



International Civil Aviation Organization

ICAO

Fifteenth Meeting of the Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/15)

Bangkok, Thailand, 28 April – 02 May 2025

Agenda Item 6: Regional ATFM Framework, A-CDM Plan and related Guidance Material

ESTABLISHMENT OF ATFM CONCEPT DESIGN AD-HOC GROUP

(Presented by Hong Kong China, Singapore, Thailand, and CANSO)

SUMMARY

This paper presents the proposal to establish an ad-hoc group to undertake a review and redesign of the Asia/Pacific Regional ATFM Concept of Operations, considering the challenges encountered in today's ATFM operations and the advent of new concepts and capabilities. The proposal calls for an ATFM Concept Design Ad-Hoc Group to be established under the purview of the ATFM/SG, with its key deliverable being the new version of the Asia/Pacific Regional ATFM Concept of Operations document along with guiding principles for the implementation roadmap in the region.

1. INTRODUCTION

1.1 Regional Air Traffic Flow Management (ATFM) in Asia/Pacific is one of long-standing history, with the implementation effort dating back for nearly two decades. From the initial conversation as part of the Asia/Pacific Air Traffic Flow Management Task Force to the development of the first version of the regional ATFM concept of operations, and from the concept development to operational implementation initiatives by groups of ANSPs and widening adoption of States/Administrations, regional ATFM has undoubtedly come a long way.

1.2 In the recent years, however, challenges in the current ATFM operations have been highlighted and system inefficiencies have become increasingly prevalent. Coupled that with the changing regional environment, technological landscape, and the advent of advanced capabilities and concepts, the Asia/Pacific Regional ATFM Concept of Operations (v1, September 2015) warrants a timely review.

1.3 This working paper puts forward a proposal for a review and a re-design of the regional ATFM concept of operation with an establishment of an ad-hoc group for this monumental task.

2. DISCUSSION

Background

2.1 Regional Air Traffic Flow Management (ATFM) implementation in Asia/Pacific could be dated back for nearly two decades, with the initiation of Asia/Pacific Air Traffic Flow Management Task Force (ATFM TF) in 2005 and the transition to Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG) in 2010. Over the years, States and Administrations have collaborated to develop, validate, and implement the regional ATFM that is operational in the region today.

2.2 The current model of regional ATFM in Asia/Pacific is based on the *Distributed Multi-Nodal ATFM Network* concept, outlined in the *Asia/Pacific Regional ATFM Concept of Operations (v1, September 2015)*¹. The concept was developed on the basis of geopolitical, operational, and technical landscape at the time of its development, and was based on allowing individual ANSPs of States/Administrations to implement ATFM measures for demand-capacity balancing in their areas of responsibilities while conforming to the common operational procedures and information exchange framework. The concept was adopted over the years, with several cross-border ATFM initiatives enacted by groups of regional ANSPs² and growing implementation by States/Administrations. This is a testament to the success of the concept of operations as was initially developed.

2.3 However, the current concept is not without its challenges. While the concept has allowed for rapid adoption and implementation, its shortcomings have been highlighted in recent years including – inter alia – conflicting ATFM measures initiated by different ATFM units, inability to utilize a wider suite of ATFM solutions, lack of mechanism to ensure commitment from stakeholders, and localized traffic optimization without considerations for regional impact.

2.4 Recognizing also the ongoing work by ICAO – through the ATM Operations Panel – in establishing provisions in *Annex 11 – Air Traffic Services* and *Doc 4444 – PANS-ATM* requiring States/Administrations to implement a form of ATFM service and to support cross-border ATFM operations within the coming few years, the challenges mentioned in 2.3 will become increasingly complex with the expected growth in ATFM adoption by regional States/Administrations. It is becoming apparent that the current mode of ATFM operations may be untenable.

2.5 Additionally, the operating environment of Asia/Pacific air traffic management will continue to be modernized with the advanced capabilities and concepts including System-Wide Information Management (SWIM), Flight and Flow Information for a Collaborative Environment (FFICE), and Trajectory-Based Operations (TBO). These concepts not only represent opportunities for improving ATFM by leveraging their benefits, but they may also change the way ATFM is operated in the region.

Proposal to Establish an Ad-Hoc Group

2.6 Recognizing both the operational challenges (2.3, 2.4) and the modernization of the operating environment in Asia/Pacific (2.5), a *timely* review of the regional ATFM concept of operations is not just warranted, but crucial. An initiative should be established to review and redesign the concept, with a view that the new Concept of Operations will be able to address the current operational challenges, while also leveraging the benefits from new concepts and technologies, to create a more efficient, effective, and inclusive ATFM operations in the Asia/Pacific region.

¹ Available here: <https://www.icao.int/APAC/Pages/eDocs.aspx>.

² Two most notable ones being the *Asia-Pacific Cross-Border Multi-Nodal ATFM Collaboration (AMNAC)* and the *Northeast Asia Region ATFM Harmonization Group (NARAHG)*.

2.7 Accordingly, the meeting is invited to consider establishing an Asia/Pacific ATFM Concept Design Ad-Hoc Group. The Ad-Hoc Group will be responsible for developing a new Regional ATFM Concept of Operations, considering the challenges of current operations and the advent of new capabilities and concepts in the coming years. The new Concept of Operations will be the primary deliverable of the newly established group, along with recommendations on guiding principles for amendments to related regional documents, including the Regional Framework for Collaborative ATFM. This Ad-Hoc Group will have a tenure of two years for a start to be further reviewed.

2.8 It is proposed that the *Asia/Pacific ATFM Concept Design Ad-Hoc Group* be established under the purview of the ATFM/SG and is staffed by Subject Matter Experts (SMEs) nominated by regional States/Administrations and International Organizations. The nominated SMEs should be knowledgeable and experienced in key subject areas including ATFM, SWIM, FF-ICE/TBO and possess strong familiarity with ATFM operations in the region. Specific knowledge areas of SMEs can be elaborated in the Ad-Hoc Group's Terms of Reference (TOR) to be developed.

2.9 While being under the purview of the ATFM/SG, the proposed Ad-Hoc Group should also coordinate closely with other relevant ICAO regional groups such as the ATFM-IR/SWG, SWIM TF, and the Asia/Pacific FF-ICE Ad-Hoc Group, and other relevant regional efforts working on ATFM concept to ensure alignment.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper,
- b) recognize the need for a review and redesign of the Asia/Pacific regional ATFM concept of operations,
- c) discuss the establishment of the *Asia-Pacific ATFM Concept Design Ad-Hoc Group* to undertake the review and redesign work, and
- d) discuss any relevant matters as appropriate.

Decision ATFM/SG/15-X: Establishment of Asia/Pacific ATFM Concept Design Ad-Hoc Group	
<p>What: That, ATFM/SG establishes the Asia/Pacific ATFM Concept Design Ad-Hoc Group to review and redesign the regional ATFM concept of operations, considering the challenges of the current operations and the advent of new capabilities and concepts including but not limited to SWIM, FF-ICE, TBO. Key deliverable of the Ad-Hoc Group will be the new version of <i>Asia/Pacific Regional ATFM Concept of Operations</i>, guided by the group's Terms of Reference (TOR) to be established.</p>	<p>Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: The current regional ATFM concept of operations has been adopted and implemented for more than ten years. While it has allowed for rapid and widening adoption over the years, increasing ATM complexity, operational limitations encountered, and upcoming advance concepts and capabilities mean that the current</p>	<p>Follow-up: <input type="checkbox"/> Required from States</p>

concept may no longer allow for the most optimum ATFM solution for the region. A review and redesign of the regional ATFM concept of operations can help the region overcome operational challenges while also leveraging the benefits from new concepts and capabilities.	
When: 29-Aug-25	Status: Draft to be adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

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