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**Thirtieth Meeting of the Regional Airspace Safety Monitoring
Advisory Group (RASMAG/30)**

Bangkok, Thailand, 14 – 17 July 2025

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 results of MAAR's annual "W" verification of flight plans for aircraft operating in RVSM airspace across MAAR-designated States, based on data from the 2024 TSD and monthly Bangkok FIR flight plan records. The analysis identified **26** aircraft operating without valid RVSM approvals in RMA databases (commonly referred to as rogue aircraft), which is consistent with last year's audit. The paper also highlights the following points:

- Two aircraft were identified as repeat rogue aircraft, having appeared on the list for a second consecutive year. Their registration details have been shared with relevant ATS States for appropriate action.
- **India** accounts for the highest number of rogue aircraft identified. MAAR is actively coordinating with the DGCA India for RVSM status updates.
- All MAAR States submitted their 2024 annual RVSM approval snapshots, except **Bangladesh** and **India**.

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. These include aircraft registrations with (1) no RVSM approvals record or (2) expired approvals in RMAs' databases.

2. DISCUSSION

2.1 The main data source for this paper is the 2024 TSD. MAAR received TSD from all States except Afghanistan, which has not submitted TSD to MAAR since 2021. The annual TSD format has been revised to include Items 10 and 18 of the Flight Plan; therefore, the 2024 TSD data set now includes an indication of whether 'W' was filed or not.

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 May 2025) are also included in the final result in this paper.

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. **Bangladesh** and **India** were the only two States that did not submit their annual snapshots.

Table 1: Summary of RVSM Approval Data Submission from States

State of Operator	Submission
Afghanistan	F2, F3 and 2024 annual snapshot
Bangladesh	F2 and F3 only
Bhutan	F2, F3 and 2024 annual snapshot
Brunei Darussalam	F2, F3 and 2024 annual snapshot
Cambodia	F2, F3 and 2024 annual snapshot
China (Hong Kong)	F2, F3 and 2024 annual snapshot
China (Macau)	F2, F3 and 2024 annual snapshot
China (Taiwan)	F2, F3 and 2024 annual snapshot
India	F2 and F3 only
Lao PDR	F2, F3 and 2024 annual snapshot
Malaysia	F2, F3 and 2024 annual snapshot
Maldives	F2, F3 and 2024 annual snapshot
Mongolia	F2, F3 and 2024 annual snapshot
Myanmar	F2, F3 and 2024 annual snapshot
Nepal	F2, F3 and 2024 annual snapshot
Pakistan	F2, F3 and 2024 annual snapshot
Philippines	F2, F3 and 2024 annual snapshot
Singapore	F2, F3 and 2024 annual snapshot
Sri Lanka	F2, F3 and 2024 annual snapshot
Thailand	F2, F3 and 2024 annual snapshot
Viet Nam	F2, F3 and 2024 annual snapshot

2.5 **Table 2** provides a summary of the number of rogue aircraft by RMA and State compared with RASMAG/29.

Table 2: Number of Rogue Aircraft by State and RMA

RMA	State	No. of Registrations - RASMAG/30	No. from RASMAG/29
AAMA	Indonesia	2	0
	Australia	1	1
AAMA Total		3	1
ARMA	Tanzania	1	2
ARMA Total		1	2
China RMA	China	0	2
China RMA Total		0	2

RMA	State	No. of Registrations - RASMAG/30	No. from RASMAG/29
EURRMA	Malta	0	1
	Lithuania	0	1
	Turkey	0	2
Total		0	4
MIDRMA	Qatar	0	2
	Iran	0	1
	United Arab Emirates	0	2
	Sudan	1	0
Total		1	5
NAARMO	United States	5	7
NAARMO Total		5	7
MAAR	Bangladesh	0	2
	India	16	4
MAAR Total		16	6
Grand Total		26	27

2.6 **Table 3** lists the aircraft registrations operating in the RVSM airspace but no matching RVSM approval records based on 2024 TSD from 23 FIRs and May 2025 Bangkok FPL data.

Table 3: Aircraft Operating in the RVSM Airspace with Expired or no RVSM Approvals

RMA	State	Registration	Aircraft Type
AAMA	Australia	VHOYW	A21N
	Indonesia	PKLEY	A333
		PKTLG	A321
ARMA	Tanzania	5HTCR	B788
MIDRMA	Sudan	STPSA	F900
MAAR	India	VTBXE	B38M
		VTBXJ	B38M
		VTBXI	B38M
		VTBWK	B38M
		VTIKP	A320
		VTIKS	A320
		VTIWW	A320

RMA	State	Registration	Aircraft Type
		VTIWX	A320
		VTIWZ	A320
		VTQV	A20N
		VTNCB	A21N
		VTNCE	A21N
		VTNCI	A21N
		VTKSE	F900
		VTRKP	F2TH
		VTYBD	B38M
NAARMO	United States	N788DP	B737
		N799JR	GLEX
		N868AV	P180
		N30NB	E55P
		N71111	GLF5

Overall Observations

2.7 The aircraft registrations highlighted in red in Table 3 represent repeated rogue aircraft, having appeared in both the December 2023 and December 2024 TSDs. NAARMO confirmed that both aircraft are non-RVSM approved. Consequently, MAAR has forwarded their registration details to all ATS States for appropriate action.

2.8 The audit conducted this year identified a total of 26 aircraft, consistent with the previous year's results. More than half of the detected aircraft were registered in India.

2.9 MAAR's investigation revealed that the majority of initially identified rogue aircraft from the TSD audit had been de-registered or transferred. As such, the aircraft registrations that remain in Table 3 represent active aircraft operating without corresponding RVSM approvals in the RMA databases.

2.10 Consequently, based on last year's audit and discussions with other RMAs, MAAR has observed that delayed notification by States is a primary reason for unverified RVSM approvals. In many instances, MAAR was able to confirm approvals through direct follow-up with the appropriate authorities. Additionally, most of the remaining rogue aircraft were due to delays in submitting F2 Forms for newly approved aircraft.

States' Highlights

2.11 Given that the majority of rogue aircraft identified in **Table 3** are registered in India, MAAR promptly contacted the DGCA of India following the release of the audit results to request verification of the RVSM approval status for the identified aircraft. While the DGCA of India has been submitting F2 Forms to MAAR, the confirmations have been provided gradually and do not yet cover all aircraft on the list. As a result, several Indian aircraft remain classified as rogue aircraft. MAAR will continue coordinating with the DGCA of India to obtain complete verification and ensure the records are updated accordingly.

2.12 The annual RVSM approval snapshot provided by each State is essential for verifying RVSM approval status and identifying rogue aircraft. MAAR has observed that when States regularly update and submit their approval snapshots, they are able to detect any missing approval records and promptly notify MAAR. Similarly, this helps identify de-registered aircraft that should be removed from the database, ensuring they are not counted toward the remaining monitoring burden. MAAR strongly encourages all States to routinely submit their annual RVSM approval snapshots to help keep the MAAR RVSM database accurate and up to date.

APANPIRG ATM and Airspace Safety Deficiencies List

2.13 Since **India** has not verified the RVSM approval status of 16 aircraft listed in Table 3 for over six months (since December 2024), and has not submitted the 2024 annual RVSM approval snapshot, MAAR would like RASMAG to consider proposing **India** for inclusion in the APANPIRG ATM and Airspace Safety Deficiencies List, due to the continued failure to confirm RVSM approval status.

2.14 As **Bangladesh** failed to submit the 2024 annual RVSM approval snapshot, the MAAR would also like RASMAG to propose to APANPIRG to inform **Bangladesh** 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 and Airspace Safety 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 2.13 and 2.14.

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