



International Civil Aviation Organization

**The 17th Meeting of the Regional Airspace Safety Monitoring Advisory Group
(RASMAG/17)**

Bangkok, Thailand, 28-31 August 2012

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

ASSESSMENT OF NON-RVSM APPROVED AIRCRAFT IN ASIA AIRSPACE

(Presented by 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 2011 based on the updated RVSM approvals data received from State CAAs.

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 available RVSM approval records.

2. Discussion

- 2.1. The Traffic Sample Data (TSD) for the month of December 2011 was used in the assessment. **Table 1** contains a summary of TSD for BOB and WPAC/SCS airspace received by MAAR.

States	FIR Name	Status	Aircraft Registraion
Afghanistan	Kabul	Received	Available
Bangladesh	Dhaka	Received	Not Available
India	Chennai	Received	Available
	Delhi	Received	Available
	Kolkata	Received	Available
	Mumbai	Received	Available
Maldives	Male	Received	Available
Myanmar	Yangon	Received	Available
Nepal	Katmandu	Received	Not Available
Pakistan	Karachi	Received	Available
	Lahore	Received	Available
Sri Lanka	Colombo	Received	Available
Cambodia	Phnom Penh	Received	Available
China	Sanya	Received	Available
Hong Kong	Hong Kong	Received	Available
Lao PDR	Vientiane	Received	Not Available
Malaysia	Kuala Lumpur	Received	Available
	Kota Kinabalu	Received	Available
Philippines	Manila	Received	Not Available
Singapore	Singapore	Received	Available
Thailand	Bangkok	Received	Available
Vietnam	Hanoi	Received	Available
	Ho Chi Minh	Received	Available

Table 1: Summary of TSD Submission by WPAC/SCS 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 2011.

States	Status
Afghanistan	Received
Bangladesh	Received
Bhutan	Not Received
Cambodia	Not Received
Hong Kong (China)	Received
India	Not Received
Lao PDR	Not Received
Macau (China)	Received
Malaysia	Received
Maldives	Received
Mongolia	Received
Myanmar	Not Received
Nepal	Not Received
Pakistan	Received
Philippines	Received
Singapore	Received
Sri Lanka	Received
Taiwan (China)	Received
Thailand	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 August 2012
AFIRMA	Up to July 2012
CARSAMMA	Up to July 2012
China RMA	Up to July 2012
EurAsia	Up to August 2012
Eurocontrol	Up to July 2012
Japan RMA	Up to July 2012
MAAR	Up to August 2012
MIDRMA	As of July 2012
NAARMO	Up to July 2012
PARMO	Up to July 2012

Table 3: RVSM Approval Data Source

3. Assessment of Airframe Operating Without Proof of RVSM Approval

3.1. Table 4 provides a summary of the number of aircraft registrations found operating without proof of RVSM approval by State.

State	Number of registrations without proof of RVSM approvals
India	65
UAE	12
USA	11
Indonesia	7
Armenia	7
Brunei	7
Pakistan	7
Republic of Korea	6
Uzbekistan	6
Vietnam	6
Sri Lanka	5
Afghanistan	5
Myanmar	4
Russia	4
Philippines	4
Kazakhstan	4
Thailand	4
GB	3
Iran	2
Germany	2
Ireland	2
Yemen	2
Bhutan	2
Laos	2
Malaysia	2
Nepal	2
China	1
Ukraine	1
Ethiopia	1
Cote d'Ivoire	1
Bahrain	1
Switzerland	1
Hong Kong	1
Isle of Man	1
Cambodia	1
Jordan	1
Total	193

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

- 3.2. **Appendix A** provides registration of aircraft operating in the RVSM airspace but no record of RVSM approval was found. The list includes aircraft registered under States within the Asia/Pacific Region.
- 3.3. **Appendix B** provides registration of aircraft operating in the RVSM airspace but no record of RVSM approval was found. The list includes aircraft registered under States outside the Asia/Pacific Region.
- 3.4. It is important that States provide MAAR with (1) an individual update of RVSM Approval (F2/F3 Form), (2) an annual Update of RVSM Approvals and (2) traffic sample data that includes aircraft registration to allow an effective assessment.

4. Actions by the Meeting

- 4.1. The meeting is invited to note the content of this paper.

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Appendix A

**Summary of the assessment of aircraft operating in the WPAC/SCS and/or BOB RVSM
airspace without proof of RVSM approval Based on Traffic Samples from December 2011
(Aircraft registered under States within the Asia/Pacific Region)**

*Note: Airframe registrations in **red** indicate previously identified by MAAR in December 2010*

State	Operator Code	Operator Name	Aircraft Registration
Afghanistan	AFG	Ariana Afghan Airlines	YAFAY
Afghanistan	AFG	Ariana Afghan Airlines	YAPIB
Afghanistan	KMF	Kam Air	YAKAM
Afghanistan	KMF	Kam Air	YAKMF
Afghanistan	KMF	Kam Air	YAKMG

State	Operator Code	Operator Name	Aircraft Registration
Bhutan	DRK	Druk Air	A5RGF
Bhutan	DRK	Druk Air	A5RGG

State	Operator Code	Operator Name	Aircraft Registration
Cambodia	TSP	TonleSap Airlines	XUTSC

State	Operator Code	Operator Name	Aircraft Registration
Hong Kong	TBJ	TAG Aviation Asia	VQBKK

State	Operator Code	Operator Name	Aircraft Registration
India	AIC	Air India	VTEDC
India	AIC	Air India	VTEDD
India	AIC	Air India	VTEDE
India	AIC	Air India	VTEDF
India	AIC	Air India	VTPEI
India	AIC	Air India	VTPPX
India	AIC	Air India	VTSCR
India	AIC	Air India	VTSCS
India	AIC	Air India	VTSCT
India	AIC	Air India	VTSCU
India	AIC	Air India	VTSCV
India	AIC	Air India	VTSCW
India	AIC	Air India	VTSCX
India	BDA	Blue Dart	VTBDI
India	GOW	Go Air	VTWAI
India	GOW	Go Air	VTWAJ

State	Operator Code	Operator Name	Aircraft Registration
India	GOW	Go Air	VTWAK
India	GOW	Go Air	VTWAL
India	GOW	Go Air	VTWAM
India	GOW	Go Air	VTWAN
India	GOW	Go Air	VTWAO
India	JAI	Jet Airways	VTJBB
India	JAI	Jet Airways	VTJBC
India	JAI	Jet Airways	VTJBF
India	JAI	Jet Airways	VTJBG
India	JAI	Jet Airways	VTJBH
India	JAI	Jet Airways	VTJBJ
India	JAI	Jet Airways	VTJBK
India	JAI	Jet Airways	VTJBL
India	JAI	Jet Airways	VTJBM
India	JAI	Jet Airways	VTJBN
India	JAI	Jet Airways	VTJBP
India	JAI	Jet Airways	VTJBQ
India	JAI	Jet Airways	VTJBR
India	JAI	Jet Airways	VTJBS
India	JAI	Jet Airways	VTJBT
India	JAI	Jet Airways	VTJBU
India	JAI	Jet Airways	VTJBV
India	JAI	Jet Airways	VTJBW
India	JAI	Jet Airways	VTJBX
India	JAI	Jet Airways	VTJEL
India	JAI	Jet Airways	VTJEM
India	JAI	Jet Airways	VTJGS
India	JAI	Jet Airways	VTJGT
India	JAI	Jet Airways	VTJGU
India	JAI	Jet Airways	VTJGV
India	JAI	Jet Airways	VTJGW
India	JAI	Jet Airways	VTJGX
India	JAI	Jet Airways	VTJGZ
India	JAI	Jet Airways	VTJWM
India	JAI	Jet Airways	VTJWN
India	JAI	Jet Airways	VTJWP
India	JAI	Jet Airways	VTJWQ
India	JLL	JetKonnnect	VTJLA
India	JLL	JetKonnnect	VTJLB
India	JLL	JetKonnnect	VTJLE
India	JLL	JetKonnnect	VTJLF
India	JLL	JetKonnnect	VTJLG
India	KFR	Kingfisher	VTDNZ
India	KFR	Kingfisher	VTVJN
India	KFR	Kingfisher	VTVJP
India	SEJ	Spicejet	VTSGV
India	SPJ	Spicejet	VTSGW
India	VTJ	Reliance Transport & Travel	VTJSK

State	Operator Code	Operator Name	Aircraft Registration
India	VTT		VTTAX

State	Operator Code	Operator Name	Aircraft Registration
Laos	LAO	Lao Airlines	RDPL34188
Laos	LAO	Lao Airlines	RDPL34199

State	Operator Code	Operator Name	Aircraft Registration
Malaysia	CLB		9MCAL
Malaysia	MAS	Malaysia Air	9MMLC

State	Operator Code	Operator Name	Aircraft Registration
Myanmar	MMA	Myanmar Airways International Co. Ltd.	XYAGG
Myanmar	MMA	Myanmar Airways International Co. Ltd.	XYAGI
Myanmar	MMA	Myanmar Airways International Co. Ltd.	XYAGL
Myanmar	MMA	Myanmar Airways International Co. Ltd.	XYAGM

State	Operator Code	Operator Name	Aircraft Registration
Nepal	RNA	Royal Nepal Airlines Corp.	9NACA
Nepal	RNA	Royal Nepal Airlines Corp.	9NACB

State	Operator Code	Operator Name	Aircraft Registration
Pakistan	BTP	Bahria Town Aviation	APRBA
Pakistan	PIA	Pakistan International Airlines	APBHK
Pakistan	PIA	Pakistan International Airlines	SXTIE
Pakistan	SAI	Shaheen Air International	APBIK
Pakistan	SAI	Shaheen Air International	APBIQ
Pakistan	SAI	Shaheen Air International	APBIR
Pakistan	VIS	Vision Air Pakistan	EK73755

State	Operator Code	Operator Name	Aircraft Registration
Philippines	CEB	Cebu Pacific	RPC3264
Philippines	CEB	Cebu Pacific	RPC3265
Philippines	CEB	Cebu Pacific	RPC3266
Philippines	CEB	Cebu Pacific	RPC3267

State	Operator Code	Operator Name	Aircraft Registration
Sri Lanka	ALK	Air Lanka	4RABF
Sri Lanka	ALK	Air Lanka	4RABH
Sri Lanka	ALK	Air Lanka	4RABT
Sri Lanka	ALK	Air Lanka	4RAGB
Sri Lanka	EXV	Expo Aviation	UPAN217

State	Operator Code	Operator Name	Aircraft Registration
Thailand	OEA	Orient Thai	HSBKA
Thailand	OEA	Orient Thai	HSBKB
Thailand	OEA	Orient Thai	HSMDL
Thailand	OEA	Orient Thai	HSSTA

State	Operator Code	Operator Name	Aircraft Registration
Vietnam	HVN	Vietnam Airlines	VNA386
Vietnam	HVN	Vietnam Airlines	VNA448
Vietnam	MKG	Air Mekong	VNA805
Vietnam	PIC	Jetstar Pacific Airlines	VNA196
Vietnam	VJC	VietJetAir	VNA320
Vietnam	VJC	VietJetAir	VNA661

Appendix B

Summary of the assessment of aircraft operating in the WPAC/SCS and/or BOB RVSM airspace without proof of RVSM approval Based on Traffic Samples from December 2011 (Aircraft registered under States outside the Asia/Pacific Region)

*Note: Airframe registrations in **red** indicate previously identified by MAAR in December 2010*

State	Operator Code	Operator Name	Aircraft Registration
Armenia	KIR	Skiva Air	EK76599
Armenia	KIR	Skiva Air	EK76921
Armenia	PHY	Phoenix Avia	EK76464
Armenia	RLB	Reliable Unique Services Aviation	EK76111
Armenia	VTF	Veteran Avia	EK76381
Armenia	VTF	Veteran Avia	EK76783
Armenia	VTF	Veteran Avia	EK76787

State	Operator Code	Operator Name	Aircraft Registration
Bahrain	BAH	Bahrain Royal Flight	R722

State	Operator Code	Operator Name	Aircraft Registration
Brunei	RBA	Royal Brunei Airlines	V8BLD
Brunei	RBA	Royal Brunei Airlines	V8BLE
Brunei	RBA	Royal Brunei Airlines	V8BLF
Brunei	RBA	Royal Brunei Airlines	V8RBP
Brunei	RBA	Royal Brunei Airlines	V8RBR
Brunei	RBA	Royal Brunei Airlines	V8RBS
Brunei	RBA	Royal Brunei Airlines	V8RBT

State	Operator Code	Operator Name	Aircraft Registration
China	ICU		B3925

State	Operator Code	Operator Name	Aircraft Registration
Cote d'Ivoire	IVN		TUTAB

State	Operator Code	Operator Name	Aircraft Registration
Ethiopia	ETH	Ethiopian Airlines	ETAPF

State	Operator Code	Operator Name	Aircraft Registration
GB	ADL	Aero Dynamics	ADLJ60
GB	ADL	Aero Dynamics	SXBTM
GB	NOS	Neos Air	EIDMJ

State	Operator Code	Operator Name	Aircraft Registration
Germany	BER	Air Berlin	DABFY
Germany	DAA	Executive Jet	DAANN

State	Operator Code	Operator Name	Aircraft Registration
Indonesia	GIA	Citilink Garuda Indonesia	PKGCC
Indonesia	GIA	Citilink Garuda Indonesia	PKGGI
Indonesia	LNI	Lion Air	PKLHV
Indonesia	LNI	Lion Air	PKLJH
Indonesia	LNI	Lion Air	PKLJI
Indonesia	IGA		PKBKS
Indonesia	IGA		PKCKP

State	Operator Code	Operator Name	Aircraft Registration
Iran	IRM	Mahan Airlines	EPMNV
Iran	IRM	Mahan Airlines	FOJHI

State	Operator Code	Operator Name	Aircraft Registration
Ireland	OEI	Celestial Aviation	OEIAH
Ireland	OEI	Celestial Aviation	OEIAR

State	Operator Code	Operator Name	Aircraft Registration
Isle of Man	MRA	Burbank Air Services	MRACE

State	Operator Code	Operator Name	Aircraft Registration
Jordan	TWR	Transworld Airfreighters	JYTWC

State	Operator Code	Operator Name	Aircraft Registration
Kazakhstan	TLG	Caspiy	UPF1001

State	Operator Code	Operator Name	Aircraft Registration
Kazakhstan	TLG	Caspiy	UPF1002
Kazakhstan	VSV	SCAT Air	UPB3710
Kazakhstan	VSV	SCAT Air	UPB5702

State	Operator Code	Operator Name	Aircraft Registration
Rep. of Korea	KAL	Korean Air	HL7613
Rep. of Korea	KAL	Korean Air	HL7614
Rep. of Korea	KAL	Korean Air	HL8225
Rep. of Korea	KAL	Korean Air	HL8240
Rep. of Korea	TWB	T'Way Air	HL8232
Rep. of Korea	TWB	T'Way Air	HL8237

State	Operator Code	Operator Name	Aircraft Registration
Russia	AZS	Aviacon Zitotrans	RA76502
Russia	TSO	Transaero Airlines	EIUNF
Russia	TSO	Transaero Airlines	EIUNU
Russia	TSO	Transaero Airlines	VQBHW

State	Operator Code	Operator Name	Aircraft Registration
Switzerland	SWR	Swiss	HBIQA

State	Operator Code	Operator Name	Aircraft Registration
UAE	ABY	Air Arabia	A6ANG
UAE	EJO	Executive Middle East	A6JET
UAE	ETD	Etihad	A6DDA
UAE	ETD	Etihad	A6EIM
UAE	ETD	Etihad	A6EIN
UAE	ETD	Etihad	A6EIO
UAE	UAE	Emirates	A6EDS
UAE	UAE	Emirates	A6EDT
UAE	UAE	Emirates	A6ELM
UAE	UAE	Emirates	A6EMY
UAE	UAE	Emirates	N778SA
UAE	UAE	Emirates	VTECY

State	Operator Code	Operator Name	Aircraft Registration
Ukraine	AEW	Aerosvit	URAAH

State	Operator Code	Operator Name	Aircraft Registration
USA	BOE	Boeing	N787BX
USA	BOE	Boeing	N787ZA
USA	CKS	Kalitta Air	N798BA
USA	FDX	Federal Express	N810FD
USA	N10	Bank of Utah	N104HK
USA	N26	Bank of Utah	N264GA
USA	N31	Bank of America Leasing & Capital	N316MJ
USA	N78	Wells Fargo Bank Northwest	N787LX
USA	N78	Wells Fargo Bank Northwest	N787PR
USA	N78	Wells Fargo Bank Northwest	N788TP
USA	N88	Alysia Wolfskeil PA Trustee	N8892D

State	Operator Code	Operator Name	Aircraft Registration
Uzbekistan	UZB	Uzbekistan Airways	UK32014
Uzbekistan	UZB	Uzbekistan Airways	UK32015
Uzbekistan	UZB	Uzbekistan Airways	UK32016
Uzbekistan	UZB	Uzbekistan Airways	UK32017
Uzbekistan	UZB	Uzbekistan Airways	UK32018
Uzbekistan	UZB	Uzbekistan Airways	UK7002

State	Operator Code	Operator Name	Aircraft Registration
Yemen	IYE	Yemen Airways	7OAFA
Yemen	IYE	Yemen Airways	7OAFB