



ICAO

*International Civil Aviation Organization***Twenty Fourth Meeting of the Communications/
Navigation and Surveillance Sub-group (CNS SG/24) of
APANPIRG**

Web-conference, 30 November – 4 December 2020

Agenda Item 8: Review and updates

8.2 National ANP and elements related to CNS; and

**REINFORCEMENT OF CNS CAPABILITY AROUND FUKUE-AKARA CORRIDOR
AREA IN INCHEON FIR**

(Presented by Republic of Korea)

SUMMARY

This paper presents the endeavor to reinforce CNS capability around Fukue-AKARA Corridor area which was identified as one of Large Height Deviation (LHD) hot spot in APAC Region.

1. INTRODUCTION

1.1 ATMO (Air Traffic Management Office) of MOLIT (Ministry Of Land, Infrastructure and Transport), the Republic of Korea (ROK) has been made an endeavor to build up safe air traffic environment with an efficient air traffic control system by operating two ACCs (Area Control Center) which divide Incheon Flight Information Region (FIR) into East & West sections.

1.2 The Fukue-AKARA Corridor (hereinafter referred to as “the Corridor”), located in the southern part of the Incheon FIR, is recognized as one of the most traffic volume areas in the Asia-Pacific region in conjunction with the region’s identification as LHD Hot Spot at the 20th Meeting of the APAC Regional Airspace Safety Monitoring Advisory Group (RASMAG/20) (Bangkok, Thailand, 25-29 May 2015).

1.3 Mindful of the need for coordination between States concerned in order to identify optimum solutions to address safety and efficiency issues in accordance with relevant ICAO Standards, procedures and policy, the Technical Working Group (TWG) was formed with technical experts designated by States Concerned.

1.4 The negotiations between States concerned stalled due to the sudden outbreak of the coronavirus disease, however, consultations were resumed in writing and video teleconference since May this year on detailed technical items requiring dialogues. In this regard, this paper presents the Republic of Korea’s (ROK) endeavor to reinforce CNS system around the Corridor area in support of addressing safety and efficiency issues in the said area.

Agenda Item 8.2

30/11/20 – 04/12/20

2. DISCUSSION

2.1 ***New Installation of U/VHF Equipment.*** ATMO has been installing up-to-date U/VHF radio equipment on the highland of Mt. Halla in southern part of Jeju Island so as to make stable communication performance over the Corridor area, which enables improving transmission and reception between pilot and ATCO. This reinforcement of communication aims to build up practically safe air traffic service circumstance in the southern part of Incheon FIR with improved performance and up-to-date function.

2.2 ***Installation of DSC between Shanghai ACC and Incheon ACC.*** ATMB of China and ATMO of ROK have completed the installation of Direct Speech Circuit (DSC) for the ATC coordination between Shanghai ACC and Incheon ACC this year. Both sides agreed to use direct speech circuit (DSC) as an official method of ATC coordination from the end of November this year.

2.3 ***New installation of Radar (ARSR/SSR) on highland of Mt. Halla.*** – In order to provide stable and safe air traffic surveillance system in the southern part of Incheon FIR, new installation of radar system is in progress. Installment of the newest air route surveillance radar could solve the blind area in the southern part of Incheon FIR and upgrade detection performance. As a result, new ARSR/SRR is expected to expand the coverage of detection.

2.3.1 ***Installation of primary surveillance radar (Air Route Surveillance Radar/ARSR).*** In preparation for regular maintenance and contingency situation, the additional installation of up-to-date primary surveillance radar is in progress, and is expected to strengthen monitoring performance of the trajectory in the southern part of Incheon FIR.

2.3.2 ***Installation of secondary surveillance radar (SSR).*** ATMO has been modernizing surveillance system by installing the state-of-the-art SSR with ICT functions on optimum location (highland of Mt. Halla) in replacement of the existing SSR in the southern part of Incheon FIR.

2.4 ***ADS-B Establishment and Implementation.*** With the completion of ADS-B establishment in all areas of Incheon FIR on May 20, 2020, the SCAN cycle of the air route radar used by Incheon ACC was shortened from 5 to 12 seconds to 4 seconds. The radar display method used by Incheon ACC is a fusion of en-route radar and ADS-B data. The shorter monitoring cycle with the ADS-B has allowed ATCO to identify more accurate data blocks and significantly improved blind area.

3. CONCLUSION

3.1 ATMO is dedicated to making an effort to strengthen and maintain the safe environment around the Corridor area by providing reliable CNS system through the cross-border cooperation with neighboring countries. While the current pandemic has temporarily reduced the air traffic volume, safety concern may resurge at any time with the expected increase of traffic in the future. As such, ATMO would do the best performance in preparation for resilience of air traffic volume when CONID19 passed.

4. ACTION BY THE MEETING

4.1 The meeting is invited to:

- a) Note the information contained in this paper.
