



ICAO

*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

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## **Agenda Item 4: Review of Current CDM/ATFM Operations and Problem Areas**

### **NARAHG UPDATE**

(Presented by China, Japan and Republic of Korea)

#### **SUMMARY**

This paper presents the operational and technical progress update of ATFM Collaboration among Northeast Asia Regional ATFM Harmonization Group (NARAHG).

## **1. INTRODUCTION**

- 1.1. NARAHG members have been committed to enhancing cross-border ATFM cooperation in Northeast Asia in accordance with the MOC signed by **China, Japan and Republic of Korea (ROK)**.
- 1.2. **In 2020, under** the guidance of the North Asia Sub-Office of the ICAO APAC, NARAHG has formulated an operation concept unanimously approved by the three states according to the characteristics of Northeast Asia and the needs of China, Japan and ROK for cross-border ATFM.
- 1.3. In keeping with ICAO's strategy, NARAHG places great emphasis on studying ICAO's existing regulations and strives to align with them.
- 1.4. With international traffic declining recently due to pandemic, NARAHG regular meetings have been temporarily suspended since 2020. Currently, only ad-hoc meetings are held for system linkage or collaborative decision-making (CDM).

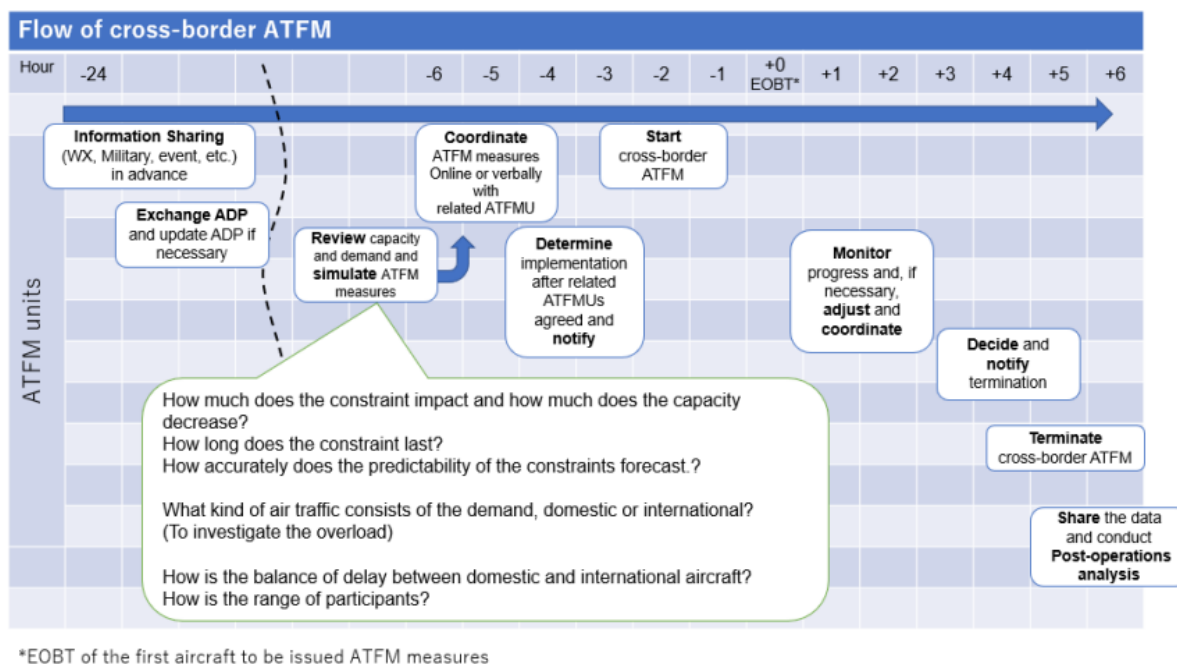
## **2. DISCUSSION**

### Complementing CONOPS

- 2.1 With respect to cross-border ATFM, NARAHG members generally implement MINIT (including conversion into GDP), level capping, or other appropriate measures depending on the actual situation. The traditional method, MINIT, often causes serious problems if large separation is required between aircraft due to sudden weather condition deterioration. Specifically, the impact tends to get significant when the target aircraft passes through

several FIRs or when multiple ATS routes converge into a single route within the downstream FIR.

- 2.2 In order to overcome the limitation of existing ATFM measures, a new conceptual measure using BTO/CTO based on data exchange on the FIR boundary was introduced as an operation concept given that NARAHG members have relatively large scale of FIRs.)



- 2.3 NARAHG members are currently studying the specific procedures of operation such as detailed common operational procedure, connection to other sub-region in APAC and etc.

#### ATFMS connection among NARAHG

- 2.4 Previously, due to the absence of ATFM system connection among the members, there is a limit to accurately predict a traffic demand from adjacent FIRs. To solve this problem and to carry out ATFM based on real-time flight data, NARAHG is linking its own ATFM systems one another.
- 2.5 By this way, three independent ATFM units can obtain the scope and data interaction of central ATFM system without establishing a centralized system. Through the automatically updated ETO time from upstream ATFM units, downstream ATFM unit can obtain more accurate inbound flight information and evaluate the need for ATFM measures through their own ATFMS.
- 2.6 In September 2021, China and Japan achieved data connection between ATFM systems via CRV network. It has been successfully helping them to create common situation awareness and enlarge the scope of inbound traffic flow monitor range. Furthermore, China and Japan started exchanging Aircraft Position Information and PTV (Predict Traffic Volume Message) test data in April 2022. Both States are in the process of examining whether data is being sent and received in accordance with the criteria.

- 2.7 China and ROK are cooperating to use CRACP (Cross Region ATFM Collaborative Platform) to transfer real operation data via CRV network temporarily until the NARAHG' ATFMS are completely connected in 2022.
- 2.8 When the ATFM connection is completed including ROK, BTO/CTO based ATFM will be operated through dynamic ATFM information exchange. Exchanging the latest ETO on FIR boundary of cross-border aircraft improves the accuracy of demand prediction in its FIR and, at the same time, establishes common situational awareness among the members.

#### Interoperability in APAC Region

- 2.9 In particular, ROK and Japan are working closely with other States/Administrations in APAC region as follows:
- a. ADP exchange
  - b. Monthly GDP operational trial with EATMCG members
  - c. Participation in bi-weekly meeting for update of APAC ATFM status
  - d. For Republic of Korea, considering joining AMANC group to strengthen cross-border ATFM cooperation with Southeast Asia
- 2.10 Based on the experience of CTOT trials with other States, Japan and ROK recognized the need to consider the combine CTO and CTOT and plan to study this together.

### **3. ACTION BY THE MEETING**

- 3.1 The meeting is invited to:
- a) note the information contained in this paper; and
  - b) discuss any relevant matters as appropriate.

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