



International Civil Aviation Organization

ICAO

Thirteenth Meeting of the Air Traffic Management Sub-Group (ATM/SG/13) of APANPIRG

Singapore, 25 – 29 August 2025

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

COLLABORATIVE EFFORTS TO MANAGE DANGER AREAS OVER HIGH SEAS

(Presented by Republic of Korea)

SUMMARY

According to the ICAO Annexes, each Contracting State shall ensure that the provision of aeronautical data and aeronautical information covers its own territory and those areas over the high seas for which it is responsible for the provision of air traffic services (ATS). This paper is to raise concerns on the danger area, “ZS(D)006” established across the Incheon FIR boundary and seek appropriate remedy.

1. INTRODUCTION

1.1 Annex 11 paragraph 2.1.2: *“Those portions of the airspace over the high seas or in airspace of undetermined sovereignty where air traffic services will be provided shall be determined on the basis of regional air navigation agreements. A Contracting State having accepted the responsibility to provide air traffic services in such portions of airspace shall thereafter arrange for the services to be established and provided in accordance with the provisions of this Annex.”*

1.2 Annex 11 paragraph 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 Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM, Doc 10066).”*

1.3 Annex 15 paragraph 2.1.2: *“Each Contracting State shall ensure that the provision of aeronautical data and aeronautical information covers its own territory and those areas over the high seas for which it is responsible for the provision of air traffic services (ATS).”*

1.4 In addition, a danger area is defined in various ICAO documents as *“an airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times”*. For the establishment of a danger area, *Manual on Civil-Military Cooperation in Air Traffic Management* (Doc 10088) paragraph 4.2.3 describes: *“... States which have accepted the responsibility for providing ATS in high seas airspace are permitted only to establish danger areas in that airspace...”*

1.5 In accordance with the Asia/Pacific Air Navigation Plan, it is clearly stated that the responsibility for provision of air traffic services within the Incheon FIR is with the Republic of Korea. Therefore, the Republic of Korea is responsible for coordinating activities that could pose the potential threat to civil aircraft within the Incheon FIR and to promptly publish the information on dangerous activities to civil aircraft to airspace users.

2. DISCUSSION

Establishment of the “ZS(D)006” across the Incheon FIR Boundary

2.1 The Republic of Korea found the danger area, ZS(D)006 which has been established across the Incheon FIR and Shanghai FIR in March 2023. The Air Traffic Office (ATMO) of Korea that provides air traffic services for the Incheon FIR was not informed of the danger area in advance. According to the Aeronautical Information Publication (AIP) of China, ZS(D)006 (**Figure 1**) is used for ground-to-air firing, activated by NOTAM.



Figure 1: ZS(D)006 Published by China Aeronautical Information Publication (AIP)

2.2 The ATMO sent a letter to Air Traffic Management Bureau (ATMB) of Civil Aviation Administration of China (CAAC) inquiring the reason for the establishment of the danger area without prior coordination with the air traffic services authority of the Republic of Korea. In addition, it clarified that this is against the ICAO Standards and Recommended Practices (SARPs) and hinders the safety of air navigation over the high seas, in March 2023. In the same month, the ATMO sent a letter again reminding that the Republic of Korea is responsible for providing air traffic services in the Incheon FIR and prior coordination must be undertaken when establishing a danger area within the Incheon FIR, and activating it due to potential threats to civil aircraft.

2.3 Informing that the CAAC is responsible for the issues related to regulatory matters including FIR, the Korea office of Civil Aviation (KOCA) sent a correspondence to the CAAC inquiring the reason for the establishment of the danger area, ZS(D)006, within the Incheon FIR without prior coordination with the Republic of Korea, in November 2023. The CAAC responded that it would reply after reviewing the issue in December 2023. However, even though the KOCA sent letters four times asking responses afterwards, the KOCA has not received further responses from the CAAC.

2.4 In the meantime, the ATMO made a monitoring procedure of the danger area to issue a NOTAM in time when it is activated. However, the ATMO has not received any NOTAM on the activation of it since its establishment. This means it is either no use of it or not informing of its status, which the latter is more dangerous to the operations of civil aviation.

Collaborative Efforts to Manage Danger area over High Seas

2.5 The Republic of Korea is committed to implementing SARPs for the safety of civil aviation and to fulfilling its responsibility for provision of air traffic services within the Incheon FIR. However, the Republic of Korea may not be aware of all the dangerous activities to the civil aviation over high seas if the information was not coordinated, in accordance with Annexes 11 and 15. Therefore, this issue needs to be discussed between two States as soon as possible.

2.6 ICAO is responsible for the development and the implementation support of SARPs for aviation safety and efficiency, and Member States shall endeavor to implement them. Recognizing that a danger area can be established without noticing at any place and any time, States need to cooperate with each other to prevent an uncoordinated and disagreed danger area from being established over high seas.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) note that the Republic of Korea upholds an open and cooperative approach to discuss appropriate remedies for this matter;
- c) encourage States to cooperate with each other to prevent an uncoordinated and disagreed danger area from being established over high seas; and
- d) discuss any relevant matters as appropriate.

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