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Agenda Item 6: ATM Coordination and Implementation

6.1: A-CDM and ATFM

ENHANCING REGIONAL ATFM COORDINATION THROUGH REGIONAL COLLABORATIVE OPERATIONAL MECHANISM (RECOM)

(Presented by China)

SUMMARY

This paper provides information on the Regional Collaborative Operational Mechanism (RECOM), a voluntary initiative developed by participating States and Administrations under the Asia-Pacific ANSP Committee (AAC). It describes the operational rationale, structural concept, implementation experience, and coordination arrangements associated with the initiative. The paper also outlines the potential contribution of RECOM to enhancing regional collaboration and supporting the harmonization of cross-border ATFM operations in the Asia-Pacific Region.

1. INTRODUCTION

1.1 Over the past decade, the Asia-Pacific region has made significant progress in implementing cross-border ATFM operations through several sub-regional collaborative mechanisms, including Asia Pacific Cross Border Multi-Nodal ATFM Collaboration (AMNAC), North Asia Regional ATFM Harmonization Group (NARAHG) and other sub-regional collaborative arrangements. These mechanisms have improved transparency, strengthened operational predictability, and facilitated more harmonized implementation of cross-border ATFM measures.

1.2 Notwithstanding these achievements, the scale and complexity of traffic flows in the Asia-Pacific region (APAC) have continued to evolve. Traffic levels have exceeded pre-pandemic levels, route structures have become denser, and the operational environment has grown increasingly interdependent. As cross-border flights traverse multiple sub-regions and may be subject to ATFM measures issued by various ANSPs, the need for enhanced cross-sub-regional situational awareness and coordination has become more salient.

1.3 In parallel, it is observed that various ATFM-related coordination meetings have gradually increased across the region to cater for discussion of operational topics across different sub-regional collaborative mechanisms. While these mechanisms provide valuable platforms, they may also lead to duplicative efforts and increased coordination burden. There is therefore an opportunity to enhance interaction and information exchange among existing sub-regional collaborative mechanisms through a more open, operationally focused and inclusive regional coordination framework, thereby improving the efficiency of regional collaboration.

1.4 In this context, RECOM as a voluntary initiative by States/Administrations has been proposed to enhance coordination across sub-regional ATFM platforms while preserving existing governance arrangements and respecting the rights of States/Administration to discharge their air navigation services responsibilities.

2. DISCUSSION

Emerging Challenges

2.1 The establishment of ATFM collaboration groups since 2014 represented a major milestone in APAC, enabling the transition from isolated point-to-point coordination toward a distributed, network-oriented operational model. Over time, this approach significantly improved transparency, strengthened the alignment of ATFM measures, and enhanced regional communication.

2.2 However, the operational environment in 2026 reflects a higher level of complexity. Increased traffic density, more long-haul flights, and frequent large-scale weather deviations (LSWD) have created scenarios in which ATFM measures implemented by one ATFM unit may generate cascading impacts across multiple downstream FIRs. Multiple capacity constraints in various FIRs illustrate the systemic interdependence of the regional network.

2.3 While sub-regional mechanisms remain effective within their respective scopes, certain coordination challenges now extend beyond individual sub-regional boundaries. In particular, delayed awareness of upstream measures, duplication of restrictions affecting common traffic flows, and difficulty in aligning implementation timing across coordination clusters may reduce overall network efficiency.

2.4 These developments do not indicate shortcomings in existing mechanisms, rather, they underscore the need for stronger interaction among existing sub-regional collaborative mechanisms amid the ongoing evolution of the regional network, as opposed to the establishment of additional operational structures.

What is RECOM?

2.5 RECOM aims to foster an open, inclusive and collaborative ATFM environment and facilitate the development of a safe and efficient regional ATM network across the Asia-Pacific region. The RECOM concept is guided by several core principles: voluntary participation; full respect for the rights of States/Administrations to carry out their air navigation services responsibilities to make relevant operational decisions; distributed coordination rather than centralized control; transparency of operational information; respect for the independence of existing sub-regional collaborative arrangements; and a pragmatic, operationally driven approach to implementation.

2.6 This initiative is envisaged to provide a regional framework for bringing together relevant operational perspectives and discussions among participating States and Administrations, with a view to strengthening interaction and collaboration across existing sub-regional ATFM arrangements and supporting the development of a more integrated Asia/Pacific ATM network.

2.7 Against the prevailing economic backdrop of the Asia-Pacific region, RECOM may contribute to improving the efficiency of regional ATFM coordination by facilitating more effective interaction and information exchange among existing sub-regional ATFM collaborative arrangements. By providing opportunities for relevant stakeholders to share operational information and coordinate discussions at the regional level, RECOM may help reduce duplication of coordination efforts and associated human and financial resource requirements, while supporting more effective use of existing coordination arrangements.

2.8 As participation and operational experience develop, RECOM may progressively evolve through practical cooperation among participating States and Administrations. This approach allows existing sub-regional collaborative arrangements to retain their respective operational characteristics and responsibilities, while providing opportunities to explore more effective approaches to regional coordination and information sharing in accordance with operational needs.

2.9 At the regional level, RECOM may provide a framework for States and Administrations, through existing sub-regional ATFM collaborative arrangements, to jointly explore operational challenges and potential solutions from the perspective of the wider Asia/Pacific ATM network. By bringing together operational perspectives from different sub-regions, participants may share information on operational bottlenecks, gaps, challenges and existing operational concepts, and jointly examine potential solutions for different operational scenarios. This provides an opportunity for relevant stakeholders to consider regional ATFM challenges collectively, rather than studying and addressing them independently within separate sub-regional arrangements, and may support the identification of more effective solutions for the wider regional network.

2.10 In scenarios involving large-scale rerouting or severe weather deviations, having a broader visibility of the traffic situation in the APAC may enable participating States/Administrations, airlines, and other stakeholders to anticipate capacity impacts beyond their area of responsibility. This harmonized platform would then contribute to improved network resilience and reduced operational uncertainty.

2.11 By providing a framework for coordination across sub-regions, RECOM may also help reduce duplication of restrictions, limit unintended cascading effects of local measures, and improve predictability for airspace users.

APAC TFCC and Regional Operational Coordination

2.12 The Asia/Pacific Traffic Flow Coordination Call (APAC TFCC), established under the framework of the Asia-Pacific ANSP Committee (AAC), as the regional virtual coordination platform for collaborative operational discussions within the Asia/Pacific Region. It provides a platform for participating States/Administrations and other relevant stakeholders to exchange operational information and conduct collaborative discussions in accordance with operational needs.

2.13 APAC TFCC was initially established through weekly coordination calls on 15 September 2025 by ANSPs from China, Hong Kong China and Singapore, with the hosting responsibility rotating among the three participants. Building on operational experience, daily coordination calls commenced on 9 February 2026. Event-triggered coordination calls were also introduced, with the first such call conducted on 30 December 2025.

2.14 APAC TFCC follows a structured agenda covering meteorological information sharing, planned ATFM measures, anticipated network impacts and Post Operations Analysis (POA), thereby supporting information exchange and operational coordination among participants.

2.15 Importantly, these coordination calls also serve as an avenue for all participants to identify the type, level of detail, and timeliness of information that needs to be shared on a routine basis. Through continued operational use, participating States/Administrations and stakeholders can better determine what information is most relevant to support collaborative decision-making, thereby helping participants identify a common set of operational information that could support a shared situational picture and cross-border coordination.

2.16 Participation in the coordination calls has progressively expanded, reflecting practical value perceived by participating States/Administrations. The growth of participation reflects the practical value of routine operational information sharing and coordination among participating stakeholders.

2.17 While current participation primarily involves ANSPs, broader stakeholder engagement may be explored in future phases. Subject to appropriate arrangements, the inclusion of relevant stakeholders such as airspace users could enhance transparency and improve shared situational awareness.

Way Forward

2.18 In the longer term, RECOM may progressively develop from a conceptual framework towards practical regional collaboration through the broader participation of States and Administrations across the Asia/Pacific Region. Broader participation would provide opportunities to share operational experience, challenges and potential solutions from different sub-regional perspectives, and to strengthen collaboration on issues affecting the wider Asia/Pacific ATM network. Participation in RECOM remains voluntary and does not affect existing bilateral or sub-regional coordination arrangements.

2.19 As participation broadens and operational experience accumulates, consideration may be given to developing regular regional coordination arrangements to provide a recurring forum for participating States and Administrations to exchange operational experience, share regional situational awareness, discuss common challenges and explore potential solutions affecting the wider Asia/Pacific ATM network.

2.20 Such arrangements could complement existing bilateral and sub-regional coordination mechanisms by providing a broader regional perspective on operational issues. Where appropriate and agreed by participating stakeholders, opportunities to more effective interaction and reduce duplication of coordination efforts may also be explored, while fully respecting the independence and operational characteristics of existing mechanisms.

2.21 APAC TFCC may continue to support information sharing and collaborative coordination in accordance with operational needs and may provide an established regional platform for the progressive development of regional collaborative ATFM arrangements.

Conclusion

2.22 This paper presents information on the Regional Collaborative Operational Mechanism (RECOM), including its conceptual framework, development to date and potential contribution to regional collaboration in the Asia-Pacific Region. It also introduces APAC TFCC as an established regional operational platform that may support information sharing and coordination among participating stakeholders.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information contained in this paper.

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