



ICAO

*International Civil Aviation Organization***THE THIRTIETH MEETING OF THE
COMMUNICATIONS / NAVIGATION AND
SURVEILLANCE SUB-GROUP (CNS SG/30)
OF APANPIRG***Bangkok, Thailand, 06 - 10 July 2026***Agenda Item 2: Review outcomes of APANPIRG, APAC ANSP Committee, ATM Sub-group,
MET Sub-group and other Meetings and global CNS updates****REVIEW OF RELEVANT MEETINGS**

(Presented by the Secretariat)

SUMMARY

The paper presents the relevant outcomes of the meetings held in the year 2025 including the Thirty-Sixth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/36), the Twenty Ninth Meeting of Communication, Navigation, and Surveillance Sub-Group (CNS SG/29), for information and action by this meeting.

1. INTRODUCTION

1.1 The Thirty-Sixth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/36) was held at the ICAO APAC Regional Office, Bangkok, Thailand, from 24 to 26 November 2025. The Meeting was attended by **188** participants from **26** Member States, **2** Special Administrative Regions of China, and **6** International Organizations. The APANPIRG/36 meeting report, working papers, information papers, and other resources can be accessed on the [APANPIRG/36 Meeting webpage](#).

1.2 The Twenty-Ninth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/29) of APAC Air Navigation Planning and Implementation Regional Group (APANPIRG) was held at the ICAO APAC Regional Office, Bangkok, Thailand, from 16 to 20 June 2025. The Meeting was attended by **100** participants from **23** States/Administrations, **2** International Organizations, and **3** industry partners. The Meeting report and other documents of the meeting can be accessed on the [CNS SG/29 Meeting webpage](#).

1.3 The APANPIRG/36 Meeting reviewed the outcomes of CNS SG/29, noted with appreciation the following work done and achievements by the CNS SG and the contributory bodies reporting to APANPIRG through the CNS SG. APANPIRG/36 also discussed CNS-related matters and acted on the Report of the CNS SG/29 meeting and other papers presented under Agenda Item 3.4.

1.4 This paper summarized relevant information and updates with a highlight of the reviewed outcomes of relevant discussions of other meetings of CNS SG/29 and APANPIRG/36.

2. DISCUSSION

The actions taken by APANPIRG/36 & CNS SG/29 meetings on CNS related matters are highlighted below:

2.1 The CNS SG/29 meeting adopted the following **5** Conclusions and **6** Decisions:

Reference	Subject
Conclusion CNS SG/29/02 (<i>Conclusion ACSICG/12/03 (CRV OG/13/07)</i>)	- Adopt the CANSO Standard of Excellence in Cyber Security for CRV
Decision CNS SG/29/03 (<i>Decision ACSICG/12/04</i>)	- Adoption of SOP to update the AMC AFTN/AMHS Routing Table in the Asia/Pacific Region
Conclusion CNS SG/29/04 (<i>Conclusion ACSICG/12/05</i>)	- Educational material to manage the distribution of IWXXM information for COMM experts in the event of primary link failure
Conclusion CNS SG/29/05 (<i>Conclusion ACSICG/12/06</i>)	- Checklist of steps required for operational IWXXM exchange
Decision CNS SG/29/08 (<i>GBAS-SBAS ITF 07/01</i>)	- Guidance Document for Implementation of SBAS in the Asia/Pacific Region
Conclusion CNS SG/29/09 (<i>SURICG/10/02</i>)	- Workflow for the request and coordination of IC codes with the ICAO APAC Office
Decision CNS SG/29/10 (<i>ATMAS TF/06/01</i>)	- Adoption of the Air Traffic Management Automation System Implementation and Operations Guidance Document Edition 1.5
Decision CNS SG/29/11 (<i>ATMAS TF/06/02</i>)	- Adoption of the AIDC Implementation and Operations Guidance Document (IGD) Edition 2.0
Conclusion CNS SG/29/12 (<i>ACSICG/12/01(CRV OG/13/04), ACSICG/12/08, SURICG/10/01, SRWG/09/01</i>)	- Update the CNS Tables of ICAO APAC e-ANP Vol II
Decision CNS SG/29/13	- Adoption of Regional Guidance Material for Addressing Human Factor Issues of ATSEP v2.0
Decision CNS SG/29/14	- Creation of ANS Information Assurance Task Force (ANSIA TF)

2.2 The contents of above Conclusions/Decisions adopted by the CNS SG/29 are provided in **Attachment A** to this paper.

2.3 Based on the outcome of discussions on various agenda items, the CNS SG/29 meeting developed **3** Draft Conclusions and **1** Draft Decision for consideration by APANPIRG/36 Meeting, which were further adopted by APANPIRG/36. The Conclusions/Decisions adopted by APANPIRG/36 are as follows:

Reference	Subject
Conclusion APANPIRG/36/10 (CNS SG/29/01 (ACSICG/12/02 (CRV OG/13/06)))	- Implementation of CRV for small Pacific Islands and small ANSPs in the region using CRV Solution, CRV SLA Package D+
Decision APANPIRG/36/11 (CNS SG/29/06 (SWIM TF/10/02))	- Adoption of APAC Common SWIM Information Services, v1.0
Conclusion APANPIRG/36/12 (CNS SG/29/07 (SWIM TF/10/03))	- Asia/Pacific Regional FIXM version 4.3 Extension
Conclusion APANPIRG/36/13 (CNS SG/29/15 (ACSICG/12/09 (CRV OG/14/01)))	- Decision on CRV II contract Management Process

2.4 All APANPIRG/36 Conclusions related to CNS are provided in **Attachment B** to this paper.

2.5 APANPIRG/36 further noted that the CNS SG had identified **16** action items related to CNS. Member States were encouraged to follow up on CNS-related action items resulting from the relevant meetings.

2.6 The following paragraphs capture the highlights of discussions in APANPIRG/36 relevant to this meeting.

Election of Co-Chairs

2.7 Nominated by China and seconded by Australia, Japan, Lao PDR, New Zealand, Singapore, Thailand, and USA, Mr. M H Hui, Assistant Director-General of Civil Aviation, Civil Aviation Department, Hong Kong China, was unanimously elected as a Co-Chair of CNS SG of the APANPIRG.

Aeronautical Fixed Service (AFS)

Outcomes of ACSICG/12

2.8 APANPIRG/36 noted that CNS SG/29 reviewed various topics discussed in the AMC Workshop and the Twelfth Meeting of Aeronautical Communication Services Implementation Coordination Group (ACSICG/12) held from 25 to 28 March 2025, updated the AMHS/ATN implementation status in States/Administrations and reviewed the outcomes of the Common aeRonautical Virtual Private Network (CRV) Workshop for PSIDS held from 3-4 March 2025 and the Thirteenth Meeting of the CRV Operations Group of APANPIRG (CRV OG/13) held from 5 to 8 March 2025.

2.9 APANPIRG/36 noted the **Conclusion CRV OG/13/01**- Standard Operating Procedures (SOP) for Dispute Resolution on CRV Matters. It was informed that SOP has been incorporated in CRV OG OM v1.4, adopted by CRV OG/13 by **Decision CRV OG/13/02** - Publish the

updated APAC CRV Operations Manual. The Meeting also noted the **Decision CRV OG/13/03** - Update to the CRV Implementation Plan v2.3.

2.10 The APANPIRG/36 meeting noted the latest updates on the planning and implementation status of CRV are as follows:

- **Under Operation**

Australia, Bhutan, Cambodia, China, Hong Kong China, Fiji, French Polynesia, India, Indonesia, Japan, Macau China, Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Caledonia, New Zealand, Pakistan, Philippines, PNG, Republic of Korea, Singapore, Sri Lanka, Thailand, USA and Vietnam

- **Under Provisioning**

Cook Islands, Niue and Tonga

- **Not Joined Yet**

Afghanistan, DPRK, Kiribati, Marshal Islands, Micronesia, Nauru, Palau, Solomon Islands, Timor Leste, Tuvalu, Vanuatu, Russia, ICAO MID States

2.11 The following **Draft Conclusion**, endorsed by CNS SG/29 Meeting, was adopted by APANPIRG/36.

Conclusion APANPIRG/36/10 (<i>Conclusion CNS SG/29/01 (ACSICG/12/02 (CRV OG/13/06))</i>) - Implementation of CRV for small Pacific Island and small ANSP in the region using CRV Solution, PCCWG SLA Package D+		
What: That, the CRV OG agreed to the following to assist small Pacific Islands & small ANSPs in APAC in the implementation of CRV:	Expected impact:	
a) CRV SLA Package D+ is reliable and addresses lead time for acquiring spares and PCCWG to import licenses and clearance for customer sites	☐ Political / Global	
b) Small Pacific Island and small ANSP in the region to consider using CRV SLA package D+ as the CRV solution to implement CRV for the exchange of voice & AMHS services	☐ Inter-regional	
c) With a target date to implement CRV by 2025, it was recommended that the CRV OG work closely with the small Pacific Islands, small ANSP in the region and PCCWG on a cost-effective CRV solution to implement CRV.	☒ Economic	
	☐ Environmental	
	☒ Ops/Technical	
Why: To facilitate the implementation of CRV for the small Pacific Island & small ANSP in the region	Follow-up:	☒ Required from States
When: 26-Nov-25	Status:	Adopted by PIRG
Who: ☒ Sub groups ☒ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☐ Other: XXXX		

2.12 The APANPIRG/36 Meeting noted the **Conclusion CNS SG/29/02**- Adopt the CANSO Standard of Excellence in Cyber Security for CRV, the **Decision CNS SG/29/03**- Adoption of

SOP to update the AMC AFTN/AMHS Routing Table in the Asia/Pacific Region, the **Conclusion CNS SG/29/04**- Educational material to manage the distribution of IWXXM information for COMM experts in the event of primary link failure, and the **Conclusion CNS SG/29/05**- Checklist of steps required to operational IWXXM exchange adopted by CNS SG/29.

2.13 The APANPIRG/36 Meeting noted that the ACSICG/12 Meeting reviewed and adopted the ATSCG ToR through **Decision ACSICG/12/07**- Terms of Reference for the AMHS to SWIM Transition Correspondence Group.

Information Management (IM)

Outcomes of SWIM TF/10

2.14 The APANPIRG/36 reviewed the report of the Tenth Meeting of the System Wide Information Management Task Force (SWIM TF/10) held from 20 to 23 May 2025 in the ICAO APAC Regional Office, Bangkok, Thailand.

2.15 The APANPIRG/36 noted that prior to SWIM TF/10, the ICAO Asia/Pacific System-Wide Information Management (SWIM) Seminar was held in Bangkok on 19 May 2025. The theme of the Seminar was Establishing SWIM – A Key Enabler for FF-ICE. The Seminar emphasized the urgency of SWIM implementation ahead of the 2034 sunset of the 2012 flight plan format, with regional efforts targeting 2032.

2.16 The APANPIRG/36 noted the Decision SWIM/TF/10/01- Revised Terms of Reference of the SWIM Implementation Pioneer Ad-hoc Group. The APANPIRG/36 also noted that SWIM TF/10 discussed and adopted 4 recommendations raised by SIPG on SWIM transition in the APAC region.

2.17 Due to the need for clear guidance to States/Administrations on the proposed first version of Common SWIM Information Services, and the Common SWIM Information Services will involve various domains, such as ATM, CNS and MET, etc., under the APANPIRG, the following Draft Decision endorsed by CNS SG/29 Meeting was adopted by the APANPIRG/36.

Decision APANPIRG/36/11 (<i>Decision CNS SG/29/06 (SWIM TF/10/02)</i>)- Adoption of APAC Common SWIM Information Services, v1.0	
What: The first version of APAC Common SWIM Information Services , be adopted for immediate use by APAC States/Administrations. The set of APAC Common SWIM Information Services, and the associated performance of SWIM Technical Infrastructure underpinning these services, is not specified to support the provision of aircraft separation.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: To assist APAC States/Administrations in planning and implementing their SWIM information services.	Follow-up: ☐ Required from States
When: 26-Nov-25	Status: Adopted by PIRG
Who: ☒ Sub groups ☐ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☐ Other: MET SG, ATM SG, AOP SG	

2.18 APANPIRG/36 was presented with the update on FIXM version 4.3 Extension development, and the following Draft Conclusion endorsed by CNS SG/29 Meeting was adopted by the APANPIRG/36 Meeting.

Conclusion APANPIRG/36/12 (<i>Conclusion CNS SG/29/07 (SWIM/TF/10/03)</i>) – Asia/Pacific Regional FIXM version 4.3 Extension	
What: The FIXM version 4.3 Extension described in SWIM/TF/10/WP30 be: a) adopted as the Asia/Pacific FIXM version 4.3 Extension; b) uploaded to the ICAO Asia/Pacific Regional Office website for use by Asia/Pacific Administrations, to support cross-border ATFM operation, A-CDM, ATFM/A-CDM integration, and traffic synchronization; and c) presented to the FIXM CCB for review and publication on the FIXM official website.	Expected impact: ☐ Political / Global ☒ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: To provide the information exchange model necessary to support cross-border ATFM operation, A-CDM, ATFM/A-CDM integration, and traffic synchronization in the Asia/Pacific Region, in line with <i>Conclusion APANPIRG/35/4</i>.	Follow-up: ☐ Required from States
When: 26-Nov-25	Status: Adopted by PIRG
Who: ☒ Sub groups ☐ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other: SWIM TF	

2.19 APANPIRG/36 was presented with the current SWIM TF's ToR, the revised SWIM TF's work plan, and the Action List to reflect the latest work status achieved.

Aeronautical Mobile Communications Service and Aeronautical electromagnetic spectrum utilization

Outcomes of WRC-27 Workshop

2.20 APANPIRG/36 reviewed the outcomes of the Workshop on ITU World Radiocommunication Conference 2027 (WRC-27 Workshop) held in the ICAO Asia and Pacific Regional Office, Bangkok, Thailand, from 24 to 25 February 2025.

2.21 Noting strong concerns from different participants on the progress of WRC-27 Agenda item 1.7 and its relevant ITU-R studies, the States/Administrations were urged to follow ICAO Assembly Resolution A41-7 to strongly support both the ICAO frequency spectrum strategy and position at WRCs.

2.22 APANPIRG/36 was informed of the increasing number of incidents of observed GNSS interference globally and the implications for air navigation safety and security. The States/Administrations were encouraged to monitor the issues and adopt a comprehensive and well-coordinated approach to address this issue.

Outcomes of SRWG/9 and Frequency Spectrum-related Issues

2.23 APANPIRG/36 reviewed the report of the Ninth Meeting of the Spectrum Review Working Group (SRWG/9) of APANPIRG held in the ICAO APAC Regional Office, Bangkok, Thailand, from 5 to 7 May 2025.

2.24 APANPIRG/36 noted the status of the implementation of the revised APAC VHF COM Frequency Allotment Plan in the Frequency Finder tool, as well as recent enhancements to the Frequency Finder tool, including updated VHF-COM allotments for APAC, new data protection in VHF-COM/NAV and SSR modules, and additional SSR capabilities. The revised FF will be distributed after testing, and States are encouraged to provide feedback.

2.25 APANPIRG/36 noted the outcomes of the ICAO APAC Radio Navigation Symposium held in New Delhi, India, from 07-09 April 2025.

2.26 APANPIRG/36 noted that the CNS SG/29 Meeting agreed to defer to the SRWG to study the need for a group under CNS SG to assess and analyse the incidents shared by APAC Member States/Administrations and GNSS and Data Link Disruption Ad-Hoc Group to develop mitigation strategies, considering the global development in this domain.

2.27 APANPIRG/36 was reminded about the survey on the readiness of APAC States/Administrations' flight plan processing systems handling SELCAL32 in 2024. It was highlighted that only 13 States/Administrations participated in the survey, which makes it difficult for us to assess the APAC region's readiness. The Meeting requested that APAC States/Administrations that have not responded to the survey share their readiness with the ICAO APAC Office.

Navigation

Outcomes of GBAS/SBAS ITF/7 Meeting

2.28 APANPIRG/36 reviewed the report of the Seventh Meeting of the ICAO APAC GBAS/SBAS Implementation Task Force (GBAS/SBAS ITF/7) held in Bangkok from 14 to 16 May 2025.

2.29 APANPIRG/36 noted that the following proposal was reviewed and supported by CNS SG/29 Meeting and GBAS/SBAS ITF/7 Meeting: “Keep priority 2 for NAVS-B0/1 GBAS and NAVS-B0/2 SBAS as some APAC States do not have access to such systems, and to change the priorities of NAVS-B0/3 ABAS and NAVS-B0/4 Nav. MON to Priority 1”. The Meeting noted that proposed changes have been incorporated into the Corrigendum of Seamless ANS Plan v4.0 adopted by APANPIRG/36 by **Decision APANPIRG/36/05**.

2.30 APANPIRG/36 noted the Decision CNS SG/29/08- Guidance Document for Implementation of SBAS in the Asia/Pacific Region adopted by CNS SG/29.

Outcomes of Radio Navigation Symposium

2.31 APANPIRG/36 reviewed the outcomes of the ICAO APAC Radio Navigation Symposium was held in New Delhi, India, from 07–09 April 2025. The theme of the Symposium was GNSS RFI: Collectively Bridging Gaps and Shaping the Path Forward. It was noted that the Symposium highlighted enhancements to the GNSS RFI reporting process through the ITU’s Satellite Interference Reporting and Resolution System (SIRRS), aimed at strengthening monitoring and resolution. It also noted the development of new Q-codes, guidance for pilots on interpreting NOTAMs, and the incorporation of related provisions into ICAO documents.

Surveillance

Outcomes of SURICG/10

2.32 APANPIRG/36 reviewed the report of the Tenth Meeting of the Surveillance Implementation Coordination Group (SURICG/10) held in Bangkok, Thailand, from 21 to 23 April 2025.

2.33 APANPIRG/36 noted the **Conclusion CNS SG/29/09-** Workflow for the request and coordination of IC codes with the ICAO APAC Office, and the **Decision SURICG/10/03-** Adoption of Mode S DAPs Implementation and Operation Guidance Document Edition 6.0.

Automation

Outcomes of ATMAS TF/6

2.34 APANPIRG/36 reviewed the report of the Sixth Meeting of the APAC Air Traffic Management Automation System Task Force (APANPIRG/36) held in Bangkok, Thailand, from 2 to 4 June 2025.

2.35 APANPIRG/36 noted the **Decision CNS SG/29/10** - Adoption of the Air Traffic Management Automation System Implementation and Operations Guidance Document Edition 1.5, and the **Decision CNS SG/29/11-** Adoption of the AIDC Implementation and Operations Guidance Document (IGD) Edition 2.0.

2.36 APANPIRG/36 noted that an ad-hoc group was formed to review and modify the ATMAS TF ToR to accommodate the latest needs of ATMAS TF, such as accommodating FF-ICE and SWIM requirements.

Regional implementation review and updates

Updates in e-ANP Vol II

2.37 APANPIRG/36 noted the Conclusion CNS SG/29/12- Update the CNS Tables of ICAO APAC e-ANP Vol II. The States/Administrations are requested to update the required information in ICAO APAC e-ANP Vol II.

Status of CNS Deficiencies

2.38 APANPIRG/36 noted that the only outstanding issue was the unreliability of AFS communication between Afghanistan and Pakistan. Pakistan informed that the AFS communication link between Pakistan and Afghanistan remains non-operational due to the absence of a functioning AFS system on the Afghanistan side. Pakistan is fully prepared and available to activate the link as soon as Afghanistan establishes the required AFS infrastructure. Afghanistan had not given any tentative timelines. Therefore, it was requested that this deficiency be removed from Pakistan's side.

2.39 APANPIRG/36 deliberated on the request of removal of one-party name from the deficiency responsible parties, even if the deficiency is not resolved yet, following the procedure of removal of deficiency defined in APANPIRG Procedural Handbook. APANPIRG/36 agreed that the deficiency related to a reliable AFS link cannot be removed from the list until the link is established. However, it was agreed to add a note to the deficiency list provided in **Appendix A**, mentioning the significant efforts made by Pakistan to resolve the deficiency, and no further action can be taken by Pakistan due to the absence of a non-functioning AFS system and air traffic on the Afghanistan side.

Capacity Building, including Human Factors and Air Traffic Safety Electronics Personnel (ATSEPs) related Training

Supervisory and managerial Roles of ATSEP- IFATSEA

2.40 APANPIRG/36 noted that IFATSEA presented the work done regarding human factors issues and their countermeasures pertaining to ATSEP while playing supervisory and managerial roles. APANPIRG/36 noted the **Decision CNS SG/29/13-** Adoption of Regional Guidance Material for Addressing Human Factor Issues of ATSEP v2.0.

Need for the Creation of an APAC Contributory Body for the Management and Implementation of ICAO ANS Cybersecurity Provisions

2.41 The APANPIRG/36 Meeting noted that a new task force, namely the ANS Information Assurance Task Force (ANSIA TF), was established by CNS SG/29 by the **Decision CNS SG/29/14 - Creation of ANS Information Assurance Task Force (ANSIA TF)**. It was informed that the ANSIA TF would prepare the draft Terms of Reference (ToR), its key deliverables, and plan in close coordination with CRV OG, ACSICG, SWIM TF, TFP Secretary, and Information Management Panel Secretary. The first meeting of the ANSIA TF will be conducted from January 28-30, 2026.

CRV II Contract Management Process

2.42 The APANPIRG/36 Meeting was informed that, due to the confidentiality of the CRV contract management process, the report under this agenda was published on the [ICAO APAC CRV Secure portal](#) under the CRV group.

2.43 The APANPIRG/36 Meeting noted that the CRV OG/13 Meeting agreed on the need to organize the Special Session- CRV OG/14 as an In-Person Meeting for 5 days to progress to the next stage of the CRV contract management process from **27-31 October 2025** in Tokyo, Japan. The Special Session- CRV OG/14 discussed the way forward for the CRV contract. The CNS SG/29 Meeting agreed that the decision will need to be shared with the APANPIRG/36 meeting, planned for November 2025, to ensure the CRV contract management process is completed on time. The CNS SG/29 devised the way forward to get endorsements of the decision made by CRV OG/14 from ACSICG and the CNS SG.

2.44 Following the process, the APANPIRG/36 Meeting was informed about the decision of the CRV II contact management process by the following **Draft Conclusion** endorsed by CNS SG/29 Meeting, which was adopted by the APANPIRG/36 Meeting.

Conclusion APANPIRG/36/13 (Conclusion CNS SG/29/15 (ACSICG/12/09 (CRV OG/14/01)))- Decision of CRV II Contract Management Process	
What: Following the procurement process formulated by CRV OG to choose one of the two options for APAC States/Administrations for the CRV II contract management process, i.e., <i>current CRV contract extension vs initiate the CRV II RFP process</i> : a) States/Administrations agree to extend the current CRV contract for 5 years , which will be referred to as the CRV II Network . After extension, the CRV II contract date would be from 1 January 2029 with expiry on 31 December 2033 b) The contract extension for the CRV network will include updated legal, commercial, financial and technical requirements of the current service provider and CRV network implementation. c) Considering internal procurement timelines of APAC States/Administrations, CRV OG should prepare baseline updates required for the CRV network before 1 April 2027 ;	Expected impact: ☐ Political / Global ☐ Inter-regional ☒ Economic ☐ Environmental ☒ Ops/Technical

Why: (1) The current CRV contract expires on 31 December 2028; (2) Some APAC States/Administrations, including PSIDS, are in the process of joining CRV, while some States have joined CRV within the last 1-2 years; (3) Transition to the new contract will take at least 1-2 years; (4) The CRV II contract management process executed by CRV OG resulted in the extension of the CRV contract for 5 years.	Follow-up: ☒Required from States
When: 26 Nov 2025	Status: Adopted by PIRG
Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☒Other: CRV OG and ACSICG	

Any Other Business

Review of ToR and Action Items

2.45 APANPIRG/36 noted that an ad-hoc group was formed to review the ToR of CNS SG. The revised ToR will be presented by the ad-hoc group at the next CNS SG meeting.

CNS Meeting Planning for 2026

2.46 APANPIRG/36 noted the tentative schedule for the CNS contributory bodies' meetings to be held in 2026 for meeting information and action. The CNS SG Secretariat would inform Member States/Administrations about the exact dates, mode and venue of the meetings while issuing invitation letters in due course.

Enhancing GNSS Resilience: Operational and Technical Collaboration against RFI (WP/06) - Japan

2.47 The paper introduced initiatives being taken by Japan to address GNSS RFI, including the RFI detection system and a reporting mechanism, a prototype GNSS jamming/spoofing detection tool, information sharing through NOTAM and the implementation of a minimum operational network as a backup. Japan shared that the MON (minimum operation network) using conventional nav aids is one of the important methods to mitigate GNSS RFI. GNSS RFI is expected to continue increasing in the APAC region. It was suggested that it is important for States to implement mechanisms for the detection and mitigation of GNSS RFI and to enhance cooperation and coordination with other States in order to maintain and improve a safe and sustainable aviation network in the APAC region.

2.48 It was informed that the first meeting of the Procedures for GNSS and Data Link Disruption Ad Hoc Group meeting was held on 1st October 2025, and the ToR was finalised. This ad hoc ToR Group included discussion of operational GNSS RFI mitigation measures. In addition, technical considerations addressed by the CNS SG were kept outside the scope of this ToR.

2.49 APAC States/Administrations were encouraged to support the implementation of GNSS RFI detection and mitigation systems and to strengthen cooperation with other regions. It was also requested to lead the expedited discussion of GNSS RFI technical aspects within the CNS SG

framework, in parallel with ongoing operational deliberations in the Procedures for GNSS and Data Link Disruption Ad Hoc Group meeting and to foster close coordination between these bodies. States/Administrations were also encouraged to actively participate in both the operational and technical discussions, including sharing GNSS RFI experiences and mitigation best practices with other States.

Proposed Focus Areas to Mitigate GNSS Radio Frequency Interference for the Asia Pacific Region (WP/20) – Singapore

2.50 Singapore recalled pertinent proposals and recommendations from the 42nd ICAO Assembly (A42) related to GNSS RFI, and the ICAO Asia Pacific Radio Navigation Symposium. It highlighted the following areas to focus regional efforts in mitigating GNSS RFI for the CNS SG and SEI WG to explore further:

- a) Harmonised notification of GNSS RFI events to operators – e.g., through development of common reporting procedures and templates;
- b) Notification of GNSS RFI events encountered by flight crew to ATC – e.g., through collaborating with airline associations and organisations to establish reporting workflows on GNSS degradation or suspected interference;
- c) Optimised navigation and communication network planning and coverage – e.g., through a regional planning framework for States and ANSPs that considers the continuing need for ground-based navigation aids, especially in the critical areas (such as terminal airspace), for greater resilience against GNSS RFI;
- d) Clear regional guidance on GNSS RFI – e.g., through new GNSS RFI-related elements in the APAC Seamless ANS Plan across both operation and technology functions; and
- e) Capable and ready operational personnel – e.g., through the Cooperative Development of Operational Safety and Continuing Airworthiness Programme – South East Asia (COSCAP-SEA) to determine regional training needs and solutions.

2.51 It was also requested that the coordination group led by the CNS SG and SEI WG, in consultation with the relevant contributory bodies under PIRG and RASG, coordinate action to collectively tackle GNSS RFI risks in this region and present joint updates to APANPIRG and RASG-APAC in 2026.

2.52 ICAO Secretariat informed that for points (a) and (b), necessary action is being taken by the Procedures for GNSS and Data Link Disruption Ad Hoc Group. For point (c), the Meeting acknowledged the significance of optimized navigation & communication network planning and coverage and encouraged States/Administrations to take the necessary action. It was noted that Seamless ANS Plan v4.0 incorporates necessary modules/ASBUs related to mitigating the GNSS RFI issue.

2.53 COSCAP SEA Chief Technical Advisor (CTA)/Program Coordinator (PC) could not join the meeting but shared feedback on the proposal shared in point (e). The Meeting noted that the proposal on capable and ready operational personnel may resonate with Strategic Priority 3 of COSCAP SEA, which focuses on anticipating and addressing emerging risks. It was noted that while GNSS RFI has not been incorporated into the current annual work plan, COSCAP-SEA would explore opportunities to advance this agenda, subject to endorsement by the steering committee.

2.54 CANSO recognised the importance of maintaining a minimum operational network of conventional NAV AIDS in supporting the mitigation of GNSS RFI and introduced the Guidelines for Implementing a Minimum Operational Network (MON) published by CANSO. It encouraged the CNS SG and SEI WG to collaborate on exploring the possibility of developing a regional, minimal operational network for the APAC region.

2.55 The Republic of Korea supplemented the need for continuing safety by taking necessary action to mitigate GNSS RFI risks and reiterated the need for training of pilots and other aviation stakeholders to manage this risk. It was also suggested that, to enhance regional capacity in managing and responding to GNSS RFI risks, a contingency procedure could be developed and incorporated into the regional contingency plan. Furthermore, the Republic of Korea encouraged Member States to actively participate in both operational and technical discussions, including the sharing of their experiences, such as GNSS RFI events and best practices for mitigation measures, with other Member States.

2.56 Hong Kong China shared the need for mitigating strategies for airborne equipment and suggested that coordination with aircraft avionics suppliers and aircraft manufacturers should be conducted while conducting future coordination between CNS SG and SEI WG.

2.57 The Meeting agreed that there was no need for a coordination group. The SRWG and Procedures for GNSS and Data Link Disruption Ad Hoc Group meetings were addressing associated technical and operational matters, respectively. An analysis of the need for a coordination group would be conducted through close collaboration between the CNS SG and the SEI WG.

2.58 The Chairperson highlighted the urgent and growing challenge of GNSS RFI in the Asia/Pacific region, as discussed in both WP/06 and WP/20. Recognising the significant operational and safety risks posed by GNSS jamming and spoofing, the Chairperson encouraged States/Administrations to actively share their current practices, experiences, and mitigation measures, including detection, reporting, and operational responses, through established regional mechanisms. By promoting collective learning and open exchange of information, the Chairperson emphasized that the region could strengthen its resilience and ensure a coordinated, robust response to GNSS interference, safeguarding the safety and efficiency of civil aviation across Asia and the Pacific.

Collaboration between CNS SG and SEI WG (WP/21)- Co-Chairperson of APRAST SEI WG

2.59 The Meeting was informed about the discussion made during the Twelfth PIRG & RASG Regional Coordination Meeting on November 27, 2024, at the ICAO APAC Office, focused on coordinating efforts between APANPIRG and RASG APAC Sub-Groups. One of the key topics was data sharing to address GNSS RFI risks. It was noted that APANPIRG has worked to mitigate GNSS RFI, with recent efforts by the Spectrum Review WG (SRWG) and CNS SG focusing on understanding and collecting data on the issue. Despite establishing an Ad Hoc Group to address GNSS and data link disruptions and urging states to report occurrences, progress has been hindered by a lack of detailed incident reports from APAC States, complicating efforts to identify GNSS RFI as the root cause of disruptions.

2.60 The Meeting was informed that to enhance operational safety against CFIT and MAC risks from spoofing and jamming, APRAST's SEI WG proposed to collaborate closely with the CNS SG. The APRAST's CFIT Task Force will identify geographic areas of concern, analyse contributing factors related to operational safety in the APAC region, and prioritize threats to develop targeted safety enhancement initiatives and advisories. Additionally, the SEI WG aims to understand OEM guidance and existing efforts on managing GNSS interference, while maintaining close coordination with CNS SG and other safety teams globally.

2.61 ICAO Secretariat supported the need for collaboration and agreed to share the proposed collaboration provided in the paper in the SRWG/10 and CNS SG/30 planned in 2026. The progress on the proposed collaboration and its associated outcomes would be presented at APANPIRG/37 in 2026.

CNS Challenges and Priorities in 2026

2.62 CNS SG identified the following challenges in the CNS field, which would be the primary area of focus for CNS SG in 2026:

1. Continue coordinating and supporting PSIDS for CRV Implementation
2. Devising baseline Terms and Conditions for CRV II
3. Supporting APAC States/Administrations for the necessary upgradation procedures for the launch of the modern Frequency Finder (FF) Tool, database sanity check and verification and conducting workshops for their training
4. Training for PSIDS to use the FF tool
5. Updating recommendation for GNSS RFI detection and mitigation after incorporating feedback from different subgroups
6. Supporting APAC States/Administrations in mitigating challenges associated with GNSS RFI/spoofing incidents
7. Expediting SWIM Implementation in the APAC region
8. Supporting APAC States/Administrations for FF-ICE R1 Implementation
9. Space-based VHF- interference, frequency band, etc.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the outcomes of the APANPIRG/36, CNS SG/29, and relevant contributory bodies, and take any necessary follow-up actions; and
- b) discuss any relevant matters as appropriate.

CNS SG/30
Attachment A to WP/02

List of Conclusion/Decisions adopted by CNS SG/29

Conclusion CNS SG/29/02 (Draft Conclusion ACSICG/12/03 (CRV OG/13/07))- Adopt the CANSO Standard of Excellence in Cyber Security for CRV		
What: The CRV OG adopts the CANSO Standard of Excellence in Cyber Security for CRV and recommends that:	Expected impact:	
a) CRV OG prefers an acceptable maturity level of Target Score 'C.' in carrying out the maturity assessment on the CRV. b) The CRV Service Provider carries out the maturity assessment. c) Each participating State/Administration carries out the maturity assessment. d) CRV OG/Each participating State/Administration creates a plan to address the gaps in the maturity score for the CRV.	☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: To have a standard Cyber Security maturity applied to the CRV.	Follow-up:	☒ Required from States
When: 20-Jun-25	Status:	Adopted by Subgroup
Who: ☒ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other: CRV OG		

Decision CNS SG/29/03 (Draft Decision ACSICG/12/04) - Adoption of SOP to update the AMC AFTN/AMHS Routing Table in the Asia/Pacific Region		
What: The proposed Standard Operating Procedures (SOP) for all ICAO Asia/Pacific (APAC) members who operate as CCC Operators (Coordination COM Centres) or External COM Centre Operators to update the AMC AFTN/AMHS Routing Table in the Asia/Pacific Region is adopted.	Expected impact:	
	☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: Enhance coordination between COM centers and ensure quality service for ATS Messaging.	Follow-up:	☒ Required from States
When: 20-Jun-25	Status:	Adopted by Subgroup
Who: ☒ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☒ Other: ACSICG		

Conclusion CNS SG/29/04 (Draft Conclusion ACSICG/12/05) - Educational material to manage the distribution of IWXXM information for COMM experts in the event of primary link failure		
What: The educational material to support COM/MET experts in managing the distribution of IWXXM in case of primary link failure is adopted as a living document.	Expected impact:	
	☐ Political / Global ☐ Inter-regional ☐ Economic	

CNS SG/30
Attachment A to WP/02

List of Conclusion/Decisions adopted by CNS SG/29

		☐ Environmental ☒ Ops/Technical
Why: Educational material that identifies the required link capabilities to maintain IWXXM message distribution in the event of a primary link failure is necessary for uninterrupted service.	Follow-up: ☐ Required from States	
When: 20-Jun-25	Status: Adopted by Subgroup	
Who: ☒ Sub groups ☒ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☐ Other: ACSICG		

Conclusion CNS SG/29/05 (Draft Conclusion ACSICG/12/06) - Checklist of steps required to operational IWXXM exchange	
What: A checklist to facilitate the operational implementation of the IWXXM message exchange is adopted as a living document.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: To support the prompt implementation of capable primary and, where relevant, secondary links for the exchange of IWXXM messages	Follow-up: ☐ Required from States
When: 20-Jun-25	Status: Adopted by Subgroup
Who: ☒ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☒ Other: ACSICG	

Decision CNS SG/29/08 (GBAS-SBAS ITF 07/01) - Guidance Document for Implementation of SBAS in the Asia/Pacific Region		
What: The draft guidance document for implementation of SBAS in the Asia/Pacific Region , developed by the APAC GBAS/SBAS ITF, is adopted.		Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: To provide guidance to States for the implementation of SBAS	Follow-up:	☐ Required from States
When: 20-Jun-25	Status:	Adopted by Subgroup
Who: ☒ CNS Sub groups ☐ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☐ Other:		

CNS SG/30
Attachment A to WP/02

List of Conclusion/Decisions adopted by CNS SG/29

Conclusion CNS SG/29/09 (SURICG/10/02) - Workflow for the request and coordination of IC codes with the ICAO APAC Office	
What: Interrogator Codes (IC) of Mode S interrogators in the Asia Pacific region are to be coordinated and assigned through the ICAO APAC Regional Office. States/Administrations requiring ICs should request to the ICAO APAC Regional Office following the approved workflow to facilitate the request.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
	Follow-up: ☐ Required from States
When: 20-Jun-25	Status: Adopted by Subgroup
Who: ☒ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other: SURICG	

Decision CNS SG/29/10 (ATMAS TF/06/01) – Adoption of the Air Traffic Management Automation System Implementation and Operations Guidance Document Edition 1.5	
What: The Air Traffic Management Automation System Implementation and Operations Guidance Document, Edition 1.5 , is adopted.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: New subsections have been added in the revised draft.	Follow-up: ☐ Required from States
When: 20-Jun-25	Status: Adopted by Subgroup
Who: ☒ Sub groups ☐ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☒ Other: ATMAS TF	

Decision CNS SG/29/11 (ATMAS TF/06/02) – Adoption of the AIDC Implementation and Operations Guidance Document (IGD) Edition 2.0	
What: The AIDC Implementation and Operations Guidance Document (IGD) Edition 2.0 is adopted	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: New subsections have been added in the revised draft.	Follow-up: ☐ Required from States
When: 20-Jun-25	Status: Adopted by Subgroup
Who: ☒ Sub groups ☐ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☒ Other: ATMAS TF	

CNS SG/30
Attachment A to WP/02

List of Conclusion/Decisions adopted by CNS SG/29

Conclusion CNS SG/29/12 (ACSICG/12/01(CRV OG/13/04), ACSICG/12/08, SURICG/10/01, SRWG/09/01) - Update the CNS Tables of ICAO APAC e-ANP Vol II		
What: The following tables of ICAO APAC e-ANP Vol II are outdated and require immediate updates. <u>General Regional Requirements</u> TABLE CNS II-1 AERONAUTICAL FIXED TELECOMMUNICATIONS NETWORK (AFTN) PLAN TABLE CNS II-2 REQUIRED ATN INFRASTRUCTURE ROUTING PLAN TABLE CNS II-3 ATS DIRECT SPEECH CIRCUITS PLAN TABLE CNS II-4 HF NETWORK DESIGNATORS <u>Specific Regional Requirements</u> TABLE CNS II-APAC-1 ATS INTER-FACILITY DATA COMMUNICATION (AIDC) IMPLEMENTATION PLAN TABLE CNS II-APAC-2 RADIO NAVIGATION AIDS TABLE CNS II-APAC-3 SURVEILLANCE	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: The current TABLEs related to CNS are outdated and require immediate updates in order to update e-ANP Vol II.	Follow-up: ☒ Required from States	
When: 20-Jun-25	Status: Adopted by Subgroup	
Who: ☒ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other:		

Decision CNS SG/29/13 - Adoption of Regional Guidance Material for Addressing Human Factor Issues of ATSEP v2.0		
What: a) ICAO APAC Guidance Material for Addressing Human Factor Issues of ATSEP v2.0 be adopted.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: The Guidance material for the improvement of the existing human resource management process towards ATSEP for addressing the factors adding stress and fatigue, improving their job performance and for achieving organizational resilience and cost benefits has been modified by adding a new chapter on “Supervisory and Managerial Role of ATSEP”.	Follow-up: ☒ Required from States	

CNS SG/30
Attachment A to WP/02

List of Conclusion/Decisions adopted by CNS SG/29

When:	20 Jun 2025	Status:	Adopted by Subgroup
Who:	☒ Sub groups ☐ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☐ Other: XXXX		

Decision CNS SG/29/14 - Creation of ANS Information Assurance Task Force (ANSIA TF)			
What: To ensure consistent implementation of the requirements of ANS information security in the APAC region in accordance with the various manuals and guidance documents published by the ICAO and other international organizations, especially Certificates and PKI, a contributory body is proposed to be created under the CNS Sub-group to manage this using personnel experienced in the management and provisioning of ANS cybersecurity.		Expected impact: ☐ Political / Global ☐ Inter-regional ☒ Economic ☐ Environmental ☒ Ops/Technical	
Why: To provide consistent application of the requirements.		Follow-up: ☒ Required from States	
When: 20-Jun-25		Status: Adopted by Subgroup	
Who: ☒ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☒ Other: ACSICG, CRV OG, SWIM TF			

CNS SG/30
Attachment B to WP/02

A List of Conclusions adopted by APANPIRG/36 Meeting related to CNS

Conclusion APANPIRG/36/10 (Conclusion CNS SG/29/01 (ACSICG/12/02 (CRV OG/13/06))) - Implementation of CRV for small Pacific Island and small ANSP in the region using CRV Solution, PCCWG SLA Package D+		
What: That, the CRV OG agreed to the following to assist small Pacific Islands & small ANSPs in APAC in the implementation of CRV:	Expected impact:	
a) CRV SLA Package D+ is reliable and addresses lead time for acquiring spares and PCCWG to import licenses and clearance for customer sites	☐ Political / Global	
b) Small Pacific Island and small ANSP in the region to consider using CRV SLA package D+ as the CRV solution to implement CRV for the exchange of voice & AMHS services	☐ Inter-regional	
c) With a target date to implement CRV by 2025, it was recommended that the CRV OG work closely with the small Pacific Islands, small ANSP in the region and PCCWG on a cost-effective CRV solution to implement CRV.	☒ Economic	
	☐ Environmental	
	☒ Ops/Technical	
Why: To facilitate the implementation of CRV for the small Pacific Island & small ANSP in the region	Follow-up:	☒ Required from States
When: 26-Nov-25	Status:	Adopted by PIRG
Who: ☒ Sub groups ☒ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☐ Other: XXXX		

Decision APANPIRG/36/11 (Decision CNS SG/29/06 (SWIM TF/10/02))- Adoption of APAC Common SWIM Information Services, v1.0		
What: The first version of APAC Common SWIM Information Services , be adopted for immediate use by APAC States/Administrations. The set of APAC Common SWIM Information Services, and the associated performance of SWIM Technical Infrastructure underpinning these services, is not specified to support the provision of aircraft separation.	Expected impact:	
	☐ Political / Global	
	☐ Inter-regional	
	☐ Economic	
	☐ Environmental	
	☒ Ops/Technical	
Why: To assist APAC States/Administrations in planning and implementing their SWIM information services.	Follow-up:	☐ Required from States
When: 26-Nov-25	Status:	Adopted by PIRG
Who: ☒ Sub groups ☐ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☐ Other: MET SG, ATM SG, AOP SG		

Conclusion APANPIRG/36/12 (Conclusion CNS SG/29/07 (SWIM/TF/10/03)) – Asia/Pacific Regional FIXM version 4.3 Extension		
What: The FIXM version 4.3 Extension described in SWIM/TF/10/WP30 be:	Expected impact:	
a) adopted as the Asia/Pacific FIXM version 4.3 Extension;	☐ Political / Global	
	☒ Inter-regional	
	☐ Economic	

CNS SG/30
Attachment B to WP/02

A List of Conclusions adopted by APANPIRG/36 Meeting related to CNS

b) uploaded to the ICAO Asia/Pacific Regional Office website for use by Asia/Pacific Administrations, to support cross-border ATFM operation, A-CDM, ATFM/A-CDM integration, and traffic synchronization; and c) presented to the FIXM CCB for review and publication on the FIXM official website.		☐ Environmental ☒ Ops/Technical
Why: To provide the information exchange model necessary to support cross-border ATFM operation, A-CDM, ATFM/A-CDM integration, and traffic synchronization in the Asia/Pacific Region, in line with <i>Conclusion APANPIRG/35/4</i>.	Follow-up: ☐Required from States	
When: 26-Nov-25	Status: Adopted by PIRG	
Who: ☒Sub groups ☐APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other: SWIM TF		

Conclusion APANPIRG/36/13 (Conclusion CNS SG/29/15 (ACSICG/12/09 (CRV OG/14/01)))- Decision of CRV II Contract Management Process		
What: Following the procurement process formulated by CRV OG to choose one of the two options for APAC States/Administrations for the CRV II contract management process, i.e., <i>current CRV contract extension vs initiate the CRV II RFP process</i> : a) States/Administrations agree to extend the current CRV contract for 5 years , which will be referred to as the CRV II Network . After extension, the CRV II contract date would be from 1 January 2029 with expiry on 31 December 2033 b) The contract extension for the CRV network will include updated legal, commercial, financial and technical requirements of the current service provider and CRV network implementation. c) Considering internal procurement timelines of APAC States/Administrations, CRV OG should prepare baseline updates required for the CRV network before 1 April 2027 ;		Expected impact: ☐ Political / Global ☐ Inter-regional ☒ Economic ☐ Environmental ☒ Ops/Technical
Why: (1) The current CRV contract expires on 31 December 2028; (2) Some APAC States/Administrations, including PSIDS, are in the process of joining CRV, while some States have joined CRV within the last 1-2 years; (3) Transition to the new contract will take at least 1-2 years;	Follow-up: ☒ Required from States	

CNS SG/30
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A List of Conclusions adopted by APANPIRG/36 Meeting related to CNS

(4) The CRV II contract management process executed by CRV OG resulted in the extension of the CRV contract for 5 years.	
When: 26 Nov 2025	Status: Adopted by PIRG
Who: ☒ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☒ Other: CRV OG and ACSICG	
