



International Civil Aviation Organization

**The 18th Meeting of the Regional Airspace Safety Monitoring Advisory Group
(RASMAG/18)**

Bangkok, Thailand, 01 – 04 April 2013

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 an assessment of aircraft operating in the WPAC/SCS and/or BOB RVSM airspace without proof of RVSM approval for the period of December 2012 based on the RVSM approvals data received from State CAAs and other RMAs.

Strategic Objectives:

A: *Safety – Enhance global civil aviation safety*

Global Plan Initiatives:

GPI-2 Reduced vertical separation minima

1. INTRODUCTION

1.1 As part of the Regional Monitoring Agency (RMA) duties and responsibilities, MAAR conducts an assessment on aircraft compliance with State approval requirements in Asia airspace where the RVSM is applied.

1.2 The purpose of this paper is to provide an assessment of aircraft operating within the RVSM airspace with no RVSM approval records available.

2. DISCUSSION

2.1 The Traffic Sample Data (TSD) for the month of December 2012 was used in the assessment. **Table 1** contains a summary of TSD from States under MAAR's responsibility.

States	FIR Name	Status	Aircraft Registraion
Afghanistan	Kabul	Received	Available
Bangladesh	Dhaka	Received	Available
Cambodia	Phnom Penh	Received	Available
China	Sanya	Received	Available
	Hong Kong	Received	Available
India	Chennai	Received	Available
	Delhi	Received	Available
	Kolkata	Received	Available
	Mumbai	Received	Available
Lao PDR	Vientiane	Received	Available
Malaysia	Kuala Lumpur	Received	Available
	Kota Kinabalu	Received	Available
Maldives	Male	Received	Available
Mongolia	Ulaanbaatar	Received	Available
Myanmar	Yangon	Received	Available
Nepal	Katmandu	Received	Available
Pakistan	Karachi	Received	Available
	Lahore	Received	Available
Philippines	Manila	Received	Available
Singapore	Singapore	Received	Available
Sri Lanka	Colombo	Received	Available
Thailand	Bangkok	Received	Available
Vietnam	Hanoi	Received	Available
	Ho Chi Minh	Received	Available

Table 1: Summary of TSD Submission by States

2.2 States in Asia region are requested to provide an annual update of RVSM approvals to RMAs according to APANPIRG Conclusion 20/22.

2.3 **Table 2** contains a summary of RVSM Approval Data submission as an annual update for Period ending 2012.

States	Status
Afghanistan	Partial
Bangladesh	Not Received
Bhutan	Not Received
Brunei Darussalam	Received
Cambodia	Not Received
Hong Kong, China	Received
India	Not Received
Lao PDR	Not Received
Macau, China	Received
Malaysia	Not Received
Maldives	Not Received
Mongolia	Not Received
Myanmar	Received
Nepal	Not Received
Pakistan	Not Received
Philippines	Not Received
Singapore	Received
Sri Lanka	Received
Thailand	Not Received
Vietnam	Received

Table 2: Summary of RVSM Approval Data Submission

2.4 The RMA approvals database information used in the comparison is provided in **Table 3**.

RMA	Availability Period
AAMA	Up to February 2013
AFIRMA	Up to February 2013
CARSAMMA	Up to February 2013
China RMA	Up to February 2013
EurAsia	Up to February 2013
EURRMA	Up to February 2013
JASMA	Up to February 2013
MAAR	Up to February 2013
MIDRMA	As of February 2013
NAARMO	Up to February 2013
PARMO	Up to February 2013

Table 3: RVSM Approval Data Source

3. CONCLUSION

3.1 There was a total number of 124 aircraft registrations found operating within the RVSM airspace without proof of RVSM Approval. 14 of these aircraft registrations were previously detected as rogue aircraft at the December 2011 assessment.

3.2 **Table 4** provides a summary of the number of aircraft registrations found operating without proof of RVSM approval by RMA/State.

RMA	States	Number of aircraft without RVSM approvals	Number of aircraft previously detected in December 2011
AAMA	Australia	1	
	Indonesia	20	1
	Papua New Guinea	1	
AAMA Total		23	1
ARMA	Central African Republic	1	
ARMA Total		1	
CARSAMMA	Cayman Islands	2	
CARSAMMA Total		2	
China RMA	China	4	
China RMA Total		4	
Eurasia RMA	Armenia	1	
	Kazakhstan	4	3
	Kyrgyzstan	1	
	Russia	1	
Eurasia RMA Total		7	3
EURRMA	Bulgaria/Myanmar	1	
	Finland	1	
	Georgia	2	
	Germany	1	
	Ireland	1	
	Switzerland	1	
	United Kingdom	3	
EURRMA Total		10	
MAAR	Afghanistan	2	1
	Bhutan	4	2
	Cambodia	1	
	India	20	
	Laos	3	
	Malaysia	4	
	Maldives	1	
	Pakistan	3	
	Philippines	13	
	Thailand	6	1
Vietnam	1		
MAAR Total		58	4

RMA s	States	Number of aircraft without RVSM approvals	Number of aircraft previously detected in December 2011
MIDRMA	QATAR	1	
	UAE	3	2
	Yemen	2	2
MIDRMA Total		6	4
PARMO	Korea	5	2
	Palau	1	
	U.S.A.	5	
PARMO Total		11	2
Unknown Total		3	
Grand Total		<u>124</u>	<u>14</u>

Table 4: Number of aircraft operating without proof of RVSM approval by RMA/State

3.3 **Appendix A** provides registrations of civil aircraft operating in the RVSM airspace but no record of RVSM approval was found.

3.4 In addition to the above list of rogue aircraft, there were 46 of military aircraft operating within the airspace with no confirmation of RVSM approvals.

4. ACTION BY THE MEETING

4.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

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Appendix A: Registrations of aircraft operating in the RVSM airspace but no record of RVSM approval was found.

*Note: - Registration in **red** represents airframes previously detected in the December 2011 TSD.*

- Underlined registration represents airframes confirmed non-RVSM approved

RMA	State	Operator Name	Registration	ACType
AAMA	Australia	M D H Pty Ltd, Cloncurry Qld	VHMDH	PC12
	Indonesia	Cardig Air	PKBBY	B733
		Citilink Indonesia	PKGLF	A320
		Citilink Indonesia	PKGLH	A320
		Citilink Indonesia	PKGLK	A320
		Citilink Indonesia	PKGLM	A320
		Citilink Indonesia	PKGLN	A320
		Citilink Indonesia	PKGLO	A320
		Indonesia Airasia	PKAXY	A320
		Indonesia Airasia	PKAXZ	A320
		Lion Air	PKLJW	B738
		Lion Air	PKLKO	B739
		Mandala Airlines	PKRMS	A320
		Sky Aviation	PKECK	B733
		Sriwijaya Air	PKCKP	B734
		Sriwijaya Air	PKCLF	B734
		Sriwijaya Air	PKCLI	B734
		Sriwijaya Air	PKCLO	B734
		Sriwijaya Air	PKCLJ	B735
	Sriwijaya Air	PKCLS	B738	
Tri-Mg Intra Asia Airlines	PKYGG	B733		
Papua New Guinea	Air Niugini	P2PXC	B738	
ARMA	Central African Republic		TLIVAF	GLF3
CARSAMMA	Cayman Islands	-	VPCTH	G4
		-	VPCEK	GALX
China RMA	China	China Eastern Airlines	B6393	A320
		Shanghai Airlines	B5150	B738
		-	B8257	GLF4
		-	B8311	P180
Eurasia RMA	Armenia	Veteran Avia	EK76812	IL76
	Kazakhstan	Caspiy	UPF1001	F100
		Caspiy	UPF1002	F100
		Caspiy	UPF1003	F100
		Scat Air	UPB5702	B752
	Kyrgyzstan	Manas Airways	EX34001	A343
Russia	Kazan Aviation Production Association - Kapo Aviakompania	RA86945	IL62	
EURRMA	Bulgaria/Myanmar	Myanmar Airways International	LZBHH	A320
	Finland	Nordic Global Airlines	OHNGB	MD11
	Georgia	Aquiline International	4LACE	B743

RMA	State	Operator Name	Registration	ACType
		Kam Air	4LMRK	B742
	Germany	Condor Flugdienst	DABUM	B763
	Ireland	Gecas - Ge Commercial Aviation Services	OEIBM	A320
	Switzerland	Avcon Jet	<u>OEIZM</u>	GLF5
	United Kingdom	Dhl Air	GDHLJ	B763
		Dhl Air	GDHLK	B763
		Virgin Atlantic Airways	GVLUV	A333
MAAR	Afghanistan	Ariana Afghan Airlines	YAPIB	B734
		Ariana Afghan Airlines	YAPIC	B734
	Bhutan	Druk Air	A5RGF	A319
		Druk Air	A5RGG	A319
		Druk Air	A5RGH	A319
		Druk Air	A5RGI	A319
	Cambodia	Skywings Asia Airlines	XUZAC	A320
	India	Air India	VTPPY	A321
		Air India	VTAND	B788
		Air India	VTANH	B788
		Air India	VTANI	B788
		Air India	VTANK	B788
		Air One Aviation	VTAOK	E135
		Alliance Air	VTRJF	CRJ7
		Gmr Aviation	VTBRK	F2TH
		Go Air Pvt Ltd.	VTTLB	A320
		Government Of Jammu & Kashmir	VTJKK	B350
		Indigo Airlines	VTIFA	A320
		Indigo Airlines	VTIFB	A320
		Indigo Airlines	VTIFC	A320
		Indigo Airlines	VTIFD	A320
		Indigo Airlines	VTIFE	A320
		Indigo Airlines	VTIFF	A320
		Indigo Airlines	VTIFG	A320
		Indigo Airlines	VTIFJ	A320
		Spice Jet Ltd.	VTSGX	B738
		Spice Jet Ltd.	VTSGY	B738
	Laos	Lao Airlines	RDPL34223	A320
		Lao Airlines	RDPL34224	A320
		Lao Central Airlines	RDPL34189	B734
	Malaysia	Malaysia Airlines	9MLLR	B738
		Malaysia Airlines	9MMXH	B738
		Transmile	9MTGM	B722
-		9MTST	CL30	
Maldives	Maldivian	8QIAN	A320	
Pakistan	Air Blue	APEDE	A343	
	Air Blue	APEDF	A343	
	Vision Air	APBIV	B742	

RMA	State	Operator Name	Registration	ACType
	Philippines	Air Philippines	RPC8398	A320
		Air Philippines	RPC8399	A320
		Cebu Pacific Air	RPC3270	A320
		Cebu Pacific Air	RPC3271	A320
		Philippine Airlines Inc.	RPC8619	A320
		Philippine Airlines Inc.	RPC8620	A320
		Philippine Airlines Inc.	RPC8815	A320
		Philippine Airlines Inc.	RPC7774	B77W
		Philippine Airlines Inc.	RPC7775	B77W
		South East Asian Airlines	RPC5319	A320
		South East Asian Airlines	RPC6319	A320
		South East Asian Airlines	RPC6320	A320
	Zest Airways	RPC8997	A320	
	Thailand	Bangkok Airways	HSPPD	A320
		Orient Thai Airline	HSBRE	B734
		Orient Thai Airline	HSMDL	MD82
Thai Air Asia		HSBBB	A320	
-		HSSCK	B722	
-		HSTYS	B738	
Vietnam	Hang Khong Vietnam	VNA321	A321	
MIDRMA	Qatar	Qatar Airways	A7ABF	A306
	UAE	Etihad Airways	A6EIM	A320
		Etihad Airways	A6EIN	A320
		Flydubai	A6FDD	B738
	Yemen	Yemenia Yemen Airways	7OAF A	A320
		Yemenia Yemen Airways	7OAF B	A320
PARMO	Korea	Asiana Airlines	HL8267	A321
		Jeju Air	HL8263	B738
		T'way Air	HL8232	B738
		T'way Air	HL8237	B738
		T'way Air	HL8253	B738
	Palau	Palau Airways	OMAEX	B734
	USA	Cessna Aircraft Co.	N448RT	C680
		Polar Air Cargo	N852GT	B748
		Polar Air Cargo	N853GT	B748
		Wells Fargo Bank Northwest Na Trustee	N650PL	GLF5
		-	RTN2113	E135
Unknown	-	-	R80006	C560
	-	-	L3458	CL60
	-	-	GJE76	GLF4