



ICAO

International Civil Aviation Organization

Sixteenth Meeting of the ICAO Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/16)

Video Teleconference, 07 – 11 June 2021

Agenda Item 4: AIS-AIM Updates

NOTAM PROLIFERATION ANALYSIS

(Presented by IFAIMA, in collaboration with the Secretariat)

SUMMARY

This paper presents information about, and a regional analysis on, NOTAM proliferation.

1. INTRODUCTION

1.1 AAITF/13 in 2018 discussed the continuing existence of NOTAM containing information of permanent validity that had not been transferred to AIP or AIP Supplement (AIP SUP) in a timely manner and developed the following Conclusion, subsequently agreed by ATM/SG/6:

Conclusion ATM/SG/6-14: Management of NOTAMs

That, States are urged to take immediate action to reduce the large numbers of permanent, long duration NOTAMs by:

- 1. conducting a full review of all NOTAMs issued by the State;*
- 2. expediting the transfer of valid permanent NOTAM information into AIP;*
- 3. expediting the transfer of valid temporary NOTAM information of long duration into AIP SUP; and*
- 4. cancelling the NOTAMs accordingly.*

1.2 AAITF/13 had agreed to the following Task:

<i>Task number</i>	13/4
<i>Action Item:</i>	Periodic sampling of NOTAM PIB to examine the proliferation of PERM and long-term temporary NOTAMs
<i>Time Frame:</i>	Ongoing
<i>Responsible party:</i>	Viet Nam and USA and Secretariat.

1.3 ICAO Headquarters initiated the Global Campaign on NOTAM Improvement and held the first webinar in April 2021. The first phase of the campaign is focused on eliminating old NOTAMs. ICAO has developed a specific tool, the NOTAMeter, which analyzes the age of NOTAM issued by member States. The NOTAMeter distinguishes between **Current** (*less than 3 months*), **Old** (*more than 3 months but less than 1 year*), and **Very Old** NOTAM (*more than 1 year*).

2. DISCUSSION

Regional NOTAM Analysis

2.1 ICAO APAC Regional Office has been conducting a NOTAM Analysis for several years using different methodology and sources such as NOTAM checklists, lists of valid NOTAM and the ICAO Integrated Safety Trend Analysis and Reporting System (iSTARS). APAC Regional Office spent a considerable amount of time and effort in conducting these large analyses before the development of new tool “NOTAMeter”.

2.2 The Regional NOTAM Analysis – 2021 is conducted by ICAO APAC Regional Office and International Federation of Aeronautical Information Management Associations (IFAIMA) using both NOTAMeter and the Regional methodology.

2.3 **Figure 1** and **Figure 2** illustrate APAC NOTAM statistics since June 2020. As of 1st May 2021, a total 6494 NOTAMs were active in the APAC Region. 543 (8.4%) of these current NOTAMs were **old** and 675 (10.4%) were **very old** NOTAMs.

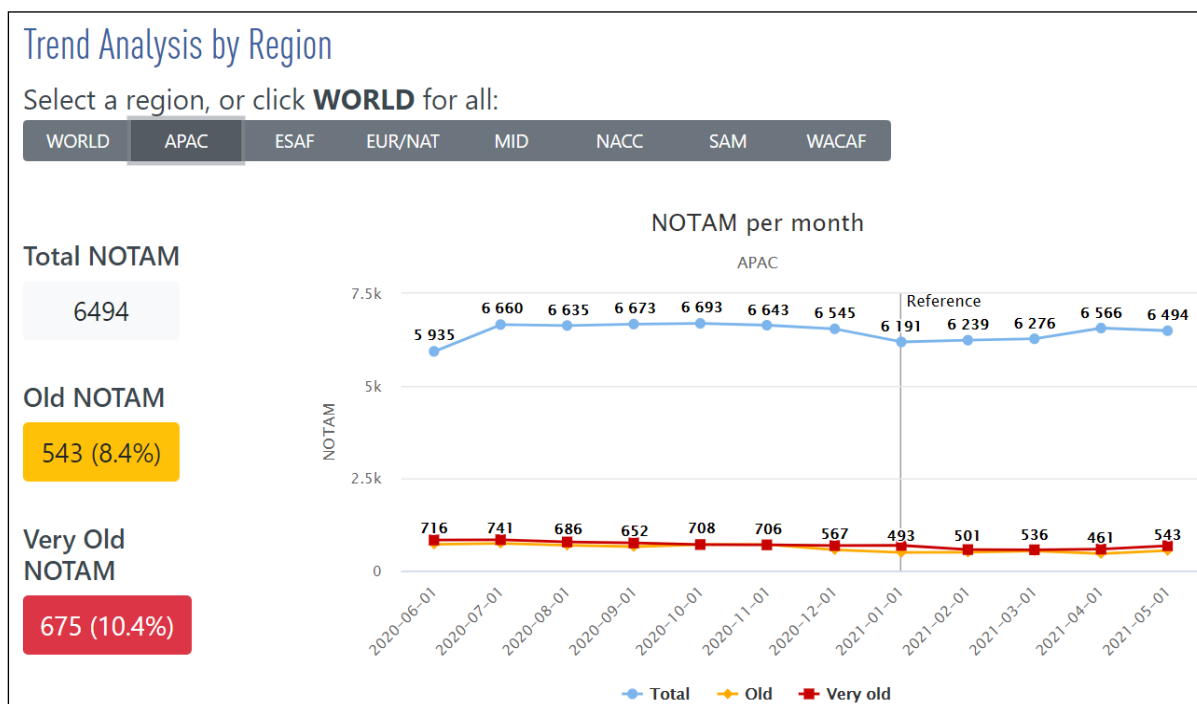


Figure 1: APAC NOTAM Statistics (Total, old and very old)

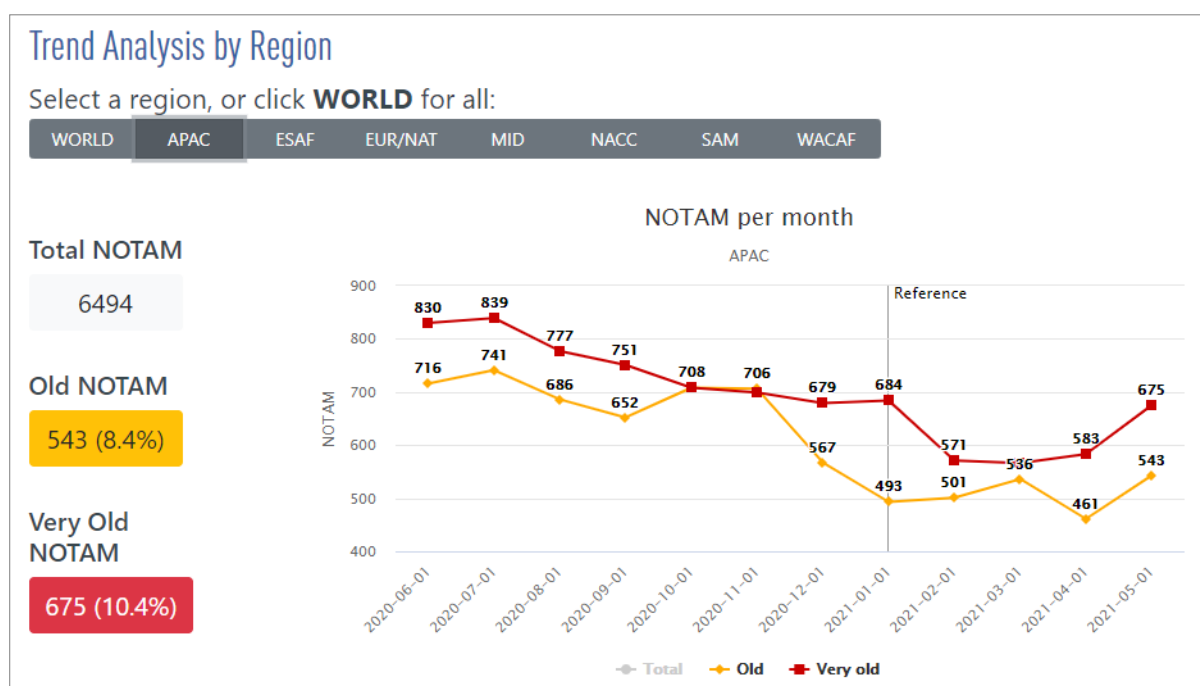


Figure 2: APAC NOTAM Statistics (old and very old)

2.4 As shown in the **Figure 2**, APAC Region had a good downtrend for both old and very old NOTAMs. However, the downtrend for old NOTAM reversed in April, and the very old NOTAM trend reversed in March 2021. As of 1st May, the numbers of very old and old NOTAM have increased by 139 (26%) and 82 (18%) respectively, from their lowest point.

2.5 **Table 1** shows NOTAM statistics of Asia/Pacific Administrations, generated by both NOTAMeter and Regional Analysis.

Administrations	NOTAMeter (as of 1 st May)					Regional Analysis (as of 25 th May)					
	Total	O	O %	VO	VO %	Total	NO	O	VO	O&VO %	EST Pass
Afghanistan	97	6	6.2	0	0	95	94	1	0	1.1	1
Australia	523	50	9.6	3	0.6	530	460	68	2	13.2	3
Bangladesh	33	3	9.1	1	3	32	31	0	1	3.1	1
Bhutan	0	0	0	0	0	0	0	0	0	0.0	0
Brunei Darussalam	0	0	0	0	0	0	0	0	0	0.0	0
Cambodia	6	0	0	0	0	7	7	0	0	0.0	1
China	1064	163	15.3	28	2.6	1127	945	153	29	16.1	2
Hong Kong, China						26	24	0	2	7.7	1
Macao, China						14	11	0	3	21.4	0
Cook Islands	5	0	0	0	0	0	0	0	0	0.0	0
DPR Korea	10	0	0	10	0	10	0	0	10	100.0	8
Fiji	57	3	5.3	1	1.8	53	47	5	1	11.3	1
India	1088	107	9.8	417	38.3	1127	655	175	297	41.9	132
Indonesia	199	6	3	91	45.7	196	104	1	91	46.9	36
Japan	1113	25	2.2	2	0.2	1113	1080	31	2	3.0	1
Kiribati	2	1	50	0	0	2	1	1	0	50.0	0
Lao PDR	41	34	82.9	0	0	41	7	13	21	82.9	0
Malaysia	236	1	0.4	1	0.4	296	293	2	1	1.0	0
Maldives	30	14	46.7	2	6.7	28	12	13	3	57.1	8
Marshall Islands	30	0	0	4	13.3	34	30	0	4	11.8	0

Administrations	NOTAMeter (as of 1 st May)					Regional Analysis (as of 25 th May)					
	Total	O	O %	VO	VO %	Total	NO	O	VO	O&VO %	EST Pass
Micronesia	19	3	15.8	4	21.1	18	14	0	4	22.2	0
Mongolia	8	0	0	0	0	11	11	0	0	0.0	0
Myanmar	8	5	62.5	0	0	11	6	5	0	45.5	6
Nauru	25	3	12	21	84	25	4	3	18	84.0	17
Nepal	1	0	0	1	100	1	0	0	1	100.0	0
New Zealand	105	4	3.8	1	1	107	101	6	0	5.6	0
Pakistan	89	17	19.1	0	0	60	55	5	0	8.3	0
Palau	0	0	0	0	0	0	0	0	0	0.0	0
Papua New Guinea	124	28	22.6	9	7.3	132	101	28	3	23.5	5
Philippines	461	60	13	60	13	440	307	75	58	30.2	71
Republic of Korea	461	0	0	0	0	596	595	1	0	0.2	0
Samoa	11	0	0	7	63.6	10	3	0	7	70.0	0
Singapore	394	0	0	0	0	447	447	0	0	0.0	0
Solomon Islands	19	0	0	2	10.5	21	18	1	2	14.3	0
Sri Lanka	23	1	4.3	2	8.7	28	25	1	2	10.7	0
Thailand	104	3	2.9	7	6.7	108	98	4	6	9.3	1
Timor Leste	7	2	28.6	0	0	7	3	4	0	57.1	0
Tonga	4	0	0	0	0	4	4	0	0	0.0	0
Tuvalu	3	0	0	0	0	0	0	0	0	0.0	0
Vanuatu	18	0	0	0	0	20	20	0	0	0.0	0
Viet Nam	76	4	5.3	1	1.3	74	68	5	1	8.1	1
<i>Note:</i>	<i>O – Old NOTAM O % – Percent of Old NOTAM VO – Very Old NOTAM VO % – Percent of Very Old NOTAM</i>					<i>NO – Not Old NOTAM O&VO % – Percent of Old and Very old NOTAM EST PASS – EST Passed NOTAM</i>					

Table 1: NOTAM statistics of Asia/Pacific Administrations

2.6 **Table 2** shows the top 10 NOTAM-promulgating APAC Administrations (as of 25th May). These Administrations promulgated **87.6%** of all APAC NOTAM, including **86.9%** of APAC old and very old NOTAM.

No	Administrations	Total NOTAM	Old NOTAM	Very Old NOTAM	Percent of old and very old NOTAM
1	China	1127	153	29	16.1%
2	India	1127	175	297	41.9%
3	Japan	1113	31	2	3.0%
4	Republic of Korea	596	1	0	0.2%
5	Australia	530	68	2	13.2%
6	Singapore	447	0	0	0.0%
7	Philippines	440	75	58	30.2%
8	Malaysia	296	2	1	1.0%
9	Indonesia	196	1	91	46.9%
10	Papua New Guinea	132	28	3	23.5%
		6004	534	483	16.9%

Table 2: Top 10 NOTAM-producing Administrations

2.7 **Table 3** shows the top 10 best performing administrations in this regard, (as of 25th May). Singapore, Vanuatu, Mongolia, Cambodia, Tonga, each had zero old and very old NOTAM.

No	Administrations	Total NOTAM	Old NOTAM	Very Old NOTAM	Percent of old and very old NOTAM
1	Singapore	447	0	0	0.0%
2	Vanuatu	20	0	0	0.0%
3	Mongolia	11	0	0	0.0%
4	Cambodia	7	0	0	0.0%
5	Tonga	4	0	0	0.0%
6	Republic of Korea	596	1	0	0.2%
7	Afghanistan	95	1	0	1.1%
8	Bangladesh	32	0	1	3.1%
9	Hong Kong China	26	0	2	7.7%
10	Malaysia	296	2	1	1.0%
		1534	4	4	0.5%

Table 3: Top 10 Best Performing Administrations – Old and Very Old NOTAM

2.8 **Table 4** shows Top 10 poorest performing Administrations in this regard (as of 25th May). These Administrations have **92.6%** of old and very old NOTAM in the APAC Region.

No	Administrations	Total NOTAM	Old NOTAM	Very Old NOTAM	Percent of old and very old NOTAM
1	India	1127	175	297	41.9%
2	China	1127	153	29	16.1%
3	Philippines	440	75	58	30.2%
4	Indonesia	196	1	91	46.9%
5	Australia	530	68	2	13.2%
6	Lao PDR	41	13	21	82.9%
7	Japan	1113	31	2	3.0%
8	Papua New Guinea	132	28	3	23.5%
9	Nauru	25	3	18	84.0%
10	Maldives	28	13	3	57.1%
		4759	560	524	22.8%

Table 4: Top 10 Poorest Performing Administrations – Old and Very Old NOTAM

2.9 **Figure 3** shows the oldest NOTAM which is published in **1992** and included in the NOTAM Checklist as a valid NOTAM (as of 1st May 2021).

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G0122/92 NOTAMN
Q) /QFACS/IV/NBO/A /000/999/1304N07941E005
A) B) 9212170930 C) PERM
E) NAVAL AERODROME AT ( ) LOCATION N1304 E7941
ELEVATION 87M RWY 06L/24R BEARING 063/243 LENGTH 3365M SURFACE
CONCRETE/ASPHALT. LCN80. FLWG CCT AREA FOR OPN DURING DAY AND NIGHT
ESTABLISHED.
CCT AREA A ALT 2000FT
1. 1256N 7929E
2. 1310N 7953E
3. 1317N 7950E
4. 1304N 7925E
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Figure 3: The oldest NOTAM

2.10 One advantage of the Regional NOTAM Analysis is checking NOTAMs with EST indicated in NOTAM Item C). As of 25th May, a total of 296 current NOTAMs in the APAC Region had passed their EST duration, i.e. were overdue for review or cancellation (**Table 5**).

2.11 Both the NOTAMeter and the Regional NOTAM Analysis have used the USA’s FAA Defense Internet NOTAM Service (DINS <https://www.notams.faa.gov/dinsQueryWeb/>) as a primary source. DINS is valuable source of worldwide NOTAMs. However, occasionally it contains some NOTAMs that are no longer current, due to reasons such as NOTAM Offices not consistently distributing their NOTAMs (NOTAMR, NOTAMC or NOTAM Checklist) to DINS, connection issues, etc.

No	Administrations	EST Passed	NOTAM numbers in DINS	NOTAM numbers not included in the latest NOTAM Checklist and should be deleted from DINS
1	2	3	4	5
1	India	132	A0209/21, A0369/21, A0649/21 A0653/21 B0020/03 B0003/11, B0064/11 C0273/01 C0015/02, C0026/02, C0249/02, C0354/02 C0043/03, C0090/03, C0151/03, C0284/03, C0311/03 C0111/04, C0289/04, C0505/04 C0094/05, C0665/05, C0730/05 C0009/06, C0010/06, C0127/06, C0146/06, C0152/06 C0144/07, C0192/07, C0310/07, C0598/07 C0113/08, C0201/08, C0216/08, C0332/08, C0561/08 C0110/09 C0225/10, C0466/10, C0983/10, C1148/10 C0056/11, C0077/11, C0094/11, C0214/11, C1241/11 C0246/12, C0377/12, C0483/12 C0048/13, C0398/13, C0689/13, C0727/13, C1039/13, C1129/13 C0182/14, C0213/14, C0215/14, C0253/14, C0266/14, C0269/14, C0274/14, C0279/14, C0301/14, C0310/14, C0343/14, C0348/14, C0368/14, C0378/14,	B0020/03 B0003/11, B0064/11 C0273/01 C0015/02, C0026/02, C0249/02, C0354/02 C0043/03, C0090/03, C0151/03, C0284/03, C0311/03 C0111/04, C0289/04, C0505/04 C0094/05, C0665/05, C0730/05 C0009/06, C0010/06, C0127/06, C0146/06, C0152/06 C0144/07, C0192/07, C0310/07, C0598/07 C0113/08, C0201/08, C0216/08, C0332/08, C0561/08 C0110/09 C0225/10, C0466/10, C0983/10, C1148/10 C0056/11, C0077/11, C0094/11, C0214/11, C1241/11 C0246/12, C0377/12, C0483/12 C0048/13, C0398/13, C0689/13, C0727/13, C1039/13, C1129/13 C0182/14, C0213/14, C0215/14, C0253/14, C0266/14, C0269/14, C0274/14, C0279/14, C0301/14, C0310/14, C0343/14, C0348/14, C0368/14, C0378/14, C0426/14, C0427/14, C0431/14, C0441/14,

No	Administrations	EST Passed	NOTAM numbers in DINS	NOTAM numbers not included in the latest NOTAM Checklist and should be deleted from DINS
			C0394/14, C0406/14, C0426/14, C0427/14, C0431/14, C0441/14, C0464/14, C0785/14, C0967/14 C0878/15, C0928/15 C0490/16, C0603/16, C0927/16, C0950/16 C0370/17, C0559/17, C0602/17, C0604/17, C1138/17, C1267/17, C1268/17, C1269/17, C1271/17 C0344/18, C0508/18, C0559/18, C0731/18, C1017/18, C1056/18, C1401/18, C1517/18 C0054/19, C0185/19, C0531/19, C0822/19, C0998/19, C1258/19, C1401/19 C0281/20, C0643/20, C0645/20, C0795/20, C1134/20, C1232/20, C1651/20 C0209/21 D0071/04 D0777/14 D0092/17, D1169/17, D1180/17 D0001/18, D0487/18 D0318/19, D0546/19 D0128/20, D0393/20 G0927/20 G0053/21, G0114/21, G0421/21	C0464/14, C0785/14, C0967/14 C0878/15, C0928/15 C0490/16, C0603/16, C0927/16, C0950/16 C0370/17, C0559/17, C0602/17, C0604/17, C1138/17, C1267/17, C1268/17, C1269/17, C1271/17 C0344/18, C0508/18, C0559/18, C0731/18, C1017/18, C1056/18, C1401/18, C1517/18 C0054/19, C0185/19, C0531/19, C0822/19, C0998/19, C1258/19, C1401/19 C0281/20, C0643/20, C0645/20, C0795/20, C1134/20, C1232/20, C1651/20 C0209/21 D0071/04 D0777/14 D0092/17, D1169/17, D1180/17 D0001/18, D0487/18 D0318/19, D0546/19 D0128/20, D0393/20
2	Philippines	71	B4930/17 B3963/19 B3297/20, B3324/20, B3346/20, B3448/20 B0184/21, B0187/21, B0223/21, B0438/21, B0439/21, B0440/21, B0442/21, B0443/21, B0478/21, B0868/21 C0059/10, C0174/10, C0251/10 C0357/11 C0739/17 C0558/18 C0468/19, C0740/19, C0750/19,	-

No	Administrations	EST Passed	NOTAM numbers in DINS	NOTAM numbers not included in the latest NOTAM Checklist and should be deleted from DINS
			<p>C0751/19, C0752/19 C0203/20, C0204/20, C0592/20, C0594/20, C0904/20, C0936/20, C0993/20, C1045/20, C1072/20, C1143/20, C1191/20, C1400/20, C1446/20, C1469/20, C1480/20, C1481/20, C1482/20, C1483/20, C1484/20, C1485/20, C1486/20, C1489/20, C1490/20, C1527/20, C1545/20 C0026/21, C0027/21, C0029/21, C0030/21, C0031/21, C0032/21, C0033/21, C0034/21, C0043/21, C0044/21, C0045/21, C0066/21, C0092/21, C0094/21, C0096/21, C0133/21, C0214/21, C0392/21, C0448/21</p>	
3	Indonesia	36	<p>B0214/05, B0238/05, B0285/05, B0294/05, B0295/05, B0296/05, B0297/05, B0304/05, B0317/05, B0319/05, B0321/05, B0322/05, B0338/05, B0340/05, B0345/05, B0372/05, B0373/05, B0376/05, B0377/05, B0378/05, B0379/05, B0380/05, B0381/05, B0382/05, B0383/05, B0384/05, B0385/05, B0389/05, B0390/05, B0399/05, B0412/05, B0415/05, B0424/05, B0427/05 C0948/12, C8413/16</p>	<p>B0214/05, B0238/05, B0285/05, B0294/05, B0295/05, B0296/05, B0297/05, B0304/05, B0317/05, B0319/05, B0321/05, B0322/05, B0338/05, B0340/05, B0345/05, B0372/05, B0373/05, B0376/05, B0377/05, B0378/05, B0379/05, B0380/05, B0381/05, B0382/05, B0383/05, B0384/05, B0385/05, B0389/05, B0390/05, B0399/05, B0412/05, B0415/05, B0424/05, B0427/05 C0948/12, C8413/16</p>
4	Nauru	17	<p>A0008/15, A0012/15, A0020/15 A0007/16, A0008/16, A0012/16, A0014/16, A0015/16 A010/17, A022/17 A02/18, A03/18, A06/18, A017/18 A010/20, A020/20 A003/21</p>	NOTAM Checklist not found

No	Administrations	EST Passed	NOTAM numbers in DINS	NOTAM numbers not included in the latest NOTAM Checklist and should be deleted from DINS
5	Maldives	8	C0044/20, C0046/20, C0048/20, C0049/20, C0054/20, C0055/20, C0057/20, C0058/20	C0044/20, C0046/20, C0048/20, C0049/20, C0054/20, C0055/20, C0057/20, C0058/20
6	DPR Korea	8	A0084/19, A0103/14, A0104/14, A0102/14, A0101/14, A0100/14, A0099/14, A0098/14	A0084/19, A0103/14, A0104/14, A0102/14, A0101/14, A0100/14, A0099/14, A0098/14
7	Myanmar	6	A0287/20, A0301/20, A0302/20, A0303/20, A0018/21, A0072/21	NOTAM Checklist (May) not found
8	Papua New Guinea	5	A0163/17 A0689/18 A0232/21, A0305/21 C0092/20	A0689/18
9	Australia	3	F1559/21, F1570/21, N1428/21	
10	China	2	A0929/21 C0466/12	C0466/12
11	Japan	1	M0054/20	M0054/20
12	Viet Nam	1	B0100/06	B0100/06
13	Fiji	1	A0218/16	A0218/16
14	Hong Kong, China	1	C0091/16	C0091/16
15	Afghanistan	1	G0157/21	
16	Bangladesh	1	C0018/13	C0018/13
17	Cambodia	1	A0018/21	
18	Thailand	1	H0633/27	H0633/27

Table 5: APAC NOTAMs Current after EST Duration.

2.12 The NOTAM procedures in ICAO Doc 10066 *Procedures for Air Navigation Services – Aeronautical Information Management* (PANS-AIM) Appendix 3 include the mandatory requirement that any NOTAM which has an EST duration shall be cancelled or replaced before the date-time specified in Item C). The NOTAMs shown in red font in the 4th column of **Table 5** are still included in NOTAM Checklists, but have not been replaced or cancelled before the EST date/time in Item C). APAC Administrations are urged to take immediate action to cancel or replace these NOTAMs.

2.13 The 5th column of **Table 5** shows the NOTAMs that were included in the DINS for which the EST duration had passed, but were not included in the latest NOTAM Checklist. If a NOTAM number is not included in the latest NOTAM Checklist, it is considered to be no longer current and is deleted from receiving systems. All of the NOTAMs contained in the 5th column of the table are considered not current, and should be deleted from the DINS. APAC Region can reduce old NOTAMs by 184 (15.7%) by removing these non-current and passed-EST NOTAMs from the DINS.

2.14 Nauru and Myanmar NOTAMs in the 4th column of **Table 5** are not verified due to missing NOTAM checklists. States are urged to check their respective NOTAMs and take appropriate action to eliminate these NOTAMs from the DINS if they are no longer current, and to ensure NOTAM Checklists are correctly compiled and distributed at intervals not exceeding one month.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- a) note the information contained in this paper;
 - b) take immediate action to ensure full compliance with NOTAM procedures in ICAO Doc 10066 PANS-AIM and in accordance with ***Conclusion ATM/SG/6-14***;
 - c) ensure the consistent distribution of NOTAMN, NOTAMR, NOTAMC and NOTAM Checklists to international NOTAM Offices and multinational NOTAM processing units; and
 - d) discuss any relevant matters as appropriate.

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