International Civil Aviation Organization

The Ninth Meeting of the APANPIRG ATM Sub-Group (ATM/SG/9)

Video Teleconference, 01 – 05 November 2021

Agenda Item 6: ATM Coordination (Meetings, Route Development, Contingency Planning)

CONSIDERATION ON FLAS ELIMINATION IN AKARA CORRIDOR

(Presented by Japan)

SUMMARY

This paper presents updates of safety improvement, and progress and proposals of the Flight Level Allocation Scheme (FLAS) elimination in the AKARA – FUKUE Corridor airspace for meeting's consideration.

1. INTRODUCTION

1.1 China, Japan and the Republic of Korea (ROK) held online meetings to discuss the improvement plan of the AKARA – FUKUE Corridor in November and December 2020. Three States agreed to conduct the improvement plan with a phased approach. The plan reported to the ICAO Headquarters was endorsed on 25 December 2020.

2. DISCUSSION

Phase 1 implementation

2.1 Phase 1 has been implemented since 25 March 2021, and Phase 1 is the current status. **Figure 1** shows the ATS route structure of Phase 1.

2.2 A new southern RNAV2 route, Y590, is established between SADLI and BEDAR and used for only eastbound traffic from China to Japan. Broken lines in the light blue mean flight routes expected RADAR vector.

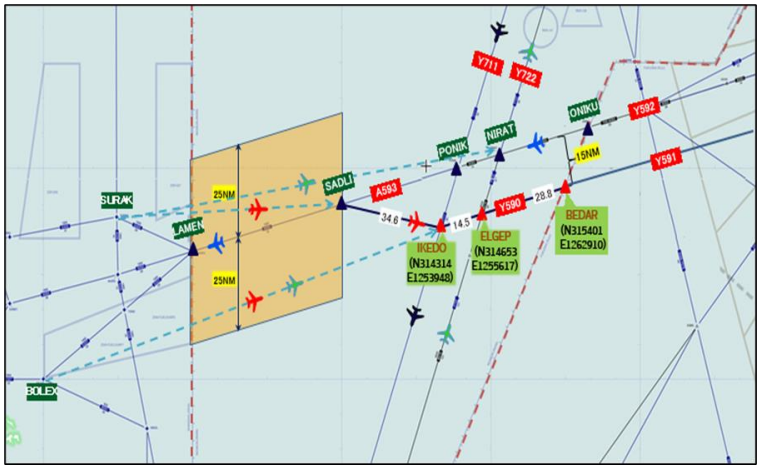

Figure 1: ATS route structure of Phase 1

2.3 Air Traffic Control (ATC) responsibility of A593 between ONIKU and SADLI has been taken over from Japan to ROK, from Fukuoka Area Control Center (ACC) to Incheon ACC since Phase 1. On the other hand, the Flight Level Allocation Scheme (FLAS), a special and unique altitude operation restricted to four flight levels (FL) to eastward and westward, respectively, remains after implementing Phase 1.

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

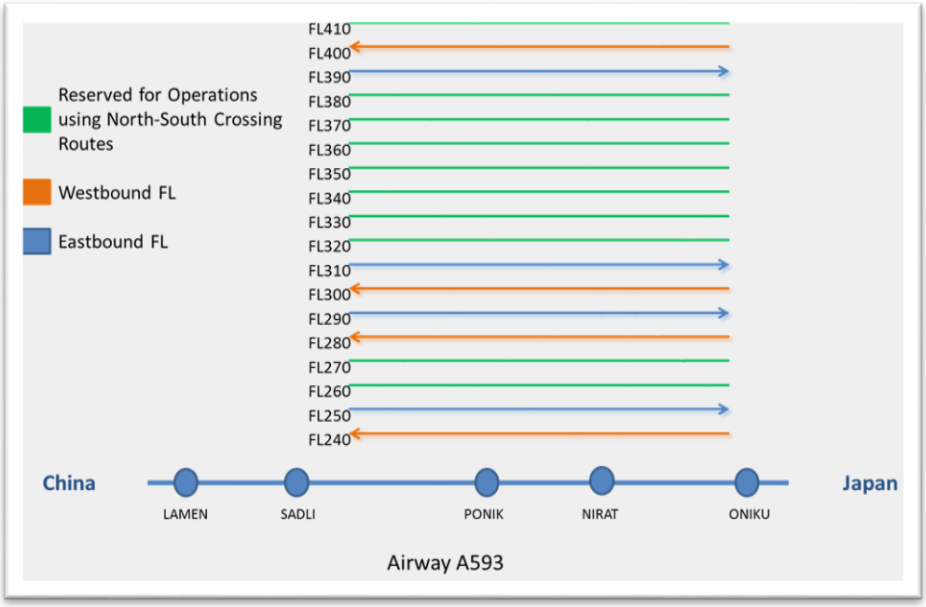

Figure 2: Flight Level Allocation Scheme (FLAS) in the AKARA Corridor airspace

Phase 2 plan and progress

2.5 **Figure 3** shows the ATS route structure of 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.

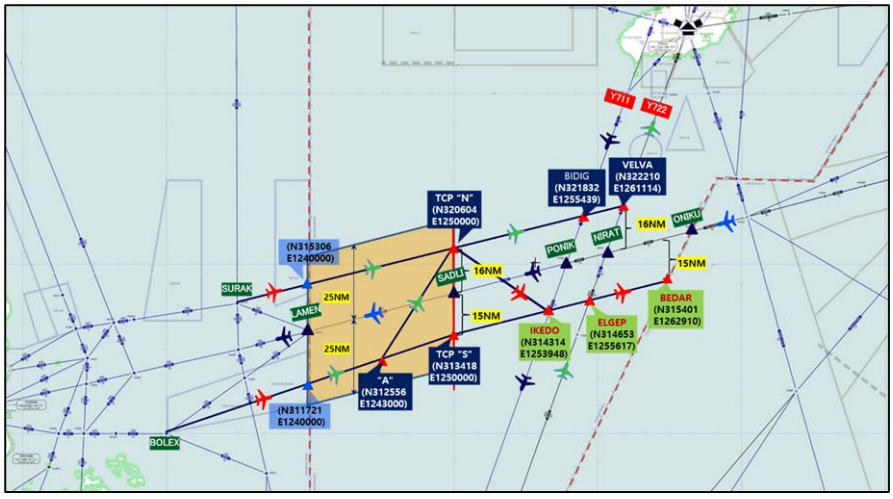

Figure 3: ATS route structure for Phase 2

2.6 The transition from Phase 1 to Phase 2 has been discussed between China and ROK. However, the transition date is not determined as of September 2021.

Consideration on the FLAS elimination

2.7 The Japan Airspace Safety Monitoring Agency (JASMA) proposed to consider the elimination of FLAS in the AKARA corridor airspace based on the safety assessment of the result of fast-time simulation that eliminating FLAS would further decrease the estimated collision risk in the airspace at the RASMAG/26 meeting.

2.8 The Republic of Korea (ROK) reminded of the performance expectations in paragraph 7.35 of the Asia/Pacific Seamless ANS Plan. ROK stated that the Seamless ANS Plan was supporting the retention of FLAS in Category S airspace for safety and efficiency reasons where crossing track conflictions occurred within 50NM of the FIR boundary and ATS surveillance coverage did not overlap the FIR boundary concerned.

7.35 Priority for FLAS level allocations should be given to higher density ATS routes over lower density ATS routes. FLAS should comply with Annex 2, Appendix 3a unless part of an OTS. FLAS other than OTS should only be utilised for safety and efficiency reasons within:

a) Category R airspace with the agreement of all ANSPs that provide services:
- within the airspace concerned; and
- within adjacent airspace which is affected by the FLAS; or

b) Category S airspace with the agreement of all ANSPs that provide services:
- where crossing track conflictions occur within 50NM of the FIRB; and
- ATS surveillance coverage does not overlap the FIRB concerned, or ATS surveillance data is not exchanged between the ATC units concerned.

Figure 4: Paragraph 7.35 of the Asia/Pacific Seamless ANS Plan V3.0

2.9 The RASMAG chairperson proposed holding the breakout session to discuss FLAS elimination and relevant matters, attended by China, Japan and ROK, together with observers from other States and International Organizations. **Figure 5** shows a part of the discussion at the breakout session quoted from the final report of RASMAG/26.

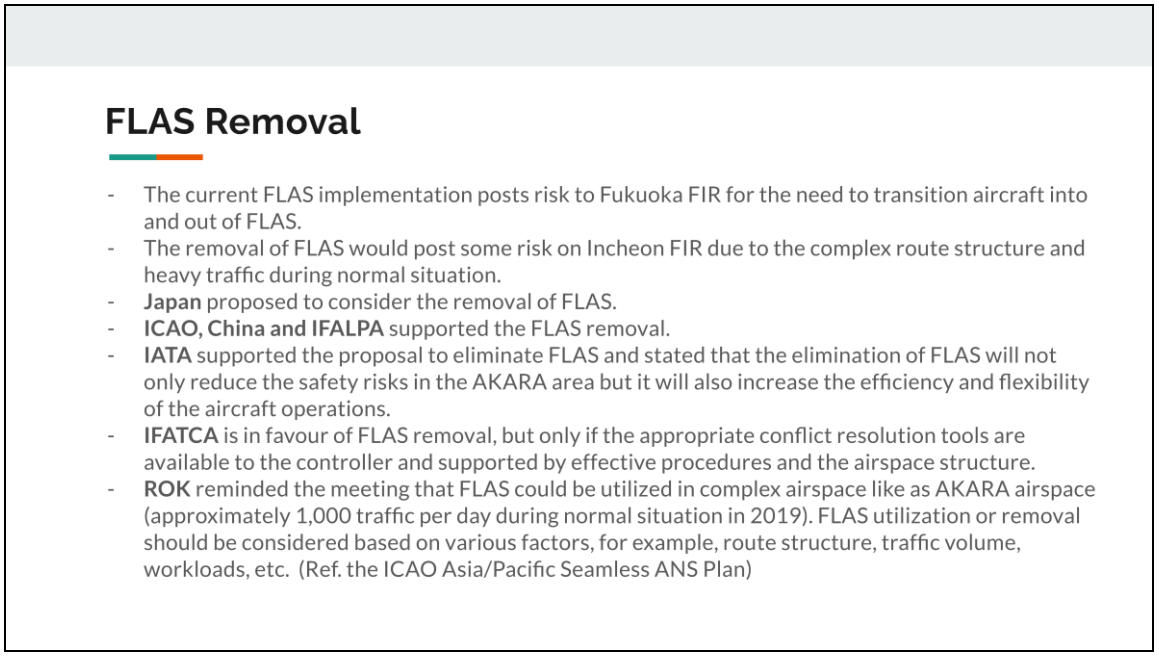

Figure 5: Discussion for FLAS Removal at the RASMAG/26 breakout session

2.10 As a side note, there are similar intersection points within Fukuoka FIR too. Those points exist very close to the edge of the AKARA corridor airspace, the FIR boundary between Fukuoka FIR and Incheon FIR. Japan never implements FLAS at the crossing points since changing altitude from/to the FLAS altitude is believed to cause increasing ATC workload and decreasing safety and efficiency of aircraft operators. Besides, the ATS surveillance capability of Fukuoka ACC well covers around the FIR boundary between Fukuoka FIR and Incheon FIR.

2.11 This may be the case with ROK, which presented at the previous ATM/SG meeting that the ADS-B establishment (in addition to the radar cover) in all areas of Incheon FIR was completed on 20 May 2020 and ADS-B allowed air traffic controllers to identify more accurate data blocks and significantly improved blind area.

2.12 Japan kindly requests ICAO to consider the following actions.

a. Looking into how the ATS surveillance capability of Incheon ACC covers the AKARA corridor airspace

b. Reporting the findings with ICAO's view whether the AKARA corridor airspace is the case with paragraph 7.35 b) of the Seamless ANS Plan or justified for the use of FLAS

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.