



International Civil Aviation Organization

ICAO

**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

CHINA RMA LTHM BURDEN ESTIMATE UPDATE

(Presented by China RMA)

SUMMARY

This paper presents the monitoring burden for the aircraft registered and operated under China RMA to meet the long-term height monitoring requirement. The data were based on the RVSM approval database by the end of May 2025.

1. INTRODUCTION

1.1 The Long-Term Height Monitoring Impact Statement developed by RASMAG was endorsed by APANPIRG/20 in September 2009. In RMACG/20 meeting China RMA provided the burden list to the meeting, and this paper is the update for the data.

2. DISCUSSION

2.1 In 2008, China RMA began its first monitoring task with two sets of EGMUs. After that, the organization has been fulfilling its duty with four sets of EGMU/E2GMUs. The ADS-B Height Monitoring System (AHMS) has also provided support for aircraft height keeping performance monitoring (HKPM) since 2014. With the use of ADS-B ground-based monitoring system, most aircraft of Chinese operators have seen compliant records, significantly reducing the on-board monitoring burden. Additionally, an increasing number of foreign aircraft could also receive valid monitoring records from the ADS-B monitoring system, helping to support these fleets in meeting long-term height monitoring requirements.

2.2 Based on the China RMA RVSM approval database by the end of May 2025, the total number of RVSM approved aircraft was 4,642, with a resultant monitoring burden of 549 and a total of 46 aircraft remaining to be monitored, according to minimum monitoring requirements (MMR).

2.3 For China, there are 4,638 approved aircraft, with a resultant monitoring burden of 545 and a total of 42 aircraft remaining to be monitored.

2.4 For the Democratic People's Republic of Korea (DPRK), there is 1 operator with 4 aircraft that require monitoring. In the last 4 years, Due to the COVID-19 epidemic, the flight duration of air Koryo is relatively short, and is currently monitored against the MMR of 1,000 flight hours requirements. China RMA is coordinating with DPRK for technical training and aircraft monitoring. It is expected to be carried out at the end of 2025.

2.5 Figure 1 describes the monitoring burden for China RMA from 2019 to 2025, in which data are extracted from the papers for RASMAG meeting. The number of total approved airframes and resultant monitoring burden is increasing from 2019 to 2024 and then decreased from 2024 to 2025, while the remaining burden is reduced from 2019 to 2021, increased from 2021 to 2023 and then decreased from 2023 to 2025.

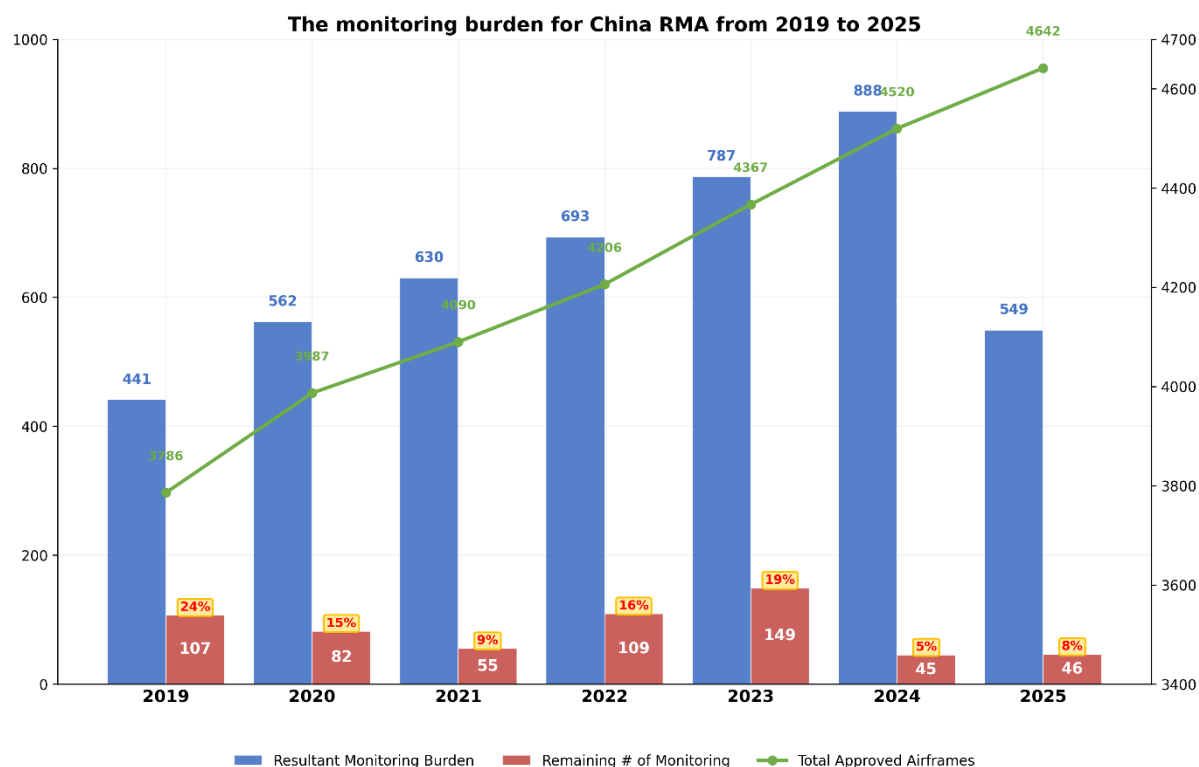


Figure 1: The monitoring burden for China RMA from 2019 to 2025

2.6 **Attachment A** provides details of the monitoring burden based on the MMR of China RMA.

3. ACTION BY THE MEETING:

- 3.1 The meeting is invited to:
- a) note the information contained in this paper; and
 - b) discuss any relevant matters as appropriate.

**Appendix A: Estimated RVSM Monitoring Burden for Asia/Pacific Region as a result of Long
Term Height Monitoring Requirements of Annex 6**

China RMA Monitoring Burden (compiled May 2025)

OPERATOR	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (# Airframes)	Remaining # of Monitoring
ADJ	CL600	1	1	1	1
	GLF5	1	1	1	0
BDJ	A320	1	2	2	1
	B737NX	1	1	1	0
	CL605	1	1	1	1
	FA7X	1	3	2	0
	GLF4	1	4	2	0
	GLF5	1	6	2	0
	GLF6	2	7	5	0
BJN	A320	1	1	1	0
	B737NX	1	4	2	0
	FA7X	1	1	1	0
	GLF5	1	1	1	0
	GLF6	2	1	1	0
BNH	GLF5	1	1	1	0
CAO	A330	1	5	2	0
	B744-10	1	3	2	0
	B752	1	2	2	1
	B772	1	12	2	0
CBG	A20N	1	6	2	0
	A320	1	11	2	0
	E170-190	1	11	2	0
CBJ	A20N	1	10	2	0
	A320	1	60	2	0
	A330	1	12	2	0
CBW	CL600	1	2	2	0
	GLF5	1	1	1	0
CCA	A20N	1	79	2	0
	A320	1	134	2	0
	A330	1	48	2	0
	A350	1	30	2	0
	AJ27	2	34	21	0
	B38M	1	24	2	0
	B737NX	1	108	2	0
	B744-10	1	2	2	0
	B744-LCF	2	1	1	0

OPERATOR	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (# Airframes)	Remaining # of Monitoring
	B748	1	7	2	0
	B773	1	28	2	0
	B787	1	14	2	0
	C919	2	3	2	0
CCD	B737NX	1	13	2	0
CCO	B752	1	1	1	1
CDC	A20N	1	43	2	0
	A320	1	30	2	0
CDG	B38M	1	12	2	0
	B737NX	1	130	2	0
CES	A20N	1	126	2	0
	A320	1	269	2	0
	A330	1	56	2	0
	A350	1	20	2	0
	AJ27	2	26	16	0
	B38M	1	1	1	0
	B737NX	1	69	2	0
	B773	1	20	2	0
	B787	1	1	1	0
	C919	2	10	6	0
CES-YN	B38M	1	3	2	0
	B737C	1	2	2	0
	B737NX	1	67	2	0
	B787	1	3	2	0
CFI	C56X	1	16	2	0
	C680	1	3	2	0
	GLF4	1	1	1	0
CFZ	C560	1	1	1	1
CGH	A320	1	10	2	0
CGN	B737NX	1	13	2	0
CGZ	A20N	1	11	2	0
	E170-190	1	9	2	0
CHB	A20N	1	9	2	0
	A320	1	36	2	0
CHH	A20N	1	1	1	0
	A330	1	33	2	0
	A350	1	2	2	0
	B38M	1	17	2	0
	B737NX	1	135	2	0
	B787	1	38	2	0
CHJ	A318	1	2	2	0

OPERATOR	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (# Airframes)	Remaining # of Monitoring
	GLF4	1	1	1	0
	GLF5	1	2	2	0
CJX	AJ27	2	5	3	0
	B737NX	1	13	2	0
CKK	B744-10	1	2	2	0
	B772	1	15	2	0
CNM	B737NX	1	9	2	0
CNW	B752	1	4	2	0
CQH	A20N	1	49	2	0
	A320	1	78	2	0
CQN	A20N	1	12	2	0
	A320	1	18	2	0
CSC	A20N	1	60	2	0
	A320	1	125	2	0
	A330	1	17	2	0
	A350	1	8	2	0
CSG	B737CL	1	1	1	0
	B772	1	10	2	0
CSH	B38M	1	16	2	0
	B737NX	1	64	2	0
	B787	1	9	2	0
CSN	A320	1	339	2	0
	A330	1	27	2	0
	A350	1	20	2	0
	AJ27	2	34	21	0
	B38M	1	27	2	0
	B737NX	1	177	2	0
	B772	1	8	2	0
	B773	1	15	2	0
	B787	1	29	2	0
	C919	2	5	3	0
CSS	B737CL	1	17	2	0
	B737NX	1	2	2	1
	B744-10	1	2	2	0
	B752	1	43	2	0
	B767	1	23	2	0
CSZ	A20N	1	32	2	0
	A320	1	82	2	0
	A330	1	6	2	0
	B38M	1	13	2	0
	B737NX	1	73	2	0

OPERATOR	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (# Airframes)	Remaining # of Monitoring
CTJ	B737NX	1	7	2	0
CUA	B737NX	1	63	2	0
CUH	B737NX	1	17	2	0
CXA	A20N	1	17	2	0
	B38M	1	19	2	0
	B737NX	1	124	2	0
	B787	1	12	2	0
CYN	E55P	1	2	2	2
CYZ	B737CL	1	16	2	0
	B737NX	1	18	2	0
	B752	1	6	2	0
	B772	1	2	2	0
	B787	1	1	1	0
DER	A320	1	1	1	0
	FA7X	1	3	2	0
	G280	2	1	1	1
	GALX	1	1	1	1
	GLF4	1	2	2	1
	GLF5	1	5	2	0
	GLF6	2	5	3	0
DJH	G280	2	1	1	0
DKH	A20N	1	35	2	0
	A320	1	64	2	0
	B787	1	8	2	0
DLJ	CL600	1	1	1	1
EPA	B38M	1	2	2	0
	B737NX	1	19	2	0
EPB	CL600	1	2	2	0
FJT	E135-145	1	1	1	0
FZA	B38M	1	2	2	0
	B737NX	1	14	2	0
GCR	A20N	1	15	2	0
	A320	1	30	2	0
	A330	1	4	2	0
	E170-190	1	56	2	0
GDC	B737NX	1	3	2	0
HBH	B737NX	1	27	2	0
	E170-190	1	1	1	1
HFJ	CL605	1	1	1	1
	G280	2	1	1	1
	GL5T	1	1	1	1

OPERATOR	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (# Airframes)	Remaining # of Monitoring
HHG	GLF5	1	1	1	0
HLF	B737CL	1	4	2	0
	B737NX	1	5	2	0
	B772	1	5	2	0
HNJ	GLF4	1	1	1	0
HXA	A20N	1	16	2	0
	A320	1	14	2	0
	AJ27	2	11	7	0
	CRJ9	1	36	2	0
HYJ	F2TH	2	1	1	0
	GLF5	1	1	1	1
HYN	GLF4	1	2	2	2
HYT	AJ27	2	1	1	0
	B752	1	10	2	0
	B767	1	2	2	0
ICU	G280	2	1	1	0
	LJ60	1	1	1	1
IGA-CG	C56X	1	1	1	0
IGA-GW	GLF4	1	1	1	0
JBE	CL605	1	1	1	0
	E135-145	1	3	2	0
	FA7X	1	3	2	0
	G280	2	1	1	0
	GALX	1	1	1	0
	GLF4	1	1	1	0
	GLF5	1	2	2	0
	GLF6	2	4	3	0
JDL	B737NX	1	10	2	0
JOY	B737NX	1	4	2	0
JSU	CARJ	1	3	2	0
JXX	CL600	1	2	2	0
JYH	B38M	1	5	2	0
	B737NX	1	22	2	0
KNA	B38M	1	2	2	0
	B737NX	1	31	2	0
LHA	B737NX	1	6	2	0
	B744-10	1	1	1	0
	B74S	1	1	1	0
LKE	A20N	1	6	2	0
	A320	1	6	2	0
	A330	1	4	2	0

OPERATOR	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (# Airframes)	Remaining # of Monitoring
	B38M	1	4	2	0
	B737NX	1	29	2	0
LLJ	GALX	1	2	2	2
MJC	GLF4	1	1	1	0
	GLF5	1	1	1	0
	GLF6	2	1	1	0
MZT	CARJ	1	4	2	0
	CL604	1	2	2	0
	G280	2	1	1	0
	GL5T	1	1	1	0
	GL7T	2	1	1	0
	GLEX	1	6	2	0
	GLF6	2	4	3	0
NLJ	GLF4	1	1	1	0
NMG	AJ27	2	7	5	0
NSJ	GLF4	1	2	2	1
	GLF5	1	2	2	0
	HDJT	2	2	2	0
OKA	B737NX	1	21	2	0
OTC	A20N	1	7	2	0
	A320	1	9	2	0
PIX	GLF5	1	2	2	0
QDA	A20N	1	22	2	0
	A320	1	16	2	0
RLH	B737NX	1	25	2	0
SAJ	C56X	1	2	2	1
SJD	GLF6	2	3	2	0
SNG	A320	1	9	2	0
STJ	C680	1	2	2	2
SZA	CARJ	1	2	2	1
	GALX	1	1	1	0
	GLF4	1	1	1	1
	H25B-800	1	1	1	1
TBA	A20N	1	6	2	0
	A320	1	36	2	0
	A330	1	5	2	0
TCI	F900	1	1	1	1
	FA7X	1	1	1	0
	GLEX	1	1	1	1
	GLF4	1	5	2	1
	GLF6	2	1	1	1

OPERATOR	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (# Airframes)	Remaining # of Monitoring
	LJ60	1	1	1	0
TXJ	GLF4	1	1	1	0
	GLF6	2	2	2	0
UEA	A20N	1	13	2	0
	A320	1	38	2	0
	AJ27	2	30	18	0
UNA	A318	1	1	1	1
	CARJ	1	1	1	0
	FA7X	1	7	2	0
	GL5T	1	1	1	0
	GLEX	1	1	1	0
	GLF4	1	2	2	1
	GLF5	1	3	2	0
	GLF6	2	5	3	0
XAI	CARJ	1	3	2	2
YZR	B737CL	1	7	2	2
	B737NX	1	10	2	0
	B744-10	1	3	2	0
	B744-5	1	1	1	0
	B787	1	2	2	2
Total China			4638	545	42

Table 1: The monitoring burden for China in 2025

State	Operator	Operator Name	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (# Airframes)	Remaining # of Monitoring
DPRK	KOR	Air Koryo	A148	2	2	2	2
			T204	2	2	2	2
Total DPRK					4	4	4

Table 2: The monitoring burden for DPRK in 2025

China RMA Grand Total (China + DPRK)	Total Approved Airframes	Resultant Monitoring Burden (# Airframes)	Remaining # of Monitoring
	4642	549	46

Table 3: The monitoring burden for China RMA in 2025