



ICAO

*International Civil Aviation Organization*

**The Combined Tenth Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/10) and Twenty—Seventh Meeting of the South East Asia ATS Coordination Group (SEACG/27)**

Bangkok, Thailand, 30 March – 03 April 2020

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## **Agenda Item 4: Implementation of CNS/ATM Systems**

### **SEAMLESS ATM PLAN UPDATE**

(Presented by the Secretariat)

#### **SUMMARY**

This paper presents the status of the Asia/Pacific Seamless ATM Plan, reporting, and implementation progress of air navigation improvements in the Asia/Pacific Region.

## **1. INTRODUCTION**

1.1 ICAO Doc 9750 *Global Air Navigation Plan (GANP)* contained the vision of an integrated, harmonized, and globally interoperable ATM System until and beyond 2028. To achieve this objective, the involvement and active participation of States from each of the seven ICAO Regions is essential. To facilitate the adaptation process of global expectations, a regional plan was created.

1.2 The first version of the Asia/Pacific Seamless ATM Plan was published in 2013. In 2014, the APANPIRG/25 Meeting adopted Regional Priorities and Targets for the APAC Region through the following Conclusion:

***Conclusion APANPIRG 25/2 – APAC Regional Air Navigation Priorities and Targets***

*That, the Regional Priorities and Targets contained in Appendix A to this Report on Agenda Item 3.0 be endorsed by APANPIRG.*

1.3 After the creation a web-based reporting tool by ICAO, APANPIRG adopted the following:

***Conclusion APANPIRG 25/5 – Web-based Seamless ATM Implementation Progress Reporting Process***

*That, States/Administrations be urged to report on their Seamless ATM implementation progress at least once a year through the ICAO online reporting process from November 2014 onwards.*

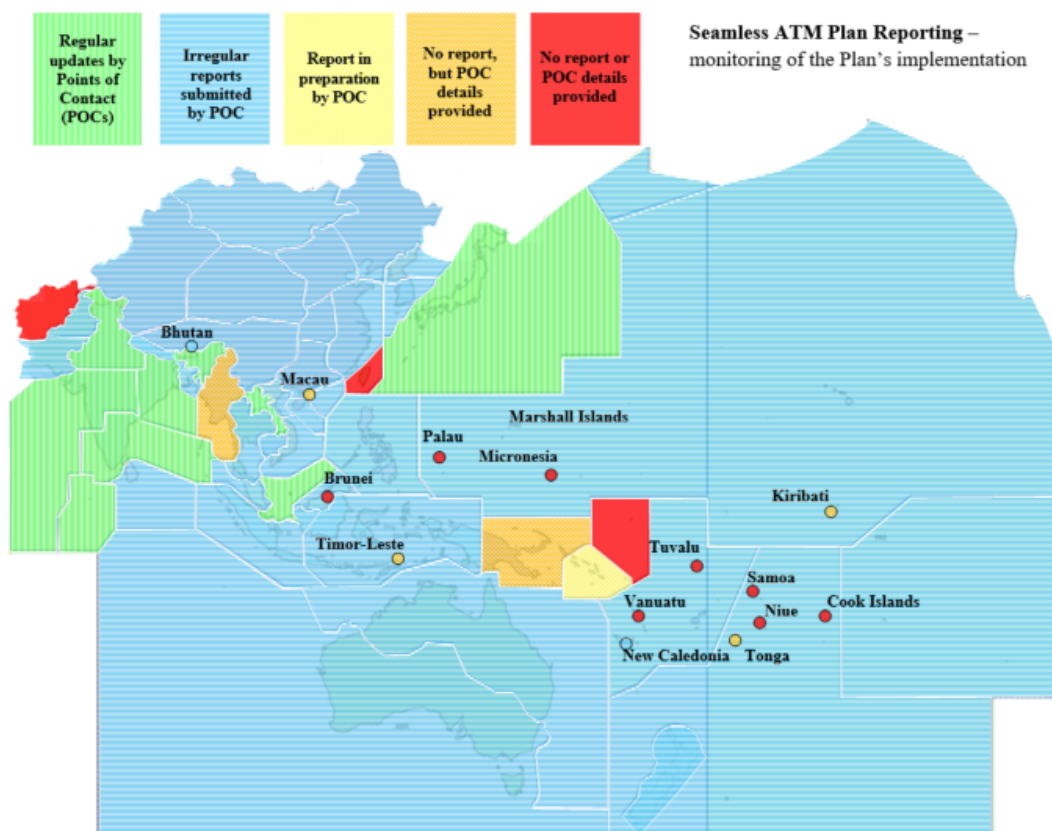
1.4 The ICAO Regional Office also encouraged APAC States/Administrations to nominate their Points of Contact (POCs) as requested by ICAO State Letter. The POCs are responsible for submitting and updating their respective State's progress of implementing the Seamless ATM Plan.

## 2. DISCUSSION

### Reporting Status

2.1 As a follow-up to Conclusion APANPIRG 25/5, a number of States/Administrations had reported on their Seamless ATM implementation progress. The status of the reporting process as at March 2019 is depicted in **Figure 1**.

*Important note: the regional Seamless reporting tool (accessible via the Regional Office website at <https://www.icao.int/APAC/Pages/ATMReport.aspx>) had not yet been updated by ICAO HQ to take into account the changes to the latest version of the Global Air Navigation Plan and what is now called the Asia/Pacific Seamless ANS Plan, so the reporting status information should be treated with caution. Therefore, only last year's data is able to be shown as the last data update of the current system was in March 2019.*



**Figure 1:** Seamless ATM Reporting

2.2 A total of **28** States/Administrations, i.e. 63.6% of the APAC States/Administrations, had submitted one or more report(s) on the ICAO Seamless ATM Reporting Portal (accessible through the ICAO Secure Portal). Among those 28 States/Administrations, only six States had submitted at least four reports from 2014 to 2018 (note: ‘regular reporting’ is measured over the past three years).

2.3 It should be noted that the Seamless ATM data is used to support an iSTARS tool intended to illustrate ANS planning and implementation (<https://portal.icao.int/space/Pages/Catalogue.aspx>).

2.4 A total of **16** States/Administrations had not prepared Seamless ATM reports:

Afghanistan, Brunei Darussalam, Cook Islands, Kiribati, Marshall Islands, Micronesia (Federated State of), Myanmar, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Democratic Republic of Timor-Leste, Tonga, Tuvalu and Vanuatu.

2.5 Details of the reporting status of each State is provided in **Attachment A**. Table 1 provides an indication of the year-by-year reporting of States, indicating that apart from India, Japan and Singapore, no APAC State or Administration had institutionalized Seamless ATM reporting, despite this being agreed at APANPIRG.

2013	2014	2015	2016	2017	2018
Nil*	Australia French Polynesia Hong Kong China India Japan Macao, China Republic of Korea Singapore Sri Lanka Thailand	Australia Bangladesh Bhutan China Fiji French Polynesia <b>Hong Kong China</b> India Indonesia Japan <b>Macao China</b> Malaysia Maldives New Caledonia, Fr. New Zealand Philippines Republic of Korea Singapore Sri Lanka Thailand	Australia <b>Bangladesh</b> <b>Bhutan</b> Cambodia <b>China</b> DPRK <b>Fiji</b> French Polynesia <b>Hong Kong China</b> India <b>Indonesia</b> Japan Lao PDR <b>Macao China</b> Malaysia Maldives Mongolia Nepal <b>New Caledonia,</b> <b>Fr.</b> New Zealand Philippines Republic of Korea Singapore Sri Lanka Thailand Viet Nam	<b>Australia</b> <b>Bangladesh</b> Bhutan <b>Cambodia</b> <b>China</b> <b>DPRK</b> Fiji French Polynesia Hong Kong China India <b>Indonesia</b> Japan Lao PDR Macao China <b>Malaysia</b> Maldives <b>Mongolia</b> <b>Nepal</b> <b>New Caledonia,</b> <b>Fr.</b> <b>New Zealand</b> Pakistan <b>Philippines</b> <b>Republic of Korea</b> Singapore <b>Sri Lanka</b> <b>Thailand</b> United States Viet Nam	<b>Australia</b> Bangladesh Bhutan <b>Cambodia</b> China <b>DPRK</b> <b>Fiji</b> <b>French Polynesia</b> Hong Kong China India Indonesia Japan Lao PDR <b>Macao China</b> <b>Malaysia</b> Maldives Mongolia <b>Nepal</b> <b>New Caledonia,</b> <b>Fr.</b> <b>New Zealand</b> Pakistan <b>Philippines</b> <b>Republic of Korea</b> Singapore Sri Lanka Thailand <b>United States</b> <b>Viet Nam</b>
0	10 (22.7%)	20 (45.4%)	26 (59%)	28 (63.6%)	28 (63.6%)

**Table 1:** Number of States that have selected one or more ASBU elements for implementation

#### Points of Contact

2.6 As per **Attachment A** to this paper, a total of **35** States/Administrations (79.5%) had nominated a Point of Contact (POC), including Brunei Darussalam recently. A total of **nine** States had not nominated any POC:

Afghanistan, Cook Islands, Marshall Islands, Micronesia (Federated state of), Nauru, Palau, Samoa, Tuvalu and Vanuatu.

#### Relation with the e-ANP

2.7 The introduction of the APAC e-ANP (Electronic Air Navigation Plan) took place at the end of 2015. Volumes 1 and 2 include regional requirements and were now approved, while the adoption of Volume 3 including the regional objectives was pending. The approved eANP Volume I and Volume II were now available at: <http://www.icao.int/APAC/Pages/APAC-eANP.aspx>.

2.8 All regional priorities and targets adopted through the Conclusion APANPIRG 25/2 were contained in the e-ANP Volume 3. All Seamless ATM objectives were also incorporated in the e-ANP Volume 3, which contained all priorities, targets, metrics and supporting documents within the APAC main planning table in accordance with the e-ANP template adopted by the Council.

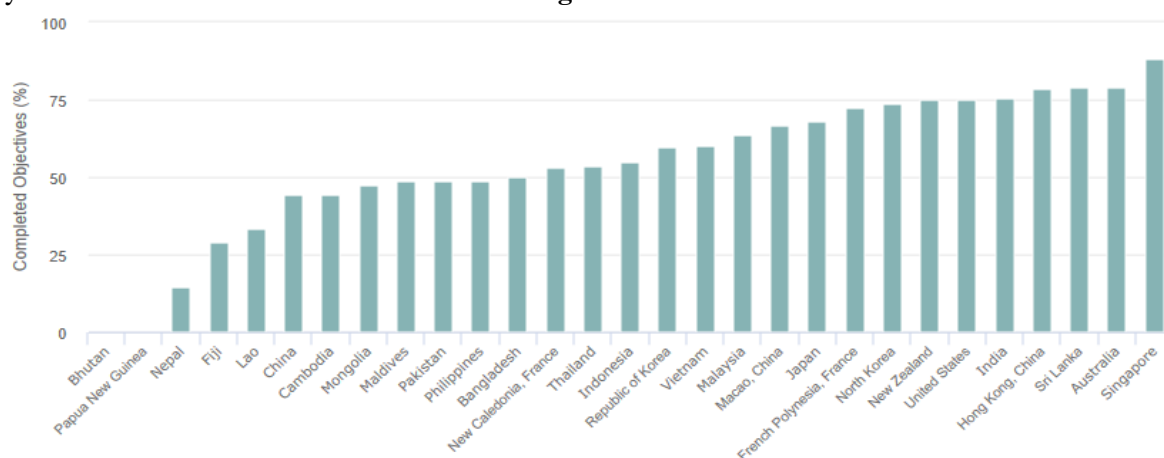
2.9 As 2019 was a review year for the Asia/Pacific Seamless ATM Plan, it is axiomatic that there is a need to update the region's priorities at the same time, especially with the expected update of the GANP.

Regional Picture

2.10 The purpose of monitoring the implementation progress is to determine the difficulties and issues, and take corrective actions at APANPIRG, Sub Group, and/or Task Force levels as appropriate.

2.11 The Regional Picture depicts the progress of States/Administrations against the GANP and e-ANP Volume III objectives. This picture is to be used as a tool by the different APANPIRG bodies (as per the Responsibility Matrix) to steer their action and take corrective actions as needed to ensure full implementation of the objectives. In order to improve the quality and accuracy of the data reported, the ICAO APAC Office interacted with POCs on an ongoing basis and cross checks the information available from other sources of collection.

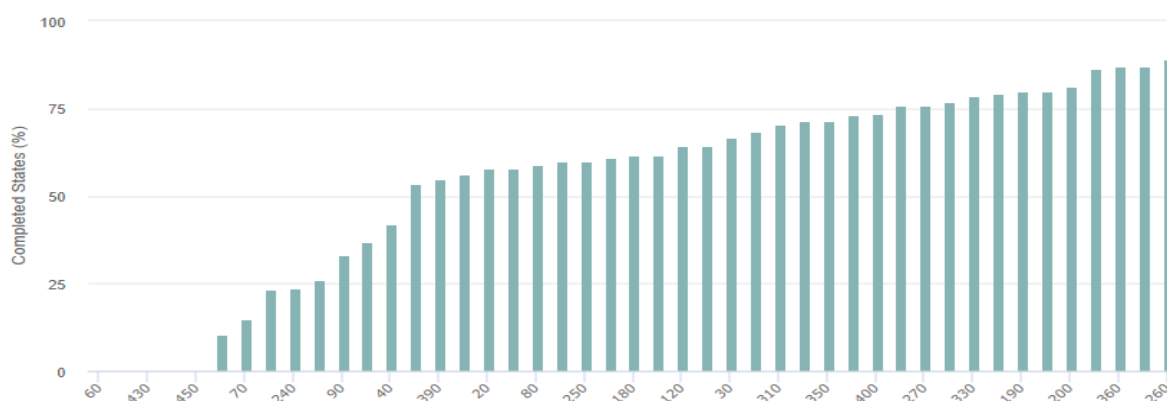
2.12 The Regional Picture was presented to the APANPIRG/27 meeting to review the progress of implementation of the 45 Seamless ATM elements. As at March 2019, the implementation progress by States and Administrations is illustrated in **Figure 2**:



**Figure 2:** Percentage of completed objectives by States

2.13 States had been urged by APANPIRG/27 to give higher priority both at CAA and Air Navigation Service Provider (ANSP) levels, and to mobilize human and financial resources to complete the implementation of Phase 1 objectives. Notwithstanding this, Phase 1 was far from being implemented, even three years after the initial target date. Moreover, the meeting noted that in 2019, States were expected to start implementing Phase II elements, which was aligned with the Global Air Navigation Plan (GANP) Aviation System Block Upgrade (ASBU) Block 1.

2.14 **Figure 3** provides an illustration of the overall regional implementation, by Seamless ATM elements.



**Figure 3:** Percentage of Completed Seamless ATM Elements

2.15 In general, the ten priority regional targets planned for Phase I (November 2015-November 2019) had not yet been achieved (**Table 2**).

<b>Acceptable Implementation</b>	
ADS-C, CPDLC	<b>B0-TBO</b>
<b>Partial Implementation</b>	
Strategic Civil Military coordination	<b>Regional</b>
Tactical Civil Military coordination	<b>Regional</b>
ADS-B airspace	<b>B0-ASUR</b>
ATS surveillance with data integrated	<b>B0-ASUR</b>
ATS Inter-facility Data-link Communications (AIDC)	<b>B0-FICE</b>
Civil Military use of Special Use of Airspace (SUA)	<b>B0-FRTO</b>
<b>Partial and Slow Implementation</b>	
Approaches, including PBN	<b>B0-APTA</b>
Air Traffic Flow Management/Collaborative Decision-Making (ATFM/CDM)	<b>B0-NOPS</b>
<b>Unacceptable Implementation Progress</b>	
Aeronautical Information Management (AIM)	<b>B0-DATM</b>

**Table 2:** Summary of Priority Elements

#### Seamless ATM Plan

2.16 The ASBU framework that supports the regional plan can be accessed via the HQ website <https://www4.icao.int/ganportal/ASBU>. The *Asia/Pacific Seamless ATM Plan* was updated in 2019 by APANPIRG/30 as the new Asia/Pacific Seamless ANS Plan Version 3.0, available at:

<https://www.icao.int/APAC/Documents/edocs/Asia%20Pacific%20Seamless%20ATM%20Plan%20V%203.0.pdf> .

2.17 A critical part of the effort to effectively implement the *Asia/Pacific Seamless ATM Plan* was the need for States to develop a National Air Navigation Plan (NANP) – as detailed in Section 9 of the *Asia/Pacific Seamless ATM Plan*. The following regional expectations for the NANP’s Basic Planning Elements (BPEs) are copied from the Regional Air Navigation Plan Vol. I:

Background – a brief introduction aimed at high level decision-makers that describes the need for the plan with benefits and costs, including the necessity for global and regional harmonization and interoperability:

- a) general (not necessarily quantitative) description of the Plan’s benefits;
- b) general description of the costs\*; and
- c) details of how the State Plan connects to the global and regional planning hierarchy.

*\*Note 1: this is a matter for the State to determine, and could be in terms of quantitative, qualitative, cost of implementation or cost of not implementing.*

*\*Note 2: ICAO do not require details of costs from States, as this is for the State’s benefit.*

Stakeholder Consultation – high level descriptions and statements:

- a) of the process used to consult with stakeholders, including the military; and
- b) from key stakeholders (such as Heads of CAAs, ANSPs, military organisations, etc.) endorsing the State Plan.

Analysis – Information on the State’s analysis of:

- a) all applicable ASBU and regional elements deemed to be applicable, including a statement of the State’s priorities\* for implementation; and
- b) elements that are deemed to be not applicable, and how these were determined.

*\*Note: this assessment should be guided by the priorities determined by APANPIRG*

Planning – descriptions of:

- a) the implementation process, such as how the different stakeholders will work together, design systems and provide feedback on implementation; and
- b) each applicable global and regional element’s implementation managers (those responsible for execution of the implementation) and timelines.

Progress – details in the State Plan as to the progress of implementation against the planning timelines.

*Note: this also provides an indication that the Plan is a ‘living document’ subject to periodic review and update.*

2.18 A template for the development of a NANP can be accessed from the ICAO website at <https://www.icao.int/APAC/Documents/edocs/National%20Air%20Navigation%20Template%20V6.0.docx>.

### Future Plans

2.19 A significant effort has been made by the ICAO APAC Regional Office to increase the number of points of contact, reporting States/Administrations and provide assistance as required. The different bodies under APANPIRG and their participants should also ensure that the data reported through the reporting system are consistently accurate.

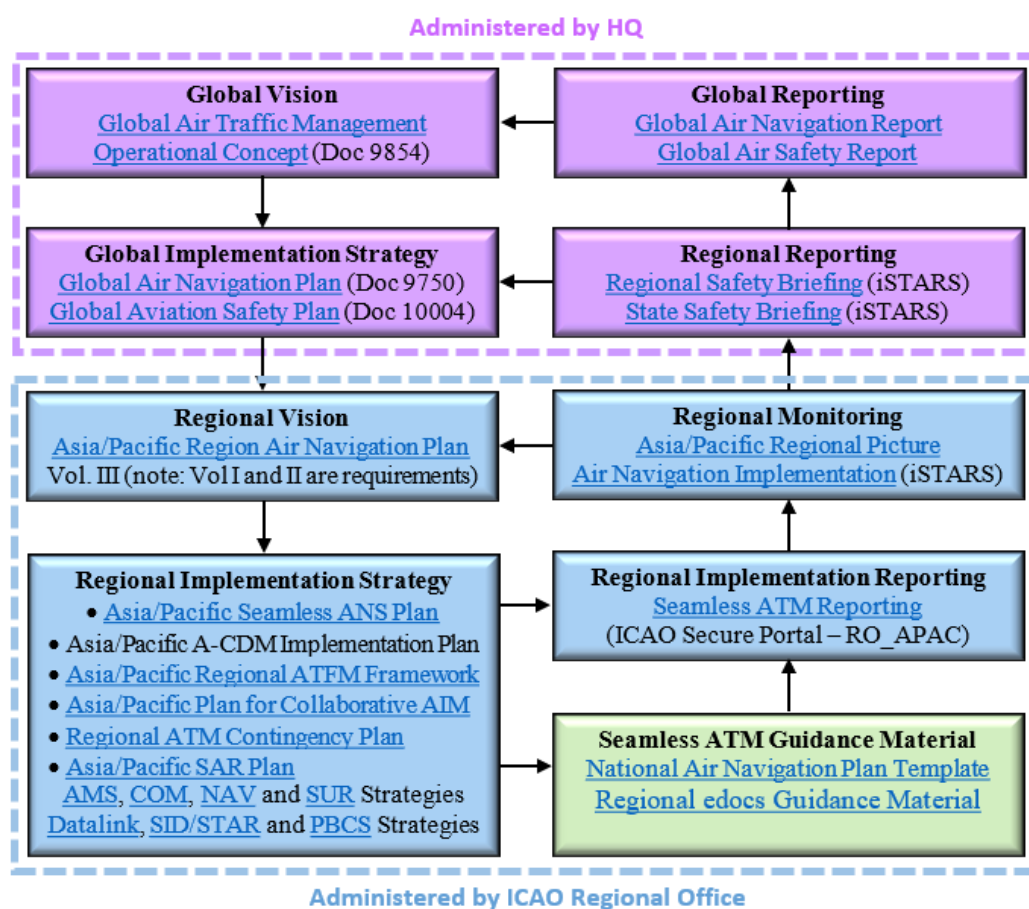
2.20 At present, the Seamless ATM Plan has several important subsidiary plans, namely the:

- *Asia/Pacific Search and Rescue Plan;*
- *Asia/Pacific Region ATM Contingency Plan;*

- *Asia/Pacific Framework for Collaborative ATFM*; and
- *Asia/Pacific Plan for Collaborative AIM*.

2.21 The intention to develop these implementation monitoring systems is to enhance the current electronic Seamless ATM Monitoring and Reporting Scheme with assistance from ICAO HQ to include the ability to report on the subsidiary plan elements, and allow the Region to input its priorities, metrics and targets.

2.22 Ultimately, the *Asia/Pacific Seamless ATM Plan* was expected to be incorporated into Volume III of the Regional Air Navigation Plan, when this became fully web-based. **Figure 4** provides an overview of the current relationship of the *Asia/Pacific Seamless ATM Plan* and the Regional Air Navigation Plan.



**Figure 4:** Air Navigation Planning and Reporting Structure

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- note the information contained in this paper;
- discuss the 16 new Priority 1 ASBU elements; and
- discuss any relevant matters as appropriate.

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