



ICAO

International Civil Aviation Organization**Twenty Ninth Meeting of the Communications/  
Navigation and Surveillance Sub-group (CNS SG/29)  
of APANPIRG**

Bangkok, Thailand, 16-20 June 2025

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**Agenda Item 10:** Regional implementation review and updates**10.1 State's National ANP and Elements related to CNS in Seamless ANS Plan****APAC SEAMLESS ANS PLAN V4.0 AND ANS REPORTING TOOL UPDATE**

(Presented by the Secretariat)

**SUMMARY**

This paper proposes revisions to the expected implementation priority of the Navigation Systems (NAVS) module Block 0 elements within the Aviation System Block Upgrade (ASBU) in the *Asia/Pacific Seamless ANS Plan Version 4.0*. Additionally, it provides updates on the ongoing efforts by the ICAO Asia/Pacific Regional Office to enhance the Seamless ANS Reporting Tool.

**1. INTRODUCTION**

1.1 The Thirty-Fifth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/35) was held in Bangkok, Thailand, from 25 to 27 November 2024.

1.2 The APANPIRG/35 adopted the following Conclusion:

***Conclusion APANPIRG/35-1: Asia/Pacific Seamless ANS Plan***

*That, given the urgency and priority of Air Navigation Service (ANS) planning and modernization, and the lack of progress in implementing the Aviation System Block Upgrade (ASBU) elements, Version 4.0 of the Asia/Pacific Seamless ANS Plan appended as Appendix A to the Report on Agenda Item 3.0 be adopted; and uploaded to the Asia/Pacific Regional Office eDocument webpage.*

1.3 The Thirty-Fourth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/34) was held in Hong Kong, China, from 11 to 13 December 2023.

1.4 The APANPIRG/34 adopted the following Conclusions:

***Conclusion APANPIRG/34/1 – APAC Regional Seamless ANS Reporting Form 3.0 and Cloud-based Seamless ANS Implementation Progress Reporting***

- a) *That, the APAC Regional Seamless ANS Reporting Form 3.0 with reference to Seamless ANS Plan V3.0, contained in Appendix A to Agenda Item 3.0, be endorsed by APANPIRG.*
- b) *That, States/Administrations be urged to report on their Seamless ANS implementation progress through the cloud-based reporting portal by not later than 30 June 2024, and then at least once a year by not later than 28 February each year.*

***Conclusion APANPIRG/34/2 – ICAO HQ Support for Regional ANS Implementation***

*That, ICAO HQ is invited to:*

- (1) provide required resources to develop the application to present the reported data in graphical mode;*
- (2) support and facilitate a workshop in Q1 2024 on the use of Seamless ANS Reporting Portal for APAC States; and*
- (3) assist on necessary update to the Portal to incorporate changes for the Seamless ANS Plan V4.0.*

## **2. DISCUSSION**

### **Asia/Pacific Seamless ANS Plan Version 4.0**

2.1 The *Asia/Pacific Seamless ANS Plan Version 4.0* can be found at the Asia/Pacific Regional Office eDocuments webpage (<https://www.icao.int/APAC/Pages/eDocs.aspx>).

2.2 The *Asia/Pacific Seamless ANS Plan* provides the expected priority for implementation of ASBU Block 0, Block 1 and Block 2 elements, within the Asia/Pacific Region. The allocation of priority was based on factors including its importance in promoting Seamless ANS:

- **Priority 1** – critical upgrade assignment based on whether the implementation of an element could bring most benefit to the region or regional upgrade by States and is essential to achieve the service level required globally;
- **Priority 2** – recommended upgrade for those elements which would bring benefits to the region and generally to be implemented from 2022, but States are encouraged to implement earlier if beneficial; and
- **Priority 3** – assigned to those elements which may not be universally implemented in the Asia/Pacific Region.

2.3 Recently, it was observed that the priorities of some CNS ASBUs finalized by *CNS-related ASBUs Review Ad-hoc Group for the Next Edition of the Seamless ANS Plan* were not correctly reflected in the published *Asia/Pacific Seamless ANS Plan Version 4.0*. This discrepancy might result from editorial errors during the gathering of voluminous feedback from all sources.

2.4 **Figure 1** provides a comparison of the priorities adopted by CNS SG/28 based on proposal from *CNS-related ASBUs Review Ad-hoc Group for the Next Edition of the Seamless ANS Plan* and the priorities published in the *Asia/Pacific Seamless ANS Plan Version 4.0*.

| ASBU Element                            | Approved Priority by CNS SG/28 | Priority Published in <i>Asia/Pacific Seamless ANS Plan Version 4.0</i> |
|-----------------------------------------|--------------------------------|-------------------------------------------------------------------------|
| NAVS-B0/1 to B0/4 SBAS, GBAS, ABAS, MON | Priority 1                     | Priority 2                                                              |

**Figure 1:** Proposed Priorities vs. Published Priorities

2.5 Recognizing that the review of ASBU NAVS falls under the responsibility of the CNS SG, the ICAO Secretariat proactively prepared and submitted a working paper for consideration at the Seventh Meeting of the Asia/Pacific GBAS/SBAS Implementation Task Force (GBAS/SBAS ITF/7, Bangkok, Thailand, 14–16 May 2025). This initiative was undertaken to solicit comments and feedback from navigation experts regarding the appropriate prioritization of the NAVS Block 0 elements prior to proposing amendments to the CNS SG.

2.6 Discussions and decisions from the GBAS/SBAS ITF/7:

- a) noting that some Asia/Pacific States/Administrations did not have access to Ground Based Augmentation Systems (GBAS) and Satellite Based Augmentation Systems (SBAS) systems, the meeting agreed to keep Priority 2 for NAVS-B0/1 GBAS and NAVS-B0/2 SBAS;
- b) noting the importance of Aircraft Based Augmentation Systems (ABAS) in supporting all performance-based navigation (PBN) navigations specifications, except RNP APCH down to LPV/LP minima, the meeting agreed that Priority 1 should be assigned for NAVS-B0/3 ABAS;
- c) noting the issues related to Global Navigation Satellite System (GNSS) radio frequency interference (RFI) events, which could posed a significant threat within the region, as well as the associated recommendations and action items from the Fourteenth Air Navigation Conference (AN-Conf/14, Montréal, Canada, 26 August – 06 September 2024) and the 59th Conference of Directors General of Civil Aviation, Asia and Pacific Regions (DGCA/59, Cebu, Philippines, 14 – 18 October 2024), the meeting agreed that Priority 1 should be assigned for NAVS-B0/ 4 Nav. MON; and
- d) acknowledging that not all ASBU NAVS Module Block 0 elements should be accorded the same level of priority within the Asia/Pacific Region, the ICAO Secretariat proposed the subdivision of these elements from a consolidated 'Thread' (see **Figure 2**) into discrete individual elements (see **Figure 3**). This approach aims to ensure that appropriate prioritization is assigned to each element accordingly.

| Functional Category | Element           | Description                           | Priority | Responsibility for Review |
|---------------------|-------------------|---------------------------------------|----------|---------------------------|
| Technology          | NAVS-B0/1 to B0/4 | SBAS, GBAS, ABAS, MON (PARS 7.5, 7.7) | 2        | CNS SG                    |

**Figure 2:** Priority Published in *Asia/Pacific Seamless ANS Plan Version 4.0*

| Functional Category | Element   | Description | Priority | Responsibility for Review |
|---------------------|-----------|-------------|----------|---------------------------|
| Technology          | NAVS-B0/1 | GBAS        | 2        | CNS SG                    |

|  |           |          |   |  |
|--|-----------|----------|---|--|
|  | NAVS-B0/2 | SBAS     | 2 |  |
|  | NAVS-B0/3 | ABAS     | 1 |  |
|  | NAVS-B0/4 | Nav. MON | 1 |  |

**Figure 3:** Proposed New Priority

2.7 Subject to the agreement of CNS SG on the proposed new priority described in **Figure 3**, the ICAO Secretariat will incorporate these changes as a corrigendum to the existing *Asia/Pacific Seamless ANS Plan Version 4.0*, and submit it to APANPIRG/36 for endorsement.

2.8 Upon endorsement, the corrigendum will be published on the ICAO Asia/Pacific Regional Office webpage, and the Seamless ANS Reporting Tool will be updated accordingly to reflect these changes.

#### Seamless ANS Reporting Tool

2.9 To facilitate States' ANS implementation reporting, the ICAO Asia/Pacific Regional Office, in collaboration with ICAO Headquarters (HQ), developed the Seamless ANS Plan Reporting Tool. Asia/Pacific States/Administrations were required to submit the implementation status for the *Asia/Pacific Seamless ANS Plan* using the tool by not later than 30 June 2024, and subsequently at least once annually by not later than 28 February each subsequent year.

2.10 The Twelfth Meeting of the Air Traffic Management Sub-Group of APANPIRG (ATM/SG/12, Bangkok, Thailand, 23 – 27 September 2024) recorded that only 17 Asia/Pacific States/Administrations (representing 41.5% of the total) had submitted some form of reporting via the new Seamless ANS Reporting Tool. Among those 17 States/Administrations, only 11 States had submitted comprehensive reports. Consequently, the available information was insufficient to enable an effective assessment of the implementation progress.

2.11 ATM/SG/12 was informed that, to enable the reporting of implementation status by States/Administrations in 2025, both the current version of the reporting tool and the *Asia/Pacific Seamless ANS Plan Version 3.0* would be retained on the ICAO Asia/Pacific Regional Office website for reference purposes.

2.12 As of 20 May 2025, only 11 Asia/Pacific States/Administrations (representing 27% of the total) had submitted some form of reporting for *Asia/Pacific Seamless ANS Plan* implementation status for 2025. ICAO Asia/Pacific Regional Office sent a reminder on 27 May 2025 to the States that had not yet submitted their reports, with a deadline for submission set for 15 June 2025.

2.13 To facilitate ICAO Secretariat in preparing comprehensive reports for relevant ICAO meetings, States/Administrations are reminded of **Conclusion APANPIRG/34-1**, which requires them to report on the progress of the *Asia/Pacific Seamless ANS Plan* implementation via the Seamless ANS Plan Reporting Tool at least once annually, with a submission deadline of 28 February.

2.14 The Meeting is to note that the ICAO Asia/Pacific Regional Office is currently working on updating the Seamless ANS Plan Reporting Tool to align with the most recent version of *Asia/Pacific Seamless ANS Plan Version 4.0*, which is expected to complete by end of Q2 2025.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) review and agree with the new prioritization of ASBU NAVS Block 0 elements, as per **Figure 3** above;
- c) agree the inclusion of the agreed-upon prioritization of ASBU NAVS Block 0 elements in the next version of the *Asia/Pacific Seamless ANS Plan*;
- d) to report on the progress of the *Asia/Pacific Seamless ANS Plan* implementation via the Seamless ANS Plan Reporting Tool at least once annually by 28 February;
- e) note that the ongoing work by the ICAO Asia/Pacific Regional Office in updating the Seamless ANS Plan Reporting Tool to align with the most recent version of *Asia/Pacific Seamless ANS Plan Version 4.0*; and
- f) discuss any relevant matters as appropriate.

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