Third Meeting of the Asia/Pacific Aerodrome Design and Operations Task Force (AP-ADO/TF/3)

Video Teleconference, 9 to 11 February 2022

Agenda Item 3: Regional Air Navigation Plan

ASIA/PACIFIC SEAMLESS ANS PLAN

(Presented by the Secretariat)

SUMMARY

This paper presents the Preferred Aerodrome/Airspace and Route Specification (PARS) Phase II aerodrome operations, which has an expected implementation date of 7 November 2019, contained in the *Asia/Pacific Seamless ANS Plan, V3.0*.

1. INTRODUCTION

1.1 The objective of the *Seamless Air Navigation Service (ANS) Plan* is to facilitate Asia/Pacific Seamless ANS operations, by developing and deploying ATM solutions capable of ensuring safety and efficiency of air transport throughout the Asia/Pacific region. The Plan provides a framework for a transition to a Seamless ANS environment, in order to meet future performance requirements.

1.2 The Plan references different levels. At the upper level is a global perspective, which is guided mainly by references to the Global Air Navigation Plan (GANP, Doc 9750), the Global ATM Operational Concept (Doc 9854) and the Global Aviation Safety Plan (GASP). Beneath this level is regional planning primarily provided by this Plan and other guidance material, in order to define goals and means of meeting State planning objectives, such as:

a) Asia/Pacific Regional Air Navigation Plan objectives;

b) the Seamless ANS performance framework, with a focus on technological and human performance within Aviation System Block Upgrade (ASBU) Block 0 elements, non-ASBU elements, and civil-military cooperation elements;

c) a deployment plan with specific operational improvements, transition arrangements, expected timelines and implementation examples; and

d) an overview of financial outcomes and objectives, cross-industry business and performance/risk management planning.

1.3 The *Seamless ANS Plan* is expected to be implemented in several phases. No phase, nor any element, is binding on any State, but should be considered as a planning framework. The *Seamless ANS Plan* itself is therefore guidance material. The implementation dates of Preferred Aerodrome/Airspace and Route Specification (PARS) Phase II and Preferred ANS Service Levels (PASL) items align with the GANP Block 1 implementation.

1.4 This Plan addresses the full range of ATM stakeholders, including civil and military Air Navigation Services Providers (ANSPs), civil and military aerodrome operators as well as civil and military airspace users. The Plan has been developed in consultation with Asia/Pacific States, administrations and also with International Organizations (IOs).

1.5 The ICAO Manual on Global Performance of the Air Navigation System (ICAO Doc 9883) provides guidance on implementing a performance-oriented ATM System. The Manual on ATM System Requirements (ICAO Doc 9882) contains eleven Key Performance Area (KPA) system expectations, as well as a number of general performance-oriented requirements. In accordance with the expectations of these documents, the Asia/Pacific Seamless ATM Planning Group (APSAPG) developed the following performance objectives to facilitate Seamless ANS operations:

a) Preferred Aerodrome/Airspace and Route Specifications (PARS);

b) Preferred ATM Service Levels (PASL).

1.6 *Asia/Pacific Seamless ANS Plan, V3.0* can be downloaded from URL: https://www.icao.int/APAC/Documents/edocs/Asia%20Pacific%20Seamless%20ATM%20Plan%20V%203.0.pdf.

2. DISCUSSION

Current Situation of Aerodromes

2.1 In the 1990s and the first decade of the new millennium, aerodrome operators in Asia Pacific invested billions of dollars to enhance capacity of existing aerodromes and to build new ones to meet increasing air traffic demand. Notable examples are the opening of Bangalore, Hong Kong, Incheon, Kuala Lumpur International, Shanghai Pudong and Suvarnabhumi airports and the expansion of New Delhi and Beijing Capital airports. The automation and the adoption of self-service technology for passenger handling such as check-in and automated border control has enabled many airports to build up capacity without expanding passenger terminal footprint.

2.2 Runways are typically the capacity bottleneck of aerodromes but aircraft parking stands, baggage sorting and transfer facilities, aprons and passenger security screening points operating close to or over capacity are becoming choke points as well, especially at hub airports. A-CDM promises to alleviate congestion but the close collaboration between airport management and other stakeholders such as its shareholder, ATM and airlines is essential to a coordinated development of the capacity of the regional air transport network in the long-term.

Performance Improvement Plan – Preferred Aerodrome/Airspace and Route Specifications (PARS) in Aerodrome Operations

2.3 The **PARS Phase II** in Aerodrome Operations has an expected implementation date of 7 November 2019 (also see para. 1.3 of this Working Paper).

2.4 The following details of PARS Phase II are extracted from the *Asia/Pacific Seamless ANS Plan V3.0*:

7.1 All international aerodromes should enable, in accordance with an Airport Master Plan, aerodrome management and coordination services:

a) when traffic density requires, an appropriate apron management service to regulate aircraft operations in coordination with ATS;

b) ATS coordination (including meetings and agreements) related to:

- *airport development and maintenance planning;*
- *local authority coordination (environmental, noise abatement, and obstacles);*

c) regular airport capacity analysis, which included a detailed assessment of passenger, airport gate, apron, taxiway and runway capacity.

*Note 1: Sample runway capacity figures are provided from several States in **Appendix D**.*

7.2 Where practicable, all international aerodromes should provide, in accordance with an Airport Master Plan, the following facilities to optimise runway capacity:

a) additional runway(s) with adequate separation between runway centrelines for parallel independent operations;

b) parallel taxiways, rapid exit taxiways at optimal locations to minimize runway occupancy times and entry/exit taxiways;

c) rapid exit taxiway indicator lights (distance to go information to the nearest rapid exit taxiway on the runway);

d) twin parallel taxiways to separate arrivals and departures;

e) perimeter taxiways to avoid runway crossings;

f) taxiway centreline lighting systems;

g) adequate manoeuvring area signage (to expedite aircraft movement);

h) holding bays;

i) additional apron space in contact stands for quick turnarounds;

j) short length or tailored runways to segregate low speed aircraft;

k) taxi bots or towing systems, preferably controlled by pilots, to ensure efficiency and the optimal fuel loading for departure; and

l) advanced visual docking guidance systems.

*7.3 All international aerodromes should operate an A-CDM system for ACIS integrated with the ATM network function consistent with **ACDM-B0/1 – 2** (Priority 1).*

2.5 Prior to implementation, each State should verify the applicability of PARS by analysis of safety, ATM capacity requirements to meet current and forecast traffic demand, efficiency, predictability, cost effectiveness and environment to meet the expectations of stakeholders. The PARS elements would be either:

a) not applicable; or

b) already implemented; or

c) not implemented.

2.6 AP-ADO/TF/2 urged States / Administrations to consider the implementation of PARS Phase II in Aerodrome Operations as contained in paragraphs 7.1 - 7.3 of the Asia/Pacific Seamless ANS Plan, V3.0.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information contained in this paper.

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