



International Civil Aviation Organization

ICAO Twenty-Eighth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/28)

Bangkok, Thailand, 21 – 24 August 2023

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 W-verification of flight plans of aircraft operating in the RVSM airspace of MAAR's designated States based on 2022 TSD and monthly Bangkok FIR FPLs, which yielded **24** aircraft that operated in RVSM airspace without valid RVSM approvals in RMAs' database (a slight increase from **21** aircraft from last year's audit). The paper also highlights the following points:

- There is no long-term repeated rogue aircraft appears on the list this year.
- The majority of the detected rogue aircraft being of Indonesian aircraft, and the ongoing efforts of the AAMA to follow up on the RVSM approval status with the DGCA of Indonesia.
- All 21 States under MAAR's responsibility submitted their 2022 annual RVSM approval snapshots to MAAR this year.

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 main data source for this paper is the 2022 TSD. Afghanistan has yet to submit a TSD for this year. The annual TSD format has been revised to include Items 10 and 18 of the Flight Plan; therefore, the 2022 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 June 2023) 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. The 2022 RVSM approval annual snapshot was submitted by all states. There are no F2 and F3 submissions from Lao PDR because there are no new aircraft or de-registration aircraft updates from Lao PDR for the year 2022; nonetheless, the 2022 RVSM approval annual snapshot can validate the RVSM approval status data.

State of Operator	Submission
Afghanistan	F2, F3 and 2022 annual snapshot
Bangladesh	F2, F3 and 2022 annual snapshot
Bhutan	F2, F3 and 2022 annual snapshot
Brunei Darussalam	F2, F3 and 2022 annual snapshot
Cambodia	F2, F3 and 2022 annual snapshot
China (Hong Kong)	F2, F3 and 2022 annual snapshot
China (Macau)	F2, F3 and 2022 annual snapshot
China (Taiwan)	F2, F3 and 2022 annual snapshot
India	F2, F3 and 2022 annual snapshot
Lao PDR	2022 annual snapshot
Malaysia	F2, F3 and 2022 annual snapshot
Maldives	F2, F3 and 2022 annual snapshot
Mongolia	F2, F3 and 2022 annual snapshot
Myanmar	F2, F3 and 2022 annual snapshot
Nepal	F2, F3 and 2022 annual snapshot
Pakistan	F2, F3 and 2022 annual snapshot
Philippines	F2, F3 and 2022 annual snapshot
Singapore	F2, F3 and 2022 annual snapshot
Sri Lanka	F2, F3 and 2022 annual snapshot
Thailand	F2, F3 and 2022 annual snapshot
Viet Nam	F2, F3 and 2022 annual snapshot

Table 1: Summary of RVSM approval data submission from States

2.5 **Table 2** provides a summary of the number of rogue aircraft by RMA and State compared with RASMAG/27.

RMA	State	No. of Registrations - RASMAG/28	No. from RASMAG/27
AAMA	Indonesia	13	4
	Australia	0	1
AAMA Total		13	5
ARMA	Kenya	0	1
ARMA Total		0	1
CARSAMM A	Argentina	1	0
	Cayman Islands	0	2
CARSAMM A Total		1	2

RMA	State	No. of Registrations - RASMAG/28	No. from RASMAG/27
RMA Eurasia	Kyrgyzstan	0	1
	Kazakhstan	0	2
	Total	0	3
EURRMA	Ireland	0	1
	Turkey	2	0
Total	EURRMA	2	1
NAARMO	United States	5	3
	Mexico	1	0
Total	NAARMO Total	6	3
PARMO	Fiji	0	1
Total	PARMO	0	1
MAAR	Malaysia	1	1
	Mongolia	0	3
	Philippines	0	1
	India	1	0
Total	MAAR Total	2	5
Grand Total		24	21

Table 2: Number of Rogue Aircraft by State and RMA

2.6 **Table 3** lists the aircraft registrations operating in the RVSM airspace but no matching RVSM approval records based on 2022 TSD from 23 FIRs and June 2023 Bangkok FPL data.

RMA	State	Registration	Aircraft Type
AAMA	Indonesia	PKLEU	A339
		PKLEV	A339
		PKMYD	B733
		PKAZQ	A320
		PKBGZ	B738
		PKAZR	A320
		PKAZS	A320
		PKBGJ	B738
		PKBGK	B738
		PKBGO	B738
		PKAZU	A320
		PKBGR	B738
PKAZT	A320		

RMA	State	Registration	Aircraft Type
CARSAMMA	Argentina	LVKDI	F900
EURRMA	Turkey	TCLLS	B789
		TCLGM	A359
MAAR	Malaysia	9MWCZ	B738
	India	VTTVJ	A21N
NAARMO	Mexico	XAASP	CL60
	United States	N420HQ	HDJT
		N618GD	GLF6
		N708KW	B763
		N312FU	H25B
N616TS	SF50		

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

Overall Observations

2.7 The audit conducted this year identified a total of **24** aircraft, indicating a slight increase compared to the previous year's count of **21** aircraft. The majority of the detected aircraft were of **Indonesian** aircraft. MAAR has already engaged with the AAMA and has been informed that they are in the process of following up on the RVSM approval status with the DGCA of Indonesia.

2.8 MAAR presented the result of an annual audit of rogue aircraft to the RMACG/18 Meeting in April 2023. The audit yielded **59** aircraft filing 'W' to operate in the RVSM airspace but no matching RVSM approval records in RMAs' database. Due to the collaborative efforts of all RMAs and the response from States, the majority of these aircraft were later confirmed to have valid RVSM approvals following the RMACG Meeting. Therefore, as outlined in this paper, there are still **24** rogue aircraft detected based on the 2022 TSD and June 2023 FPLs. Additionally, it is worth noting that no long-term repeated rogue aircraft have appeared on the list this year.

States' Highlights

2.9 MAAR acknowledges and values the State's assistance in providing the annual RVSM approval snapshots. This year, MAAR received submissions of the 2022 annual RVSM approval snapshots from all States, which is greatly appreciated.

2.10 MAAR expresses gratitude to the States that have promptly updated their Point of Contact (POC) for RVSM Approval matters in cases the POCs have been replaced. Throughout 2022, numerous States have undergone changes in their POCs; however, MAAR has successfully maintained effective coordination by connecting with the appropriate POCs, ensuring the smooth continuation of RVSM Approval matters between MAAR and the respective States.

APANPIRG List of Deficiencies

2.11 Because **Brunei Darussalam** is now providing the MAAR with the 2020, 2021, and 2022 annual RVSM approval snapshots, the MAAR would like RASMAG to propose to APANPIRG that **Brunei Darussalam** be removed from the APANPIRG List of Deficiencies in the ATM and Airspace

Safety fields for failure to submit RVSM approval status validation data (under “Non-Provision of Safety Related Data by States”).

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 2.11.

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