



International Civil Aviation Organization

**Special Coordination Meeting on the Implementation of ATM Contingency Arrangements (SCM-IACA)**

*(Cairo, Egypt, 24-25 September 2014)*

**Agenda Item 1: Introduction**

**OUTCOME OF THE FIRST MEETING OF THE AD-HOC AFGHANISTAN CONTINGENCY GROUP (AHACG/1)**

*(Presented by the Secretariat)*

**SUMMARY**

This paper presents the outcome of the First meeting of the Ad-Hoc Afghanistan Contingency Group (AHACG/1).

Action by the meeting is at paragraph 3.

**REFERENCES**

- AHACG/1 meeting Report

**1. INTRODUCTION**

1.1 The First meeting of the Ad-Hoc Afghanistan Contingency Group (AHACG/1) held in Kuala Lumpur, Malaysia, 11-12 September 2014, was attended by 44 participants from Afghanistan, Bangladesh, China, India, Iran, Malaysia, Oman, Singapore, Thailand, United States, IATA, IFATCA and NATO. The meeting Report is at **Appendix A**.

**2. DISCUSSION**

2.1 The AHACG/1 meeting was apprised of the outcome of the ATM Sub-Groups meetings conducted in the APCA and MID Regions related to contingency planning. The meeting was also apprised of the current situation of the civil aviation in Afghanistan.

2.2 The AHACG/1 meeting noted with concerns the low number of Afghan qualified air traffic controllers, which is considered the main challenge for Afghanistan Civil Aviation Authority (ACAA) for ensuring the provision of Air Traffic Services (ATS) after 15 December 2014, the termination date of the current Air Navigation Service Provider (ANSP) contract. The current ANS contract was funded by the North Atlantic Treaty Organization (NATO)-International Security Assistance Force (ISAF) and United States Air Force Central Command (AFCENT).

2.3 The AHCG/1 meeting discussed the available options and agreed to the following:

- Afghanistan should continue with their stated priority to arrange for a new ANSP as soon as possible. Current options for the short term include:
  - a. ISAF extension of existing ANSP contract;
  - b. Afghanistan extension of existing ANSP contract;
  - c. Afghanistan engage new ANSP; or
  - d. Afghanistan delegates the provision of ATS to another State.
- All affected States and Organisations plan for a disruption or discontinuation of service to the en-route operations in the upper airspace. Scenarios include:
  - a. Uncontrolled upper airspace with procedural operations above the flight level reserved for military operations;
  - b. Closure of airspace and re-routed operations; or
  - c. Combination of the above
- States to prepare plan for possible re-route operations in their airspace, in coordination with other States to result in regional plans. Plans to include:
  - a. capacity assessment using modelling/simulation;
  - b. safety assessment identifying required mitigation actions, the Regional Monitoring Agencies (RMAs) should be involved;
  - c. security assessment, if applicable due to conflict zones (en-route); and
  - d. time-line for implementation including approvals, LoAs and publication of aeronautical information.
- Plans to be send to ICAO by mid-October so they can be shared through a SharePoint site for review and comments.
- ICAO to support the above with the following:
  - a. convene the Second Meeting of the Ad Hoc Afghanistan Contingency Group, tentatively mid-November in Istanbul;
  - b. convene high-level meeting, tentatively mid-October;
  - c. arrange for Pakistan to attend both meetings;
  - d. APAC, EUR/NAT and MID Regional Offices to support work and meetings;
  - e. process Proposal for Amendments (PfAs) to the Air Navigation Plans (ANPs) for any new ATS routes and/or arrange for approval of temporary deviation from ANPs, if applicable; and
  - f. keep the aviation community informed.
  - g. coordinate with partners willing to support Afghanistan mainly with ANS training and safety oversight capacity building. ICAO to send a State Letter to seek for donors.

2.4 IATA delivered a presentation that noted the current upper airspace routes through the Kabul FIR were the most efficient available and suggested that planning should avoid ‘pushing’ problems to adjacent FIRs, and that the lower airspace issues should be kept separate from upper airspace considerations. They stressed the importance to keep the Afghan Airspace available and suggested for uncontrolled upper airspace the following:

- a procedural spacing of 10 minute spacing;
- Mach number restrictions of 0.82 or 0.83 to ensure no closure;
- Traffic Information Broadcast by Aircraft (TIBA) procedures;
- 'metering' by Bay of Bengal Cooperative Air Traffic Flow Management System (BOBCAT) 24 hours a day; and
- monitoring by using adjacent states radar services (Pakistan, Turkmenistan, Uzbekistan, Tajikistan)

2.5 The AHACG/1 meeting recognized that the Afghan Airspace might need to have a capacity reduction. Moreover, the meeting noted that the current Iraq situation meant that Iran was already at capacity, stressing that there were traffic bottlenecks on the Turkey-Iran interface and that other conflicts such as in Eastern Ukraine were severely reducing the possible options for transit through this area.

2.6 The AHACG/1 meeting discussed Europe-Asia major traffic flow contingency planning and highlighted that the contingency routes through Iran to Europe appear to be the only viable means of ensuring that Southeast Asian traffic can operate to and from Europe if the provision of ATS within the Kabul FIR is impaired. Accordingly, the meeting requested Iran to provide their feedback to the proposed routing schemes at **Appendix A**.

2.7 The AHACG/1 meeting noted with appreciation the actions taken by Iran to accommodate the sudden increase of traffic over Tehran FIR, due to the escalated situation in Iraq and Ukraine. The meeting noted the concerns addressed by Iran related to the status of their CNS/ATM infrastructure, due to the sanctions imposed on Iran. Accordingly, it was recommended that discussions on exemptions to the sanctions imposed on Iran should be undertaken to allow Iran meet the standard requirements for the provision of ATS. NATO noted this and stated they would do what they could to bring this to the attention of the States concerned.

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

3.1 The meeting is invited to take into consideration the outcome of the AHACG/1 meeting when discussing the implementation of ATM contingency arrangements in the MID Region.

-----

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**



**REPORT OF THE FIRST MEETING OF THE AD HOC AFGHANISTAN  
CONTINGENCY GROUP (AHACG/1)**

KUALA LUMPUR, MALAYSIA, 11 – 12 SEPTEMBER 2014

The views expressed in this Report should be taken as those of the  
Meeting and not the Organization

Approved by the Meeting  
and published by the ICAO Asia and Pacific Office, Bangkok and  
ICAO Middle East Office, Cairo

First Meeting of the Ad Hoc Afghanistan Contingency Group  
Table of Contents

---

**CONTENTS**

INTRODUCTION.....	i
Meeting .....	i
Attendance .....	i
Officer and Secretariat.....	i
Language and Documentation.....	i
Opening of the Meeting.....	i
REPORT ON AGENDA ITEMS.....	1
Agenda Item 1: Adoption of Provisional Agenda .....	1
Agenda Item 2: Afghanistan ATS Status and Capability Building .....	1
Agenda Item 3: Europe- Southeast/South Asia Contingency Planning (scenarios, procedures).....	7
Agenda Item 4: Civil/Military cooperation, contingency promulgation and implementation.....	14
Agenda Item 5: Next meeting.....	15
Agenda Item 6: Any other business.....	16
Agenda Item 7: Closing.....	16

First Meeting of the Ad Hoc Afghanistan Contingency Group  
Table of Contents

---

**APPENDICES AND ATTACHMENTS**

Attachment A:	List of Participants .....	A-1
Attachment B:	List of Working and Information Papers.....	B-1
Appendix A:	Milestones and Tasks.....	Appendix A-1

## INTRODUCTION

### Meeting

1.1 The First Meeting of the Ad Hoc Afghanistan Contingency Group was held at Kuala Lumpur, Malaysia from 11 to 12 September 2014.

### Attendance

2.1 The meeting was attended by 44 participants from Afghanistan, Bangladesh, China, India, Iran, Malaysia, Oman, Singapore, Thailand, United States, IATA, IFATCA and NATO. A list of participants is provided at **Attachment A** to this Report.

### Officer and Secretariat

3.1 Mr. Len Wicks, Regional Officer Air Traffic Management (ATM), ICAO Asia and Pacific (APAC) Regional Office, and Mr. Elie El Khoury, Regional Officer Air Traffic Management and Search and Rescue, ICAO Middle East (MID) Regional Office were moderators for the meeting.

### Language and Documentation

4.1 The working language of the meeting was English inclusive of all documentation and this Report. Nine working papers, two information papers and two presentations were considered by the meeting. The list of working and information papers is attached at **Attachment B** to this report.

### Opening of the Meeting

5.1 The meeting was opened by the ICAO APAC Regional Director, Mr. Arun Mishra, who thanked Malaysia for the provision of the meeting facilities. Mr. Mishra stressed the importance of the meeting. He thanked the States (especially Iran and Oman as they had come from other regions), and the International Organizations that had responded to a very short notice request to attend.

5.2 Mr. Len Wicks, Regional Officer Air Traffic Management welcomed all the participants to the meeting.

5.3 Mr. Elie El Khoury on behalf of the ICAO MID Regional Office and in particular Mr. Mohamed R. M. Khonji, MID Office Regional Director, extended his gratitude to APAC Regional Director for his invitation to participate in this meeting. He emphasized the importance of the inter-regional coordination meetings, which would ensure the successful implementation of any contingency arrangements in a harmonized manner.

5.4 IFALPA expressed their apologies for not being able to attend the meeting at short notice, but presented a written statement that emphasised the need for a proper safety and security analysis of any contingency scheme. They were particularly concerned about airliner safety over conflict areas after the tragic MH17 event, and stressed that airspace should be closed if necessary, while acknowledging the negative impacts on airline cost structures.

.....

## REPORT ON AGENDA ITEMS

### Agenda Item 1: Adoption of Provisional Agenda

1.1 The provisional agenda (WP01) was adopted by the meeting, which noted the List of Papers (IP01) and the Order of Discussion. The meeting noted with disappointment the unfortunate absence of Pakistan, which was a crucial nation in any contingency planning in the affected region.

### Agenda Item 2: Afghanistan ATS Status and Capability Building

#### ATM Sub-Group Outcomes Related to Afghanistan (IP02)

2.1 ICAO presented information on Afghanistan that was presented at the Second Meeting of the APANPIRG Air Traffic Management Sub-Group (ATM/SG/2, 04-08 August 2014).

2.2 At the ATM/SG/2 ICAO provided information on certain aspects of the transition from military to civilian control of Afghanistan's airspace, and suggested considerations for sub-regional airspace contingency planning, should the Kabul FIR become partially or fully restricted. Currently, the situation in Afghanistan remained fluid, with no certainty regarding the level of Air Traffic Control (ATC) services. The ATM/SG/2 had noted that the ATC contract for provision of services from the Kabul ACC was due to expire in December 2014 and would not be renewed by the military. Moreover, although the Afghanistan government was in negotiations to contract services, as at the time of the ATM/SG/2 meeting the contract had not been awarded.

2.3 IATA stated at the ATM/SG/2 that the development of contingency routes and procedures for Afghanistan was of paramount importance, and should be undertaken as a matter of urgency. They further stated that many airlines would be planning to avoid the Kabul FIR in the same way that they were currently avoiding other airspace defined by their risk management processes. Noting that most carriers were able to utilise Iranian airspace, IATA stressed that reasonable contingency routing schemes were of vital importance, as a number of alternative options involved substantial costs that may threaten the financial viability of affected airlines.

2.4 Thailand notified the meeting that they would support contingency measures as far as possible, and that the Bay of Bengal Cooperative Air Traffic Flow Management System (BOBCAT) could be reconfigured to provide enhanced services.

2.5 It was noted that there needed to be coordination between the ICAO European/North Atlantic (EUR/NAT) Office, MID Office and the APAC Office. In this regard, the meeting was apprised of the forthcoming Fourth Meeting of the Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS/4, 29 to 31 October 2014, Bangkok), at which all three offices would be present.

2.6 The ATM/SG/2 meeting recognised that the overriding importance of the contingency planning for the Kabul FIR required an urgent response, and agreed to the following Decision:

#### ***Decision ATM/SG/2-4: Ad Hoc Afghanistan Contingency Group***

*That, an ad hoc group is convened supported by the ICAO Asia/Pacific Office to urgently discuss contingency planning to address any contingency aspects for the continued safe and efficient operation of aircraft between Europe and the Asia/Pacific Region, consisting of IATA, IFALPA, Afghanistan, China, India, Iran, Oman, Pakistan, Singapore, the United States, Thailand and other affected parties as necessary.*



First Meeting of the Ad Hoc Afghanistan Contingency Group  
Report on Agenda Items

---

Afghanistan Status Report

2.7 Afghanistan provided a statement of their current status and planning for the transition of Air Navigation Services (ANS) from the military to Afghan authorities taking over these tasks. For the provision of air navigation services for the upper, lower and Kabul Approach Control airspaces, it was envisioned that Afghanistan would sign an ANS contract, and the procurement process was ongoing. The current airspace contract funded by North Atlantic Treaty Organization (NATO)-International Security Assistance Force (ISAF) and United States Air Force Central Command (AFCENT) would expire on 15 December 2014. For continued and uninterrupted airspace management and finalizing the takeover arrangements, the Government of the Islamic Republic of Afghanistan (GIROA) had requested that the current contract with IAP Worldwide Services be extended for three months. No official response to that request had been received by Afghan authorities.

2.8 The Afghanistan Civil Aviation Authority (ACAA) had received bids from 19 companies, and two had been considered in the final process (IAP and Global Aerospace Logistics – GAL, from the United Arab Emirates). It was underlined that the prices by the two interested and qualified companies were determined to be excessively high and would exceed the revenues generated from the overflight charges. However, as an alternative, the GIROA was also discussing a possible new option and a contract with UK-based NATS Holdings. Unfortunately, the Presidential election was also causing a delay, although both candidates had pledged to sign the security agreement that provided a basis for further military support and maintenance of some COM/SUR facilities. The meeting was assured that this would only take days after the election.

2.9 In answer to the question of how long it might take for another external contractor to deploy staff to Kabul, the meeting noted it would take some three months at a minimum. It was further noted that some parts of the ATC communications (COM) and surveillance (SUR) infrastructure would be removed at the end of 2014, causing a further challenge to a new contractor.

2.10 The Afghan delegation stated that the continuity of the safe traffic flows within Kabul Flight Information Region (FIR) was considered to be the top urgent priority for the GIROA. Accordingly, all the necessary measures were being taken to ensure the provision of ATS after 15 December 2014. The meeting was presented with a briefing related to the civil aviation developments in Afghanistan, in particular the implementation of the civil aviation law and establishment of an independent Civil Aviation Authority nine months ago comprising of more than 1,200 Afghan personnel.

2.11 It was noted with concern by the meeting that the lack of experienced Afghan Air Traffic Controllers Officers (ATCOs) was the main issue affecting the continuity of the ATS after the 15 Decembers 2014. Afghanistan highlighted that in accordance with their plans, ATS within Kabul FIR would be initially provided by contractors, who would also train Afghan ATCOs. It was anticipated that after the five year contract, Afghanistan would transition to all ANS being provided by Afghans. In this respect, the meeting noted with appreciation the willingness of the present States and Organizations to support Afghanistan to overcome their training challenges.

2.12 In summary, it was noted that the current options for the short term included:

- a) ISAF extending the contract of the existing ANS Provider (ANSP);
- b) Afghanistan funding the extension of the current contract with the existing ANSP;
- c) Afghanistan engaging a new ANSP; and
- d) Afghanistan delegating ANS responsibilities to another State.

Status of Military Transition in Afghanistan (WP03)

2.13 NATO discussed the background of recent airspace and airfield transition efforts in Afghanistan, as well as the situation that NATO and the NATO-led ISAF, and the GIRoA faced regarding the transition to civil control.

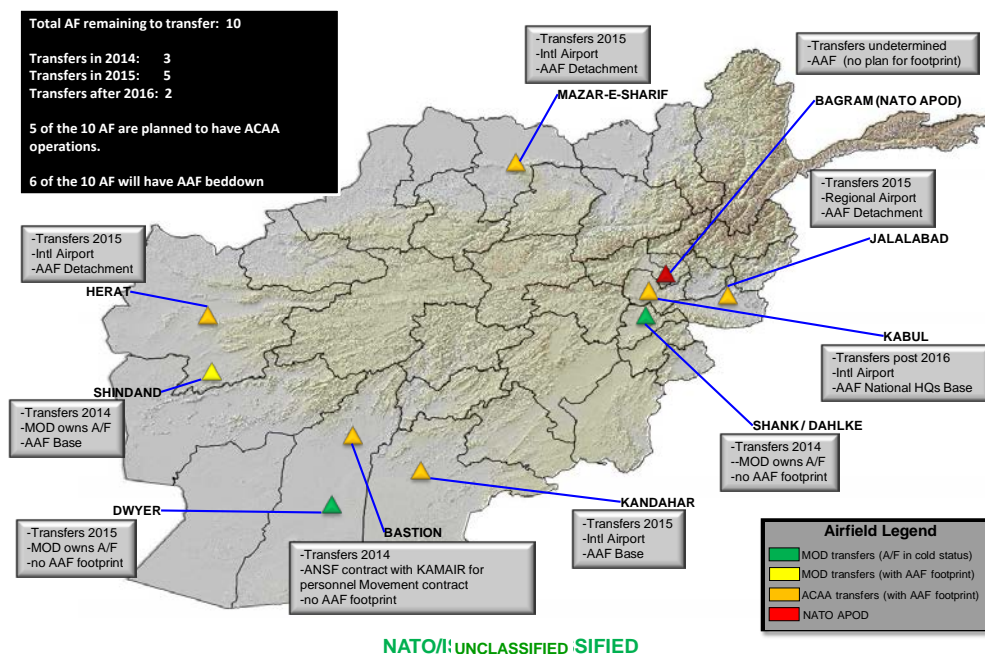
2.14 NATO recalled the three-way Memorandum of Arrangement (MOA) between the Ministry of Civil Aviation and Tourism (now Ministry of Transport), ICAO and Commander United States Air Forces Central Command (AFCENT) in 2002, noting that the Combined Forces Airspace Control Authority (ACA) assumed responsibility for air traffic services and aviation facilities within Afghanistan until the Afghan authorities were capable of doing so. They noted the development of an Afghanistan Civil Aviation Roadmap (ACAR), Aviation Action Plan (AAP) and Terms of Reference for the Aviation-Donor Coordinating Board in 2012 to facilitate the transition services and responsibility for airspace and airports (Kandahar, Kabul, Herat, and Mazar-e-Sharif). These plans were based on the assumptions that sufficient Afghan personnel would be trained, training facilities and trainers/mentors were available, and financial issues resolved as agreed in the Aviation Action Plan.

2.15 NATO stated that the Afghanistan Civil Aviation Authority (ACAA) had made great strides in developing an organization that conformed to ICAO Standards and Recommended Practices (SARPs) but still lacked human capacities to control the airspace and operate major airports. It was also highlighted that, from a NATO viewpoint, that the Afghans were not capable of performing full safety oversight of the civil sector and there was no safety management system (an ICAO requirement), in place. A very ambitious mentoring project led by the German Ministry of Foreign Affairs and supported by the United States Federal Aviation Administration was developed and had been on-going to help key leadership within the ACAA to achieve a level of experience and knowledge. The AHACG/1 meeting noted that part of the reason for the lack of human capacity was the lack of sufficient remuneration for key technical and instructional staff to ensure retention, as noted by the recent ICAO Mission (17 to 19 June 2014).

2.16 In 2013, a team developed the concept for a National Aviation System Transition Contract (NASTC) related to the transition of the aviation services from contractors to Afghans over a five year period. In December 2013, the ACAA split the operation of airspace and airfields into two different contracts, with emphasis on the airspace contract only. The intent of the ACAA was that once the airspace contract was signed, the Request for Proposals (RfP) for the provision of the five key airfield services would be immediately released. As indicated in the Afghanistan update, the contract for the provision of airspace services had not yet been signed; consequently, the RfPs for the airfields had not been issued.

2.17 The current AFCENT position is that the contract for the provision of services at Kabul Area Control Centre (KACC) and Kabul Approach Control (KAC) would not be renewed. So, if Afghan authorities are unable to resource or fully fund a new contract by 15 December 2014, all airspace within the Kabul FIR, excluding Control Areas/Control Zones (CTA/CTR) surrounding military controlled airfields would become Class G (uncontrolled) airspace and would become unmonitored. Essentially from the military point of view, there would be no ANS available for civil traffic. Furthermore, there would be a lack of adequate Communications, Navigation, Surveillance (CNS) infrastructure at Kabul International Airport (KAIA), as it would only have non-controlled VFR operations. NATO/ISAF had developed a contingency plan using tactical command and control procedures, in order for military operations to continue in support of ongoing operations and the NATO-led *Resolute Support* Mission from 2015 onwards. Although the meeting noted that Kabul Tower was already staffed by some Afghan controllers, they were not at the supervisory or management level.

First Meeting of the Ad Hoc Afghanistan Contingency Group  
Report on Agenda Items



**Figure 1:** Afghanistan Aerodromes

2.18 For airfield transition, there were ten airfields yet to be transitioned to the GIRoA (**Figure 1**). Three would be transitioned in 2014 and five in 2015.

2.19 KAIA and Bagram would not transition until sometime after 2016; unless the ACAA was able to provide airfield service at KAIA that conformed to ICAO SARPs. The previous transition timeline for the four major airfields was no longer achievable and the expected transition to GIRoA by on 1 January 2015 was not possible.

2.20 Following NATO’s post-2014 engagement in Afghanistan, NATO established a joint mechanism called ‘Enduring Partnership’, which would become the prime vehicle for the relationship between NATO and Afghanistan over the long-term. Over the last thirteen years, NATO/ISAF had assisted the Afghan people to regain control over their nation’s destiny, helping to make Afghanistan make significant advances in the aviation domain – especially with the development of an independent ACAA (although it was not yet financially independent).

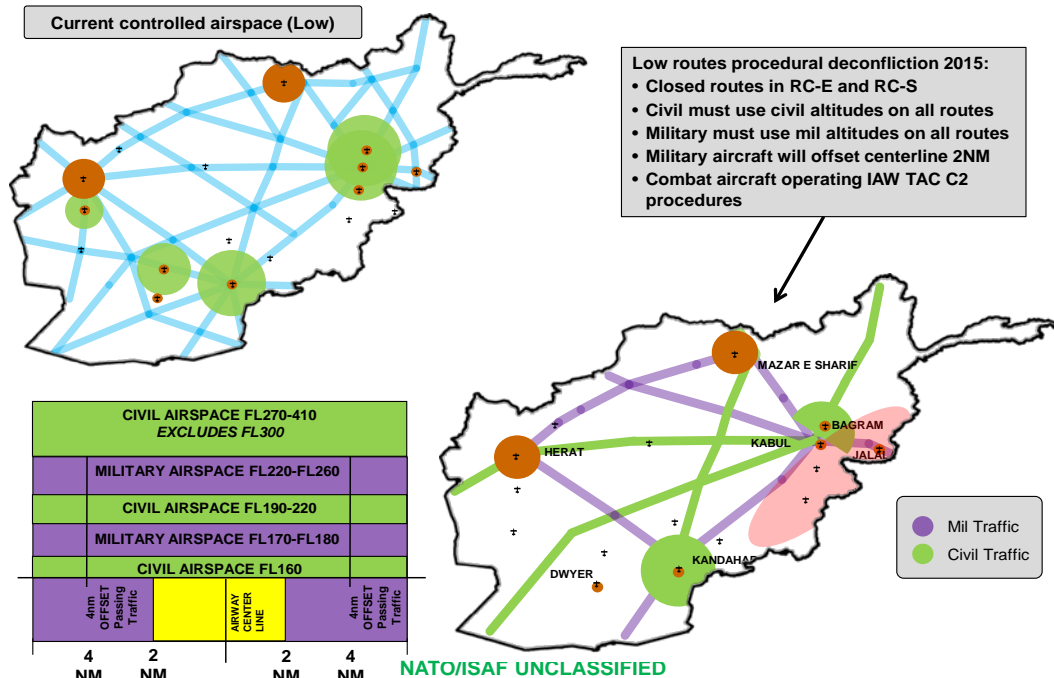
ISAF Presentation and Afghanistan Airspace Contingency Plan (WP02)

2.21 NATO/ISAF presented ISAF’s plan to continue military operations. Although these plans would possibly accommodate limited civilian flights, they were developed to de-conflict civilian air traffic to the extent possible if there was no airspace contract and civilian flights operated within the uncontrolled airspace. They noted that ATC services would be provided by AFCENT-funded IAP until 15 December 2014, and if the airspace contract was not funded, all ATC services were expected to terminate at the expiration of the current contract. These services included the KACC comprising the low and high airspace structure, and also Kabul Approach Control. The associated ATC radars and radio antennas would also be shut down, resulting in a loss of radar and radio coverage in large areas of Afghanistan.

2.22 The current airway structure and radio frequencies would still be available; however, there would be no personnel controlling, advising or providing flight information services to civil aircraft within the Kabul Flight Information Region (FIR).

First Meeting of the Ad Hoc Afghanistan Contingency Group  
Report on Agenda Items

2.23 For the low airspace (below FL300), the military contingency plan was developed to provide for a safer airspace environment and to mitigate foreseen hazards between military and civil aircraft, considering that some civil air traffic within Afghanistan would continue operating in uncontrolled airspace. Lateral de-confliction would require a segregation of military and civilian aircraft to separate designated airways (Figure 2). There would be seven airways designated for military traffic and four east/west, north/south airways for civilian traffic.



**Figure 2:** Draft Military Contingency Plan

2.24 Additionally, military aircraft would be required to offset two miles from airway centreline. All aircraft (military and civil) would make position reports on one Common Traffic Advisory Frequency (CTAF) for the entire Kabul FIR. For vertical de-confliction, the military envisaged designated altitude blocks reserved solely for civilian aircraft. (FL160; FL190-FL220; and above FL310), and military aircraft from FL170-FL180; FL230-FL260; and FL300.

2.25 Bagram and Kandahar had radar approach control while Mazar-e-Sharif and Herat had non-radar approach control. All military aircraft would remain at last assigned altitude until reaching military controlled airspace around the five Resolute Support airfields. It was currently envisioned that KAIA would only have uncontrolled airspace with VFR operations. ICAO noted that this posed numerous unacceptable safety risks for international operations, not least the presence of military operations such as Remotely Piloted Aircraft (RPA), civilian aid flights, mountainous weather and terrain, and lack of guidance related to the safe conduct into a challenging single runway aerodrome.

2.26 As far as longitudinal separation was concerned, ISAF advised that adjacent nations would have to separate aircraft entering Afghanistan at the same entry point by a minimum of 50NM in accordance with existing agreements. The military Air Mobility Division (AMD) would ensure that all military aircraft published on the Air Tasking Order entering Afghanistan were separated by a minimum of 15 minutes.

First Meeting of the Ad Hoc Afghanistan Contingency Group  
Report on Agenda Items

---

2.27 Air to Air Refuelling (AAR) tracks had been moved or closed so that none of the remaining 20 AAR tracks crossed or conflicted with military or civilian airways. Due to the inability to de-conflict military and civilian aircraft from combat aircraft other than by 'see and avoid', civilian airways mainly in the south and east will be restricted for military operations. Some other airways around Afghanistan would be restricted to mitigate risk, resulting in adverse routings for civilian airlines. NATO made it clear to the meeting that they would not be responsible for civil-civil aircraft conflicts.

2.28 The military noted that their contingency plan, despite mitigation measures, increased risk for potential mid-air collisions compared to current operating procedures, especially as there would be no monitoring of civil aircraft adherence to flight plans. In particular, the presence of Remotely Piloted Aircraft (RPA) with no 'see and avoid' capability exacerbated the problem. The military stated that route and altitude restrictions would undoubtedly lead to higher costs for civilian airliners. The Afghanistan representatives to the AHACG/1 meeting clarified that the GIRoA had not yet approved the ISAF contingency plan.

### **Agenda Item 3: Europe- Southeast/South Asia Contingency Planning (scenarios, procedures)**

#### IATA Presentation

3.1 IATA gave a presentation that noted the current upper airspace routes through the Kabul FIR were the most efficient available and suggested that planning should avoid ‘pushing’ problems to adjacent FIRs, and that the lower airspace issues should be kept separate from upper airspace considerations. They suggested an uncontrolled upper airspace could have:

- a procedural spacing of 10 minute spacing;
- Mach number restrictions of 0.82 or 0.83 to ensure no closure;
- Traffic Information Broadcast by Aircraft (TIBA) procedures;
- ‘metering’ by BOBCAT 24 hours a day; and
- monitoring by adjacent states (Pakistan, Turkmenistan, Uzbekistan, Tajikistan) using radar

3.2 ICAO recalled that 10 minutes was in fact an ATC separation, and that even if monitoring could be arranged for transit through the Kabul FIR, this did not reduce risk from civil-military conflicts, emergency or irregular flight operations (or the presence of adverse weather) and was problematic with the heightened concern for the safe passage of civil airliners over conflict areas after the MH17 tragedy.

3.3 IATA recognised that the airspace might need to have a capacity reduction. Moreover, they noted that the current Iraq situation meant that Iran was already at capacity, stressing that there were traffic bottlenecks on the Turkey-Iran interface and that other conflicts such as in Eastern Ukraine were severely reducing the possible options for transit through this area. They reviewed the options through China (via the Middle East/Africa, north of the Himalayas) and emphasised the need for State authorities to provide expedited overflight approvals in contingency circumstances.

3.4 The meeting noted with appreciation that Iran had recently accommodated numerous airline requests at short notice because the authorisation was being conducted by civil authorities.

#### India's Plan to Mitigate Possible Impacts of Afghanistan's Military Civil Transition (WP09)

3.5 India highlighted their plan to mitigate possible consequences of the Afghan transition from military to civil control. They recalled that the Indian subcontinent was under seamless surveillance coverage with all major Indian ATC Centres capable of processing multiple surveillance sensor data, and were also equipped with Automatic Dependent Surveillance-Contract (ADS-C), Controller Pilot Data Link Communications (CPDLC) and Satellite Communications (SATCOM).

3.6 India had analysed the westbound traffic flow from Delhi and Mumbai FIRs transiting through Karachi and Lahore FIRs into Kabul airspace. On average, there were 130 to 135 flights westbound through these two gateways into Afghanistan airspace (74% through Delhi FIR and 26 % through Mumbai FIR), thus Delhi FIR was likely to be most affected. India could suggest efficient rerouting options for the westbound flights, with minimal alteration to the present flight patterns.

3.7 India presented a detailed fast time traffic simulation movie for the proposed re-routing structure which demonstrated the possible congestion over various significant way points to the meeting. Moreover, India stated that the Research and Development unit established by Airports Authority of India at Hyderabad would be able to analyse near real-time traffic scenarios and submit a detailed safety case to the next AHACG meeting.

3.8 India noted that the lack of skilled Afghan ATC controllers for area services was potentially a major problem. India emphasised their willingness to support Afghanistan.

Europe - Asia Major Traffic Flow Contingency Planning (WP04)

3.9 ICAO stated that it was necessary even at the earliest planning stages to develop potential contingency schemes so they could be analysed and consulted. A number of scenarios were considered by the meeting:

- **Scenario A:** *Partial Kabul FIR Contingency Services* – in the event that some parts of the Kabul FIR are unable to be provided with an ATC service (this is a matter for Afghanistan to manage under its Annex 11 obligations);
- **Scenario B:** *Kabul FIR Contingency Services* – no ATC service but upper airspace is not affected by military or security concerns, and a number of restrictions are applied;
- **Scenario C:** *Iranian Airspace Routes* – routing via Iranian airspace due to a number of ‘hot spots’ in Syrian, Iraq and European airspace;
- **Scenario D:** *Middle East Contingency Procedures* – involving the Contingency Routing Plans for Asia/Middle East/Europe (CRAME 03) procedures via the Gulf (not considered due to current congestion in the Gulf and longer routings);
- **Scenario E:** *ATS route L888 – via China* for some Southeast and East Asian traffic, routing north of the Himalayas via RNAV 10 route L888;
- **Scenario F:** ‘Silk Road’ concept – for traffic north of the Himalayas using direct RNAV 2/RNP 2 tracks from Kunming to Europe (not considered because it is a longer term concept).

3.10 Therefore, it was proposed that the planning by the AHACG for Afghanistan contingency operations should concentrate on Scenarios B, C and E.

3.11 Regarding **Scenario B**, the following Kabul FIR requirements might be considered, although collectively, there would be latent risk from issues such as military traffic, emergency or irregular situations, adverse weather and lack of monitoring):

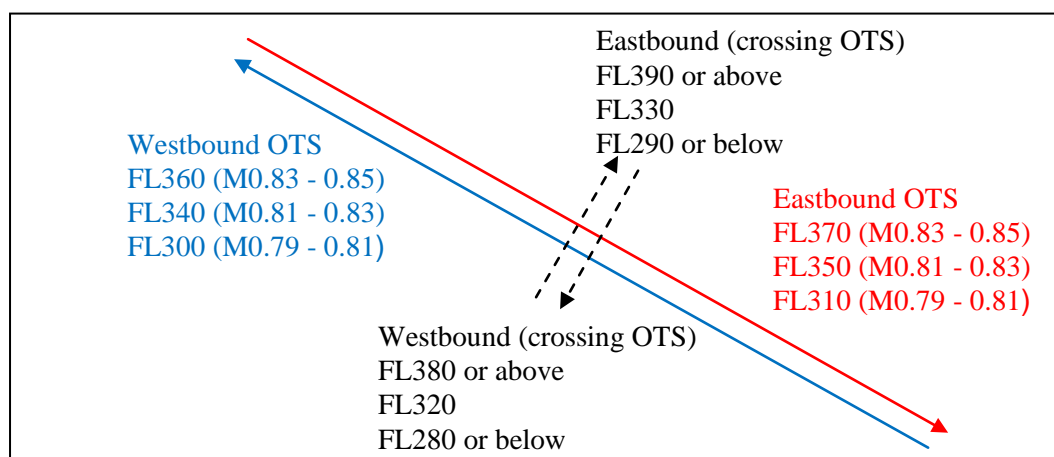
- BOBCAT could be configured to operate H24 for both west and east direction traffic at a specified time-based separation such as 20 minutes, monitored by neighbouring ATC units; and
- crossing ATS routes such as A219, A453, G202, G206 and G668 may need to be closed to ensure no converging traffic; and
- TIBA could be utilised; and
- aircraft should operate with lights and if equipped, surveillance systems such as Aircraft Collision Avoidance Systems (ACAS) and Automatic Dependent Surveillance-Broadcast (ADS-B) on; and
- Advisory services could be provided by an adjacent ATC unit.
- Lateral off setting from the centerlines of ATS routes

3.12 Regarding **Scenario E**, China would need to assess the current and possible future capacity on this ATS route and also consider the capacity of its neighbours. A capacity declaration and mechanisms for Air Traffic Flow Management (ATFM) to regulate the traffic on L888 would be necessary for AHACG Afghanistan contingency arrangements.

3.13 Iranian contingency routes in **Scenario C** appear to be the only viable means of ensuring that South and Southeast Asian traffic can operate to and from Europe if the provision of ATC services within the Kabul FIR is impaired.

3.14 The following contingency scheme focused on Iranian airspace (but extended as necessary into Turkish and Pakistan/Indian airspace if required) was reviewed by the AHACG for consideration by Iran and adjacent States:

- a) a high density Organized Track System (OTS, henceforth referred to as the ‘Royal Road’ OTS, after the ancient road between Persia and Anatolia) be established to accommodate the main northwest-southeast flow of air traffic, with either two or three near-parallel ATS routes using –
  - i. Flight Level Allocation Scheme (FLAS) for westbound flight levels FL300, FL340 and FL360 (**Figure 3**);
  - ii. FLAS for eastbound flight levels FL310, FL350 and FL370 (**Figure 3**);
  - iii. advisory (not mandatory) speed controls of Mach 0.79 - 0.81 for FL300/FL310, Mach 0.81 - 0.83 for FL340/FL350, and Mach 0.83 - 0.85 for FL360/FL370;



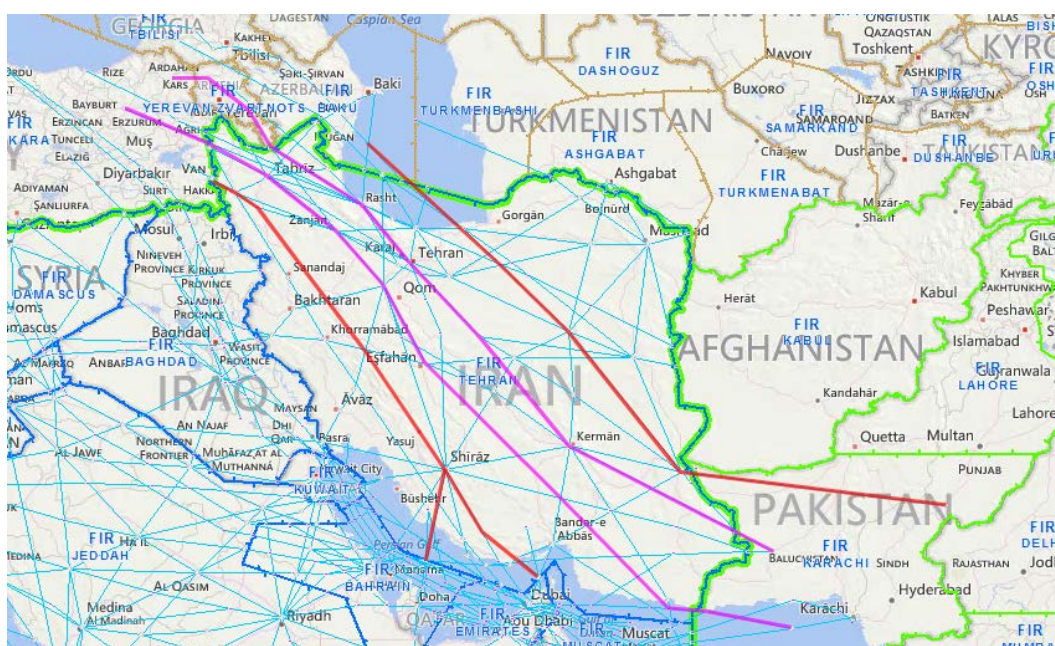
**Figure 3:** Possible High Density OTS FLAS

- iv. BOBCAT or alternative traffic metering system to provide slots seven minutes apart, with a requirement for entry timing of plus or minus one minute from the allocated entry slot time (this would set an approximate 55NM spacing);
  - v. 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);
  - vi. Mandatory carriage of ACAS (and possibly Automatic Dependent-Surveillance-Broadcast OUT (ADS-B OUT));
- b) FLAS for westbound traffic crossing the Royal Road OTS of FL320 (or FL280 and below, or FL380 or above);



- c) FLAS for eastbound traffic crossing the Royal Road OTS of FL330 (or FL290 and below, or FL390 or above);
- d) A two-way route system (the ‘Caucasus Corridor’) laterally segregated from the Royal Road OTS which is dedicated for traffic between the Caucasus/Russia and South or Southeast Asia (**Figure 3**); and
- e) A two-way route system (the ‘Gulf Corridor’) laterally segregated from the Royal Road OTS which is dedicated for traffic between the Gulf and Europe (Iran has already promulgated a suitable route from BONAM on the Ankara FIR boundary to DARAX on the Emirates FIR boundary).

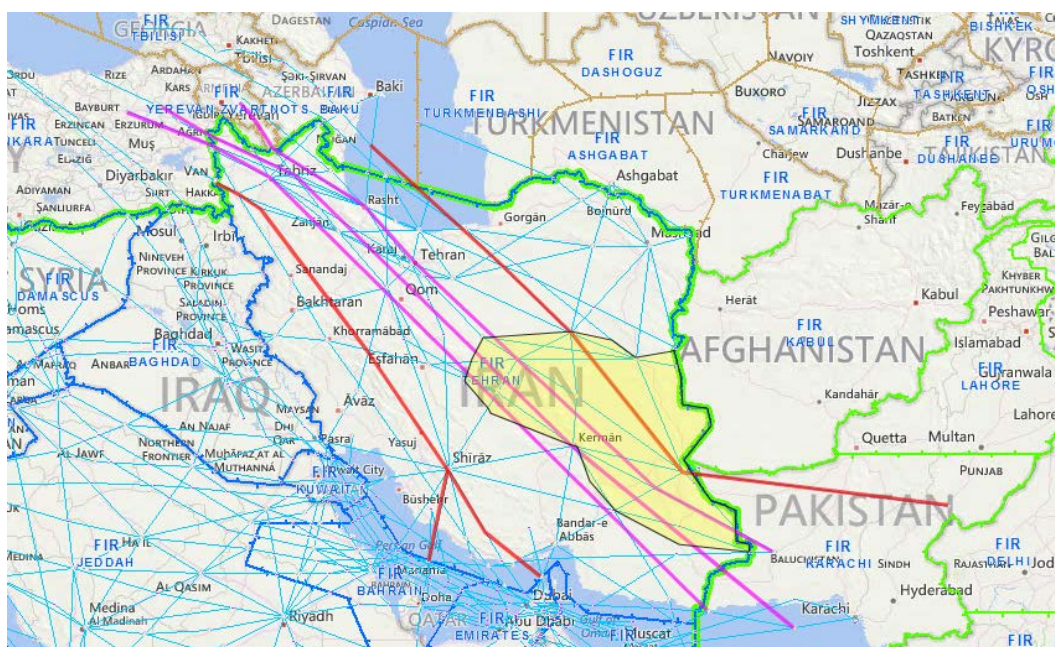
3.15 **Figure 4** provides an overview of the contingency scheme with the Gulf and Caucasus Corridors (red) if it is assumed that current ATS routes must be utilised for the Royal Road OTS (pink). However, some route portions are direct RNAV to ensure segregation. The assumed capacity is **102** aircraft per hour (8.57 aircraft spaced seven minutes apart, two routes and six flight levels).



**Figure 4:** Royal Road OTS (existing ATS routes), with Gulf and Caucasus Corridors

3.16 **Figure 5** provides an overview of an ideal contingency scheme if mostly direct RNAV routes could be utilised for the Royal Road OTS – without complete reliance on existing entry and exit waypoints, dependent on aircraft equipment, civil/military cooperation and ATM constraints. The assumed OTS capacity is **154** aircraft per hour (8.57 aircraft spaced seven minutes apart, three routes and six flight levels). This configuration would also be the most fuel and emissions efficient.

## First Meeting of the Ad Hoc Afghanistan Contingency Group Report on Agenda Items



**Figure 5:** Royal Road OTS using RNAV and flexible entry/exit waypoints

3.17 It should be noted that the yellow portion of Iranian airspace in **Figure 5** has been declared as non-radar (due to a lack of radar spare parts), which may present some difficulties in terms of monitoring a heavy flow of procedural traffic, unless the military can provide surveillance support such as data sharing or delegated monitoring, or other States can share ADS-B data in the area.

3.18 It is possible that to reduce ATC workload, that the northern most OTS route should be mainly used by airlines operating from/to airports such as in Northern India, Bangladesh, and China, whereas the middle route could mainly service Southeast Asia, and the southmost route could service destinations such as Southern India, Sri Lanka, Maldives, etc.

3.19 The meeting noted that as a crucial State if a contingency scheme was necessary, Iran would be required to urgently:

- determine their current and future capacity; and
- advise ICAO of their assessment of OTS capability and requirements, bearing in mind civil/military aspects and COM/SUR capability.

### EUROCONTROL Initial Assessment (WP05)

3.20 EUROCONTROL provided information on an initial impact evaluation of possible contingency ATS routes, and discussed various planning considerations for contingency structures. The System for Assignment and Analysis at a Macroscopic level (SAAM, an airspace modelling tool designed by EUROCONTROL) was used for this evaluation. The evaluation included only those flights which had a flight segment within European airspace, and used available existing ATS route options.

3.21 As a major finding of the evaluation, the re-distribution of flights avoiding Afghanistan was directed to Iran via the Delhi/Mumbai, Karachi, Tehran FIRs and vice-versa, as well as via China through the Urumqi and Kunming FIRs. Inside the EUR/NAT Region airspace the re-distribution of flights avoiding Afghanistan may utilise ATS route options via the Ankara, Yerevan, Baku, Ashgabat and Almaty FIRs. However it was noted that the Central Asian area would not provide a more efficient alternative for flows between Europe and Asia.

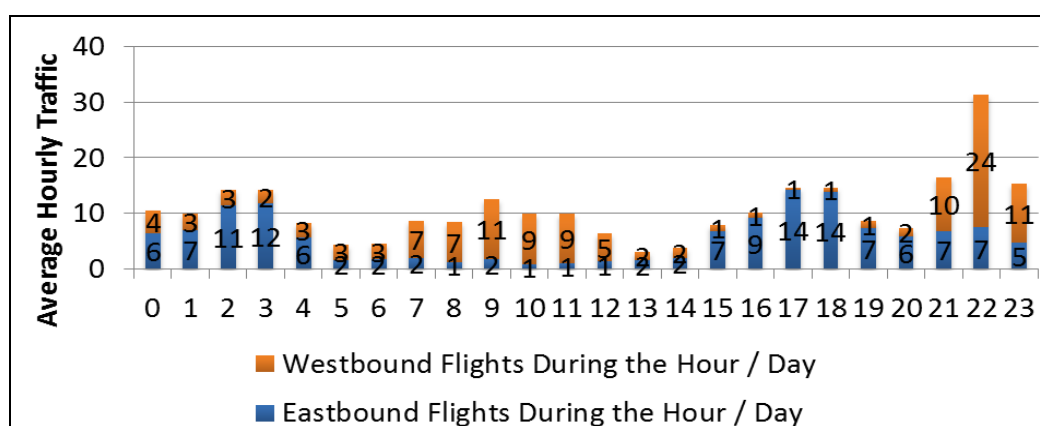
3.22 In utilizing currently available ATS routes, it was noted that the shortest ATS route option (G452 and G208 / L124) merged over Zahedan (ZDN) inside Tehran FIR immediately after the FIR boundary, causing potential capacity problems at this position. At positions TIGER and TASOP on the Karachi and Delhi FIR boundary an increase of 17 aircraft per hour was indicated. Overall, for the Tehran FIR, there were peaks of 75 flights per hour from 2100 until 0200 UTC.

3.23 For China, an increase of 24 flights per day was observed. In Europe, the main traffic concentration was in the Ankara, Sofia and Bucuresti FIRs. The most loaded waypoints were ALRAM / DASIS and ODERO / UDROS between Ankara FIR and respectively Tehran FIR and Sofia FIR.

3.24 Compared to Kabul airspace being available, EUROCONTROL assessed the shortest alternative route from Europe to Asia would suffer a daily penalty of 1,871 kg of fuel (approximately USD635,000 annually at USD120 per barrel) and 1,466 tonnes of CO<sub>2</sub>.

Kabul FIR Traffic Sample Data

3.25 Thailand provided a presentation on a Traffic Sample Data for December 2013. The eastbound average was 134 flights per day, and westbound 122 flights per day, totalling 256 flights per day. **Figure 6** illustrates the peak hourly traffic periods, mainly at 0200-0300, 1700-1800, and the main peak from 2100-2300 UTC (note: 2000 – 2359 UTC: current BOBCAT Operations).



**Figure 6:** Average Hourly Kabul FIR Traffic (FL290-FL410, 01-31 December 2013)

3.26 The AHACG/1 meeting agreed that it would be important to develop an Internet resource to inform about the contingency status, requirements and planning, and that EUROCONTROL’s Network Manager, ICAO, Thailand (with BOBCAT), were key parties to this initiative.

Iran Contingency Actions

3.27 Iran provided a presentation on the actions they had taken to try and manage a large increase in traffic, including splitting ATC sectors and the addition of a number of temporary contingency routes to relieve pressure points.

3.28 Iran noted that restrictions (such as 10 minute longitudinal separation minimum at position PG which Tehran had to provide, even though it is within the Karachi FIR) were causing major capacity problems. They also noted that they had to descend all traffic entering the Kabul FIR at or below FL290 or FL270 and below between 2000 and 2400 UTC.

3.29 Iran noted that the eastbound peak traffic loads around 1900 UTC were more of a problem than westbound at present. The ICAO MID Office would assist Iran in determining and building capacity, especially at their forthcoming meeting in Cairo 24-25 September 2014.

First Meeting of the Ad Hoc Afghanistan Contingency Group  
Report on Agenda Items

---

3.30 Iran stressed the need for the improvement of certain key components of their ATM system, in order to be able to provide enhanced capacity to accommodate the increased flow of traffic (as an example the south-eastern part of the Tehran FIR was not covered with radar services; however three purchased radar antennas to cover this area with radar services had been reserved by France for more than 10 years). Based on this, and taking into consideration that the Iranian Airspace was used by most of the international air operators, it was recommended that discussions on the exemptions to the sanctions imposed on Iran should be undertaken to allow Iran meet the standard requirements for the provision of ATS. NATO noted this and stated they would do what they could to bring this to the attention of the States concerned.

3.31 Singapore emphasised that capacity enhancement by using surveillance capability and close coordination with Karachi FIR, would help to alleviate the capacity problem at position PG by reducing the current procedural separation minima of 10 minutes.

3.32 The United States reminded the meeting that States needed to look at CNS infrastructure parameters such as Secondary Surveillance Radar (SSR) code limits in assessing their capability.

3.33 The AHACG/1 meeting noted that ICAO would issue a State Letter in the next week requesting States to detail what support (training, facilities, personnel, etc.) they could provide for Afghanistan and, if necessary due to contingency support, Iran.

**Agenda Item 4: Civil/Military cooperation, contingency promulgation and implementation**

IFATCA Perspective (WP06)

4.1 IFATCA emphasised to the meeting that conflict situations had to be a serious flight risk to be considered by airlines when planning routes in certain areas of the world after the tragic loss of MH17. When considering their route options, operators would obviously maintain safety as their first priority; however any rerouting by airlines could have an adverse effect on the adjacent airspace with regard to traffic intensity and route complexity, and thus cause another safety issue.

4.1 Prior to the events of 17 July 2014, an IFATCA member association in the area concerned reported that their FIR was handling over 900 overflights each day, compared to about 400 overflights before the Ukraine conflict. IFATCA stated that a rapid increase in traffic like this would be difficult for any ATC unit to efficiently manage, especially those with ageing equipment, limited facilities, a ground-based navigation route network and poor communication with neighbouring units.

4.2 IFATCA stated that when preparing contingency plans for the possibility of Afghanistan's airspace, the implications of the migration of a large number of flights to alternative routes or into a single FIR must be considered. The airspace in some parts of this region was already congested and in addition the military authorities may prohibit civil aircraft operations in large areas. Therefore the addition of extra flights could have serious repercussions on the efficiency and ultimate safety of operation of ATC units in the area; thus a comprehensive safety case based on Annex 19 Safety Management System principles must be conducted before implementation.

Contingency Operation Promulgation and Implementation (WP07)

4.3 ICAO provided information on potential contingency scheme promulgation and implementation issues that should be considered, prior to the endorsement of any such scheme.

4.4 The effective date of any contingency routes and associated procedures must be an AIRAC date, as required by Annex 15. Promulgation must be by Aeronautical Information Publication (AIP) Supplement issued not less than 56 days before the effective date, in order to ensure that updated Flight Management System (FMS) data could be loaded into aircraft in readiness.

4.5 NOTAM should only be used to define contingency routes in extreme circumstances arising at very short notice. In the event that extreme circumstances require promulgation of contingency routes by NOTAM, it should be recognised that few States had implemented graphical NOTAM; therefore an Internet resource for hosting graphical representations of contingency routes and airspace should be arranged, and accessible from ICAO Regional Office websites.

4.6 Details of contingency routes published in any AIP Supplement must be in accordance with the requirements of Annex 15 ENR 3.2 – Appendix 1 requirements for Upper ATS routes.

4.7 No contingency arrangement could be successful unless it had been consulted with all affected stakeholders, including *inter alia*, airlines, military, ATC units, and aerodrome operators. Each involved State must ensure that there was an adequate effort to identify potential problems that could be addressed in designing the contingency scheme, or mitigated as part of a safety analysis. In addition, such consultation improved buy-in and conformance.

4.8 Communication of any inter-regional contingency scheme that may disrupt passenger and airline movements was necessary to political decision-makers and also to the media if necessary. Each State must evaluate the potential consequences of the contingency operation and reassure/inform as required to reduce the enquiries and any confusion that resulted from an actual implementation.

## Agenda Item 5: Next meeting

### Meetings and Milestones (WP08)

5.1 ICAO noted that after AHACG/1, there were a number of opportunities to develop capability building measures, contingency arrangements, pre-implementation co-ordination and communication processes, implementation agreements, and post-implementation communication and monitoring procedures:

- 22-23 September 2014 – Eurasia Special Coordination Meeting (SCM, Beijing, China) with ICAO APAC, ICAO European/North Atlantic (EUR/NAT) Offices and EURONTROL expected to attend;
- 24-25 September 2014, SCM on the Implementation of ATM Contingency Arrangements [in the MID Region], Cairo, Egypt; and
- 29-31 October 2014, Fourth Meeting of the Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS/4, Bangkok, Thailand), at which the ICAO APAC, MID, and EUR/NAT Offices should all be present.

5.2 While the AHACG/1 meeting should provide a forum for strategy development, and the Eurasia SCM and TRASAS meetings would be opportunities for the ICAO Regional Offices to develop the necessary technical and administrative planning, the meeting agreed that there needed to be a comprehensive follow-up planning to implement any contingency operation. Thus a second meeting of the AHACG (AHACG/2) was proposed, but in addition to the AHACG/1 participants, other States that would need to develop comprehensive implementation plans should be invited such as Bulgaria, Pakistan, Turkey, Armenia, and Azerbaijan. AHACG/2 was tentatively planned for 14-16 or 15-17 November 2014 (to be determined), supported by NATO at Istanbul, Turkey.

5.3 In addition to the technical meetings, the AHACG agreed that there would be a need for a high level contact group at Director General or Ministerial level to ensure the right resources and cooperation were in place for any contingency scheme.

5.4 The meeting noted that consideration should be given to some form of pre and post-implementation monitoring, to ensure the agreed actions have been taken and that any adjustments have been made to the plan. Thus a pre and post-implementation monitoring schedule should be considered. **Appendix A** is a summary timeline of milestones and events.

**Agenda Item 6: Any other business**

6.1 There was no other business at the meeting.

**Agenda Item 7: Closing**

7.1 Mr. Michiel Vreedenburgh, Chief, Implementation Planning and Support, ANB, ICAO remarked that the first meeting of the AHACG had been a good step. In summary, all affected States and Organisations needed to plan for a disruption or discontinuation of service to en-route operations in Kabul's upper airspace to take into account:

- uncontrolled upper airspace with procedural operations above the flight level assigned for military operations; or
- closure of airspace and re-routed operations; or
- a combination of the above.

7.2 Mr. Vreedenburgh noted that plans using current ATS routes did not need the approval of the ICAO Council, but there were already some contingency routes being used in Iran. He noted that all States and Organisations should support Afghanistan in its efforts regarding procuring and transitioning ANS as described. Moreover, he stated that contingency plans should be sent to ICAO by 10 October and include an assessment of:

- a) capacity, using modelling/simulation;
- b) safety, identifying required mitigation actions;
- c) security, if applicable, due to conflict zones en-route; and
- d) timeline for implementation including approvals, Letters of Agreement and publication of aeronautical information and coordinating and publishing revised airline schedules.

7.3 ICAO would support the planning process by:

- a) Convene next Second Meeting of Ad hoc Afghanistan Contingency Group, tentatively mid-November in Istanbul;
- b) Convene high-level meeting, tentatively mid-October;
- c) Arrange for Pakistan to attend both meetings;
- d) APAC, EUR/NAT and MID Regional Offices to support work and meetings;
- e) Support from ANB to ROs and with coordination of HQ actions, e.g. facilitating new overflight permissions/authorisations;
- f) Keep the President of the Council and Secretary General informed;
- g) Process PfAs to ANPs for any new ATS routes and/or arrange for approval of temporary deviation from ANP, if applicable;
- h) Keep the aviation community informed; and
- i) ICAO to coordinate partners to support Afghanistan following the transition with assistance for ANSP training and safety oversight capacity building; ICAO to send a letter to seek donors.

-----

First Meeting of the Ad Hoc Afghanistan Contingency Group  
Report on Agenda Items

**Appendix A: Milestones and Tasks**

States	ICAO	IATA/IFATCA/ EURCONTROL	NATO/ISAF	Weekly Timeline
	Conduct of AHACG/1, Kuala Lumpur, Malaysia <b>11-12 SEP</b>			08 SEP 2014
AIRAC promulgation cut-off: <b>18 SEP</b> , effective 13 NOV	Engagement with Pakistan at high level: <b>22 SEP</b>		AIRAC promulgation cut-off: <b>18 SEP</b> , effective <b>13 NOV</b>	15 SEP 2014
Iran to advise ICAO of OTS feasibility and India to assess delegated ANS option: <b>22 SEP</b>	Conduct of Eurasia SCM, Beijing, China: <b>22-23 SEP</b> and MID SCM: <b>24-25 SEP</b>			22 SEP 2014
Thailand to advise BOBCAT feasibility H24 two way (Iranian or Afghan airspace) by <b>01 OCT</b>	State Letter to seek donors and advisory of high-level contact meeting by: <b>01 OCT</b>	EUROCONTROL NM to consider, with Thailand and ICAO, creation of a contingency website page by: <b>01 OCT</b>	Advise ICAO of any sanctions amendment for crucial Iranian ATM facilities by: <b>01 OCT</b>	29 SEP 2014
All involved States to submit contingency schemes and safety, capacity and security assessments to ICAO: <b>10 OCT</b>				06 OCT 2014
AIRAC cut-off: <b>16 OCT</b> , effective <b>11 DEC</b>			NOTAM advisory Kabul FIR uncontrolled 15 DEC	13 OCT 2014
ATC training; airspace user advisories; high level briefings		EUROCONTROL to advise analysis of scheme: <b>24 OCT</b>		20 OCT 2014
Last date for Afghanistan to make contract/delegation decision: <b>01 NOV</b>	Conduct of TRASAS/4, Bangkok: <b>29-31 OCT</b>	IATA to brief airlines of contingency status: <b>31 OCT</b>		27 OCT 2014
	Conduct of high-level contact group (DGs, ministers?): <b>TBD</b>	IFATCA to brief associations of scheme by: <b>07 NOV</b>		3 NOV 2014
	Conduct of AHACG/2, Istanbul, Turkey <b>14-16 NOV</b>		SPIN/ACP change; PIFR Smart Cards	10 NOV 2014
				17 NOV 2014
	State Letter advising States of contingency and briefing or			24 NOV 2014



First Meeting of the Ad Hoc Afghanistan Contingency Group  
Report on Agenda Items

	approval of the ICAO Council by: <b>28 NOV</b>			
			Contingency procedures start; Trigger NOTAM: 01 DEC	01 DEC 2014
State advisory and trigger NOTAM: <b>08 DEC</b>			End of IAP ANSP contract by AFCENT: 14 DEC	08 DEC 2014
Contingency scheme activation if required: <b>15 DEC</b>				15 DEC 2014
Post-implementation safety assessment and monitoring				22 DEC 2014
Airspace authority transfers to ACAA: <b>01 JAN</b>				29 DEC 2014