



ICAO

International Civil Aviation Organization

The Second Meeting of the South Asia, Indian Ocean and Southeast Asia ATM Coordination Group (SAIOSEACG/2)

Bangkok, Thailand, 20 – 24 March 2023

Agenda Item 4: Implementation of CNS-ATM Systems

AIR TRAFFIC FLOW MANAGEMENT STEERING GROUP OUTCOMES

(Presented by the Secretariat)

SUMMARY

This paper presents the outcomes of the twelfth Meeting of the Air Traffic Flow Management Steering Group (ATFM/SG/12).

1. INTRODUCTION

1.1 The twelfth Meeting of Air Traffic Flow Management Steering Group (ATFM/SG/12) was held by Video Teleconference (VTC) hosted by the ICAO Asia/Pacific Regional Office, from 13 to 16 September 2022. The VTC was attended by 224 registered participants from 24 Administrations and four International Organizations including Australia, Bangladesh, Bhutan, Cambodia, China, Hong Kong China, Fiji, India, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United States, Viet Nam, CANSO, IATA, IFALPA, IFATCA, and ICAO.

1.2 A total of 20 working papers, two information papers, and seven presentations were considered by the meeting. The meeting papers, presentation and report are available on the ATFM/SG/12 meeting web-page:

<https://www.icao.int/APAC/Meetings/Pages/2022-ATFMSG12.aspx>

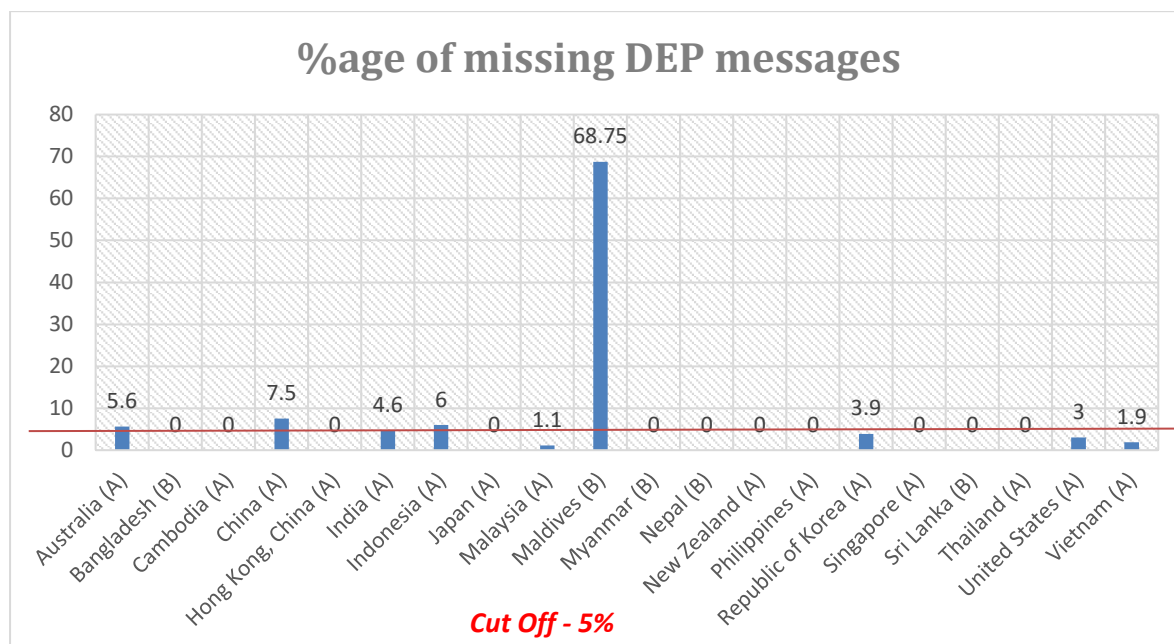
1.3 The meeting had agreed to the following three Draft Conclusions. The ATM/SG/10 meeting subsequently agreed to the Conclusions drafted by ATFM/SG/12.

- ***Conclusion ATM/SG/10-4: Update Regional Framework for Collaborative ATFM***
- ***Conclusion ATM/SG/10-5: ATFM Training Guide***
- ***Conclusion ATM/SG/10-6: Regional ATFM Implementation Status Reporting***

2. DISCUSSION

Missing DEP Messages

2.1 The APAC regional missing DEP messages analysis was conducted on 31 October 2022 based on the ATFM/SG/12 action item. Seven States, viz., Australia, Hong Kong China, India, Japan, Mongolia, Singapore and Thailand, provided data to ICAO on the number of FPLs received and number of missing DEP messages. The summary of the analysis is as shown below.



2.2 The ICAO secretariat, based on the analysis, concluded that five States' improvement to meet the criterion was observed. Therefore, the following modification on the DEP message transmission deficiency was presented for consideration by APANPIRG/33, which was approved.

- Deletion – Bangladesh, India, Malaysia, Nepal and the United States

2.3 The above analysis was based on ONE day's data from a limited number of States. To assess a more realistic regional status it will be necessary to collect more extensive data from more number of States. Hence it is proposed to conduct another regional analysis of missing DEP messages in June. States will be requested to collect FPL data of all international flights operated in their respective FIRs for a period of one week along with number of missing DEP messages related to those flights.

Regional ATFM Implementation Status

2.4 ICAO provided a summary of the ATFM implementation status of APAC Administrations, reported against the performance objectives of the Regional Framework for Collaborative ATFM. Annual implementation status reports for 2023 were received from 20 APAC Administrations.

2.5 Based on reports received States were assessed as having *Robust* (90-100%), *Marginal* (70-89%) or *Incomplete* (0-69%) implementation. **Table 1** summarizes the updated Asia/Pacific Region ATFM Implementation Status based on the Regional ATFM Plan Monitoring and Reporting Form V3.0 (**Attachment A**).

Administration (Tier)	% Implementation			Implementation Status
	2021	2022	2023	
Afghanistan (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Australia (A)	87	<i>no report</i>	<i>no report</i>	Did Not Report
Bangladesh (B)	13	13	<i>no report</i>	Did Not Report

Administration (Tier)	% Implementation			Implementation Status
	2021	2022	2023	
Bhutan (A)	<i>never reported</i>	<i>no report</i>	21	Incomplete
Brunei Darussalam (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Cambodia (A)	<i>no report</i> (63 in 2020)	82	95	Robust
China (A)	<i>no report</i> (87 in 2020)	<i>no report</i>	97	Robust
Hong Kong, China (A)	89	89	95	Robust
Macao, China (B)	<i>no report</i> (23 in 2020)	<i>no report</i>	39	Incomplete
Cook Islands (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Fiji (B)	<i>never reported</i>	<i>no report</i>	0	Incomplete
France (French Polynesia) (B)	<i>never reported</i>	<i>no report</i>	40	Incomplete
DPR Korea (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
India (A)	92	84	85	Marginal
Indonesia (A)	71	63	54	Incomplete
Japan (A)	89	94	91	Robust
Kiribati (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Lao PDR (A)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Malaysia (A)	<i>no report</i> (16 in 2020)	<i>no report</i>	36	Incomplete
Maldives (B)	<i>no report</i> (20 in 2020)	<i>no report</i>	<i>no report</i>	Did Not Report
Marshall Islands (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Micronesia (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Mongolia (A)	<i>no report</i> (39 in 2020)	40	28	Incomplete
Myanmar (B)	<i>no report</i> (30 in 2020)	<i>no report</i>	<i>no report</i>	Did Not Report
Nauru (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Nepal (B)	43	40	<i>no report</i>	Did Not Report
New Caledonia (B)	<i>no report</i> (43 in 2020)	<i>no report</i>	<i>no report</i>	Did Not Report
New Zealand (A)	<i>no report</i> (44 in 2020)	67	78	Marginal
Pakistan (B)	11	80	59	Incomplete

Administration (Tier)	% Implementation			Implementation Status
	2021	2022	2023	
Palau (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Papua New Guinea (B)	<i>no report</i> (21 in 2020)	<i>no report</i>	<i>no report</i>	Did Not Report
Philippines (A)	61	77	59	Marginal
Republic of Korea (A)	82	87	93	Robust
Samoa (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Singapore (A)	97	97	99	Robust
Solomon Islands (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Sri Lanka (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Timor Leste (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Tonga (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Thailand (A)	90	90	91	Robust
Tuvalu (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
United States (A)	94	<i>no report</i>	96	Robust
Vanuatu (B)	<i>never reported</i>	<i>no report</i>	<i>no report</i>	Did Not Report
Viet Nam (A)	34	34	71	Marginal

Table 1: Updated Asia/Pacific Region ATFM Implementation Status

ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) continue to improve DEP message origination;
- c) note the continued slow regional progress in implementation of the performance expectations of the Regional Framework for Collaborative ATFM; and
- d) discuss any relevant matters as appropriate.

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		Bhutan	Cambodia	China	Hong Kong, China	Macao, China	Fiji	French Polynesia	India	Indonesia	Japan	Malaysia	Mongolia	New Zealand	Pakistan	Philippines	Republic of Korea	Singapore	Thailand	United States	Viet nam
		<p style="text-align: center;">Not implemented = 0% Partial implementation = 20%, 50%, 75% Full implementation = 100%</p>																			
A. Administrations Distributing ATFM Measures																					
Indicate whether your Administration has:																					
1	Enacted regulations for the implementation of ATFM	100%	100%	100%	100%				100%	100%	100%	100%	0%	100%		100%	100%	100%	100%	100%	100%
2	Implemented a program of annual or bi-annual strategic airport and airspace capacity, and strategic demand analysis	50%	100%	100%	100%				50%	50%	100%	0%	100%	100%		100%	50%	100%	100%	100%	50%
3	Performed an analysis of current traffic demand and expected growth for the next 5 years (rolling)	25%	100%	100%	100%				50%	50%	50%	25%	50%	50%		25%	50%	100%	50%	100%	50%
4	Commenced daily pre-tactical airport and airspace capacity-demand analysis for ATFM Program airports and associated terminal airspace as well as enroute ATC sectors supporting the homogeneous ATM areas and major traffic flows identified in the Asia and Pacific Regions	50%	100%	100%	100%				50%	50%	100%	50%	50%	50%		50%	100%	100%	100%	100%	50%
5	Made arrangements for relevant ATFMU to chair and/or participate in regularly scheduled ATFM conferences for pre-tactical ATFM planning	0%	100%	100%	100%				100%	50%	100%	0%	50%	0%		50%	100%	100%	100%	100%	100%
6	Commenced ATFM post-operations analysis and rectification, taking guidance from the Asia/Pacific ATFM Post-Operations Analysis Recommended Framework as starting point	50%	100%	100%	100%				100%	0%	100%	50%	50%	100%		0%	100%	100%	100%	100%	100%
7	Ensured the origination, distribution and processing of FPL and ATS messages in accordance with ICAO Doc 4444 PANS-ATM and the Regional Framework for Collaborative ATFM	100%	100%	100%	100%				100%	100%	100%	100%	100%	100%		100%	100%	100%	100%	100%	100%
8	Enacted requirements to ensure FPL is submitted no less than 3 hours prior to EOBT except where necessary for operational or technical reasons	100%	100%	0%	100%				100%	100%	0%	100%	0%	100%		0%	100%	100%	100%	100%	0%
9	Enacted requirements to ensure a DLA message is transmitted when the departure of an aircraft for which basic FPL has been sent is delayed by more than 15 minutes after the EOBT specified in that basic FPL	100%	100%	100%	100%				100%	100%	100%	0%	0%	100%		0%	100%	100%	100%	100%	100%
10	Ensured that, when there is a delay from a GDP, CTOT and other slot allocation information originated from the ATFMU is communicated to all relevant stakeholders	0%	100%	100%	100%				100%	100%	100%	0%	0%	100%		50%	100%	100%	100%	100%	100%
11	Implemented or designed systems to ensure that FPL are not discarded from relevant ATM systems as a consequence of ATFM delay.	0%	100%	100%	100%				100%	0%	100%	100%	0%	100%		0%	100%	100%	100%	100%	100%
12	Implemented common fixes, terminology and communications in ATFM, AMAN/DMAN and A-CDM systems	0%	NA	100%	100%				100%	50%	50%	NA	0%	100%		NA	100%	100%	100%	100%	50%
13	Optimized ATC separation and reduced runway occupancy times at all ATFM program airports and in associated terminal airspace	0%	50%	100%	100%				100%	50%	100%	50%	0%	75%		75%	100%	100%	50%	75%	75%
14	Implemented strategic airport slot allocation at all international airports where demand significantly exceeds airport capacity	0%	100%	100%	100%				100%	100%	100%	0%	100%	50%			100%	100%	100%	100%	100%
15	Implemented pre-tactical modelling of airport and airspace configuration and traffic demand, and the effect of ATFM measures	0%	100%	100%	50%				50%	25%	100%	50%	25%	50%		25%	100%	100%	50%	100%	50%
16	Implemented tactical ATFM measures for flights inbound to ATFM program airports	0%	100%	100%	100%				100%	50%	100%	0%	50%	100%		50%	100%	100%	100%	100%	100%
17	Enabled sharing of relevant information between all stakeholders through implementation of CDM	0%	100%	100%	100%				100%	100%	100%	0%	0%	100%		100%	100%	100%	100%	100%	100%
18	Implemented dynamic updating of airport and airspace capacity constraints, capacity calculations and demand information	0%	100%	100%	50%				100%	50%	100%	50%	0%	50%		50%	50%	100%	100%	100%	50%
19	Implemented local procedures for ATFM operations and communication, including phraseology and terminology for ATFM Units, ATS Units, airspace users, and airport operators, drawn from ICAO Doc. 9971	50%	100%	100%	100%				100%	50%	50%	50%	0%	100%		100%	100%	100%	100%	100%	50%
20	Established ATFM capability with appropriately trained staff and operating procedures	50%	100%	100%	100%				100%	50%	100%	50%	50%	50%		50%	100%	100%	100%	100%	100%
21	Developed procedures for ATFMU, ATS Units, airspace users, and airport operators when ATFM program is active	50%	100%	100%	100%				100%	100%	100%		50%	50%		100%	100%	100%	100%	100%	50%
22	Implemented local ATC procedures and, where available, CDM processes facilitating compliance with received CTOT	0%	100%	100%	100%				100%	100%	100%	50%	0%	100%		100%	100%	100%	100%	100%	50%
23	Implemented tactical ATFM measures for flights inbound to constrained airspace	0%	100%	100%	100%				0%	0%	100%	50%	50%	100%		100%	100%	100%	100%	100%	0%
24	Ensured tactical ATFM measures are only applied during periods of constraint	0%	100%	100%	100%				100%	0%	100%	0%	0%	100%		100%	100%	100%	100%	100%	100%
25	Promulgated procedures to avoid subjecting individual flights to more than one tactical ATFM measure	0%	0%	100%	100%				100%	0%	100%	0%	0%	100%		0%	100%	100%	100%	100%	0%
26	Developed procedures and agreements for post-operational analysis of cross-border ATFM with stakeholders	0%	100%	100%	100%				50%	50%	100%	50%	50%	0%		50%	100%	100%	100%	100%	50%
27	Ensured post-operations analyses are used for planning ATFM, airspace and ATS route improvements	0%	100%	100%	100%				100%	50%	100%	0%	50%	50%		50%	50%	100%	50%	100%	50%
28	Commenced daily preparation and sharing of an ATFM Daily Plan (ADP) for all ATFM Program airports and associated terminal airspace	0%	100%	100%	100%				100%	0%	100%	0%	50%	0%		50%	100%	100%	100%	100%	100%
29	Promulgated procedures for tactical management of ATFM measures, including revision, cancellation where necessary	0%	100%	100%	100%				100%	0%	100%	0%	50%	100%		100%	100%	100%	100%	100%	100%
30	Ensured interoperability of implemented ATFM, A-CDM, AMAN, DMAN, ATM automation systems and airspace user systems where operational interfaces exist or are planned	0%	NA	100%	75%				50%	75%	50%	0%	0%	100%		NA	50%	75%	75%	100%	50%
31	Implemented meteorological services to support ATM in the terminal area (e.g. Meteorological Service in Terminal Area - MSTa)	0%	100%	100%	100%				100%	100%	100%	100%	25%	100%		25%	100%	100%	25%	100%	50%
32	Implemented distributed multi-nodal ATFM information distribution capability	0%	100%	100%	100%				0%	100%	100%	0%	0%	NA		100%	100%	100%	100%	100%	100%
33	Ensured ATFM systems take long haul flights into account in demand predictions	0%	100%	100%	100%				100%	0%	100%	100%	0%	100%		100%	100%	100%	100%	100%	50%
34	Ensured ATM and ATFM systems provide timely update of estimate information for airborne aircraft	0%	100%	100%	50%				100%	50%	100%	50%	0%	100%		100%	100%	100%	100%	100%	50%
Average Implementation		21%	95%	97%	95%				85%	54%	91%	36%	28%	78%		59%	93%	99%	91%	96%	71%

Not implemented = 0% Partial implementation = 20%, 50%, 75% Full implementation = 100%		Bhutan	Cambodia	China	Hong Kong, China	Macao, China	Fiji	French Polynesia	India	Indonesia	Japan	Malaysia	Mongolia	New Zealand	Pakistan	Philippines	Republic of Korea	Singapore	Thailand	United States	Viet nam
		B. Administrations Facilitating ATFM Measures (but not expected to implement and distribute cross-border ATFM measures)																			
Indicate whether your Administration has:																					
43	Implemented a program of annual or bi-annual strategic airport and airspace capacity, and strategic demand analysis					50%	0%	0%								50%					
44	Performed an analysis of current traffic demand and expected growth for the next 5 years (rolling)					50%	0%	0%								100%					
45	Made arrangements for relevant personnel from ATSU to participate in regularly scheduled ATFM conferences for pre-tactical ATFM planning					0%	0%	NA								NA					
46	Ensured the origination, distribution and processing of FPL and ATS messages in accordance with ICAO Doc 4444 PANS-ATM and the Regional Framework for Collaborative ATFM					100%	0%	100%								100%					
47	Enacted requirements to ensure FPL is submitted no less than 3 hours prior to EOBT except where necessary for operational or technical reasons					100%	0%	0%								0%					
48	Enacted requirements to ensure a DLA message is transmitted when the departure of an aircraft for which basic FPL has been sent is delayed by more than 15 minutes after the EOBT specified in that basic FPL					0%	0%	100%								0%					
49	Ensured local stakeholders are able to access CTOT information readily, either directly from the ATFMU distributing it or through local dissemination					0%	0%	0%								100%					
50	Implemented or designed systems to ensure that FPL are not discarded from relevant ATM systems as a consequence of ATFM delay.					100%	0%	100%								100%					
51	Optimized ATC separation and reduced runway occupancy times at all ATFM program airports and in associated terminal airspace					50%	0%	25%								NA					
52	Enabled sharing of relevant information between all stakeholders through implementation of CDM					0%	0%	100%								0%					
53	Implemented local procedure with regards to ATFM operations and communication, including phraseologies, among ATFMU, ATS Units, airspace users, and airport operators drawn from ICAO Doc 9971					50%	0%	50%								50%					
54	Developed procedures for ATS units, airspace users, and airport operators when ATFM program is active					0%	0%	50%								100%					
55	Implemented local ATC procedures and, where available, CDM processes facilitating compliance with received CTOT					50%	0%	0%								50%					
57	Developed procedures and agreements for post-operational analysis of cross-border ATFM with stakeholders					50%	0%	0%								50%					
Average Implementation						39%	0%	40%								59%					

*2023 Update to the revised ATFM Regional ATFM Monitoring and Reporting Form version 3.0

Note: Questions 35-42 for Phase III will not be considered for evaluation in the SAIOSEACG/2.