International Civil Aviation Organization

Twenty-Eighth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/28)

Bangkok, Thailand, 21 – 24 August 2023

Agenda Item 3: Reports from Asia/Pacific RMAs and EMAs

JASMA AKARA SAFETY IMPROVEMENT UPDATE

(Presented by JASMA)

SUMMARY

This paper presents progress and updates of the safety improvement plan for the AKARA FUKUE corridor airspace.

1. INTRODUCTION

1.1 In 1983, International Civil Aviation Organization (ICAO) requested China, Japan and the Republic of Korea (ROK) to establish a direct route between Fukue, Japan and Shanghai, China through the ROK airspace (known as “AKARA FUKUE corridor” thereafter).

1.2 Under the 1983 AKARA FUKUE corridor arrangement, Japan and China shared air traffic control (ATC) responsibilities in the ROK airspace on a limited number of flight levels (FL) of 240, 280 and 390 for westbound, and 250, 290 and 410 for eastbound. In 2007, the FL allocation scheme (FLAS) was changed to the current FL240, 280, 300 and 400 for the westbound, and FL250, 290, 310 and 390 for the eastbound. Other FLs are retained for use by ROK.

1.3 China, Japan and ROK agreed to an improvement plan of the AKARA FUKUE corridor airspace with a phased approach in December 2020, and the plan was summarized as a consensus document. Then the consensus document was reported to the ICAO Headquarters for its endorsement. Under the agreement, Incheon Area Control Center (ACC) had ATC responsibility in the whole Incheon airspace by being dissolved the former special ATC operation for AKARA FUKUE corridor, and a pair of uni-directional routes were established from 25 March 2021 between Japan and ROK (Phase 1).

1.4 The uni-directional routes were supposed to be extended into the Chinese airspace two months later (Phase 2). However, Phase 2 has not been realized yet, pending the agreement between China and ROK.

2. DISCUSSION

Phase 1 Implementation

2.1 **Figure 1** shows the current status of Air Traffic Service (ATS) route structure in Phase 1, which has been implemented since 25 March 2021.

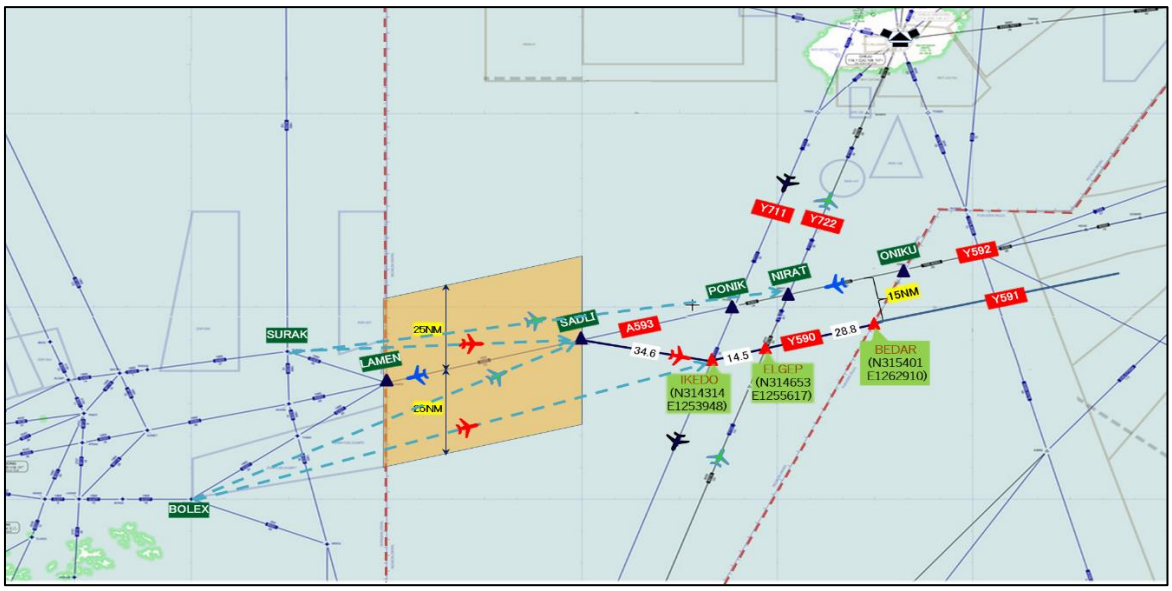

Figure 1: ATS route structure of AKARA FUKUE corridor in Phase 1

2.2 A new southern RNAV2 route, Y590, is established between SADLI and BEDAR in the Incheon Flight Information Region (FIR) and is used only for eastbound traffic from China to Japan. Broken lines in the light blue mean flight routes expected via radar vector.

2.3 ATC responsibility of A593 between ONIKU and SADLI has been transferred from Japan to ROK, from Fukuoka ACC to Incheon ACC since Phase 1. On the other hand, FLAS, a special and unique altitude operation restricted to four FLs eastward and westward, respectively, remains after the Phase 1 implementation.

2.4 **Figure 2** shows FLAS operation in the AKARA FUKUE corridor airspace, eastbound flights operate on FL250, FL290, FL310, and FL390 and westbound flights operate on FL240, FL280, FL300, and FL400.

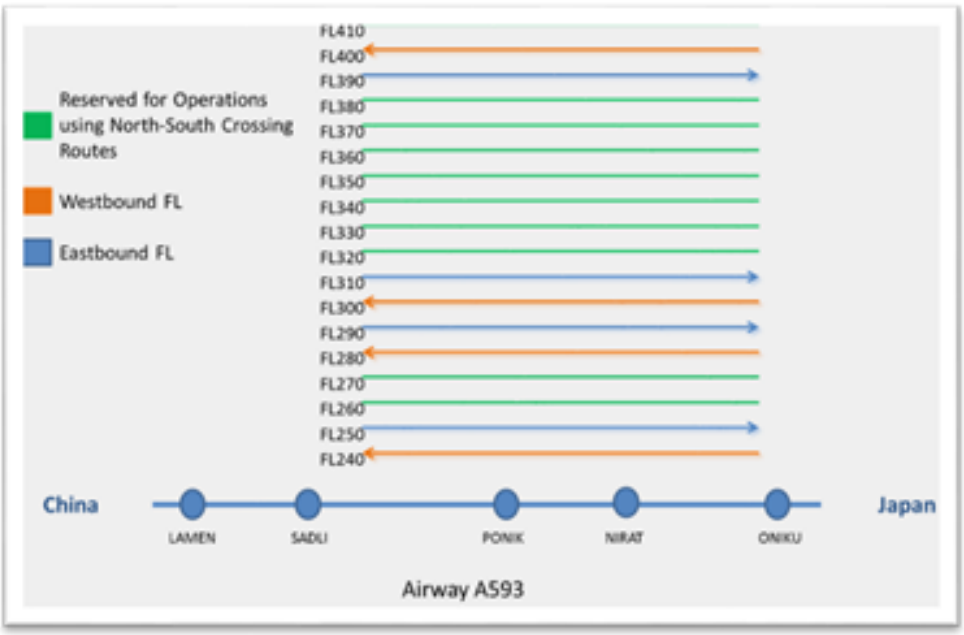

Figure 2: FLAS in AKARA FUKUE corridor

Phase 2 Consideration

2.5 **Figure 3** shows the expected ATS route structure in Phase 2. A new northern RNAV2 route will be established between SURAK and VELVA. The southern RNAV2 route will be stretched to BOLEX, and two new routes will be established to connect the northern RNAV2 route and the southern RNAV2 route.

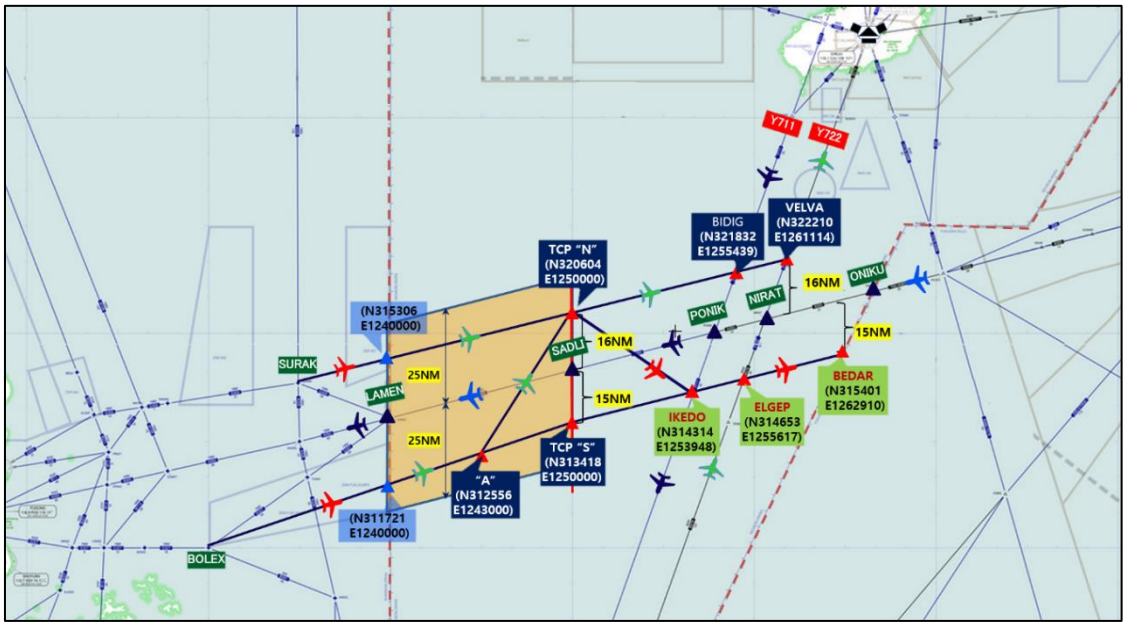

Figure 3: ATS route structure of AKARA ¬ FUKUE corridor in Phase 2

2.6 The transition from Phase 1 to Phase 2 has been discussed between China and ROK. However, the latest and rescheduled transition date is not determined as of July 2023.

Discussion at ATM/SG/10

2.7 At the Tenth Meeting of the Air Traffic Management Sub-Group (ATM/SG/10) in October 2022, Japan presented that Japan and ROK had conducted a bilateral discussion on the use of non-FLAS FLs, which would provide more preferred and efficient operation to aircraft operators and contribute to decreasing the technical risk estimates.

2.8 It was also informed that Japan and ROK agreed, in the interim, through the discussion that Fukuoka ACC and Incheon ACC conducted altitude coordination positively to assign non-FLAS FL for aircraft desiring it if the altitude was not assigned to other aircraft.

2.9 Japan showed the data and graphs that the number and percentage of non-FLAS FL usage of westbound, especially FL320, FL340, FL360 and FL380, had significantly increased to a maximum of 25% through the positive coordination between Fukuoka ACC and Incheon ACC.

2.10 ROK mentioned that ROK would work closely with China and Japan to improve the situation regardless of the Phase 2 implementation delay, including:

- Efficient FLAS operation: formulating measures and discussion with Japan;
- AIDC implementation: with Shanghai ACC targeted by 3Q 2023; and
- Reducing longitudinal separation minima: 10 minutes (currently with Shanghai ACC).

2.11 ICAO mentioned that since Phase 2 had been delayed, ICAO would like to support the initiatives such as efficient FLAS operation, AIDC implementation between Incheon ACC and Shanghai ACC, and longitudinal separation minima improvement between Incheon ACC and Shanghai ACC.

2.12 Japan and ROK agreed to discuss further efficient FLAS operation for achieving the next target of 50% of non-FLAS usage at the ATM/SG/10 meeting.

Japan-Korea Aviation Cooperation Conference

2.13 The Japan-Korea Aviation Cooperation Conference, which is a high-level meeting between the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan and the Ministry of Land, Infrastructure and Transport (MOLIT) of ROK, was held at Jeju Island on 11 to 12 May 2023. **Figure 4** shows a part of the Memorandum of Cooperation (MOC), which was agreed and signed between delegates of Japan and ROK.

3. **Air Navigation Capacity and Efficiency**

a. Cooperate on improving the air traffic flow and capacity between the two countries to ensure safe and efficient operation corresponding to the growth in traffic volume

b. Share policies on air navigation aids including satellite systems

Figure 4: Excerpt of MOC between Japan and ROK

2.14 The objective airspace of “Cooperate on improving the air traffic flow and capacity” includes the AKARA FUKUE corridor airspace. Therefore, it was confirmed that Japan and ROK would continue working on improving safety and efficiency in the corridor airspace at the conference.

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.

…….