**ICAO Doc 9574**<br>**ICAO Doc 9930** |
| **Related ICAO Strategic Objective(s): Safety; Efficiency & Capacity** |


## 1. INTRODUCTION

1.1 The ARMA is mandated to keep a database of height-keeping monitoring compliance for all RVSM approved aircraft in AFI region, and to produce a report for each State at least once a year, or as required by the APIRG structures.

1.2 The collection of RVSM safety assessment data is an ongoing RVSM process which is a requirement for the maintenance of RVSM safety. AFI FIR's/ACC's are committed to capturing, compiling and submitting Safety Assessment data on a monthly basis to ARMA for this purpose. As should be recalled the continued accurate monitoring of RVSM in AFI, as in other ICAO regions, is a long term process with ARMA requiring the full participation of all AFI FIRs/ACCs. Reference is made to Recommendation 6/8 (c) of the 2008 Special AFI RAN/ 08 meeting which focuses on the long term collection of RVSM traffic data.

1.3 The ARMA dispatches an information letter every six months to each FIR/ACC that provides information on the submission status for the period under review. Various FIRs have an exceptional record and others are lacking whilst there are those that do not submit at all. The question is periodically asked as to what the Safety Assessment data is used for and how should the forms be completed. In order to recap the under mentioned information is provided

## 2. DISCUSSION

| **AFI Airspace – estimated annual flying hours = 483 110.88 hours** *(note: estimated hours based on the 2018 traffic sample data)* | | | |
|---|---|---|---|
| **Source of Risk** | **Risk Estimation** | **TLS** | **Remarks** |
| *RMACG 13 Total Risk (PREVIOUS RMACG)* | *58.6 x $10^{-9}$* | *5.0 x $10^{-9}$* | *Above TLS* |
| Technical Risk | 2.4 x $10^{-11}$ | 2.5 x $10^{-9}$ | Below Technical TLS |
| Operational Risk | 70.2 x $10^{-9}$ | - | - |
| Total Risk | **75.4x $10^{-9}$** | 5.0 x $10^{-9}$ | **Above TLS** |

2.1 The table above represents the total vertical collision risk against a TLS of $5 \times 10^{-9}$ fatal accidents per flight hour. The CRA 13 2018 estimate of the total vertical collision risk was 75.4 x 10-9 fatal accidents per flight hour, i.e. 15 times the total vertical TLS. It was approximately 1.3 times larger than its CRA 12 2017 counterpart. The current estimate is somewhat comparable to the estimate of CRA 9 2014 and equal to approximately half of the estimate for CRA 10 2015.

2.2 Data was received from a very limited number of FIR/UIRs. Only 15 FIR provided data and this data was used to determine the passing frequency and aircraft population. Only one FIR/UIR, namely Harare, provided ARMA Form 4 data for all 12 months. In total, 132.9 months' worth of data was processed. This constitutes approximately 42% of the total that should have been available from the 27 participating FIR/UIRs. This was the lowest percentage of provided data for all CRAs. The quality of the available information varied strongly.

2.3 With concern the persistent deficiencies in the AFI Region, in particular those affecting the safety of aircraft operations. Priority should be given by APIRG Structure to help eliminate the most common and persistent deficiencies. Although efforts have been made by ARMA to get the States to participate and comply, it has been an unsuccessful task. Most of these long-standing deficiencies have not been eliminated. The following States have not been able to keep up with the commitments made at the AFI RAN Meeting in 2008.

**State Data Return RVSM Deficiencies**

- Addis Ababa
- Asmara
- Dar es Salaam
- Kinshasa
- Lilongwe
- Luanda
- Lusaka
- Mogadishu

## 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) Take note of the content of working paper

b) Assists ARMA by recommending actions that will be effective in ensuring the States comply to the recommendations of ICAO Doc 9930

c) Urge States FIRs/ACCs to submit RVSM Safety Assessment data as required at monthly intervals in order for the various safety assessment tasks to be undertaken and completed as per ICAO provisions.

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