International Civil Aviation Organization

The Third Meeting of the APANPIRG ATM Sub-Group (ATM /SG/3)

Bangkok, Thailand, 03-07 August 2015

Agenda Item 5: ATM Coordination (Meetings, Route Development, Contingency Planning)

AD HOC AFGHANISTAN CONTINGENCY GROUP (AHACG) OUTCOMES

(Presented by the Secretariat)

SUMMARY

This paper presents the outcomes of the Second and Third Meetings of the Ad Hoc Afghanistan Contingency Group (AHACG) and makes recommendations for the preparedness of affected States.

1. INTRODUCTION

1.1   The Second Meeting of the Ad Hoc Afghanistan Contingency Group (AHACG/2) was held at Istanbul, Turkey from 17 to 19 November 2014.

1.2   AHACG/2 was attended by 49 participants from Afghanistan, Armenia, Azerbaijan, Bulgaria, Georgia, India, I. R. Iran, Kyrgyzstan, Malaysia, Pakistan, Russian Federation, Singapore, Tajikistan, Thailand, Turkey, USA, IATA, IFALPA, North Atlantic Treaty Organization (NATO), International Security Assistance Force (ISAF)/United States Air Force Central Command (AFCENT), and EUROCONTROL.

1.3   The Third Meeting of the Ad Hoc Afghanistan Contingency Group (AHACG/3) was held at Muscat, Sultanate of Oman, from 11 to 14 May 2015.

1.4   AHACG/3 was attended by 42 participants from Afghanistan, China, India, Islamic Republic of Iran (Iran), Kyrgyzstan, Malaysia, Oman, Pakistan, Singapore, Thailand, USA, IATA, CANSO, North Atlantic Treaty Organization (NATO), United States Air Force Central Command (AFCENT), and EUROCONTROL.

2. DISCUSSION

Communications Coordination Meeting Outcomes

2.1   ICAO presented information from the Communications (COM) Coordination Meeting that was held in Abu Dhabi, United Arab Emirates (UAE), on 25-26 February 2015. The meeting discussed the service contract for Very Small Aperture Terminal (VSAT) service supporting air/ground Very High Frequency (VHF) communication covering the Kabul Flight Information Region (FIR) and ground/ground communication between States concerned.

2.2   Iran offered to send Communication, Navigation and Surveillance (CNS) technical officers to Afghanistan to assist with identifying and solving the CNS issues regarding interoperability of flight plan and ATS messaging between them and Afghanistan. This was accepted by Afghanistan, with both States agreeing to liaise to ensure facilitation of the visit prior to the end of June.

2.3   Iran informed the AHACG/3 that Aeronautical Fixed Telecommunication Network (AFTN) communication had been out of order for a number of years between Iran and Afghanistan/Pakistan, further commenting that the problem appeared to be at the Pakistan end. Afghanistan noted that the CADAS (Comsoft Aeronautical Data Access System) flight plan and message exchange system that had been installed by the UAE had been damaged by water, but arrangements with the UAE to facilitate a visit by a technician were underway. CANSO agreed to assist Afghanistan with their flight plan capability issues. IATA stated that if there was no assurance of flight plans being handled correctly, then it was likely that some airlines would avoid the applicable airspace.

2.4   CANSO provided information on Afghanistan's CADAS Aeronautical Message Handling System (AMHS). In 2011, the UAE's GCAA installed a CADAS Terminal in Kabul. The message switch software allowed secured access through the Internet, enabling the installation of web-based servers anywhere in the world and communication of ATS messages through the UAE Area Control Centre (ACC) message switch. During the AHACG/3 meeting, CANSO arranged a conference call with the ICAO MID Office and the UAE GCAA, which agreed to proceed with reinstating CADAS in Kabul. The GCAA requested Kabul to send a written request via ICAO, and CANSO agreed to be the focal point to coordinate and follow up with GCAA and Afghanistan.

2.5   Regarding the Afghanistan – Pakistan VSAT system, the target date for restoration was May 2015. However the AHACG/3 meeting was informed that there had been no progress in Pakistan, due to a lack of resources to pay Pakistan Telecom approximately USD100,000 for the service. Afghanistan requested Pakistan to contact their service provider Spacecom.

2.6   Afghanistan informed the AHACG/3 meeting that the High Frequency (HF) air/ground communication ground facilities serving as back-up for VHF and which could be used as an alternative for ground/ground COM had been installed. However, there was a lack of information regarding operational HF frequencies and in addition, training for those radio operators on HF radio communication skills would be required.

2.7   Afghanistan updated the AHACG/3 regarding the Multilateration (MLAT) ATS surveillance system. Afghanistan stated that Germany had committed to completion of the safety case for MLAT, and it was expected to be operational after another five months. Pakistan also informed the meeting that they were installing new radars, and data link technology such as ATS Inter-facility Data Link Communications (AIDC) and Controller Pilot Data Link Communications (CPDLC).

Afghanistan Contingency Options – Airline View

2.8   IATA reinforced their views on planning strategies related to scenarios when:

- Kabul airspace was available, and it was an airline decision whether or not to operate with 'procedural' management procedures and some form of 24 hour traffic metering system; and

- routes avoiding the Kabul FIR are being used – to the west via Pakistan-Iran airspace or to the north via Pakistan–Tajikistan-Kyrgyzstan, or Chinese routes north of the Himalayas).

2.9   The question of airspace classification was discussed. The meeting concurred that, in the event of no air traffic control being provided within the Kabul FIR, the airspace would automatically by definition become either Class F (uncontrolled advisory) or Class G (uncontrolled), and that the State was responsible for promulgating this status. It was noted that most airlines had restrictions from their State of Registration that did not allow operations in uncontrolled airspace.

Capacity Building Measures

2.10   Afghanistan, India and Pakistan all confirmed to the AHACG/3 meeting that they were ready to implement 50NM separation (Oman informed the meeting that they are using 5NM separation based on ATS surveillance within the Muscat FIR).

2.11   IATA asked why States were using 50NM separation when ATS surveillance was available (apart from the known surveillance gaps within the Kabul FIR). ICAO recalled that the Asia/Pacific Seamless ATM Plan expected ATS surveillance-based separation to be used within surveillance airspace. India advised that there was also a surveillance gap within its airspace between waypoints TIGER and LUN/LKA, but this would not be a problem soon, with the expected operation of an Automatic Dependent Surveillance-Broadcast (ADS-B) station at Jaisalmer during 2015.

2.12   India reported that the routes between the Lahore and Delhi FIRs (M875 and L333) were operational and in use at mutually agreed, specified times.

2.13   The blockage of FL300 within the Kabul FIR was discussed at AHACG/3, with input from AFCENT, and IATA and member airlines. AFCENT representatives undertook to review the situation, particularly with a view to using Flexible Use Airspace (FUA) principles. Discussion followed on which agency was the airspace authority in Afghanistan, with Afghanistan reporting this function would transition from the military to the ACAA at the end of the current ATS contract.

2.14   EUROCONTROL provided presentations at AHACG/2 and AHACG/3 on the consequences of the Kabul FIR being unavailable on European-Asian traffic flows. The major features were the shift of traffic from the Lahore FIR to the Karachi FIR, and the dense traffic flows via the Tehran FIR. Major bottlenecks and significant ATC sector traffic loads during peak hours were identified between the Tehran and Ankara FIRs, and near position TIGER between the Karachi and Delhi FIRs. The major developments had been the implementation of route systems though Armenian airspace (Yerevan FIR) which provided alternative connections between the Tehran and Ankara FIRs, and the successful implementation of Central Asian routes via Kyrgyzstan and Tajikistan, which provided alternative routing for traffic routing via Pakistan-Afghanistan-Tajikistan.

Draft Afghanistan ATM Contingency Plan

2.15   Afghanistan presented the draft Afghanistan Air Traffic Management (ATM) Contingency Plan. The meeting recalled that the Annex 11 to the Convention on International Civil Aviation specified that Afghanistan was responsible for determining its contingency arrangements as the ATS authority for the Kabul FIR, with assistance if necessary from ICAO.

2.16   NATO/AFCENT could not guarantee that military aircraft would not operate above FL300 in a contingency situation. The meeting noted that airspace users were responsible for their own safety/security risk assessment, to determine whether or not to fly via the Kabul FIR.

2.17   The AHACG/3 meeting extensively reviewed the draft contingency plan, so that comments and suggestions could be made to improve the plan. Afghanistan agreed to incorporate the comments (as well as those features from the current NATO/AFCENT contingency plan[1] deemed appropriate), and ensure close consultation with stakeholders such as IATA, airlines and the military to ensure the finalisation of the plan by mid-June, but not later than 30 June 2015.

2.18   Afghanistan noted that, in the event that ATS was not available within the Kabul FIR, a number of contingency procedures/measures might be considered for the State Contingency Plan, as reflected in the Inter-regional Afghanistan ATM Contingency Arrangement at **Attachment A**.

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[1] Submitted as AHACG/1/WP02 and accepted by the ACAA at AHACG/2.

Role of Pakistan in Afghanistan Contingency Planning

2.19   Pakistan provided detailed proposals on Afghanistan airspace contingency planning, noting that any disruption in provision of ATS may result in avoidance, causing a severe impact on more than 200 flights per day that operated through Pakistan airspace to/from the Kabul FIR.

2.20   Pakistan also identified different avoidance options, including availability of ATS route P500, with direct Transfer of Control Points (TCPs) control between Lahore and Dushanbe Area Control Centres (ACCs). Pakistan had recently optimized the route structure by providing an efficient connectivity from ATS Route L509 (SAMAR-LAJAK) by providing a route segment between JABAR and PS VOR (T400) to join ATS route P500 (DI – ADINA – PS – PADDY – FIRUZ).

2.21   Pakistan stated that they could ensure longitudinal separation of 10 minutes at Kabul FIR TCPs with application of Mach number technique so that the minimum longitudinal separation should continue to exist till the next TCP with Iran/Turkmenistan/Tajikistan. Pakistan also advised that they could offer advisory services to suitably equipped aircraft within the Kabul FIR. Pakistan was also considering the possibility of routing westbound traffic via SERKA to P628, by extending the operational hours of this route.

2.22   In case of continued availability of Kabul FIR, Pakistan stressed that the extension of Bay of Bengal. Cooperative Air Traffic. Flow Management System (BOBCAT) timings to 24 hours as discussed during AHACG/1 would ensure availability of optimum levels and adherence to flight planning for operators. They noted that safety could further be augmented by implementing Traffic Information Broadcast by Aircraft (TIBA) procedures. In case of any emergency where climb or descent was involved, aircraft could vacate the route by 15NM to the right and thereafter climb or descend as required using TIBA or guard frequencies.

2.23   Pakistan announced that it had implemented five minute longitudinal separation within its surveillance environment, which had been used for transfer of control with Muscat ACC for more than 15 years, and suggested this could be used for all traffic if all neighbouring ACCs do the same.

2.24   Due to crossing traffic, Pakistan stated that Tehran should only release traffic at METBI/EGRON with 5 minute or 50NM separation once agreed by India at only those levels (FL 390 and above, FL 330 and FL 290 and below) in accordance with the 'Royal Road' Organised Track System (OTS) already implemented within the Tehran FIR for crossing traffic. Pakistan emphasised, therefore, that the Iranian OTS restrictions would be extended through the Karachi FIR as well.

2.25   Pakistan has also studied the traffic orientation highlighted by Iran during AHACG/2. The bidirectional route N319 DERBO thence to ULDUS is sufficiently spaced from the other two routes. However, eastbound flow on MAGRI/KEBUD and DASIS/ASVIB sector will ultimately converge over PG just minutes after the Transfer of resulting in difficulties for Tehran/Karachi ACC. In order to provide parallel route for traffic from Tehran ACC, Pakistan was considering an additional flow on a new direct route (Bi-directional) between PEKES and NH VOR which depended on India creating an onward suitable bi-directional connectivity from Nawabshah.

2.26   Pakistan was in the process of releasing two levels (FL410 and FL430) which were presently not available within Pakistan airspace due to operational reasons. It was likely that these levels would be available in case of any such contingency.

2.27   AHACG/3 noted that the other routing alternatives north of the Himalayas involved RNAV ATS route L888 and other routes through China; however L888 was constrained by aircraft capability (oxygen, escape routes) and China's ATM capability in remote airspace. China was requested to advise ICAO regarding the capacity of L888, and whether there were any interface issues with Laos with increased traffic using L888.

Europe-Asia Major Traffic Flow Contingency Planning

2.28   The AHACG/3 meeting acknowledged the work of Tehran in implementing an OTS (**Figure 1**) to improve capacity management, even before any Kabul FIR contingency operation as there were already severe capacity consequences from Syrian/Iraqi airspace issues. The meeting noted that Iran now had nine ATC Sectors, which could be amalgamated or activated as the traffic situation required. The high density OTS to accommodate the main northwest-southeast flow of air traffic was as follows:

   a)   Flight Level Allocation Scheme (FLAS) for **westbound** flight levels FL300, FL340 and FL360);

   b)   FLAS for **eastbound** flight levels FL310, FL350 and FL370;

   c)   merging procedures for traffic departing Iranian airports so aircraft can join the OTS routes, preferably climbing to a level below the OTS FLAS, and then being vectored or delayed before safely merging (the sequence would need to be coordinated with the next State unless such traffic was accounted for in the traffic metering system);

   d)   FLAS for **westbound** traffic crossing the Royal Road OTS of FL320 (or FL280 and below, or FL380 or above);

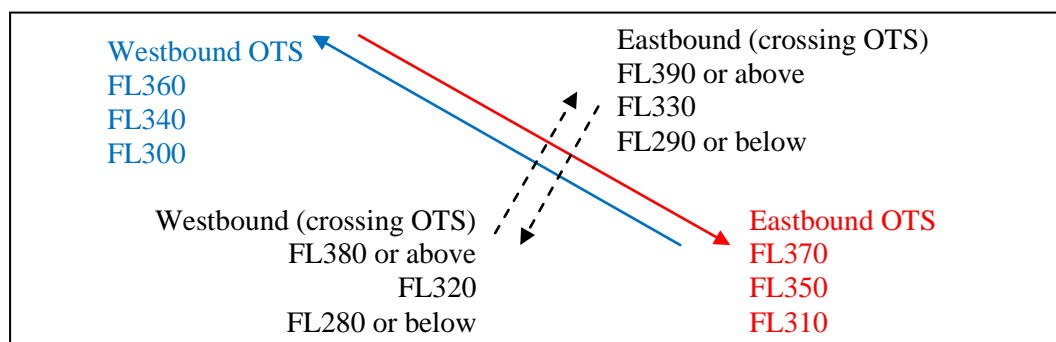   e)   FLAS for **eastbound** traffic crossing the Royal Road OTS of FL330 (or FL290 and below, or FL390 or above)

Figure 1: Iran's Royal Road OTS FLAS

2.29   The agreed Royal Road OTS within the Tehran FIR was as follows:

   a)   From DERBO (Tehran/Karachi FIR) G452 ZDN UN319 ULDUS (Tehran/Baku FIR) as a bidirectional scheme (currently available).

   b)   From ASVIB (Tehran/Karachi FIR) PEKES T215 ANK RUS R661 TBZ UL333 DASIS (Tehran/Ankara FIR) as a bidirectional scheme (being finalized).

   c)   From KEBUD (Tehran/Karachi FIR) DANOV DHN RST B121 MAGRI (Tehran/Yerevan FIR) as a bidirectional scheme (in negotiation).

Note: A two-way route system (the 'Gulf Corridor') laterally segregated from the Royal Road OTS is dedicated for traffic between the UAE and Europe (Iran had already promulgated a suitable route from BONAM on the Ankara FIR boundary to GABKO and PATAT on the Emirates FIR boundary).
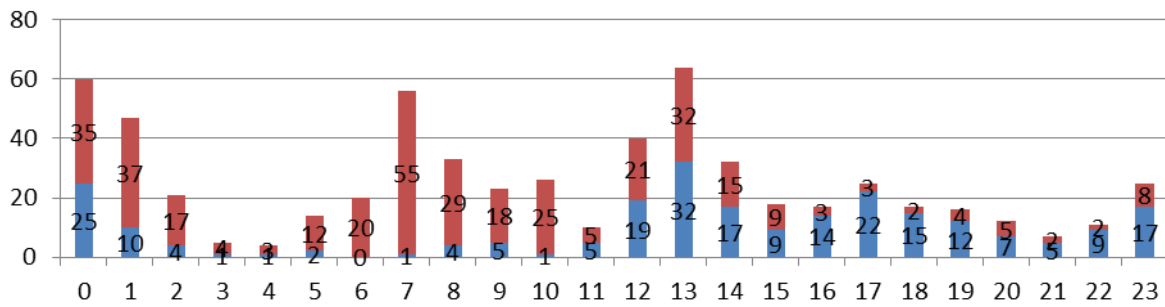
Figure 2: Tehran Sector 1 Traffic Data (eastbound blue, westbound red)
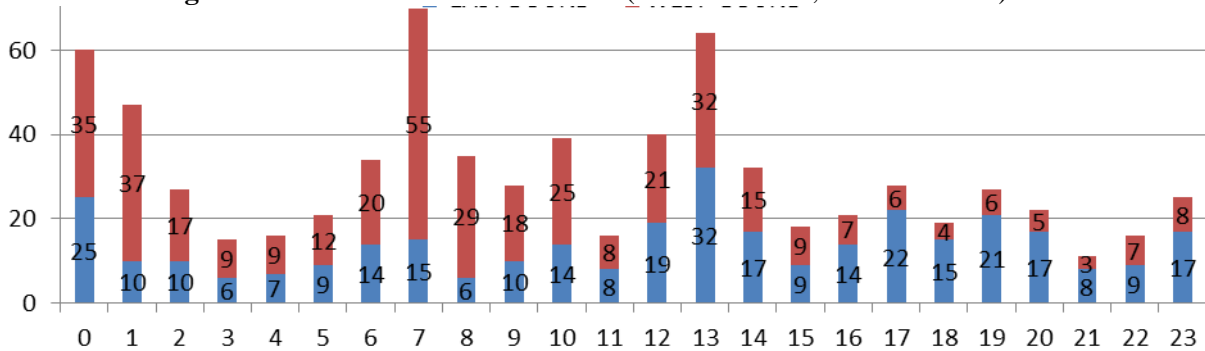

Figure 3: Tehran Sector Traffic Data Totals (eastbound blue, westbound red)

2.30   Iran provided statistics for ATC Sector loading (**Figure 2** and **Figure 3**). Based on this data and traffic analysis, Iran stated that the declared capacity of the Tehran FIR was about 35 aircraft per hour in each ATC sector. For eastbound traffic between 0200 and 1100 UTC, Tehran had extra capacity to accept traffic from European airspace; and for westbound traffic between 1500 and 2300 UTC, there was extra capacity to accept traffic.

2.31   The meeting noted that the data indicated periods of six hours in the north western Sector 1 interfacing with Turkey that exceeded the declared capacity.

2.32   The meeting noted that Lahore and Tehran ACCs would sign an ATS LOA in order to accommodate the contingency measures by 15 June 2015.   In addition, the LOAs between Karachi/Tehran and Muscat/Tehran implementing 50NM would be amended and would also support the contingency arrangement.

2.33   Iran noted the need for improved ATFM measures to regulate the flow of traffic through the Tehran FIR, and the fact that there was no need to specify the mandatory carriage of ACAS (as it was an ICAO Standard) and that ADS-B IN was not relevant to the OTS. They also stated that certain key components of Iranian ATM systems such as radar needed renewal or improvement, requiring the committed cooperation of other nations that could assist.

            India's Contingency Planning

2.34   India provided advice on potential contingency arrangements, in addition to those that they had suggested in AHACG/1/WP09. India stated that there were 10 RNP 10 ATS routes and 11 conventional routes between Pakistan and Indian FIRs, noting that the two countries had implemented 50 NM separation minima on RNP 10 routes N895, P628 and L509. ICAO stated that the application of 50NM horizontal separation was not dependent on the navigation specification of the ATS route, as Area Navigation (RNAV) aircraft could fly on conventional (non-RNAV) routes as long as the route waypoints were entered into aircraft Flight Management Systems (FMS), and a means of determining a 50NM separation was available.   Thus the meeting noted that there was no need to change conventional routes to Performance-based Navigation (PBN) routes within surveillance airspace.

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2.35   India stated that as ATS route R 462 was a bi-directional route that provided connectivity to UUD from Nawabshah via RAMSA and the realignment/ extension of L 518 (effective from 30 April 2015), provided onward connectivity to PRA and the proposed requirement to convert A325 as a bi-directional route was no longer necessary.

Yemen Contingency Operations Update

2.36   The AHACG/3 meeting was apprised of the ICAO MID Region experience related to contingency planning, in particular to the implementation of the MID Region ATM Contingency Plan and the latest developments related to the Yemen situation. The meeting agreed to use the same coordination mechanism implemented in the ICAO MID Region, in particular the Contingency Coordination Team (CCT) and the Notification Procedures.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

a) note the information contained in this paper;

b) confirm the status of the:

   i)   Pakistan's VSAT system;

   ii)   Pakistan's ADS-C and CPDLC capability;

   iii)   Pakistan's Royal Road OTS implementation preparedness, PEKES-NH VOR routing, release of FL410 and FL430, and use of 50NM;

   iv)   Afghanistan's Kabul FIR ATS Contingency Plan;

   v)   Afghanistan's Kabul ACC HF and controller training in its use;

   vi)   Afghanistan's Kabul FIR MLAT system;

   vii)   Afghanistan's Kabul FIR FUA system for FL300;

   viii)   India's ADS–B station at Jaisalmer;

   ix)   India's implementation of 50NM separation;

   x)   China's assessment on ATS route L888;

   xi)   China's assessment of any details of interface issues with Loa PDR;

c) discuss the future of the AHACG, and if appropriate with satisfactory contingency arrangements in place, consider disestablishment of the group with the following Draft Decision; and

Draft Decision ATM/SG/3-X: Disestablishment of the AHACG

That, the Asia/Pacific Ad Hoc Afghanistan Contingency Group (AHACG) be disestablished.

d) discuss any relevant matters as appropriate.

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INTERNATIONAL CIVIL AVIATION ORGANIZATION

INTER-REGIONAL

AFGHANISTAN ATM CONTINGENCY ARRANGEMENTS

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INTER-REGIONAL AFGHANISTAN AIR TRAFFIC MANAGEMENT CONTINGENCY ARRANGEMENTS

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FOREWORD

This Document is for guidance only. Regulatory material relating to the aircraft operations is contained in relevant ICAO Annexes, PANS/ATM (Doc.4444), Regional Supplementary Procedures (Doc.7030), States AIPs and current NOTAMs, which should be read in conjunction with the material contained in this Document.

Guidelines for contingency measures for application in the event of disruptions of air traffic services and related supporting services were first approved by the Council on 27 June 1984 in response to Assembly Resolution A23-12, following a study by the Air Navigation Commission and consultation with States and international organizations concerned, as required by the Resolution. The guidelines were subsequently amended and amplified in the light of experience gained with the application of contingency measures in various parts of the world and in differing circumstances.

The purpose of the guidelines contained in this document is to assist in providing for the safe and orderly flow of international air traffic in the event of disruptions of air traffic services and related supporting services and in preserving the availability of major ATS routes within the Kabul Flight Information Region (FIR).

The main objective of the Inter-Regional Afghanistan ATM Contingency Arrangements is to provide a description of the inter-regional contingency measures in place to deal with a range of contingency situations.

This Contingency Arrangements have been developed by the Ad Hoc Afghanistan Contingency Group (AHACG) in accordance with instructions from the Secretary General of the International Civil Aviation Organization (ICAO) and the decision taken by the Asia Pacific Planning and Implementation Group (APANPIRG).

RECORD OF AMENDMENTS

Amendment Number	Effective Date	Initiated by	Paragraph/ Reference	Remarks
0.7	14 May 2015	AHACG/3		Initial Draft

INTRODUCTION

The Air Navigation Services (ANS) within the Kabul Flight Information Region (FIR) were provided under the framework of the North Atlantic Treaty Organization (NATO) and United States . This structure was expected to end during the 3rd Quarter of 2015. It is currently unclear, if Afghanistan Civil Aviation Authority (ACAA) would be able to provide ANS with their own resources or contract a new body that would provide these ANS functions on their behalf.

The termination of provision of the affected Air Navigation Services should be announced by Notice to Airmen (NOTAM) 28 days before the end date of the cessation of services. If this airspace contract is not extended, all air traffic control services (Kabul Area Control Center comprising the low and high airspace structure, as well as Kabul Approach Control) and also de-confliction services between civil and military operation will terminate on that end date.

The effective transition from military to civilian control of the ANS within the Kabul FIR is critically important to support the major traffic flows between Europe and Asia through the Kabul FIR and the adjacent airspace. This situation has become even more critical due to a variety of airspace constraints and operation limitations/restrictions in the neighbouring FIRs.

Consequently, the High-Level Meeting on Afghanistan Airspace Contingency Planning in Hong Kong, China 28 November 2014 decided that the contingency aspects for the continued safe and efficient operation of aircraft between Europe and the Asia/Pacific Region should be urgently discussed between all stakeholders (States and International Organisations) and that an Inter-Regional Afghanistan ATM Contingency Arrangements should be urgently developed.

Afghanistan shall develop and promulgate a State Contingency Plan (according to ICAO Annex 11) for implementation in the event of disruption, or potential disruption, of air traffic services and related supporting services in the airspace for which they are responsible for the provision of such services. Such a contingency plan shall be developed with the assistance of ICAO as necessary, in close coordination with the air traffic services authorities responsible for the provision of services in adjacent portions of airspace, the airspace users concerned and the International Organizations. The contingency plan should include contingency arrangements to be implemented in the event of natural disasters, military conflicts or public health emergencies.

To this extent, the Inter-regional Afghanistan ATM Contingency Arrangements do not replace the State Contingency Plan and eventually do not relieve Afghanistan from its responsibility of developing/updating a State Contingency Plan.

The alternative routes are based mainly on the existing route network. Concerned States, in consultation with airspace users, might establish temporary routes to be able to accommodate extra traffic in a safe manner.

The ICAO Asia Pacific Regional Office will be the owner of this Document and will coordinate with ICAO HQ and Cairo and Paris Regional Offices any amendment to the Contingency Arrangements.

Each ICAO Regional Office will distribute the Contingency Arrangements to all relevant States, IATA, and other International Organizations within their regions.

This Document is available to users through the ICAO Asia/Pacific (APAC) website (http://www.icao.int/APAC/Pages/edocs.aspx).

In order to maintain the effectiveness of the Contingency Arrangements, Stakeholders are encouraged to provide the ICAO APAC Regional Office with their comments/suggestions and updates.

Inter-regional Afghanistan ATM Contingency Focal Points

The list of the Inter-regional Afghanistan ATM Contingency Focal Points is at **Table 1.** This list should be reviewed and updated, as appropriate.

Table 1: INTER-REGIONAL AFGHANISTAN ATM Contingency Focal Points

NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
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Coordination Procedures

Implementation of the contingency measures

A Contingency Coordination Team (CCT) will be established from the following members:

- The focal points listed in Table 1; and
- Other States, Organizations, Agencies etc., when deemed necessary, as temporary members.

The main tasks of the CCT are as follows:

- monitor continuously information from all relevant sources;
- initiate action for the activation/deactivation of the Contingency Arrangements;
- arrange for the provision of relevant aeronautical information to the ICAO Regional Offices and Headquarters;
- liaise with international/regional organizations as appropriate;
- exchange up-to-date information with States directly concerned and States which are potential participants in contingency arrangements.

The notification/coordination process at **Table 2** should be used to facilitate the implementation of contingency arrangements.

In the event of adoption of contingency procedures States/Air Navigation Service Providers (ANSPs) will notify all affected agencies and operators appropriately.

Table 2: Notification/coordination process

Airspace Avoidance				
Airlines	**Airline Actions**	**IATA Actions**	**ICAO APAC Office**	**States/ ANSP**
Monitor global activities that have an effect on flight operations. (currently in place)	NONE	NONE	NONE	NONE
Review state activity that requires airline safety and security review (currently in place)	Notify IATA as to effected FIR' and factors under review. (security and or safety)	When more than (30%) of airlines reporting, notify ICAO APAC	Call for the Contingency Coordination Team (CCT)	NONE
Identify specific Factors and pending trigger events (currently in place)	inform IATA on review findings and possible trigger events	Inform CCT on findings and number of airlines reporting	Notify effected states/ANSP on number of airlines reviewing current activity	NONE
Event triggered: reviewing avoidance options and select avoidance scenario	Inform IATA of selected scenario and volume/initial timelines.	Inform CCT	Notify effected States/ANSP scenario and volume/timelines	Review scenario and give feedback on feasibility
48 Hours prior to activation of planned avoidance re-routes	Notify IATA	Notify CCT	Notify effected states/ANSP	Prepare NOTAMS and avoidance scenario
24 Hours prior to activation of planned avoidance re-routes	Notify IATA	Notify CCT	Notify effected states/ANSP	Publish NOTAMs

SCENARIO A

Degradation of Air Traffic Services

In case of degradation or potential disruption of ATS or related services within the Kabul FIR, the provisions of the Afghanistan State Contingency Plan apply. If these are not available the provisions as specified below might apply.

The ANSP responsible for providing ATS within Afghanistan/Kabul FIR will decide upon the level of notification necessary and take action as required to disseminate the information.

If the degradation of ANS in the Kabul FIR results in a situation whereby no ATS are provided, then the airspace classification automatically becomes by definition Class F (uncontrolled, advisory) or Class G (uncontrolled). In this case airspace users must be aware that State/military aircraft may continue their operations within the Kabul FIR.

Airspace users are responsible to make their own risk assessment to determine whether or not they would utilise the Kabul FIR.

In the event that limited or even no ATS are available within the Kabul FIR and the State Contingency Plan is not implemented, the following contingency procedures/measures, as presented by IATA, <u>might</u> be considered by the concerned States:

- o The following ATS routes are available, at and above FL 310, bi-directional (refer **Figure 1**):
    - FIRUS – P500 – PADDY (12 NM ATS route portion delegated to Dushanbe ACC)
    - SOKAM UL333 SERKA
    - CHARN P628 ASLUM
    - RANAH L750 ROSIE
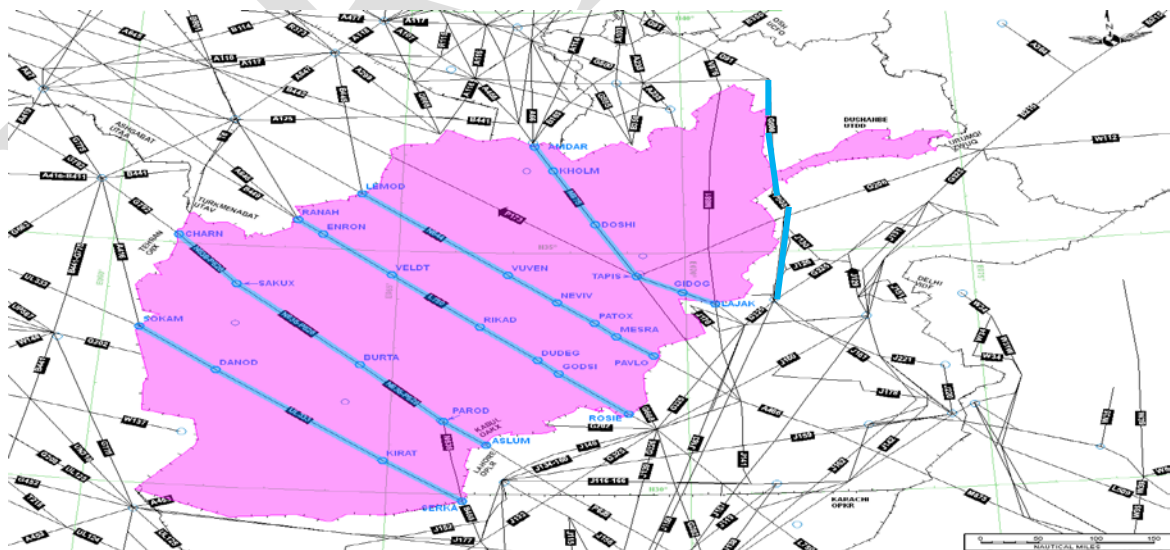   - LEMOD N644 PAVLO
    - AMDAR M875 TAPIS L509 LAJAK

Figure 1: Kabul FIR Upper Airspace ATS Routes

- o All other ATS routes will be closed
- o All available tracks are laterally separated by a minimum of 50 NM to avoid altitude coordination or Flight Level Allocation requirements. Altitudes are assigned based on proper altitude for direction of flight (even Flight Levels for Westbound flights, odd Flight Levels for Eastbound flights.)

- o **ATC / ATFM Coordination**
    - ▪ The ATFM function will need to inform operators and ACCs of times, route and altitudes to be met.
    - ▪ The upstream ACC adjacent to Kabul FIR will need to provide an ATC coordination estimate to the downstream (receiving) ACC to include Aircraft identification, type, Mach, origin, route, destination, estimated time at a boundary waypoint that will have been agreed, flight level. This coordination will be carried out via dedicated recorded voice line or other agreed recorded methods.

- o **ATFM Procedure:**
    - ▪ BOBCAT (for westbound flights) & NMOC (for eastbound flights) provide flow metering to 15 minutes in trail per flight level per track.
    - ▪ Upstream ACCs, aircraft operators and flight crews are made aware of the Required Time of Arrival at the metering point and ensure that the times and levels are respected.

- o **ATC Procedure for the ACC delivering traffic:**
    - ▪ Assigns Airspeed to aircraft based on aircraft performance as to maintain required longitudinal spacing and appropriate FL
    - ▪ Ensures that the aircraft has been cleared on the airway(s) as planned by the ATFM function
    - ▪ Ensures minimum longitudinal spacing of 15 minutes between aircraft on the same track at the same Flight Level
    - ▪ Informs the receiving ACC of inbound traffic and provides an inbound boundary waypoint estimate
    - ▪ Instructs the aircraft to contact the receiving ACC as per agreement.

- o **NAV**
    - ▪ Aircraft operate along required airways using RNAV 10 or better.
- o **COM**
    - ▪ The upstream ACC will instruct the aircraft to contact the receiving ACC via VHF voice radio at a point that will have been coordinated between the concerned ACCs, corresponding to the point at which the aircraft enters VHF radio coverage.
    - ▪ The aircraft will monitor 121.5 and an agreed-upon air to air frequency (123.45?).
    - ▪ The aircraft will broadcast the following message :
        - • *ALL STATIONS*
        - • *THIS IS [CALLSIGN] IN THE KABUL FIR*
        - • *FL ...*
        - • *[WESTBOUND | EASTBOUND] ON [AIRWAY]*
        - • *ESTIMATING [WAYPOINT] AT [UTC TIME]*
        - • *[CALLSIGN]*

- *FL ...*
- *IN THE KABUL FIR*
  - in the English language on the agreed-upon air-air VHF radio frequency at the following times:
  - 10 minutes prior to entering the Kabul FIR
  - 10 minutes prior to crossing a waypoint within the Kabul FIR
  - At not less than 20 minute intervals
  - At any other time considered necessary by the pilot
- Consideration should be given to the following:
  - Using air-ground satellite voice for supplementary or emergency air-ground communications.
  - Using CPDLC to an ATC agency that has agreed to provide a coordination service.
- **In-Flight Contingencies**
  - In case of a non-critical in-flight emergency, the aircraft would proceed as cleared until leaving the Kabul FIR.
  - In case of a critical in-flight emergency (de-pressurization, etc.), aircraft would follow ICAO emergency descent procedures and proceed at the discretion of the pilot in command.
  - In case of a medical emergency the aircraft would proceed as cleared until leaving the Kabul FIR.
  - Consideration should be given to the mandatory use of ACAS.

SCENARIO B

Delegation of Air Traffic Services

The AHACG/2 meeting had discussed the possibility of Air Navigation Services (ANS) delegation by Afghanistan to another State.

The delegation may provide full or partial Air Traffic Services (ATS) within the whole or part of the Kabul Flight Information Region (FIR). The delegation of responsibility for ANS (especially ATS) within the upper airspace of Afghanistan to neighbouring countries was presented as an alternative option to the circumnavigation of the Kabul FIR.

It was possible that, after suitable training, Afghan controllers could provide an ATS from the State providing delegated services, so that the ANS was no longer delegated. In this case, there would be a significant benefit in terms of the service being provided from a potentially more secure site than Kabul, with more than one ACC capable of providing services within the Kabul ACC for contingency.

SCENARIO C

Circumnavigation of Kabul FIR

If the degradation of ANS in the Kabul FIR results in a situation whereby no ATC services are provided, then the airspace classification automatically becomes by definition Class F (uncontrolled, advisory) or Class G (uncontrolled). In this case, with the potential presence of military aircraft operations and a potential lack of information on airspace safety/security issues, airlines may elect to avoid the Kabul FIR.

As the Tehran FIR was already at capacity at times, additional measures were needed to be available to respond to traffic that would divert south of Afghanistan on the Tehran-Karachi FIR axis, in addition to that which would divert north of the Himalayas using ATS route P500 and via China (L888, or other routes).

The current Organised Track Systems (OTS) utilised by Iran should be extended into the Karachi FIR as follows:

- a) Flight Level Allocation Scheme (FLAS) for **westbound** flight levels: FL300, FL340 and FL360;

- b) FLAS for **eastbound** flight levels: FL310, FL350 and FL370;

- c) merging procedures for traffic departing airports within the Tehran and Karachi FIRs so aircraft can join the OTS routes, preferably climbing to a level below the OTS FLAS, and then being vectored or delayed before safely merging (the sequence would need to be coordinated with the next State unless such traffic was accounted for in the traffic metering system);

- d) FLAS for **westbound** traffic <u>crossing</u> the Royal Road OTS of FL320 (or FL280 and below, or FL380 or above);

- e) FLAS for **eastbound** traffic <u>crossing</u> the Royal Road OTS of FL330 (or FL290 and below, or FL390 or above)
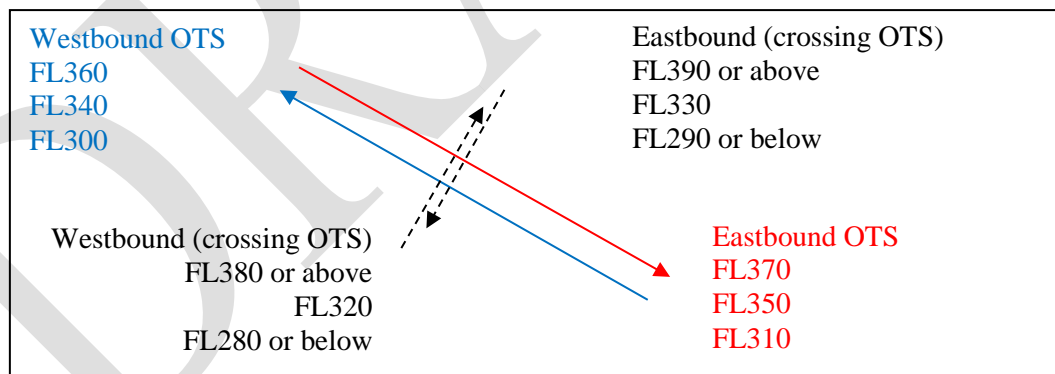

Figure 2: Royal Road OTS FLAS

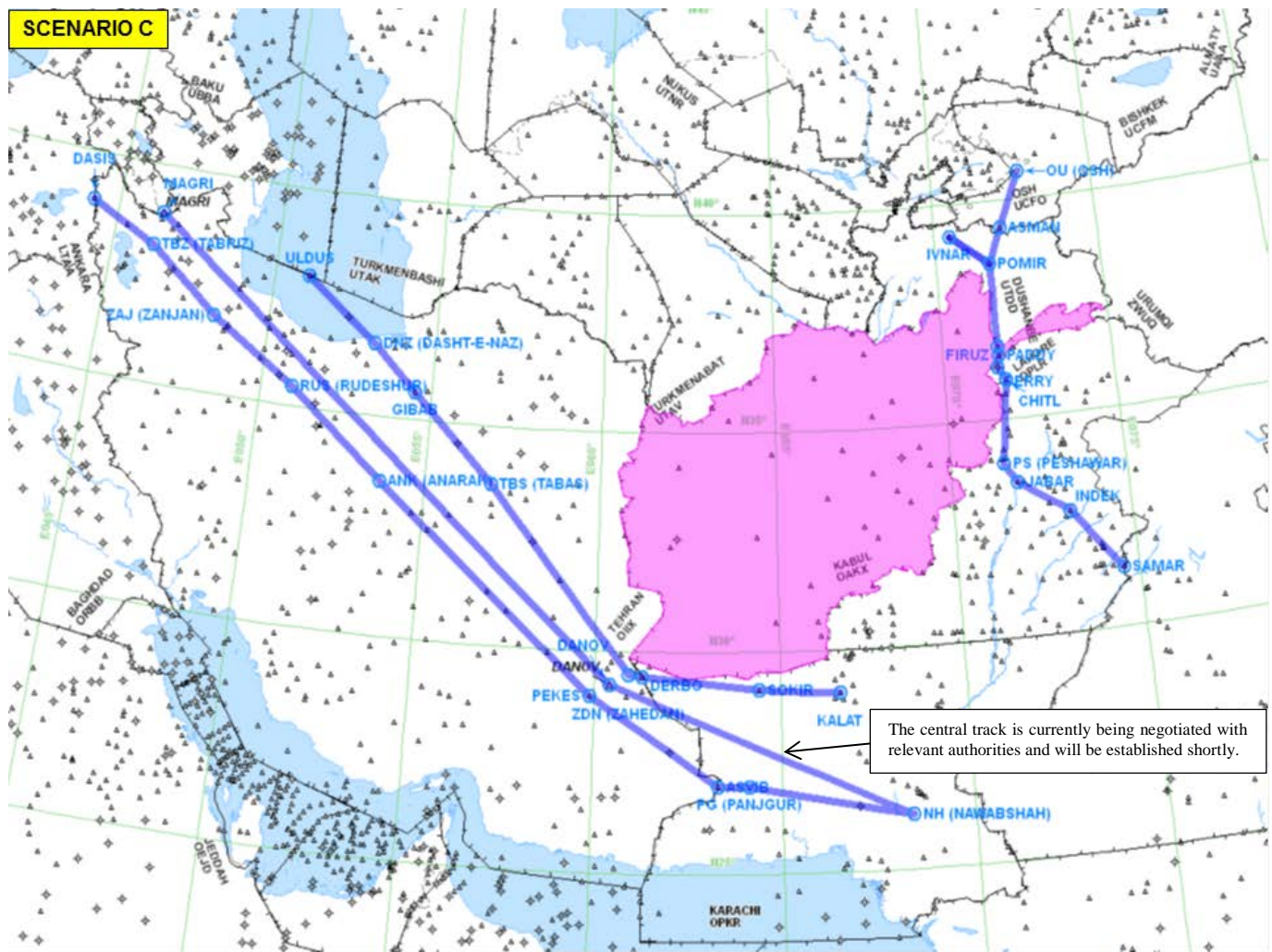The agreed OTS within the Tehran and Karachi FIR was as **Figure 2**:

Figure 3: Circumnavigation routes including Extended Royal Road OTS

Other measures

During times of uncertainty when airspace closures/circumnavigation seem possible, aircraft operators should be prepared for a possible change in routing while en-route, familiarization of the alternative routes outlined in the contingency arrangements as well as what may be promulgated by a State via aeronautical publication.

ATC should be alert to respond to any request by aircraft and react commensurate with safety.

During the contingency operations, States concerned should take necessary measures to grant special over flight permissions to those flights avoiding the affected Airspace(s).

- END -