REPORT OF

THE NINTH MEETING OF THE SPECTRUM REVIEW WORKING GROUP (SRWG/9)

Bangkok, Thailand
7-9 May 2025

The views expressed in this Report should be taken as those of SRWG/9 Meeting and not of the Organization.

Approved by the Meeting
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HISTORY OF THE MEETING

REPORT ON AGENDA ITEMS

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1. Introduction

1.1 The Ninth Meeting of the Spectrum Review Working Group (SRWG/9) of APANPIRG was held in the ICAO APAC Regional Office, Bangkok, Thailand, on 7 – 9 May 2025.

2. Attendance

2.1 The Meeting was attended by **37** participants from **10** States/Administrations and **2** International Organizations, including Australia, China, Hong Kong China, India, Japan, Lao PDR, Philippines, Singapore, Thailand, Vietnam, EUROCONTROL and ICAO. The List of Participants is provided in **Attachment 1** to this Report. Indonesia and Eurocontrol were provided the option to join the Meeting online due to the significance of their paper/presentation and their inability to join the Meeting in person.

3. Opening of the Meeting

3.1 The Meeting was opened by Dr. Soniya Nibhani, Regional Officer, ANS (CNS) Implementation. Dr. Nibhani informed about the key agenda items and expectations from the Meeting. She extended her appreciation and gratitude to all participants and their contributions, along with the submission of various papers on essential agenda items to discuss during the Meeting. She shared the importance of the Meeting to keep the aviation spectrum safe and secure and requested to participate actively and share insights to resolve various proposed issues during the Meeting.

4. Officers and Secretariat

4.1 Mr. Arthur Kin Hei Lau, Electronics Engineer, Civil Aviation Department, Hong Kong, China, chaired the Meeting.

4.2 Dr. Soniya Nibhani, Regional Officer ANS (CNS) Implementation, acted as the Secretary of the Meeting with the support of Ms. Xu Jian, Associate Programme Officer (CNS) Implementation and Ms. Varapan Meefuengsart, the Programme Assistant from ICAO Asia and Pacific Regional Office.

5. Organization, working arrangement, language and documentation

5.1 The SRWG/9 met as a single body. The working language for the Meeting was English inclusive of all documentation and this report. A total of **twenty (20) Working Papers, one (1) Information Paper, and two** (2) Presentations were considered by the Meeting. The List of Papers is provided in **Attachment 2** to this Report**.**

6. Draft Conclusions, Draft Decisions and Decisions of SRWG – Definition

6.1 SRWG recorded its actions in the form of Draft Conclusions, Draft Decisions and Decisions within the following definitions:

> **Draft Conclusions** deal with matters that, according to APANPIRG's terms of reference, require the attention of States or action by the ICAO in accordance with established procedures;

Draft Decisions deal with the matters of concern only to APANPIRG and its contributory bodies; and

Decisions of the SRWG that relate solely to matters dealing with the internal working arrangements of the SRWG.

7. List of Conclusions/Decisions from SRWG/9

	Reference Number	Title of (Draft) Conclusions/Decisions
1.	Draft Conclusion SRWG/9/01	- Update the TABLE CNS II-4- HF NETWORK DESIGNATORS in ICAO APAC e-ANP Vol II

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Agenda Item 1: Adoption of the Agenda

1.1 The provisional agenda presented in **WP/01** was adopted as the agenda for the Meeting.

Agenda Item 2: Election of Chair

2.1 Nominated by China and seconded by India and Singapore, Mr. Arthur Kin Hei Lau, Electronics Engineer, Civil Aviation Department, Hong Kong, China, was elected as the Chair of the Spectrum Review Working Group (SRWG).

2.2 Mr. Arthur Kin Hei Lau expressed his gratitude to all Member States who nominated or supported his nomination as the Chair of the SRWG. He shared the key achievements of SRWG in the last eight years and various challenges that the aviation spectrum is facing. He encouraged active discussion and cooperation to address various issues planned to be discussed during the Meeting. He also thanked Mr. Chainan Chaisompong for his contributions during his term as the chair of SRWG from 2020 to 2024, along with his efforts to advance spectrum-related activities in the Asia-Pacific region.

Agenda Item 3: Review outcomes of relevant meetings

Review of Outcomes of Relevant Meetings - Secretariat (WP/02)

3.1 The paper summarized relevant information and updates with a highlight on the outcomes of SRWG/8, which was reviewed by CNS SG/28. It was stated that the CNS SG/28 Meeting adopted four (4) conclusions and two (2) decisions. In addition, based on the outcome of discussions on various agenda items, the CNS SG/28 Meeting developed **four (4)** Draft Conclusions and **one** (1) draft Decision for consideration by the APANPIRG/35, which were adopted by the APANPIRG/35 Meeting. The Meeting noted the Conclusions/Decisions adopted by the CNS SG/28 and the APANPIRG/35 and discussed the follow-up.

3.2 The Meeting was informed that Resolution **COM5/5** (WRC-23) mentioned in section 2.20 of WP/02 was changed by ITU to **RESOLUTION 676 (WRC-23)** "Prevention and mitigation of harmful interference to the radionavigation satellite service in the frequency bands 1 164-1 215 MHz and 1 559-1 610 MHz". It was announced that ICAO is finalizing the ICAO position for WRC-27, which includes a recommended modification action related to this resolution under Agenda Item 4 of WRC-27. States were encouraged to monitor the progress of the work in the ITU closely, in order to ensure the continued availability of navigation capabilities.

Outcomes of WRC27 Workshop – Secretariat (WP/03)

3.3 The Workshop on ITU World Radiocommunication Conference 2027 (WRC-27 Workshop) was held in the ICAO Asia and Pacific Regional Office, Bangkok, Thailand, from 24 to 25 February 2025. The Workshop was organized in conjunction with the Twentieth Working Group Meeting of the Frequency Spectrum Management Panel (FSMP-WG/20), which was held from 27 February to 7 March 2025. The objective of the Workshop was to provide the background and information to States/Administrations in preparing their delegations for the WRC-27 and address other spectrum issues of vital importance to the international aviation community.

3.4 The Workshop focused on agenda items of major concerns for the aviation community and action plans to be implemented at the national levels, regional preparations for WRC-27, radio altimeter and 5G issues, the issue of GNSS interference, and current practices and new challenges in APAC.

3.5 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. Specifically, the States/Administrations were encouraged to communicate with radio regulatory authorities to ensure, to the maximum extent possible, that the ICAO position was accounted for in the development of national positions. It was highly recommended that delegations to regional conferences, ITU study groups and WRC include experts from their civil aviation authorities and other civil aviation stakeholders who are fully prepared to represent aviation interests.

3.6 Concerns were raised about the potential interference from 5G to the radio altimeter. The Workshop was informed of the increasing number of incidents of observed GNSS interference globally and the implications for air navigation safety and security. Serious concerns regarding the impact of GNSS interference on the safety and security of air navigation systems were expressed by the participants of the Workshop and States/Administrations were encouraged to monitor the issues and take into account a comprehensive and well-coordinated approach to address this pressing issue.

3.7 The Workshop noted that, along with the progress of the studies, there might be some updates to the ICAO position. Therefore, participants requested that it would be better for the aviation community to organize an additional remote workshop/webinar in 2027 to understand such updates.

3.8 The Meeting acknowledged the significance of the preparatory Workshop for WRC27 and shared appreciation with the ICAO APAC Office. The Meeting advised States/Administrations to follow up on the changes made in the ICAO position over time and take appropriate action.

3.9 The Meeting was informed that Asia-Pacific Telecommunity (APT) will organize the 2nd Meeting of the APT Conference Preparatory Group for World Radiocommunication Conference 2027 (APG27-2) from **28 July to 1 August 2025** in Pattaya, Thailand. The APG27-2 will be organized by the APT as a physical meeting with remote participation. It was informed that APG27-2 is an important meeting for WRC-27 preparations. The APG27-2 Meeting will discuss the ICAO Position for WRC-27, which will be presented by ICAO HQ. It will also help to learn the Spectrum/WRC relevant issues, and to help network and promote understanding of aeronautical issues to National Spectrum Regulators within the APAC Region. More details of the Meeting can be accessed at this link.

Agenda Item 4: Review Frequency planning requirements for the APAC Region

Agenda Item 4.1: VHF COM Frequency Allotment Plan for APAC

Follow-up actions for revised VHF COM Frequency Allotment Plan for APAC – Secretariat (WP/04)

4.1 The paper provided the actions taken by the ICAO Secretariat after approval of the *VHF COM Frequency Allotment Plan for the APAC Region* by APANPIRG/35. The Meeting noted that during the SRWG/8 Meeting, China presented the latest actions taken on the VHF COM Frequency Allotment Plan for the APAC Region, including the statistical analyses of the actual usage of frequencies in the APAC Region, and suggested simplifying the APAC Frequency Allotment Plan by **converging the various allotments of "sub-services" to the main service**, and proposed **the twelve frequencies which have not been allotted to any services**, be allotted to ACC services.

4.2 It was informed that the revised VHF COM Frequency Allotment Plan in the Table and the Chart for the APAC Region was included in the revised Asia/Pacific Regional Frequency Management Manual v1.1, adopted by the SRWG/8 through **Conclusion SRWG/8/6**. In addition, it was noted that **the new allotment of twelve (12) frequencies**, belonging to the International and National Aeronautical Mobile Services band, which was proposed to be allotted to ACC services in SRWG/7, was not included in any of the Asia-Pacific conference outcomes.

4.3 The SRWG/8 Meeting endorsed a draft Conclusion to simplify the VHF COM Frequency Allotment Plan and to clarify the function of these twelve frequencies for ACC service in

the APAC Region. APANPIRG/35 meeting adopted the proposed draft **Conclusion APANPIRG/35/8** *(Conclusion CNS SG/28/06 (SRWG/8/2)* – **VHF COM Frequency Allotment Plan for APAC Region**, which was endorsed by CNS SG/28.

4.4 It was agreed that the Secretariat would notify the CNSS of the ANB about updates to the regional VHF COM Allotment Plan to ensure that the Frequency Finder (FF) tool reflects the latest revisions. To enhance the efficiency of frequency use in the APAC region, Member States and Administrations were requested to review and update the frequencies uploaded in the FF, ensuring the database remains current.

4.5 The ICAO Secretary informed that she coordinated with ICAO Headquarters to incorporate the revised allotment plan into the FF tool, which was updated in February 2025 and will be released with the latest version of Frequency Finder 2025.01. Furthermore, it was added that Volume II of the Handbook on Radio Frequency Spectrum Requirements for Civil Aviation (ICAO Doc 9718, Volume II) is in the process of being updated with the revised APAC VHF COM allotment plan and will be placed on the ICAO NET in due course. The update on the modules in Frequency Finder was introduced in WP/11 for further information.

4.6 The Meeting encouraged States/Administrations to provide contributions to the VHF COM Frequency Allotment Plan and raise their respective concerns over the frequency allotment.

4.7 Regarding the tentative dates for launching the new version of Frequency Finder, it was stated that the dates have not yet been finalized. However, it is expected to be launched in Q3 2025.

Proposal for frequency band reduction for AOC Service – China (WP/10)

4.8 China presented the actions taken to improve the utilization of the frequency band 117.975 - 137 MHz based on the statistical analysis of frequency assignments in the AOC band in the APAC Region. It was informed that in the past, SRWG/2 had discussed different measures to increase the efficiency of frequency management for the APAC Region, and the reduction of the band for AOC had been mentioned. The SRWG/2 Meeting agreed that a proposal could be circulated to the APAC States to reduce the band for AOC: A-Proposed new sub-band for ATS services in APAC 128.900 - 131.375 MHz; B-Existing assigned AOC frequencies in this sub-band are subject to coordination, if required, between the Member State and the ICAO regional office. However, the State letter AP087/15 (CNS) was published to survey the view of the proposal, and objections were received from several States. This work could not be sustained.

4.9 Another discussion about re-allotment of AOC band was raised during SRWG/7 by WP16, which shared the proposal for the reduction of 128.825-132.025 MHz to 129.700-130.875 MHz for AOC, 128.825-129.700 MHz can be re-allotted to VOLMET, ATIS and ACC-L, and 130.875-132.025 MHz can be re-allotted to ACC-U and FIS. In addition, the details of the VHF COM frequency utilization in the APAC region were provided in the Seminar on Frequency Use, held at the APAC Regional Office in Bangkok, Thailand, from 16 to 18 September 2024.

4.10 China shared statistics of AOC Assignments until July 2024 and 128.900 – 132.025 MHz (AOC) usage in the APAC Region. It was added that, compared to the number of frequency assignments for AOC in Europe, which in a smaller frequency band (131.400 – 131.975 MHz) accommodates 2919 frequency assignments, the frequency usage of the AOC band in the APAC Region is inefficient.

4.11 It was suggested that the use of the 128.900 - 129.675 MHz and 130.900 - 132.025 MHz bands (International and National services) be prioritized when adding or modifying frequency assignments for AOC service. It was suggested that the frequency bands of 129.700 - 130.875 MHz, without changing their allotment now, can be reserved for other services in the future, which may encounter congestion problems.

4.12 The Meeting discussed the suggestion of frequency band reduction of AOC and the proposal of China to add an item to the Action list. Several States shared their concern about the proposal. Some States shared the position to keep the 129.700 - 130.875 MHz allocation as it is currently done in respective States. Some States shared their preference to keep the AOC band as it is without any proposed changes. After detailed deliberation, it was agreed that it was not possible to reach an agreement on this matter within the limited time available.

4.13 It was agreed that the ad-hoc group formed in SRWG/7(15 – 17 February 2023) *to review the VHF COM Frequency Allotment Plan for APAC in terms of effective use of frequencies in the region* will discuss the proposal along with other potential ways for effective utilization of the VHF COM Frequency band, including the AOC band in APAC region. The ad-hoc group will share its report at the next SRWG meeting. **ACTION ITEM 9-1**

Agenda Item 4.2: HF utilization in APAC

Survey Result of The Utilization of HF Spectrum Bands for Aeronautical Communication in the APAC Region - HF Ad-hoc Group (WP/05)

4.14 The HF ad-hoc group presented the results of the survey questionnaire on the utilization of HF spectrum bands for Aeronautical communication in the APAC Region conducted in 2024.

4.15 It was recalled that to follow up on ***Action Item 7-3 from SRWG/7***, an ad-hoc group with Indonesia as a rapporteur was established in 2023 to conduct a review of the operational use of HF in the Asia-Pacific Region and the applicable international provisions. The ad-hoc group also proposed to combine the two databases in a single table called New Table_HF APAC 2024, which could be used as a basis for further work on difficulties that are experienced when using frequencies from the aeronautical HF bands.

4.16 The ad-hoc group formulated the survey questions, and the ICAO Secretariat published the questionnaire to the APAC States through the ICAO APAC State Letter Ref.: T 8/8.1: AP094/24 (CNS) dated 6 August 2024. All responses received were shared with the HF ad-hoc group in December 2024 by the ICAO secretariat.

4.17 The ICAO APAC Regional Office received **fifteen** (15) responses from States/Administrations, including Afghanistan, Australia, China, Hong Kong China, Macao China, India, Indonesia, Japan, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Singapore, and Thailand.

4.18 Key analysis of responses was shared for the following key topics:

1. States/Administration implement the HF bands between 2 850 kHz and 22 000 kHz for aeronautical purposes
2. Registration to ITU MIFR
3. Issues in assigning the HF bands to the operational condition
4. HF allocation in accordance with the current Appendix 27 of the Radio Regulations version
5. Other issues related to Agenda Item 1.9 WRC-27

4.19 It was proposed that with reference to these updates and considering the discussions presented in Working Paper WP/15 of SWRG/8, it was noted that the HF allocations are currently reflected in Table CNS II-4 – HF Network Designators, as published in ICAO Doc. APAC ANP, Volume II, Part III (CNS)—last amended in January 2017—requires revision to ensure continued alignment with the current regulatory framework. A review of the allocations contained in the APAC

ANP was also conducted by the ad-hoc group, and the results of this review are presented in the following Table.

Based on **ICAO APAC ANP Vol. II**			Based on **ITU RR Appendix 27 (**2024 version)
Frequency Channel (kHz)	Area Code	ITU allotment area	ITU allotment area
3 491	SEA-1A	SEA	MWARA: EA RDARA: 1E 4A 10C 13E
5 670	SEA-1B	EA (3)	MWARA: EA
11 285	SEA-1B	SEA	RDARA: 2A 3B 7
11 297	SEA-2	(3)	RDARA: 2 12F
13 306	SEA-2	NCA, (1) INO	MWARA: INO NAT

4.20 In addition, the ad-hoc group presented the following as conclusions.

1) Out of 29 States/Administrations, 15 responded; 14 confirmed HF usage, and one did not. **HF bands are used not only by ANSPs but also by airlines, SAR, and others**, referencing Appendix 27 of the ITU Radio Regulations. Some States also **use Appendix 26 allocations**, though this band is **not meant for safety-of-life services**. ICAO guidance currently focuses on Appendix 27 only.

2) Responses revealed that **many Administrations have not registered HF allocations in the Master International Frequency Register (MIFR)**, risking international recognition and protection of the aviation spectrum. MIFR registration is emphasized in ICAO Doc 9718 as vital for protecting aviation interests in future spectrum discussions.

3) Operational issues highlighted include **severe frequency congestion** (e.g., 8879 kHz between Brisbane and Mumbai)**, unassigned frequencies in designated allotment areas** (e.g., Indonesia), **and ongoing voice quality problems due to ionospheric interference**. Some States now limit HF use to domestic contexts without VHF.

4) After WRC-23, Appendix 27 was amended to update channel characteristics but not the allotment areas. Existing allocations in ICAO APAC ANP Vol. II (last updated 2017) now requires revision to reflect the latest ITU framework**.**

5) Looking ahead to WRC-27, **Agenda Item 1.9 proposes updates to Appendix 26** to support HF modernization. ICAO calls on States to safeguard aviation HF safety communications and avoid regulatory changes that might compromise Appendix 27 protections.

6) The ad hoc group recognizes the need for the inclusion of the allotment plan information presented in both WP/15 of SRWG/8 and this Working Paper, subject to approval by the Meeting, into the Asia/Pacific Regional Frequency Management Manual v1.1.

4.21 The Meeting noted the key recommendations and agreed on the following actions:

1. States/Administrations that have not registered HF allocations in the Master International Frequency Register (MIFR) should register themselves as a priority**. ACTION ITEM 9-2**
2. States/Administrations should update the HF Network Designators table in the ICAO APAC e-ANP Vol. II following the latest ITU framework (ITU Radio Regulations

Appendix 27). **ACTION ITEM 9-3**

3. States/Administrations not responding to the survey provided in ICAO APAC State Letter Ref.: T 8/8.1: AP094/24 (CNS) should respond to the survey. **ACTION ITEM 9-4**
4. It was added that as per **Doc 9718 - Handbook on Radio Frequency Spectrum Requirements for Civil Aviation, Vol 1**, section 4.5 FREQUENCY COORDINATION AND REGISTRATION:
   Therefore, States/Administrations should coordinate with the ITU through telecommunications regulatory authorities for such assignments.

> 4.5.4 Coordination and registration of frequency assignments in the HF bands (between 2 850 kHz and 22 000 kHz) is only taking place through the ITU. However, ICAO is considering developing, in parallel, a relevant ICAO list of HF frequency assignments.

5. For the proposal for the inclusion of the HF allotment plan information presented in both WP/15 of SRWG/8 and this WP/05 of SRWG/9 to into the Asia/Pacific Regional Frequency Management Manual v1.1, it was agreed the HF ad-hoc group will draft the content and present it in the SRWG/10 meeting for further deliberation and review. **ACTION ITEM 9-5**

4.22 The Meeting appreciated the ad-hoc group led by Indonesia for their outstanding contributions to HF utilization in the APAC region.

Agenda Item 4.3: Other matters

Proposal to Assign a Frequency for Rescue and Firefighting Communication in Emergencies at the Airport – Thailand (WP/09)

4.23 Thailand proposed the assignment of a frequency to be used for direct communication between the rescue and firefighting (RFF) service and the flight crew of an aircraft in emergency situations, aiming to enhance safety during emergencies.

4.24 It was stated that there is currently no information on the frequency to be used to support radio communication for RFF service at airports. To enhance emergency response, the improvement plan proposed direct communication between the RFF service and the flight crew, establishing a new ground emergency communication line separate from the 121.5 MHz emergency channel. Considering the nature of the service to provide a communication channel for ground emergency situations, Thailand informed that it is considering using the Frequency 121.6 MHz from the Aerodrome Surface (AS) allotment.

4.25 Thailand proposed that to optimize frequency usage, direct communication between the RFF service and the flight crew during emergencies on the ground should employ frequencies from the Aerodrome Surface allotment (121.55 – 121.9917 MHz) and suggested amending the Asia/Pacific Regional Frequency Management Manual v1.1.

4.26 The SRWG/9 Meeting was requested to adopt a Draft decision to amend the Asia/Pacific Regional Frequency Management Manual v1.1 by using frequency from the Aerodrome Surface allotment (121.55 – 121.9917 MHz) to support direct communication between the RFF service and the flight crew during emergencies on the ground.

4.27 The Meeting discussed the proposal and noted that some States/Administrations have allocated a unique frequency for RFF or similar applications. It was discussed that there is no need to

assign a dedicated band to support direct communication between the RFF service and the flight crew during emergencies on the ground. It was proposed that the allotment of frequencies or associated bands for RFF services should be done at the national level by individual States/Administrations based on local requirements.

4.28 Thailand shared the rationale for advocacy for the allocation of the frequency band for RFF services and amended the proposed draft decision to:

> To amend the Guidance Material by using frequency from ~~the Aerodrome Surface allotment (121.55 – 121.9917 MHz)~~ 117.975 – 136.875 MHz to support direct communication between the RFF service and the flight crew during emergencies on the ground

4.29 Associated changes for Chapter 3 Air-Ground Communication Frequency Management of the Asia/Pacific Regional Frequency Management Manual v1.1 were also proposed.

4.30 The Meeting deliberated on the possibilities of adding frequency band 117.975 – 136.875 MHz for RFF service in the Asia/Pacific Regional Frequency Management Manual v1.1 and agreed that the selection of frequency to be used for firefighting service communication is State's prerogative within the framework of their respective regulations, while taking into consideration ICAO SARPs.

Review of HF-related information in CNS TABLES in e-ANP Vol II – Secretariat (WP/16)

4.31 The ICAO Secretariat summarized the need for review and update to the TABLE CNS II-4- HF NETWORK DESIGNATORS specified in ICAO APAC e-ANP Vol II by APAC States / Administrations. It reminded States/Administrations to review the data affecting their administration and provide feedback to ICAO on the data's accuracy in the requisite format to update the relevant CNS requirements in all volumes of e-ANP.

4.32 The Meeting was informed that the ICAO Secretariat has been presenting papers in various CNS contributory bodies' Meetings in the last 2 years to request States/Administrations to update the CNS tables mentioned in e-ANP Vol II, as most tables are outdated. However, no significant updates have been shared by the States/Administrations. Therefore, this year, the papers are being presented in various responsible contributory bodies to update relevant tables, and a draft conclusion is being proposed. Once adopted, States/Administrations will be committed to updating the required information in ICAO APAC e-ANP Vol II. After the CNS SG/29 Meeting, if all proposed draft conclusions are adopted by CNS SG/29, the ICAO Secretariat will issue a State Letter to all States/Administrations for necessary action.

4.33 The Meeting requested that the ICAO Secretariat demonstrate the PfA process to States. The ICAO Secretariat demonstrated the process and informed that all CNS tables in the Word file mentioned in ICAO APAC e-ANP Vol II are uploaded to the ICAO APAC e-ANP Webpage with instructions on how to file a PfA. It was added that while issuing the State Letter, after CNS SG/29, if CNS SG/29 adopts the draft conclusions, information about the PfA process will be shared in the letter.

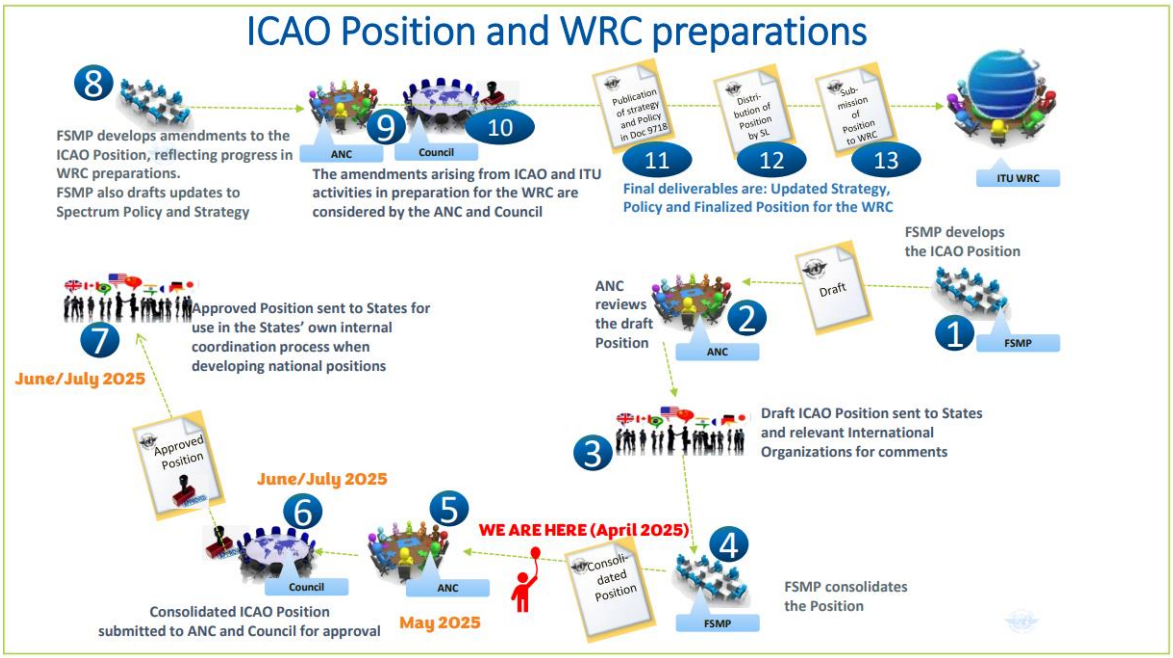
4.34 With the aforementioned, the Meeting endorsed the following draft conclusion for CNS SG/29 adoption:

Draft Conclusion SRWG/09/01- Update the TABLE CNS II-4- HF NETWORK DESIGNATORS in ICAO APAC e-ANP Vol II	
What: States to provide update on the current TABLE CNS II-4- HF NETWORK DESIGNATORS.	Expected impact: ☐ Political / Global

	☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: The current TABLE CNS II-4-HF NETWORK DESIGNATORS is outdated and requires immediate updates, in order to update e-ANP Vol II.	Follow-up: ☒Required from States
When: 09 May 2025	Status: Draft to be adopted by Sub-group
Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☒Other: SRWG	

Global Developments Related to Frequency Spectrum Management – Sec (SP/01)

4.35 The presentation prepared by ICAO HQ and presented by the ICAO Secretariat shared the global developments related to Frequency Spectrum Management. It was stated that the initial ICAO position for the International Telecommunication Union (ITU) World Radiocommunication Conference 2027 (WRC-27) was presented at the 227th Air Navigation Commission (ANC) (Oct 2024). It was then circulated to States/international organizations for their comments. It was stated that ANC will review the comments and update them in May 2025, after which it will be processed for Council approval in June/Jul 2025. The process of ICAO Position development and WRC preparations in detail was introduced as follows:



4.36 States and International Organizations were requested to consider the ICAO position as much as possible in their preparation activities for WRC-27 at the national level, in the activities of regional telecommunication organizations, and in the relevant meetings of the ITU. In addition to the first Workshop held at the APAC RO to promote the ICAO position and increase awareness of WRC-27 agenda items related to aviation, it was informed that the Frequency Spectrum Management Panel (FSMP) will organize a total of three more workshops in 2025/2026.

4.37 Agenda items for the World Radiocommunication Conference 2027 (WRC-27) that affect aeronautical safety services were introduced, including **Agenda Item 1.7**: *Study on IMT use in the frequency bands 4400-4800 MHz*, **Agenda Item 1.9**: *Update Appendix 26 in support of aeronautical*

mobile (OR) high-frequency modernization, **Agenda Item 1.17**: *Space Weather Sensors*, **Agenda Item 1.19**: *Primary allocations to the EESS passive in the bands 4200-4400 MHz*, and **Agenda Item 9.1**: *Urgent action by study groups in preparation for the next WRC regarding beyond-line-of-sight C2-link for RPAS.*

4.38 It was added that Spectrum and CNS-related issues might be discussed at the technical commissions of the 42nd Assembly, which will be held from 23 September to 03 October 2025. The topics of discussion may include GNSS Interference, ITU WRC-27 agenda items, including potential interference concerns to radio altimeter/ WAIC, and Integrated Communications, Navigation and Surveillance & Spectrum (ICNSS).

4.39 The Meeting noted that digital transformation is occurring not only outside the World but also inside the aircraft. On 28 March 2025, the Council adopted Amendment 91 to A10V5 on new provisions related to wireless avionic intercommunications (WAIC), **which will become applicable on 27 November 2025**. It was recalled that WAIC is a wireless data link for communications between various safety-of-flight-related functions on board a single aircraft, typically replacing wiring for sensing and monitoring capabilities. The WAIC SARPs, while ensuring protection to radio altimeters, facilitate WAIC sharing the frequency band 4200-4400 MHz with the Radio Altimeter. Implementing WAIC is expected to provide benefits for aircraft operation, especially through the reduction of CO2 emissions due to the reduction of aircraft weight and associated fuel consumption from saved wiring runs.

4.40 The Meeting was informed that WRC-27 **Agenda Item 1.19:** *Primary allocations to the EESS passive in the bands 4200-4400* is an important agenda item. Although it is recognized that there are benefits for weather forecasting provided by sea surface temperature measurements through the EESS (passive), the **"passive" term should not be interpreted as a safe allocation** for sharing of 4200-4400 MHz. It is important to ensure that any changes to the operating conditions within this frequency band would not impose any technical, regulatory, or operational constraints on radio altimeters or WAIC.

Agenda Item 5: Update on Frequency Finder

Update on Frequency Finder (FF) – Secretariat (WP/11)

5.1 The paper presented the latest work, enhancements, and functionalities brought to the Frequency Finder tool to assist ICAO Regional Offices and States/Administrations in managing and coordinating aeronautical frequency assignments and SSR Mode S II/SI codes. The paper included updates on the amendment of the VHF COM Frequency Allotment Plan for APAC in the VHF-COM module, a new data protection mechanism brought to the VHF-COM/NAV module as well as the SSR module of the Frequency Finder (FF) tool, and further enhancements brought to the SSR module.

5.2 The Meeting noted that the modified version of the FF tool will be distributed to the Regional Offices upon the completion of the current testing phase. States/Administrations were encouraged to utilize the tool extensively, discuss any pertinent matters, and provide feedback on FF tool usage, suggestions, bugs, and recommendations.

5.3 The Meeting requested that the latest version of the FF tool be provided as soon as possible. It also asked ICAO to consider resolving the following issue or considering the following proposal for the upgradation of the tool:

a. Currently, the date of entry of a frequency in FF is the latest date when a modification was made. If an additional column sharing information about the first-time allocation of frequency can be added, it would be beneficial.

b. Downloading the updated global list takes a lot of time, and the screen is engaged with

various processing windows while synchronizing the global database. The tool can be improved to minimize the time of synchronization.

c. It has been observed that the bandwidth used by the system while using FF can be of the order of Gb. It was recommended that the tool be improved to save bandwidth utilization.

d. The States should be able to submit a request to ICAO for a tested frequency using a button that generates an automated message to ICAO for requests submitted by States, and also, States get notification of successful submission of the request.

e. In the same way, once ICAO verifies the request, ICAO should be able to share concurrence using the "Approve" button on FF. The response to the "Approve" button should be generated in the form of a letter with the ICAO logo, which mentions the details of the approved request. In addition, States should get an automated response for ICAO concurrence.

f. ICAO should consider adding a tool for NDB frequency assignments in the FF tool.

5.4 It was agreed that the ICAO Secretariat will share the proposed modifications requested in the FF tool with ICAO HQ and share HQ responses with them in the next Meeting of the SRWG. **ACTION ITEM 9-6**

Agenda Item 6: Review of Frequency Lists in the Region

Review of Frequency Lists – Secretariat (WP/12)

6.1 The ICAO Secretariat presented the status of Frequency Lists and the coordination of aeronautical frequency utilization for the region in 2024. It was reported that the ICAO Secretariat, in the past, duplicated its work on the VHF NAV module of Frequency Finder as well as on the Frequency Manager for new facility frequency planning upon request from the states. Recognizing the need to migrate the Frequency List 2 database from Frequency Manager to Frequency Finder, the ICAO APAC Office synchronized all registered assignments on Frequency List 2 in the Frequency Manager into Frequency Finder in 2022 and has been using Frequency Finder on frequency assignments for NAV systems.

6.2 It was recalled that during SRWG/7, the Secretariat proposed an interim solution to publish Frequency List 2 (36th edition) by Frequency Finder. The publication of Frequency List 1 (38th edition) and Frequency List 2 (37th edition) using Frequency Finder was done in 2024 by State Letter reference T 8/8.4 & T 8/8.5: AP070/24 (CNS) dated 28 May 2024.

6.3 The CNS SG/28 endorsed the Draft Conclusion CNS SG/28/07 (SRWG/8/4) – Transition from the regular publication of Frequency List 2 to the global database of frequencies included in the Frequency Finder, which was adopted by APANPIRG/35 by **Conclusion APANPIRG/35/9**. As discussed in SRWG/8, after adopting the Draft Conclusion CNS SG/28/07 (SRWG/8/4), the ICAO APAC Regional Office will stop the regular publication of Frequency List 2.

6.4 The Meeting noted that Frequency Manager is now used only for NDB assignments and the maintenance of Frequency List 1. As informed in the SRWG/8 Meeting, the computer for running Frequency Manager failed in January 2024. Even after recovery, the tool is intermittent, and it is getting difficult to utilize. There is a risk that the tool may be unavailable for use in the near future. In such cases, it would be challenging to allocate NDB frequency to the APAC States/Administrations.

6.5 Recently, the ICAO APAC Office published Frequency List 1 (39th edition) in 2025 by State Letter Ref.: T 8/8.4: AP056/25 (CNS) dated 24 April 2025. The Frequency List 1 (39th edition)

can also be accessed on the ICAO APAC e-Docs webpage. It was informed that in 2024, the ICAO APAC Regional Office coordinated over 500 Frequency registrations, including VHF COM frequencies (List 3), NAV frequencies (List 2), and NDB frequencies (List 1).

6.6 ICAO APAC Member States/Administrations were requested to coordinate with the Regional Office for any change in assignment or requirement for new frequencies prior to their use. The Meeting discussed the way to do NDB assignments and the maintenance of Frequency List 1(NDB) in case of failure of the Frequency Manager.

6.7 The Meeting deliberated on the issue of NDB frequency assignment in case of unavailability of the frequency manager tool and shared the need for a dedicated tool for this purpose, as NDB has been an essential facility, since GNSS RFI occurrences are affecting the APAC region. It was agreed that other regions may also consider keeping NDB facilities or their enhancement in the future. Therefore, a tool to manage NDB frequency allocation is essential.

6.8 It was agreed that the best way is the FF tool to incorporate the NDB frequency/ident assignment facility. The Meeting requested that ICAO HQ incorporate the NDB frequency/identity assignment facility in the current FF tool. The Meeting requested that the ICAO Secretariat share this message with ICAO HQ and update the Meeting on the response. **ACTION ITEM 9-7**

6.9 Meanwhile, it was also shared that if ICAO can help to get detailed NDB frequency assignment criteria, APAC States/Administrations may explore the alternate ways to do such assignments in the future. The ICAO Secretariat was requested to coordinate with ICAO HQ and compile the resources that help understand NDB frequency/identity assignment criteria. **ACTION ITEM 9-8**

6.10 In response to Australia's request to provide an Excel file of the published frequency list 1, the ICAO Secretariat informed that the list was published using the frequency manager. The ICAO Secretariat checked the frequency manager and found that downloading an Excel sheet is not possible with the frequency manager tool.

Agenda Item 7: Frequency use by oil platform

Outcomes of the Seminar on Frequency Use– Secretariat (WP/06)

7.1 The paper presented the key outcomes of the Seminar on Frequency Use held in Bangkok, Thailand, from 16-18 September 2024. The primary objective of the Seminar was to address various challenges in aeronautical frequency management, with a focus on the unique issues faced by the APAC Region. The event aimed to facilitate the exchange of best practices and experiences, particularly in the Frequency used to support the harmonization of frequency assignment procedures in the region.

7.2 In the Seminar, participants were provided with an in-depth overview of the regulatory framework, Frequency assignment planning, management, frequency management software tools, frequency management challenges in APAC, and potential solutions, with insights shared from Europe. The Seminar concluded with the following key outcomes:

i. Recognized the effort in the APAC Region from numerous studies to increase the use of frequency resources in the region, noting the fruitful outcomes from the SRWG;

ii. Further studies are needed on HF allotment in the APAC Region, and more research on frequency assignment may be needed for NDB and the Asia Pacific Regional Frequency Management Manual to be revised.

iii. Advance planning is required if APAC identifies the need to implement 8.33 kHz channel spacing for VHF COM.

iv. Recommend to consider the need for frequency evaluation in APAC, similar to those conducted by EUROCONTROL, to improve the accuracy of frequency registration, identify errors to allow for a more effective use of frequency resources;

v. Noted time-division multiplexing of radio frequency as a possible solution to resolve frequency congestion for NDBs;

vi. Safety concern from potential interference to the radio altimeter, operating in the frequency band 4200-4400 MHz, from 5G;

vii. Recognizing the impact on safety and efficiency to civil aviation from frequency interference on CNS infrastructure, in particular the impact on GNSS from spoofing and jamming, it was recommended that States in APAC (1) implement ICAO's recommendations/mitigation strategies and (2) monitor and report frequency interference encountered to appropriate Regional Working Group/Task Force for further consideration and action.

viii. Recommend that States/Administration (1) review and indicate frequencies, under their current frequency assignment, being used for ACARS in the "Remark" column in ICAO COM List 3, and (2) request for new frequency assignment(s), allocated for datalink communication, intended for use for ACARS should be clearly indicated in their request to ICAO in the "Remark" section in the Frequency Finder.

ix. Recommend that States/Administrations in the APAC region refer to the model used in Europe for the allocation and assignment of VDL Mode 2 for more efficient use of the frequency spectrum;

x. Recommend the need to review the VHF COM Allotment Plan for APAC on a regular basis to increase the amount of spectrum available to support future growth in air traffic and enhancement of the frequency management software tool to support frequency assignment in APAC;

xi. Recommend coordination with the ICAO APAC Regional Office for frequency assignments, as well as enhance inter-regional coordination to mitigate interference and ensure efficient frequency use; and

xii. Recommend that States/Administrations in the APAC Region support the ICAO position on WRC-27 agenda items to ensure a favourable outcome for the aviation industry.

7.3. The Meeting appreciated ICAO for organizing the Seminar and shared the significance of the discussion held during the event last year. It was recommended that such events should be organized regularly to prepare Member States/Administrations with knowledge to understand frequency spectrum challenges and their resolutions.

Agenda Item 8: Frequency Interference in the Region

8.1: 5G and Radio Altimeter
8.2: GNSS interference
8.3: Other issues

Outcomes of Radio Navigation Symposium – Secretariat (WP/07)

8.1 ICAO Secretariat presented the key outcomes of the ICAO APAC Radio Navigation Symposium, which 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***. The Symposium aimed to provide a collaborative platform to exchange experiences and insights on GNSS RFI, analyze its impact and challenges, and facilitate in-depth discussion on mitigation measures and future development to build a resilient aviation system. The Symposium developed recommended actions to

guide future efforts in managing GNSS RFI. It also addressed the USOAP Radio navigation flight inspection requirements and the latest developments.

8.2 Key presentations covered ***Setting the Scene***: explored the global radio navigation developments, updates from the ICAO APAC Region, and GNSS vulnerabilities, ***Addressing GNSS RFI***: panel discussion on the operational and safety impacts of RFI on GNSS-dependent systems, addressed the consequences of flight operation and air navigation service, and highlighted best practices, ongoing efforts, and recommended actions, ***Mitigating GNSS Interference***: Current Measures and Gaps to Address, ***Risks Beyond GNSS***: Lessons and Broader Threats to Satellite-Based Systems, ***Expert panel*** deliberated on Key Takeaways, Recommendations, and the Path Forward, as well as ***Radio Navigation Flight inspection***.

8.3 The list of key recommendations discussed during the Symposium can be accessed by this link. The final list of recommendations resulting from the Symposium, along with the safety bulletin, will be published by ICAO HQ in due course. The Symposium recommended organizing such sessions in the future and ensuring that all APAC member States/Administrations participate and contribute in such sessions so that comprehensive regional requirements can be formulated to address GNSS RFI issues in the region. The Secretariat requested continued collaboration and information sharing among States to support ongoing efforts in mitigating GNSS interference and enhancing regional aviation safety and resilience.

8.4 ICAO Secretariat shared the first draft of a list of recommendations, which is being prepared by ICAO HQ. It was informed that detailed recommendations have been formulated for all six areas explained in SP30 during the Symposium. On request to share the proposed draft, it was stated that the document is being finalized by ICAO and cannot be shared at this stage. However, the finalized list will be shared by a State Letter in due course. It was added that the final list of recommendations is expected to be published by the end of May 2025.

8.5 ICAO Secretariat informed that with the introduction of GNSS-based operations in the 1990s, the APAC Region has been discussing various challenges and resolving measures for GNSS interference. Several APANPIRG conclusions have been adopted on this matter. It included APANPIRG Conclusion 8/43 - GNSS Frequency Based Interference (1997), APANPIRG Conclusion 9/32 - GNSS Frequency Protection (1998), APANPIRG Conclusion 22/28 - Protection of aviation utility of GNSS (2011), and APANPIRG Conclusion 27/36- Protection of GNSS signal against jamming (2016).

8.6 However, it was agreed that GNSS RFI has been an intense point of discussion in the last few years, and the proposed mitigation measures will take a long time to evolve and evaluate their efficacy. The close coordination of various stakeholders and actions from all parties, including but not limited to airlines, airport operators, ANSPs, CAA, aircraft manufacturers, avionics manufacturers, and other relevant stakeholders, is significant.

8.7 The Meeting agreed that, from the technical side, there are a lot of significant topics related to GNSS RFI that require more research to get a comprehensive understanding. For instance, the identification of GNSS RFI as a root cause of a particular occurrence is the key. Other instances, such as issues in satellite constellation and avionics issues, can pose the same effect, and it is not easy to isolate the real cause of the problems identified. In addition, how to correct GNSS RFI issues and associated legal implications is a significant point of discussion.

8.8 Australia informed that they are closely coordinating with their radio regulators to monitor GNSS RFI occurrences in Australia; however, no cases have been reported yet.

8.9 ICAO Secretariat informed that the Radio Navigation Symposium held in India from 7-9 April 2025 was not attended by some States, mainly because they have not received any incident reports for this. However, it should be noted that GNSS RFI is a global issue, and all

States/Administrations are equally vulnerable to these incidents, as aviation is a global business. Therefore, it is essential to participate in such discussions and prepare in advance for upcoming challenges.

8.10 The Meeting discussed that ASEAN States may jointly discuss the mitigation measures and coordinate to formulate strategies to address GNSS RFI occurrences for cross-border operations. Until technical measures can effectively prevent GNSS RFI events, it was recommended to use procedural mitigations and alternate navigation references, e.g., DMEs to minimize operational disruptions.

Atmospheric Conditions Conducive Long-Range Interference – Australia (WP/08)

8.11 This paper presented several examples of Long-Range Interference occurrences experienced on operational VHF channels during extreme atmospheric conditions and the use of Frequency Finder to confirm assignment details.

8.12 The Meeting was informed that, as part of managing Aviation VHF RF spectrum use in Australia, Airservices Australia has a duty of care to maintain interference-free communications in this spectrum. Maintaining co-channel separation distances between VHF outlets is paramount.

8.13 The Meeting noted that in the week beginning 11 December 2023, interference to multiple frequencies at separate sites on the east coast of Australia for approximately 5 days was experienced. Airservices accesses a Tropo Index Prediction website for analysis of expected "VHF Ducting". Examples of the frequencies tested using the Frequency Finder DB included 119.7 MHz Noumea La Tontouta - Mt Edith, 126.2 MHz for Noumea La Tontouta ATIS - Amberley APP, and 128.3 MHz Noumea La Tontouta (FIS-L) - Woronora (APP-I). Additionally, from the week beginning 18 February 2024, testing included 118.2 MHz Tarin Rock (ACC-U) - Summertown (APP-I).

8.14 The Meeting shared details of each incident. It was added that this issue is not restricted to activity across international borders, but that it can impact co-channel reuse in a country as large as Australia. For instance, the site of 118.2 MHz Summertown, which provides APP service for the Adelaide TCU, was being impacted by transmissions being made on the ACC-U service from the site Tarin Rock. As expected, with approach services being impacted at a critical phase of a flight, there was extra workload imposed on the ATC operators using this frequency.

8.15 The Meeting discussed the issue and observed that some other States/Administrations have faced the same issue in the past. It was added that during such occurrences, States can coordinate with neighbouring States using PoC information prepared and updated by the SRWG meeting every year. It was added that it is a seasonal issue, and the forecast can share an estimate of the period of the issue. Therefore, Australia is using alternative frequencies when such issues are observed.

8.16 The Meeting encouraged other States/Administrations to share their experience in SRWG meetings along with mitigation measures.

Agenda Item 9: Review the Regional Guidance Material

Revised Asia/Pacific Regional Frequency Management Manual – China (SP/03)

9.1 China presented the Asia/Pacific Regional Aeronautical Radio Frequency Management Guidance Material Edition 1.1, renamed Asia/Pacific Regional Frequency Management Manual, which was adopted by the **Conclusion SRWG/8/6**.

9.2 The amendments included a revision on the title of the document, VDL reduced channel spacing, backup frequencies, TIBA, and GBAS/VDB frequency assignment planning. The Meeting discussed and reviewed the pertinent paragraphs.

9.3 The Meeting noted that SRWG/8 Meeting formulated action item 8-5 which says that *Recognizing that certain refinements are required for new paragraphs concerning HF, TIBA, backup frequency, and GBAS, the Meeting agreed to adopted this revision as Edition 1.1 with clear presentation for the proposed amendments to differentiate the status of text as original, agreed, to be determined (TBD). The SRWG will discuss and review the pertinent paragraphs in future meetings.* As China already presented the revision in this Meeting, it was suggested that this action item be closed.

9.4 Another action item was formulated to share further updates with the SRWG/10 meeting for other proposed changes highlighted in yellow in the IGD, which require more deliberation. **ACTION ITEM 9-9**

9.5 India suggested adding NDB frequency assignment criteria in the Asia/Pacific Regional Frequency Management Manual v1.1 if it is available in any ICAO documents. The Meeting noted that currently, there is no information on resources that can provide this information. However, the ICAO Secretariat will try to search for this information from other reference materials. **ACTION ITEM 9- 10**

Agenda Item 10: State and regional updates

The Use of Frequency Coupling for Direct Controller Pilot Communications in Hong Kong China – Hong Kong China (WP/15)

10.1 This paper examined the use of frequency coupling in Direct Controller-Pilot Communication (DCPC) and its role in enhancing efficiency, situational awareness, and communication reliability under Hong Kong's air traffic control (ATC) operations. It was informed that while frequency coupling provided significant benefits, it also induced technical and operational challenges, including undetected simultaneous transmissions, system calibration complexities, intermodulation interference, and difficulties in fault finding. The corresponding mitigation strategies to optimize the frequency coupling in DCPC were shared. A balanced evaluation of its advantages and limitations was recommended to ensure effective implementation in ATC operations.

10.2 The Meeting noted the technical and operational limitations of frequency coupling and corresponding mitigation strategies.

Requirement of VHF for Flying Training Institutes – India (WP/20)

10.3 The paper presented information about the increasing demand for VHF spots for Flying Training Institutes (FTIs) in India. India informed that as of December 2024, 38 Flying Training Organizations (FTOs) were licensed by DGCA India to establish FTIS at 57 locations between 2020 and 2024, and many were in the process of getting DGCA approval. Due to the increasing number of FTOs, the requirement for air-ground VHF communication is increasing.

10.4 Required coverage for these FTOs varies from 5-50 NM as per the required training circuit. Based on the requirement, currently, VHF spots for these FTOs are being assigned in the VHF Sub band for AOC (i.e., 128.825-132.025 MHz). In view of the rising demand for VHF spots for Flying Training Operations, India proposed that there should be a dedicated group of frequencies within VHF Sub Band 128.825-132.025 MHz for this purpose.

10.5 The Meeting suggested that SRWG should focus on the core bands allocated to aviation. However, the allocation of sub-bands for national use can be done by States/Administrations at their discretion. Therefore, the proposal was not agreed upon at the Meeting.

Agenda Item 11: Future Work Programme

Agenda Item 11.1: Frequency Evaluation (Auditing)

Regular Audits of COM & NAV bands in Europe – Eurocontrol (SP/02)

11.1 The presentation introduced the latest audits and evaluation processes in Europe. Eurocontrol shared the Frequency Management process objectives and needs and referred to the SAFIRE Database and the ICAO Global database. It was informed that the global database has no data for the NAM region. He provided information about VHF COM footprint density in the World based on the database, along with Congestion / Density Maps. Eurocontrol informed that due to severe congestion issues, every 2–3 years, a Frequency Database Quality Evaluation is conducted for COM and NAV by Eurocontrol. It was added that various documents are referred to for auditing the database, including AIPs of States. He shared details of the Audit tool – MANIF AFM, and a short demonstration was conducted. It was added that each audit corrects or deletes hundreds of assignments, and the process is largely automated, keeping audit effort and cost low.

11.2 The Meeting noted that the Audit tool has a feature to correlate AIP data with the local database and find out which frequencies are not recorded at both places. In addition, there is a feature to check each record with its position on the map, which confirms if the facility is being used for what it was intended.

Agenda Item 11.2: Implementation of 8.33 kHz Separation

Need for VHF COM Simulation – India (WP/19)

11.3 India presented outcomes of the analysis of the frequency simulation for India, which arose from the decisions made during the WP/07 of SRWG/5. It was recalled that the simulation done in the past demonstrated that the frequency requirements for up to 2030 could be satisfied within the frequency band 117.975 - 137 MHz. During SRWG/6 (1 – 3 March 2022), in WP/14, a frequency simulation from 2021 to 2030 was done. It was proposed to undertake a similar simulation between 2025 and 2027 to assess the severity of the congestion.

11.4 India shared the present frequencies for different VHF-COM services allocated in India since 2021 and concluded that 300 (67.42%) of the total projected 445 VHF spots in 2021 have already been implemented from 2021 to February 2025. It was added that the availability of sufficient 25 kHz channels in the APAC Region for the next 5 years will avoid a mandatory implementation of channels with 8.33 kHz channel spacing in India. Implementation of radio equipment with 8.33 KHz spacing is costly for aircraft operators.

11.5 India shared statistics of VHF requirements projected in 2021-22 and actually implemented till Q1 2025, as well as their detailed analysis.

11.6 It was concluded that until about 2030, the requirements brought forward by India could be satisfied within the frequency band 117.975 – 137 MHz using equipment that is designed for 25 kHz frequency separation. The analysis, as presented, however, does not take into account an increase in the use of this band in countries adjacent to India. When the increase in adjacent countries is significant, the potential for satisfying all of the requirements from India is reduced. This is manifested in particular for aeronautical services with a large DOC that includes higher flight levels.

11.7 India shared that a new review of the spectrum requirements will take place around 3 years from now. It was suggested that such a review should take into consideration the actual number of new frequency assignments that would be placed into operation use at that time, as well as provide for a better opportunity to assess the spectrum requirements for a period of up to 2 years from that time. It was added that the analysis is valid under the assumptions or conditions under which it was performed.

Changing these may give different results. Overall, it was expected that this may not necessarily significantly change the end results as presented.

11.8 The Meeting was suggested to undertake an updated spectrum capacity analysis for the APAC Region in 2028 to determine if congestion in the use of VHF COM frequencies can be foreseen that would require the implementation of 8.33 kHz channel spacing in the APAC Region.

11.9 The Meeting shared appreciation for India conducting a simulation and sharing detailed statistics. It was agreed that before deciding on the next round of simulation, it is imperative that the FF database is up to date with the entry of all frequencies being used by States. It is because an accurate database would support the precision of the prediction of APAC frequency needs after the simulation. Therefore, all States/Administrations were requested to access the FF tool and check for inconsistencies with their local database, if any, against the Aeronautical Information Publication (AIP). It was also advised that frequencies that are registered but not being used from the FF tool be removed. In addition, it was suggested that other details such as range, power transmission, etc., should be corrected. **ACTION ITEM 9- 11**

11.10 The ICAO Secretariat was requested to coordinate with the FSMP secretary to find out the tentative timelines of space-based VHF SARPs publication, as it will affect the VHF allocation plan for APAC and, hence, the simulation. **ACTION ITEM 9- 12**

Agenda Item 11.3: Frequency Spectrum Strategy for APAC

Brainstorming Session

11.11 During this session, the following agenda item was discussed.

- *Flimsy 1- Revised draft decision from WP09*
- *Criteria for resolving non-compatibility issues of frequencies in the global database COM3*

11.12 The discussion held for Flimsy 1 is recorded under WP/09 discussion.

11.13 The Meeting discussed the criteria that can be used to decide on assigning a frequency in case a non-compatibility message is received in the FF tool after the compatibility test, while the same frequency is found suitable to use after verification using another tool used by States, which is more accurate in the States' view.

11.14 It was informed that the FF tool is more conservative than many other available tools. It was suggested that States can do a compatibility test using the FF tool, and in case of incompatible results, if States wish to use the frequency as their tool, found it suitable to use, they can do so after coordinating with concerned States and confirming that no interference is observed by other States. The name of the State due to which the FF tool suggested the proposed frequency as incompatible can be obtained from the compatibility result generated by the FF tool. If concerned States do not encounter any interference issues and have no objection to using the proposed frequency, the proposer can decide to continue using the frequency after internal consultation. It was added that ICAO should be advised about such coordination and their outcomes, with a request to upload the chosen frequency in the FF tool. In case of need, States can request ICAO support for cross-border coordination.

11.15 ICAO Secretariat informed that in case such a request is received, the ICAO will upload the requested frequency in the database with a note that “entry was done on the request of the State”

Agenda Item 12: Review of Action Items and Point of Contact (PoC) of States on frequency affairs

Review PoC of States – Secretariat (WP/13)

12.1 The paper presented the current status of PoCs of States on frequency-related affairs for review and update. The Meeting noted that the current practice of aeronautical frequency coordination performed by the ICAO Regional Office is implemented as communication between the ICAO regional officer and the Point of Contact (POC) in different States/Administrations. The up-to-date PoC list is a basic requirement for efficient and timely coordination. The Meeting reviewed and updated the PoC list, which is provided in **Appendix A** to this report.

Review of ToR and Action Items – Secretariat (WP/14)

12.2 The Meeting reviewed the ToR of SRWG and action items. The Meeting observed that the current ToR of SRWG requires further amendments to include other tasks being taken care of by SRWG, such as working on interference issues, WRC coordination, etc. It was added that while modifying the ToR, coordination should be done with FSMP to ensure a proper record of the regional group's role in WRC matters. As the review required a thorough analysis of current work, it was suggested that the ICAO Secretary, with the chair, would revise the ToR and present the draft of the revised ToR in the SRWG/10 meeting for consideration. **ACTION ITEM 9- 13** Upon agreement by the Meeting, the revised ToR would be proposed as a Draft Decision to CNS SG for consideration. In addition, the action items were reviewed and updated. The updated Action Items List is provided in **Appendix B** to this report.

Agenda Item 13: Next Meeting and Any Other Business

CNS-Related ASBU in Asia/Pacific Seamless ANS Plan – Sec (WP/17)

13.1 ICAO Secretariat recalled the steps taken in past CNS SG meetings to provide inputs for Seamless ANS Plan v4.0, which was adopted by the Thirty-Fifth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/35) held at the ICAO Asia and Pacific Regional Office in Bangkok, Thailand, from 25 to 27 November 2024 by Conclusion 35/1.

13.2 The Meeting was informed that 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 could be due to an inadvertent mistake when compiling feedback from all sources. It was also added that if a Priority 1 were assigned to the NAVS ASBU elements, it would require a consequential review and amendment to the following paragraphs in the Asia/Pacific Seamless ANS Plan Version 4.0.

13.3 To resolve this issue, after internal coordination within the ICAO Secretariat, it was decided that the responsible ICAO Secretariat would share the issues associated with proposed changes in the priorities of NAVS ASBUs with the responsible contributory bodies. These included GBAS-SBAS ITF and PBNICG. It was also decided that the ICAO secretariat will share this information with all contributory bodies under CNS for their information and necessary action, if any. Based on the outcomes of the discussion with relevant contributory bodies, the plan to correct the list of CNS-related ASBUs and other impacted ASBUs, if any, will be finalized and shared with the CNS SG/29 meeting planned to be held from 16-20 June 2025. The Meeting was requested to review CNS/other ASBUs in the Seamless ANS plan and share any discrepancies, if any.

Outcomes of Second APAC Ministerial Conference on Civil Aviation – Sec (WP/18)

13.4 The Second Asia Pacific Ministerial Conference on Civil Aviation was held from 11 - 12 September 2024 in New Delhi, India. In the Conference, the APAC Ministers reviewed commitments made under the Beijing Declaration and agreed to another set of commitments to high-priority aviation strategic objectives in the form of the Asia Pacific Ministerial Declaration on Civil

Aviation (Delhi). The Conference endorsed the Second Asia and Pacific Ministerial Declaration on Civil Aviation (Delhi), also known as the Delhi Declaration, which is provided in **Appendix C.**

13.5 The Meeting noted that the Delhi Declaration generates the political will needed to support the organization's various objectives for an effective and efficient aviation system. The Declaration incorporated various critical aspects that required immediate attention from the APAC States. It included substantial commitments needed from the APAC States for effective implementation of ICAO global plans, implementation of aviation safety and air navigation services priority elements, and addition of resilience to health-related disruptions. Furthermore, it has highlighted commitments required for gender equality, resourcing for civil aviation, aviation environment protection, and ratification of international air law treaties.

13.6 The Meeting was invited to collaborate towards achieving the targets of the Delhi Declaration and to share the latest implementation status of commitments with the ICAO APAC Office for accurate progress tracking.

GNSS RFI discussion

13.7 The Meeting discussed the next step recommended for States to handle GNSS RFI issues. It was raised that last year, after the GNSS RFI reporting form was issued to Member States, a clear procedure and guidelines were not provided on how to report such issues, especially for cross-border incidents. It was recommended to form an ad-hoc group that studies the current situation of GNSS interference in the region NSS RFI, analyzes it and proposes a way forward.

13.8 The ICAO Secretariat informed that since last year, not a single incident report has been shared with the ICAO APAC Office. Therefore, there is not enough data for the group to start working on this. It was agreed that it is imperative to first collect some incident reports from APAC States/Administrations. It was suggested that States/Administrations share their incident report and its details in the SRWG/10 Meeting. Based on inputs from reports from States/Administrations, the need to form an ad-hoc group will be deliberated in the SRWG/10 Meeting. **ACTION ITEM 9- 14**

13.9 The ICAO Secretariat was recommended to coordinate with other ad-hoc groups formed in the region for GNSS RFI matters and understand their scope of work. It will help to avoid duplication of efforts. The ICAO Secretariat will share information at the SRWG/10 Meeting. **ACTION ITEM 9-15**

Date for Next Meeting

13.10 The Meeting considered that the next SRWG meeting would be held for 3 days, tentatively planned for **4–6 February 2026**. Any States/Administrations interested in hosting the Meeting may contact the ICAO APAC Office for hosting discussions at least 4 months before the Meeting. The exact dates and venue will be communicated to the member states in due course.

ICAO APAC POINT OF CONTACT ON FREQUENCY AFFAIRS

	STATE/NAME		TITLE/ORGANIZATION	TEL/ FAX	E-MAIL
1.	**AFGHANISTAN**				
2.	**AUSTRALIA**				
	1.	Mr. Matthew Kelly (Primary contact) (updated on 29/04/21)	Senior Engineering Specialist Airservices Australia Locked Bag 747 Eagle Farm QLD 4009 **AUSTRALIA**	Tel: +61 7 3866 3542	matthew.kelly@airservicesaustralia.com;
	2.	Mr. Spencer Robinson (Associate contact) (updated on 5 Oct 22)	Engineering Specialist – Communications (Frequency Assigner) Airservices Australia Locked Bag 747, Eagle Farm QLD 4009 **AUSTRALIA**	Tel: +61 417 978 963 Fax:	SPECTRUM.MANAGER@AirservicesAustralia.com;
	3.	Mr. Paul Dowsett (Associate contact) (updated on 20 Feb 22)	Senior Engineering Specialist Airservices Australia Locked bag 747, Eagle farm QLD 4009 **AUSTRALIA**	Tel: +61 425 480 025 Fax:	paul.dowsett@airservicesaustralia.com ;
3.	**BANGLADESH**				
4.	**BHUTAN**				
	4.	Mr. Karma Gayley (updated on 17 Feb 23)	CNS Officer Bhutan Civil Aviation Authority Paro International Airport **BHUTAN**	Tel: +97517833052 (Mobile)	kgayley@bcaa.gov.bt;

	STATE/NAME		TITLE/ORGANIZATION	TEL/ FAX	E-MAIL
	5.	Ms. Devi Maya Adhikari (updated on 17 Feb 23)	CNS Officer Department of Air Transport Paro International Airport **BHUTAN**	Tel: +97517771562 (Mobile)	dmadhikari@doat.gov.bt;
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6.		**CAMBODIA**			
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24.		**MONGOLIA**			
25.		**MYANMAR**			
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Reference	Who	What	Due date	Status
A 4-1		Australia informed the meeting about its use of Common Traffic Advisor Frequency (CTAF). A CTAF is a frequency designated for the purpose of carrying out airport advisory practices while operating to or from an airport without an operating control tower. The meeting noted the need of Australia to implement Frequency Finder in supporting CTAF service, and ICAO is urged to explore the solution with Frequency Finder's function to meet the requirements for CTAF		Close
A 4-2		An interference report was received from air navigation service provider on frequency 124.900 MHz implemented at Manado, Sulawesi. The frequency experienced interference with Manila, Philippines. The meeting noted that the reported interference was predicted by Frequency Finder and the use of the graphical display that Frequency Finder generated was further explained. Initially, Indonesia acknowledges this will most likely change the frequency assignment for Manado, Sulawesi		Close
A 4-3		The meeting noted the research and outcomes in IP/7 and IP/10, and encouraged States/Administration to continue the exploration on the spectrum capacity to accommodate GBAS/VDB and report the recommendations back to the SRWG for further review by the NSP, as necessary		Close
A 4-4		The meeting encouraged States/Administrations to share experience in using VHF COM function of Frequency Finder in various regional CNS events		Close
A 4-5	All	States to provide ICAO Regional Office with information of all facilities that are in operation to improve the currency of Frequency lists	~~30-Mar-21~~	Close
A 4-7	All, Robert Witzen	Create ad hoc group to draft Table of Content first, then develop the regional guidance material on aeronautical frequency spectrum management in a shared way by States.	~~31/03/2023~~ **CNS SG/27**	Close
A4-8	Robert Witzen, All	to run new VHF COM simulations	**End-2023**	Close
A5-1	ICAO	The meeting discussed the point-of-contact of SRWG to track and monitor and to take the suggestions for improvement as well as concerns on the space-based VHF issue, and ICAO secretariat was requested to take this role whether the information be provided by Singapore on a voluntary basis, updates from an FSMP WG meeting, from States or from other appropriate sources		Close
A5-2	ICAO	To host a regional WRC-23 preparatory meeting upon coordination with ICAO HQ after lifting of travel restriction.	~~31/12/2022~~ **13-14 Feb 23**	Close
A5-3	ICAO	To resolve firewall query of Australia for FF installation and use.		Close
A5-4	ICAO	To inform ICAO HQ to consider the feasibility incorporating terrain data into future version of Frequency Finder	SRWG/7	Close
A5-5	ICAO, India, Thailand, China, Japan, Mr. Robert Witzen	Ad-hoc group led by India to further explore the issue of 50 kHz channel spacing in the frequency band 108-117.975 MHz for ILS (LOC)/VOR operations and provide the inputs to SRWG/6. To coordinate with Japan to participate in ad-hoc group.	~~31/03/2022~~ **SRWG/7**	Close
A5-6	ICAO	To take appropriate follow up action to improve the awareness on the potential of emerging technologies and the necessity to consider the development of software tool like Frequency Finder to support the frequency assignment planning at regional office in future.	~~SRWG/7~~	Completed
A5-7	ICAO	ICAO secretariat will issue State Letter with clear actions and guidance for States to submit necessary data for VHF simulation, as a response to the Conclusion CNS SG/24/7		Completed
A5-8	ICAO	USA suggested to create a POC for all CNS matters as it is for ATM and compile them in APANPIRG POC. ICAO secretariat appreciated the suggestion and decided to take necessary action for that.		Completed

Reference	Who	What	Due date	Status
A5-9	ICAO	France shared observation that in addition to French mitigation, Japan has also implemented mitigations by using less power of 5G base station. It was informed by France that as per ITU there is no regulation for power limit from the base station. ICAO was requested to take necessary follow up action at regional level, to support CAAs working with State's spectrum regulators to avoid the future safety issues on radio altimeter due to 5G implementation.		Completed
A5-10	ICAO	to conduct a **in-person** workshop **for Frequency Finder** ~~after new release of FF along with online course proposed by ICAO HQ for new release of FF is available~~	~~SRWG/7~~ **Tentatively October 2023**	Close
A6-1	ICAO, SRWG	Recommended to undertake an analysis on VHF COM simulation in 3 - 5 years from now (2025-2028) to assess the severity of the congestion	2025-2028	Open
A6-2	ICAO	Review the registered frequencies from the simulation conducted in 2016 in the Frequency Finder, and remove those temporary frequencies in the Frequency Finder in previous simulation service	SRWG/7	Close
A6-3	ICAO	Establish an ad-hoc group (in offline mode through email list) to review the VHF COM Frequency Allotment Plan for APAC in terms of effective use of frequencies in the region, including the review of non-safety critical frequency use. **(superceded by A7-1)**	SRWG/7	Close
A6-4	ICAO	Publish questionnaire for APAC states for possible introduction of 50 kHz channel spacing in the APAC region via State Letter from ICAO APAC Regional Office (follow up of A5-5)	SRWG/7	Close
A6-5	ICAO	Probable augmentation of the Frequency Finder tool to incorporate indication to States to coordinate or not to coordinate	SRWG/7	Open
A6-6	China, ICAO	To summarize the revised planning principle/criteria in the format used in WP04 of SRWG/1	SRWG/7	Close
A6-7	ICAO	State Letter on updated Guidance Material to invite APAC States for review and comments ~~(Follow-up of A4-7)~~ **(Superceded by A7-2)**	SRWG/7	Close
~~A5-9~~ **A6-8**	ICAO	Administrations of Member States in APAC region would take proactive measures (~~necessary follow up actions~~) in line with FSMP at national and regional level, to ~~support CAAs~~ work with National telecommunication regulators to prevent and monitor any impact of 5G to Radio Altimeters (~~avoid the future safety issues on radio altimeter due to 5G implementation~~).	~~SRWG/7~~	Ongoing
~~A6-3~~ **A7-1**	China as Rapporteur and Mr Robert Witzen as Advisor with participation from volunteering States/Administration, ICAO	Ad-hoc Expert group led by China to address issues identified in current frequency allotment plan. Tasks of this group: - Study the allotment plan; - Analyze the real use of allotment registered in FF; - Understand the current situation; - Identify existing issues and rooms for improvement; - Develop suggestions in both technical and administrative perspectives; - Explore the potential in reallocating sub-bands/pools; - Produce a survey on the usage of TIBA in the Region; and - Review content of Guidance Material ~~(as discussed in WP08)~~	SRWG/8	Close
A7-2	ICAO	After circulating to APAC States for review of Guidance Material, ad-hoc group to review virtually the material	CNS SG/27	Close

Reference	Who	What	Due date	Status
A7-3	Indonesia as Rapporteur with participation from volunteering States/Administration, ICAO	Ad-hoc group rapported by Indonesia to share the experience in this Region on handling HF resource utilization and provide recommendations, produce a survey on the usage of HF in the Region, review eANP Vol II relevant tables, review outcomes from former ICAO meetings, and suggestions to Agenda Item 1.9 in WRC-23 if deemed necessary.	SRWG/8	Ongoing
A8-1	ICAO, States/Administrations	The States/Administrations that intend to use or is using VHF frequencies for Satellite-based VHF experimental systems during the period of time that the relevant SARPs and planning criteria are being developed and before operational deployment, should inform ICAO of their use. ICAO shall inform all States in APAC through frequency spectrum POC to ensure that all States are aware and monitor for any possible interference it may cause to VHF terrestrial systems. States/Administrations should also inform ICAO of any interference due to VHF Satellite-based experimental systems. And, in the event of interference, the correction action should be taken as soon as practicable.	SRWG/9	Open
A8-2	ICAO, States/Administrations	The Secretariat will notify the ANB CNSS about the updates of the regional VHF COM Allotment Plan to ensure the Frequency Finder tool incorporates the latest revisions. Member States/Administrations are requested to review and update the frequencies uploaded in the Frequency Finder (FF), ensuring the database remains current.	SRWG/9	Close
A8-3	ICAO, HF Ad-hoc group with Indonesia as Rapporteur	The ad-hoc group refines the survey on the Utilization of HF Spectrum Frequency bands in the Operation of Aeronautical Communications and the New Table with HF Frequency Assignments in the APAC Region, ensuring that they are clear and comprehensive enough to collect information effectively from States and facilitate their responses. The Secretariat disseminate the revised survey and updated table through a State Letter once the revisions have been finalized.	SRWG/9	Close
A8-4	States/Administrations	The States/Administrations register all aeronautical frequencies for NDB and AOC on oil rigs with ICAO APAC Office, share the best practices in States/Administrations to regional forum, e.g. SRWG, and nominate experts to support and participate in the Seminar for the frequency use for oil rigs.	SRWG/9	Close
A8-5	SRWG	Recognizing that certain refinements are required for new paragraphs concerning HF, TIBA, backup frequency, and GBAS, the meeting agreed to adopted this revision as Edition 1.1 with clear presentation for the proposed amendments to differentiate the status of text as original, agreed, to be determined (TBD). The SRWG will discuss and review the pertinent paragraphs in future meetings.	SRWG/9	Close
9-1	VHF Ad-hoc Group Australia, Bhutan, China (lead), Hong Kong China, Indonesia, India, Japan, Lao PDR, Philippines, Republic of Korea, Singapore, Thailand, United States and IATA	The VHF ad-hoc group formed in SRWG/7 to review the VHF COM Frequency Allotment Plan for APAC in terms of effective use of frequencies in the region will discuss the proposal along with other potential ways for effective utilization of the VHF COM Frequency band, including the AOC band in APAC region. The ad-hoc group will share its report at the next SRWG meeting	SRWG/10	Open
9-2	States/Administrations	States/Administrations that have not registered HF allocations in the Master International Frequency Register (MIFR) should register themselves as a priority.	SRWG/10	Open
9-3	States/Administrations	States/Administrations should update the HF Network Designators table in the ICAO APAC e-ANP Vol. II following the latest ITU framework (ITU Radio Regulations Appendix 27).	SRWG/10	Open
9-4	States/Administrations	States/Administrations not responding to the survey provided in ICAO APAC State Letter Ref.: T 8/8.1: AP094/24 (CNS) should respond to the survey	SRWG/10	Open
9-5	HF Ad-hoc Group Australia, China, India, Indonesia, Singapore, Thailand	For the proposal for the inclusion of the HF allotment plan information presented in both WP/15 of SRWG/8 and this WP/05 of SRWG/9 to into the Asia/Pacific Regional Aeronautical Radio Frequency Guidance Material, it was agreed the HF ad-hoc group will draft the content and present it in the SRWG/10 meeting for further deliberation and review	SRWG/10	Open
9-6	ICAO Secretariat	ICAO Secretariat will share the proposed modifications requested in the FF tool in SRWG/9 report in section 5.3 with ICAO HQ and share HQ responses with them in the next Meeting of the SRWG	SRWG/10	Open
9-7	ICAO Secretariat	ICAO HQ incorporate the NDB frequency/identity assignment facility in the current FF tool. The Meeting requested that the ICAO Secretariat share this message with ICAO HQ and update the Meeting on the response	SRWG/10	Open

Reference	Who	What	Due date	Status
9-8	ICAO Secretariat	If ICAO can help to get detailed NDB frequency assignment criteria, APAC States/Administrations may explore the alternate ways to do such assignments in the future. The ICAO Secretariat was requested to coordinate with ICAO HQ and compile the resources that help understand NDB frequency/identity assignment criteria	SRWG/10	Open
9-9	China, Singapore, ICAO	Another action item was formulated to share further updates with the SRWG/10 meeting for other proposed changes highlighted in yellow in the Asia/Pacific Regional Frequency Management Manual v1.1, which require more deliberation	SRWG/10	Open
9-10	ICAO Secretariat	India suggested adding NDB frequency assignment criteria in the Asia/Pacific Regional Aeronautical Radio Frequency Management Guidance Material if it is available in any ICAO documents. The Meeting noted that currently, there is no information on resources that can provide this information. However, the ICAO Secretariat will try to search for this information from other reference materials.	SRWG/10	Open
9-11	States/Administrations	Before deciding on the next round of simulation, it is imperative that the FF database is up to date with the entry of all frequencies being used by States. It is because an accurate database would support the precision of the prediction of APAC frequency needs after the simulation. Therefore, all States/Administrations were requested to assess the FF tool and check for inconsistencies with their local database, if any, against Aeronautical Information Publication (AIP). It was also advised to remove frequencies that are registered but not being used. In addition, it was suggested that other details such as range, power transmission, etc., be corrected	SRWG/10	Open
9-12	ICAO Secretariat	The ICAO Secretariat was requested to coordinate with the FSMP secretary to find out the tentative timelines of space-based VHF SARPs publication, as it will affect the VHF allocation plan for APAC and, hence, the simulation	SRWG/10	Open
9-13	ICAO Secretariat, SRWG chair	ICAO Secretary, with the chair, would revise the ToR and present the draft of the revised ToR in the SRWG/10 meeting for consideration	SRWG/10	Open
9-14	States/Administrations	it is imperative to first collect some incident reports from APAC States/Administrations. It was suggested that States/Administrations share their incident report and its details in the SRWG/10 Meeting. Based on inputs from reports from States/Administrations, the need to form an ad-hoc group will be deliberated in the SRWG/10 Meeting	SRWG/10	Open
9-15	ICAO Secretariat, SRWG chair	The ICAO Secretariat was recommended to coordinate with other ad-hoc groups formed in the region for GNSS RFI matters and understand their scope of work. It will help to avoid duplication of efforts. ICAO Secretariat will share information in SRWG/10 Meeting	SRWG/10	Open

Asia and Pacific Ministerial Declaration on Civil Aviation (Delhi)

1) We, the Ministers from the Asia and Pacific States responsible for Civil Aviation, met in New Delhi, India, from 11-12 September 2024, on the occasion of the 2nd Asia Pacific Ministerial Conference on Civil Aviation and the 80th anniversary of the Convention on International Civil Aviation (Chicago Convention), organized by the International Civil Aviation Organization (ICAO), to reaffirm the obligations as the Contracting States to the Chicago Convention signed on 7 December 1944 to ensure the safety, security, efficiency and continuity of civil aviation;

2) Recalling that Ministers met at the 1st Asia Pacific Ministerial Conference on Civil Aviation in Beijing, China, from 31 January to 1 February 2018, and endorsed a landmark declaration (Beijing Declaration) underpinning the importance of air transportation for social and economic development and the shared commitments and vision of Asia and Pacific Ministers to build Regional momentum to realize the implementation of Aviation Safety priorities and targets and Asia/Pacific Seamless Air Traffic Management (ATM) Plan (now renamed as the Asia/Pacific Seamless Air Navigation Service (ANS) Plan) with the collaboration of States/Administrations and active participation of the aviation industry;

3) Acknowledging the extraordinary circumstances during COVID-19 pandemic which impeded States/Administrations from effectively implementing the Beijing Declaration commitments while noting updated safety and air navigation targets have emerged to better support States/Administrations in the Asia and Pacific Region;

4) Recognizing that the recovery of air transportation is progressing and that passenger and freight demand in the Asia and Pacific Region is forecast to regain higher growth rates requiring a concerted effort of States/Administrations and the aviation industry to meet the increasing demand while enabling a safe, secure, efficient and a more resilient aviation sector, and minimizing the adverse effects of international civil aviation on the global climate, which supports the realization of United Nations 2030 Agenda for Sustainable Development;

5) Identifying that key priorities exist in the Asia and Pacific Region requiring collaboration and that States/Administrations need to develop capabilities to improve safety, security and building of additional capacity to address emerging Regional and global challenges to sustain the Regional civil aviation growth forecast;

6) Noting that over half of the States/Administrations in the Asia and Pacific Region which have had an ICAO audit under the Universal Safety Oversight Audit Programme – Continuous Monitoring Approach (USOAP – CMA) have an effective implementation (EI) of the critical elements (CEs) of a State safety oversight system lower than the global average;

7) Noting that over half of the States/Administrations in the Asia and Pacific Region which have had an ICAO audit under the Universal Security Audit Programme (USAP) have an EI of the CEs of a State aviation security oversight system lower than the global average;

8) Acknowledging that the ICAO Assembly 41st Session endorsed the Global Aviation Safety Plan (GASP) 2023 – 2025 edition and the Seventh Edition of the Global Air Navigation Plan (GANP) as the global strategic directions for safety and air navigation respectively, and urged Member States to demonstrate the political will necessary to implement remedial actions to resolve safety concerns and air navigation deficiencies in a timely manner as well as integrate aviation in the national development plans;

9) Appreciating that HR development strategies combined with adequately funded and quality assured training and accompanying investment in training infrastructure is essential for developing and maintaining a qualified and competent workforce to manage all aviation activities and to meet ICAO's strategic objectives;

10) Realizing the benefits of working in partnership with ICAO and aviation stakeholders through interactive platforms for closer coordination to identify opportunities for innovation and the adoption and integration of new technologies, such as Advanced Air Mobility (AAM) to keep pace with global advancement in information technology, artificial intelligence, etc. and future evolving technologies and sciences;

11) Recognizing that only universal participation in the international air law treaties adopted under the auspices of ICAO would secure and enhance the benefits of unification of the international rules which they embody, with particular priority to be given to the Protocols of Amendment to the Convention on International Civil Aviation which have not yet entered into force;

12) The Second Asia Pacific Ministerial Conference, therefore, agrees to the Asia and Pacific Ministerial Declaration on Civil Aviation (Delhi) and the Ministers commit to the following:

1.0 Reaffirming Asia and Pacific Ministerial Declaration on Civil Aviation (Beijing)

1.1 Support and continue efforts towards the realization of the Beijing Declaration commitments, especially pursuing cooperative progress on commitments relating to aviation safety oversight capability, State Safety Programme (SSP) implementation, certification of aerodromes used for international operations, the timely implementation of the Asia/Pacific Seamless Air Navigation Service (ANS) Plan, and supporting the establishment of independent accident investigation authorities.

2.0 Effective Implementation of ICAO Global Plans

2.1 Undertake to support the effective implementation of the ICAO Global Aviation Safety Plan (GASP), Global Air Navigation Plan (GANP) and Global Aviation Security Plan (GASeP) and associated Regional plans, which include detailed guidance to assist States/Administrations in complying with ICAO's Standards and Recommended Practices (SARPs).

3.0 Aviation Safety

3.1 Continue efforts and cooperation to uphold aviation safety as a key priority, carrying out effective safety oversight and safety management activities, joining forces to share safety information and fostering a strong and positive safety culture.

3.2 Strive to achieve the current GASP, in particular, prioritize and commit resources to achieve the following goals:

a) Improve scores for the effective implementation (EI) of the critical elements (CEs) of the States/Administrations safety oversight system;

b) Work towards an effective SSP;

c) Endeavour not to have any Significant Safety Concerns (SSCs) under the USOAP Continuous Monitoring Approach (CMA) and to resolve any future SSCs within the time frame agreed with ICAO;

d) Collaborate with States/Administrations and the aviation industry through the Regional Aviation Safety Group (RASG) to organize capability-building events for the Region and implement Safety Enhancement Initiatives (SEIs) as stipulated in the Regional Aviation Safety Plan (RASP); and

e) Develop and publish a National Aviation Safety Plan (NASP).

4.0 Air Navigation Services

4.1 Commit to resources in modernization and innovation in Air Navigation Services, in tandem with developments in the airport and airline capacity, to support recovery and meet future demand for air travel and new entrants.

4.2 Commit to implement the ICAO Standards and Procedures for Air Navigation Services (PANS), and the Asia/Pacific Seamless ANS Plan (including prioritized GANP elements) and its subsidiary plans to enhance ANS capacity and harmonization in the Asia and Pacific Region focusing on as a matter of priority:

a. Phase I, II and III of the Asia/Pacific Regional Aeronautical Information Management (AIM);

b. Improved Airspace Safety and Capacity through the implementation of more efficient Air Traffic Control (ATC) separation minima;

c. Performance Based Navigation (PBN) implementation in accordance with ICAO Assembly Resolution A37-11 on Global PBN Goals;

d. Common Ground/Ground Telecommunication Infrastructure to support ANS applications;

e. Expediting the implementation of ICAO provisions related to System Wide Information Management (SWIM);

f. Enhanced civil/military cooperation;

g. Enhanced Surveillance capability for improved Safety and Efficiency;

h. Air Traffic Flow Management (ATFM) and Airport Collaborative Decision Making (A-CDM) implementation;

i. Air Traffic Management (ATM) contingency planning, in coordination with neighbouring States/Administrations;

j. Air navigation in national planning frameworks such as National Development Plans (NDPs) supported by National Air Navigation Plans (NANP); and

k. Enhancement of safety risk assessment capability.

4.3 Share best practices, resources and capability in the provision of ANS, including Aeronautical Search and Rescue (SAR), Meteorological Services for International Air Navigation (MET) and Air Traffic Flow Management (ATFM) through Regional cooperation and enhanced coordination.

4.4 Work collaboratively through ICAO and Regional collaborative platforms towards Seamless ANS, including Flight and Flow Information for a Collaborative Environment (FF-ICE) and Trajectory-Based Operations (TBO) to support future traffic growth and sustainability.

5.0 Aviation Security

5.1 Commit to continuing efforts and cooperation to uphold aviation security as a key priority, carry out effective aviation security oversight, enhance compliance with relevant ICAO aviation security and security-related Standards, joining forces to share security information as appropriate and foster a positive security culture.

5.2 Strive to achieve the aspirational goal of the GASeP as established, in particular, prioritize and commit resources to achieve the following objectives:

a) Improve score for the effective implementation (EI) of the critical elements (CEs) of the States/Administrations security oversight system;

b) Endeavour not to have any Significant Security Concerns (SSeCs) under the USAP Continuous Monitoring Approach (CMA) and to resolve any future SSeCs within the time frame agreed with ICAO;

c) Collaborate through Regional multilateral Forums such as; the Regional Aviation Security Coordination Forum (RASCF) to assist States/Administrations to achieve compliance with the relevant aviation security and security-related Standards.

6.0 Facilitation

6.1 Consistent with the facilitation-related Decisions of the ICAO 41st Assembly Session in October 2022 and the outcomes of ICAO's High-Level Conference on COVID-19 in 2021, strive to ensure coordination between civil aviation and various stakeholders, including the health authorities, to allow seamless implementation of ICAO Annex 9 — *Facilitation* and the ICAO's Facilitation Programme, including relevant health related provisions and the five key elements of the ICAO Traveller Identification Programme Strategy, and taking into account a multi-layered risk-based approach to establish national health and other facilitation measures.

7.0 Gender Equality

7.1 Demonstrate States/Administrations commitment to promote and encourage the aviation sector to take the necessary measures to strengthen gender equality by supporting policies, as well as the establishment, development and improvement of strategies and programmes to further women's careers within the aviation sector.

8.0 Resourcing for Civil Aviation

8.1 Commit to providing Civil Aviation Authorities/Administrations in the Region with the necessary autonomy and powers, sustainable sources of funding and resources to carry out effective safety and security oversight and regulation of the aviation industry or alternatively, as may be appropriate, consider establishing and delegating responsibilities to an RSOO (Regional Safety Oversight Organization) that can effectively support regulatory oversight for aviation safety and security.

8.2 Urge Asia and Pacific States /Administrations, other ICAO Member States, international assistance and donor partners, as well as financial institutions to enhance cooperation and provide technical expertise, resources and funding support for technical assistance, capacity-building initiatives and the implementation of the above commitments/actions in the Asia and Pacific Region.

9.0 Aviation Environment Protection

9.1 Encourage Asia and Pacific States/Administrations to continue their efforts and work together to reduce emissions and other environmental impacts of aviation.

10.0 Ratification of International Air Law Treaties

10.1 Encourage Asia and Pacific States, which so far have not done so, to ratify the Amendments to the *Convention on International Civil Aviation*, in particular, the amendments to Articles 50 (a) and 56 adopted by the ICAO Assembly 39th Session in 2016, as soon as possible.

10.2 Encourage Asia and Pacific States to consider becoming parties to the international air law treaties that they have not yet ratified.

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LIST OF WORKING/INFORMATION PAPERS

WP/IP/SP Number	Agenda	Subject	Presented by
		WORKING PAPERS	
WP/01	1	Provisional Agenda	Secretariat
WP/02	3	Review of outcomes of relevant meetings	Secretariat
WP/03	3	Outcomes of WRC27 Workshop	Secretariat
WP/04	4	Follow-up actions for revised VHF COM Frequency Allotment Plan for APAC	Secretariat
WP/05	4	Survey results of the utilization of HF spectrum bands for aeronautical communication in the APAC region	HF Ad-hoc working group
WP/06	7	Outcomes of the Seminar on Frequency Use	Secretariat
WP/07	8	Outcomes of Radio Navigation Symposium	Secretariat
WP/08	8	Atmospheric Conditions Conducive Long-Range Interference	Australia
WP/09	4	Proposal to assign a frequency for rescue and firefighting communication in emergencies at the airport	Thailand
WP/10	4	Proposal for frequency band reduction for AOC service	China
WP/11	5	Update on Frequency Finder (HQ)	Secretariat
WP/12	6	Review of Frequency Lists	Secretariat
WP/13	12	Review POC of States	Secretariat
WP/14	12	Review of ToR and the Action List	Secretariat
WP/15	10	The Use of Frequency Coupling for Direct Controller Pilot Communications in Hong Kong China	Hong Kong China
WP/16	4	Review of HF-related information in CNS TABLES in e-ANP Vol II	Secretariat
WP/17	13	CNS-Related ASBU in Asia/Pacific Seamless ANS Plan	Secretariat
WP/18	13	Outcomes of the Second Asia Pacific Ministerial Conference on Civil Aviation	Secretariat
WP/19	11	Frequency Simulation for India	India
WP/20	10	Requirement of VHF for Flying Training Institutes	India

WP/IP/SP Number	Agenda	Subject	Presented by
		INFORMATION PAPERS	
IP/01	1	Meeting Bulletin	Secretariat
		PRESENTATIONS	
SP/01	4	FSMP Global Development	Secretariat
SP/02	11	COM & NAV Bands Audits in Europe	Eurocontrol
		FLIMSY	
Flimsy/01		Revised Drafted Decision from WP/09	Secretariat

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