



**INTERNATIONAL
CIVIL AVIATION
ORGANIZATION**



Survey Outcome on CMAAC and FUA Implementation

ICAO Secretariat
ATM/SG/14 WP/37

CMAC in APAC Seamless ANS Plan

- GANP
- APAC Seamless ANS Plan (Version 4.0)
- Delhi Declaration

The Ten Civil-Military elements identified by APANPIRG

Strategic
Coordination

Tactical
Coordination

Airspace Review

Flexible Use of
Airspace

International
Airspace

Integrated C/M
ATM System

Joint C/M
Aerodromes &
Navigation Aids

Shared C/M
Data

Common C/M
Training &
Procedures

Space Vehicle
Launch and Re-
entry



International Civil Aviation Organization Organisation de l'aviation civile internationale Organización de Aviación Civil Internacional Международная организация гражданской авиации منظمة الطيران المدني الدولي 国际民用航空组织

Ref.: RSO - AP104/25 (RSO)

4 September 2025

Subject: Civil-Military Cooperation in Air Traffic Management (CMAC) and Flexible Use of Airspace (FUA) Implementation Survey

Action required: To complete the survey and reply no later than **31 October 2025**

Dear Sir/Madam,

I wish to draw your attention to the subject of Civil-Military Cooperation in Air Traffic Management (CMAC) and Flexible Use of Airspace (FUA) implementation in Asia and Pacific (APAC) Region, which constitutes key elements of the Global Air Navigation Plan and Asia/Pacific Seamless ANS Plan (Version 4.0) for the enhancement of airspace capacity, operational efficiency, Air Navigation Services (ANS) resilience, and environmental sustainability.

In its role as a regional forum to support APAC States/Administrations, the ICAO Asia and Pacific Regional Sub-Office has developed a survey on CMAC and FUA. The purpose of the survey is to have a better understanding of the progress on CMAC and FUA implementation in the APAC Region and to provide effective and efficient support for further enhancement.

States/Administrations are kindly requested to provide a single response using the paper-based survey document enclosed to this letter as **Attachment A**, and submit the survey no later than 31 October 2025 through email to APAC-RSO@icao.int with a copy to yingzhang@icao.int. The information collected will be treated as confidential and only aggregated data with statistical summaries that do not identify individual State/Administration will be shared and used by ICAO.

Please accept, Sir/Madam, the assurances of my highest consideration.

Yours sincerely,

Tao Ma
Regional Director

Enclosure:
Civil-Military Cooperation in
Implementation Survey

Asia and Pacific Office
252/1 Vibhavadi Rangsit Road
Chatuchak
Bangkok 10900
Thailand

Section 1: Respondent Profile

Section 2: Implementation Status

Section 3: Performance Assessment and Benefits

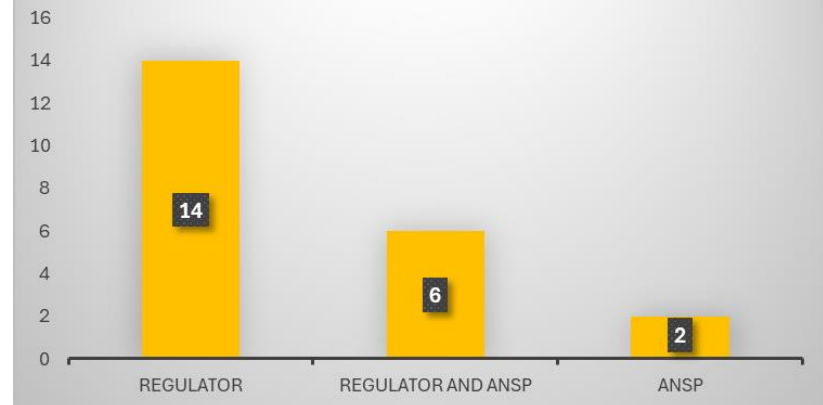
Section 4: Challenges, Experiences and Next Step Forward

Section 5: Support Needs

Survey on CMAC/FUA Implementation

- ICAO has developed a survey on CMAC and FUA implementation which was circulated via a State Letter (RSO - AP104/25 (RSO)) in September 2025.
- 22 States/Administrations have completed the Survey and provided response to ICAO before 31st March 2026.

Participating Organizations



Overall Status

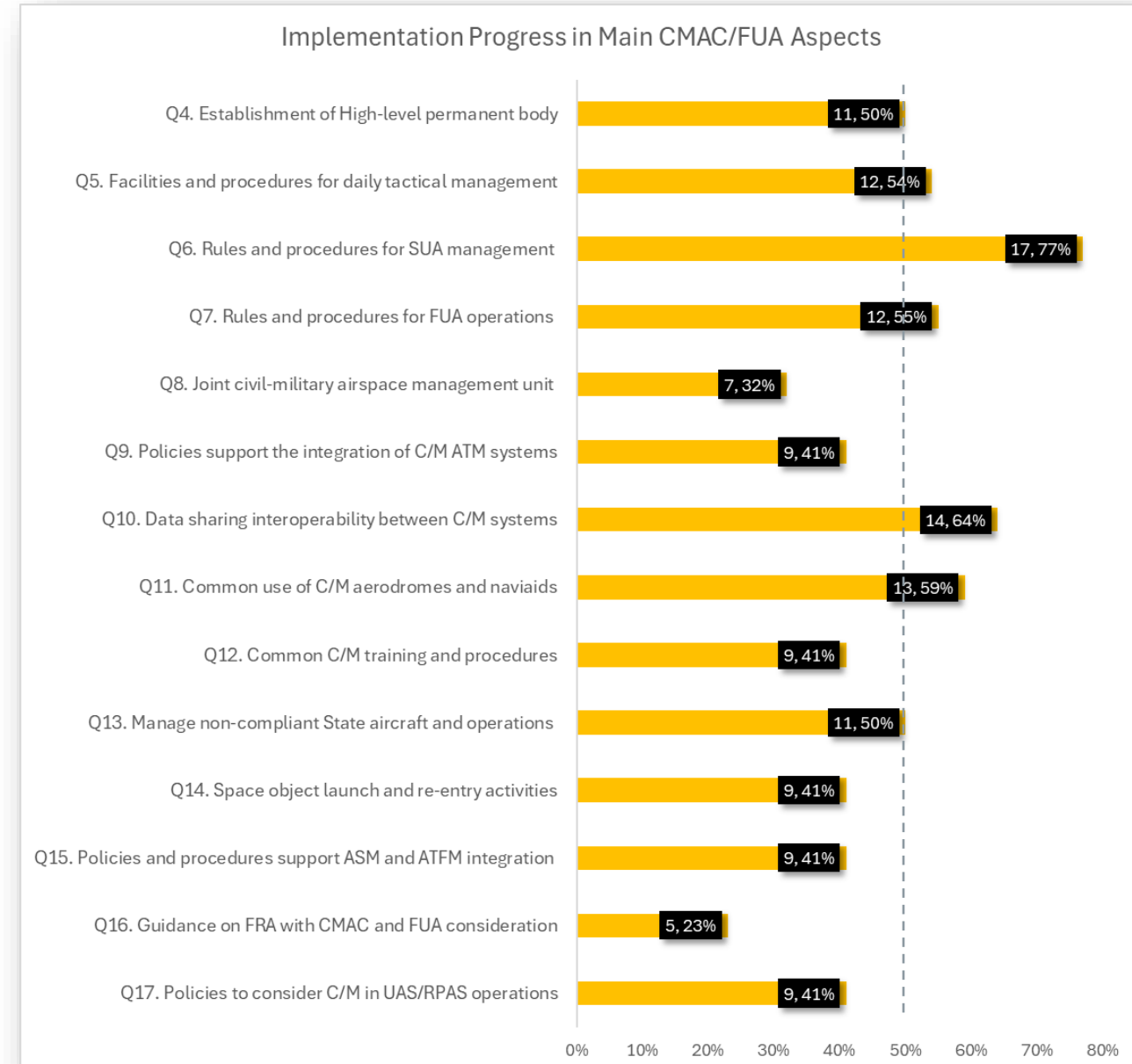
- Huge diversity in CMAC/FUA implementation maturity across the region.
- Overall progress at regional level is slow to reach the goals of GANP and regional priorities in line with the target time

Groups	Implementation Status	No. & % of the Respondents
1. Maturely implemented	≥8 elements implemented with established high-level civil-military (C/M) body	7 (31.8%)
2. In further development	3 - 8 elements implemented with established or establishing high-level C/M body	7 (31.8%)
3. Challenges to further	<3 elements or 3 - 8 elements implemented but no plan for high-level C/M body	5 (22.7%)
4. Other cases	No designated military airspace in FIR or Not applicable	3 (13.6%)



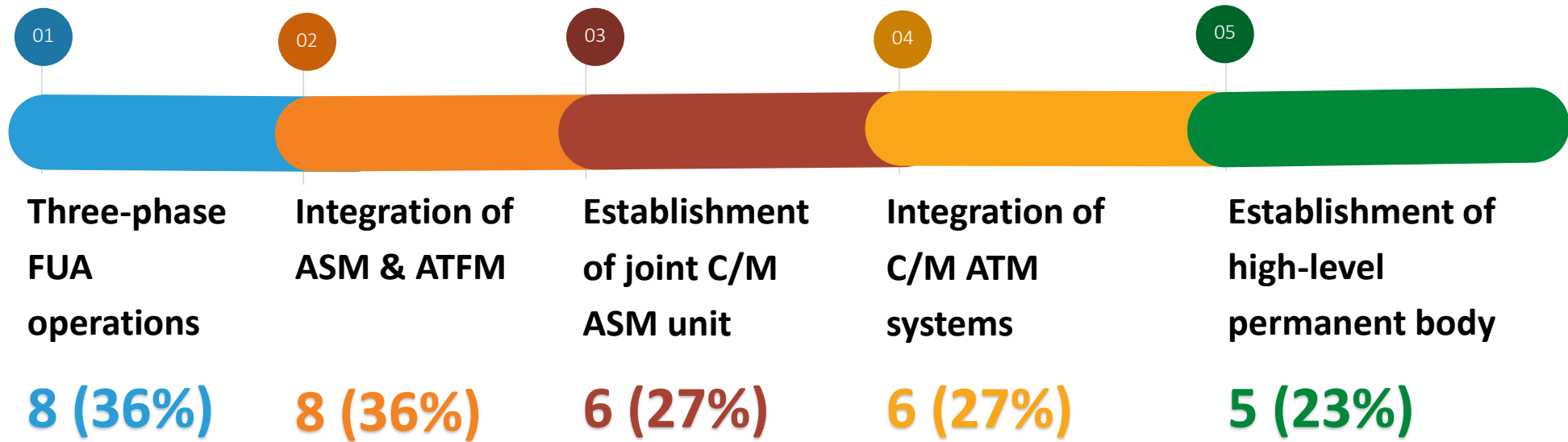
Overall Status

- Implementation process of each aspects is not consistent
- Main gaps include:
 - high-level C/M body and regulatory framework
 - establishment of joint C/M airspace management unit
 - integration of C/M ATM system
 - common C/M training and procedures
 - integration with relevant ANS initiatives
- Several elements might be implemented tactically and operationally but difficult to evolve to an enhanced level without high-level C/M mechanism

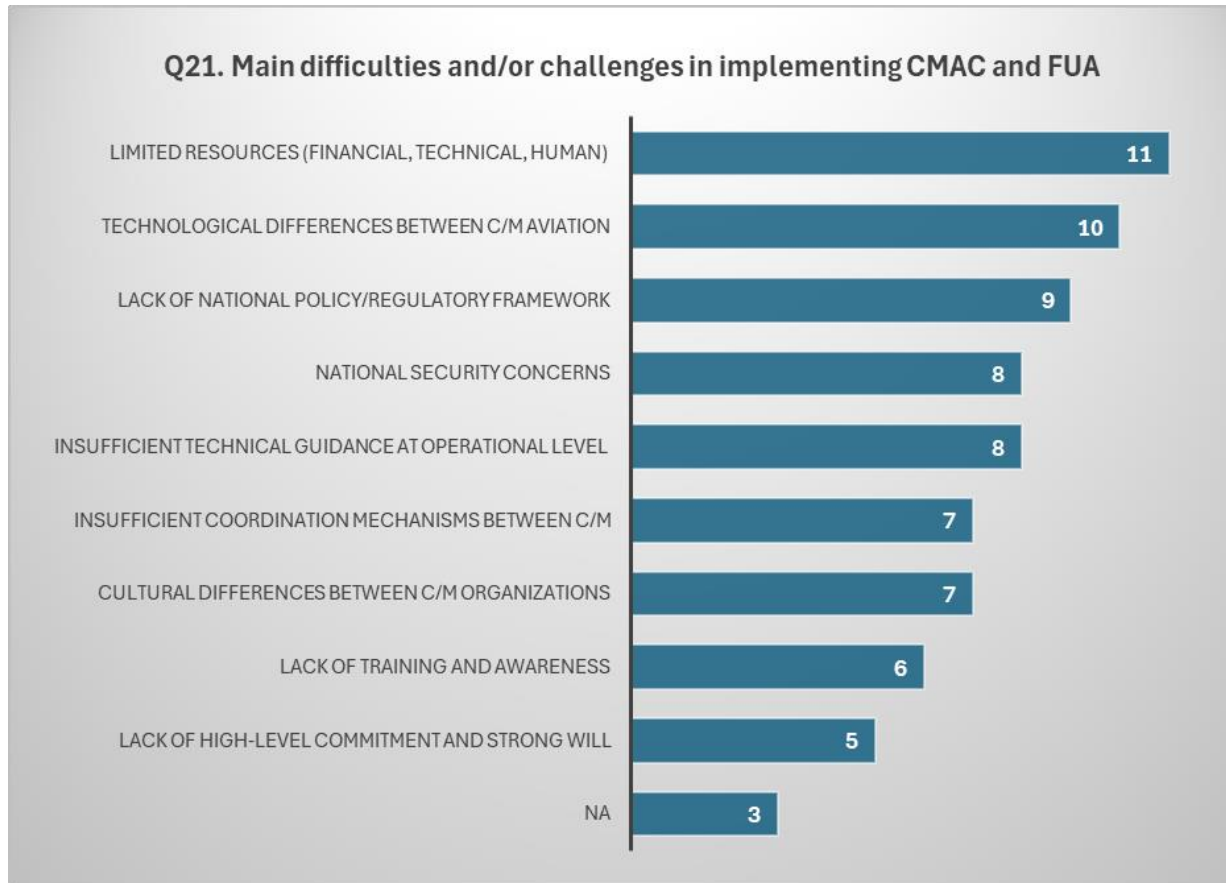


Developing Trend

Aspects that are under active development:



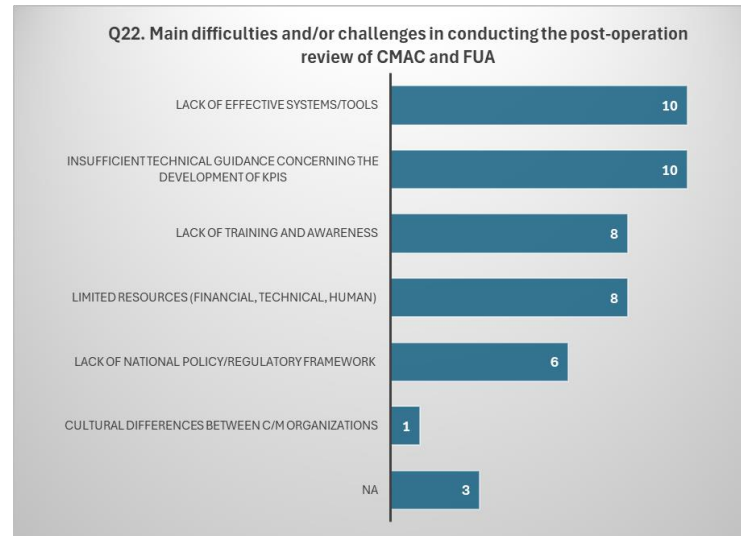
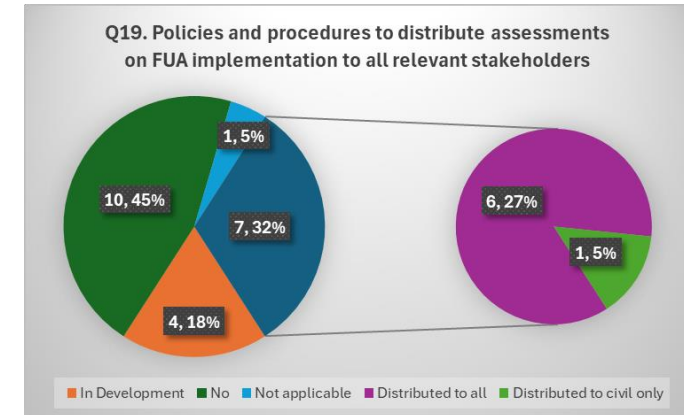
Main Difficulties and Challenges



- The main difficulties and challenges (ranked in top five):
 - limited resources (financial, technical, human)
 - technological difference between civil and military
 - national security concerns
 - lack of national policy/regulatory framework
 - insufficient technical guidance
- “*High-level commitment and strong will*” is no longer the major difficulty and/or challenge

Performance Review

- Performance monitoring and post-operation reviews for FUA operations are largely absent in the region, implemented by **less than one third** of the respondents
- The main reasons include, but not limited to
 - lack of effective systems/tools
 - insufficient technical guidance concerning KPIs development
 - lack of training and awareness



- ✓ *Safety*
- ✓ *Capacity*
- ✓ *Efficiency*
- ✓ *Contingency response*
- ✓ *Reduced flight delay*
- ✓ *Fuel/emission reduction*
- ✓ *Cost efficiency*
- ✓ *Facilitate flight planning*

Key Experiences and Good Practices – Words from Respondents

Strong commitment from high level in both civil and military, which has been crucial for driving implementation forward

Regular civil-military conferences and meetings that facilitate knowledge sharing and address operational challenges collaboratively

The importance of **early** civil-military collaboration and **continuous** coordination to address local operational challenges.

Exchange of experiences through training & meeting result in enhance airspace safety & capacity

Established **data sharing protocols** between civil and military systems that improve situational awareness and enable more efficient airspace management.

Full implementation is still in progress, but benefits gained through the **progressive implementation**.

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Needs for Support



Integration of ASM and ATFM at system level



Technical guidance on FUA airspace design



Development of national policy and regulations



Safety risk management from joint civil and military perspectives



Common training programme

01

*Regional guidance
materials and best
practices*

02

*Workshops and
seminars (on-line &
off-line)*

03

*Assistance in
developing national
strategies*

A Region in Transition...



strategic intent is mainly present, but regulatory framework, tactical implementation, data sharing/system integration, and performance monitoring, etc. are **the critical gaps**

CMAC/FUA considerations for relevant initiatives e.g. ATFM, FRA, UAS/RPAS are becoming the new common interests of future development

Technical support with safety concerns is the most urgent requirement and the provision of **regional guidance materials** and **best practices** is the most preferable method

Recommendations for States/Administrations (Para. 2.9)

- High-level civil-military body and national policy & joint C/M ASM units as a priority
- Adopt the three-level ASM and FUA operations in a phased and adaptable manner
- Consider establishing mandatory post-operation assessment policies for FUA
- Conduct regular reviews on SUAs and CDRs, civil-military working procedures, etc.
- Start with joint training as a low-cost, high-trust building measure between C/M;
- further the data sharing interoperability and ATM system integration
- Share best practices and contribute to the regional implementation



Next Step Forward (Para. 2.10)

- Facilitate technical guidance on FUA implementation for the Region
- Consider organizing on-site workshops in 2027-2028 to facilitate communication and sharing on subjects of common interests
- Consider organizing on-line CMAC/FUA workshop/seminar at regular intervals
- Facilitate States/Administrations' participation in relevant technical training programme for both civil and military



The meeting is invited to:

- a) note the information contained in this paper;
- b) encourage States/Administrations to utilize the survey results in **Appendix A** and consider the proposed recommendations to plan further implementation of CMAC/FUA with a phased and adaptable measure to be in line with national ANS development;
- c) discuss the proposals in paragraph **2.10** on CMAC/FUA promotional activities to facilitate technical guidance, experience sharing and collaboration across the region;
- d) encourage States/Administrations to actively participate in and contribute to various regional initiatives on enhanced CMAC/FUA implementation through provision of best practice, lessons learned, technical cooperation, etc. to facilitate the regional progress and harmonization; and
- e) discuss any relevant matters as appropriate.

Thank You

