International Civil Aviation Organization

INFORMATION PAPER (IP/04)

ICAO Asia and Pacific (APAC)
Twenty-Ninth Meeting of the Meteorology Sub-Group (MET SG/29)

Bangkok, Thailand, 18 - 22 August 2025

Agenda Item 3: Air navigation deficiencies

ACHIEVEMENTS AND PLANS OF THE REPUBLIC OF KOREA FOR IWXXM IMPLEMENTATION

(Presented by the Republic of Korea)

SUMMARY

The 34th APANPIRG meeting recommended that the identification, assessment, and reporting of air navigation deficiencies should include consideration of IWXXM implementation. Implementing IWXXM involves both generating OPMET data in IWXXM format and securing AMHS capabilities for its dissemination. This paper outlines the achievements and future plans of the Republic of Korea in support of IWXXM implementation.

1. INTRODUCTION

1.1 The 34th Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) recommended integrating the ICAO Meteorological Information Exchange Model (IWXXM) implementation into air navigation deficiency reporting. MET/IE WG/23 stated that the 2025 Asia/Pacific performance indices and the 2025 SIGMET Tests would serve as references for identifying potential deficiencies, which will be reviewed at the MET SG meeting in 2026.

1.2 To potentially avoid being classified as deficient, States that did not provide IWXXM SIGMET during the 2024 Annual SIGMET Test period—but have implemented or plan to implement IWXXM services afterward—were encouraged to present their progress at the MET SG/29. The Republic of Korea was among those States.

1.3 The implementation of IWXXM requires the generation of OPMET data in IWXXM format and the establishment of communication capabilities through the ATS Message Handling System (AMHS). This paper shares the Republic of Korea's achievements and future plans for IWXXM implementation from these two perspectives.

2. DISCUSSION

IWXXM Generation of OPMET Data (Completed)

2.1 The Aviation Meteorological Office (AMO) of the Korea Meteorological Administration (KMA) completed the development of IWXXM version 2023-1 in December 2023. In cooperation with the Japan Meteorological Agency (JMA), AMO conducted a successful inter-State IWXXM exchange test via AMHS in December 2024. The completeness of IWXXM ver. 2023-1 was further improved between 2024 and 2025, based on advice from the Hong Kong Observatory (HKO).

AMHS Capacity for Communication (In Progress)

2.2 The Republic of Korea completed international AMHS line connections with China and Japan via the Common Aeronautical Virtual Private Network (CRV) in Q4 of 2022, including support for File Transfer Body Part (FTBP).

2.3 Since 2024, the Republic of Korea has been implementing a mid-to-long-term plan to migrate domestic clients from the Aeronautical Fixed Telecommunication Network (AFTN) to AMHS. Terminal clients—basic users of the Flight Information Exchange Model (FIXM), Aeronautical Information Exchange Model (AIXM), and IWXXM—are planned to be migrated by 2025, while system clients, such as AMO, which handle message exchange, are targeted for migration by 2028.

2.4 In line with the domestic transition plan, AMO is preparing to establish domestic AMHS connections and implement an operational framework. A pilot AMHS system will be built in 2025, with full implementation and transition to operational use targeted by 2028.

2.5 Upon completion of the pilot AMHS system in 2025, an IWXXM exchange test with the Civil Aviation Administration of China (CAAC) is planned via AMHS in November 2025. AMO also intends to participate in the Annual SIGMET Test during that period with messages in IWXXM format. In addition, AMO plans to implement real-time OPMET data transmission via the AMHS operational system by 2028.

2.6 To minimize disruption in IWXXM data availability, AMO has been providing IWXXM data through an Open API service since 2019. Since 1 August 2025, IWXXM version 2023-1 data has been made available via the Open API.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) Note the information contained in this paper; and

b) Consider removing Republic of Korea from the Draft Conclusion presented in WP/07 under 2.9 “Lack of Provision of IWXXM Format SIGMET”.

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