International Civil Aviation Organization

Tenth Meeting of the Air Traffic Management Sub-Group (ATM/SG/10) of APANPIRG

Video Teleconference, 17 – 21 October 2022

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

CONSIDERATION OF AIRSPACE ESTABLISHED ON SHORT NOTICE

(Presented by Japan)

SUMMARY

This paper presents the impact of Air Traffic Management and Air Traffic Control operations, which were caused by airspace establishment on short notice (e.g., rocket launch/re-entry areas, military exercises).

1. INTRODUCTION

1.1 At the Ninth meeting of the Air Traffic Management Sub-Group (ATM/SG/9), it was reminded by the International Air Transport Association (IATA) that the ICAO Doc 10066 Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM) procedure required that NOTAMs for Danger Area activation shall be published for all affected Flight Information Regions (FIRs) with at least 7 days' advance notice.

1.2 IATA also stated at the meeting that it was critical where any temporary Special Use Airspace (SUA) extended into other FIRs, NOTAMs were published by all FIRs, with the seven days advance notice as it was required in the PANS-AIM procedure.

2. DISCUSSION

Danger areas in NOPAC

2.1 Danger areas have been established continuously in the Pacific Ocean airspace of Fukuoka FIR and/or Anchorage FIR. **Table 1** shows a summary of the establishment of the Danger areas which shows cases that the Danger areas affected the North Pacific (NOPAC) routes in Anchorage FIR and Fukuoka FIR in 2022. Highlighted cells were Danger areas that were informed to Japan on short notice, less than 7 days prior.

	Date of obtaining information	Term of airspace use	Location
1	26 FEB 2022	From 5 MAR 2022 to 16 MAR 2022	Around NUBDA on R220 (Fukuoka FIR)
2	27 MAR 2022	From 29 MAR 2022 to 31 MAR 2022	Anchorage Oceanic FIR
3	5 APR 2022	From 9 APR 2022 to 11 APR 2022	Anchorage Oceanic FIR
4	5 MAY 2022	From 9 MAY 2022 to 11 MAY 2022	Anchorage Oceanic FIR

	Date of obtaining information	Term of airspace use	Location
5	30 MAY 2022	From 6 JUN 2022 to 15 JUN 2022	Around POXED on A590 (Fukuoka FIR)
6	1 JUL 2022	From 6 JUL 2022 to 8 JUL 2022	Anchorage Oceanic FIR
7	5 AUG 2022	From 16 AUG 2022 to 22 AUG 2022	Around NOGAL on R220 (Fukuoka FIR)
8	12 AUG 2022	From 17 AUG 2022 to 19 AUG 2022	Anchorage Oceanic FIR
9	12 AUG 2022	From 21 AUG 2022 to 27 AUG 2022	Around POXED on A590 (Fukuoka FIR)
10	1 SEP 2022	From 6 SEP 2022 to 8 SEP 2022	Anchorage Oceanic FIR

Table 1: Summary of the establishment of the Danger areas in 2022

2.2 Since most Danger areas were overlapping with NOPAC routes, the Anchorage Air Route Traffic Control Center (ARTCC) and the Fukuoka Air Traffic Management Center (ATMC) needed to coordinate closely with each other for establishing alternative routes to avoid the Danger areas.

2.3 Additionally, Anchorage ARTCC and Fukuoka ATMC were required to consider cautiously establishment of the Pacific Organized Track System (PACOTS) and restrictions of the User Preferred Routes (UPRs) due to the Danger Areas as well.

2.4 Fukuoka ATMC had some difficulty in coordination with Anchorage ARTCC due to the time difference interference, especially weekends since the most Danger areas were informed on short notice.

Airspace restrictions in Taibei FIR

2.5 It was informed by NOTAMs that airspace restrictions were established mainly in Taibei FIR and partially in Shanghai and Manila FIRs at the beginning of August 2022. Although the airspace restrictions would be activated from 0400 UTC on 4 August 2022, Japan realized the NOTAMs on 3 August 2022, approximately one day prior to the effective date and time.

2.6 **Figure 1** shows the airspace restrictions, which would affect a significant impact on major international ATS routes such as A1 and M750, which are mainstream air traffic flow between Japan and Southeast Asia.

Figure 1: Airspace restrictions in Taibei FIR

2.7 Numerous flights were planned and were flying unusual routes to avoid airspace restrictions, and those flights caused irregular traffic flow and congestion in the specific sector of the Fukuoka Area Control Center (ACC).

2.8 Although the congestion of numerous flights flying unusual routes made Fukuoka ACC's ATC operation so complicated, Fukuoka ACC managed to deal with the remarkable traffic volume and flow by conducting close and careful coordination with neighboring ACCs.

Japan's experience, effort, improvement and proposal

2.9 In Japan, there are a few and limited organizations being able to launch rockets. Therefore, close coordination has been allowed for long years between launching organizations and the Japan Civil Aviation Bureau (JCAB).

2.10 For example, when some launching organization in Japan has a plan to launch their rocket, the organization proactively calculates the range of airspace restrictions. The organization shares the calculated information with JCAB and arranges to notify the restrictions in the Aeronautical Information Publication (AIP) Supplement to aircraft operators.

2.11 Although having implemented the schemes in Paragraph 2.10, JCAB realized that some procedures for launching rockets had not been conducted properly as providing launch information and the Point of Contact (POC) to the ICAO APAC regional office. To improve that situation, JCAB has started consideration on the improvement with focusing on the latest and updated information provided by some meetings.

2.12 Japan recalls paragraphs 2.19.1 in ICAO Annex 11 (**Figure 2**) and the following conclusions (**Figure 3** and **Figure 4**) that were agreed upon at the past APANPIRG meetings.

2.19 Coordination of activities potentially hazardous to civil aircraft

2.19.1 The arrangements for activities potentially hazardous to civil aircraft, whether over the territory of a State or over the high seas, shall be coordinated with the appropriate air traffic services authorities. The coordination shall be effected early enough to permit timely promulgation of information regarding the activities in accordance with the provisions of Annex 15.

Figure 2: Paragraph 2.19.1 in ICAO Annex 11

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target Date
C 29/9 A & B	**Procedures for Ballistic Launch/Space Re-entry Management**	That, States are urged to: (1) ensure adoption and sensitisation of the ballistic launch/space re-entry expectations contained with the *Asia/Pacific Seamless ATM Plan*; and (2) institutionalise the related guidance and State Planning Checklist provided at **Appendix A to the Report on Agenda Item 3.2**.	ICAO APAC RO APAC States	State Letter with Implementation GM Action in accordance with the Conclusion	31 October 2018

Figure 3: Conclusion APANPIRG/29/9: Procedures for Ballistic Launch/Space Re-entry Management

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target Date
C 30/10 A & B	**Ballistic Launch and Space Re-Entry Notification and Response**	That, States are urged to: 1. Comply with Asia/Pacific Seamless ANS Plan provisions for advance notification of ballistic launch and space re-entry activities; 2. Ensure that, in addition to the coordination specified in Annex 11, and in the Asia/Pacific Seamless ANS Plan, all notifications for ballistic launch and space re-entry are addressed to: a) the ATC Centres in Charge of all affected Flight Information Regions; and b) the International NOTAM Office of all affected Flight Information Regions; and 3. Ensure that NOTAMs are promulgated and tactical coordination undertaken for the management of affected airspace and traffic, immediately on receipt of notification from another State, and on receipt of any notification of changes or cancellation.	ICAO RO APAC States and Administrations	State Letter Note and comply with the regional expectations established	15 November 2019 As soon as practicable

Figure 4: Conclusion APANPIRG/30/10 Ballistic Launch and Space Re-Entry Notification and Response

2.13 Japan would like to stress that establishing airspace restrictions on short notice would affect significant impacts on aircraft operators and ATM/ATC units since air traffic flow is drastically changed in many cases.

2.14 Therefore, more than 14 days prior coordination to establishing airspace restrictions due to rocket launch/re-entry areas and 7 days prior notification for military exercises would reduce operational impact, provide enough time for coordination among ATC units, and allow ATC units to arrange and manage human resources properly.

2.15 Moreover, according to Japan's experience, collaboratively advanced coordination would be beneficial in addition to the coordination/notification that is based on ICAO Annex 11, PANS-AIM (ICAO Doc 10066) and the Asia/Pacific Seamless ANS Plan, even though the establishment of airspace is still in the consideration phase.

2.16 Additionally, enhancement of the civil and military coordination in States that is based on the ICAO Doc 10088 would contribute to having the above coordination effective.

2.17 Japan would like to propose all States to establish the coordination scheme between launching organizations and ATS authority, and the coordination scheme with neighboring States.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper;

b) remind all States to review ICAO Annex 11, ICAO PANS-AIM, the Asia/Pacific Seamless ANS Plan and conclusions at past APANPIRG meetings,

c) propose all States to establish the coordination scheme between launching organizations and ATS authority to realize the coordination based on the documents in paragraph 3.1 b),

d) propose all States to establish the coordination scheme among neighboring States,

e) discuss enhancement of the civil and military coordination in States, and

f) discuss any relevant matters as appropriate.

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