

**INTERNATIONAL CIVIL AVIATION ORGANIZATION****TWENTY EIGHTH MEETING OF THE ASIA/PACIFIC
AIR NAVIGATION PLANNING AND IMPLEMENTATION
REGIONAL GROUP (APANPIRG/28)***Bangkok, Thailand, 11 to 14 September 2017***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 2017 activities and progress of the ICAO Asia and Pacific Regional Sub-Office (APAC RSO) and proposes future activities for 2018.

The ICAO APAC RSO was established in June 2013 with the aim of providing implementation support assistance to APAC States and Administrations in ATM enhancement activities, including Airspace Organisation and Management (AOM), Air Traffic Flow Management (ATFM) and Collaborative Decision Making (CDM).

1. INTRODUCTION

1.1 The APAC Regional Sub-Office was established in 2013 at Beijing, and is now into its fourth year of operations. The RSO has endeavored to meet its key objective, namely to enhance support to States through project-oriented activities aiming to support States and Administrations in the APAC Region. Progress had 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), Air Traffic Flow Management (ATFM).

2. DISCUSSION**RSO Staffing**

2.1 During the first three years, 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 RSO in 2016, but the positions of three seconded Regional Officers had remained vacant for one year. This reduced workforce resulted in reduced RSO activities during 2016-2017.

2.2 In 2017 the situation had positively improved. In October three people will join the RSO: two ATFM Regional Officers (one ICAO position and one secondment from an International Organization) and one Regional Officer on Air Space Management (secondment from Malaysia).

Means of action

2.3 The APAC Regional Office and Regional Sub-Office aim to ensure that States conformed with 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 RSO activities can be grouped into the three following categories :

- acting as secretariat of regional/specific working groups to ease coordination between States in the region (PBN Implementation Coordination Group (PBNICG), SCSTFRG, NARAHG, ...);
- organizing dedicated workshop/training for several States (example: Foundation ATFM workshop); and
- providing specific assistance on request from a State (example: PBN Go Team).

2.5 All 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 Regional Sub Office's website (<http://www2010.icao.int/APAC/APAC-RSO/Pages/default.aspx>).

Recent activities of RSO in 2017

Recent activities on PBN

2.6 Noting the disappointing PBN implementation rate in the APAC region, the APAC Regional Office decided to constitute PBN Go Teams to directly assist identified States to improve their PBN implementation. The APAC RSO was tasked with taking the main role of organising this initiative. After the PBN Go Team Stakeholder's meeting held in Bangkok on 24 Jan 2017, the APAC RSO sent a State letter (including a questionnaire) to three States to ask whether they would accept a PBN Go Team visit. The only positive response was from Lao PDR, which the PBN Go Team would visit in 4Q 2017.

2.7 The Fourth Meeting of the PBNICG (PBNICG/4) was held in Bangkok from 14 to 16 March 2017. Before the PBNICG/4, a one day PBN workshop was organized at the same venue on 13 March 2017, focusing on RNP2, Advanced RNP (ARNP) and RNP 0.3 navigation specification, PBN operational approval aspects, instrument flight procedure surveillance and safety management. During the workshop and the PBNICG/4 meeting, many topics were discussed related to PBN implementation including

- SBAS (Satellite Based Augmentation System) related issues;
- GNSS interference;
- challenges faced in PBN implementation;
- setting up PBN operational approval organization;
- update of APAC flight inspection units' catalogue; and
- updated information on States' PBN implementation status.

2.8 The PBN Workshop for Air Traffic Controllers was held at the APAC RSO premises from 13 to 15 June 2017. Recognizing the lack of training for air traffic controllers which compose an important portion of PBN implementation, the workshop adopted “the train the trainer principle” and invited ATC instructors, supervisors, regulators, and experts related to air traffic controller training. The workshop received a good feedback from the participants, who asked to conduct it regularly.

2.9 Regarding the PBN implementation support to States, Viet Nam and Myanmar asked for assistance from the APAC RSO. Viet Nam’s issues were related to PBN procedure review for Cam Ranh and Phu Bai, and ATC operational procedures in non-surveillance environment, for which consultation was provided. Myanmar requested more comprehensive support in procedure design, airspace design, safety assessment and PBN operational approval, which required a long term plan. Myanmar and APAC RSO are planning this assistance in October 2017.

Recent activities on Air Space Management

2.10 The RSO was tasked with providing Secretariat services to the South China Sea Traffic Flow Review Group (SCSTFRG), with the aim of facilitating the ATS route network optimization and the suitability of FLOS (Flight Level Orientation Scheme) analysis.

2.11 The fourth Meeting of the SCSTFRG was held in Changsha, China, October 2016. The outcomes of this meeting were reported to SEACG/24 which was held in March, 2017. As a result of the collaborative efforts by the States concerned, the SCSTFRG had made some important progress, including an agreement on the application of longitudinal spacing on ATS routes A1 and A202, the top two busiest ATS routes in South China Sea area. New route initiatives in Singapore, Kuala Lumpur, Ho Chi Minh and Bangkok FIRs would be helpful to reduce flight distance and increase ATS routes capacity.

2.12 The fifth Meeting of the SCSTFRG was held in Singapore from 18 to 21 April 2017. Under the SCS Operational Concept and following priority area identified in previous meeting, the A1 parallel route proposal was further discussed and a preliminary consensus was reached to consider the application of RNAV2 NavSpec for this new parallel route. The RSO provided the meeting with a whole picture of FLAS/FLOS in SCS airspace which incorporated the data from the all the States in SCS area. The meeting reviewed and further discussed the FLAS/FLOS, several side meetings were held to identify problems and make proposals on optimization of FLAS. Further analysis would be conducted by the Group based on airspace modelling and simulation in collaboration with ATMRI (Singapore) and MAAR (Thailand).

Recent activities on Civil Military Cooperation

2.13 In September 2016, ICAO and EUROCONTROL signed an agreement about a demonstration version of EUROCONTROL’s Local and Sub-Regional ASM (LARA) support system. LARA is a civil-military airspace reservations tool which balances operational requirements in line with the Flexible Use of Airspace concept (FUA). It covers both the planning and tactical phases and until now has been used exclusively by some European States. In December 2016, the APAC RSO received a training from EUROCONTROL how to best use this demonstration tool to promote the implementation of Civil-Military ATM Cooperation in APAC Region. The LARA toolkit incorporates some basic concepts of Civil-Military ATM cooperation, especially focusing on FUA concept and series of exercises.

2.14 In April 2017, APAC RSO, in cooperation with CAAC and the EU-China Aviation Partnership Project, organized an ad-hoc Civil-Military ATM Cooperation workshop for Chinese civil and military participants. This workshop took place in Beijing and gathered a broad mix of participants from CAAC, ATMB, China Military authorities, CAMIC, EUROCONTROL, some research agencies and some airlines. At this workshop, APAC RSO promulgated the principles and

strategies of ICAO, and presented the implementation situation of Civil-Military ATM Cooperation in APAC Region. All the stakeholders exchanged information and experiences, especially focusing on related mechanism and procedures on Civil-Military coordination, priorities and prerequisites of FUA implementation, good practices of some European States.

Recent activities on ATFM/CDM

2.15 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.

2.16 The 5th meeting of NARAHG was held in Shanghai from 18th to 20th January 2017. The meeting agreed on the basic principles of ATFM used by NARAHG and agreed to start discussion for cross-border ATFM operational procedure in accordance with ICAO Manual. During the meeting, recognizing the importance and potential benefits of the Cross Region ATFM Collaborative Platform (CRACP), the NARAHG Member agreed to launch this project in 2017. To facilitate the Post Operation Analysis, the RSO build a website in the ICAO Security Portal to collect and share the data.

2.17 In between NARAHG/5 and ATFMMSG/7, NARAHG Small Working Group held several meetings and drafted the IR/ICD document, which was presented to ATFMMSG/7. The outcomes of the NARAHG/5 and NARAHG/SWG were reported to ATFMMSG/7.

Future activities of RSO in 2018

Future activities on PBN

2.18 Based on the lessons learned from the previous PBN workshop targeted for Air Traffic Controllers, the APAC RSO is planning to hold another PBN Workshop for Air Traffic Controllers in February 2018. The workshop will last four days; the first three days will be dedicated to PBN concepts and ATC consideration issues, and the last day to exercises focused on PBN application to ATC. Participants will be regulators, instructors, supervisors as well as air traffic controllers.

2.19 The Fifth Meeting of PBN Implementation Coordination Group (PBNICG/5) will be held in Fiji (to be confirmed) in March 2018. Before the meeting, a 2 day workshop will be held focusing on PBN implementation issues on Pacific Island States and instrument flight procedure (IFP) surveillance.

2.20 Following the decision made by the APAC Flight Procedure Program (FPP) Steering Committee held in Singapore from 11 to 13 July 2017 to remove the PBN Safety Assessment from the scope of FPP activities, the APAC RSO is planning to conduct a 2 day PBN Safety Assessment Workshop at the premises of APAC RSO in April or May 2018. The topics of the workshop will be Safety Management System, ICAO Circular for safety assessment (under development) and the use of safety assessment checklists adopted by APANPIRG/26.

2.21 Recognizing the increasing interest on SBAS/GBAS implementation in the region, the APAC RSO is planning to hold in 2018 a SBAS/GBAS Implementation Seminar on the purpose of sharing information and experiences. The topics of the seminar will be SBAS/GBAS concept, SBAS/GBAS development and implementation status, challenges for the SBAS/GBAS implementation and SBAS/GBAS implementation experiences and lessons learned by the States.

Future activities on Air Space Management

2.22 Recognizing the importance of airspace design to improve capacity and efficiency of airspace, the APAC RSO is planning to hold an Airspace Design Workshop. The workshop will include airspace design concept, airspace design process and exercises and last for 5 days. The venue of the workshop will be determined later.

2.23 Following up the MOC between Myanmar and the APAC RSO in 2017, the APAC RSO will provide Myanmar with assistance on airspace design tasks to international and domestic airports in Myanmar. Other States that need support from the APAC RSO are invited to approach and discuss their airspace design and PBN implementation issues. The APAC RSO applies cost recovery principle for the assistance.

2.24 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 RSO is going to continue its support on SCSTFRG and start providing secretariat service for BOBTFRG this year. The RSO is 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

2.25 The APAC RSO is planning to organize an APAC Civil-Military ATM Cooperation workshop at the APAC Regional Office from 01-03 November 2017. The APAC RSO will discuss ICAO policies and strategies on Civil and Military Cooperation domain based on the new Doc10088 (which will replace Circular 330), emphasizing the concepts and mechanism of AOM and FUA topics.

2.26 With the support of a EUROCONTROL team, a series of FUA exercises will be organized, as well as a demonstration of the LARA tool. The second day of the workshop will also provide an opportunity for civil and military authorities from different States to share their experiences and practices. The APAC RSO plans to organize a field visit to the Airspace Management Cell of AEROTHAI in Bangkok.

2.27 Following an invitation from Malaysia, the APAC RSO will organize an ad hoc Civil Military ATM Cooperation workshop for Malaysia scheduled from 25-27 September, 2017. For this workshop, the APAC RSO will provide standard FUA training courses to the civil and military authorities, and conduct a series of FUA exercises to assist Malaysia to reach an initial National Civil-Military ATM Cooperation Agreement.

2.28 Thailand has also already requested the APAC RSO to provide assistance to organize an ad hoc Civil-Military ATM Cooperation workshop for civil and military authorities. Considering the 2017 schedule arrangement, and after coordinating with AEROTHAI, both sides agreed to hold the workshop in early 2018. Coordination of other workshop details is ongoing.

2.29 The APAC RSO is also planning to provide assistance to Myanmar on the civil-/military ATM cooperation aspect, aiming at establishing a standard agreement between the Civil and Military parties.

Future ATFM/CDM Activities

2.30 Under the guidance of the ICAO APAC Regional Office, the RSO would continue its commitment to NARAHG. The RSO would like to play a positive role in facilitating coordination between Multi-Nodal ATFM Group and 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/5, the next NARAHG meeting would be held by the end of this year. As the Secretariat of NARAHG, RSO also received a request from the Multi-Nodal ATFM Group to attend the plenary meeting of NARAHG. Recognizing the differences between the two groups, it is necessary for a face-to-face meeting in the near future, perhaps with the RSO as the facilitator.

2.31 The 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 was expected to take the form of consulting, workshop/seminar, ATFM projects tailored for States and collaboration with the Regional Office in associated international ATFM meetings. Upon request from States, the RSO remained available to deliver the Foundation ATFM Workshop and Advanced ATFM Workshop and Cross-Border ATFM Workshop (ICAO-IATA partnership).

RSO Contact

2.32 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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