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**Twenty-Sixth Meeting of the Regional Airspace Safety
Monitoring Advisory Group (RASMAG/26)**

Video Teleconference, 20 – 23 September 2021

Agenda Item 5: Airspace Safety Monitoring Activities/Requirements in the Asia/Pacific Region

MAAR ASSESSMENT OF NON-RVSM APPROVED AIRCRAFT

(Presented by the Monitoring Agency for Asia Region)

SUMMARY

This paper presents the result of an annual audit of aircraft operating in the RVSM airspace under MAAR's responsibility. The audit was based on 2020 TSD and monthly Bangkok FIR FPLs, which resulted in **19** aircraft that operated in RVSM airspace without valid RVSM approvals in RMAs' database (decreased from **26** aircraft from last year's audit). The paper also highlights the following points:

- The reduction in the number to **19** aircraft from **26** is likely due to reduction of flights and travel restrictions during the COVID-19 pandemic (Dec 2020 vs Dec 2019).
- India has the highest number of aircraft on the list, all of which operate only domestic flights.
- 19 of 21 States under MAAR's responsibility already adopted the new F2 Form and filled in RSP180/RCP240 Approval fields.

1. INTRODUCTION

1.1 As part of the Regional Monitoring Agency (RMA) duties and responsibilities, MAAR conducts an annual audit of aircraft transiting through RVSM airspace based on the Traffic Sample Data (TSD) for the period of December from 24 FIRs under MAAR's responsibility.

1.2 The purpose of this paper is to summarize the result of an annual audit of aircraft filing 'W' to operate in the RVSM airspace but has no valid RVSM approvals in RMAs' database (a.k.a. rogue aircraft). These include aircraft registrations with (1) no RVSM approvals record or (2) expired approvals in RMAs' databases.

2. DISCUSSION

2.1 The 2020 TSD is used as the main data source for this paper. All States submitted complete TSD this year. Since the previous RASMAG, the TSD format has been revised to include Item 10 and Item 18 of the Flight Plan. This allows the responsible RMA to conduct the TSD audit based on actual Item 10 designator.

2.2 In addition to the annual audit based on TSD from 24 FIRs, MAAR also conducts monthly audits of flight plans (FPLs) from the Bangkok FIR. The monthly audit results (up to July 2021) are also included in the final result in this paper. However, due to the drastic reduction in traffic in 2020 and 2021, not many rogue aircraft could be detected from Bangkok FIR's FPLs.

2.3 The TSD was compared against the current MAAR approval database and other RMAs' latest approval snapshots. Other RMAs' correspondence and monthly approval update are also used to update the final result.

Results

2.4 **Table 1** contains a summary of RVSM approval data submission from States. Brunei Darussalam Myanmar and Pakistan were the three States that did not submit their annual snapshots.

State of Operator	Submission
Afghanistan	F2, F3 and 2020 annual snapshot
Bangladesh	F2, F3 and 2020 annual snapshot
Bhutan	F2, F3 and 2020 annual snapshot
Brunei Darussalam	F2 and F3 only
Cambodia	F2, F3 and 2020 annual snapshot
China (Hong Kong)	F2, F3 and 2020 annual snapshot
China (Macau)	F2, F3 and 2020 annual snapshot
China (Taiwan)	F2, F3 and 2020 annual snapshot
India	F2, F3 and 2020 annual snapshot
Lao PDR	F2, F3 and 2020 annual snapshot
Malaysia	F2, F3 and 2020 annual snapshot
Maldives	F2, F3 and 2020 annual snapshot
Mongolia	F2, F3 and 2020 annual snapshot
Myanmar	F2 and F3 only
Nepal	F2, F3 and 2020 annual snapshot
Pakistan	F2 and F3 only
Philippines	F2, F3 and 2020 annual snapshot
Singapore	F2, F3 and 2020 annual snapshot
Sri Lanka	F2, F3 and 2020 annual snapshot
Thailand	F2, F3 and 2020 annual snapshot
Viet Nam	F2, F3 and 2020 annual snapshot

Table 1: Summary of RVSM approval data submission from States

2.5 In accordance to RASMAG/25 Task List by the action item 25/1, RMAs to check that all States to adopt the new F2 Form and States to explicitly check YES or NO in field 15 (RSP180 Approval) and field 18 (RCP240 Approval). MAAR found that **19 of 21** States already adopted the new F2 Form and identified RSP180/RCP240 Approval on the form. **Myanmar and Viet Nam** are the only two States who did not adopt to the new F2 Form.

2.6 **Table 2** provides a summary of the number of rogue aircraft by RMA and State compared with RASMAG/25.

RMA	State	No. of Registrations – RASMAG/26	No. from RASMAG/25
AAMA	Indonesia	4	12
	Australia	1	2
AAMA Total 5			14
ARMA	Tanzania	0	1
ARMA Total 0			1
MAAR	India	12	8
	Malaysia	2	0
	Thailand	0	1
MAAR Total 14			9

RMA	State	No. of Registrations – RASMAG/26	No. from RASMAG/25
NAARMO	United States	0	2
		NAARMO Total 0	2
		Grand Total 19	26

Table 2: Number of Rogue Aircraft by State and RMA

2.7 **Table 3** lists the individual registrations of rogue aircraft, where:

- **bold case** indicates aircraft found from the December 2020 TSD; and
- *italic case* indicates aircraft found from Bangkok FIR’s FPLs.

RMA	State	Registration	Aircraft Type
AAMA	Indonesia	PKCMO	B739
		PKAXG	A320
		PKAXI	A320
		PKAXJ	A320
	<i>Australia</i>	<i>VHIEQ</i>	<i>C510</i>
MAAR	India	VTIUR	A21N
		VTISL	A20N
		VTISM	A20N
		VTISJ	A20N
		VTIUW	A21N
		VTISN	A20N
		VTIJY	A20N
		VTILB	A21N
		VTISR	A20N
		VTIUZ	A21N
		VTISS	A20N
		VTILC	A21N
	<i>Malaysia</i>	<i>9MWCA</i>	<i>B738</i>
<i>9MXXQ</i>		<i>A333</i>	

Table 3: Aircraft operating in the RVSM airspace with expired or no RVSM approvals

Overall Observations

2.8 In June 2021, MAAR presented the result of an annual audit of rogue aircraft to the Virtual RMA Coordination Group Meeting. The audit yielded **31** aircraft and **4** of which were also detected in December 2019. However, the contributions made by all RMAs and State response; those **4** repeat rogue aircraft were confirmed RVSM approved after the RMACG Meeting. Thus, there is no long-term repeated rogue aircraft identified in this paper.

2.9 Due to travel restrictions in the Bangkok FIR during the COVID-19 pandemic, the monthly Bangkok FPL-based audit yields significantly fewer number of rogue aircraft compared to those before the pandemic.

States’ Highlights

2.10 The majority of rogue aircraft from this year’s audit are Indian aircraft. All of these aircraft used for domestic flights which their State CAA neglected to submit MAAR the F2 forms. These aircraft also belong to only one operator, who confirmed that all their aircraft have been approved. However, the DGCA of India has not submitted the corresponding F2 Forms to MAAR due to limitations in their work process during the COVID-19 pandemic.

2.11 MAAR also sent the list of aircraft that were detected from 2020 TSD (which are to be “treated as non-RVSM approved”) to the corresponding ATS Authorities so that they can take the appropriate action. The process will be followed for the rogue aircraft found from Bangkok FIR flight plan after 30 days of first notification.

APANPIRG List of Deficiencies

2.12 Since **India** failed to verify the RVSM approval status of their 12 aircraft listed above for over six months (since Dec 2020), the MAAR would like RASMAG to propose to APANPIRG to **include India** on the APANPIRG List of Deficiencies in the ATM/AIS/SAR fields for failure to verify RVSM approval status (under “Non-Provision of Safety Related Data by States”).

2.13 As **Brunei Darussalam, Myanmar and Pakistan** failed to submit the 2020 annual RVSM approval snapshot, the MAAR would also like RASMAG to propose to APANPIRG to inform these **3 States** of the non-compliance status in regard of failure to submit the annual RVSM approval snapshot this year, which may result in an inclusion in the APANPIRG List of Deficiencies in the ATM/AIS/SAR fields next year if the problem persists.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss any relevant matters as appropriate; and
- c) endorse the proposal outlined in 2.12 and 2.13.

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