International Civil Aviation Organization

Twelfth Meeting of the Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/12)

Video Teleconference, 13 – 16 September 2022

Agenda Item 5: Regional ATFM Framework and Guidance Material

UPDATE OF REGIONAL ATFM PLAN MONITORING AND REPORTING FORM

(Presented by Secretariat)

SUMMARY

This paper presents updated Regional ATFM Plan Monitoring Form Version 3.0 along with revised reporting metrics.

1. INTRODUCTION

1.1 The Asia-Pacific Regional Framework for Collaborative ATFM, developed by the ATFM/SG, has been adopted by the Asia-Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) since September 2015. The Regional Framework specifies Distributed Multi-Nodal ATFM Network, envisaged as a network of interconnected ANSP led ATFM nodes without a central ATFM unit, as the core concept of cross-border ATFM for the region.

1.2 To track State implementation progress of the regional expectations included in the Framework document a Regional ATFM Monitoring and Reporting form was developed that would be used to analyze ATFM implementation against the performance objectives of the Regional Framework for Collaborative ATFM.

1.3 In accordance with Conclusion ATM/SG/5-3: Asia/Pacific Regional Framework for Collaborative ATFM Amendment, the ATFM Implementation Status Report form was appended to the Framework document and made available on the ICAO Asia/Pacific Regional Office website. The form provides a drop-down menu for each item the input values 0, 0.5 and 1, respectively representing not implemented, partial implementation or full implementation.

1.4 The ATFM Reporting Form is available on the ICAO Asia/Pacific Regional Office website at: http://www.icao.int/APAC/Pages/edocs.aspx.

2. DISCUSSION

Regional ATFM Plan Performance Expectations

2.1 The Regional Framework for Collaborative Air Traffic Flow Management (ATM) is one of several important plans that are subsidiary to the Asia Pacific Seamless Air Navigation Services (ANS) Plan, namely:

- Asia/Pacific Search and Rescue (SAR) Plan;

- Asia/Pacific Region ATM Contingency Plan; and
- Asia/Pacific Regional Framework for Collaborative ATFM; and
- Asia/Pacific Collaborative Aeronautical Information Management (AIM) Plan; and
- Asia/Pacific A-CDM Implementation Plan.

2.2 In the ATFM/SG/11 meeting, it was decided to review and update the Regional Framework Document so as to reflect the updates in the Asia Pacific Seamless ANS Plan (Version 3.0) and GANP Edition 6 (2019). ATFM/IR/SWG was tasked to update and modify the Regional ATFM Framework Document. Accordingly ATFM/IR/SWG has updated the Regional ATFM Framework Document (Attachment A of ATFM/SG/12-WP/15 refers).

2.3 The regional ATFM performance objectives specified in Section 7 of this framework – Performance Improvement Plan, complement and where necessary expand upon the performance objectives of the Seamless ANS Plan. The Performance Improvement Plan continues with the phased approach of implementation of performance expectations. The Version 3.0 of the Framework had proposed Phase IA, IB and II with timelines coinciding with Phase I and II of APAC Seamless ANS Plan.

2.4 Recognizing the substantial performance expectations in PARS/PASL Phase III, the different update cycles between the Asia/Pacific Seamless ANS Plan and the Framework, the significant impact due to COVID-19 pandemic, and the potential benefits of a more granular progress tracking, Regional ATFM Capability Phase III is proposed to be divided into sub-phases A and B, with expected implementation of 03 November 2022 and November 2025.

2.5 As of now, the deadline for phases IA, IB, and II capability implementation has passed. The expected capabilities for those phases are still retained in the document for reference as States/Administrations may not have implemented all elements in those phases yet. **These expected capabilities will be marked as "For Immediate Implementation"**.

Regional ATFM Plan Status Monitoring and Reporting Form

2.6 A draft Regional ATFM Monitoring, and Reporting form is provided in Attachment A. The format of the monitoring and reporting form is consistent with those currently used or proposed for the Seamless ATM Plan and its other subsidiary plans.

2.7 A **common reporting date of 28 February** is proposed for implementation status reports provided against regional plans including the Regional Framework for Collaborative ATFM, Regional Plan for Collaborative AIM, Regional SAR Plan and Regional ATM Contingency Plan. This would ensure that the reported data is received sufficiently early to facilitate implementation reporting to the relevant technical group while allowing flexibility in the scheduling of technical meetings.

2.8 Recognizing States' differing level of readiness in ATFM implementation and their relevance in the cross-border ATFM network regardless of their capability levels, it is also proposed to standardize the reporting format of the forms in terms of percentage(s) of implementation efforts, **for example: 10%, 20%, 50%, etc.** The percentage(s) will be available as a drop-down option for all relevant items.

2.9 In alignment with the methodology applied to assessment of implementation status in a number of significant ATM technical fields in the APAC Region, implementation status of each Administration is assessed as *Robust (90 – 100% implementation), Marginal (70 – 89%) or Incomplete (0 – 69%).* However, recognizing the significant COVID-19 pandemic-related disruption to ANS Planning and Implementation, it is proposed to modify the assessment Status as - ***Robust (90 – 100% implementation), Acceptable (80-89%), Marginal (70 – 79%) or Incomplete (0 – 69%)***.

2.10 States are reminded that the reporting form provides evidence of implementation of ATFM, which States had for some time been obliged to implement in accordance with the standards of Annex 11. Non-reporting would be treated in the same way as non-implementation for the purpose of ICAO reporting to ATM/SG and APANIRG.

2.11 The meeting is invited to consider the following Draft Conclusion supporting Regional ATFM implementation status monitoring.

<table>
<tr><td colspan="3">Draft Conclusion/<s>Decision</s> ATFM/SG/12-X: Regional ATFM Implementation Status Reporting</td></tr>
<tr><td colspan="2">What: That,

1. the ATFM Implementation Status Report form (version 3.0) provided in Appendix XX to the report be adopted and be made available on the ICAO Asia/Pacific Regional Office website; and
2. Asia/Pacific Administrations are urged to report their ATFM implementation status at least once annually by no later than 28th February each year, using the ATFM Implementation Status Report Form.
3. The Regional Framework for Collaborative ATFM be amended to include the information in ATFM/SG/12 WP/14 Attachment A.

Note: This Conclusion supersedes Conclusion ATM/SG/5-3</td><td>Expected impact:

☐ Political / Global

☐ Inter-regional

☐ Economic

☐ Environmental

☒ Ops/Technical</td></tr>
<tr><td colspan="2">Why: To facilitate the monitoring of Regional ATFM implementation status, and the identification of priority areas of ATFM for inclusion in Seamless ANS monitoring and for the attention of APANPIRG.</td><td>Follow-up: ☒Required from States</td></tr>
<tr><td>When: On adoption by ATM/SG/10 21-Oct-22</td><td colspan="2">Status: Draft to be adopted by Subgroup</td></tr>
<tr><td colspan="3">Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other: XXXX</td></tr>
</table>

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper;

b) agree to the performance monitoring form provided, subject to any amendment by the meeting;

c) agree to the Draft Conclusion on Regional ATFM Implementation Status Reporting; and

d) discuss any relevant matters as appropriate.

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REGIONAL ATFM PLAN MONITORING AND REPORTING FORM

ATFM PERFORMANCE INDICATORS

The following indicators are based on the Performance Improvement Plan of the Asia/Pacific Regional Framework for Collaborative ATFM, which should be read in conjunction with this form. The information provided will be used by the relevant Regional bodies to assess individual Administration and overall regional compliance with the Framework, and may be used by Administrations to internally evaluate their implementation status.

INSTRUCTIONS

A If your administration **is expected, or intends, to implement and distribute cross-border ATFM measures** under the terms of the Performance Improvement Plan of the Asia/Pacific Regional Framework for Collaborative ATFM:
Answer Questions 1 to 42

B If your Administration **is <u>not</u> expected to implement and distribute cross-border ATFM measures** as described above:
Answer Questions 43 to 61

C **Not implemented = 0%** **Partial implementation = 25%,50%,75%** **Full implementation = 100%**

D **Assesment - Robust (90 – 100% implementation), Acceptable (80-89%), Marginal (70 – 79%) or Incomplete (0 – 69%).**

E **Date of Reporting - 28th February each year**

#	Reporting Form Element	S7, Para.	S7, Para.2	S7, Phase	Response
1	Enacted regulations for the implementation of ATFM	11		IA	
2	Implemented a program of bi-annual strategic airport and airspace capacity, and strategic demand analysis	12	46	IA	
3	Performed an analysis of current traffic demand and expected growth for the next 5 years (rolling)	13	46	IA	
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	14	13	IA	
5	Made arrangements for relevant ATFMU to chair and/or participate in regularly scheduled ATFM conferences for pre-tactical ATFM planning	16		IA	
6	Commenced ATFM post-operations analysis and rectification, taking guidance from the Asia/Pacific ATFM Post-Operations Analysis Recommended Framework as starting point	17		IA	
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	18		IB	
8	Enacted requirements to ensure FPL is submitted no less than 3 hours prior to EOBT except where necessary for operational or technical reasons	19		IB	
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	20		IB	
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	21		IB	
11	Implemented or designed systems to ensure that FPL are not discarded from relevant ATM systems as a consequence of ATFM delay.	23		IB	
12	Implemented common fixes, terminology and communications in ATFM, AMAN/DMAN and A-CDM systems	24		IB	
13	Optimized ATC separation and reduced runway occupancy times at all ATFM program airports and in associated terminal airspace	25		IB	
14	Implemented strategic airport slot allocation at all international airports where demand significantly exceeds airport capacity	26		IB	
15	Implemented pre-tactical modelling of airport and airspace configuration and traffic demand, and the effect of ATFM measures	27	39	IB	
16	Implemented tactical ATFM measures for flights inbound to ATFM program airports	30		IB	
17	Enabled sharing of relevant information between all stakeholders through implementation of CDM	28		IB	
18	Implemented dynamic updating of airport and airspace capacity constraints, capacity calculations and demand information	29		IB	
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	31	45	IB	
20	Established ATFM capability with appropriately trained staff and operating procedures	31	42	II	
21	Developed procedures for ATFMU, ATS Units, airspace users, and airport operators when ATFM program is active	31		IB	
22	Implemented local ATC procedures and, where available, CDM processes facilitating compliance with received CTOT	31		IB	
23	Implemented tactical ATFM measures for flights inbound to constrained airspace	33	41	IB	
24	Ensured tactical ATFM measures are only applied during periods of constraint	33		IB	
25	Promulgated procedures to avoid subjecting individual flights to more than one tactical ATFM measure	34		IB	
26	Developed procedures and agreements for post-operational analysis of cross-border ATFM with stakeholders	35		IB	
27	Ensured post-operations analyses are used for planning ATFM, airspace and ATS route improvements	36		IB	
28	Commenced daily preparation and sharing of an ATFM Daily Plan (ADP) for all ATFM Program airports and associated terminal airspace	37	15	II	
29	Promulgated procedures for tactical management of ATFM measures, including revision, cancellation where necessary	37		II	
30	Ensured interoperability of implemented ATFM, A-CDM, AMAN, DMAN, ATM automation systems and airspace user systems where operational interfaces exist or are planned	38		II	
31	Implemented meteorological services to support ATM in the terminal area (e.g. Meteorological Service in Terminal Area - MSTA)	40		II	
32	Implemented distributed multi-nodal ATFM information distribution capability	42		II	
33	Ensured ATFM systems take long haul flights into account in demand predictions	43		II	
34	Ensured ATM and ATFM systems provide timely update of estimate information for airborne aircraft	44		II	
35	Implemented A-CDM at international aerodrome and integrated with ATFM operations with appropriate information exchange between the two systems and processes	47		IIIA	
36	Established national civil-military ATM coordination body to enable stratetic, pre-tactical, and tactical airspace management (ASM)	48		IIIA	
37	Established a civil-military ATM coordination body to regularly review the use of Special Use Airspace (SUA) to ensure optimal usage all airspaces based on the FUA concept	49		IIIA	
38	Established regulations to support a safe integration of UAS operations in non-segregated airspace	50		IIIB	
39	Implemented ATFM information distribution capability utilizing FIXM v4.2 (or later), extended where necessary, to enable the exchange of flight-specific ATFM information	51		IIIB	
40	Integrated ATFM, AMAN/DMAN, and A-CDM systems through cross-platform information exchange based on FIXM v4.2 (or later) with appropriate extension	52		IIIB	
41	Established research and development programs to explore novel capacity enhancement techniques such as free route airspace, extended arrival metering, dynamic airspace configurations, target time operations, and collaborative trajectory options, with an emphasis on needs, safety case, and cost-benefit analysis	53	55, 56	IIIB	
42	Implemented Meteorological information exchange with ATM and ATFM systems using IWXXM v3.0 (or later)	54		IIIB	

#	Reporting Form Element	S7, Para.	S7, Para.2	S7, Phase	Response
43	Implemented a program of bi-annual strategic airport and airspace capacity, and strategic demand analysis	12	46	IA	
44	Performed an analysis of current traffic demand and expected growth for the next 5 years (rolling)	13	46	IA	
45	Made arrangements for relevant personnel from ATSU to participate in regularly scheduled ATFM conferences for pre-tactical ATFM planning	16		IA	
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	18		IB	
47	Enacted requirements to ensure FPL is submitted no less than 3 hours prior to EOBT except where necessary for operational or technical reasons	19		IB	
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	20		IB	
49	Ensured local stakeholders are able to access CTOT information readily, either directly from the ATFMU distributing it or through local dissemination	21			
50	Implemented or designed systems to ensure that FPL are not discarded from relevant ATM systems as a consequence of ATFM delay.	22		IB	
51	Optimized ATC separation and reduced runway occupancy times at all ATFM program airports and in associated terminal airspace	25		IB	
52	Enabled sharing of relevant information between all stakeholders through implementation of CDM	28		IB	
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	30	46	IB	
54	Developed procedures for ATS units, airspace users, and airport operators when ATFM program is active	31			
55	Implemented local ATC procedures and, where available, CDM processes facilitating compliance with received CTOT	31		IB	
56	Developed ATFM post-operations analysis workflow among ATFMU, ATS units, airspace users, and airport operators to ensure proper and timely feedback mechanism can be distributed to ATFMU originating the ATFM measures	35		II	
57	Developed procedures and agreements for post-operational analysis of cross-border ATFM with stakeholders	35		II	
58	Ensured post-operations analyses are used for planning ATFM, airspace, and ATS route improvements	36		II	
59	Ensured capability to receive ATFM Daily Plan (ADP) from Administrations distributing the ATFM measures and to distribute it among local stakeholders for situational awareness	37	15	II	
60	Ensured ATM systems provide timely update of estimate information for airborne aircraft	44		II	
61	Educated ATM staff and stakeholders on the basic of ATFM and its connection with ATS				