

International Civil Aviation Organization



ICAO

**Twenty Fifth Meeting of the Communications/
Navigation and Surveillance Sub-group (CNS SG/25) of
APANPIRG**

Video Tele-Conference, 18 – 22 October 2021

Agenda Item 2: Review outcomes of APANPIRG/RASG Chairpersons review, APANPIRG/31 meeting, ATM Sub-group and other major meetings relevant to CNS Sub-group

**UPDATES ON CNS SG/24 AND APANPIRG/31 CONCLUSIONS/DECISIONS AND
ACTION ITEMS**

(Presented by the Secretariat)

SUMMARY

The paper presents the latest status and actions taken for various Conclusion/Decision adopted and recommended in the Twenty Fourth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/24) of APANPIRG, Conclusion/Decision adopted by the Thirty First Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/31) related to CNS along with latest status and action taken on various ACTION ITEMS formulated by the CNS SG/24 meeting for information and necessary follow-ups actions.

1. INTRODUCTION

1.1 The Thirty-first Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/31) was held from 14 to 16 December 2020 via video teleconference. The Meeting was attended by 193 participants from 23 Member States, 2 Special Administrative Regions of China, and 8 International Organizations (AAPA, ACI, CANSO, IATA, ICAO, IFALPA, IFATCA and IFATSEA). APANPIRG/31 meeting report, working papers, information papers, and other resources can be accessed by following link:

<https://www.icao.int/APAC/Meetings/Pages/2020-APANPIRG31.aspx>.

1.2 The Twenty Fourth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/24) of APANPIRG was held from 30 November to 4 December 2020 via video teleconference. The meeting was attended by 176 participants from 26 States/Administrations and 5 International Organizations namely CANSO, EUROCONTROL, IATA, IFATCA and IFATSEA, plus 26 participants from industry partners. CNS SG/24 meeting report, working papers, information papers, and other resources can be accessed by following link:

<https://www.icao.int/APAC/Meetings/Pages/2020-CNS-SG24.aspx>.

Agenda Item 2

18-22/10/21

2. DISCUSSION

2.1 The CNS SG/24 meeting adopted **Eight** (8) Conclusions and **Five** (5) Decisions. In addition, based on the outcome of discussions on various agenda items, the CNS SG/24 meeting developed **four** (4) Draft Conclusions for consideration by APANPIRG/31 Meeting, which was adopted by APANPIRG/31.

2.2 The CNS SG/24 meeting adopted following **8** Conclusions and **5** Decisions:

Reference	Subject
Conclusion CNS SG/24/3 (<i>ACSICG/7/2 (ATFM/SG/10-3)</i>)	- Amendment of the AFTN/AMHS-based Interface Control Document (ICD) for ATFM
Conclusion CNS SG/24/4	- Publishing of the CRV Operations Manual
Decision CNS SG/24/5	- CRV Landing Page on the ICAO APAC Website
Decision CNS SG/24/6 (<i>SRWG/4/1</i>)	- Frequency requirements for VHF-COM systems and ILS, VOR, DME and GBAS/VDB facilities
Conclusion CNS SG/24/7 (<i>SRWG/4/2</i>)	- Simulation of VHF COM Frequency requirements for next 10 years
Conclusion CNS SG/24/8 (<i>SRWG/4/3</i>)	- Establishment a list of focal point responsible for the operation of Frequency Finder in States
Decision CNS SG/24/9 (<i>SRWG/4/4</i>)	- Revision of the Term of Reference of the SRWG
Conclusion CNS SG/24/10	- Flight Inspection Guidance Material (FIGM) for APAC Region
Conclusion CNS SG/24/11	- Protection of ILS Critical and Sensitive Areas in Three Dimensional
Decision CNS SG/24/12 (<i>SURICG/5/2</i>)	- Dissolution of SEA/BOB ADS-B WG
Conclusion CNS SG/24/14 (<i>SURICG/5/4(DAPs WG/3/2)</i>)	- Mode S DAPs IGD 2.0
Conclusion CNS SG/24/15 (<i>SURICG/5/6</i>)	- Revised ADS-B Implementation and Operations Guidance Document (AIGD) Edition13
Decision CNS SG/24/16 (<i>SURICG/5/1</i>)	- Establishment of Study Group under SURICG on Sharing of Surveillance Data in SWIM

2.3 The contents of above Conclusions adopted by the CNS SG are provided in the **Appendix A** to this paper.

2.4 Based on the outcome of discussions on various agenda items, the CNS SG/24 meeting developed 4 Draft Conclusions for consideration by APANPIRG/31 Meeting, which were further adopted by APANPIRG/31. The conclusions adopted by APANPIRG/31 are as follows:

Reference	Subject
APAPPIRG C 31/12 (<i>Draft Conclusion CNS SG/24/1</i>)	- Target Year of CRV Implementation in APAC Region
APANPIRG C 31/13 (<i>Draft Conclusion CNS SG/24/2 (ACSICG/7/1)</i>)	- Revised Regional Strategies on AMS and Datalink
APANPIRG C 31/14 (<i>Draft Conclusion CNS SG/24/13 (SURICG/5/3(DAPs WG/3/1))</i>)	- Mode S Forward Fit Equipage in APAC Region
APANPIRG C 31/15 (<i>Draft Conclusion CNS SG/24/17</i>)	- Addressing Human Factor Issues of ATSEP

2.5 All APANPIRG/31 Conclusions related to CNS are included in **Appendix B** to this paper.

2.6 The latest status and action taken for **Eight** (8) Conclusions and **Five** (5) Decisions of CNS SG/24 and **Four** (4) Conclusions of APANPIRG/31 are provided in **Appendix C** to this paper.

2.7 The latest status and action taken on various ACTION ITEMS formulated by the CNS SG/24 meeting is provided in **Appendix D** to this paper.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to
- a. note the latest status and action taken for various CNS SG/24 and APANPIRG/31 **Conclusions/Decisions** provided in **Appendix C** and take any necessary follow-up actions;
 - b. note the latest status and action taken for CNS SG/24 action items provided in **Appendix D** and take any necessary follow-up actions; and
 - c. discuss any relevant matters as appropriate.

List of Conclusion/Decisions adopted by CNS SG/24 on behalf of APANPIRG on Technical Matters

Conclusion CNS SG/24/3(ACSICG/7-2 (ATFM/SG/10-3)) - Amendment of the AFTN/AMHS-based Interface Control Document (ICD) for ATFM	
<p>What: That, the AFTN/AMHS-based Interface Control Document for ATFM Version 2.0 provided in Appendix E to this Report be adopted and posted on the ICAO Asia/Pacific Regional Office website to supersede the existing version, for use by Asia/Pacific Administrations in implementing cross-border ATFM communications in accordance with the provisions of the Regional Framework for collaborative ATFM.</p>	<p>Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To align with message format provisions of Annex 10 Vol II, and to support implementation by States through amendment to specific provisions.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 4-Dec-20</p>	<p>Status: Adopted by Subgroup</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> other: ACSICG/7</p>	

Conclusion CNS SG/24/4 - Publishing of the CRV Operations Manual	
<p>What: That the CRV Operations Manual provided in Appendix F to this Report be adopted as first Edition for publishing and use.</p>	<p>Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: Provides the information and directions required for CRV OG performance and CRV operations.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 4-Dec-20</p>	<p>Status: Adopted by Subgroup</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Decision CNS SG/24/5 - CRV landing page on the ICAO APAC website	
<p>What: That ICAO APAC Office is requested to create CRV landing page on ICAO APAC web page to providing information on CRV and guidance on how to join, leave or make changes.</p>	<p>Expected impact: <input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: Provides online access to the information and directions required for the Request Fulfilment Process and procedures to join, leave or make changes the CRV network</p>	<p>Follow-up: <input type="checkbox"/> Required from States</p>

List of Conclusions/Decisions adopted by CNS SG/24 on behalf of APANPIRG on Technical Matters

When: 4-Dec-20	Status: Adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

Decision CNS SG/24/6(SRWG/4/1) - Frequency requirements for VHF-COM systems and ILS, VOR, DME and GBAS/VDB facilities	
What: That, the SRWG is tasked to develop a rolling frequency assignment plan for VHF-COM and ILS, VOR, DME and GBAS/VDB facilities to meet the operational requirements until [2030], subject to a regular review and updating by the SRWG.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To secure adequate spectrum for these facilities for the near future.	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 4-Dec-20	Status: Adopted by Sub-group
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

Conclusion CNS SG/24/7(SRWG/4/2) – Simulation of VHF COM Frequency requirements for next 10 years	
What: To conduct a new round of simulation for VHF COM frequency assignment based on new operational requirements of States to 2030 as necessary.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To support regional strategy on the use of 8.33KHz channel spacing.	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 4-Dec-20	Status: Adopted by Sub-group
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

Conclusion CNS SG/24/8(SRWG/4/3) – Establishment a list of focal point responsible for the operation of Frequency Finder in States	
What: That, States in APAC Region are requested to nominate a focal point responsible for operation of the Frequency Finder and coordination for frequencies assignments with ICAO APAC Regional Office in order to reduce operational error and improve quality management for the coordination process.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To reduce operational error in accessing the tool of Frequency Finder and improve the spectrum management quality by enhancing the administrative process.	Follow-up: <input checked="" type="checkbox"/> Required from States

List of Conclusions/Decisions adopted by CNS SG/24 on behalf of APANPIRG on Technical Matters

When: 4-Dec-20	Status: Adopted by Sub-group
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Decision CNS SG/24/9 (SRWG/4/4) – Revision of the Term of Reference of the SRWG	
What: That, the revised Terms of Reference provided in Appendix J to the Report be adopted.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: Need to refine the scope of related tasks and include the new members.	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 4-Dec-20	Status: Adopted by Sub-group
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

Note: This revision is to conduct simulation on VHF COM frequency assignment and expand its scope of work to cover Navigation systems with highlight on GBAS implementation.

Conclusion CNS SG/24/10 – Flight Inspection Guidance Material (FIGM) for APAC Region	
What: That, the first edition of the Flight Inspection Guidance Material (FIGM) provided in Appendix K to this Report be adopted.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To provide additional guidance on planning, execution and delivery of flight inspection for States/Administrations in APAC Region.	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 4-Dec-20	Status: Adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

Conclusion CNS SG/24/11- Protection of ILS Critical and Sensitive Areas in Three Dimensional	
What: That, States to: a) take note of the importance in extending protection of ILS Critical and Sensitive Areas (CASA) from two dimensional to three dimensional as stated in ICAO Annex 10 (7th Edition, Amendment 92), Volume I, Attachment C, Paragraph 2.1.9.5; b) be aware that departing aircraft and/or manoeuvring helicopters/aircraft can cause disturbances to ILS signals	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical

List of Conclusions/Decisions adopted by CNS SG/24 on behalf of APANPIRG on Technical Matters

<p>received by arriving aircraft under single runway mixed mode operation;</p> <p>c) take measures to mitigate potential impacts caused by disturbances in ILS signals under single runway mixed mode operation;</p> <p>and ICAO to:</p> <p>d) provide guidance materials in establishing three dimensional ILS CASA and their protection.</p>	
<p>Why: In accordance with ICAO Annex 10 (7th Edition, Amendment 92), Volume I, paragraph 2.1.9.5 – “While critical and sensitive areas are evaluated in a two-dimensional (horizontal) context, protection should actually be extended to volumes, as departing aircraft and/or manoeuvring helicopters/aircraft can also cause disturbances to the ILS signals”. However, no detailed guidance was given as to how to establish the ILS CA/SA in three dimensional and how to protect them.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 4-Dec-20</p>	<p>Status: Adopted by Sub-group</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input checked="" type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

<p>Decision CNS SG/24/12 (SURICG/5/2) - Dissolution of SEA/BOB ADS-B WG</p>	
<p>What: Noting that most of the tasks outlined in the TOR have been achieved and the completion of residual part of action items will be performed by SURICG,</p> <p>That, the SEA/BOB ADS-B WG be dissolved.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: The SEA/BOB ADS-B WG terms of reference have been completed and pending action items will be performed by SURICG.</p>	<p>Follow-up: <input type="checkbox"/> Required from States</p>
<p>When: 4-Dec-20</p>	<p>Status: Adopted by Sub-group</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> APANPIRG <input checked="" type="checkbox"/> Other: SURICG</p>	

<p>Conclusion CNS SG/24/14 (SURICG/5/4(DAPS WG3/2)) - Mode S DAPs IGD 2.0</p>	
<p>What: That, the <i>Mode S DAPs Implementation and Operation Guidance Document</i> Edition 2.0 provided in Appendix N to this Report be adopted.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: Editorial correction and revision to reflect regional updates in implementation.</p>	<p>Follow-up: <input type="checkbox"/> Required from States</p>
<p>When: 4-Dec-20</p>	<p>Status: Adopted by Sub-group</p>

List of Conclusions/Decisions adopted by CNS SG/24 on behalf of APANPIRG on Technical Matters

Who: Sub groups APAC States ICAO APAC RO ICAO HQ Other:

Conclusion CNS SG/24/15 (SURICG/5/6) - Revised ADS-B Implementation and Operations Guidance Document (AIGD)			
What:	That, the revised ADS-B Implementation and Operations Guidance Document (AIGD) provided in Appendix O to this Report, which consolidated all change proposals during SURICG/5, be adopted as Version 13.	Expected impact:	<input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why:	Updates and editorial correction	Follow-up:	<input type="checkbox"/> Required from States
When:	4 Dec 2020	Status:	Adopted by Sub-group
Who:	<input checked="" type="checkbox"/> CNS Sub group <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ		

Decision CNS SG/24/16 (SURICG/5/1) - Establishment of Study Group under SURICG on Sharing of Surveillance Data in SWIM			
What:	Noting the operational needs of this region to enhance surveillance data sharing and new technologies available, That, the Study Group under SURICG on Sharing of Surveillance Data in SWIM (SURSG) with TOR provided in Appendix P to the Report, comprising subject matter experts in relevant areas including surveillance and SWIM to be set up to study and recommend solutions on surveillance data sharing to provide surveillance from “departure to destination”, be established.	Expected impact:	<input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why:	To enhance surveillance coverage, enhance surveillance data availability by providing additional layers of surveillance services, and support implementation of advanced Air Traffic Management (ATM) tools such as Air Traffic Flow Management (ATFM).	Follow-up:	<input checked="" type="checkbox"/> Required from States
When:	4-Dec-20	Status:	Adopted by Sub-group
Who:	<input checked="" type="checkbox"/> Sub Groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SURICG		

A List of Conclusions from CNS SG/24 approved by APANPIRG/31 Meeting

APAPPIRG C 31/12 (Conclusion CNS SG/24/1)- Target Year of CRV Implementation in APAC Region	
What: That, set and monitor 2021 as the target for CRV implementation for all ANSPs.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: Considering the challenges and difficulties faced by States/Administrations under current pandemic situation and recommended to postpone the target year of regional implementation of CRV from 2020 to end of 2021 and further align with follow up actions on Common Ground/Ground Telecommunication Network stated in the Beijing Declaration.	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 16-Dec-20	Status: To be adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

APANPIRG C 31/13 (Conclusion CNS SG/24/2(ACSICG/7/1)) - the Revised Regional Strategies on AMS and Datalink	
What: That, the revised Aeronautical Mobile Service (AMS) Strategy for the Asia/Pacific Region provided in Appendix C and the revised Strategy for Implementation of the Air-Ground Data Link in the Asia/Pac Region provided in Appendix D to the Report be adopted.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: Need to update the regional strategies on AMS and Datalink based on the latest developments	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 16-Dec-20	Status: To be adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

APANPIRG C 31/14 (Conclusion CNS SG/24/13 (SURICG/5/3(DAPS WG3/1)) - Mode S Forward Fit Equipage in APAC Region	
What: Regarding fitment of Mode S equipage, That, States/Administrations in APAC Region be strongly encouraged to mandate that registered aircraft with a maximum certified take-off mass exceeding 5 700 kg or having a maximum cruising true airspeed capability greater than 250 knots, with a date of manufacture on or after 1 January 2022 be equipped with Mode S avionics compliant with Enhanced Surveillance (EHS).	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: Considering that a number of DAPs	Follow-up: <input checked="" type="checkbox"/> Required from States

A List of Conclusions from CNS SG/24 approved by APANPIRG/31 Meeting

applications will require EHS and that it's easy for new aircraft to be equipped with EHS. Retrofitting existing airframes with EHS will need further deliberation under challenging pandemic situation.	
When: 16-Dec-20	Status: To be adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input checked="" type="checkbox"/> APANPIRG <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SURICG	

APANPIRG C 31/15 (Conclusion CNS SG/24/17) - Addressing Human Factor Issues of ATSEP

<p>What: That,</p> <p>a) the States are encouraged to make reference and implement the recommendations made out of the IFATSEA study report <i>Factors adding stress and fatigue to ATSEP</i> provided in Appendix R to the Report for pro-active measures;</p> <p>b) States are also encouraged to join the small working group for finding the left-out gaps and in preparing the regional ATSEP human factor guidance material.</p>	<p>Expected impact:</p> <p><input type="checkbox"/>Political / Global</p> <p><input type="checkbox"/>Inter-regional</p> <p><input checked="" type="checkbox"/>Economic</p> <p><input type="checkbox"/>Environmental</p> <p><input checked="" type="checkbox"/>Ops/Technical</p>
<p>Why: to continuously improve the human performance management in practice to better support CNS/ATM system operations.</p>	<p>Follow-up: <input checked="" type="checkbox"/>Required from States</p>
When: 16-Dec-20	Status: Draft to be adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

CNS SG/24 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target Date	Actual Date	Status
1.	Conclusion CNS SG/24/1 & APAPPIRG C 31/12	Target Year of CRV Implementation in APAC Region	That, set and monitor 2021 as the target for CRV implementation for all ANSPs.	ICAO APAC RO APAC States and Administrations	State Letter T 8/2.10 –AP002/21(CNS) dated 6 January 2021 , Subject: Postpone the target year of CRV implementation from 2020 to end of 2021in APAC Region	29 January 2021	6 January 2021.	CLOSED
2.	Conclusion CNS SG/24/2 (<i>ACSICG/7/1</i>) & APANPIRG C 31/13	The Revised Regional Strategies on AMS and Datalink	That, the revised Aeronautical Mobile Service (AMS) Strategy for the Asia/Pacific Region provided in Appendix A to the Report on Agenda Item 3.4 and the revised Strategy for Implementation of the Air-Ground Data Link in the Asia/Pac Region provided in Appendix B to the Report on Agenda Item 3.4 be adopted.	ICAO APAC RO APAC States and Administrations	Posted on ICAO APAC Website State letter to notify States by Ref.: T 8/4.1 - AP005/21 (CNS) dated 8 January 2021 , subject: The Revised Regional Strategies on AMS and Datalink	29 January 2021	8 January 2021	CLOSED
3.	Conclusion CNS SG/24/3 (<i>ACSICG/7/2</i> (<i>ATFM/SG/10-3</i>))	Amendment of the AFTN/AMHS-based Interface Control Document (ICD) for ATFM	That, the AFTN/AMHS-based Interface Control Document for ATFM Version 2.0 provided in Appendix E to this Report be adopted and posted on the ICAO Asia/Pacific Regional Office website to supersede the existing version, for use by Asia/Pacific Administrations in implementing cross-border	ICAO APAC RO APAC States and Administrations	State Letter Ref: T 8/9.1 – P262/20 (CNS) dated 22 December 2020 , Subject: To note the various regional guidance materials available on the ICAO APAC website and take into consideration for their implementation	29 January 2021	22 December 2020	CLOSED

CNS SG/24 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target Date	Actual Date	Status
			ATFM communications in accordance with the provisions of the Regional Framework for collaborative ATFM.					
4.	Conclusion CNS SG/24/4	Publishing of the CRV Operations Manual	That the CRV Operations Manual provided in Appendix F to this Report be adopted as first Edition for publishing and use.	ICAO APAC RO APAC States and Administrations	State Letter Ref: T 8/9.1 – P262/20 (CNS) dated 22 December 2020 subject: To note the various regional guidance materials available on the ICAO APAC website and take into consideration for their implementation	29 January 2021	22 December 2020	CLOSED
5.	Decision CNS SG/24/5	CRV Landing Page on the ICAO APAC Website	That ICAO APAC Office is requested to create CRV landing page on ICAO APAC web page to providing information on CRV and guidance on how to join, leave or make changes.	ICAO APAC RO	Ref.: T 8/2.10-AP107/21(CNS) dated 16 June 2021 , Subject: CRV Landing Page on ICAO APAC Website Action Required: Take Reference to CRV Landing Webpage for Implementation of CRV in APAC Region by end of 2021	31 st December 2021	16 June 2021	CLOSED
6.	Decision CNS SG/24/6 (SRWG/4/1)	Frequency requirements for VHF-COM systems and ILS, VOR, DME and GBAS/VDB facilities	That, the SRWG is tasked to develop a rolling frequency assignment plan for VHF-COM and ILS, VOR, DME and GBAS/VDB facilities to meet the operational requirements until [2030], subject to a regular review and updating by the SRWG.	Member States, and ICAO APAC RO	Rolling frequency assignment plan for VHF-COM and ILS, VOR, DME and GBAS/VDB facilities are implemented by Member States, relevant information is updated with SRWG.	31 st December 2021	SRWG meeting	ON GOING

CNS SG/24 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target Date	Actual Date	Status
7.	Conclusion CNS SG/24/7 (SRWG/4/2)	Simulation of VHF COM Frequency requirements for next 10 years	To conduct a new round of simulation for VHF COM frequency assignment based on new operational requirements of States to 2030 as necessary.	ICAO APAC RO	Simulation results and recommendations State Letter Ref: T 8/8.6-AP058/21(CNS) dated 9 April 2021 subject: Simulation of VHF COM Frequency requirements for next 10 years	31 st December 2021	Last dates of inputs from states: 15 July 2021. Response from 7 States received namely China, Hong Kong China, Japan, Republic of Korea, Singapore, Thailand and USA	ON-GOING
8.	Conclusion CNS SG/24/8 (SRWG/4/3)	Establishment a list of focal point responsible for the operation of Frequency Finder in States	That, States in APAC Region are requested to nominate a focal point responsible for operation of the Frequency Finder and coordination for frequencies assignments with ICAO APAC Regional Office in order to reduce operational error and improve quality management for the coordination process.	ICAO APAC RO APAC States and Administrations	Point of Contact (PoC) list State Letter Ref: T 8/8.9 - AP057/21(CNS) dated 8 April 2021 subject: Focal Point for Frequency Coordination	31 st March 2021	Last dates of inputs from states: 10 June 2021. Response from 16 States received namely Australia, Cambodia, China, Hong Kong China, Fiji, India, Indonesia, Japan, Lao PDR, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand and USA.	ON-GOING

CNS SG/24 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target Date	Actual Date	Status
9.	Decision CNS SG/24/9 (SRWG/4/4)	Revision of the Term of Reference of the SRWG	That, the revised Terms of Reference provided in Appendix J to the Report be adopted.	ICAO APAC RO	Revised ToR of SRWG	November 2020.	November 2020	CLOSED
10.	Conclusion CNS SG/24/10	Flight Inspection Guidance Material (FIGM) for APAC Region	That, the first edition of the Flight Inspection Guidance Material (FIGM) provided in Appendix K to this Report be adopted.	ICAO APAC RO APAC States and Administrations	State Letter Ref: T 8/9.1 – P262/20 (CNS) dated 22 December 2020 Subject: To note the various regional guidance materials available on the ICAO APAC website and take into consideration for their implementation	29 January 2021	22 December 2020	CLOSED
11.	Conclusion CNS SG/24/11	Protection of ILS Critical and Sensitive Areas in Three Dimensional	That, States to: a) take note of the importance in extending protection of ILS Critical and Sensitive Areas (CASA) from two dimensional to three dimensional as stated in ICAO Annex 10 (7th Edition, Amendment 92),	ICAO APAC RO ICAO HQ	Guidance materials in establishing three dimensional ILS CASA and their protection Information shared with ICAO HQ NSP. No further follow up action at NSP.	31 st December 2021.	OPEN	ON-GOING

CNS SG/24 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Decis ion	Text of Conclusion/Decision	Responsibility	Deliverable	Target Date	Actual Date	Status
			<p>Volume I, Attachment C, Paragraph 2.1.9.5;</p> <p>b) be aware that departing aircraft and/or maneuvering helicopters/aircraft can cause disturbances to ILS signals received by arriving aircraft under single runway mixed mode operation;</p> <p>c) take measures to mitigate potential impacts caused by disturbances in ILS signals under single runway mixed mode operation;</p> <p>and ICAO to:</p> <p>d) provide guidance materials in establishing three dimensional ILS CASA and their protection.</p>					
12.	Decision CNS SG/24/12 (SURICG/5/2)	Dissolution of SEA/BOB ADS-B WG	<p>Noting that most of the tasks outlined in the TOR have been achieved and the completion of residual part of action items will be performed by SURICG,</p> <p>That, the SEA/BOB ADS-B WG be dissolved.</p>	ICAO APAC RO	Dissolved SEA/BOB ADS-B WG	November 2020	November 2020	CLOSED

CNS SG/24 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target Date	Actual Date	Status
13.	Conclusion CNS SG/24/13 (SURICG/5/3(DAPs WG/3/1)) & APANPIRG C 31/14	Mode S Forward Fit Equipage in APAC Region	That, States/Administrations in APAC Region be strongly encouraged to mandate that registered aircraft with a maximum certified take-off mass exceeding 5 700 kg or having a maximum cruising true airspeed capability greater than 250 knots, with a date of manufacture on or after 1 January 2022 be equipped with Mode S avionics compliant with Enhanced Surveillance (EHS).	ICAO APAC RO APAC States and Administrations	State Letter to notify states by Ref.: T 8/5.11 – AP003/21 (CNS) dated 6 January 2021 , subject: Mode S Forward Fit Equipage in APAC Region	29 January 2021	6 January 2021	CLOSED
14.	Conclusion CNS SG/24/14 (SURICG/5/4(DAPs WG/3/2))	Mode S DAPs IGD 2.0	That, the <i>Mode S DAPs Implementation and Operation Guidance Document</i> Edition 2.0 provided in Appendix N to this Report be adopted.	ICAO APAC RO APAC States and Administrations	State Letter Ref: T 8/9.1 – P262/20 (CNS) dated 22 December 2020 Subject: To note the various regional guidance materials available on the ICAO APAC website and take into consideration for their implementation	29 January 2021	22 December 2020	CLOSED

CNS SG/24 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target Date	Actual Date	Status
15.	Conclusion CNS SG/24/15 (SURICG/5/6)	Revised ADS-B Implementation and Operations Guidance Document (AIGD) Edition13	That, the revised ADS-B Implementation and Operations Guidance Document (AIGD) provided in Appendix O to this Report, which consolidated all change proposals during SURICG/5, be adopted as Version 13.	ICAO APAC RO APAC States and Administrations	State Letter Ref: T 8/9.1 – P262/20 (CNS) dated 22 December 2020 Subject: To note the various regional guidance materials available on the ICAO APAC website and take into consideration for their implementation	29 January 2021	22 December 2020	CLOSED
16.	Decision CNS SG/24/16 (SURICG/5/1)	Establishment of Study Group under SURICG on Sharing of Surveillance Data in SWIM	Noting the operational needs of this region to enhance surveillance data sharing and new technologies available, That, the Study Group under SURICG on Sharing of Surveillance Data in SWIM (SurSG) with TOR provided in Appendix P to the Report, comprising subject matter experts in relevant areas including surveillance and SWIM to be set up to study and recommend solutions on surveillance data sharing to provide surveillance from “departure to destination”, be established.	ICAO APAC RO APAC States and Administrations	First meeting of SURSG from 20 th April 2021-22 nd April 2021.	November 2020	November 2020	CLOSED

CNS SG/24 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Decision	Text of Conclusion/Decision	Responsibility	Deliverable	Target Date	Actual Date	Status
17.	Conclusion CNS SG/24/17 & APANPIRG C 31/15	Addressing Human Factor Issues of ATSEP	That, a) the States are encouraged to make reference and implement the recommendations made out of the IFATSEA study report <i>Factors adding stress and fatigue to ATSEP</i> provided in Appendix R to the CNS SG/24 Report for proactive measures; b) States are also encouraged to join the small working group for finding the left-out gaps and in preparing the regional ATSEP human factor guidance material.	ICAO APAC RO APAC States and Administrations	Report posted on ICAO APAC Website under e-docs and State letter issued to notify States Ref: T 3/9.9- AP022/21 (CNS) dated 26 th January 2021subject Addressing Human Factor Issues of A TSEP	29 January 2021	27 th January 2021 Ad-hoc group formed on 05.04.2021	CLOSED

— END —

UPDATES ON ACTION ITMES FROM CNS SG/24					
Action Item	Subject	Status / Target Date	Action Party	Status	Remarks / follow-up
24-1	To address communications, navigation, and surveillance (CNS) systems resilience and mitigation of harmful interference to global navigation satellite system (GNSS) by making use of the ICAO guidance provided in Doc 9849, <i>Global Navigation Satellite System (GNSS) Manual</i> .	CNS SG25	Member States	On-going	Update the region on DFMC progress through CNS SG/25 IP07.
24-2	The meeting noted the issues related to CRV operational support at a regional level, as more and more ANSPs, service providers and service consumers have been joining CRV, various services are being implemented over CRV. States/Administrations are encouraged to share their new ideas on this issue in future meetings	CNS SG25	Member States, ICAO Secretariat	On-going	Four ad-hoc expert groups within CRV OG along the lines of Strategy, Design, Transition and Operations are working to improve CRV OM to add Continuous Service Improvement, advancement, documentation and reporting to the Operations Group. Various WPs/IPs in CRV OG/8: 1. <i>In Case Of CRV Core Network Failure- Japan (IP/05)</i> 2. <i>Revisit the CRV solution for small Pacific Islands and small ANSPs in APAC- Fiji (WP/13) and relevent Draft Conclusion CRV/08/02 - Implementation of CRV for small Pacific Island and small ANSP in the region using CRV Solution, PCCWG SLA Package D</i> 3. <i>Backup B2B Internet Service between FAA and Air services- FAA (IP/14)</i> 4. <i>Distribution of Surveillance Data to PNG via CRV- Aireon LLC and NuiSky Pacific (PNG) (IP/07)</i> 5. <i>CRV Connection to Santiago Chile- New Zealand (IP/10)</i>
24-3	MET SG and CNS SG enhance mutual coordination and sharing outcomes of related survey and Seminar/workshop, and encouraged States/Administrations to expedite responding to the ICAO's survey as soon as possible before APANPIRG/31, and the contributory body of MET SG (Meteorological Information Exchange Working Group (MET/IE WG)) should work collaboratively with ACSICG for a way forward in APAC region	CNS SG/25	Member States, ICAO Secretariat	On-going	<i>ACSICG8 WP08 - Summary on ICAO Actions to facilitate IWXXM on AMHS in APAC Region ,and IP07-Relevant Outcomes of ICAO APAC MET/IE WG/19</i>
24-4	The meeting encouraged SWIM TF to make better benefits from the cross cutting coordination with other contributory bodies of APANPIRG, in particular with CRV and ATFM, to further enhance the connection with infrastructure and the users.	CNS SG/25	SWIM TF, CRV OG, ATFM, ICAO Secretariat	On-going	Ongoing Coordination among CRV OG, SWIM TF, and ACSICG
24-5	Support of the ICAO Position by ITU Member States is required to ensure that the position is supported at the WRC-23 and that aviation requirements are met	WRC 23	Member States, ICAO Secretariat	On-going	Promote ICAO Position at ITU/APT RRS-21 and APG 23-3.

24-6	<p>Through Flimsy/03, Singapore informed the meeting about the proposal on a draft conclusion to encourage States/Administrations in APAC Region to participate in the ICAO DCIWG space-based VHF sub-group to review ICAO Annex 10 SARPs for adoption of space-based VHF operations.</p> <p>The meeting considered further work needs to be done and agreed to recommend States/Administrations who are interested and capable to join the relevant study, and as present ICAO Position for WRC-23 already included space-based VHF agenda.</p> <p>The Secretariat was requested to coordinate with SRWG chair and ACSICG chair to clarify how to track and monitor this initiative, and form an ad hoc group, if necessary, to take the concerns from States on a regional level so as to make the study meaningful, and the outcome of this deliberation will be reported back to CNS SG/25 for consideration.</p>	CNS SG/25	ACSICG, SRWG, Member States, ICAO Secretariat	On-going	It has been addressed by Flimsy02 during SRWG/5, and developed SRWG Action Item 5-1.
24-7	<p>ICAO APAC will forward this WP/21 Protection of ILS Critical and Sensitive Areas in Three-Dimensional and ILS Facility Performance Category Requirements and its presentation file to secretary of the ICAO Navigation Systems Panel (NSP) for consideration by Conventional Nav aids and Testing Working Group (CNTWG).</p>	CNS SG/25	ICAO Secretariat	Closed	WP/21 and its presentation file are shared with NSP Secretary
24-8	<p>The Secretariat informed the meeting about the regional established practice on II code coordination through Flimsy/05, as well as the need for IC code inter-regional coordination, and urged States/Administration to provide the required information to ICAO Regional Office for updating the APAC II code list</p>	CNS SG/25	Member States, ICAO Secretariat	On-going	Interregional coordination was made for AFG. DAPS WG/4 proposed new requirements in this regard.
24-9	<p>The meeting recalled the regional efforts on cybersecurity issues in the past years, considering the nature of complexity and the need for inter section coordination within the APAC RO and with HQ and in relation to the Cybersecurity Action Plan and promoting similar drills in future, ICAO APAC is requested to plan a webinar on cybersecurity for the region in 2021</p>	CNS SG/25	Member States, ICAO Secretariat	Closed	ICAO Asia Pacific Regional Cybersecurity Webinar held on <i>14 June 2021</i>