



*International Civil Aviation Organization*

ICAO

**Twelfth Meeting of the Asia/Pacific Air Traffic Flow  
Management Steering Group (ATFM/SG/12)**

Video Teleconference, 13 – 16 September 2022

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**Agenda Item 4: Review of Current CDM/ATFM Operations and Problem Areas**

**ATFM IN THE CONTINGENCY SITUATION**

(Presented by Secretariat)

**SUMMARY**

This paper presents information on ATFM in the context of recent years' contingency situations in the Asia and Pacific Region. It focuses on ATFM operations and issues, excluding NOTAM promulgation-related issues and Civil-Military Coordination-related issues.

**1. INTRODUCTION**

1.1 In recent years, several contingency situations were caused by various reasons, including international disputes, natural disasters, etc., in the Asia and Pacific Region, listed below. In addition, airspace closures due to the Ukraine crisis also affected the APAC Region and airline operations.

- Pakistan airspace closure: February 2019
- Yangon FIR (Myanmar): February 2021
- Kabul FIR (Afghanistan): August 2021 (on going)
- Tonga volcanic eruption and Tsunami: January 2022
- Taipei FIR Danger areas: August 2022

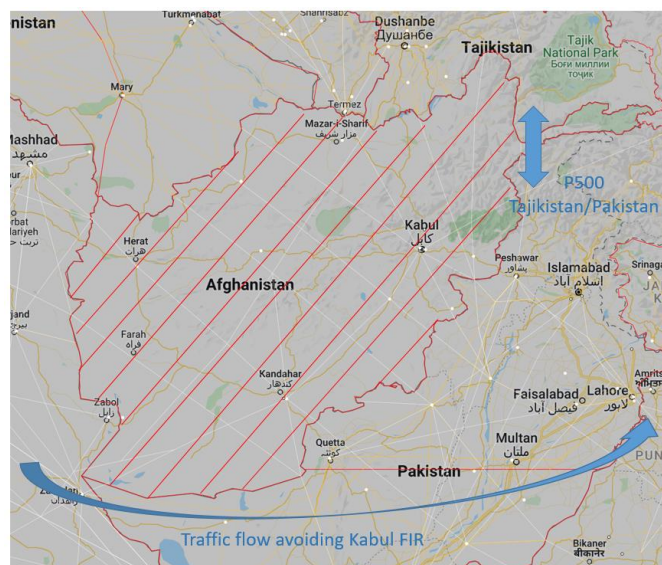
1.2 During the emergence of a potential crisis, a Contingency Coordination Team (CCT) will be established in the Regional office concerned and at ICAO HQ according to the Annex 11 – *Air Traffic Services*, Appendix C. The tasks of the CCT will be to monitor continuously information from all relevant sources, to arrange for the constant supply of relevant information received by the State aeronautical information service at the location of the Regional Office and Headquarters, to liaise with international organizations concerned and their regional organizations, as appropriate, and to exchange up-to-date information with States directly concerned and States which are potential participants in contingency arrangements.

**2. DISCUSSION**

Kabul FIR

2.1 ICAO APAC Regional Office has been engaged with Afghanistan, and with neighbouring States and airspace users, since 16 August 2021. The Kabul FIR CCT was formed and ongoing coordination of ATM contingency operations has been conducted through frequent online meetings.

2.2 Since the current Kabul FIR is classified as Class G with no ATS services, except the Kabul control zone, many overflights have avoided the airspace despite the available contingency arrangement. The traffic volume in the neighbouring States such as India, Iran and Pakistan has increased by accepting those additional flights avoiding Kabul FIR.



**Figure 1:** Traffic flow avoiding Kabul FIR

2.3 As informed by AEROTHAI under WP/04, BOBCAT was designed and operated for the traffic flow over Kabul FIR. Therefore, considering the abovementioned circumstances, the BOBCAT operation is currently suspended.

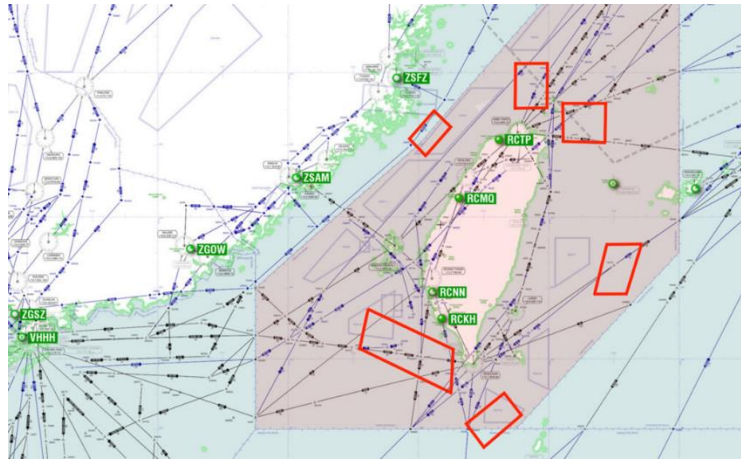
2.4 The traffic volume on P500, where ATC is delegated to Tajikistan and Pakistan, has slightly increased. This provides an example of situations where it may be necessary to monitor the situation carefully, to determine whether ATFM needs to be considered to maintain the safety of the neighbouring airspace. **Table 1** shows the number of flights on P500 per day.

Date	Number of flights on P500 per day
Jan 2020 (before COVID-19 pandemic)	59
Jan 2022 (before Ukraine crisis)	84
Feb 2022	56
Mar 2022	48
Apr 2022	48
May 2022	45
Jun 2022	54
Jul 2022	55
Aug 2022	58
1-3 Sep 2022	63

**Table 1:** Number of flights on P500 per day

## Taipei FIR

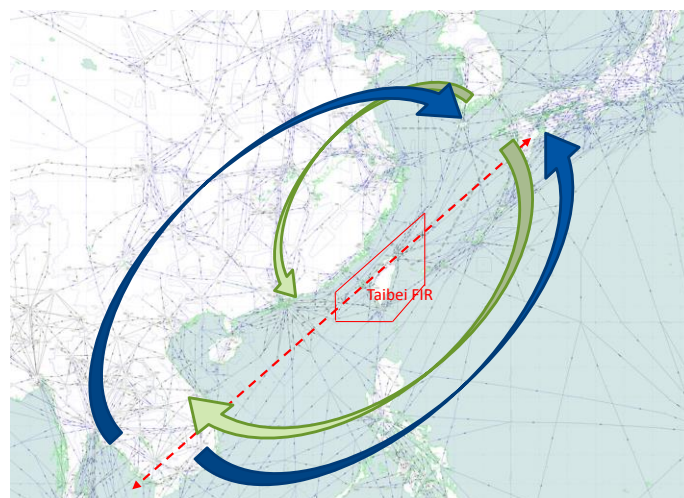
2.5 NOTAMS promulgating a number of Danger Areas in the Taipei FIR, and partially in the Shanghai and Manila FIR were issued. The Danger areas, to be active for three days commencing 0400 UTC on 4 August, would impact a number of major ATS routes, such as A1 and M750, between Southeast Asia, the Taipei FIR and Northeast Asia. **Figure 2** shows the Danger areas.



**Figure 2:** Danger areas with in the Taipei FIR

2.6 ICAO APAC office formed the Taipei FIR CCT and held the first video teleconference at 0700 UTC on 4 August 2022. The team noted that that the purpose of the meeting was not to discuss or develop contingency solutions, but was intended to share information among all stakeholders.

2.7 Since the majority of flights over the Taipei FIR were expected to be diverted through either Manila FIR/Ho Chi Minh FIR or Chinese FIRs, the neighbouring FIRs needed to prepare the contingency arrangement taking the traffic congestion and/or bottle neck into consideration. **Figure 3** summarizes the expected deviations from the Taipei FIR. However, the neighbouring States and airspace users did not have enough time for coordination, the tentative ATFM measures (i.e. MINIT) were applied for the first day of the Danger areas. **Table 2** summarizes the ATFM measures by neighbouring FIR.



**Figure 3:** Expected deviations from the Taipei FIR

Taibei FIR			
	10 MINIT regardless ALT	via SALMI	
	15 MINIT regardless ALT	via BULAN	
	15 MINIT regardless ALT	via BORDO	
	15 MINIT regardless ALT	via SEDOK	
	12 MINIT regardless ALT	via IGURU	
Shanghai FIR			
	30 MINIT regardless ALT	via BEKOL	To the direction of Japan and ROK
	30 MINIT regardless ALT	via TEBEK	To the direction of Japan and ROK
	30 MINIT regardless ALT	via DOTMI	To the direction of Japan and ROK
	30 MINIT regardless ALT	via MIDOX	To the direction of Japan and ROK
	Not acceptable	via AGAVO	Destination Hong Kong and Macau
	20 MINIT regardless ALT	via SADLI	Destination Hong Kong and Macau
Hong Kong FIR			
	60 MINIT	IKELA-BEKOL	To the direction of Japan and ROK
	60 MINIT	SIKOU-BEKOL	To the direction of Japan and ROK
	60 MINIT	DOSUT-BEKOL	To the direction of Japan and ROK
	60 MINIT	SABNO-BEKOL	To the direction of Japan and ROK
	60 MINIT	IKELA-DOTMI	To the direction of Japan and ROK
	60 MINIT	DOSUT-DOTMI	To the direction of Japan and ROK
	60 MINIT	NOMAN-DOTMI	To the direction of Japan and ROK
Manila FIR			
	Nil		
Fukuoka FIR			
	GDP	A593	Departures from Japan only
	GDP	A1	Departures from Japan only
	GDP	R595	Departures from Japan only
	GDP	ACC sector F17	Departures from Japan only
	8 MINIT	RUGMA	Departures from ROK
Incheon FIR			
	20 MINIT	A593	Destination Hong Kong and Macau

**Table 2:** Initial ATFM measures by FIRs

2.8 Japan, Republic of Korea and Philippines coordinated closely to deal with the deviating traffic. To meet MINIT by neighbouring FIRs, Japan implemented manual ATFM at the Fukuoka/Manila, Fukuoka/Incheon, and Fukuoka/Taibei FIR boundaries against only departures from Japan.

2.9 Bangkok ATFMU conducted several CDM web conferences with stakeholders, both local CDM and cross-border CDM with neighbouring FIRs, to assess the situation, the impact, and estimated route delays and to confirm the airspace users' intentions. A final CDM web conference was also held for post-operations analysis. As a result, some departures from Thailand deviated to Manila FIR, and others deviated to Chinese FIRs to avoid the Danger areas.

2.10 Hong Kong ATFMU provided MINIT on Day 1 as a tactical ATFM measure and converted the MINIT into CTOTs on Day 2 for AMNAC members to provide predictability and minimize airborne delays.

2.11 The meeting is invited to recall that Doc 9971 – *Manual of Collaborative ATFM* (Part II. Chapter 1. 1.3) states the principles of ATFM consist of;

- a) optimizing available airport and airspace capacity without compromising safety;

- b) maximizing operational benefits and global efficiency while maintaining agreed safety levels;
- c) promoting timely and effective coordination and collaboration with all affected stakeholders;
- d) fostering international collaboration leading to an optimal, seamless ATM environment;
- e) recognizing that airspace is a common resource for all users and ensuring equity and transparency, while taking into account security and defence needs;
- f) supporting the introduction of new technologies and procedures that enhance system capacity and efficiency;
- g) enhancing predictability, for ANSPs as well as AUs;
- h) helping to maximize aviation economic efficiencies and returns, and support other economic sectors such as business, tourism and cargo; and
- i) constantly evolving to support the ever-changing aviation environment.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss the need for coordination mechanism to deal with the contingency situation;
- c) recognize the ATFM principles stated in the Doc 9971 - *Manual of Collaborative ATFM*;
- d) recognize the importance and the objective of the CCT; and
- e) discuss any relevant matters as appropriate.

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