



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**TWENTY NINTH MEETING OF THE ASIA/PACIFIC
AIR NAVIGATION PLANNING AND IMPLEMENTATION
REGIONAL GROUP (APANPIRG/29)**
Bangkok, Thailand, 3 to 5 September 2018
Agenda Item 3: Performance Framework for Regional Air Navigation Planning and Implementation
3.6: Other Air Navigation Matters
**PAST AND FUTURE ACTIVITIES OF THE
ICAO ASIA AND PACIFIC REGIONAL SUB-OFFICE**

(Presented by the Secretariat)

SUMMARY

This Working Paper provides an update on the 2018 activities and progress of the ICAO Asia and Pacific Regional Sub-Office (APAC RSO) and proposes future activities for 2019. The APAC RSO was established in June 2013 with the aim of providing implementation support assistance to APAC States and Administrations in Air Traffic Management (ATM) enhancement activities.

1. INTRODUCTION

1.1 The APAC RSO was established in June 2013 in Beijing, China, and is now into its fifth year of operations. The APAC RSO has endeavored to meet its key objective, namely to enhance support to States and Administrations through project-oriented ATM activities in the APAC Region. Progress has been achieved in the key areas of Airspace Organization and Management (AOM) [Flexible Use of Airspace (FUA), Civil Military Cooperation (CMAC) and Performance-Based Navigation (PBN)], Collaborative Decision Making (CDM) and Air Traffic Flow Management (ATFM).

2. DISCUSSION
APAC RSO Staffing

2.1 During the first three years, the APAC RSO was fully staffed (one person from ICAO and nine secondees from China, Japan, Malaysia, Republic of Korea and Singapore). In June 2016, most of the seconded staff went back to their home organization after a three year secondment. New secondees from China joined the APAC RSO in 2016, but the positions of three seconded Regional Officers had remained vacant for more than one year. This reduced workforce resulted in reduced APAC RSO activities during 2016-2017.

2.2 At the end of 2017 the situation had positively improved. In October, two staff have joined the APAC RSO as ATFM Regional Officers (one ICAO staff and one secondee from IATA). In February 2018, a secondee from Malaysia reported on duty as the Regional Officer on Airspace Management. During this summer, the APAC RSO is processing the replacement of three Chinese secondees.

Means of action

2.3 The APAC Regional Office and the APAC RSO aim to ensure that States conform to the implementation targets agreed in the APAC Seamless ATM Plan. After analysis of States' reports, gap analysis is conducted and actions are defined to provide assistance to States in need.

2.4 Most of the APAC RSO activities can be grouped into the three following categories :

- a) providing **Secretariat** services to APANPIRG regional work groups such as the Performance-Based Navigation Implementation Coordination Group (PBNICG), small working groups formed by regional groups, such as the South China Sea Traffic Flow Review Group (SCSTFRG), and State groups that have requested ICAO Secretariat support, such as the Northeast Asia Regional ATFM Harmonization Group (NARAHG);
- b) organizing dedicated **workshop** for several States (example: CMAC/FUA workshop, PBN Safety Assessment workshop); and
- c) providing **specific assistance** on request from a State (example: PBN Go Team).

2.5 All APAC RSO activities are published few months in advance both on the Regional Office's meetings page (<https://www.icao.int/APAC/Meetings/Pages/default.aspx>) and on the APAC RSO's website (<http://www2010.icao.int/APAC/APAC-RSO/Pages/default.aspx>).

Recent activities of the APAC RSO in 2018

Recent activities on PBN

2.6 The second PBN Workshop for Air Traffic Controllers was held in Bangkok, Thailand from 6 to 9 February 2018. Noting that the lack of PBN training for air traffic controllers could delay the PBN implementation, the workshop was focused on theoretical part on PBN, ATC consideration and application, as well as group exercise. The workshop received a good feedback from the participants, who asked to conduct it regularly.

2.7 An Asia/Pacific PBN Go Team visited Myanmar from 5 to 9 March 2018. The PBN Go Team conducted PBN operational approval training, PBN airspace review, PBN procedure review and PBN safety assessment assistance. The PBN Go Team proposed a list of recommendations which were accepted by the Department of Civil Aviation of Myanmar through an action plan.

2.8 The Fifth Meeting of the PBN Implementation Coordination Group (PBNICG/5) was held in Nadi, Fiji from 2 to 4 May 2018. Before the PBNICG/5, a PBN Workshop for Pacific Islands States and a Quality Assurance Workshop for Instrument Flight Procedures were organized at the same venue on 30 April and 1 May 2018 respectively. The States shared their PBN implementation challenges in the region. A specific focus was made on the PBN implementation and safety oversight support to Pacific Islands States. In addition, the regional transition plan development for PBN approach procedure chart identification was also discussed significantly.

2.9 A PBN Operational Approval Workshop was held in Bangkok, Thailand from 14 to 18 May 2018. The workshop dealt with PBN concept, recent ICAO criteria and guidance materials, technical and operational considerations as well as practical exercise using sample documents and PBN technical assessor worksheet. More PBN Operational Approval Workshops will be conducted together with Asia/Pacific COSCAPs in this region.

Recent activities on Airspace Management

2.10 The APAC RSO was tasked to provide the secretariat to the South China Sea Traffic Flow Review Group (SCSTFRG), formed as a small working group of the South East Asia ATS Coordination Group (SEACG), and the newly established Bay of Bengal Traffic Flow Review Group (BOBTFRG), similarly formed under the South Asia Indian Ocean ATM Coordination Group (SAIOACG). The aims of these groups are to facilitate the ATS route network optimization and to review the existing Flight Level Allocation Scheme (FLAS) and/or Flight Level Orientation Scheme (FLOS) with the view of enhancing efficiencies within those concerned airspaces.

2.11 The Sixth Meeting of the SCSTFRG was held at the APAC RSO, Beijing, China from 5 to 7 March 2018. The outcomes of this meeting were reported to SEACG during the combined Eighth Meeting of the South Asia Indian Ocean ATM Coordination Group and Twenty-Fifth Meeting of the South-East Asia ATS Coordination Group (SAIOACG/8 & SEACG/25) that was held from 25 to 30 March 2018 in Siem Reap, Cambodia. A side-meeting between Cambodia, China, Hong Kong China, Thailand and Viet Nam facilitated by ICAO was also conducted during the SAIOACG/8 & SEACG/25 as a follow-up to the SCSTFRG/6. The outcomes of these meetings are as follows:

- a) Discussion on reduction of longitudinal spacing from 30NM to 20NM on ATS route A1 and A202 is on-going. China, Hong Kong China and Viet Nam agreed to provide updates during the next SCSTFRG meeting.
- b) Malaysia and Singapore to continue bilateral discussion on reduction of longitudinal spacing from 80NM to 40NM on ATS route M758 and M761 – expected for implementation in first half of 2020.
- c) New ATS routes requirements proposed by Malaysia were agreed to be incorporated into APAC Route Catalogue.
- d) Indonesia, Malaysia, Singapore and Viet Nam started discussion on reduction of separation on ATS route M768 to 50NM using ADS-C/CPDLC. Progress to be reported during the next SCSTFRG meeting.

2.12 The Preparatory Meeting of the First Meeting of the BOBTFRG was conducted as a side-meeting during the SAIOACG/8 & SEACG/25 in Siem Reap, Cambodia. A tentative date of first meeting could be before the end of 2018.

Recent activities on Civil Military Cooperation

2.13 Following an invitation from Malaysia, the APAC RSO organized an ad hoc Civil-Military ATM Cooperation/Flexible Use of Airspace (CMAC/FUA) workshop in Kuala Lumpur on 25-27 September, 2017. The APAC RSO provided standard training courses for senior officers from the Malaysian Armed Forces as well as from the DCA Malaysia to broaden the awareness of ICAO provisions on CMAC/FUA. The workshop comprised of several exercises on pre-tactical and tactical coordination for Flexible Use of Airspace and sharing of best practices used in other States. The participants also took the initiative to hold preliminary discussion on drafting a document/manual on “Civil and Military Cooperation Policy”.

2.14 The APAC RSO organized an APAC Civil-Military ATM Cooperation workshop at the APAC Regional Office from 01-03 November 2017. The APAC RSO broadened and refreshed ICAO policies and strategies on CMAC domain based on the ICAO Circular 330, and emphasized the concepts and mechanism of Airspace Organization and Management and Flexible Use of Airspace topics. With the support of a EUROCONTROL team, a series of Flexible Use of Airspace exercises as well as a demonstration of the LARA (Local and Sub-Regional ASM support system) tool were conducted. Meanwhile, the workshop also provided an opportunity for civil and military authorities

from different States to share their experiences and practices. A field visit to the Airspace Management Cell of AEROTHAI was organized.

2.15 Based on previous cooperation between Air Traffic Management Bureau (ATMB) China and APAC RSO, the APAC RSO set out to promote the implementation of CMAC/FUA into different Regional ATMBs. Following an invitation from the ATMB, the APAC RSO organized and conducted a Regional CMAC/FUA workshop in Hangzhou China from 26 to 27 July 2018 focusing on East-China Regional ATMB and Regional Air Force. This workshop strongly promoted the implementation of CMAC/FUA at operational level.

2.16 Following an invitation from Thailand, the APAC RSO organized an ad hoc CMAC/FUA Workshop in Bangkok Thailand from 6 to 10 August 2018 for all the personnel of Thai-CMAC (a Joint Civil and Military Cell) which is vested with the responsibilities of implementing CMAC/FUA in Thailand. For this workshop, the APAC RSO broadened the awareness of basic concepts and principles of CMAC/FUA based on ICAO's provisions, shared best practices and/or experiences with all the participants from Thai-CMAC.

Recent activities on ATFM/CDM

2.17 The Air Traffic Flow Management (ATFM) is one of the ICAO's priorities as described in the 5th Edition of The Global Air Navigation Plan published in 2016. It is also one of ten priorities in Asia & Pacific Region as agreed in The Asia/Pacific Seamless ATM Plan.

2.18 The positions of ATFM unit of the APAC RSO, unfortunately, had been vacant for a year and a half. The APAC RSO could only continue its commitment to support NARAHG during the duration. At length, two officers have been assigned to ATFM unit of the APAC RSO again in October 2017. Thus, this will enable the APAC RSO's activities in ATFM to be more active.

2.19 Recognizing the direction provided in the *Asia/Pacific Regional Framework for Collaborative ATFM* and in the *Regional ATFM Concept of Operations*, as well as the need for the ATFM initiatives harmonization to ensure the regional ATFM network interoperability, the APAC RSO would coordinate and facilitate the ongoing work of the ATFM Information Requirement Small Working Group (ATFM/IR/SWG), formed under the Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG). The first face-to-face meeting of ATFM/IR/SWG was held at the RSO from 29 to 31 August, which one of objectives was to have common understanding of the concept of operations of cross-border ATFM initiatives in this region, Multi-Nodal ATFM group in South-east Asia, NARAHG in North-east Asia, and future plan of the cross-border ATFM in South Asia. The outcomes of this SWG will be reported to ATFM/SG.

2.20 ICAO APAC RSO was entrusted by China, Japan and Republic of Korea to facilitate the establishment of Northeast Asia Regional ATFM Harmonization Group (NARAHG). The RSO has been supporting NARAHG to move forward since the 1st meeting of the NARAHG which was held in August 2014, Beijing.

2.21 The 6th meeting of NARAHG was held in Seoul, the Republic of Korea from 12th to 14th March 2018. The meeting agreed to develop a common agreeable concept of operations document for NARAHG for the future harmonized ATFM operations in this region.

Future activities of the APAC RSO in 2019

Future activities on PBN

2.22 A PBN Safety Assessment Workshop will be held at the APAC RSO in Beijing, China from 16 to 18 October 2018. The objectives of the workshop are to introduce available guidance materials that can be used for the PBN safety assessment and to share experiences and best practices with other States. The workshop will deal with ICAO safety assessment criteria and guidance materials, application of regional guidance on PBN safety assessment through exercise, and States' best practices on PBN safety assessment.

2.23 Recognizing the increasing interest on SBAS/GBAS implementation in the region, the APAC RSO is planning to hold a SBAS/GBAS Implementation Seminar in March 2019. The seminar will focus on pros and cons using GBAS/SBAS based approach procedures (LPV, GLS) comparing to the GNSS based approach procedures (Baro VNAV). The topics of the seminar will be, operational concept of SBAS/GBAS system, States' implementation/development status, implementation challenges, GBAS/SBAS procedure development, operator's safety case, etc.

2.24 The Sixth Meeting of PBN Implementation Coordination Group (PBNICG/6) will be held in Indonesia (to be confirmed) in March/April 2019. The meeting will review regional PBN implementation status, share PBN implementation experiences and discuss on PBN implementation challenges and solutions. Before the meeting, a workshop may be held depending on the identified issues or requests from States.

2.25 Based on the lessons learned from the previous PBN workshops for Air Traffic Controllers, the APAC RSO will hold the third PBN Workshop for Air Traffic Controllers in the second half of 2019. The workshop will deal with PBN and airspace concept, ATC considerations on PBN application, and exercise focused on PBN application. Participants will be regulators, instructors, supervisors as well as air traffic controllers.

2.26 The APAC RSO will plan for a PBN Go Team mission to Pacific Islands States pending the availability of financial resources. The scope of the activities will be PBN Implementation Plan development, PBN procedure implementation together with safety assessment, PBN operational approval support and PBN training for air traffic controllers. The PBN Go Team will be mobilized when a State (or a group of States) asks supports for their PBN implementation.

2.27 As required by the ICAO Circular 353, *Transition Planning for Change to Instrument Flight Procedure Approach Chart Identification from RNAV to RNP*, the APAC RSO will develop a regional transition plan in cooperation with the ICAO Asia/Pacific Regional Office.

Future activities on Airspace Management

2.28 Recognizing the importance of airspace design to improve capacity and efficiency of airspace, the APAC RSO is planning to hold a PBN Airspace Design Workshop at the APAC RSO in Beijing, China on 21-25 January 2019. The workshop will include airspace design concept, airspace design process and exercises, which will last for 5 days.

2.29 The main task in the future will be concentrated on optimizing and upgrading route structures to more advanced and efficient level, so that more capacity could be provided without compromising the safety. In this regard, the APAC RSO is going to continue its support on SCSTFRG (the next meeting is scheduled on 5-7 November 2018 in Manila, Philippines) and starts providing secretariat service for BOBTFRG (the first meeting is scheduled on 26-28 November 2018 at Regional Office). The APAC RSO has also tasked to take the important role to strengthen the coordination between various groups and conducted an overview analysis of possible future route structures, in order to enhance the holistic review and avoid potential friction between specific sub-regions.

Future activities on Civil Military Cooperation

2.30 The APAC RSO is discussing with DCA Myanmar and CAA Philippines for the organization of Civil/Military ATM Cooperation/Flexible Use of Airspace workshop.

2.31 The ATMB and the APAC RSO are willing to continue their cooperation on Civil-Military ATM Cooperation in 2019. Based on preliminary coordination, the APAC RSO is planning to provide a series of Regional Civil-Military ATM Cooperation Workshops for different regional ATMBs to promote and facilitate the implementation of Civil-Military ATM Cooperation/Flexible Use of Airspace in China.

Future ATFM/CDM Activities

2.32 Based on the agreement of ATFM/SG/8, held in New Delhi India from 14 to 18 May 2018, the APAC RSO will continue coordinating and facilitating the ongoing work of the ATFM/IR/SWG. The RSO will play a positive role in this regard with Multi-Nodal ATFM Group (South-east Asia), NARAHG (North-east Asia) and a cross-border ATFM initiative in South Asia in cooperation with the related international organizations (i.e. IATA and CANSO). The SWG may consider recommending an expansion of the scope of work and TOR to include the proposed harmonization support role.

2.33 Under the guidance of the ICAO APAC Regional Office, the APAC RSO would continue its commitment to NARAHG aiming to harmonize the cross-border operation or finding a suitable and acceptable interface solution between the different groups. According to the work plan and the discussion of NARAHG/6, the next NARAHG meeting would be held in October this year.

2.34 The APAC RSO would continue supporting States, including individual States and Sub-Regional Groups, to implement associated ASBU (Aviation System Block Upgrades) modules and the Asia/Pacific Seamless ATM Plan. This support is expected to take the form of consulting, workshop/seminar, ATFM projects and/or Airport Collaborative Decision Making (A-CDM) projects tailored for States and collaboration with the Regional Office in associated international ATFM meetings. Upon request from States, the APAC RSO remained available to deliver the Foundation ATFM Workshop, Advanced ATFM Workshop and Seminar on ATFM Integration with A-CDM in cooperation with IATA.

RSO Contact

2.35 The RSO can be contacted through email at APAC-RSO@icao.int or via the website at <http://www2010.icao.int/APAC/APAC-RSO/>

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

- a) note the information contained in this paper;
- b) suggest any other support activities which RSO may consider providing; and
- c) discuss any relevant matters as appropriate.

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