INTERNATIONAL CIVIL AVIATION ORGANIZATION

TWENTY EIGHTH MEETING OF THE ASIA/PACIFIC AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (APANPIRG/28)

Bangkok, Thailand, 11 to 14 September 2017

Agenda Item 3: **Performance Framework for Regional Air Navigation Planning and Implementation**

3.2: **ATM**

AIR TRAFFIC GROWTH IN ASIA-PACIFIC AND THE ROLE OF AIR TRAFFIC FLOW MANAGEMENT

(Presented by Hong Kong, China)

SUMMARY

This Paper presents the phenomenal growth in overflight traffic through the Hong Kong FIR in recent years and the operational difficulties imposed by its geographical location in relation to the 2 main Air Traffic Flow Management (ATFM) development groups in the Region.

The Paper highlights the issue that any divergence in the approach to ATFM information and interconnectivity will cause operational complexity and inefficiency and urges harmonization into a single network across the Asia/Pacific (APAC) Region, in line with the ICAO APAC Framework for collaborative ATFM and Seamless ATM Plan Phase II.

Strategic Objective:

B: ***Air Navigation Capacity and Efficiency****—Increase the capacity and improve the efficiency of the global aviation system*

1. INTRODUCTION

1.1 Notwithstanding industry forecasts of modest to strong single digit fleet growth in the Asia Pacific Region over the longer term, more recent statistics for air traffic transiting the Hong Kong FIR are showing growth significantly beyond forecast expectation.

1.2 While traffic growth at Hong Kong International Airport (HKIA) has been relatively modest, overflight traffic transiting the Hong Kong FIR showed phenomenal growth rates of 10%, 14% and 16% over the last 3 years respectively, resulting in a compounding growth rate of over 45% since 2014. Overflight numbers are now approaching 1,000 per day through the relatively small FIR.

1.3 Despite diligent strategic ATM resource planning, implementation of advanced systems and procedures and rigorous training programs, coping with such exceptional growth rates and increasingly frequent en-route restrictions is proving to be extremely challenging from the pre-tactical and tactical operational perspective.

1.4 This effect appears to be widespread throughout the APAC Regions, manifesting itself in exponentially increasing network delays, regular schedule slippage with consequent wastage of runway slots and, on occasion, close to gridlock conditions at affected airports.

1.5 As one of the 10 Regional Priorities and Targets under the APAC Seamless ATM Plan, Network-based Air Traffic Flow Management (ATFM) Operations must be urgently pursued as one of the most critical enablers of sustainable growth within the region.

2. DISCUSSION

2.1 Hong Kong, China has jointly pioneered and supported the development and trialing of the distributed multi-nodal ATFM network, which is a core concept of the APAC Framework for Collaborative ATFM as agreed by States under the ICAO APAC ATFM Steering Group.

2.2 Given its geographical location at the confluence of several of the region's major air routes and the passage of some of the busiest city pair routes, Hong Kong, China finds itself midstream between the predominantly South-East Asian Multi-Nodal ATFM Group and the Northeast Asia Regional ATFM Harmonization Group (NARAHG).

2.3 Divergence between the approaches adopted by the 2 collaborative Groups on application of ATFM measures is evident and there is a need for alignment of these applications so as to ensure more efficient ATM operations and minimize wastage of valuable airspace capacity across the Region.

2.4 Hong Kong, China acknowledges the vastly increased benefits of Ground Delay Programs (GDP) over traditional ATFM measures in terms of predictability and stakeholders' operational planning capability. Increased predictability is the key to efficient network operations.

2.5 From an airport Demand and Capacity Balancing perspective, the application of ATFM measures at HKIA in different forms e.g. GDP, Minutes-in-Trail, Minimum Departure Intervals, to different sub-regions, though not highly desirable, is still manageable and unavoidable due to reasons stated in paragraphs 2.2 and 2.3 above. However, from the rapidly growing number of overflights perspective, many of them are subject to en-route restrictions or airspace constraints, such a hybrid of ATFM measures becomes extremely complex to determine and monitor. The difficulty in sourcing accurate and up to date overflight schedule data, which also lacks anticipated routing information, makes the application of multiple forms of ATFM measures simultaneously within a flow of traffic problematic and ineffective, and often leads to extensive delays in upstream ANSPs.

2.6 It is therefore crucial that harmonization of ATFM-related information and interconnectivity into a single network is achieved as soon as practicable so as to facilitate a holistic solution to traffic management within the Region.

2.7 The ICAO APAC Framework for Collaborative ATFM has targeted 8 November 2018 for implementation of Phase II ATFM capability, in alignment with the Seamless ATM Plan Phase II.

2.8 While this date is a planning target and not binding on States, it is highly desirable that harmonization of ATFM-related information and interconnectivity are achieved by this date, at least by the two main ATFM collaborative groups.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

a) Note the contents of this paper;

b) work towards harmonization of ATFM-related information and achieve interconnectivity according to the ICAO APAC Framework for collaborative ATFM; and

c) discuss and consider appropriate action.

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