

**60<sup>th</sup> CONFERENCE OF  
DIRECTORS GENERAL OF CIVIL AVIATION  
ASIA AND PACIFIC REGIONS**

*Sendai, Japan  
28 July - 1 August 2025*

AGENDA ITEM 4:      AIR NAVIGATION

**EXPEDITING OF APAC SWIM IMPLEMENTATION  
AS A STRATEGIC PRIORITY**

(Presented by China, Japan, New Zealand, Singapore and Thailand on behalf of Member States/Organizations of SWIM Implementation Pioneer Ad-Hoc Group\* under ICAO APAC SWIM Task Force)

**SUMMARY**

This paper is a call for all Asia/Pacific States to participate in the decision-making process for the implementation of the APAC SWIM and a statement of contributions by the SWIM Implementation Pioneer ad-hoc Group (SIPG) under the ICAO APAC SWIM Task Force.

The Conference is invited to:

- a) Note the contents in this paper;
- b) Encourage States to be involved in decision making for the APAC SWIM implementation;
- c) Urge ICAO APAC Office to organise SWIM-related seminars and workshops;
- d) Urge States and ANSPs to participate in SWIM-related seminars and workshops organised by the ICAO APAC Office to overcome SWIM implementation challenges; and
- e) Discuss any other matters to support implementation needs of the APAC Regional SWIM, as appropriate.

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\*Australia, China, Hong Kong China, Indonesia, Japan, Malaysia, New Zealand, Pakistan, Philippines, Republic of Korea, Singapore, Thailand, IATA and CANSO

## **ACCELERATION OF APAC SWIM IMPLEMENTATION**

### **1. INTRODUCTION**

1.1 The disruption caused by the COVID-19 pandemic in the aviation industry has come to an end, and air traffic volume at major airports and in the airspaces of the Asia-Pacific (APAC) region is now surpassing pre-pandemic levels. However, due to the departure of human resources from the aviation sector during the pandemic, some States are currently facing manpower shortages. This has created an imbalance between air transport demand and supply, resulting in increased delays of scheduled commercial flights. Although such challenges were anticipated based on pre-pandemic air traffic growth projections, the aviation industry is now being called upon to identify and implement measures needed to effectively manage the current situation and prepare for the future traffic growth.

1.2 To improve the efficiency of air navigation system (ANS) under the current condition and to enhance its capability to adapt to the evolving ANS landscape, SWIM (System Wide Information Management) and FF-ICE (Flight and Flow Information for a Collaborative Environment) have been identified as key building blocks. The first edition of ICAO Doc 10199 Procedures for Air Navigation Services – Information Management (PANS-IM) was established with an effective date of 28 November 2024. It aims to ensure standardized and harmonized implementation of SWIM to facilitate the seamless information sharing essential to the future ATM concept, as outlined in ICAO Doc 9854 Global ATM Operation Concept. In support of FF-ICE implementation, ICAO Doc 4444 Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM) was also amended to incorporate provisions enabling FF-ICE, with SWIM serving as its core enabler.

1.3 At the global level, the 14th Air Navigation Conference (AN-CONF/14), held from 26 August to 6 September 2024 discussed the topics of Air Navigation System Performance Improvement and agreed to target a global transition to a more advanced flight planning mechanism i.e. FF-ICE and cessation of 2012 Flight Plan by 2034.

1.4 At the regional level, the fourth edition of the APAC Seamless ANS Plan was approved by APANPIRG/35, held from 25 to 27 November 2024, with the goal of achieving sustainable skies in the region. This edition of the Plan includes the regional implementation of SWIM, with a target date of 27 November 2025. In addition, FF-ICE services are included with target implementation date of 23 November 2028.

### **2. DISCUSSION**

2.1 To support the development and implementation of SWIM in the APAC region, the SWIM Task Force (SWIM TF) was established in 2016, with its first meeting held in 2017. As of May 2025, ten SWIM TF meetings have been conducted, during which a total of 182 working papers and 80 information papers have been thoroughly reviewed and intensively discussed.

2.2 SWIM is not built for its own sake; its values lie in the enhanced operations it enables. As an infrastructure-focused initiative, a deeper understanding of SWIM requires hands-on experience in its development and implementation. To provide such an opportunity, the SWIM in ASEAN Demonstration was held in Bangkok, Thailand and Singapore in November 2019, under the leadership of Aeronautical Radio of Thailand Ltd. (AEROTHAI) and Civil Aviation Authority of Singapore (CAAS). The demonstration aimed to showcase the benefits of SWIM and, importantly, a potential regional SWIM architecture. The project involved participation not only from ASEAN Member States/Organizations, but also from stakeholders across the broader APAC region. The lessons learnt from this demonstration were considered by the SWIM TF as a significant input for regional SWIM development and implementation. Furthermore, at 5th Meeting of SWIM TF in 2020, China, Japan, and Republic of Korea demonstrated the FF-ICE/R1 service, directly impressing upon

the SWIM Task Force members the usefulness of information services represented by FF-ICE and the role SWIM plays in this area.

2.3 At the 7th Meeting of SWIM TF in 2023, the SWIM Implementation Pioneer ad-hoc Group (SIPG) of 14 States/Organizations was established to advance the study phase from in-room discussions to the realization of an APAC regional SWIM. SIPG conducted evaluation work on the technical specifications based on the SWIM over CRV Demonstration and the Surveillance Data Sharing over SWIM technical trial, which was led by Hong Kong Civil Aviation Department (HKCAD) in May 2024. These initiatives aimed to demonstrate the feasibility of information exchange over SWIM using the regional backbone network infrastructure for the APAC region, CRV (Common aeronautical Virtual Private Network). The demonstration focused on the sharing of flight and surveillance data along with the construction of a prototype of the APAC SWIM technical infrastructure. In addition, the technical specifications were reviewed and refined based on the evaluation to improve their legitimacy and to achieve the goal of the SWIM TF.

2.4 Although the SWIM TF had compiled a set of requirements for the implementation of the APAC SWIM in recent years, it requires the agreement of each APAC State. If the APAC Regional SWIM is not implemented for the APAC region in time, the 2012 Flight Plan cannot be sunset by 2034.

2.5 As the implementation of the APAC SWIM must not cause confusion among ATM stakeholders in the region, all APAC States are encouraged to participate and contribute to the work and activities of the SWIM TF and SIPG. To ensure the smooth implementation of the APAC Regional SWIM, sufficient educational activities to promote understanding among ATM stakeholders and evaluation work to ensure that the APAC SWIM works as envisioned are required. In the spirit of “No Country Left Behind,” SIPG Member States and Organisations are committed to providing as much support as possible. Similarly, ICAO should organize more SWIM related events like workshops and seminars to provide these opportunities for SWIM education.

2.6 Conclusion APANPIRG/33/9 had adopted the timeframe for the implementation of APAC Regional SWIM between 2024 to 2030 with 2030 as the targeted implementation completion. Although 2030 is 5 years away, it should be noted that the amount of work to be carried out for the implementation of APAC Regional SWIM should not be underestimated and States/ANSPs are urged to develop their SWIM implementation plans if they have not commenced yet. There are SIPG members who are progressing well in their SWIM implementation and will be keen to share their experience with States/ANSPs to progress the SWIM implementation within the APAC region to meet the timeline adopted by APANPIRG.

2.7 At the AN-Conf/14, held at ICAO Headquarters from 26 August to 6 September 2024, the Conference agreed to target a global transition to a more advanced flight planning mechanism (Flight and Flow – Information for a Collaborative Environment (FF-ICE)), with a targeted global transition by 2034. States were urged to support and contribute to the work of their respective PIRGs and their sub-groups to develop a regional plan to transition to FF-ICE services based on the 2034 global cessation of the ICAO 2012 flight plan. As SWIM is the enabler for FF-ICE, supporting the activities to meet the APAC SWIM implementation timeline, will allow the smooth transition to FF-ICE to meet the 2034 global cessation of the ICAO 2012 flight plan target timeline.

### **3. ACTION BY THE CONFERENCE**

3.1 The Conference is invited to:

- a) Note the contents in this paper;
- b) Encourage States to be involved in decision making for the APAC SWIM implementation;

- c) Urge ICAO APAC Office to organise SWIM-related seminars and workshops to provide for opportunities for further SWIM education;
- d) Urge States and ANSPs to participate in SWIM-related seminars and workshops organised by the ICAO APAC Office to overcome SWIM implementation challenges; and
- e) Discuss any other matters to support implementation needs of the APAC Regional SWIM, as appropriate.

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