



ICAO

*International Civil Aviation Organization*

**ELEVENTH MEETING OF THE SURVEILLANCE  
IMPLEMENTATION COORDINATION GROUP  
(SURICG/11)**

*Bangkok, Thailand, 25 – 27 March 2026*

**Agenda Item 5:** Review of regional requirements for Surveillance in the e-ANP, Seamless ANS Plan and the reported implementation status

a) Outcome for survey on APAC Surveillance and DCPC Coverage

**OUTCOME FOR SURVEY ON ATS SURVEILLANCE AND DIRECT CONTROLLER AND PILOT COMMUNICATION (DCPC) VHF COVERAGE CHARTS FOR APAC REGION**

(Presented by the Secretariat, Hong Kong China and Thailand)

**SUMMARY**

The need to enhance the surveillance and Direct Controller and Pilot Communication (DCPC) VHF coverage where gaps exist in APAC Region along some of the busy air traffic routes at boundaries between FIRs has been identified during APANPIRG/29 in 2018. As such, the coverage charts were regularly generated for inclusion in APAC Seamless ANS Plan. The ICAO APAC Regional Office launched a survey in early 2022 to update information concerning existing/planned coverage and reported the outcome from the Survey in CNS SG/26. Another round of update to reflect the latest coverage was conducted per State Letter T 8/5.4: AP099/25 (CNS) issued in July 2025. This Working Paper captures the outcomes from the latest survey for information of this meeting.

**1. INTRODUCTION**

1.1 Identified the need to enhance the surveillance and Direct Controller and Pilot Communication (DCPC) VHF coverage where gaps exist in APAC Region along some of the busy air traffic routes at boundaries between FIRs, the Conclusion APANPIRG/29/22 was endorsed in 2018, where there is a mechanism to produce charts and regularly update them in a sustainable manner to show the latest situation in ATS surveillance and DCPC VHF coverage in the Asia Pacific Seamless ANS Plan, so that resources in enhancing the surveillance and DCPC VHF coverage to address the gaps can be prioritized and optimized in a holistic, collaborative and harmonized manner.

1.2 With the need for a regular update, the ICAO APAC Regional Office issued the State Letter T 8/5.4: AP099/25 (CNS) issued in July 2025 for States/Administrations to update their ATS Surveillance and DCPC VHF coverage information. Details of replies from States/Administrations are provided below.

**2. DISCUSSION**

2.1 As of 2 March 2026, there were 14 States/Administrations provided their updated coverages, and all plottable data provided has been applied to the update of coverage maps. Based on the inputs from States/Administrations, the overall pictures of ATS surveillance and DCPC VHF coverage are given as follows in Figures 1 and 2 respectively. Detailed comparison in each main area of region identified in the APAC Seamless ANS Plan:-





Figure 4a: DCPC VHF coverage in the area of 2022

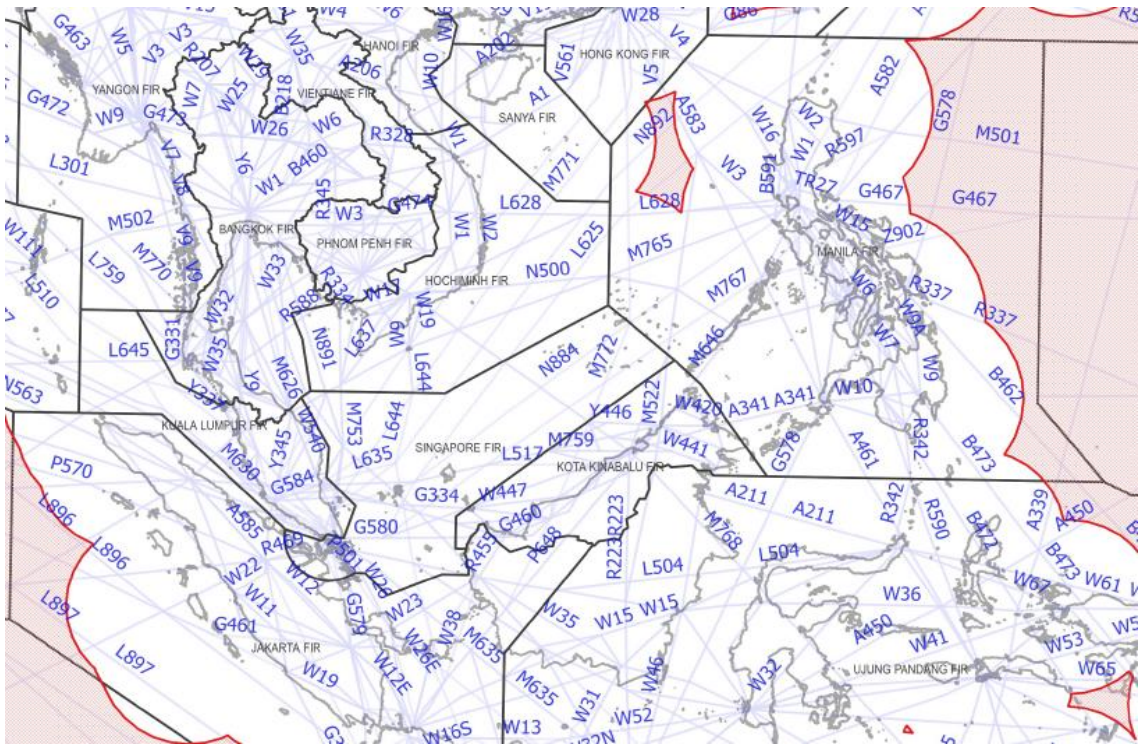
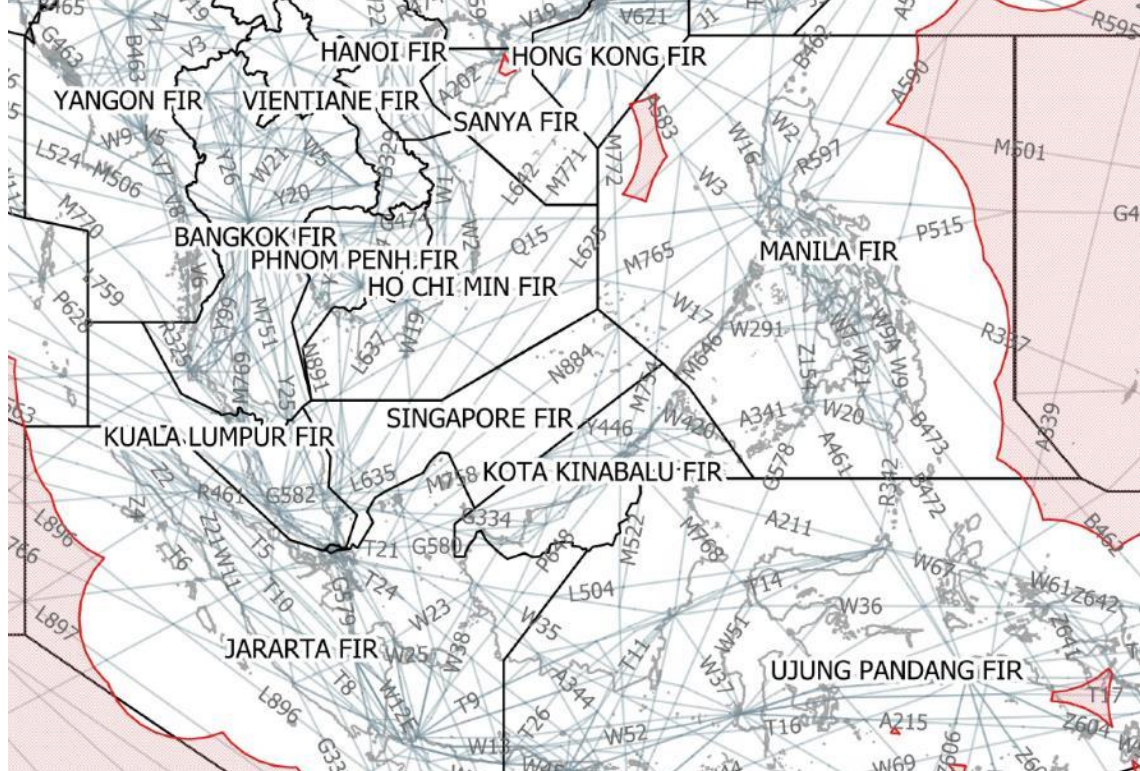


Figure 4b: DCPC VHF coverage in the area of 2025



2.4

No major update was observed for DCPC VHF coverage compared with last input.

- (b) Priority 2: Bay of Bengal airspace between the Indian subcontinent and the Andaman Islands, the Indian subcontinent and the Arabian Sea

Figure 5a: ATS Surveillance coverage in the area in 2022

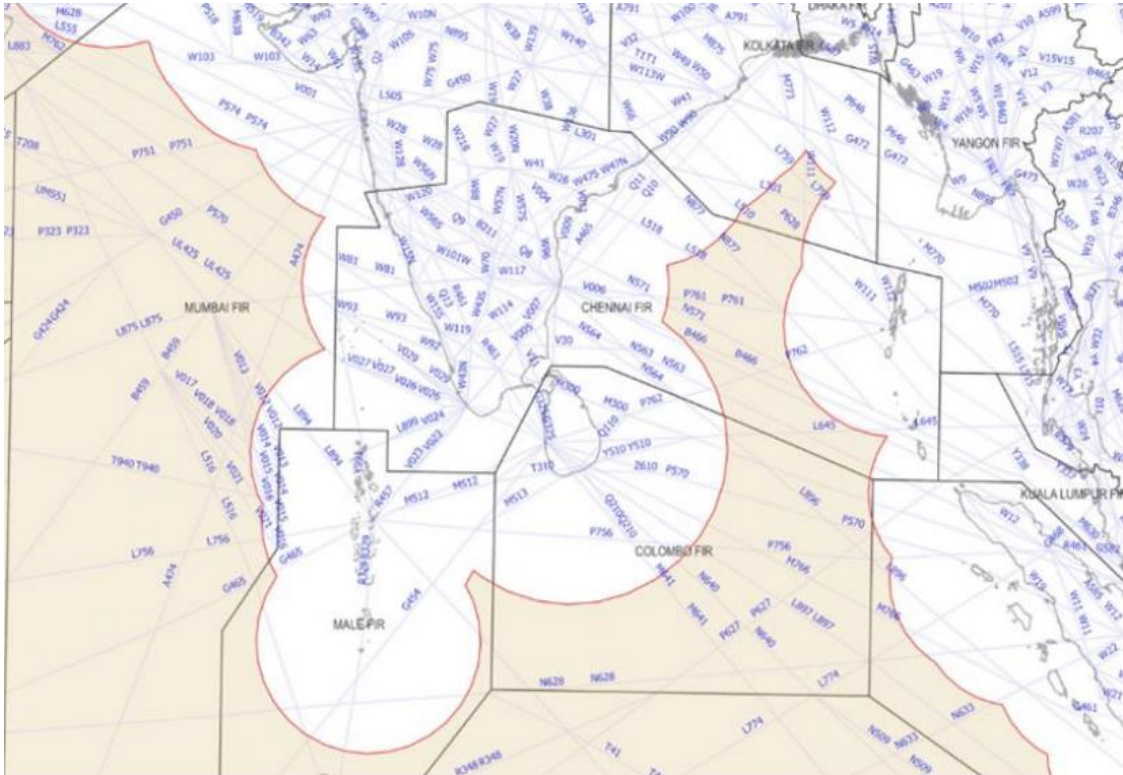
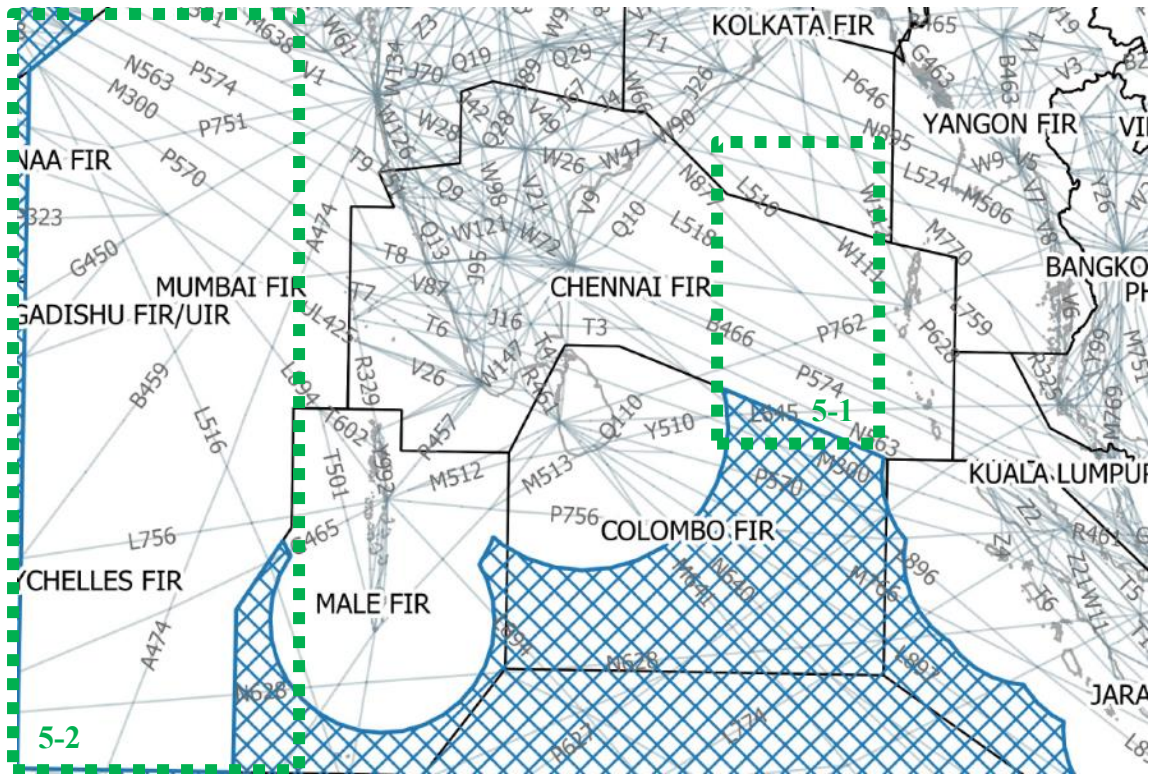


Figure 5b: ATS Surveillance coverage in the area in 2025



2.5 It is noted an increase in ATS surveillance coverage in the area marked as 5-1 and 5-2.



(c) Priority 3: airspace between Indonesia and Australia (between Java and West Australia)

Figure 7a : ATS Surveillance coverage in the area in 2022

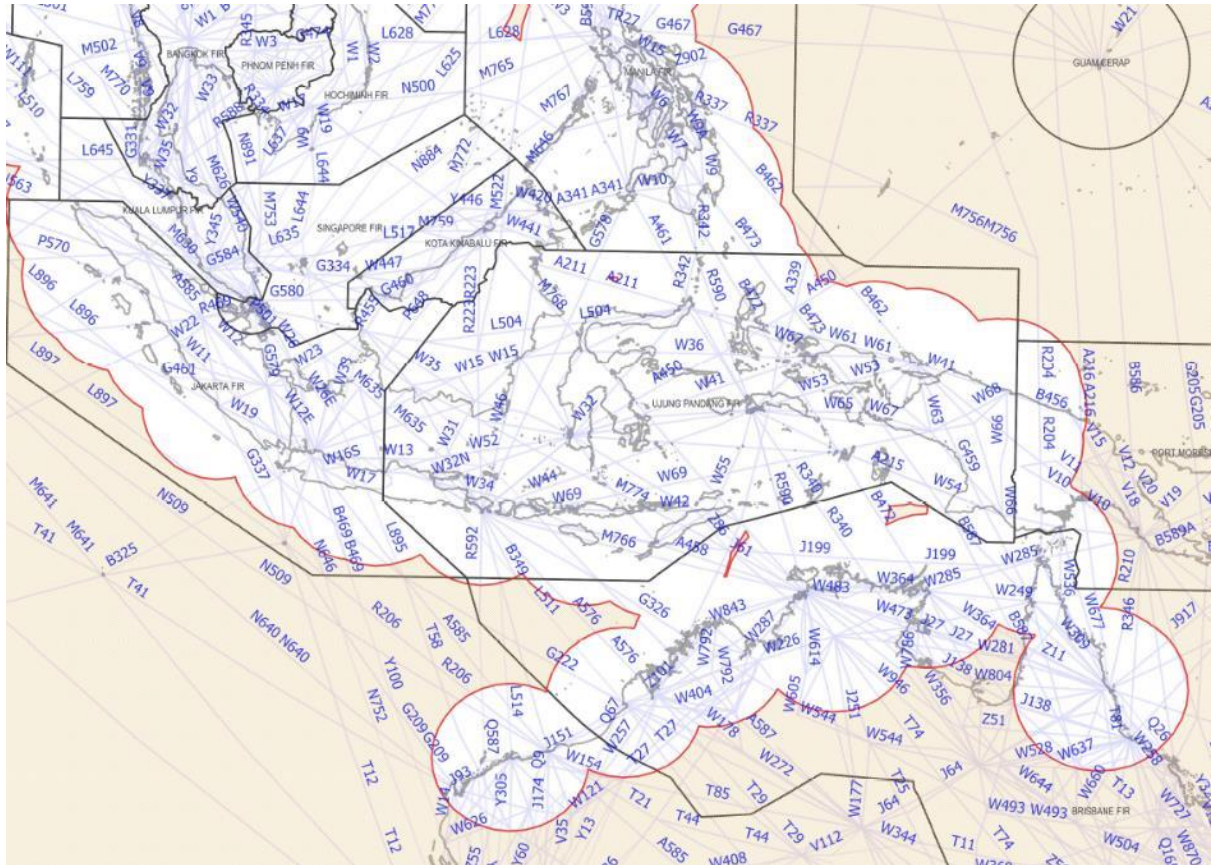
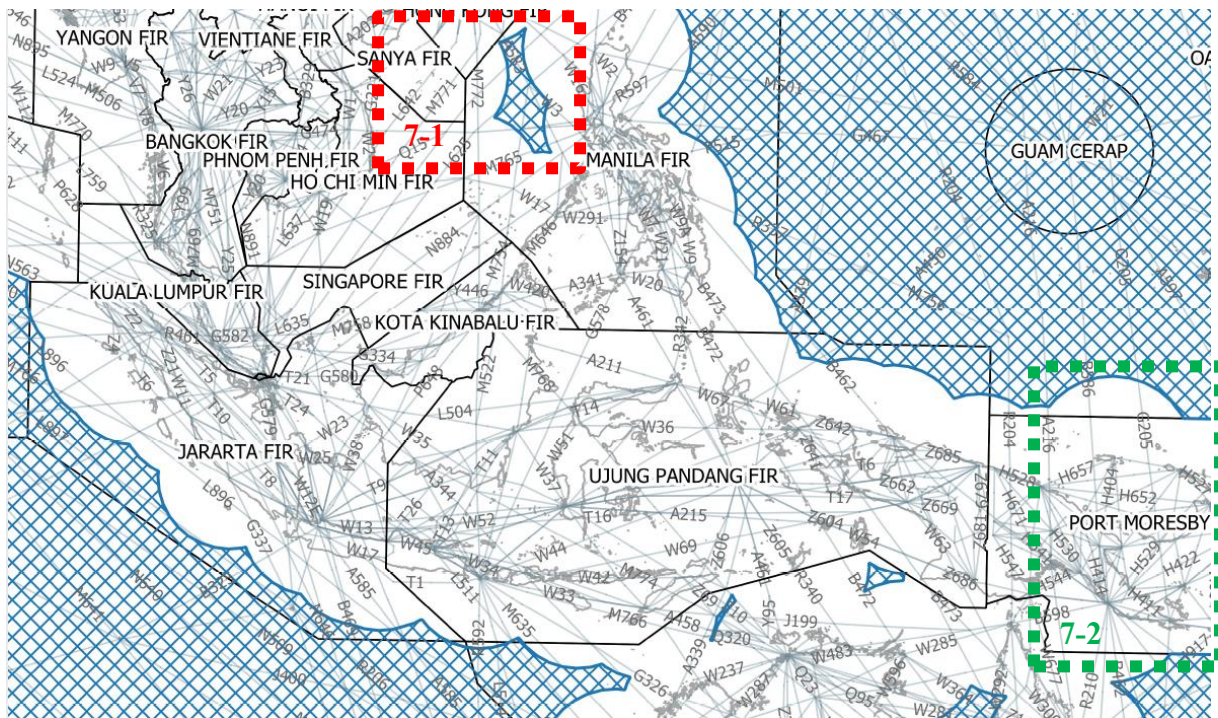


Figure 7b : ATS Surveillance coverage in the area in 2025



2.7 The reduction in area was identified as marked as 7-1 compared to last input. It is noted an improved ATS surveillance coverage in the area marked as 7-2.

Figure 8a : DCPC VHF coverage in the area in 2022

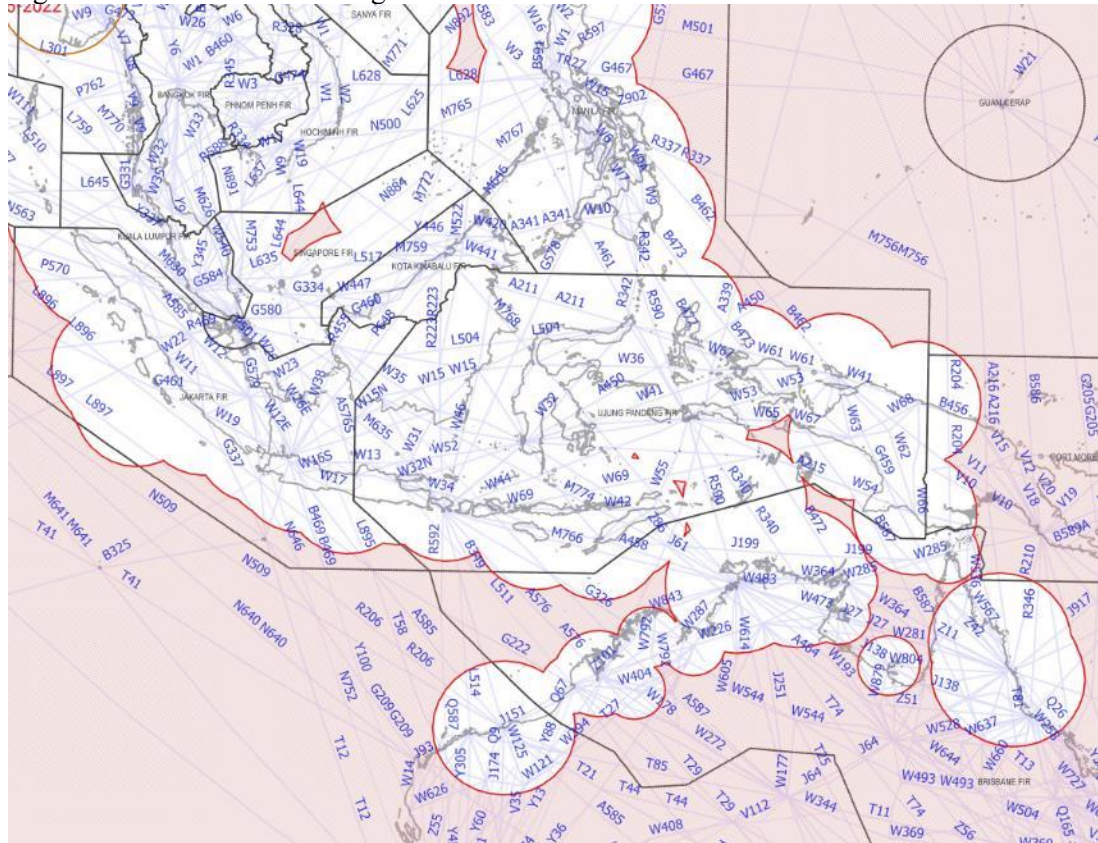
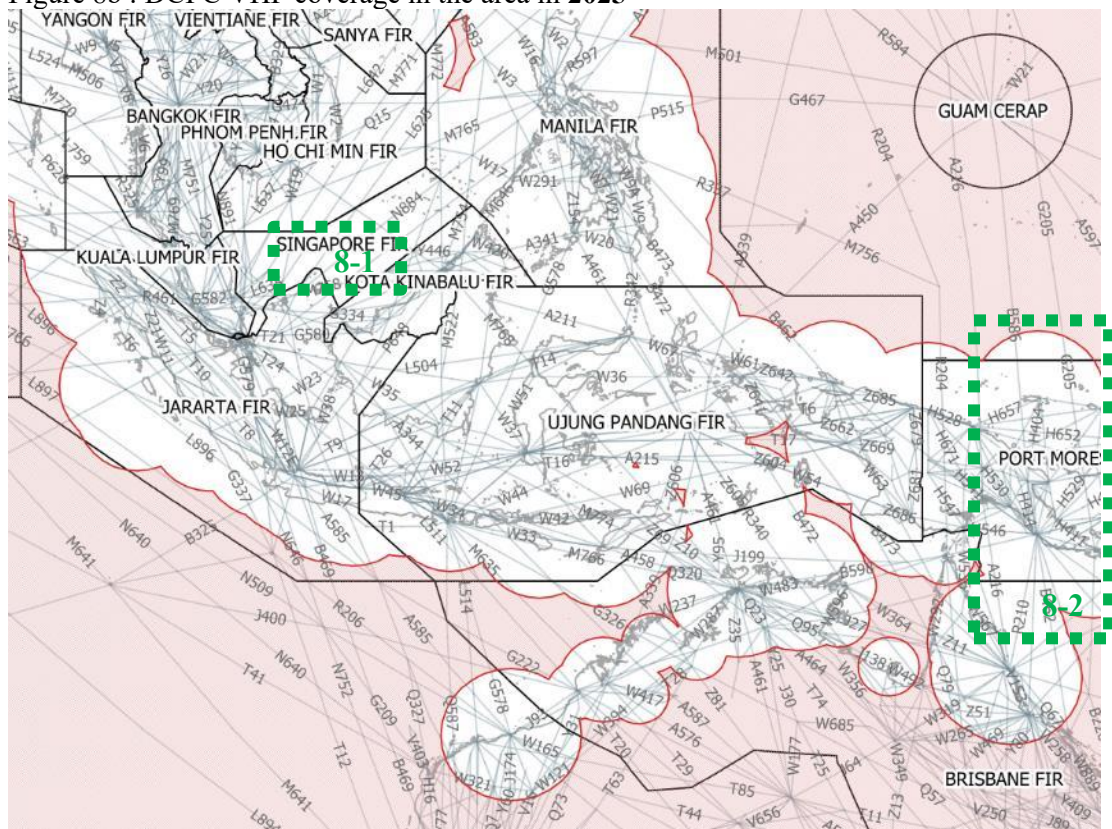


Figure 8b : DCPC VHF coverage in the area in 2025



2.8 The small gap identified in area marked as 8-1 compared to last input. Similar to ATS surveillance coverage, it is noted an increase in DCPC VHF coverage in the same area marked as 8-2.

(d) Priority 4: Coral Sea between Papua New Guinea and Australia



Figure 10a : DCPC VHF coverage in the area in 2022

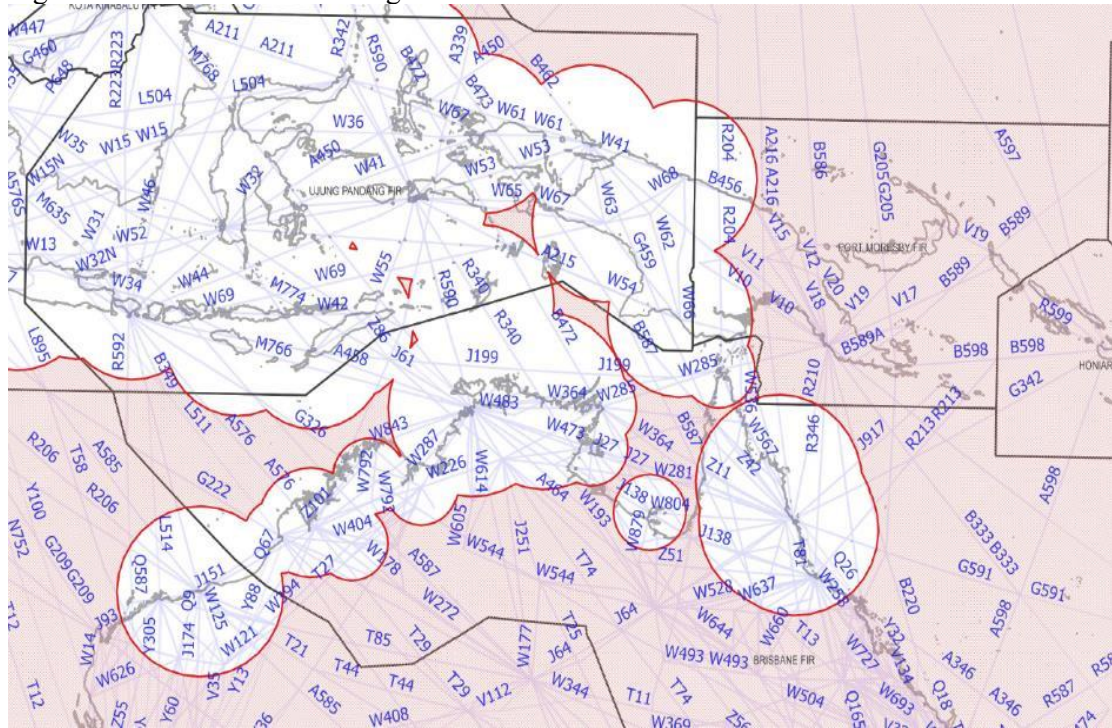
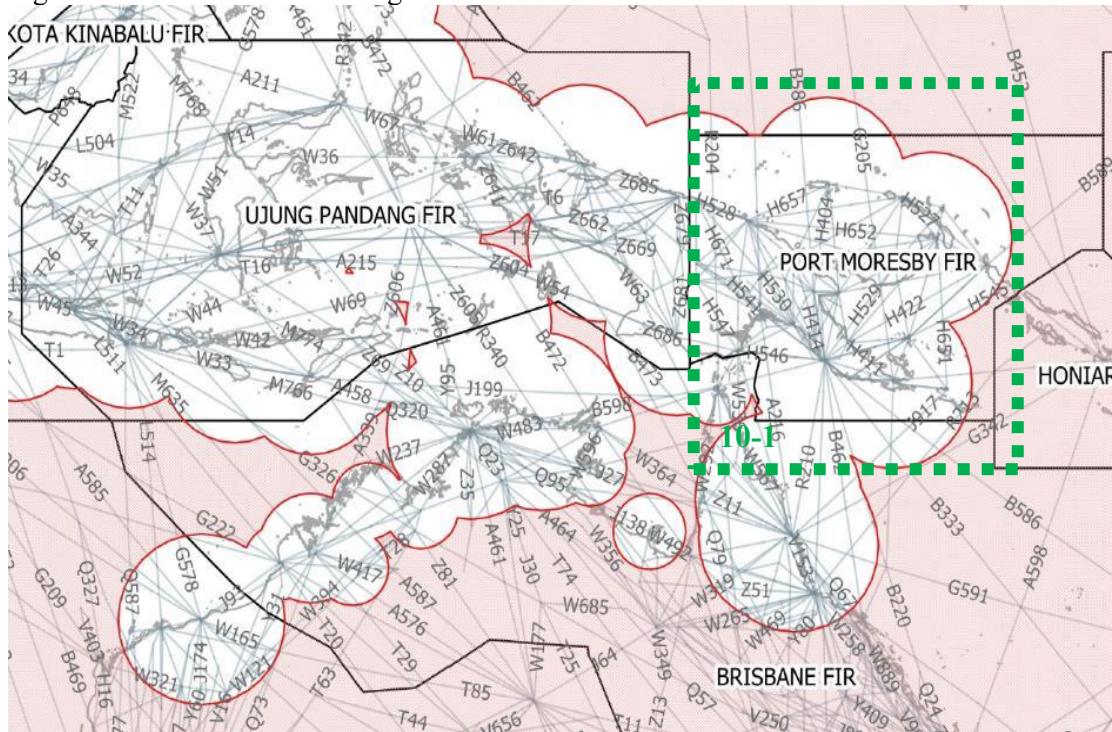


Figure 10b : DCPC VHF coverage in the area in 2025



2.10 Similar to ATS surveillance coverage, it is noted major reported improvement in DCPC VHF coverage in the area marked as 10-1.

Observation and Conclusion

2.11 During plotting of coverage map, it is observed that data could be incorrect, causing the change in coverage area, including following causes:

- Previously planned base stations were no longer in plan nor implemented. Some may be relocated, while others could be change in plan. Many of the planned stations were not updated from some States during this survey
- Typo in lat-longs  
e.g. xx° N mistyped as xx° S, or xxx° E mistyped as xxx° W

- Mixing up of lat-long formats e.g. xx° yy' zz" (degree-minute-second) with xx.yyyz° which are not equal.

2.12. Based on the coverage charts above, relevant States/Administrations are encouraged to work with appropriate parties to derive plans in addressing the coverage gaps identified above, such as surveillance data sharing between FIRs or adoption of space-based surveillance as appropriate. For States/Administrations which have not yet responded to the survey, they are reminded to contribute relevant information to complete the charts.

2.13. It is proposed that the updated coverage charts of the ATS surveillance and DCPC VHF coverage to be reviewed by States via CNS Sub-group and incorporated into the next update of the Asia Pacific Seamless ANS Plan.

2.14. As suggested by States in CNS SG/26, coverage of space-based ADS-B has been included in this round of input/update. The Secretariat thanked Thailand for the meticulous work done and human resources paid to update the coverage maps.

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

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) encourage relevant States/Administrations to work with appropriate parties and/or other States/Administrations to derive plans in addressing the coverage gaps identified in the coverage charts; and
- c) discuss any relevant matter as appropriate.

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**Appendix 1 – Summary of Response to the Survey**

<b>States</b>	<b>Data Received 2025</b>	<b>Plotted on Map</b>
<b>Group 1 APAC Contracting States with RVSM Airspace</b>		
Afghanistan		
Australia	YES	YES
Bangladesh		
Cambodia		
China		YES (2022s data)
China - Hong Kong	YES	YES
China - Macao	YES	YES
Democratic People's Republic of Korea		
Fiji		
India	YES	YES
Indonesia	YES	YES
Japan	YES	YES
Lao People's Democratic Republic		
Malaysia	YES	YES (2022s data)
Maldives		YES (2019s data)
Mongolia		
Myanmar		YES (2022s data)
Nauru		
Nepal		
New Zealand		YES (2022s data)
Pakistan	YES	YES
Papua New Guinea	YES	YES
Philippines	YES	YES
Republic of Korea		YES (2022s data)
Singapore	YES	YES
Solomon Islands		
Sri Lanka	YES	YES
Thailand	YES	YES
Viet Nam		YES (2022s data)
<b>Group 2 APAC Contracting States with no RVSM Airspace</b>		
Bhutan	YES	YES
Brunei Darussalam		
Macao, China		
Cook Islands		
Kiribati		
Marshall Islands		
Micronesia		
Palau		
Samoa		
Timor Leste		
Tonga		
Tuvalu		
Vanuatu		
COUNT	14	20