55th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS

Denarau Island, Nadi, Fiji
22 — 26 October 2018

AGENDA ITEM 4:   AIR NAVIGATION

NARAHG UPDATE

Presented by the People's Republic of China

SUMMARY

This paper describes the specific work and plans of China in the joint development and deployment of the Cross Regional ATFM Collaborative Platform (CRACP) with Japan and Republic of Korea in recent years. And put forward specific suggestions for the synergy and cooperation of the cross regional ATFM collaborative operation to promote the operation of Northeast Asia and the entire Asia-Pacific civil aviation.

NARAHG UPDATE

1.   **INTRODUCTION**

1.1   In 2015, China, Japan and Korea signed a memorandum of cooperation at the third meeting of the Northeast Asia Regional ATFM Harmonization Group, officially opening up the three countries' cross-regional traffic management cooperation in Northeast Asia. In order to properly cope with the challenges of increasing cross-regional flights to countries, China has proposed the construction of a "Cross Regional ATFM Collaborative Platform" (CRACP), which aims to seamless connect different ATFM systems to achieve pre-tactical coordination, sharing of common situation awareness and tactical operation of cross region flights between three countries through. After obtaining the unanimous consent of Japan and ROK, the three countries established a joint working group, and the Civil Aviation Administration of China quickly approved special funds for research and development, testing and deployment.

1.2   In 2016, China and Japan launched the "ATFM Daily Plan" (ADP) exchange verification work between Shanghai ATCC and Fukuoka ATMC, and copied to ROK daily. This move provides practical experience for the three countries' ATFM units to design and establish cross-regional pre-tactical traffic management and cross-regional traffic management coordination procedures. On this basis, the operation requirements and interface protocols of CRACP are improved.

1.3   In January 2017, China, Japan and Korea conducted a human in the loop test of the CRACP at the fifth meeting of NARAHG. All states agreed in March to substantially initiate the CRACP deployment. At the end of March, China and Japan signed an ATFM LOA. This is the first ATFM LOA between two neighboring countries in the Asia-Pacific region. On the day of the first flight of the C919 on May 7, Japan and ROK accurately implemented the GDP of the Pudong landing flight based on the ADP information, ensuring a balance between airspace capacity and operational efficiency.

1.4   In February 2018, China and Japan implemented on-site installation and networking testing of the CRACP client. In April, ROK completed the installation test of CRACP in new build air traffic command center in Daegu. A trial run of CRACP alternative emails is underway between Shanghai-Fukuoka and Fukuoka-Daegu. After that, the three countries will try to digitally release the traffic management restrictions through the platform.

1.5   At present, the implementation of CRACP in China, Japan and ROK is in the first stage. The main purpose is to realize the practical application of ADP exchange and traffic management restriction information release. In the second phase of 2020, the three countries will use dedicated lines for client interconnection and real-time sharing of cross-regional flight operations information. In the third stage, the three countries will directly use the ATFM system to achieve seamless cross regional flight dynamic information and traffic management coordination information through the same interface protocol.

1.6   The operational concept of the China-Japan-ROK CRACP platform is similar to that of multiple nodes, but countries have absolute autonomy in their own FIR. The restrictions from other FIR will "stay" on the handover points only. Each FIR will calculate the departure time by their ATFM systems to relay the demand of restriction.

1.7   The CRACP platform has the ability to interface with similar operating platforms.

2.   DISCUSSION

2.1   With the continuous increase of flight volume, the Asia-Pacific region is actively exploring the establishment of a unified cross-regional traffic management operation framework. We believe this is a necessary task. However, based on the experience of the CRACP project in China, Japan and ROK, we recognized that the finalization of an operational framework for the Asia-Pacific operation requires an ongoing process. The ATFM operation is a complicated and arduous task for every country and region. The differences in different regions of the Asia-Pacific region are bound to have special cases that apply only to local regions. "Practice is the only sign of truth testing." To this end, we recommend that ICAO continue to optimize the operational framework for the Asia-Pacific region based on actual experience.

2.2   Cross regional ATFM collaboration is the integration of existing ATFM systems in various regions of the country, so the process of continuous optimization is relatively long. Long-term and effective support is needed from countries and regions. At present, the research and practice partnership established between China, Japan and ROK is healthy and effective. With the continuous advancement of work, we hope relevant parties will continue to strengthen their support for this work, and jointly summarize and refine the practical experience to continuously update the operational standards applicable to cross regional ATFM, and upgrade relevant operation system and network.

2.3   The existing CRACP platform has certain simulation and experimental functions. We hope to conduct more joint experiments for future operations on this basis and form a cross region test mechanism as soon as possible to provide more reasonable operational procedures and coordination procedures for relevant operating units in different states and administrations.

3.   ACTION BY THE CONFERENCE

3.1   The Conference is invited to:

a)   Discuss and establish an update mechanism for the Asia-Pacific cross region ATFM operational framework;

b)   Make full use of existing platforms to organize countries and regions for a variety of useful explorations and experiments.

— END —