



International Civil Aviation Organization

The Sixth Meeting of ICAO Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/6)

Bangkok, Thailand, 06 – 10 June 2016

Agenda Item 2: Review Outcomes of Related Meetings

RELATED MEETINGS OUTCOMES

(Presented by the Secretariat)

SUMMARY

This paper presents a summary of relevant outcomes from Asia/Pacific regional meetings relevant to the work of ATFM/SG.

1. INTRODUCTION

1.1 The 26th Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/26) was held in Bangkok, Thailand, from 7 to 10 September 2015.

1.2 The 5th Meeting of the Regional ATFM Contingency Plan Task Force (RACP/TF/5) was held in Bangkok, Thailand, from 1 to 4 December 2015.

1.3 The Combined 6th Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/6) and 23rd Meeting of the South-East Asia ATS Coordination Group (SEACG/23) was held in Bangkok, Thailand from 29 February to 3 March 2016.

2. DISCUSSION

APANPIRG/26

2.1 The APANPIRG/26 meeting was briefed on the outcomes from ATFM/SG/4 (Bangkok, Thailand, 1 – 5 December 2014) and ATFM/SG/5 (Bangkok, Thailand, 30 March – 3 April 2015) and agreed to the following Conclusions:

Conclusion APANPIRG/26/8 – Regional Cross-border ATFM Implementation Support

That, to support regional cross-border Air Traffic Flow Management (ATFM) progress and implementation, States are urged to:

- *support the multi-nodal ATFM operational trial program commencing June 2015;*
- *ensure timely completion of planning, procurement and resource allocation to enable participation in the multi-nodal ATFM operational trial program; and*
- *implement cross-border ATFM in accordance with the performance objectives of the Regional Framework for Collaborative ATFM.*

Conclusion APANPIRG/26/9 – Asia/Pacific Regional Framework for Collaborative ATFM

That, regarding the Asia/Pacific Regional Framework for Collaborative ATFM Version 1.0 (APANPIRG/26/WP07/Appendix A), and the Regional ATFM Concept of Operations Version 1.0 (APANPIRG/26/WP07/Appendix B), ICAO be requested to:

- a) *make the Framework and the Concept of Operations available on the ICAO Asia/Pacific Regional Office web site, replacing the earlier APAC ATFM Regional Concept of Operations and ATFM Communications Handbook for the Asia Pacific Region; and*
- b) *reference the Framework within the Asia/Pacific Seamless ATM Plan.*

Conclusion APANPIRG/26/10 – ATFM Seminars/Workshops

That, ICAO be urged to facilitate Asia/Pacific ATFM Seminars/Workshops for Asia/Pacific and trans-regional States, to:

- a) *familiarize stakeholders with the Asia/Pacific Regional Framework for Collaborative ATFM;*
- b) *assist implementation of ATFM; and*
- c) *act as a forum for further development of the Asia/Pacific Regional Framework for Collaborative ATFM, and the associated ATFM Information Requirements document and Interface Control Document (ICD).*

2.2 The meeting was informed of the outcomes of the 4th Meeting of the Regional ATM Contingency Plan Task Force (RACP/TF/4), held in Bangkok, Thailand from 26 to 30 January 2015. The draft Regional ATM Contingency Plan presented to the meeting key information for the guidance of States, and the agreed performance improvement plan with an expected implementation date of 10 November 2016. It was proposed that the Plan in its draft form should be uploaded to the ICAO Asia/Pacific Regional Office website for immediate use by States in planning their development of ATM contingency plans. APANPIRG/26 agreed to the following Draft Conclusion:

Conclusion APANPIRG/26/14 – Draft Regional ATM Contingency Plan

That, regarding the Draft Asia/Pacific Regional ATM Contingency Plan version 0.2 attached as APANPIRG/26/WP07/Appendix C:

ICAO be requested to make the Draft Regional ATM Contingency Plan available on the Asia/Pacific Regional Office website; and

1. *States are urged to consider the following sections of the Draft Regional ATM Contingency Plan in the planning and development of State contingency plans and inter State contingency agreements, pending finalization of the Regional ATM Contingency Plan:*
 - a) *Section 7 – Performance Improvement Plan;*

- b) *Appendix A – ATM Contingency Planning Principles;*
- c) *Appendix B – Basic Plan Elements; and*
- d) *Other relevant information and guidance provided in the document.*

2.3 The Draft Regional ATM Contingency Plan is available on the ICAO Asia/Pacific Regional Office web site at <http://www.icao.int/APAC/Pages/edocs.aspx>.

RACP/TF/5

2.4 The RACP/TF/5 meeting discussed information relating to the management of airports and airspace during volcanic ash events. The meeting was provided with references from ICAO Doc 4444 – Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM), Annex 2 to the Convention on Civil Aviation, and the guidance in ICAO Doc 9974 – *Flight Safety and Volcanic Ash – First Edition 2012*, ICAO Doc 9691 – *Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds – Third Edition 2015*, and the ICAO *Air Traffic Management Volcanic Ash Contingency Plan Template – First Edition August 2012*.

2.5 Responses to volcanic ash events could include:

- declaration of danger area or restricted area (territorial airspace only) for the airspace over and in proximity to the volcanic source;
- re-routing of all traffic around affected airspace (effectively airspace closure);
- promulgation of amended routes available to avoid the affected airspace, for operators choosing to do so;
- air traffic flow management measures; and/or
- aerodrome closure.

2.6 The meeting agreed to the following contingency planning principles for contingency response to volcanic ash cloud:

Airspace

1. Declaration of danger area or, if required by State regulations, restricted area (territorial airspace only) containing the pre-eruptive or erupting volcano and its forecast/observed ejecta;
2. Inclusion in relevant NOTAM of proposed alternate ATS routes to avoid the volcanic ash cloud and assure regularity of ATM;
3. Inclusion in relevant NOTAM of air traffic flow management (ATFM) measures where applicable;

Airports

4. Inclusion in relevant NOTAM of requirements for pilots to plan for alternate aerodromes and/or additional fuel to allow for delays; and
5. Closure of aerodromes only during periods of volcanic ash contamination of the movement area.

2.7 It was further agreed that NOTAM relating to volcanic ash should include text conforming to these principles.

2.8 The meeting was reminded that Danger Area or Restricted Area relating to volcanic activity were confined to the vicinity of a pre-eruptive or erupting volcano to contain the volume of airspace affected by ballistic ejecta. They should not be promulgated to contain the volume of airspace of the volcanic ash cloud. It was a pilot responsibility to assess the information provided about the volcanic ash cloud, such as the SIGMET and NOTAM information, to determine whether to operate in or avoid the affected airspace.

2.9 The meeting was presented with proposed inclusions in the Regional ATM Contingency Plan for response to Volcanic Ash Cloud and similar contingency events, as was specified in the RACP/TF Terms of Reference (TOR). The information provided included relevant items from the ICAO *Air Traffic Management Volcanic Ash Contingency Plan Template – First Edition August 2012*, and a reminder of the need for States to ensure adherence to ICAO Standards and Recommended Practices (SARPS). Outcomes from the 2nd Meeting of the Volcanic Ash Exercises Steering Group (VOLCEX/SG/2, Bangkok, Thailand, 14 – 16 September 2015) were also provided to the meeting. They included:

Recommendation 4: Regulatory provisions for response to volcanic ash contingency events

States' regulatory provisions and arrangements should be reviewed to ensure that (in accordance with the guidance provided in ICAO Doc 9974 – Flight Safety and Volcanic Ash):

- a) *Aircraft operators are required to include in their safety management system (SMS) an identifiable safety risk assessment for operations into airspace forecast to be, or at aerodromes known to be, contaminated with volcanic ash*
- b) *Safety oversight procedures are used for the evaluation of operators' capability to conduct flight operations safely into airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash*

Recommendation 5: Airspace and airport management in response to volcanic eruption and volcanic ash cloud

States' airspace and airport management policies and procedures should be reviewed to ensure that (in accordance with the guidance provided in ICAO Doc 9974 – Flight Safety and Volcanic Ash and the provisions of ICAO Doc 4444 – PANS-ATM, 15.8.1c and Note 2):

- a) *Airspace affected by volcanic ash cloud should not be 'closed'*
- b) *Specification in NOTAM of alternate routing or other air traffic flow management (ATFM) measures to manage airspace constraints arising from volcanic ash cloud should be solely for the purpose of ensuring the predictability and regularity of air traffic, and should be based on an assessment of capacity and demand in airspace affected by volcanic ash and/or by aircraft avoiding the volcanic ash cloud*
- c) *NOTAM specifying alternate routing or other ATFM measures related to a volcanic eruption or volcanic ash cloud should be issued separately from the ASHTAM/NOTAM issued in accordance with Annex 15, 5.1.1.1, r and u*
- d) *Aerodromes should only be closed by NOTAM for periods of observed volcanic ash contamination of the surface of the aerodrome movement area*

- e) *Airport capacity limitations of alternate aerodromes, including apron capacity, should be considered, and recommendations for the use of other alternates considered for inclusion in NOTAM (in c, above)*
- f) *If required by State regulations, any declaration of a Danger Area or Restricted Area should be confined to the pre-eruptive or erupting volcano and the area containing its forecast or observed ejecta*

Recommendation 6: Regular updates of volcanic ash information

*The Regional ATM Contingency Plan should be reviewed and, where necessary, amended to promote the principles adopted by APANPIRG/26 in **Conclusion 26-19** — **Volcanic Ash Information Coordination and Collaboration***

2.10 A range of inclusions in the Regional ATM Contingency Plan that addressed the VOLCEX/SG recommendations and Conclusion 26-19 was proposed. The meeting agreed to the proposed inclusions, which were provided within the context of the relevant sections of the Contingency Plan in **RACP/TF/5/WP06** and **WP07**.

2.11 The meeting noted that an Appendix to the Regional ATM Contingency Plan would be drafted, summarizing actions to be taken by relevant Volcanic Observatories, Volcanic Ash Advisory Centres (VAACs), Meteorological Watch Offices (MWOs) and Area Control Centres (ACCs). The actions were currently being examined by VOLCEX/SG. It was suggested that this should include actions to be taken by aircraft operators, who should also play an active role in seeking information.

SAIOACG/6&SEACG/23

2.12 The Combined Meeting of SAIOACG/6 and SEACG/23 was provided with information highlighting India's major initiatives within the Chennai FIR to enhance safety, efficiency and airspace capacity within a Seamless ATM environment, including new ADS-B sites, use of Mode S to display aircraft identification (and thus relieve the shortage of Mode A codes), new ATC sectors, implementation of 30NM separation, Departure Clearance (DCL), and AIDC trials.

2.13 India discussed their plans India's efforts to address the issue of non-availability of suitable flight levels at SAMAR for westbound flights exiting Delhi Flight Information Region via position SAMAR during day time to be managed by the 'CATOS'- Collaborative Air traffic flow Management over SAMAR. This Internet based application was capable of indicating availability of available levels to participating user airlines on 'first-come-first-served' basis. The meeting was advised that consultation with users would be undertaken (no set date for implementation was available). The meeting noted that there might be an option to simply extend the BOBCAT tool to cover SAMAR.

2.14 The meeting was informed of the outcomes of the 3rd Meeting of the South China Sea Major Traffic Flow Review Group (SCS/MTFRG/3, Bangkok, Thailand, 25-27 February 2016), now re-named the South China Sea Traffic Flow Review Group (SCSTFRG).

2.15 ICAO presented an overview of the existing non-standard FLAS /FLOS that had been in operation for many years. The meeting was of the opinion that this needed to be amended especially in the light of the safety issues caused by non-standard direction of flight, changes in traffic flows as well as the possibility to transition towards surveillance-based separation standards, supported by newer PBN navigation specifications.

2.16 The meeting discussed a proposed South China Sea Operational Concept, with an expected implementation of 09 November 2017 (**Attachment A**). The Operational Concept will be presented for adoption by APANPIRG/27 in September 2016.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

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South China Sea Operational Concept

Expected Implementation: 09 November 2017

Communication: VHF, either direct or using a shared facility (therefore States are encouraged to provide shared transceivers where they are required)*

Navigation: using the Seamless ATM Plan's expectations:

- RNAV 2/ RNP 2 – near parallel or parallel routes spaced 20NM apart for the major traffic routes to increase capacity where required (note: this is a procedural separation, and is not the determinant of the ATC separation, which is based on ATS surveillance);
- implementation of extra RNAV 2/ RNP 2 routes where required which are not necessarily based on existing routes; and
- the new routing structure to be based on the most direct routes possible, using key entry/exit waypoints to/from the South China Sea, or SID/STAR waypoints.

Surveillance: using the Seamless ATM Plan's expectations:

- coverage by ADS-B and SSR*;
- ADS-B data to be shared wherever this data is required.

ATM: using the Seamless ATM Plan's expectations:

- operationalization of 5-10NM ATC separation;
- 10-20 NM separation at Transfer of Control Points (TOC);
- removal of the Flight Level Allocation Scheme (FLAS);
- ATFM measures such as Miles-in-Trail or Minutes-in-Trail to be applied where required for tactical capacity/demand balancing; and
- an update of ATC LOAs and contingency plans as required.

**ICAO encourages states to share surveillance and communications capabilities wherever possible, and in instances where necessary, establish new capabilities to plug the gaps in surveillance and VHF communications within the South China Sea. It is suggested that 09 November 2017 be set as preliminary target for full surveillance and communications within the South China Sea area.*