



International Civil Aviation Organization

Air Traffic Services Route Network Task Force (ARN TF)

Sixth Meeting  
(Cairo, Egypt, 22 – 24 April 2013)

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**Agenda Item 4: Contingency Planning**

**MID REGION CONTINGENCY PLANNING STATUS**

*(Presented by the Secretariat)*

**SUMMARY**

This paper presents a follow up to the Implementation of Contingency Plans in the MID Region taking into consideration the current events in the Region and for ensuring safety and continuity of civil aviation, it's becoming more imperative and pressing that all MID States take necessary measures to sign the pending Contingency agreements with adjacent FIRs/States and expedite the promulgation of their contingency plans.

Action by the meeting is at paragraph 3.

**REFERENCES**

- ARN TF/5 Report
- MIDANPIRG/13 Report

**1. INTRODUCTION**

1.1 The MIDANPIRG/13 meeting, held in Abu Dhabi, UAE, 22 to 26 April 2012 was attended by a total of one hundred and two (102) participants, which included experts from ten (10) States (Bahrain, Egypt, Iran, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, UAE and Yemen) and six (6) International Organizations/Agencies (ACAC, CANSO, IATA, IFALPA, Jeppesen and MIDRMA).

1.2 The fifth meeting of ARN TF held in Amman, Jordan, 5 to 7 February 2012, was attended by a total of twenty Six (26) participants, including experts from seven (7) States (Bahrain, Egypt, Iran, Jordan, Oman, Saudi Arabia and United Arab Emirates) and four (4) International Organizations/Industries (IACA, IATA, CANSO and MIDRMA)..

**2. DISCUSSION**

2.1 The meeting may wish to note that MIDANPIRG/13 recalled that one of the challenges contributing to the low pace in implementation of contingency plans was the process of consultation and agreements with adjacent FIRs/States. However, it was noted that progress has been achieved in this regard, since a number of States have signed contingency planning agreements with adjacent FIRs/States, and some agreements are pending signatures.

2.2 MIDANPIRG/13 noted with concern that the development and promulgation of contingency plans remains one of the long standing deficiencies in the MID Region. Taking into consideration the current events in the Region and for ensuring safety and continuity of civil aviation, the MIDANPIRG/13 meeting recognized that it's becoming more imperative and pressing that all MID States take necessary measures to sign the pending contingency agreements with adjacent FIRs/States and expedite the promulgation of their contingency plans.

2.3 MIDANPIRG/13 reviewed the draft MID Regional Contingency Plan and the revised version of the Contingency Routing Scheme Asia/Middle East/Europe 2003 (CRAME-03) Document, which was consolidated by the Secretariat; and agreed that the plan should be further updated by States and users. Accordingly the meeting agreed to the Conclusion13/9 below:

*CONCLUSION 13/9: MID REGIONAL CONTINGENCY PLAN*

*That, States and users be urged to review the MID Regional Contingency Plan and the revised version of the CRAME-03 at **Appendices 4.2E and 4.2F** to the Report on Agenda Item 4.2, respectively; and provide updates and comments to the ICAO MID Regional Office before **1 September 2012**.*

2.4 As a follow up to the MIDANPIRG Conclusion mentioned above, the ICAO MID Regional Office issued the State letter AN 6/1.2.1 – 12/166 dated 12 June 2012, unfortunately few States replied by sending their updated contingency plans, but the ICAO MID Regional Office did not receive any comments related to the CRAME-03.

2.5 Taking into consideration the current events in the MID Region and for ensuring safety and continuity of civil aviation, the meeting is urgently invited to review the MID Regional Contingency Plan as **Appendix A** to this working paper. Further, the meeting is invited to update the contingency agreement status in the MID Region as at **Appendix B** and the contact details as at **Appendix C** to this working paper.

2.6 The meeting is kindly requested to review the CRAME-03 version (3), and amend the Routing scenarios by considering additional routes over Baghdad Flight Information Region (FIR), as at **Appendix D** to this working paper.

2.7 ICAO MID Regional Office, based on inputs received from the MID States, updated the focal points contact details of the CRAME-03 as at **Appendix E** to this working paper.

2.8 The meeting may wish to agree to the following draft Conclusion:

*DRAFT CONCLUSION 6/XX: MID REGIONAL CONTINGENCY PLAN*

*That,*

- a) States and users be urged to review the MID Regional Contingency Plan and the revised version of the CRAME-03 version (3) as at **Appendices X and X** to the ARN TF/6 Report on Agenda Item 3, respectively; and provide updates and comments to the ICAO MID Regional Office before **31 May 2013**;*
- b) ICAO MID Regional Office to coordinate with ICAO EUR/NAT and APAC Regional Offices and ICAO Head Quarters the revision and update process of the CRAME-03version (3).*

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) review and update the MID Regional Contingency Plan as at **Appendix A** to this working paper;
- b) update the Contingency agreement status as at **Appendix B** to this working paper;
- c) review and amend the CRAME-03 version (3) as at **Appendix D** to this working paper;
- d) urge States to sign their pending Contingency Planning Agreements with their respective neighboring States;
- e) agree to the Draft Conclusion as at para 2.8 above; and
- f) update the contact details as at **Appendix C and E** to this working paper

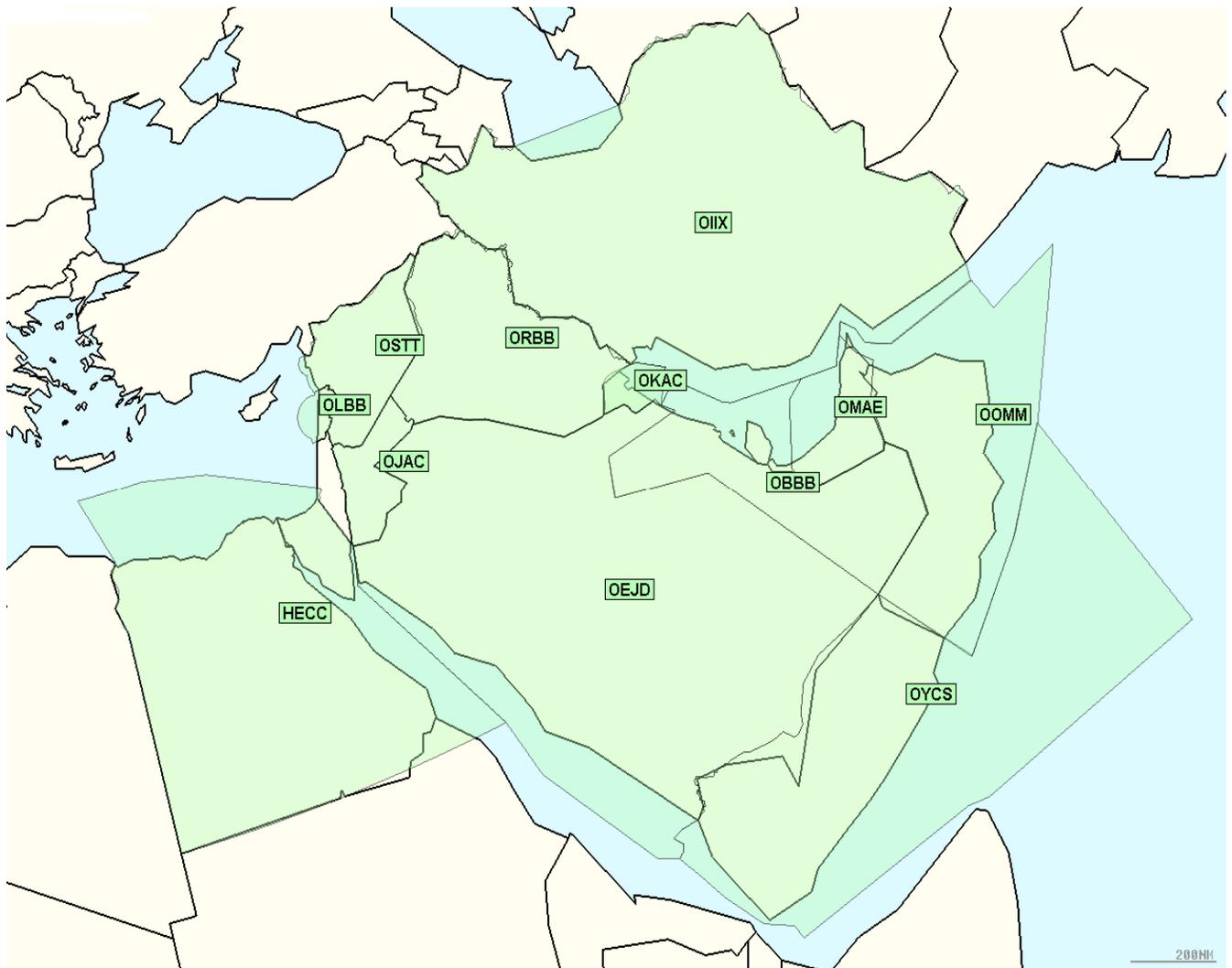
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APPENDIX A

MID Doc ----

AIR TRAFFIC MANAGEMENT OPERATIONAL CONTINGENCY PLAN

MID REGION



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by the MID Regional Office of ICAO

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## FOREWORD

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

The MID Region is fast growing continental airspace in the world, and is strategically situated between EUR/NAT Region to the North, WACAF Region to the west ESAF Region to the South East and APAC Region to the East. In 2010 in excess of ----- flights transited the airspace. The ATS Route accommodates a high concentration of traffic which regularly sees traffic flows in excess of 100 flights per hour. Control of traffic in this vast and complex airspace is delegated to a number of states, with their Continental Control facilities geographically dispersed.

The MID Regional Air Traffic Management Operational Contingency Plan is primarily for the information of operators and pilots planning and conducting operations in MID Region. The intent is to provide a description of the arrangements in place to deal with a range of contingency situations.

The Manual has been produced with the approval and on behalf of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG); a MID Regional planning body established under the auspices of the International Civil Aviation Organisation (ICAO). This Group is responsible for developing the required operational procedures; specifying the necessary services and facilities and; defining the aircraft and operator approval standards employed in the MID Region.

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This Document will be made available to users from a number of web sites including the ICAO MID website [http:// www.icao.int/mid/](http://www.icao.int/mid/)

To assist with the editing of this Manual and to ensure the currency and accuracy of future editions it would be appreciated if readers would submit their comments/suggestions for possible amendments/additions, to the ICAO MID Regional Office at the above Email address.



**ATM CONTINGENCY PLAN**  
**FOR FLIGHTS OPERATING**  
**WITHIN THE MID REGIONAL CONTINENTAL CONTROL AREAS**

**Objective**

The Air Traffic Management (ATM) Contingency Plan contains details of the arrangements in place to ensure, as far as possible, the continued safety of air navigation in the event of partial or total disruption of Air Traffic Services within the MID region. This document is produced in accordance with the requirement of ICAO Annex 11 – Air Traffic Services, Chapter 2, paragraph 2.30.

This plan details both common procedures throughout the MID Region and the procedures specific to the individual ANSPs within the MID region. The plan is presented in two parts:

**Part 1 – Contingency Situations Affecting ATC Facilities**

ATC services within the MID region are provided from a number of geographical locations and this plan details the contingency arrangements at each of these facilities. It is considered unlikely that any physical contingency at one particular facility will affect another directly, hence in Part 1 of this document the procedures for each ACC are considered independently.

**Part 2 – Contingency Situations Affecting Multiple FIRs**

This part of the plan considers events which are likely to affect more than one facility within the MID region. In particular these include the contingency arrangements in place to deal with;

- the airspace suffering contamination by volcanic ash.
- the steps taken to deal with a mass turn back<sup>4</sup> of traffic over the MID region.

### **States and FIRs affected**

**This document contains contingency procedures for those Air Navigation Service Providers (ANSPs) who provide an ATC service within the MID region, and those ANSPs whose airspace has a common boundary with the MID region for which supporting procedures are published.**

The states, FIRs and ACCs affected by this contingency plan and for which procedures are promulgated are as follows:

Bahrain

- Bahrain FIR

Egypt

- Cairo FIR

Iran, Islamic Republic of

- Tehran Control

Iraq

- Baghdad Control

Jordan

- Amman Control

Kuwait

- Kuwait Control

Lebanon

- Beirut Control

**Libya**

- Tripoli Control

Oman

- Muscat Control

Qatar

- Bahrain Control

Saudi Arabia

- Jeddah Control
- Riyadh Control

**Sudan**

- Khartoum Control

Syrian Arab Republic

- Damascus Control

United Arab Emirates

- Emirates Control

Yemen

- Sana'a Control

## PART 1 – CONTINGENCY SITUATIONS AFFECTING ATC FACILITIES

### SCOPE OF THE PLAN

This part of the Contingency Plan considers:

- Common procedures adopted by ATC facilities in the event of contingency situations.
- Detailed procedures adopted by individual ATC facilities in the event of contingency situations. The plan considers contingency situations which may result in a degradation of the ATC service provided (limited service) as well as situations where there is a total loss of the ability to provide ATC services (no service).

Where available, information is also provided outlining the steps taken by ANSPs to deal with a long term unavailability of an ATC facility. In particular the procedures detailed by each ATC facility will, insofar as possible, comprise the following:

- FIRs for which the Contingency Plan applies
- FIRs with supporting procedures
- Notification procedures
- Implementation of the plan
- Limited service
  - disruption of ground/air communication capability
  - disruption of ability to provide control services
- No service
  - loss of ground/air communication capability
  - loss of ability to provide control services
- Contingency Route Structure:
  - for activation within that FIR
  - for activation within adjacent FIR

- Long term contingency arrangements
- Contact details

## COMMON PROCEDURES

### Implementation of the plan

In the event of adoption of contingency procedures ANSPs will notify all affected agencies and operators appropriately.

In **Limited Service** situations the individual ANSP will decide upon the level of notification necessary and take action as required to cascade the information.

In **No Service** situations it is likely that the ATC facility involved will be subject to evacuation. In this instance the ANSP will issue NOTAMs and broadcast on appropriate frequencies that contingency procedures have been initiated. The notification process employed by individual ANSPs is detailed in their respective entries in this plan, however the general format will be as follows:

Issue a NOTAM advising operators of the evacuation. The following is an example of the type of information which may be promulgated:

*“Due to emergency evacuation of (States ACC) all ATC services are terminated. Flights within (States ACC) FIR should continue as cleared and contact the next ATC agency as soon as possible. Flights not in receipt of an ATC clearance should land at an appropriate airfield or request clearance to avoid (State) FIR. Flights should monitor (defined frequencies).”*

Broadcast an evacuation message on appropriate frequencies:

*“Emergency evacuation of (States ACC) is in progress. No air traffic control service will be provided by (States ACC). Use extreme caution and monitor (control frequencies), emergency frequencies and air to air frequencies. Contact the next air traffic control unit as soon as possible”.*

### Traffic Information Broadcast by Aircraft (TIBA) procedures

The following communications procedures have been developed in accordance with the Traffic Information Broadcast by Aircraft (TIBA) procedures recommended by ICAO (Annex 11 – Air Traffic Services, Attachment C). These procedures should be applied when completing an altitude change to comply with the ATC clearance.

At least 3 minutes prior to the commencement of a climb or descent the flight should broadcast on the last assigned frequency, 121.5, 243.0 and 123.45 the following:

*“ALL STATION (callsign) (direction) DIRECT FROM (landfall fix) TO (oceanic entry point) LEAVING FLIGHT LEVEL (number) FOR FLIGHT LEVEL (number) AT (distance)(direction) FROM (oceanic entry point) AT (time)”.*

When the level change begins, the flight should make the following broadcast:



## **1.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES**

Bahrain FIR

## **1.2 FIRs WITH SUPPORTING PROCEDURES**

Emirates FIR  
Jeddah FIR  
Riyadh ACC  
Kuwait FIR  
Muscat FIR  
Tehran FIR  
Sana'a FIR

## **1.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

## **1.4 LIMITED SERVICE – PROCEDURES**

### **1.4.1 Disruption of ground/air communication capability**

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Bahrain frequency normally provided by Bahrain Control will be delegated as appropriate to the other ATS units namely Doha, Riyadh and Dhahran. Appropriate frequencies will be advised by Bahrain and the assisting ATS units.

Situations which could result in a Limited Service are:

#### Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Bahrain Communications center and Bahrain ACC )

#### Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

#### Staffing

Reduced Staffing  
Illness

**APPENDIX A**

Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

**1.4.2 Disruption of ability to provide control services**

Bahrain ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

*Separation standards*

Bahrain ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

*Contingency tracks*

Dependant on the nature of the service limitation, Bahrain may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

*Air Traffic Flow Management*

Bahrain ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Bahrain ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

**1.5 NO SERVICE – PROCEDURES**

**1.5.1 Loss of ground/air communication capability**

In the event of Bahrain ACC being unable to provide ground/air communications for Bahrain FIR **Bahrain and Qatar APP Units** will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
  - No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues
- d) Evacuation of Bahrain ACC
  - Fire
  - Bomb threat

#### *Effect on flights*

In the event of Bahrain ACC being unable to provide ground/air communications for a sustained period of time **Bahrain CAA** in coordination with adjacent FIR's could provide a limited communications facility to flights in the Bahrain FIR.

ATFM measures may be imposed as necessary.

### **1.5.2 Loss of ability to provide control services**

Should Bahrain ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Bahrain FIR.

In the event that Bahrain ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Bahrain Contingency plan.

**APPENDIX A**

The Plan will be activated by promulgation of a NOTAM issued by (CAA) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (CAA) and/or ICAO MID office.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Bahrain Contingency Procedures – **Appendix xx.** In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is **provided in Appendix XX.**

## **1.6 FLIGHT CREW AND OPERATOR PROCEDURES**

### **1.6.1 For flights within the Bahrain FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 **and 123.45** and the assigned Unit frequency. A listening watch on these frequencies must be maintained.

### **1.6.2 For flights within the Bahrain FIR – Westbound**

**Emirates ACC** will endeavour to provide an ATC service throughout the Bahrain FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures – **Appendix x**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<b>UNIT</b>	<b>TEL. No</b>	<b>FAX No</b>	<b>EMAIL</b>	<b>AFTN</b>
Tehran ACC	00982144544116 or 44554060 or 44544133 (Sector Controller)	00982144544117	<a href="mailto:maj.alireza@yahoo.com">maj.alireza@yahoo.com</a> <a href="mailto:alireza.majzoubi@gmail.com">alireza.majzoubi@gmail.com</a>	OIIIZGZX
Muscat ACC	00968 24 519 550	00968 24519 930		OOMMZQZX
Riyadh ACC	+966 1 221 1121	00966	atskia@gmail.com	
Jeddah ACC	+9662685 5764/5	+9662 685 54021	atcfahad@hotmail.com	
Sana'a ACC	00967 1345402/3	00967 1344047	atccns@gmail.com	OYSNZQZX OYSNZQZA
Bahrain ACC	009731732 1080/1081	0097317321029	bahatc@caa.gov.bh	OB BBZQZX OB BBZQZA
Emirates ACC	0097125996969	0097125996850	atc@szc.gcaa.ae	OMAEZQZX

		0097125996852	mdolbey@szc.gcaa.ae	OMAEYAYH
Kuwait ACC	+96524346220 / 24710268	+965 24346221	baracoda99@hotmail.com q8dgca_danoff@hotmail.com	
Qatar APP	+974 4462 2300	+974 4465 6554	ahmed@caa.gov.qa	

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

### **1.6.3 For flights within the Bahrain FIR – Eastbound**

**Jeddah ACC, Riyadh ACC and Kuwait ACC** will endeavour to provide an ATC service throughout the Bahrain FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

### **1.6.4 For flights approaching the Bahrain FIR when the contingency is activated.**

#### *Not in Receipt of an ATC Clearance*

In the event that Bahrain ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Bahrain FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Bahrain FIR or to land at an appropriate airfield.

#### *In receipt of an acknowledged ATC Clearance outside Bahrain FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Bahrain FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

## **1.7 BAHRAIN FIR – CONTINGENCY ROUTE STRUCTURE**

### **1.7.1 For activation within Bahrain FIR**

In a **limited service** contingency situation Bahrain ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Bahrain FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

### **1.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Bahrain FIR should use the following contingency routes:

**CONTINGENCY ROUTE STRUCTURE FOR BAHRAIN FIR**

<b>ROUTE NAME</b>	<b>ENTRY FIX</b>	<b>AIRWAY ROUTING</b>	<b>EXIT FIX</b>	<b>ALTITUDES</b>
<b>BAHCR1WB</b>	BALUS	UL768 RAMSI UL602	DAVUS	FL260+ EXCEPT FL340
<b>BAHCR2WB</b>	BALUS	UL768	COPPI	FL260+ EXCEPT FL340
<b>BAHCR3WB</b>	BALUS	N929 SILNO A791	BPN	FL260+ EXCEPT FL340
<b>BAHCR4WB</b>	BALUS	N929 SILNO G663	GIBUS	FL260+ EXCEPT FL340
<b>BAHCR5WB</b>	ALSER	G663 SILNO G663	GIBUS	FL340 ONLY
<b>BAHCR6WB</b>	ALSER	G663 SILNO A791	BPN	FL340 ONLY
<b>BAHCR7WB</b>	COPPI	G667	AVOBO	FL240 ONLY
<b>BAHCR8EB</b>	AKRAM	B418 MUTAR G663	ALSER	FL270, FL350
<b>BAHCR9EB</b>	AKRAM	B41B ASPAN UN318	OXAT	FL270, 290, 350
<b>BAHCR10EB</b>	MGA	UP891	EMILU	FL250
<b>BAHCR11EB</b>	TAGSO	UN318	LOXAT	FL310, FL370
<b>BAHCR12EB</b>	ULOVO	UP559 KEDAT UM691 KUSAR UN318	LOXAT	FL330, FL390+
<b>BAHCR13EB</b>	RABAP	UM667 UMAMA UP559 LOTIT A791	NADAM	FL250, 290, 330, 370+
<b>BAHCRE14B</b>	AMBIK	→GEVAL →	KUVER	FL270, FL350

**CONDITIONS**

1. all aircraft to be level prior to entry fix
2. mach speeds assigned to all aircraft
3. no altitude changes in Bahrain fir
4. all aircraft will correct altitude for direction of flight

**SEPARATION**

1. all inbound aircraft to be separated by **minimum 15 minutes** longitudinally at entry fix. separation shall be **constant or increasing** as per assigned speeds/mach numbers;
2. all inbound aircraft to be separated by **minimum 20 minutes** longitudinally at entry fix **if faster aircraft behind; maximum overtake speed difference of m.04 or 25KTS IAS.**

Communications with the next ATSU should be established at the earliest opportunity.

**CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT  
MONITORING SERVICES**

CONTINGENCY ROUTE	ROUTE	MANDATORY REPORT	MANDATORY REPORT	EXIT FREQUENCY
<b>BAHCR1WB</b>	BALUS UL768 RAMSI UL602 DAVUS	BALUS 132.12MHZ B/U 121.1 DOHA	RAMSI 132.45MHZ B/U 127.85	IVONI KUW 125.3MHZ
<b>BAHCR2WB</b>	BALUS UL768 COPPI	BALUS 132.12MHZ B/U 121.1 DOHA	RAMSI 132.45MHZ B/U 127.85	COPPI JED 134.4 FL340 and Below RIY 132.5 FL360 and above
<b>BAHCR3WB</b>	BALUS N929 SILNO A791 BPN	BALUS 132.12MHZ B/U 121.1 DOHA	RULEX 132.45MHZ B/U 127.85	BPN JED 134.3 FL340 and Below RIY 125.9 FL360 and above
<b>BAHCR4WB</b>	BALUS N929 SILNO G663 GIBUS	BALUS 132.12MHZ B/U 121.1 DOHA	RULEX 132.45MHZ B/U 127.85	GIBUS RIY 126.0MHZ
<b>BAHCR5WB</b>	ALSER G663 GIBUS	ALSER 132.45MHZ B/U 127.85	SILNO 125.05MHZ B/U 126.3 DAM	GIBUS RIY 126.0MHZ
<b>BAHCR6WB</b>	ALSER G663 SILNO A791 BPN	ALSER 132.45MHZ B/U 127.85	SILNO 125.05MHZ B/U 126.3 DAM	BPN JED 134.3MHZ
<b>BAHCR7WB</b>	COPPI G667 AVOBO	COPPI 132.45MHZ B/U 126.3 DAM		MGA RIY 126.0MHZ
<b>BAHCR8EB</b>	B418 NUTAR G663	AKRAM 126.7MHZ B/U 126.3 DAM	MUTAR 132.45 MHZ B/U 126.3 DAM	ALSER TEH 133.4 MHZ
<b>BAHCR9EB</b>	B418 ASPAN UN318	AKRAM 126.7MHZ B/U 126.3 DAM	ASPAN 132.45MHZ B/U 126.3DAM	LOXAT UAE 128.25MHZ
<b>BAHCR10EB</b>	UP891	MGA 126.7MHZ B/U 126.3 DAM		EMILU KUW 125.3MHZ
<b>BAHCR11EB</b>	UN318	EGNOV 126.7MHZ B/U 126.3DAM	ASPAN 132.45MHZ B/U 126.3 DAM	LOXAT UAE 128.25MHZ
<b>BAHCR12EB</b>	UP559 KEDAT KUSAR UN318	KEDAT 126.7 MHZ B/U 126.3 DAM	ASPAN 132.45 MHZ B/U 126.3	LOXAT UAE 128.25MHZ
<b>BAHCR13EB</b>	UM667 UMAMA UP559 LOTIT A791	GEVAL 132.45 MHZ B/U 126.3 DAM	LOTIT 132.12 MZH B/U 126.3 DAM	NADAM UAE 132.15 MHZ
<b>BAHCR14EB</b>	AMBIK → GEVAL → KUPER	GEVAL 132.45 MHZ B/U 126.3 DAM		KUPER TEH 133.4 MHZ

Note: Any Aircraft with HF capabilities can make position reports on BAH

**APPENDIX A**

HF frequencies 8910KHZ 5667KHZ 2992KHZ

**1.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Bahrain loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Bahrain facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Bahrain FIR after several days. In the interim period, flight operations in Bahrain would be severely restricted and all flights will be required to route clear of the Bahrain FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**APPENDIX XX**

**SAMPLE NOTAMS**

**a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE BAHRAIN FIR ALL ACFT ARE ADVISED TO AVOID BAHRAIN FIR.

**b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE BAHRAIN FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DELAY AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

**c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN BAHRAIN FIR ALL ACFT ARE ADVISED THAT THE BAHRAIN AIR TRAFFIC SERVICES CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY BAHRAIN FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE CONTINGENCY ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY BAHRAIN AIRSPACE.

**d) Non adherence to the Contingency Plan**

NOTAM.....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE BAHRAIN FIR.

## CHAPTER 2: DETAILED PROCEDURES – CAIRO FIR

### 2.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Cairo FIR

### 2.2 FIRs WITH SUPPORTING PROCEDURES

Athens FIR  
Nicosia FIR  
Amman FIR  
Tel Aviv FIR  
Jeddah FIR  
Riyadh ACC,  
Khartoum FIR  
Tripoli FIR

### 2.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

### 2.4 LIMITED SERVICE – PROCEDURES

**2.4.1** The various circumstances surrounding each contingency situation make it difficult to establish exact and detailed procedures to be followed in each case. Here are the general guidelines which should be followed in case of limited service.

- The *AOCT "ATS Operational Contingency Team"* will convene to have the appropriate procedures applied according to the situation arising.
- The *AOCT* will take the necessary action As Soon As Possible to inform all adjacent ANSPs and Operators.
- The Limited Service message will be broadcast on appropriate frequencies and operators in receipt of such message are asked to forward this information to affected flights wherever possible.

**APPENDIX A**

- Cairo ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.
- Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.
- Cairo ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.
- Dependant on the nature of the service limitation, Cairo ACC may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.
- Cairo ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

**2.5 NO SERVICE – PROCEDURES**

In the event of Cairo ACC being unable to provide the Air Traffic Services (ATS), the head of ECAA will activate the Egyptian Air Traffic Services contingency plan, the civil aviation authorities of the adjacent FIRs will be notified in accordance with the Operational Coordination Agreement (OCA) signed between Cairo ACC and the adjacent ACCs. The adjacent ACCs will in return activate the procedures stated in the OCA.

The Plan will be activated by promulgation of a NOTAM issued by (ECAA) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (ECAA) and/or ICAO MID office.

**2.6 CAIRO FIR – CONTINGENCY ROUTE STRUCTURE**

**2.6.1 For activation within Cairo FIR**

In a **limited service** contingency situation Cairo ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Cairo FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN and/or any other means available.

**2.6.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Cairo FIR should use the following contingency routes.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Athens ACC				
Nicosia ACC				
Amman ACC				

Jeddah ACC	00966	00966		
Riyadh ACC	00966	00966		
Khartoum ACC				
Tripoli ACC				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

**CONTINGENCY ROUTE STRUCTURE AND FREQUENCIES FOR FLIGHT MONITORING SERVICES CAIRO FIR**

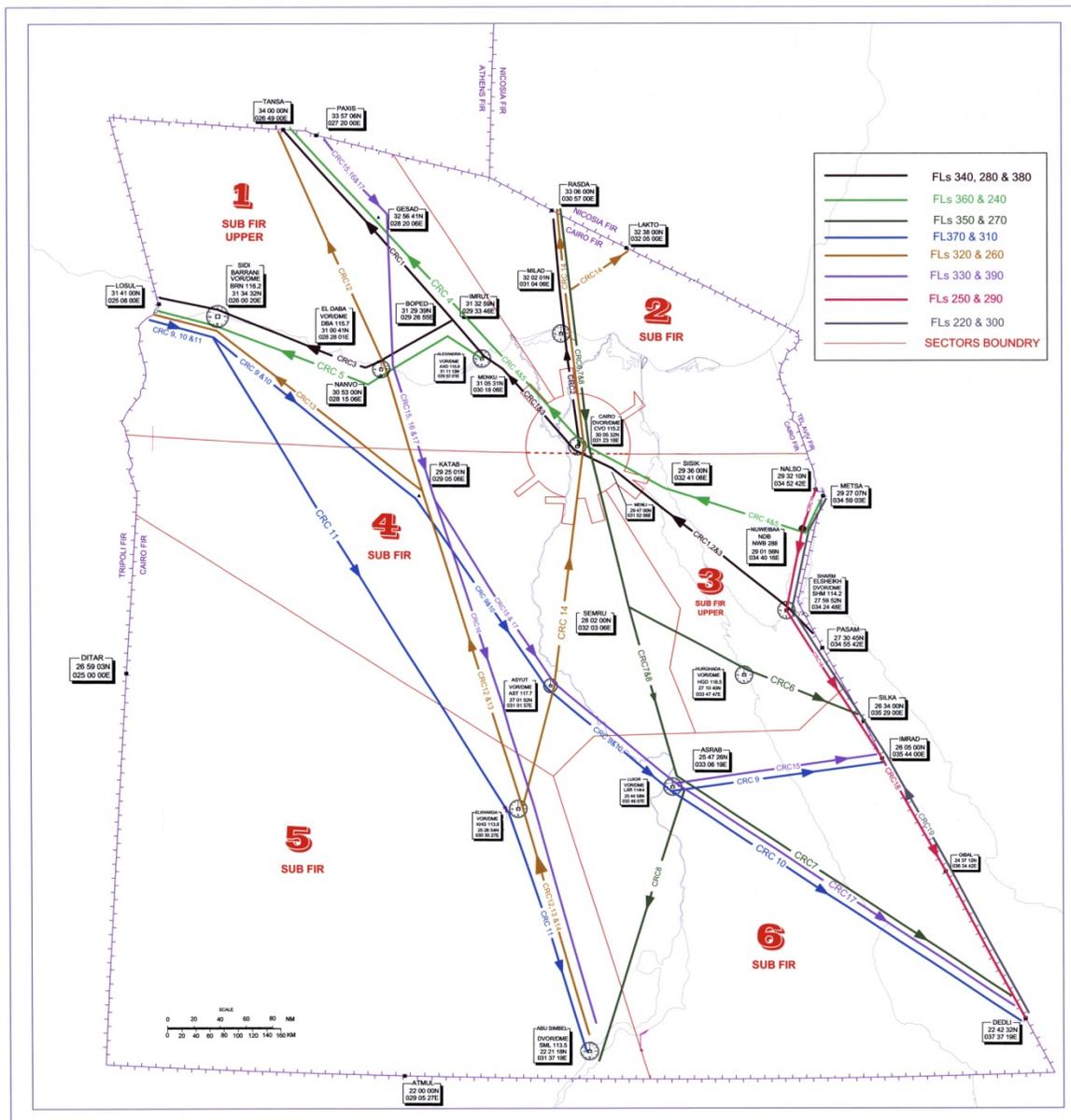
CONTINGENCY ROUTES IN CAIRO (CRC)	ATS ROUTES	FREQUENCIES	FL ASSIGNMENT
CRC1	PASAM-A411-CVO-IMRUT-UL617-TANSA	126.6Mhz CVO 127.7Mhz	FLs 380, 340 and 280
CRC 2	PASAM-A411-CVO-A16-RASDA	126.6Mhz CVO 124.7Mhz	FLs 380,340 and 280
CRC 3	PASAM-A411-CVO-A727-OTIKO- W725-BRN-A411-LOSUL	126.6Mhz CVO 127.7Mhz	FLs 380,340 and 280
CRC 4	METSA-W733-NWB-A791-MENLI-A411-CVO-A727-IMRUT- L617/UL617-TANSA	126.6Mhz CVO 127.7Mhz	FLs 360 and 240
CRC 5	METSA-W733-NWB-A791-MENLI-A411-CVO-A1-BOPED- W725-BRN- A411-LOSUL	126.6Mhz CVO 127.7Mhz	FLs 360 and 240
CRC 6	RASDA-A16-CVO-A727-SEMURU-B418-SILKA	124.7Mhz CVO 132.2Mhz SEMRU 126.6Mhz	FLs 350 and 270
CRC 7	RASDA-A16-CVO-A727-LXR-R775-DEDLI	124.7Mhz CVO 132.2Mhz SEMRU 129.4Mhz	FLs 350 and 270
CRC 8	RASDA-A16-CVO-A727-SML	124.7Mhz CVO 132.2Mhz SEMURU 129.4Mhz	FLs 350 and 270
CRC 9	LOSUL-A411-BRN-UP751-LXR-A145-IMRAD	127.7Mhz KATAB 132.2Mhz AST 129.4Mhz	FLs 370 and 310
CRC 10	LOSUL-A411-BRN-UP751-LXR-R775-DEDLI	127.7Mhz KATAB 132.2Mhz AST 129.4Mhz	FLs 370 and 310
CRC 11	LOSUL-A411-BRN-A145-KHG-B12-SML	127.7Mhz DANAD 132.2Mhz/ ABM AST 129.4Mhz	FLs 370 and 310
CRC 12	SML-B12-DBA-UL613-TANSA	129.4Mhz ABM AST 132.2Mhz KATAB 127.7Mhz	FLs 320 and 260
CRC 13	SML-B12-KATAB-UP751-BRN-A411-LOSUL	129.4Mhz ABM AST 132.2Mhz KATAB 127.7Mhz	FLs 320 and 260
CRC14	SML-B12-KHG-W8-CVO-A16-MILAD-A16-RASDA OR N307-LAKTO	129.4Mhz AST 132.2mhz CVO 124.7Mhz	FLs 320 and 260
CRC15	PAXIS-UL607-GESAD-L551-DBA-B12-KATAB-UP751-LXR-A145-IMRAD	127.7Mhz KATAB 132.2Mhz AST 129.4Mhz	FLs 330 and 390
CRC16	PAXIS-UL607-GESAD-L551-DBA-B12-SML	127.7Mhz KATAB 132.2Mhz ABM AST 129.4Mhz	FLs 330 and 390
CRC17	PAXIS-UL607-GESAD-L551-DBA-B12-KATAB-UP751-LXR-R775-DEDLI	127.7Mhz KATAB 132.2Mhz AST 129.4Mhz	FLs 330 and 390
CRC18	NALSO-NWB-SHM-IMRAD-GIBAL-DEDLI	126.6Mhz SILKA	FLs 290 and 250

		129.4Mhz	
CRC19	DEDLI-GIBAL-IMRAD-SHM-NWB-NALSO	129.4Mhz SILKA 126.6Mhz	FLs 300 and 220

***This CRCs table does not include any eastbound routes to AMMAN FIR.***  
 Note; Cairo FIR served as well by HF Frequency 11300 KHz

**APPENDIX 1E**

**CONTINGENCY ROUTES WITHIN CAIRO FIR**



Communications with the next ATSU should be established at the earliest opportunity.

## **2.7 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Egypt loses the ability to provide an ATC service in the Cairo FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Cairo facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Cairo FIR after several days. In the interim period no ATC service will be available and all flights will be required to route clear of the Cairo FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

### **SAMPLE NOTAMS**

#### **a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE CAIRO FIR ALL ACFT ARE ADVISED TO AVOID THE CAIRO FIR.

#### **b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE CAIRO FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

#### **c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN CAIRO FIR ALL ACFT ARE ADVISED THAT THE Cairo FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY CAIRO AIRSPACE.

**d) Non adherence to the Contingency Plan**

NOTAM.....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE CAIRO FIR.

## **CHAPTER 3: DETAILED PROCEDURES – TEHRAN FIR**

### **3.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES**

Tehran FIR

### **3.2 FIRs WITH SUPPORTING PROCEDURES**

Ankara FIR  
Baghdad FIR  
Bahrain FIR  
Baku FIR  
Emirates FIR  
Kabul FIR  
Karachi FIR  
Kuwait FIR  
Muscat FIR  
Turkmenbashi FIR  
Yerevan FIR

### **3.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

### **3.4 LIMITED SERVICE – PROCEDURES**

#### **3.4.1 Disruption of ground/air communication capability**

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Tehran frequency normally provided by Tehran Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Tehran and the assisting ATS units.

Situations which could result in a Limited Service are:

## Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Tehran Communications center and Tehran ACC )

## Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

## Staffing

Reduced Staffing  
Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

## Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

### **3.4.2 Disruption of ability to provide control services**

Tehran ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

#### *Separation standards*

Tehran ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

#### *Contingency tracks*

Dependant on the nature of the service limitation, Tehran may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

#### *Air Traffic Flow Management*

**APPENDIX A**

Tehran ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Tehran ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

**3.5 NO SERVICE – PROCEDURES**

**3.5.1 Loss of ground/air communication capability**

In the event of Tehran ACC being unable to provide ground/air communications for Tehran FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
  - No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues
- d) Evacuation of Tehran ACC
  - Fire
  - Bomb threat

*Effect on flights*

In the event of Tehran ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Tehran FIR.

ATFM measures may be imposed as necessary.

### **3.5.2 Loss of ability to provide control services**

Should Tehran ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Tehran FIR.

In the event that Tehran ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Tehran Contingency plan.

The Plan will be activated by promulgation of a NOTAM issued by (IRCAO) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (IRCAO) and/or ICAO MID office

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Tehran Contingency Procedures – Appendix xx.' In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

## **3.6 FLIGHT CREW AND OPERATOR PROCEDURES**

### **3.6.1 For flights within the Tehran FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

### **3.6.2 For flights within the Tehran FIR – Westbound**

----- ACC's will endeavour to provide an ATC service throughout the Tehran FIR as soon as evacuation commences. These procedures are detailed at Tehran Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Ankara FIR	+903123980000 +903123981153 +903123981614 +903123980296	+903123980961		LTAZRZX LTAZQZX
Baghdad FIR	+9647901655461			
Bahrain ACC	+97317321080 +97317321081 +97317320486	+97317321029	bahatc@caa.gov.bh	OBBBZQZX OBBBZQZA
Baku FIR	+994124971673			UBBBZRZX UBBBZQZX
NAKHCEVAN ACC	+994136446950			UBBNZPZX UBBNZQZX
UAE ACC	00971	00971		OMAEZQZX OMAEYAYH
Kabul FIR	+873781338375			
Karachi FIR	+922199248038 +922199071953 +922199242148	+922134604322		OPKCRZX OPKCRZA
Kuwait FIR	+9654762994 +9654342476 +9654760763	+9654310096		
Muscat ACC	+96824519550 +96824519507	+96824519939		OOMMZQZX
Turkmenbashi FIR	+99312396664 +99312510162 +99312377750	+99312331352		
Yerevan FIR	+37410593479 +37410593260 +37410593304	+37410593304		

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

### 3.6.3 For flights within the Tehran FIR – Eastbound

----- ACC will endeavour to provide an ATC service throughout the Bahrain FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

**3.6.4 For flights approaching the Tehran FIR when the contingency is activated.**

*Not in Receipt of an ATC Clearance*

In the event that Tehran ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Tehran FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Tehran FIR or to land at an appropriate airfield.

*In receipt of an acknowledged ATC Clearance outside Tehran FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Tehran FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

**3.7 TEHRAN FIR – CONTINGENCY ROUTE STRUCTURE**

**3.7.1 For activation within Tehran FIR**

In a **limited service** contingency situation Tehran ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Tehran FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

**3.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Tehran FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

**Contingency Route Scheme**

Entry FIR	Exit FIR	Entry FIX	Route Designator	Exit FIX	Flight Levels	Remarks
Ankara	Nakhchivan	DASIS	UL333 R661	DULAV	FL330	
		ALRAM	G208 A422 R661	DULAV	FL310, FL410	ALRAM-UMH Eastbound (one way) then two way
Ankara	Yerevan	ALRAM	UL333 G482	MAGRI	FL330	
		ALRAM	G208 A422 G482	MAGRI	FL310, FL410	ALRAM-UMH Eastbound then two way
Ankara	Ashgabat	ALRAM	-G208-G781-A416-W4	RIKOP	FL310, FL410	
		DASIS	UL333-A416-W4	RIKOP	FL330	ALRAM-UMH Eastbound then two way
Ankara	Karachi bound to Delhi and beyond	DASIS	R660-A416-N39-G208 G452	DERBO	FL330	
		ALRAM	G208-G208 UL124 - R661-T210-G208 UL125-G452	DERBO	FL310, FL410	ALRAM-UMH Eastbound then two way
			G208-UL124 R661 -T210-	KEBUD		ALRAM-UMH

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Ankara	Karachi Bound to Mumbai and beyond	ALRAM	G208 UL125		FL310, FL410	Eastbound then two way
		DASIS	G208-R654-G665	ASVIB	FL330	
Ankara	Bahrain	ALRAM	G208-UL223-G667- W31-B417	TULAX	FL310, FL410	ALRAM-UMH Eastbound then two way
			G208-UL223-W3-R659	MIDSI		
			G208 - UL223 W3 -G663	ALSER		
			G208-R654-R659	MIDSI		
			G208-R654-R659-G663	ALSER		
		DASIS	UL333 R660-R661-R654-R659	MIDSI	FL330	
		DASIS	UL333 R660-R661-R654-R659-G663	ALSER		
Ankara	Kuwait	ALRAM	G208-UL223-G667- W31-B417	TULAX	FL310, FL410	ALRAM-UMH Eastbound then two way
		DASIS	UL333 R660-R661-R654-G667-W31-B417	TULAX	FL330	
Ankara	Emirates	ALRAM	G208-R654-R659-G666-UL223	SIR	FL310, FL410	ALRAM-UMH Eastbound then two way
		DASIS	UL333 R660-R661-R654-R659-G666-UL223	SIR	FL330	
	Landing UAE	ALRAM	G208-UL223-W3-G666	ORSAR	FL310, FL410	ALRAM-UMH Eastbound then two way
		DASIS	G208-R654-R659-G666-UL333 R660-R661-R654-R659-G666-			
Ankara	Kabul	DASIS	R660-B121-T210-G208-R205-G202	KAMAR	FL330	ALRAM-UMH Eastbound then two way
			R660-A416-or MSD-G792	SOKAM CHARN		
		ALRAM	G208-G208/UL124-T210-G208-R205-G202	KAMAR	FL310, FL410	
			G208-G208/UL124-G781-A416-or G792	SOKAM CHARN		
Ankara	Muscat	DASIS	R660-B121-T210-G208-W32-R654-	ORBIX	FL330	
		ALRAM	G208-R661-T210-G208-W32-R654	ORBIX	FL310, FL410	ALRAM-UMH Eastbound then two way
Yerevan	Bahrain	MAGRI	G482-R661-R654-R659-G663	ALSER	FL390	
			G482-R661-R654-R659	MIDSI		
Yerevan	Kuwait	MAGRI	G482-R661-R654-G667-W30-B417	TULAX	FL390	
Yerevan	Emirates	MAGRI	G482-R661-R654-R659-G666-W147 UL223	SIR	FL390	
	Landing UAE	MAGRI	G482-R661-R654-R659-G666	ORSAR		
Yerevan	Karachi bound to Delhi and beyond	MAGRI	-B121-UL333-UN319-G452	DERBO	FL390	
	Karachi Bound to Mumbai and beyond		B121-A416-N39-G208/UL125-W32-UL124-UL124	KEBUD		
Yerevan	Kabul	MAGRI	B121-UL333-UN319-R794-G202-	KAMAR	FL390	
			B121-A416-or G792	SOKAM CHARN		
Yerevan	Muscat	MAGRI	B121-A416-T212 G208 UL125-W32-R654	ORBIX	FL390	
Baku	Emirates	ULDUS	P574-R654-R659-G666-UL223	SIR	FL370	
		DULAV	R661 UL125-R654-R659-G666-UL223		FL290	

Nakhchivan		LALDA	G670-B121-G667-R654-R659-G666-UL223		FL250	
	Landing UAE	ULDUS	P574-R659-G666	ORSAR	FL370	
		DULAV	R661 UL125-R654-R659-G666		FL290	
		LALDA	G670-B121-G667-R654-R659-G666		FL250	
Baku Nakhchivan	Bahrain	ULDUS	P574-R659-G663	ALSER	FL370	
			P574-R659	MIDSI		
		DULAV	R661 UL125-R654-R659-G663	MIDSI	FL290	
		LALDA	G670-B121-G667-R654-R659-G663	ALSER	FL250	
Baku Nakhchivan	Kuwait	ULDUS	P574-SAV-G667-AWZ-W30-MAH-B417	TULAX	FL370	
		DULAV	R661 UL125-R654-G667-W30-B417		FL290	
Baku Nakhchivan	Baghdad	ULDUS	P574-B411	PAXAT	FL370	
		DULAV	R661 UL125-R654-B411		FL290	
		LALDA	G670-B121-G667-B411		FL250	
Baku Nakhchivan	Muscat	ULDUS	UN319-A419-R654	ORBIX	FL370	
		DULAV	R661-R660-A416-N39-G208-W32-R654		FL290	
		LALDA	G670-A416-N39-G208-W32-R654-		FL250	
Baku Nakhchivan	Kabul	ULDUS	UN319-R794-G202	KAMAR	FL370	
			UN319-A416-or G792	SOKAM CHARN		
		DULAV	UL125-UP146-UL333-UN319-R794-G202-	KAMAR	FL290	
Baku Nakhchivan	Karachi bound to Delhi and beyond	DULAV	UL125 -UL333 - UN319 - G452	DERBO	FL290	
		ULDUS	UN319-G452		FL370	
		LALDA	G670-A416-N39-G208-G452		FL250	
	Karachi Bound to Mumbai and beyond	DULAV	R661-R660-A416- N39-G208-	KEBUD	FL290	
		ULDUS	UN319-UL125 G208		FL370	
		LALDA	G670-A416-N39-G208		FL250	
Ashgabat	Karachi	ORPAB	G775-G208 UL125-PG or G452	KEBUD DERBO	FL270	
		GIRUN	G792-G775-G208 UL125-or G452		FL310	
Ashgabat	Kabul	ORPAB	G775-G792- or A416	SOKAM CHARN	FL270	
		GIRUN	G792 or A416		FL310	
Ashgabat	Muscat	ORPAB	G775-W2-R654	ORBIX	FL270	
		GIRUN	G775-W2-R654		FL310	
Ashgabat	Emirates	RIKOP	A419	DARAX	FL280	
Ashgabat	Bahrain	RIKOP	A419-G663	ALSER	FL280	
			A419-G663-R659	MIDSI		
Ashgabat	Kuwait	RIKOP	A419-G663-G669	NANPI	FL280	
Ashgabat	Baghdad	RIKOP	W4-A416-R660	DASIS	FL280	
Ashgabat	Ankara	RIKOP	W4-A416-G781-G208-G781	BONAM	FL280	BONAM-UMH West bound then two way
Emirates	Nakhchivan	DARAX	A419-W10-R659-R654-R661	DULAV	FL240, FL300, FL400	
	Baku		W32-G208-N39-R794	ULDUS		
Emirates	Yerevan	DARAX	A419-W10-R659-R654-R661-G482	MAGRI	FL240, FL300, FL400	
Emirates	Ashgabat	DARAX	A419	RIKOP	FL270	
Emirates	Kabul	DARAX	A419-A453	PIRAN	FL270	
Emirates	Baghdad	DARAX	A419-W10-R659-G202-B411	PAXAT	FL240,FL300, FL400	
			A419-W10-R659-R654-R661-R660-	DASIS	FL240,FL300,	

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Emirates	Ankara	DARAX	A419-W10-R659-R654-G208-G781- A419-W10-W3-UL223-G781	BONAM	FL400	BONAM-UMH West bound then two way
Kuwait	Baku	TULAX	B417-W30-G667-P574	ULDUS	FL250	
	Nakhchivan		B417-W30-G667-R654-R661	DULAV		
Kuwait	Yerevan	TULAX	B417-W30-G667-R654-R661-G482	MAGRI	FL250	
Kuwait	Ashgabat	NANPI	G669-G663-A419	RIKOP	FL350	
Kuwait	Kabul	NANPI	G669-G452-A453	PIRAN	FL350	
Kuwait	Karachi	NANPI	G669-G452	DERBO	FL350	
			G669-G452-UL124	KEBUD		
			G669-G452-R654-G665	ASVIB		
Kuwait	Muscat	NANPI	G669-W10-R654	ORBIX	FL350	
Kuwait	Landing UAE	NANPI	R784-W143-G666	ORSAR	FL350	
	UAE		R784-W143-G666-UL223	SIR		
Bahrain	Karachi	MIDSI	A453-G452	DERBO	FL190	
			A453-M561	ASVIB		
Bahrain	Baku	MIDSI	R659-R654-P574	ULDUS	FL200,FL340	BONAM-UMH West bound then two way
		ALSER	G663-R659-R654-P574		FL220,FL380	
	Nakhchivan	MIDSI	R659-R654-R661	DULAV	FL200,FL340	
		ALSER	G663-R659-R654-R661		FL220,FL380	
Bahrain	Yerevan	MIDSI	R659-R654-R661-G482	MAGRI	FL200,FL340	
		ALSER	G663-R659-R654-R661-G482		FL220,FL380	
Bahrain	Ashgabat	MIDSI	R659-G663-A419	RIKOP	FL190	
		ALSER	G663-A419		FL250	
Bahrain	Kabul	MIDSI	A453	PIRAN	FL190	
Bahrain	Landing UAE	KUVER	B416-R784-W143-G666	ORSAR	FL270	
	UAE		B416-R784-W143-G666-UL223	SIR		
Bahrain	Ankara	MIDSI	R659-R654-R661-R660	DASIS	FL200,FL340	BONAM-UMH West bound then two way
		MIDSI	R659-R654-G208-G781	BONAM		
		MIDSI	R659-W3-UL223-G781			
		ALSER	G663-R659-R654-R661-R660	DASIS	FL220,FL380	
		ALSER	G663-R659-R654-G208-G781	BONAM		
		ALSER	G663-W3-UL223-G781			
Muscat	Karachi	IMLOT	A791	JI	FL270, FL370, FL390	
		DENDA	R462		FL290, FL310, FL350	
Muscat	Baku	ORBIX	R654-W32-G208-N39-R794	ULDUS	FL360	
	Nakhchivan		R654-W32-G208-N39-A416-R661	DULAV		
Muscat	Yerevan	ORBIX	R654-W32-G208-N39-A416-B121	MAGRI	FL360	
Muscat	Ashgabat	ORBIX	R654-W2-G775	ORPAB	FL360	
Muscat	Kabul	ORBIX	R654-W2-A453	PIRAN	FL360	
Muscat	Baghdad	ORBIX	-R654-G202-B411	PAXAT	FL360	
Muscat	Ankara	ORBIX	R654-W32-G208-N39-A416-R660-	DASIS	FL360	BONAM-UMH West bound then two way
			R654-W32-G208-T210-R661-G208-G781	BONAM		
Baghdad	Baku	PAXAT	B411-G202-G667-P574	ULDUS	FL270	
Baghdad	Yerevan	PAXAT	B411-G202-G667-R654-R661-G482	MAGRI	FL270	
Baghdad	Ashgabat	PAXAT	B411-G202-G663-A419	RIKOP	FL270	
Baghdad	Karachi	PAXAT	B411-G202	KAMAR	FL270	
			B411-G202-R654-G452-	DERBO		
			B411-G202-R654-UL124	KEBUD		
Baghdad	Muscat	PAXAT	B411-G202-R654-G665	ASVIB	FL270	
			B411-G202-R654	ORBIX		
	Landing		B411-G202-R659-G666	ORSAR		

Baghdad	UAE	PAXAT			FL270	
	UAE		B411-G202-R659-G666-UL223-	SIR		
Kabul	Ankara	KAMAR	G202-R794-UN319-A416-R660	DASIS	FL380	
		SOKAM	A416-R660		FL340	
		CHARN	G792-B411-A416-RR660		FL360	
Kabul	Baku	KAMAR	G202-R794-UN319	ULDUS	FL380	
		SOKAM	A416-UN319		FL340	
		CHARN	G792-B411-A416-UN319		FL360	
Kabul	Nakhchivan	KAMAR	G202-R794-UN319-A416-R660-R661	DULAV	FL380	
		SOKAM	A416-R660-R661		FL340	
		CHARN	G792-B411-A416-R660-R661		FL360	
Kabul	Yerevan	KAMAR	G202-R794-UN319-A416-R660-G482	MAGRI	FL380	
		SOKAM	A416-R660-G482		FL340	
		CHARN	G792-B411-A416-R660-G482-		FL360	
Kabul	Ashgabat	SOKAM	A416-G775	ORPAB	FL340	
			A416-G792	GIRUN		
		CHARN	G792		FL360	
			G792-G775	ORPAB		
Kabul	Muscat	PIRAN	A453-W2-R654	ORBIX	FL200	
Kabul	UAE	PIRAN	A453-A419	DARAX	FL200	
Kabul	Bahrain	PIRAN	A453	MIDSI	FL200	
Kabul	Kuwait	PIRAN	A453-G452-G669	NANPI	FL200	
		KAMAR	G202-W6-W30-B417	TULAX	FL380	
Kabul	Baghdad	PIRAN	A453-G452-R654-G202-B411	PAXAT	FL200	
		KAMAR	G202-B411		FL380	
Karachi	Baku	ASVIB	G665-R654-W32-G208-N39-R794	ULDUS	FL260	
		KEBUD	UL124-R654-W32-G208-N39-R794-		FL360	
		DERBO	G452-G208-N39-R794		FL320	
	Nakhchivan	ASVIB	G665-R654-W32-G208-N39-A416-R660-R661	DULAV	FL260	
		KEBUD	UL124-R654-W32-G208-N39-A416-R660-R661		FL360	
		DERBO	G452-G208-N39-A416-R660-R661		FL320	
Karachi	Yerevan	ASVIB	G665-R654-W32-G208-N39-A416-B121	MAGRI	FL260	
		KEBUD	UL124-R654-W32-G208-N39-A416-B121		FL360	
		DERBO	G452-G208-N39-A416-B121		FL320	
Karachi	Ashgabat	DERBO	G452-G775	ORPAB	FL320	
		KEBUD	G208-G775		FL360	
Karachi	Muscat	DERBO	G452-W2-R654	ORBIX	FL320	
		ASVIB	M561-W2-R654		FL260	
Karachi	UAE	DERBO	G452-A453-A419	DARAX	FL320	
		ASVIB	M561-A419		FL260	
Karachi	Bahrain	DERBO	G452-A453	MIDSI	FL320	
		ASVIB	M561-A453		FL260	
Karachi	Kuwait	ASVIB	G665-R654-G452-G669	NANPI	FL260	
		KEBUD	UL124-R654-G452-G669		FL360	
		DERBO	G452-G669		FL320	
Karachi	Baghdad	ASVIB	G665-R654-G202-B411	PAXAT	FL260	
		KEBUD	UL124-R654-G202-B411		FL360	
		DERBO	G452-R654-G202-B411		FL320	
Karachi	Ankara	ASVIB	G665-R654-W32-G208-N39-A416-R660	DASIS	FL260	
		KEBUD	UL124-R654-W32-G208-N39-A416-R660		FL360	
		DERBO	G452-G208-N39-A416-R660-		FL320	
		ASVIB	G665-R654-W32-G208-T210-R661-G208-G781		FL260	

		<b>KEBUD</b>	<b>UL124-R654-W32-G208-T210-R661-G208-G781</b>	<b>BONAM</b>	FL360	
		<b>DERBO</b>	<b>G452-G208-T210-R661-G208-G781</b>		FL320	

**ADJACENT FIR FREQUENCIES AND TELEPHONE NUMBERS**

ATS UNIT	RTF Call Sign	Frequency		Telephone NO
		Main		
<b>Baku</b>	Baku RADAR	<b>Main</b>	<b>133.100</b>	+994124971673
		<b>Stand by</b>	<b>133.300, 129.000, 135.100</b>	
<b>Yerevan</b>	Yerevan RADAR	<b>Main</b>	<b>128.800</b>	+37410593304
		<b>Stand by</b>	<b>124.000</b>	
<b>Nakhchivan</b>	Nakhchivan RADAR	<b>Main</b>	<b>127.900</b>	+994136446950
		<b>Stand by</b>	<b>118.200</b>	
<b>Ankara</b>	Ankara RADAR Via DASIS	<b>Main</b>	<b>127.300</b>	+903123980000 ext. 1153 or 1614 +903123980961
		<b>Stand by</b>	<b>129.300, 122.275</b>	
	Ankara RADAR Via BONAM, ALRAM	<b>Main</b>	<b>128.100</b>	
		<b>Stand by</b>	<b>132.900, 129.450</b>	
<b>Baghdad</b>	Tehran Control	<b>Main</b>	<b>123.000</b>	+9647901655461
		<b>Stand by</b>	<b>123.525</b>	
<b>Kuwait</b>	Kuwait RADAR	<b>Main</b>	<b>125.300</b>	+9654762994 +9654342476 +9654760763
		<b>Stand by</b>	<b>124.800, 132.100</b>	
<b>Bahrain</b>	Bahrain RADAR	<b>Main</b>	<b>132.120</b>	+97317321080 +97317321081 +97317320486
		<b>Stand by</b>	<b>125.700</b>	
<b>UAE</b>	UAE RADAR	<b>Main</b>	<b>132.150, 124.850</b>	+97317321080 +97317321081 +97317320486
		<b>Stand by</b>		
<b>Muscat</b>	Muscat CONTROL	<b>Main</b>	<b>128.150, 119.800</b>	+96824519550 +96824519507
		<b>Stand by</b>		
<b>Kabul</b>	Kabul Information	<b>Main</b>	<b>120.900, 128.500</b>	+873761336375
		<b>Stand by</b>		
<b>Karachi</b>	Karachi Control	<b>Main</b>	<b>128.300</b>	+922199248038 +922199071953 +922199242148
		<b>Stand by</b>		
<b>Ashgabat</b>	Ashgabat RADAR	<b>Main</b>	<b>135.200</b>	
		<b>Stand by</b>	<b>135.800</b>	
<b>Turkmenbashi</b>	Turkmenbashi RADAR	<b>Main</b>		
		<b>Stand by</b>		

### 3.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Tehran loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location to backup ACC (located in IKIA).

The facility is established at another location IKIA but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Tehran facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Tehran

FIR after several days. In the interim period no ATC service will be available and all flights will be required to route clear of the Tehran FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

## **APPENDIX XX**

### **SAMPLE NOTAMS**

#### **a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE TEHRAN FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

#### **b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE TEHRAN FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

#### **c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN TEHRAN FIR ALL ACFT ARE ADVISED THAT THE Tehran FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY TEHRAN AIRSPACE.

#### **d) Non adherence to the Contingency Plan**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE TEHRAN FIR.

#### **e) Avoidance of airspace**

NOTAM.....DUE TO TEHRAN ACC BUILDING EVACUATION ALL ACFT SHALL BE ADVISED TO AVOID TEHRAN FIR

## CHAPTER 4: DETAILED PROCEDURES – BAGHDAD FIR

### 4.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Baghdad FIR

### 4.2 FIRs WITH SUPPORTING PROCEDURES

Amman FIR  
Ankara FIR  
Damascus FIR  
Jeddah FIR  
Kuwait FIR  
Tehran FIR

### 4.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

*Note:- In the event of an evacuation, we must assume that the Tower at ORBI is also evacuated. There needs to be a system in place where we can initiate the evacuation messages via cell phone (we call Erbil tower, Najaf Tower and Basra Tower and they broadcast the evacuation message and implement the contingency routes, they will also need to issue the NOTAM and contact adjacent FIRs).*

### 4.4 LIMITED SERVICE – PROCEDURES

#### 4.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Baghdad frequency normally provided by Baghdad Control will be delegated as appropriate to the other ATS units namely *Erbil, Najaf and Basra Towers*. Appropriate frequencies will be advised by Baghdad and the assisting ATS units.

Situations which could result in a Limited Service are:

## Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Baghdad Communications center and Baghdad ACC )

## Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

## Staffing

Reduced Staffing  
Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

## Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

### **4.4.2 Disruption of ability to provide control services**

Baghdad ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

#### *Separation standards*

Baghdad ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

#### *Contingency tracks*

Dependant on the nature of the service limitation, Baghdad may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

#### *Air Traffic Flow Management*

Baghdad ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

**APPENDIX A**

Baghdad ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

**4.5 NO SERVICE – PROCEDURES**

**4.5.1 Loss of ground/air communication capability**

In the event of Baghdad ACC being unable to provide ground/air communications for Baghdad FIR *Erbil, Najaf and Basra Towers* will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
  - No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues
- d) Evacuation of Baghdad ACC
  - Fire
  - Bomb threat

*Effect on flights*

In the event of Baghdad ACC being unable to provide ground/air communications for a sustained period of time *Erbil, Najaf and Basrah Towers* in coordination with adjacent FIR's could provide a limited communications facility to flights in the Baghdad FIR.

ATFM measures may be imposed as necessary.

#### **4.5.2 Loss of ability to provide control services**

Should Baghdad ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Baghdad FIR.

In the event that Baghdad ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Baghdad Contingency plan.

The Plan will be activated by promulgation of a NOTAM issued by (ICAA) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (ICAA) and/or ICAO MID office, as authorized by Head of ICAA. It is expected that the civil aviation authorities concerned and the airline operators will fully cooperate to implement the Plan as soon as possible.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Baghdad Contingency Procedures – Appendix xx. In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

### **4.6 FLIGHT CREW AND OPERATOR PROCEDURES**

#### **4.6.1 For flights within the Baghdad FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5, 123.45 and the assigned Unit frequency. A listening watch on these frequencies must be maintained.

#### **4.6.2 For flights within the Baghdad FIR – Westbound**

Kuwait ACC will endeavour to provide an ATC service throughout the Baghdad FIR as soon as evacuation commences. These procedures are detailed at Baghdad Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Amman FIR	+ 962 64 451672			
Ankara FIR	+903123 980290	+903 12 398 0961	<a href="mailto:cellatin.brozkurt@dhmi.gov.tr">cellatin.brozkurt@dhmi.gov.tr</a>	
Damascus FIR	+963 115 400164	+963 11 540 0312		
Jeddah FIR	+966 26 8550067			
Kuwait FIR	+965 43432476 or +965 4760463			
Tehran FIR	+982 144 544116			

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

#### **4.6.3 For flights within the Baghdad FIR – Eastbound**

Ankara ACC will endeavour to provide an ATC service throughout the Baghdad FIR as soon as evacuation commences. These procedures are detailed at Baghdad Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

#### **4.6.4 For flights approaching the Baghdad FIR when the contingency is activated.**

##### *Not in Receipt of an ATC Clearance*

In the event that Baghdad ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Baghdad FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Baghdad FIR or to land at an appropriate airfield.

##### *In receipt of an acknowledged ATC Clearance outside Baghdad FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Baghdad FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

#### **4.7 BAGHDAD FIR – CONTINGENCY ROUTE STRUCTURE**

##### **4.7.1 For activation within Baghdad FIR**

In a **limited service** contingency situation Baghdad ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Baghdad FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

##### **4.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Baghdad FIR should use the following contingency routes:

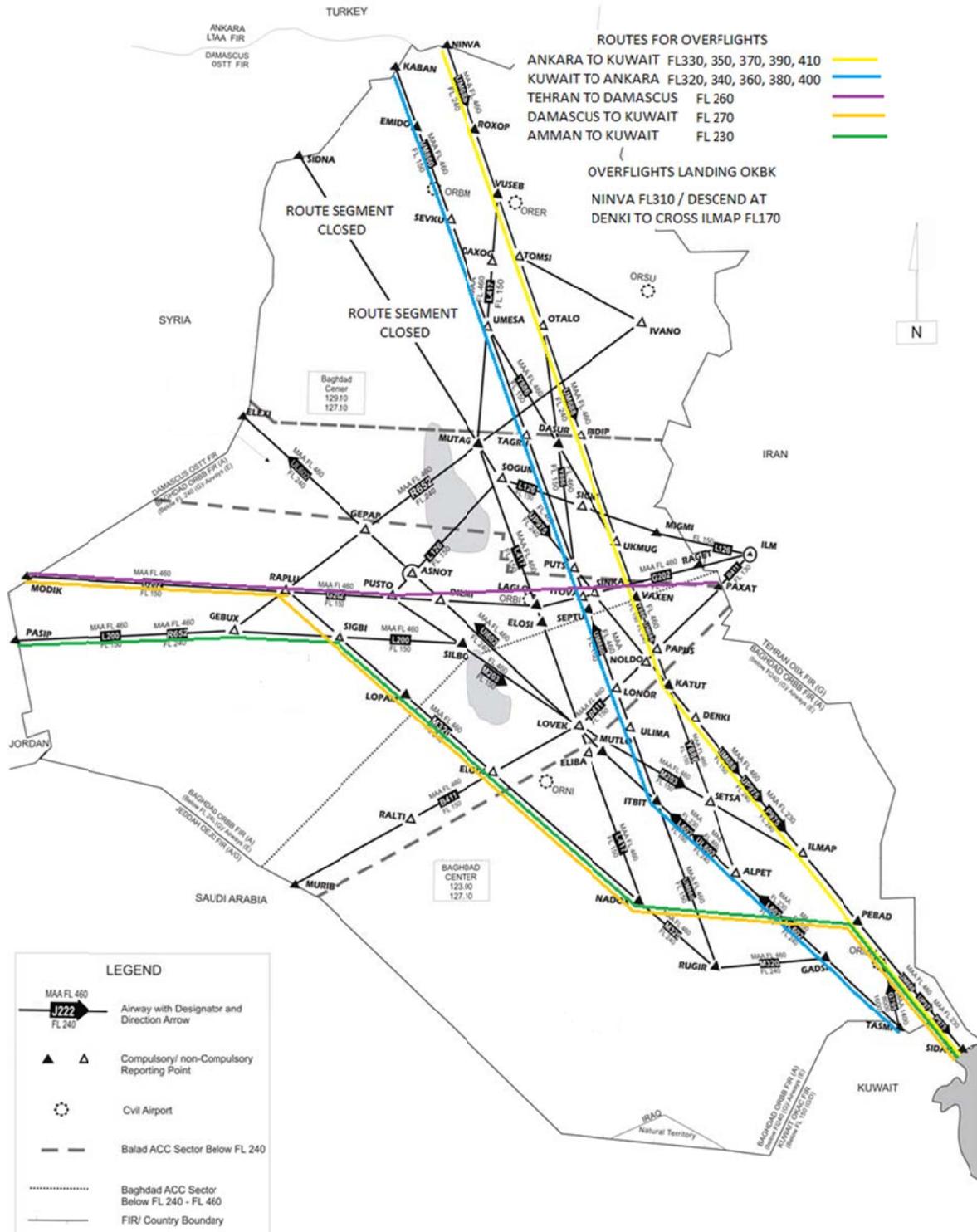
Communications with the next ATSU should be established at the earliest opportunity.

#### **For Transit Flights South North Except traffic Landing Kuwait**

<b>Entry FIR</b>	<b>Exit FIR</b>	<b>Entry FIX</b>	<b>Route Designator</b>	<b>Exit FIX</b>	<b>Flight Levels</b>	<b>Frequencies</b>
<b>Ankara</b>	<b>Kuwait</b>	<b>NINVA</b>	<b>UM688</b>	<b>SIDAD</b>	FL330, FL350, FL370, FL390, FL410	NINVA 129.10 VAXEN 123.0 PEBAD 125.3
<b>Damascus</b>	<b>Kuwait</b>	<b>MODIK</b>	<b>G202 M320 UM688</b>	<b>SIDAD</b>	FL 270	MODIK 121.3 RAPLU 129.10 LOPAM 123.0 PEBAD 125.3
<b>Amman</b>	<b>Kuwait</b>	<b>PASIP</b>	<b>L200 M320 UM688</b>	<b>SIDAD</b>	FL 230	PASIP 128.5 GIBUX 129.10 LOPAM 123.0 PEBAD 125.3
<b>Kuwait</b>	<b>Ankara</b>	<b>TASMI</b>	<b>UL602</b>	<b>KABAN</b>	FL320, FL340, FL360, FL380, FL400	TASMI 123.0 SEPTU 129.10 UMESA 132.9
<b>Kuwait</b>	<b>Damascus</b>	<b>TASMI</b>	<b>UL602 M320 G202</b>	<b>MODIK</b>	FL280	TASMI 123.0 ELODI 129.10 MODIK 121.3
<b>Kuwait</b>	<b>Amman</b>	<b>TASMI</b>	<b>UL602 M320 L200</b>	<b>PASIP</b>	FL240	TASMI 123.0 ELODI 129.10 PASIP 128.5
<b>Tehran</b>	<b>Damascus</b>	<b>PAXAT</b>	<b>DCT G202</b>	<b>MODIK</b>	FL 260	PAXAT 129.1 MODIK 121.3

- 1) *Note No ATC Service provided to any flight Departing from within the Baghdad FIR;*
- 2) *Adjacent FIRs to provide 10Minutes Longitudinal Separation between Aircraft at the same Flight Level, with similar or faster performance Aircraft proceeding; and*
- 3) *UP975 from SIDAD to UKMUGNOT USABLE Air Route Segment.*

ARN TF/6-WP/12  
APPENDIX A



#### 4.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Baghdad loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Baghdad facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Baghdad FIR after several days. In the interim period no ATC service will be available and all flights will be required to route clear of the Baghdad FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

#### APPENDIX XX

##### SAMPLE NOTAMS

**a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE BAGHDAD FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

**b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE BAGHDAD FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

**c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN BAGHDAD FIR ALL ACFT ARE ADVISED THAT THE Baghdad FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY TEHRAN AIRSPACE.

**d) Non adherence to the Contingency Plan**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE BAGHDAD FIR.

## **CHAPTER 5: DETAILED PROCEDURES – AMMAN FIR**

### **5.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES**

Amman FIR

### **5.2 FIRs WITH SUPPORTING PROCEDURES**

Jeddah FIR  
Riyadh ACC  
Baghdad FIR  
Damascus FIR  
Tel Aviv FIR  
Cairo FIR

### **5.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

## 5.4 LIMITED SERVICE – PROCEDURES

### 5.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Amman frequency normally provided by Amman Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Amman and the assisting stations.

Situations which could result in a Limited Service are:

#### Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Amman Communications center and Amman ACC )

#### Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

#### Staffing

Reduced Staffing  
Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

#### Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

### 5.4.2 Disruption of ability to provide control services

Amman ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

#### *Separation standards*

Amman ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

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*Contingency tracks*

Dependant on the nature of the service limitation, Amman may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

*Air Traffic Flow Management*

Amman ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Amman ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

**5.5 NO SERVICE – PROCEDURES**

**5.5.1 Loss of ground/air communication capability**

In the event of Amman ACC being unable to provide ground/air communications for Amman FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
  - No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues

d) Evacuation of Amman ACC

- Fire
- Bomb threat

*Effect on flights*

In the event of Amman ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Amman FIR.

ATFM measures may be imposed as necessary.

### **5.5.2 Loss of ability to provide control services**

Should Amman ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Amman FIR.

In the event that Amman ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Jordan Contingency Plan.

The Plan will be activated by promulgation of a NOTAM issued by (CARC) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (CARC) and/or ICAO MID office

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Amman Contingency Procedures – Appendix xx.' In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix **XX**.

## **5.6 FLIGHT CREW AND OPERATOR PROCEDURES**

### **5.6.1 For flights within the Amman FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

### **5.6.2 For flights within the Amman FIR – Westbound**

**Cairo, Damascus, Jeddah ACC and Tel Aviv ACC** will endeavour to provide an ATC service throughout the Amman FIR as soon as evacuation commences. These procedures are detailed at Amman Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Jeddah ACC	00966	00966		
Riyadh ACC	00966	00966		
Baghdad ACC				
Damascus ACC				
Tel Aviv ACC				
Cairo ACC				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

### 5.6.3 For flights within the Amman FIR – Eastbound

**Cairo, Damascus, Jeddah ACC and Tel Aviv ACC** will endeavour to provide an ATC service throughout the Amman FIR as soon as evacuation commences. These procedures are detailed at Amman Contingency Procedures – **Appendix x**

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

### 5.6.4 For flights approaching the Amman FIR when the contingency is activated.

#### *Not in Receipt of an ATC Clearance*

In the event that Amman ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Amman FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Amman FIR or to land at an appropriate airfield.

#### *In receipt of an acknowledged ATC Clearance outside Amman FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Amman FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

## 5.7 AMMAN FIR – CONTINGENCY ROUTE STRUCTURE

### 5.7.1 For activation within Amman FIR

In a **limited service** contingency situation Amman ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Amman FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

### 5.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Amman FIR should use the following contingency routes:

#### CONTINGENCY ROUTE STRUCTURE FOR AMMAN FIR

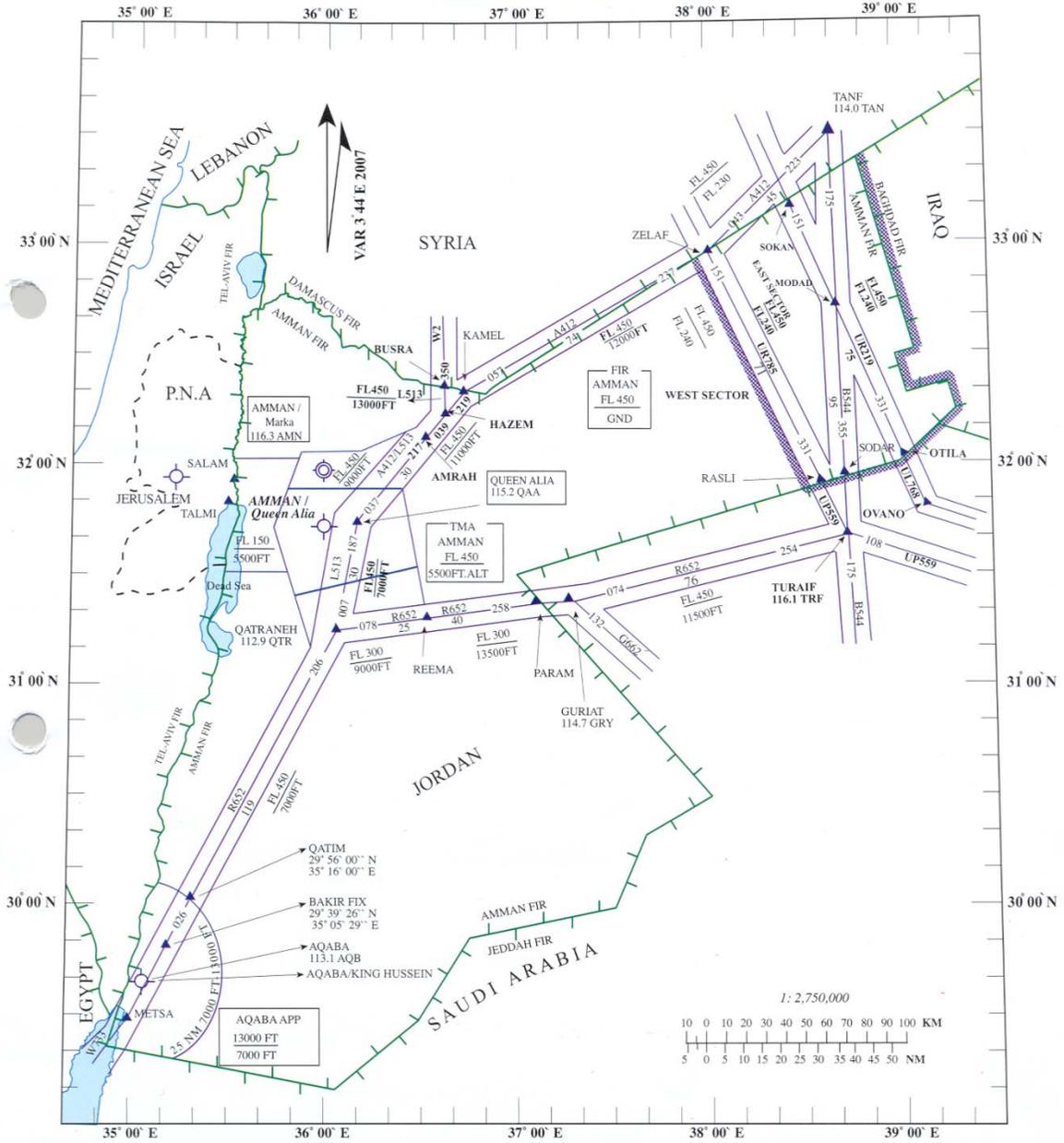
Present ATS Route	Contingency Routings	FIRs Involved
<b>EAST SECTOR:</b> ATS routes B544, UR219, UR785 In case of closure: these routes, all traffic will have to be re routed as follows:	<p>a) <b>East Bound Traffic:</b> all traffic has to follow the routes: L513 to BUSRA and HAZEM, A412/L513 to QAA–GRY, W333/R652 in JEDDAH FIR. Other traffic coming from the north through ZELAF or TANF will have to continue on A412/L513 to QAA–GRY, W333/R652 in JEDDAH FIR.</p> <p>b) <b>West Bound Traffic:</b> all traffic has to come through GRY/ ATS route R652 then on W333/A412/L513, GRY – QAA then L513 HAZEM to BUSRA and DAMASCUS FIR.</p>	<ul style="list-style-type: none"> <li>• <b>Damascus FIR</b></li> <li>• <b>Jeddah FIR</b></li> </ul>
<b>WEST SECTOR :</b> this sector has four outlets: <b>North Border:</b> ATS route A412/L513 and W2 with DAMASCUS in case of closure	<p>a) All west bound traffic has to go through TALMI. Or ATS route A412/L513 – QTR then ATS route R652 to METSA and CAIRO FIR. As for the east bound traffic it will, be through SALAM or METSA on route R652 - QTR, thereafter to QAA or to continue to GRY in JEDDAH.FIR.</p>	<ul style="list-style-type: none"> <li>• <b>Tel Aviv FIR</b></li> <li>• <b>CAIRO FIR</b></li> <li>• <b>JEDDAH FIR</b></li> </ul>
<b>West Border Air Corridors with TELAVIV FIR:</b> in case of being closed, east bound traffic has to follow:	<p>b) A412/L513 to HAZEM then L513 to BUSRA and DAMASCUS or to continue on A412/L513 to ZELAF or TANF in DAMASCUS FIR. West bound traffic will use A412/L513 to QTR then R652 to METSA and CAIRO FIR. Arrivals have to come through A412/L513 or L513 - BUSRA and QAA or on R652 from CAIRO FIR through METSA.</p>	<ul style="list-style-type: none"> <li>• <b>Damascus FIR</b></li> <li>• <b>Cairo FIR</b></li> </ul>
<b>South border METSA and R652 to</b>	Departures or arrivals have to use W2 to BUSRA – HAZEM – A412/L513 to QAA and vice versa. OR via TELAVIV FIR instead of	<ul style="list-style-type: none"> <li>• <b>Damascus FIR</b></li> <li>• <b>Tel Aviv FIR</b></li> </ul>

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<b>and from CAIRO FIR:</b> in case of closure	L513 or A412	
<b>East border ATS route R652 QTR – PARAM – GRY</b> in case of closure	c) East bound traffic has to use A412/L513 to ZELAF then UR785 to JEDDAH FIR. West bound traffic will proceed through OTILA to SOKAN UR219 to ZELAF then A412 to QAAVOR.	<ul style="list-style-type: none"> <li>• <b>DAMASCUS FIR</b></li> <li>• <b>Jeddah FIR</b></li> </ul>

Communications with the next ATSU should be established at the earliest opportunity.

Appendix



APPENDIX

CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT MONITORING SERVICES

CONTINGENCY ROUTES IN AMMAN (CRJ)	ATS ROUTES	COM

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**5.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Jordan loses the ability to provide an ATC service in the Amman FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Amman facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Amman FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Amman FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**APPENDIX XX**

**SAMPLE NOTAMS**

**a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE AMMAN FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

**b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE AMMAN FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

**c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN AMMAN FIR ALL ACFT ARE ADVISED THAT THE AMMAN FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY AMMAN AIRSPACE.

**d) Non adherence to the Contingency Plan**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN  
SHALL AVOID THE AMMAN FIR

## **CHAPTER 6: DETAILED PROCEDURES – KUWAIT FIR**

### **6.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES**

Kuwait FIR

### **6.2 FIRs WITH SUPPORTING PROCEDURES**

Baghdad FIR  
Bahrain FIR  
Jeddah FIR  
Tehran FIR

### **6.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

### **6.4 LIMITED SERVICE – PROCEDURES**

#### **6.4.1 Disruption of ground/air communication capability**

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Kuwait frequency normally provided by Kuwait Control will be delegated as appropriate to the other ATS units namely -----, Appropriate frequencies will be advised by Kuwait and the assisting ATS units.

Situations which could result in a Limited Service are:

#### Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Kuwait Communications center and Kuwait ACC )

#### Propagation

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Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing

Illness

Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

**6.4.2 Disruption of ability to provide control services**

Kuwait ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

*Separation standards*

Kuwait ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

*Contingency tracks*

Dependant on the nature of the service limitation, Kuwait may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

*Air Traffic Flow Management*

Kuwait ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Kuwait ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

## **6.5 NO SERVICE – PROCEDURES**

### **6.5.1 Loss of ground/air communication capability**

In the event of Kuwait ACC being unable to provide ground/air communications for Kuwait FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
  - No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues
- d) Evacuation of Kuwait ACC
  - Fire
  - Bomb threat

#### *Effect on flights*

In the event of Kuwait ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Kuwait FIR.

ATFM measures may be imposed as necessary.

### **6.5.2 Loss of ability to provide control services**

Should Kuwait ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Kuwait FIR.

In the event that Kuwait ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio

**APPENDIX A**

frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Kuwait Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Kuwait Contingency Procedures – Appendix xx.' In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

**6.6 FLIGHT CREW AND OPERATOR PROCEDURES****6.6.1 For flights within the Kuwait FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

**6.6.2 For flights within the Kuwait FIR – Westbound**

----- ACC's will endeavour to provide an ATC service throughout the Kuwait FIR as soon as evacuation commences. These procedures are detailed at Kuwait Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Baghdad FIR				
Bahrain FIR				
Jeddah FIR				
Tehran FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

**6.6.3 For flights within the Kuwait FIR – Eastbound**

----- ACC's will endeavour to provide an ATC service throughout the Kuwait FIR as soon as evacuation commences. These procedures are detailed at Kuwait Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

#### **6.6.4 For flights approaching the Kuwait FIR when the contingency is activated.**

##### *Not in Receipt of an ATC Clearance*

In the event that Kuwait ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Kuwait FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Kuwait FIR or to land at an appropriate airfield.

##### *In receipt of an acknowledged ATC Clearance outside Kuwait FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Kuwait FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

### **6.7 KUWAIT FIR – CONTINGENCY ROUTE STRUCTURE**

#### **6.7.1 For activation within Kuwait FIR**

In a **limited service** contingency situation Kuwait ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Kuwait FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

#### **6.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Kuwait FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

### **6.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Kuwait loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

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The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Kuwait facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Kuwait FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Baghdad FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**APPENDIX XX**

**SAMPLE NOTAMS**

**a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE KUWAIT FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

**b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE KUWAIT FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

**c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN KUWAIT FIR ALL ACFT ARE ADVISED THAT THE Kuwait FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY KUWAIT AIRSPACE.

**d) Non adherence to the Contingency Plan**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE KUWAIT FIR

## **CHAPTER 7: DETAILED PROCEDURES – BEIRUT FIR**

### **7.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES**

Beirut FIR

### **7.2 FIRs WITH SUPPORTING PROCEDURES**

Damascus FIR

Nicosia FIR

### **7.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

### **7.4 LIMITED SERVICE – PROCEDURES**

**APPENDIX A**

**7.4.1 Disruption of ground/air communication capability**

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Beirut frequency normally provided by Beirut Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Beirut and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Beirut Communications center and Beirut ACC )

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing  
Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

**7.4.2 Disruption of ability to provide control services**

Beirut ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

*Separation standards*

Beirut ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

*Contingency tracks*

Dependant on the nature of the service limitation, Beirut may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

#### *Air Traffic Flow Management*

Beirut ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Beirut ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

#### *Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

### **7.5 NO SERVICE – PROCEDURES**

#### **7.5.1 Loss of ground/air communication capability**

In the event of Beirut ACC being unable to provide ground/air communications for Beirut FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
  - No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues
- d) Evacuation of Beirut ACC

**APPENDIX A**

- Fire
- Bomb threat

*Effect on flights*

In the event of Beirut ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Beirut FIR.

ATFM measures may be imposed as necessary.

**7.5.2 Loss of ability to provide control services**

Should Beirut ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Beirut FIR.

In the event that Beirut ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Beirut Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Beirut Contingency Procedures – Appendix xx.' In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

**7.6 FLIGHT CREW AND OPERATOR PROCEDURES**

**7.6.1 For flights within the Beirut FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

**7.6.2 For flights within the Beirut FIR – Westbound**

----- ACC's will endeavour to provide an ATC service throughout the Beirut FIR as soon as evacuation commences. These procedures are detailed at Beirut Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Damascus FIR				
Nicosia FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

### 7.6.3 For flights within the Beirut FIR – Eastbound

----- ACC's will endeavour to provide an ATC service throughout the Beirut FIR as soon as evacuation commences. These procedures are detailed at Beirut Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

### 7.6.4 For flights approaching the Beirut FIR when the contingency is activated.

#### *Not in Receipt of an ATC Clearance*

In the event that Beirut ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Beirut FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Beirut FIR or to land at an appropriate airfield.

#### *In receipt of an acknowledged ATC Clearance outside Beirut FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Beirut FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

## 7.7 BEIRUT FIR – CONTINGENCY ROUTE STRUCTURE

### 7.7.1 For activation within Beirut FIR

In a **limited service** contingency situation Beirut ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the

**APPENDIX A**

Beirut FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

**7.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Beirut FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

**7.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Beirut loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Beirut facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Beirut FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Beirut FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**APPENDIX XX**

**SAMPLE NOTAMS**

**a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE BEIRUT FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

**b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE BEIRUT FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

**c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN BEIRUT FIR ALL ACFT ARE ADVISED THAT THE Beirut FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY BEIRUT AIRSPACE.

**d) Non adherence to the Contingency Plan**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE BEIRUT FIR

## **CHAPTER 8: DETAILED PROCEDURES – TRIPOLI FIR**

### **8.1**

#### **FIR FOR WHICH THE CONTINGENCY PLAN APPLIES**

Tripoli FIR

## **8.2 FIRs WITH SUPPORTING PROCEDURES**

Algiers FIR  
Cairo FIR  
Khartoum FIR  
Malta FIR  
N'Djamena FIR  
Niamey UIR  
Nicosia FIR  
Tunis FIR

## **8.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

## **8.4 LIMITED SERVICE – PROCEDURES**

### **8.4.1 Disruption of ground/air communication capability**

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Tripoli frequency normally provided by Tripoli Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Tripoli and the assisting ATS units.

Situations which could result in a Limited Service are:

#### Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Tripoli Communications center and Tripoli ACC )

#### Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

#### Staffing

Reduced Staffing

Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

#### Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

### **8.4.2 Disruption of ability to provide control services**

Tripoli ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

#### *Separation standards*

Tripoli ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

#### *Contingency tracks*

Dependant on the nature of the service limitation, Tripoli may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

#### *Air Traffic Flow Management*

Tripoli ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Tripoli ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

#### *Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

## **8.5 NO SERVICE – PROCEDURES**

### **8.5.1 Loss of ground/air communication capability**

**APPENDIX A**

In the event of Tripoli ACC being unable to provide ground/air communications for Tripoli FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
  - No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues
- d) Evacuation of Tripoli ACC
  - Fire
  - Bomb threat

*Effect on flights*

In the event of Tripoli ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Tripoli FIR.

ATFM measures may be imposed as necessary.

**8.5.2 Loss of ability to provide control services**

Should Tripoli ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Tripoli FIR.

In the event that Tripoli ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Tripoli Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Tripoli Contingency Procedures – Appendix xx.' In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

## 8.6 FLIGHT CREW AND OPERATOR PROCEDURES

### 8.6.1 For flights within the Tripoli FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

### 8.6.2 For flights within the Tripoli FIR – Westbound

----- ACC's will endeavour to provide an ATC service throughout the Tripoli FIR as soon as evacuation commences. These procedures are detailed at Tripoli Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Algiers FIR				
Cairo FIR				
Khartoum FIR				
Malta FIR				
N'Djamena FIR				
Niamey UIR				
Nicosia FIR				
Tunis FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

**APPENDIX A**

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

**8.6.3 For flights within the Tripoli FIR – Eastbound**

----- ACC's will endeavour to provide an ATC service throughout the Tripoli FIR as soon as evacuation commences. These procedures are detailed at Tripoli Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

**8.6.4 For flights approaching the Tripoli FIR when the contingency is activated.**

*Not in Receipt of an ATC Clearance*

In the event that Tripoli ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Tripoli FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Tripoli FIR or to land at an appropriate airfield.

*In receipt of an acknowledged ATC Clearance outside Tripoli FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Tripoli FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

**8.7 TRIPOLI FIR – CONTINGENCY ROUTE STRUCTURE**

**8.7.1 For activation within Tripoli FIR**

In a **limited service** contingency situation Tripoli ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Tripoli FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

**8.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Tripoli FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

**8.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Tripoli loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Tripoli facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Tripoli FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Tripoli FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

## **APPENDIX XX**

### **SAMPLE NOTAMS**

#### **a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE TRIPOLI FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

#### **b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE TRIPOLI FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

#### **c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN TRIPOLI FIR ALL ACFT ARE ADVISED THAT THE Tripoli FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY TRIPOLI AIRSPACE.

#### **d) Non adherence to the Contingency Plan**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE TRIPOLI FIR

## **CHAPTER 9: DETAILED PROCEDURES – MUSCAT FIR**

### **9.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES**

Muscat FIR

### **9.2 FIRs WITH SUPPORTING PROCEDURES**

Bahrain FIR  
Emirates FIR  
Jeddah FIR  
Karachi FIR  
Mumbai FIR  
Tehran FIR  
Sana'a FIR

### **9.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

### **9.4 LIMITED SERVICE – PROCEDURES**

#### **9.4.1 Disruption of ground/air communication capability**

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Muscat frequency normally provided by Muscat Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Muscat and the assisting stations.

Situations which could result in a Limited Service are:

#### Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Muscat Communications center and Muscat ACC )

#### Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

#### Staffing

Reduced Staffing  
Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

#### Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

#### **9.4.2 Disruption of ability to provide control services**

Muscat ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

#### *Separation standards*

Muscat ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

#### *Contingency tracks*

**APPENDIX A**

Dependant on the nature of the service limitation, Muscat may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

*Air Traffic Flow Management*

Muscat ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Muscat ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

**9.5 NO SERVICE – PROCEDURES**

**9.5.1 Loss of ground/air communication capability**

In the event of Muscat ACC being unable to provide ground/air communications for Muscat FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
  - No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues
- d) Evacuation of Muscat ACC
  - Fire

- Bomb threat

#### *Effect on flights*

In the event of Muscat ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Cairo FIR.

ATFM measures may be imposed as necessary.

### **9.5.2 Loss of ability to provide control services**

Should Muscat ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Muscat FIR.

In the event that Muscat ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Oman Contingency Plan.

The Plan will be activated by promulgation of a NOTAM issued by the Sultanate of Oman International NOTAM Office (NOF) as far in advance as is practicable. However, when such prior notification is impracticable for any reason, the Plan will be put into effect on notification by the designated authority, as authorized by the DGMAN. It is expected that the civil aviation authorities concerned, and the airline operators will fully cooperate to implement the Plan as soon as possible.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Muscat Contingency Procedures – Appendix xx.' In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix **XX**.

## **9.6 FLIGHT CREW AND OPERATOR PROCEDURES**

### **9.6.1 For flights within the Muscat FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 **and 123.45**. A listening watch on these frequencies must be maintained.

### **9.6.2 For flights within the Muscat FIR – Westbound**

**APPENDIX A**

**Mumbai ACC, Karachi ACC, Sana'a ACC and Tehran ACC** will endeavour to provide an ATC service throughout the Muscat FIR as soon as evacuation commences. These procedures are detailed at Muscat Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Tehran ACC	0098 21 44544116 or 44554060 44544133 (Sector Controller)	0098 21 44544117	<a href="mailto:maj.alireza@yahoo.com">maj.alireza@yahoo.com</a> <a href="mailto:alireza.majzoubi@gmail.com">alireza.majzoubi@gmail.com</a>	OIIIZGZX
Karachi ACC	0092 21 9248 756	0092 21 9248 758	<a href="mailto:gmats@cyber.net.pk">gmats@cyber.net.pk</a>	OPKCZQZX OPKCZQZA
Mumbai ACC	0091 22 26828088	0091 22 26828066	WSOMUM@AAI.AERO	VABFZQZX VABFZQZA
Sana'a ACC	00967 1345402/3	00967 1344047	atccns@gmail.com	OYSNZQZX OYSNZQZA
Bahrain ACC	00973 1732 1080/1081	00973 1732 1029	bahatc@caa.gov.bh	OBBBZQZX OBBBZQZA
Emirates ACC	0097125996969	0097125996850 0097125996852	atc@szc.gcaa.ae mdolbey@szc.gcaa.ae	OMAEZQZX OMAEYAYH
Jeddah ACC				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

### 9.6.3 For flights within the Muscat FIR – Eastbound

**Bahrain ACC, Emirates ACC and Sana'a ACC** will endeavour to provide an ATC service throughout the Muscat FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures – **Appendix x**

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

**9.6.4 For flights approaching the Muscat FIR when the contingency is activated.**

*Not in Receipt of an ATC Clearance*

In the event that Cairo ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Muscat FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Muscat FIR or to land at an appropriate airfield.

*In receipt of an acknowledged ATC Clearance outside Muscat FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Muscat FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

**9.7 MUSCAT FIR – CONTINGENCY ROUTE STRUCTURE**

**9.7.1 For activation within Muscat FIR**

In a **limited service** contingency situation Muscat ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Muscat FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

**9.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Muscat FIR should use the following contingency routes:

CONTINGENCY ROUTE STRUCTURE FOR MUSCAT FIR

ATS WAYPOINT	DIRECTION	FL ASSIGNMENT	NEXT ACC	COM
RASKI/PARAR	WESTBOUND	240 (Muscat arrivals only) 300 and 380	UAE	
TOTOX REXOD LOTAV KITAL	WESTBOUND	220 (Muscat arrivals only) 320 and 400	UAE	
TAPDO	WESTBOUND	200 (Muscat arrivals only) 260 and 340	UAE	
DENDA	WESTBOUND	180 (Muscat arrivals only) 280 and 360	UAE	
IMLOT	WESTBOUND (NOT FOR UAE ARRIVALS)	ALL LEVELS	UAE	
SOUTHBOUND TRAFFIC TO HAI VOR (ONLY)	WESTBOUND	180 AND 280	SANA'A	

FROM LABRI P304)				
NORTHBOUND TRAFFIC TO MUSAP/SODEX	WESTBOUND	160/260	UAE	
DEPARTURES FROM MUSCAT VIA B400	WESTBOUND	240 and 300 cross 20nm south of IZXI 200 or below and to be level 20nm before KEBAS	SALALAH APP OR SANA'A	
ASPUX	WESTBOUND	340 AND ABOVE	BAHRAIN	

Communications with the next ATSU should be established at the earliest opportunity.

**APPENDIX**

**CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT MONITORING SERVICES**

<b>ATS WAYPOINT</b>	<b>DIRECTION</b>	<b>FL ASSIGNMENT</b>	<b>NEXT ACC</b>	<b>COM</b>
RASKI/PARAR	EASTBOUND		MUMBAI	
TOTOX REXOD LOTAV KITAL	EASTBOUND		MUMBAI	
ALPOR	EASTBOUND	330 AND 370	KARACHI	128.3, 123.7
DENDA	EASTBOUND		TEHRAN	
IMLOT	EASTBOUND		TEHRAN	
ASPUX	EASTBOUND		MUMBAI	

**9.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Muscat loses the ability to provide an ATC service in the Muscat FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Muscat facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Muscat FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Muscat FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**APPENDIX XX**

## SAMPLE NOTAMS

### a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE MUSCAT FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

### b) Airspace available with limited ATS

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE MUSCAT FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

### c) Contingency plan activated

NOTAM .....DUE TO DISRUPTION OF ATS IN MUSCAT FIR ALL ACFT ARE ADVISED THAT THE Cairo FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY MUSCAT AIRSPACE.

### d) Non adherence to the Contingency Plan

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE MUSCAT FIR.

## CHAPTER 10: DETAILED PROCEDURES – JEDDAH FIR

### 10.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Jeddah FIR

### 10.2 FIRs WITH SUPPORTING PROCEDURES

Amman FIR  
Asmara FIR  
Bahrain FIR  
Baghdad FIR  
Cairo FIR

**APPENDIX A**

Khartoum FIR  
Kuwait FIR  
Sana'a FIR

**10.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

**10.4 LIMITED SERVICE – PROCEDURES**

**10.4.1 Disruption of ground/air communication capability**

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Jeddah frequency normally provided by Jeddah Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Jeddah and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Jeddah Communications center and Jeddah ACC )

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing  
Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

## **10.4.2 Disruption of ability to provide control services**

Jeddah ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

### *Separation standards*

Jeddah ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

### *Contingency tracks*

Dependant on the nature of the service limitation, Jeddah may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

### *Air Traffic Flow Management*

Jeddah ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Jeddah ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

### *Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

## **10.5 NO SERVICE – PROCEDURES**

### **10.5.1 Loss of ground/air communication capability**

In the event of Tripoli ACC being unable to provide ground/air communications for Jeddah FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)

**APPENDIX A**

- Data Lines (Loss of data lines)
- b) Propagation;
- Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
- No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues
- d) Evacuation of Jeddah ACC
- Fire
  - Bomb threat

*Effect on flights*

In the event of Jeddah ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Jeddah FIR.

ATFM measures may be imposed as necessary.

**10.5.2 Loss of ability to provide control services**

Should Jeddah ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Jeddah FIR.

In the event that Jeddah ACC are evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Jeddah Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Jeddah Contingency Procedures – Appendix xx.' In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

**10.6 FLIGHT CREW AND OPERATOR PROCEDURES**

**10.6.1 For flights within the Jeddah FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

**10.6.2 For flights within the Jeddah FIR – Westbound**

----- ACC's will endeavour to provide an ATC service throughout the Jeddah FIR as soon as evacuation commences. These procedures are detailed at Jeddah Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Amman FIR				
Asmara FIR				
Bahrain FIR				
Baghdad FIR				
Cairo FIR				
Khartoum FIR				
Kuwait FIR				
Sana'a FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

**10.6.3 For flights within the Jeddah FIR – Eastbound**

----- ACC's will endeavour to provide an ATC service throughout the Jeddah FIR as soon as evacuation commences. These procedures are detailed at Jeddah Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

#### **10.6.4 For flights approaching the Jeddah FIR when the contingency is activated.**

##### *Not in Receipt of an ATC Clearance*

In the event that Jeddah ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Jeddah FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Jeddah FIR or to land at an appropriate airfield.

##### *In receipt of an acknowledged ATC Clearance outside Jeddah FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Jeddah FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

### **10.7 JEDDAH FIR – CONTINGENCY ROUTE STRUCTURE**

#### **10.7.1 For activation within Jeddah FIR**

In a **limited service** contingency situation Jeddah ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Jeddah FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

#### **10.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Jeddah FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

### **10.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Jeddah loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Jeddah facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Jeddah FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Jeddah FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**APPENDIX XX**

**SAMPLE NOTAMS**

**a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE JEDDAH FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

**b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE JEDDAH FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

**c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN JEDDAH FIR ALL ACFT ARE ADVISED THAT THE Tripoli FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY JEDDAH AIRSPACE.

**d) Non adherence to the Contingency Plan**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE JEDDAH FIR

## **CHAPTER 11: DETAILED PROCEDURES – KHARTOUM FIR**

### **11.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES**

Khartoum FIR

### **11.2 FIRs WITH SUPPORTING PROCEDURES**

Cairo FIR  
Jeddah FIR  
Ndjamena FIR  
Tripoli FIR  
Asmara FIR  
Addis Ababa FIR  
Nairobi FIR  
Entebbe FIR  
Kinshasa FIR  
Brazzaville ACC

### **11.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

### **11.4 LIMITED SERVICE – PROCEDURES**

#### **11.4.1 Disruption of ground/air communication capability**

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Khartoum frequency normally provided by Khartoum Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Cairo and the assisting stations.

Situations which could result in a Limited Service are:

#### **Equipment Failure**

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)

- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Khartoum Communications center and Khartoum ACC )

#### Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

#### Staffing

Reduced Staffing  
Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

#### Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

#### **11.4.2 Disruption of ability to provide control services**

Khartoum ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

#### *Separation standards*

Khartoum ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

#### *Contingency tracks*

Dependant on the nature of the service limitation, Khartoum may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

#### *Air Traffic Flow Management*

Khartoum ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Khartoum ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

**APPENDIX A**

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

**11.5 NO SERVICE – PROCEDURES**

**11.5.1 Loss of ground/air communication capability**

In the event of Khartoum ACC being unable to provide ground/air communications for Khartoum FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
  - No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues
- d) Evacuation of Khartoum ACC
  - Fire
  - Bomb threat

*Effect on flights*

In the event of Khartoum ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Cairo FIR.

ATFM measures may be imposed as necessary.

**11.5.2 Loss of ability to provide control services**

Should Khartoum ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Khartoum FIR.

In the event that Khartoum ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Sudan Contingency Plan.

The Plan will be activated by promulgation of a NOTAM issued by the Sudanese International NOTAM Office (NOF) as far in advance as is practicable. However, when such prior notification is impracticable for any reason, the Plan will be put into effect on notification by the designated authority, as authorized by the DGCA. It is expected that the civil aviation authorities concerned, and the airline operators will fully cooperate to implement the Plan as soon as possible.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Khartoum Contingency Procedures – Appendix xx. In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix **XX**.

## **11.6 FLIGHT CREW AND OPERATOR PROCEDURES**

### **11.6.1 For flights within the Khartoum FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

### **11.6.2 For flights within the Khartoum FIR – Westbound**

Jeddah ACC, Asmara ACC, Addis Ababa ACC, Nairobi ACC and Entebbe ACC will endeavour to provide an ATC service throughout the Khartoum FIR as soon as evacuation commences. These procedures are detailed at Cairo Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<b>UNIT</b>	<b>TEL. No</b>	<b>FAX No</b>	<b>EMAIL</b>	<b>AFTN</b>
Cairo ACC	TBN	Fax: (20) 2-2665435	E-mail: egoca@idsc.gov.eg	HECAYAYX

**APPENDIX A**

Tripoli ACC	TBN	Fax: (218) 37454	TBN	HLLTYAYX
Jeddah ACC	TBN	Fax: (966) 2-6401477	TBN	OEJDYAYX
Ndjamena ACC	+253522520830	+253522526231	TBN	TBN
Asmara ACC	(291) 1-124334	Fax: (291) 1-181255	TBN	HHAAYAYX
Addis Ababa ACC	TBN	Fax: (251) 1-612533	E-mail: civil-aviation@telecom.net.et	HAAAYAYX
Nairobi ACC	TBN	Fax: (254) 20-822300	E-mail: info@kcaa.or.ke	HKNCYAYD
Entebbe ACC				
Kinshasa ACC				
Brazzaville ACC	+242055478182	+242069920433	TBN	FCCCCRZX

ICAO MID	0020 2 2267	0020 2 2267 4843	
	4845/46/41		
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

**11.6.3 For flights within the Khartoum FIR – Eastbound**

**Tripoli ACC, Ndjamena ACC, Kinshasa and Brazzaville ACC** will endeavour to provide an ATC service throughout the Khartoum FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures – **Appendix x**

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

**11.6.4 For flights approaching the Khartoum FIR when the contingency is activated.***Not in Receipt of an ATC Clearance*

In the event that Khartoum ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Cairo FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Khartoum FIR or to land at an appropriate airfield.

*In receipt of an acknowledged ATC Clearance outside Khartoum FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Khartoum FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

## **11.7 Khartoum FIR – CONTINGENCY ROUTE STRUCTURE**

### **11.7.1 For activation within Khartoum FIR**

In a **limited service** contingency situation Khartoum ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Khartoum FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

### **11.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Khartoum FIR should use the following contingency routes:

#### **INTERNATIONAL ROUTE STRUCTURE AND COMMUNICATIONS FOR TRANSIT OF THE KHARTOUM FIR WHEN NO ATS AVAILABLE IN SUDAN AIRSPACE**

Contingency Routes Khartoum (CRK)	ATS Route	Direction	FL Assignment (FLAS)	ACCs	COM (Frequency Details in Appendix X)
CRK	UR611	N/S One way	Odd F370 ,F350 ,F330	CAIRO	HF, VHF
CRK	UB612	N/S Two ways	Odd F330 ,F350 Even F320,F360	CAIRO	HF, VHF
CRK	UA451	N/S Two ways	Odd F370 ,F350 ,F330 Even F300	CAIRO	HF, VHF
CRK	UG660	E/W Two ways	Even F400 ,F340 ,F280 Odd F290,F310	CAIRO	HF, VHF
CRK	UB736	E/W Two ways	Even F340 ,F260 Odd F390,F410	NIROBI	HF, VHF
CRK	UB527	N/S Two ways	Odd F370 Even F380	NIROBI	HF, VHF
CRK	UT267	E/W One way	Even F400,F340,F280	CAIRO	HF, VHF
CRK	UT124	E/W One way	Even F320, F360	NIROBI	HF, VHF

Communications with the next ATSU should be established at the earliest opportunity.

APPENDIX

CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT MONITORING SERVICES

<b>CONTINGENCY ROUTE KHARTOUM (CRK)</b>	<b>ATS ROUTE</b>	<b>ACC</b>	<b>COM</b>
CRK	UR611	CAIRO	HF, VHF HF 11300, VHF: Primary 129.4 MHz Secondary 130.9 MHz
CRK	UB612	CAIRO	HF, VHF HF 11300, VHF: Primary 129.4 MHz Secondary 130.9 MHz
CRK	UB612 SOUTH SECTOR	NAIROBI	HF, VHF HF 11300, VHF: Primary 121.3 MHz
CRK	UB736	NAIROBI	HF, VHF HF 11300, VHF: Primary 129.4 MHz Secondary 130.9 MHz,
CRK	UA451	CAIRO	HF, VHF HF 11300, VHF: Primary 129.4 MHz Secondary 130.9 MHz,
CRK	UG660	CAIRO	HF, VHF HF 11300, VHF: Primary 129.4 MHz/ Secondary 130.9 MHz
CRK	UB736	NAIROBI	HF, VHF HF 11300, VHF: Primary 121.3 MHz
CRK	UB527	NAIROBI	HF, VHF HF 11300, VHF: Primary 121.3 MHz
CRK	UT124	CAIRO	HF, VHF HF 11300, VHF: Primary 121.3 MHz/ Secondary 130.9 MHz

CRK	UM863	CAIRO	HF, VHF HF 11300, VHF: Primary 121.3 MHz Secondary 130.9 MHz
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**11.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Sudan loses the ability to provide an ATC service in the Khartoum FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Khartoum facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Khartoum FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Cairo FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**APPENDIX XX**

**SAMPLE NOTAMS**

**a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE KHARTOUM FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

**b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE KHARTOUM FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

**c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN KHARTOUM FIR ALL ACFT ARE ADVISED THAT THE SUDANESE INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY SUDANESE AIRSPACE.

**d) Non adherence to the Contingency Plan**

**APPENDIX A**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN  
SHALL AVOID THE KHARTOUM FIR

## **CHAPTER 8: DETAILED PROCEDURES – DAMASCUS FIR**

### **12.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES**

Damascus FIR

### **12.2 FIRs WITH SUPPORTING PROCEDURES**

Amman FIR  
Ankara FIR  
Baghdad FIR  
Beirut FIR  
Nicosia FIR

### **12.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

## **12.4 LIMITED SERVICE – PROCEDURES**

### **12.4.1 Disruption of ground/air communication capability**

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Damascus frequency normally provided by Damascus Control will be delegated as appropriate to the other ATS units namely -----, Appropriate frequencies will be advised by Damascus and the assisting ATS units.

Situations which could result in a Limited Service are:

#### Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Damascus Communications center and Damascus ACC)

#### Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

#### Staffing

Reduced Staffing  
Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

#### Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

### **12.4.2 Disruption of ability to provide control services**

Damascus ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. Enroute reclearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

**APPENDIX A**

*Separation standards*

Damascus ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

*Contingency tracks*

Dependant on the nature of the service limitation, Damascus may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

*Air Traffic Flow Management*

Damascus ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Damascus ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

**12.5 NO SERVICE – PROCEDURES**

**12.5.1 Loss of ground/air communication capability**

In the event of Damascus ACC being unable to provide ground/air communications for Damascus FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing

- No Staff
- Illness (Seasonal Influenza)
- Weather
- Industrial Relations issues

d) Evacuation of Damascus ACC

- Fire
- Bomb threat

*Effect on flights*

In the event of Damascus ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Damascus FIR.

ATFM measures may be imposed as necessary.

### **12.5.2 Loss of ability to provide control services**

Should Damascus ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Damascus FIR.

In the event that Damascus ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Damascus Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Damascus Contingency Procedures – Appendix xx.' In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

## **12.6 FLIGHT CREW AND OPERATOR PROCEDURES**

### **12.6.1 For flights within the Damascus FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

### **12.6.2 For flights within the Damascus FIR – Westbound**

**APPENDIX A**

----- ACC's will endeavour to provide an ATC service throughout the Damascus FIR as soon as evacuation commences. These procedures are detailed at Damascus Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Amman FIR				
Ankara FIR				
Baghdad FIR				
Beirut FIR				
Nicosia FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

**12.6.3 For flights within the Damascus FIR – Eastbound**

----- ACC's will endeavour to provide an ATC service throughout the Damascus FIR as soon as evacuation commences. These procedures are detailed at Damascus Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

**12.6.4 For flights approaching the Damascus FIR when the contingency is activated.***Not in Receipt of an ATC Clearance*

In the event that Damascus ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Damascus FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Damascus FIR or to land at an appropriate airfield.

*In receipt of an acknowledged ATC Clearance outside Damascus FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Damascus FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

## **12.7 DAMASCUS FIR – CONTINGENCY ROUTE STRUCTURE**

### **12.7.1 For activation within Damascus FIR**

In a **limited service** contingency situation Damascus ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Damascus FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

### **12.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Damascus FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

## **12.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Damascus loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Damascus facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Damascus FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Damascus FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

## **APPENDIX XX**

### **SAMPLE NOTAMS**

**APPENDIX A**

**a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE DAMASCUS FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

**b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE DAMASCUS FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

**c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN DAMASCUS FIR ALL ACFT ARE ADVISED THAT THE Damascus FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY DAMASCUS AIRSPACE.

**d) Non adherence to the Contingency Plan**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE DAMASCUS FIR

## CHAPTER 13: DETAILED PROCEDURES – EMIRATES FIR

### 13.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Emirates FIR

### 13.2 FIRs WITH SUPPORTING PROCEDURES

Bahrain FIR  
Muscat FIR  
Qatar TMA  
Tehran FIR

### 13.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the Emirates ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

### 13.4 LIMITED SERVICE – PROCEDURES

#### 13.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Emirates frequency normally provided by Emirates Control will be delegated as appropriate to Muscat ACC and Bahrain ACC. The Appropriate frequencies will be advised by Emirates ACC and the assisting ATSUs.

Situations which could result in a Limited Service are:

#### Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Emirates Communications center and Emirates ACC)

#### Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

#### Staffing

Reduced Staffing

**APPENDIX A**

Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

**13.4.2 Disruption of the ability to provide control services**

Emirates ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in an emergency.

Traffic without a valid clearance may be subject to tactical traffic management measures to meet the requirements of the service limitation.

*Separation standards*

Emirates ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

*Contingency tracks*

Dependant on the nature of the service limitation, Emirates ACC may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available..

*Air Traffic Flow Management*

Emirates ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Emirates ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units' airspace.

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

**13.5 NO SERVICE – PROCEDURES**

**13.5.1 Loss of ground/air communication capability**

In the event of Emirates ACC being unable to provide ground/air communications for the Emirates FIR, Emirates ACC will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
  - Transmitters (Loss of all Transmitters)
  - Receivers (Loss of all Receivers)
  - Aerials (Loss of all Aerials)
  - Data Lines (Loss of data lines)
- b) Propagation;
  - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
  - No Staff
  - Illness (Seasonal Influenza)
  - Weather
  - Industrial Relations issues
- d) Evacuation of Emirates ACC
  - Fire
  - Bomb threat

#### *Effect on flights*

In the event of Emirates ACC being unable to provide ground/air communications for a sustained period of time, Muscat ACC and Bahrain ACC, in coordination with adjacent FIR's, could provide a limited communications facility to flights in the Emirates FIR.

ATFM measures may be imposed as necessary.

#### **13.5.2 Loss of ability to provide control services**

Should Emirates ACC be evacuated, the potential would exist for a major disruption to Air Traffic Control (ATC) within the Emirates FIR.

In the event of Emirates ACC being evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with an alternate means of communication. The procedures to be adopted are detailed in the Emirates Contingency plan.

**APPENDIX A**

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as detailed in the Emirates Contingency Procedures – Muscat ACC and Bahrain ACC, Appendix E. In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix E.

**13.6 FLIGHT CREW AND OPERATOR PROCEDURES****13.6.1 For flights within the Emirates FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

**13.6.1.1 For flights within the Emirates FIR – Westbound**

Muscat ACC will endeavour to provide an ATC service throughout the Emirates FIR as soon as evacuation commences. These procedures are detailed at Emirates Contingency Procedures – Appendix E.

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

**ADJACENT ATSU CONTACT DETAILS:**

UNIT	TEL. No	FAX No	EMAIL	AFTN
Bahrain FIR	9731 7321080 9731 7321081	9731 7321029	bahatc@caa.gov.bh catco@caa.gov.bh	OBBBZQZX OBBBZQZA
Muscat FIR	9682 4519550 96824519507	9682 4519932	n.almazroui@caa.gov.om	OOMMZQZX
Qatar TMA	9744 4622515 9744 4656561 9744 4656562	9744 4621765	doha.ais@caa.gov.qa ahmed@caa.gov.qa	OTBDZTZX
Tehran FIR	9821 44544116 9821 44544060	9821 44544117	Maj.alireza@yahoo.com	OIIIZGZX OIIIZQZX

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

**13.6.2 For flights within the Emirates FIR – Eastbound**

Bahrain ACC will endeavour to provide an ATC service throughout the Emirates FIR as soon as evacuation commences. These procedures are detailed at Emirates Contingency Procedures – Appendix E.

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

**13.6.3 For flights approaching the Emirates FIR when the contingency is activated.**

*Not in Receipt of an ATC Clearance*

In the event that Emirates ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Emirates FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Emirates FIR or to land at an appropriate airfield.

*In receipt of an acknowledged ATC Clearance outside Emirates FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot’s discretion, continue, but must expect a limited ATC service or no service within the Emirates FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

**13.7 EMIRATES FIR – CONTINGENCY ROUTE STRUCTURE**

**13.7.1 For activation within Emirates FIR**

In a **limited service** contingency situation Emirates ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Emirates FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN.

**13.7.2 For activation within an adjacent FIR**

Unless instructed otherwise, flights entering the Emirates FIR should use the following contingency routes:

- All routes which are not mentioned will be not available;
- Ten minutes longitudinal separation from OB BB, OIII, OOMM and OTDB;
- All traffic transiting UAE FIR shall be maintaining flight level:

**WESTBOUND**

**OVERFLYING AND LANDING TRAFFIC**

ATS	ATS	ATSU	Transfer	Available Flight	EXIT ATS	NEXT ATSU	REMARKS
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**APPENDIX A**

Waypoint	Route	Frequency	Waypoint	Level	Waypoint	Frequency	
<b>MENSA</b>	N571	MUSCAT ACC 119.8	ATBOR	FL320, FL340, FL380 and Above	BALUS	BAHRAIN 132.125	
<b>MENSA</b>	N571	MUSCAT ACC 119.8	ATBOR	FL 260, FL300	TONSA	BAHRAIN 132.125	
<b>SODEX</b>	N563	MUSCAT ACC 124.7	<b>ADV</b>	FL280, FL360	BALUS	BAHRAIN 132.125	
	Z994	MUSCAT ACC 124.7	MISOD	FL300, FL320,	MEKMA	BAHRAIN 132.125	Available only for Traffic Landing Doha
<b>TAPRA</b>	M762	MUSCAT ACC 119.8	<b>TAPRA</b>	FL180	<b>TAPRA</b>	DUBAI APP 124.9	Available only for Traffic Landing within Dubai CTA
<b>ITRAX</b>	P899	MUSCAT ACC 124.7	<b>ITRAX</b>	FL160		ABU DHABI APP 124.4	Available only for Traffic Landing within Abu Dhabi CTA
<b>LU DID</b>	M628	MUSCAT ACC 124.7	<b>LU DID</b>	FL340 and Above		BAHRAIN ACC 2992 8918 5667 (HF)	-----

**EASTBOUND**

ATS Waypoint	ATS Route	ATSU Frequency	Transfer Waypoint	Available Flight Level	EXIT ATS Waypoint	NEXT ATSU Frequency	REMARKS
NADAM	A791	BAHRAIN 132.125	SHJ	FL390	LALDO	MUSCAT ACC 119.8	
			SHJ	FL250, FL290, FL330, FL370	TONVO	MUSCAT ACC 119.8	
SIR	L223	TEHRAN/ 133.4	RAGOL	FL350	TARDI	MUSCAT ACC/124.7	
LABTA	Y505	BAHRAIN /132.125	80NM FROM SHJ	FL190/FL170	-----	DUBAI APP/124.9	Available only for Traffic Landing Northern Emirates
ORSAR	G666/ B416	THRAN/13 3.4	80NM FROM SHJ	A090/FL210	-----	DUBAI APP/124.9	Available only for Traffic Landing Northern Emirates
GITEX	N685	BAHRAIN 132.125	ADV	FL270, FL310, FL390	LABRI	MUSCAT ACC 124.7	-----
			60NM FROM ADV	FL190	-----	ABU DHABI APP/124.4	Available only for Traffic Landing Southern Emirates

**DEPARTING TRAFFIC****WESTBOUND:**

ATS Route	ATSU Frequency	Transfer Waypoint	Available Flight Level	NEXT ATSU Frequency	REMARKS
N571	DUBAI APP/124.9	60NM FROM SHJ	FL200	BAHRAIN 132.125	Dubai APP Shall Climb Traffic to FL180 then to be Transferred to Bahrain ACC

G462	ABU DHABI APP/124.4	60NM FROM ADV	FL180	BAHRAIN 132.125	Abu-Dhabi Shall Climb Traffic to FL160 then to be Transferred to Bahrain ACC
Z994	ABU DHABI APP/124.4	60NM FROM ADV	FL200	BAHRAIN 132.125	Available for Traffic Landing Doha Traffic Departing Dubai CTA Shall be transferred Locally by Dubai APP to Abu-Dhabi APP then to be Routed via TAS Route Z994

**EASTBOUND**

ATS Route	ATSU Frequency	Transfer Waypoint	Available Flight Level	NEXT ATSU Frequency	REMARKS
A791	DUBAI APP 124.9	<b>LALDO</b>	FL230	MUSCAT ACC 119.8	Dubai APP Shall Climb Traffic to FL230 then to be Transferred to Muscat ACC
L223	DUBAI APP 124.9	<b>TARDI</b>	FL210	MUSCAT ACC 124.7	Abu-Dhabi Shall Climb Traffic to FL210 then to be Transferred to MUSCAT ACC
N318	ABU DHABI APP 124.4	<b>LABRI</b>	FL230	MUSCAT ACC 124.7	Abu-Dhabi Shall Climb Traffic to FL230 then to be Transferred to MUSCAT ACC

Communications with the next ATSU should be established at the earliest opportunity.

**13.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Emirates ACC loses the ability to provide an ATC service in the Emirates FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the main facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Emirates FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Emirates FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**APPENDIX XX**

**SAMPLE NOTAMS**

**a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE EMIRATES FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

**b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE EMIRATES FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

**c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN EMIRATES FIR ALL ACFT ARE ADVISED THAT THE Emirates FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY EMIRATES AIRSPACE.

**d) Non adherence to the Contingency Plan**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE EMIRATES FIR

**CHAPTER 14: DETAILED PROCEDURES – SANA’A FIR**

**14.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES**

Sana’a FIR

**14.2 FIRs WITH SUPPORTING PROCEDURES**

Addis Ababa FIR  
Asmara FIR  
Bahrain FIR  
Jeddah FIR  
Mogadishu FIR  
Mumbai FIR  
Muscat FIR

**14.3 NOTIFICATION PROCEDURES**

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

#### **14.4 LIMITED SERVICE – PROCEDURES**

##### **14.4.1 Disruption of ground/air communication capability**

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Sana'a frequency normally provided by Sana'a Control will be delegated as appropriate to the other ATS units namely -----, Appropriate frequencies will be advised by Sana'a and the assisting ATS units.

Situations which could result in a Limited Service are:

##### Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Sana'a Communications center and Sana'a ACC )

##### Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

##### Staffing

Reduced Staffing  
Illness  
Weather (Severe Weather i.e. Storm, Snow, Flooding)

##### Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

##### **14.4.2 Disruption of ability to provide control services**

Sana'a ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

**APPENDIX A**

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

*Separation standards*

Sana'a ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

*Contingency tracks*

Dependant on the nature of the service limitation, Sana'a may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

*Air Traffic Flow Management*

Sana'a ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Sana'a ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

**14.5 NO SERVICE – PROCEDURES**

**14.5.1 Loss of ground/air communication capability**

In the event of Sana'a ACC being unable to provide ground/air communications for Sana'a FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

a) Equipment Failure;

- Transmitters (Loss of all Transmitters)
- Receivers (Loss of all Receivers)
- Aerials (Loss of all Aerials)
- Data Lines (Loss of data lines)

b) Propagation;

- Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing

- No Staff
- Illness (Seasonal Influenza)
- Weather
- Industrial Relations issues

d) Evacuation of Sana'a ACC

- Fire
- Bomb threat

*Effect on flights*

In the event of Sana'a ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Sana'a FIR.

ATFM measures may be imposed as necessary.

#### **14.5.2 Loss of ability to provide control services**

Should Sana'a ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Sana'a FIR.

In the event that Sana'a ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Sana'a Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Sana'a Contingency Procedures – Appendix xx.' In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

### **14.6 FLIGHT CREW AND OPERATOR PROCEDURES**

#### **14.6.1 For flights within the Sana'a FIR – General**

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

#### **14.6.2 For flights within the Sana'a FIR – Westbound**

----- ACC's will endeavour to provide an ATC service throughout the Sana'a FIR as soon as evacuation commences. These procedures are detailed at Sana'a Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Addis Ababa FIR				
Asmara FIR				
Bahrain FIR				
Jeddah FIR				
Mogadishu FIR				
Mumbai FIR				
Muscat FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	00962 6 569 8728	00962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

#### 14.6.3 For flights within the Sana'a FIR – Eastbound

----- ACC's will endeavour to provide an ATC service throughout the Sana'a FIR as soon as evacuation commences. These procedures are detailed at Sana'a Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

#### 14.6.4 For flights approaching the Sana'a FIR when the contingency is activated.

##### *Not in Receipt of an ATC Clearance*

In the event that Sana'a ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Sana'a FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Sana'a FIR or to land at an appropriate airfield.

*In receipt of an acknowledged ATC Clearance outside Sana'a FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Sana'a FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

## **14.7 SANA'A FIR – CONTINGENCY ROUTE STRUCTURE**

### **14.7.1 For activation within Sana'a FIR**

In a **limited service** contingency situation Sana'a ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Sana'a FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

### **14.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Sana'a FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

## **14.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Sana'a loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Sana'a facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Sana'a FIR within **48** hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Sana'a FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

## **APPENDIX XX**

### **SAMPLE NOTAMS**

**APPENDIX A**

**a) Avoidance of airspace**

NOTAM.....DUE TO DISRUPTION OF ATS IN THE SANA'A FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

**b) Airspace available with limited ATS**

NOTAM .....DUE TO ANTICIPATED DISRUPTION OF ATS IN THE SANA'A FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

**c) Contingency plan activated**

NOTAM .....DUE TO DISRUPTION OF ATS IN SANA'A FIR ALL ACFT ARE ADVISED THAT THE Sana'a FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY SANA'A AIRSPACE.

**d) Non adherence to the Contingency Plan**

NOTAM .....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE SANA'A FIR

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**APPENDIX B**

**CONTINGENCY AGREEMENT STATUS**

STATE	CORRESPONDING STATES	STATUS	SOFT COPIES SENT TO ICAO
BAHRAIN	IRAN KUWAIT OMAN QATAR SAUDI ARABIA UAE	Signed Signed Signed Signed Signed Signed	Sent
EGYPT	GREECE JORDAN LYBIA CYPRUS SAUDI ARABIA SUDAN	Signed  Signed  Signed	Sent
IRAN	ARMENIA AZERBAIJAN TURKMANISTAN AFGHANISTAN BAHRAIN IRAQ KUWAIT OMAN PAKISTAN TURKEY UAE	Signed    Signed  Signed Signed	Sent
IRAQ	IRAN JORDAN KUWAIT SAUDI ARABIA SYRIA TURKEY		Sent

STATE	CORRESPONDING STATES	STATUS	SOFT COPIES SENT TO ICAO
JORDAN	EGYPT IRAQ ISRAEL SAUDI ARABIA SYRIA	Signed	Sent
KUWAIT	BAHRAIN IRAN IRAQ SAUDI ARABIA	Signed  Signed	
LEBANON	CYPRUS SYRIA		
OMAN	BAHRAIN INDIA IRAN PAKISTAN UAE YEMEN	Signed  Signed  Signed Signed	Sent
QATAR	BAHRAIN SAUDI ARABIA UAE	Signed	
SAUDI ARABIA	BAHRAIN EGYPT ERITREA IRAQ JORDAN KUWAIT SUDAN YEMEN	Signed   Signed Signed	
SYRIA	IRAQ JORDAN LEBANON CYPRUS TURKEY		

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STATE	CORRESPONDING STATES	STATUS	SOFT COPIES SENT TO ICAO
UAE	BAHRAIN IRAN OMAN QATAR	Signed  Signed	Sent
YEMEN	DJIBOUTI ERITREA ETHIOPIA INDIA OMAN SAUDI ARABIA SOMALIA	Signed	

-----

APPENDIX C

**CONTINGENCY CONTACT DETAILS**

NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
<b>BAHRAIN</b>						
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Sleem Mohammed Hasan	+ 973 17321117		+ 973 39608860	+ 973 17329977	<b>sleemmh@caa.gov.bh</b>	
Air Traffic Duty Supervisor	+ 973 17321081 + 973 17321082			+ 973 17321029		
<i>EGYPT</i>						
<i>Mr. Mohamed Alkady</i>	2022657849	202 6391792	20 106504438	202 2680627	<a href="mailto:elkady@nansceg.org">elkady@nansceg.org</a> mielkady@hotmail.com	
<i>Mr. Aly Hussien Aly</i>	202 6373950	202 4178460	20101609760	202 2680627		
IRAN Mr. M. Rasouli Nejad Deputy of IAC in Operations	+98214454435		+989123874921			
Mr. E. Shoustari General Director Of ATS	+982144544101		+989121861900	+982144544102		
Mr. A. Majzoubi Chief of ACC	+982144544114		+989123053095			
Mr. Khodakarami Deputy of ATS Dept.	21 4087386		98 9132843796			
<i>JORDAN</i>						
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<i>KUWAIT</i>						
Mr. Mukhled Kh. Al- Sawagh	+ 965 24346220		+ 965 97666979	+ 965 24346221	q8dgca_danoff@hotmail.com	
<i>LEBANON</i>						

NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
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<b>OMAN</b>						
Mr. Abdullah Nasser Al-Harthy	968519201		9689476806	968519939 /519930	Abdullah_nasser@dgcam.com.om	
Mr. Saud Al Adhoobi	968519305		9689321664	968519939/519930	saud@dgcam.com.om	
<b>SAUDI ARABIA</b>						
Mr. Mohammad Al Alawi	<b>96626401005</b>		<b>96655621582</b>	<b>9662 6401005</b>	<b>alalawi_m@yahoo.com</b>	
<b>SYRIA</b>						
Mr.Hussein. Mahfoud Director General of Civil Aviation	963 113333815		093222553		dgca@net.sy	
<b>UNITED ARAB EMIRATES (UAE)</b>						
Mr. Ahmed Al Jallaf Executive Director ANS	971 2 599 6888		971 50 614 9065	971 2 599 5883	aljallaf@szc.gcaa.ae	AFTN: OMAEZQZX OMAEYAYH
<b>YEMEN</b>						
Mr. Saleh A. Al-Theeb	9671 345402	9671 344048	73715516	9671 345403	Sanlans@hotmail.com	
<b>IATA – MID</b>						
Mr. Achim Baumann	<a href="tel:+96265804256">+962 6 580 4256</a>		<a href="tel:+962797045556">96279 704 5556</a>	+962-6 593 9912	baumanna@iata.org	
<b>ICAO Cairo</b>						
S. Al Adhoobi (RO/ATM)	202 267 4845 ext 104		201 113910327	202 267 4843	sadhoobi@cairo.icao.int	
M.R. Khonji (DRD)	202 267 4841 ext. 116/115	202 415 2073	201 232 14946	202 267 4843	mkhonji@cairo.icao.int mkhonji@hotmail.com	
<b>ICAO Headquarters – Montreal</b>						
Vince Galotti (C/ATM)	1 514 954-6711	1 514 281-0731	1 514 951-0283	1-514-954 8197	vgalotti@icao.int	
Chris Dalton (TO/ATM)	1 514 954-8219 ext. 6710	1 514 485-3635		1-514-954 8197	cdalton@icao.int	
Gustavo De Leon (TO/ATM)	1 514 954-8219 ext. 6199	1 514 482-7182	1 514 883-4847	1-514-954 8197	gdeleon@icao.int g_deleon_p@hotmail.com	
Aleksandar Pavlovic	1-514 954 8162	1-514 932 7632		1-514-954 6077	apavlovic@icao.int	

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NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
(C/AIS/MAP)						
Hindupur Sudarshan (TO/RAO)	1-514 954 8219 ext 8190	1-514 486 4041		1-514-954 6077	hsudarshan@icao.int	

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APPENDIX D

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**CONTINGENCY ROUTING SCHEME FOR  
ASIA/MIDDLE EAST/EUROPE – 2003  
(CRAME-03)**

**Version III**

**Approved by the President on behalf of the ICAO Council**

**Introduction**

The Contingency Routing Scheme for Asia/Middle East/Europe – 2003 (CRAME-03) has the objectives of ensuring continued safety of air navigation within FIRs affected by airspace closures and minimising effects on international civil air transportation in the event of military action occurring in the Middle East area. The procedures contained in this document supplements or details, where so required, those actions and procedures prescribed in State specific contingency plans.

The contingency routing scheme is designed to provide alternative routes to/from Asia, Middle East, and Europe, which will allow aircraft operators to avoid airspace in the Middle East, as necessary, with a minimum of disruption to flight operations.

It is not possible to predict with certainty what airspace will remain open or closed to civil aviation and for what period of time. Experience from operating similar contingency plans under similar conditions shows that a flexible approach to airspace management is required. Frequent changes in military objectives and concentrations of military activities will affect the airspace available for civil operations. In this regard, the contingency routing scheme takes into account that States may need to modify the extent to which they can support the contingency arrangements. Accordingly, this contingency scheme has been designed to contain a variety of options, which can be used for varying scenarios.

It is recognized that operators may incur economic penalties during application of the contingency scenarios. Therefore, air traffic flow control measures will be implemented as required.

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**Airspace Definition**

The contingency routing scenarios are designed for air traffic operating through the following flight information regions (FIRs) south and north of the Himalayas (see charts in **Appendix B**): Addis Ababa, Alma Ata, Asmara, Bahrain, Bangkok, Cairo, Colombo, Delhi, Emirates, Frunze, Jeddah, Kabul, Karachi, Khartoum, Kunming, Lahore, Lanzhou, Madras, Male, Mogadishu, Mumbai, Muscat, Sana'a, Semipalatinsk, Seychelles, Tehran, Ulaan Baatar, Urumqi and Vientiane.

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**Contingency Situation**

These procedures have been developed to provide alternative routings for various scenarios in the event that military activity in the Middle East closes airspace to international civil aviation or where operators wish to avoid airspace due to a perceived risk to the safety of flight.

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**Responsibilities**

Elements of this contingency scheme may be activated by NOTAM or Aeronautical Information Publication (AIP) Supplement as required and issued by the air traffic services (ATS) authorities responsible for the FIRs concerned. ATS authorities will notify by NOTAM any closures of ATS routes and airspace that become potentially hazardous to air traffic. The NOTAM should give information on any degradation of communications, navigation and surveillance services. The affected ATS unit should activate its contingency scheme by the most direct means possible (direct speech, AFTN (SS priority) or any other means of priority message) to the following:

- a) all airborne aircraft potentially affected by such closures or degradation of services
  - b) adjacent FIRs and air traffic control (ATC) Centres;
  - c) to the following ICAO Regional Offices:
    - 1) Bangkok (AFTN: VTBBICOX);
    - 2) Cairo (SITA: CAICAYA);
    - 3) Nairobi (SITA: NBOCAYA.); and
    - 4) Paris (SITA: PAREUYA); and
  - d) and to the following IATA Regional Offices:
    - 1) Singapore (WSSSIATA);
    - 2) Amman;
    - 3) Nairobi; and
    - 4) Brussels.
-

**ICAO Approval**

<i>Approval</i>	By agreement of States and international organizations through the ICAO Regional Offices of Asia/Pacific, Middle East and European and North Atlantic, this contingency scheme is approved by the President on behalf of the ICAO Council.
<i>Coordination</i>	The appropriate ICAO Regional Office will distribute this contingency scheme to all relevant States and international organisations within their regions.
<i>Amendment and Review</i>	This contingency scheme should be reviewed regularly and amended as appropriate. In addition, States should periodically review their own national contingency plan and coordinate any amendments with neighbouring States and ICAO.
<i>Revision Conditions</i>	Amendments and revisions are to be coordinated with affected States, organisations and ICAO. Proposed amendments to the contingency scheme should be forwarded to the relevant ICAO Regional Office for action.
<i>Contact Names and Telephone Numbers</i>	To be provided by State ATS Providers and international organizations to the relevant ICAO Regional Office for distribution. A list of contact details is contained in <b>Appendix A</b> .

**Contingency Scenarios**

<b>Description</b>	This contingency scheme provides a series of options for alternative routings where ATS routes and airspace are closed or operators choose to avoid airspace, which could pose a risk to the safety of flight.
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## Airspace and Routes

### *Contingency routing scheme*

This contingency scheme has been developed based on existing ATS routes and making use of appropriate contingency routes in the Contingency Routing Plan for Asia/Middle East/Europe (CRAME). Priority has been given to safety considerations and to ensuring that as far as possible, ATC operations are not complicated. Temporary routes are also established where necessary.

The contingency routings are designed to take into consideration that disruptions to normal traffic flows have the potential to create an additional burden and complexity to ATC. Therefore, temporary contingency routes have been designed to be safe and instantly manageable by ATC. This may require additional track miles to be flown by the aircraft operator.

The contingency schemes were given CRAME designators based on various scenarios that may take place, which are:

**Scenario 1 (Yellow routes):** Flights planning to operate on existing routes to and from Gulf States aerodromes that are open to civil flights, and overflights are permitted over portions of the Arabian Peninsular.

**Scenario 2 (Pink routes):** Flights planning to avoid the Persian Gulf by operating on existing routes through Pakistan and Iran via the Arabian Sea.

**Scenario 3 (Blue routes):** Flights planning to avoid the Persian Gulf by operating through Pakistan, Iran and Turkey.

**Scenario 4 (Orange routes):** Flights planning to avoid the Persian Gulf, Iran and Turkey by operating through Afghanistan and India.

**Scenario 5 (Red routes):** Flights planning to avoid the Persian Gulf, Iran, Turkey and Afghanistan by operating across the Arabian Sea and Indian Ocean.

**Scenario 6 (Green routes):** Flights planning to avoid the Middle East entirely by operating north of the Himalayas or east and north of Afghanistan (Kabul FIR).

The scenarios above are further delineated in terms of alternative routes that are available to meet each scenario's stated objective. This will normally be in the form of a contingency route designator (e.g. *CS Green 6.4*) or an existing code where the route is already specified as a part of CRAME or the ATS route designator for established ATS routes. Details of these alternative routes that apply to each scenario are contained in the charts at **Appendix B**. Except for Scenarios 5 and 6, which are limited to existing route structures, the route details and procedures associated with each contingency route is at **Appendix C**.

**Special Note:**

*Under Scenarios 1 to 5 above, airline company policy may dictate that their aircraft avoid the Middle East area completely as well as operations over Afghanistan, which may require them to plan via China, North of the Himalayas in accordance with Scenario 6.*

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## Air Traffic Management

***ATS Responsibilities***

Normal communications, navigation and surveillance (CNS) and air traffic management (ATM) are expected to be provided for the FIRs concerned.

It should be noted that tactical air traffic control considerations during periods of over-loading may require re-assignment of routes or portions thereof. Where possible, the designated alternative routes have been designed to maximize the use of existing ATS route structures and communication services.

The State ATS provider should issue NOTAMs detailing the services and facilities not available, including where known, an expected date of restoration, and giving information on the arrangements for the provision of alternative services where appropriate. In addition, if a disruption to service is anticipated, the State ATS provider should publish a NOTAM that alerts the operator to the possible disruption and what actions are expected to take place. This will allow both operators and affected State ATS providers to prepare in advance of any such occurrence.

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**Separation**

Separation criteria will be applied in accordance with the *Procedures for Air Navigation Services—Air Traffic Management* (PANS-ATM, Doc 4444) and the Regional Supplementary Procedures (Doc 7030).

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**Level Restrictions:  
Regional Route  
Structure**

Wherever possible, aircraft on long-haul international flights shall be given priority and cleared to optimum cruising levels, i.e. at FL 280 and above.

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**Air Traffic Flow Management**

Air traffic flow management (ATFM) measures will be introduced as required to ensure an optimum flow of air traffic to and through areas during times when demand exceeds or is expected to exceed the available capacity. ATFM also should ensure that safety is not compromised by the development of unacceptable levels of traffic congestion. During the implementation of this contingency scheme there could be periods of traffic build up that would require implementation of ATFM.

ATS providers with responsibility for contingency routes should coordinate in advance appropriate ATFM arrangements that include setting acceptable traffic flow rates for the various routing scenarios. An example of traffic flow rates based on applying 10 minute and 15 minute longitudinal separation is provided in **Appendix F**. Flow rates would need to be established for each contingency route by States concerned.

In order to regulate and maximise the airspace capacity and make use of available flight levels, it may be necessary to impose speed restrictions/requirements on some routes for specific time periods.

Tactical flow management measures which monitor the progress of individual aircraft will intervene when required to meet ATM constraints.

States should review the airport traffic movement curfew hours, with a view to providing leniency during the critical period when the contingency routes are activated so as to allow for late arrivals or departures as a result of flow control measures.

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**Transition to contingency scheme the event of airspace closure**

During times of uncertainty when airspace closures seem possible, aircraft operators should be prepared for a possible change in routing while en-route. This would require familiarization of the alternative routes outlined in this contingency scheme as well as what may be promulgated by a State via NOTAM or AIP.

In the event of an airspace closure that has not been promulgated, ATC should if possible broadcast to all aircraft in their airspace what airspace is being closed and to stand by for further ATC instructions.

ATS providers should recognize that when closure of airspace or airports are promulgated, individual airlines may have different company requirements as to their alternative routings. ATC should be alert to respond to any request by aircraft and react commensurate with safety.

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## Transfer of Control and Co-ordination

**Transfer of Control** The transfer of control and communication should be at the common FIR boundary unless there is mutual agreement between the adjacent ATS units. State ATS providers should also review current co-ordination requirements in light of contingency operations or short notice airspace closures.

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## Communications

**Flight Monitoring** In areas where a control service is not available, a flight monitoring and broadcast procedure should be used. The ICAO Traffic Information Broadcast by Aircraft (TIBA) procedure as shown in **Appendix D** should be used for flights in the Asia Pacific and Middle East Regions on VHF 128.95 MHz and the IATA In-flight Broadcast Procedure (IFBP) is used for flights in African/Indian Ocean FIRs as specified in **Appendix E**, Paragraph 6.1 on VHF 126.9 MHz.

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## Pilot and Operator Procedures

### Intercept Operations

Pilots need to be aware that a contingency situation involving military activity carries the possibility of being intercepted by military aircraft. Aircraft operators must therefore be familiar with international intercept procedures contained in Annex 2 to the Chicago Convention, paragraph 3.8 and Appendix 2, Sections 2 and 3 as shown in **Appendix G**, as well as specific intercept procedures that may be contained in a State AIP.

Pilots need to continuously guard the VHF emergency frequency 121.5 MHz and should operate their transponder at all times during flight, regardless of whether the aircraft is within or outside airspace where secondary surveillance radar (SSR) is used for ATS purposes. Transponders should be set on a discrete code assigned by ATC or select code 2000 if ATC has not assigned a code.

If an aircraft is intercepted by another aircraft, the pilot shall immediately:

- a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with international procedures;
- b) notify, if possible, the appropriate air traffic services unit;
- c) attempt to establish radio communication with the intercepting aircraft by making a general call on the emergency frequency

121.5 MHz and 243 MHz if equipped; and

- d) set transponder to Code 7700, unless otherwise instructed by the appropriate ATS unit.

If any instructions received by radio from any sources conflict with those given by the intercepting aircraft, the intercepted aircraft shall request immediate clarification while continuing to comply with the instructions given by the intercepting aircraft.

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## Overflight Approval

**Overflight approval requirements** Aircraft operators are to obtain overflight approval from States for flights operating through their FIRs, where required. In a contingency situation, flights may be rerouted at short notice and it may not be possible for operators to give the required notice to obtain approval. This would be a particular problem when airspace is closed at short notice. States responsible for the FIRs in which contingency routes are established should consider making special arrangements to expedite flight approvals in these contingency situations.

States should facilitate the entry/overflight of humanitarian flights within their territorial airspace/FIRs in case be requested by Humanitarian Agencies.

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## Appendices

- Appendix A** *List of contact persons and details*
- Appendix B** Chart(s) of Contingency routes
- Appendix C** Matrix containing details of contingency routes
- Appendix D** ICAO Contingency TIBA Procedures
- Appendix E** IATA In-flight Broadcasting Procedures
- Appendix F** ATFM air traffic flow rates

**Appendix G**

ICAO Interception Procedures

DRAFT

Appendix A

List of Contacts

NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
<b>ARMENIA</b>						
Arthur Gasparyan (Focal Point – H24)	3741 59 33 04		3741 47 71 90	3749 59 33 04	<a href="mailto:arthur.gasparyan@armats.am">arthur.gasparyan@armats.am</a>	UGEEADXX
Avag Poghosyan (Alternate – H24)	3741 59 30 76		3749 40 15 82	3741 28 70 02		UGEEADXX
<b>AZERBAIJAN</b>						
Bala Mirzoev	99412 971 604 (0500 – 1400)		99450 326 2863 (H24)	99412 972 733 (0500 – 1400)	<b>Direct address:</b> <a href="mailto:balamirzoev@azans.az">balamirzoev@azans.az</a> <b>Official address:</b> <a href="mailto:office@azans.az">office@azans.az</a> <a href="mailto:atm@azans.az">atm@azans.az</a>	UBBBADXX
ATC Supervisor (on duty)	99412 971 673					
<b>BAHRAIN</b>						
Mr. Mohamed Ahmed Juman	973 321 031/80 INMARSAT: 873 763 688 478 (H24)			973 321 029 INMARSAT: 873 763 688 479	cmcan@bahrain.gov.bh	Air Navigation Crisis Management Centre Operational on H24
<b>BANGLADESH</b>						
Chairman CAA of Bangladesh	880-2-8911122			880-2-8913322	caab@nsl.bangla.net	
<b>CHINA</b>						
Mr. Liu Zhonghua	86-10-6401 2907			86-10-6513 5983		AFTN: ZBBBZGZX

Appendix A

List of Contacts

NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
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<b>EGYPT</b>						
Mr. Mohamed Alkady	202 265 7849	202 639 1792	202 417 8460	202 268 0627	<a href="mailto:elkady@nansceg.org">elkady@nansceg.org</a> <a href="mailto:mielkady@hotmail.com">mielkady@hotmail.com</a>	
Mr. Aly Hussien Aly	202 637 3950	202 417 8460	201 01609 760	202 268 0627		
<b>GEORGIA</b>						
Vladimir Gogashvili	995 32 947 326 (0500-1400 UTC)		995 77 411 125	995 32 947326 (0500-1400UTC)	<a href="mailto:atc@airnav.com.ge">atc@airnav.com.ge</a> <a href="mailto:atc@caucasus.net">atc@caucasus.net</a>	UGGGADXX
<b>HONG KONG, CHINA</b>						
Mr. Norman Lo	(852) 2867 4202	(852) 2504 4299	(852) 9038 0695	(852) 2910-1177 (VHHH ATCC- H24)	nsmlo@cad.gov.hk	
Deputy Director General Civil Aviation						
Mr. John Lau	(852) 2910-6402	(852) 2341-1928	(852) 9022-8422	(852) 2910-1177	jtclau@cad.gov.hk	
<b>INDIA</b>						
H.S. Chawla	91-11-2463 1684		981-0016-825	91-11-2461 1078	edatmchqnad@airportsindia.org .in	
DGCA India	91-11-2462 7830	91-11-2467 1272		91-11-2462 9221		
AAI				91-11-2463 2990		
<b>INDONESIA</b>						
DGAC – Indonesia				62-21-424 6703		
Director of Aviation Safety				62-21-350 7569		
<b>IRAN</b>						

Appendix A

List of Contacts

NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
Mr. A. Golmohammadi DG of Operations	982 1452 5493					<i>Note.- During New Year Holidays in Iran (20 March – 5 April) Contact the Dep. Of CAO in Operation or in the Dept. of ATS</i>
Mr. Momenirokh Deputy of CAO in Operation		21 440 0753	98 913 227 4798	98 214 527 194		
Mr. E. Shoushtari Deputy of ATS Dept.		21 601 4235	98 911 286 100			
Mr. Khodakarami Deputy of ATS Dept.		21 408 7386	98 913 284 3796			
<b>JORDAN</b>						
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Civil Sector ATFM (H24)	996 312 603 552			996 312 603 573 996 312 313 573		UAFMZDZX

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NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
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<b>MALAYSIA</b>						
Mr. Maniam Appadurai Deputy Director ATS (Operations)	007-603-7846 5233 007-603-7846 9428	603-7980 0870		603-7847 2997	accwmfc@tm.net.my	
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Mr. Abdullah Nasser Al-Harthy	968 519 201		968 947 6806	968 519 939/ 519 930	<a href="mailto:Abdullah_Nasser@dgcam.com.om">Abdullah_Nasser@dgcam.com. om</a>	
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NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
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Senior Controllers (H24)	7 095 155 8572 7 095 155 5515					UUUVZDZX
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NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
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Mr. Prasert Pathumbal Thai Airways	66 2 996 9101			66 2 504 3803	prasert.p@thaiairways.co.th	SITA: BKKOWTG
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NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
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NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
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Appendix B

Contingency Routes

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## CONTINGENCY SCHEME ROUTE DETAILS

### 1. INTRODUCTION

1.1 The following scenarios provide aircraft operators with alternative routings to their normal routes that may be affected by airspace closures.

#### ROUTES — DESCRIPTION

**Scenario 1 (Yellow routes):** Flights planning to operate on existing routes to and from Gulf State aerodromes that are open to civil flights, and overflights are permitted over portions of the Arabian Peninsular

**Scenario 2 (Pink routes):** Flights planning to avoid the Gulf area on existing routes through Pakistan and Iran via the Arabian Sea

**Scenario 3 (Blue routes):** Flights planned to avoid the Gulf area by operating through Pakistan, Iran and Turkey

3.1	TIGER/G452	TIGER-G452-RK-ZAHEDAN
3.2	P628/ZAHEDAN	P628-ASOPO-A791-BHOPAL-'PRA' VOR-A791/R462-CHOR-B210-NAWABSHAH-PG-G208-ZAHEDAN
3.3	AAE/ZAHEDAN	AAE-N895W-SASRO-G208(W)-CHOR-KC-PARET-PG-ZAH
3.4	ZAHEDAN/AAE	ZAH-G208-PG-P318 (S)-DOSTI-M638-KC-G208(E)-AAE
3.5	KC/JI	KC-A791 L308 (W)-PARET-JI
3.6	JI/KC	JI-A791(E)-LATEM-KC

Appendix C

Contingency Scheme Route Details

**Scenario 4 (Orange routes): Flights planned to avoid the Gulf area, Iran and Turkey by operating through India, Pakistan and Afghanistan**

4.1	G500	DELHI–A466–LAHORE–A466–JHANG ISMAIL-KHAN (DI)–P500–PADDY–FIRUZ–P500/G500  <i>Note:— Contingency levels FL310-FL390 within Kabul FIR.</i>
4.2	M881	DELHI–A466–LAHORE–A466–JHANG ISMAIL KHAN (DI)–P500–ADINA M881–LAJAK EGPAN  <i>Note 1:— Contingency levels FL280-FL290 within Kabul FIR.</i> <i>Note 2:— M881 conflicts laterally with ATS route P500.</i>
4.3	A466	DELHIA–466–LAHORE–A466–DI–AMDAR–TERMEZ  <i>Note:— Contingency flight levels FL290–FL390.</i>
4.4	N644	JHANG ISMAIL KHAN (DI)–N644–PAVLO–LEMOD  <i>Note:— Contingency levels FL310-FL390.</i>  <i>RNP 10 approved aircraft only</i>
4.5	L750	TIGER–G202N–ZHOB–L750–ROSIE–RANAH  <i>Note:— Contingency levels FL310-FL390</i>  <i>RNP 10 approved aircraft only</i>
4.6	B466/N636/P628/G792	NAWABSHAH–B466/N636–KANDAHAR–N636/P628–CHARN–G792–MASHHAD–GIRUN or MASHHAD–G775–ASHGABAT  <i>Note:— Contingency levels FL310-FL350.</i>  <i>RNP 10 approved aircraft only</i>
4.7	P628/B466/	P628–ASOPO–A791–BHOPAL–‘PRA’ VOR–A791W–CHOR–B210–NAWABSHAH–B466–KANDAHAR–V390–CHARN–G792–MASHHAD–GIRUN or MASHHAD–G775–ASHGABAT  <i>Note 1:— Contingency levels FL310-FL350 within Kabul FIR.</i> <i>Note 2:— Within Tehran FIR G792 minimum enroute altitude FL310.</i>

Appendix C

Contingency Scheme Route Details

**Scenario 5 (Red routes): Flights planned to avoid the Persian Gulf, Iran, Turkey, and Afghanistan by operating across the Arabian Sea and the Indian Ocean**

<p><b>CRAME 3A and 2C — as amended</b></p>	<p>Mumbai (BBB)–P751–BOLUR (1700.7N 063 07.4E)–ASPUX (1744.1N 06000.1E)–UN315–Haima (HAI)–LOTOS (N22 00.0 E050 39.2)</p> <p><i>Note 1:— CRAME 3A is identical to CRAME 2C.</i></p> <p><i>Note 2:— Traffic may route beyond LOTOS (N22:00.0 E050:39.2) via:</i></p> <ul style="list-style-type: none"> <li>i) LOTOS–N569 ALRIK (N2206.5 E04825.6) L883 PMA YEN UL300–Luxor (LXR)–A727–Cairo (CVO). <i>Westbound routing only;</i></li> <li>ii) LOTOS– N569/L883 PMA YEN –Yenbo (YEN)–A411–WEJ–A411–Sharm el Sheikh (SHM)–A411–Cairo (CVO). <i>Westbound routing only;</i></li> <li>iii) Cairo (CVO)–A727–SEMRU (N28:02.0 E032:03.1)–B418–WEJH (WEJ)–UL573–Dafinah (DFN)–M628 UMRAN (N2315.1 E04520.4) L883 ALRIK (N2206.5 E04825.6) –LOTOS (N22 12.7 E045 48.0). <i>Eastbound routing only;</i></li> <li>iv) LOTOS–N569 ALRIK L883 – UMRAN (N2315.1 E04520.4) M628 Dafinah (DFN)–G782–Jeddah (JDW). Or N569 RABTO (N2216.1 E04003.4) G782 JDW <i>Westbound routing only;</i></li> <li>v) Jeddah (JDW)–B417–BONUM (N2212.9 E03938.1)–N569 RABTO (N2216.1 E04003.4) N569–LOTOS. <i>Eastbound routing only;</i> and</li> <li>vi) <b>LOTOS–Y100–KFA for flights to/from Bahrain, Dammam and Doha airports (consult local NOTAMs).</b></li> </ul>
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<p><b>CRAME 3B</b></p>	<p>Katunayake (KAT)–P570–TVM– UL425–ASPUX (1744.1N 06000.1E)–UN315–HAI–LOTOS (N22 00.0 E050 39.2) then flight plan route to destination (consult local NOTAMs).</p> <p><i>Note:— This is the most northerly route available. Traffic may route beyond LOTOS (N22:00.0 E050:39.2) via:</i></p> <ul style="list-style-type: none"> <li>i) LOTOS–N569 ALRIK (N2206.5 E04825.6) L883 PMA YEN UL300–Luxor (LXR)–A727–Cairo (CVO). <i>Westbound routing only;</i></li> <li>ii) LOTOS– N569/L883 PMA YEN –Yenbo (YEN)–A411–WEJ–A411–Sharm el Sheikh (SHM)–A411–Cairo (CVO). <i>Westbound routing only;</i></li> <li>iii) Cairo (CVO)–A727–SEMRU (N28:02.0 E032:03.1)–B418–WEJH (WEJ)–UL573–Dafinah (DFN)–M628 UMRAN (N2315.1 E04520.4) L883 ALRIK (N2206.5 E04825.6) –LOTOS (N22 12.7 E045 48.0). <i>Eastbound routing only;</i></li> </ul>
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Contingency Scheme Route Details

	<p>iv) LOTOS–N569 ALRIK L883 – UMRAN (N2315.1 E04520.4) M628 Dafinah (DFN)–G782–Jeddah (JDW). Or N569 RABTO (N2216.1 E04003.4) G782 JDW. <i>Westbound routing only;</i></p> <p>v) Jeddah (JDW)–B417–BONUM (N2212.9 E03938.1)–N569 RABTO (N2216.1 E04003.4) N569–LOTOS. <i>Eastbound routing only; and</i></p> <p>vi) <b>LOTOS–Y100–KFA for flights to/from Doha (consult local NOTAMs).</b></p>
--	---

<b>CRAME 4A</b>	<p>Mumbai (BBB)–P751–RIGAM (N14:39.5 E05304.2)–B526–RIYAN (RIN)–M559 ITOLI (N1528.4 E04509.4) M301 SAA–UR777–DANAK–UB413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs).</p> <p><i>Note:— CRAME 4A assumes that the Sanaa and Jeddah FIRs are available. Traffic may also route beyond ODAKA (N14:40.6 E052:34.0) as follows:</i></p> <ul style="list-style-type: none"> <li>- RIGAM–P751–Aden (KRA)–B413– DANAK–B413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs).</li> </ul>
-----------------	--

<b>CRAME 4 B</b>	<p>Katunayake (KAT)–P570–Trivandrum (TVM) –UL425–DONSA (N14:35.2 E065:11.6)–UP323– GIDAS DCT–SOC (N1238.3 E05354.4) (Socotra) – N764 –RIN– M559 ITOLI (N1528.4 E04509.4) M301 –SAA–UR777–DANAK–UB413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs).</p> <p><i>Note:— CRAME 4B assumes the Sanaa and Jeddah FIRs are open. Traffic may also route beyond RASEM (N14:11.5 E0050:28.6) as follows:</i></p> <ul style="list-style-type: none"> <li>- ORBAT (N1406.6 E05039.4)– P751–Aden (KRA) – B413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs).</li> </ul>
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**Flights departing/arriving/overflying from/to Hong Kong, Thailand and northern India.**

<b>CRAME 5A</b>	<p>Mumbai (BBB)–G450–ORLID (N11 17.1 E060 00.1)–UT382–AVEDA (N0913.5 E04911.4) – DAROT (N0911.4 E04721.2)–Hargeisa (HARGA) then flight plan route to destination (consult local NOTAMs).</p>
<b>CRAME 5B</b>	<p>Male (MLE)–DCT–MAGUG (N05 20.7 E006 00.) UT384 DAROT (N0911.4 E04721.2)–Hargeisa (HARGA) then flight plan route to destination (consult local NOTAMs).</p>

Appendix C

Contingency Scheme Route Details

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	<p><i>Note:— Traffic may route beyond Hargeisa via—DCT—Dire—Dawa (DWA) – W886—Addis Ababa (ADS)—UR2—TIKAT (N12:24.3 E035:38.2) then flight plan route to destination (consult local NOTAMs).</i></p>
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Appendix C

Contingency Scheme Route Details

**Scenario 6 (Green routes): Flights planned to avoid the Middle East entirely by flying north of the Himalayas or east and north of Afghanistan (Kabul FIR)**

6.1	L888/A360	BANGKOK (BKK)–B346–LUANG PRABANG (LPB)–B218–SAGAG–A581–BIDRU–L888–KUQA–A460–RULAD (N4330 E08044) G270 BERTO (N4332 E07948.4)–A360
6.2	B330/A368	BANGKOK (BKK)–B346–LUANG PRABANG (LPB)–B218–SAGAG–BIDRU–A581–KUNMING (KMG)–G212–JINTANG–B330–YABRAI–B215–FUKANG–A368–SARIN
6.3	B330	BANGKOK (BKK)–B346–LUANG PRABANG (LPB)–B218–SAGAG–BIDRU–A581–KUNMING (KMG)–G212–JINTANG–B330–YABRAI–MORIT
6.4	B215/A364	DELHI–A466–LAHORE–J121–BATAL–J131–GILGIT–G325–PURPA–B215–SACHE–A364–KASHI (KHG) <b>KURUM–R/UR356</b>
6.5	B215/A360	DELHI–A466–LAHORE–J121–BATAL–J131–GILGIT–G325–PURPA–B215–KUQA–A460– RULAD (N4330 E08044) G270 BERTO (N4332 E07948.4)–A360
6.6	B215/A368	DELHI–A466–LAHORE–J121–BATAL–J131–GILGIT–G325–PURPA–B215–FUKANG–A368–SARIN
6.7	B215/B206	DELHI–A466–LAHORE–J121–BATAL–J131–GILGIT–G325–PURPA–B215–FUKANG–B206–ALTAY

**Scenario 7 (Purple routes): Flights planned to avoid the Mediterranean Sea - MID States by operating through Turkey and Iraq**

- 7.1- Route UM688 – for East bound traffic
- 7.2 Route UM975 – for East bound traffic
- 7.3 Route UM860 – for West bound traffic

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**TRAFFIC INFORMATION BROADCASTS BY  
AIRCRAFT (TIBA) AND RELATED OPERATING PROCEDURES**

*(See Annex 11, Chapter 4, 4.2.2, Note 2)*

**1. Introduction and applicability  
of broadcasts**

1.1 Traffic information broadcasts by aircraft are intended to permit reports and relevant supplementary information of an advisory nature to be transmitted by pilots on a designated VHF radiotelephone (RTF) frequency for the information of pilots of other aircraft in the vicinity.

1.2 TIBAs should be introduced only when necessary and as a temporary measure.

1.3 The broadcast procedures should be applied in designated airspace where:

- a) there is a need to supplement collision hazard information provided by air traffic services outside controlled airspace; or
- b) there is a temporary disruption of normal air traffic services.

1.4 Such airspaces should be identified by the States responsible for provision of air traffic services within these airspaces, if necessary with the assistance of the appropriate ICAO Regional Office(s), and duly promulgated in aero-nautical information publications or NOTAM, together with the VHF RTF frequency, the message formats and the procedures to be used. Where, in the case of 1.3 a), more than one State is involved, the airspace should be designated on the basis of regional air navigation agreements and promulgated in Doc 7030.

1.5 When establishing a designated airspace, dates for the review of its applicability at intervals not exceeding 12 months should be agreed by the appropriate ATS authority(ies).

**2. Details of broadcasts**

**2.1 VHF RTF frequency to be used**

2.1.1 The VHF RTF frequency to be used should be determined and promulgated on a regional basis. However, in the case of temporary disruption occurring in controlled airspace, the States responsible may promulgate, as the VHF RTF frequency to be used within the limits of that airspace, a frequency used normally for the provision of air traffic control service within that airspace. (For the purpose of this contingency scheme, broadcasts shall be made on 128.95 MHz).

2.1.2 Where VHF is used for air-ground communications with ATS and an aircraft has only two serviceable VHF sets, one should be tuned to the appropriate ATS frequency and the other to the TIBA frequency.

## 2.2 Listening watch

A listening watch should be maintained on the TIBA frequency 10 minutes before entering the designated airspace until leaving this airspace. For an aircraft taking off from an aerodrome located within the lateral limits of the designated airspace listening watch should start as soon as appropriate after take-off and be maintained until leaving the airspace.

## 2.3 Time of broadcasts

2.3.1 A broadcast should be made:

- a) 10 minutes before entering the designated airspace or, for a pilot taking off from an aerodrome located within the lateral limits of the designated airspace, as soon as appropriate after take-off;
- b) 10 minutes prior to crossing a reporting point;
- c) 10 minutes prior to crossing or joining an ATS route;
- d) at 20-minute intervals between distant reporting points;
- e) 2 to 5 minutes, where possible, before a change in flight level;
- f) at the time of a change in flight level; and
- g) at any other time considered necessary by the pilot.

## 2.4 Forms of broadcast

2.4.1 The broadcasts other than those indicating changes in flight level, i.e. the broadcasts referred to in 2.3 a), b), c), d) and g), should be in the following form:

ALL STATIONS (necessary to identify a traffic information broadcast)

(call sign)

FLIGHT LEVEL (number) (or CLIMBING\* TO FLIGHT LEVEL (number))

(direction)

(ATS route) (or DIRECT FROM (position) TO (position))

POSITION (position\*\*) AT (time)

ESTIMATING (next reporting point, or the point of crossing or joining a designated ATS route) AT (time)

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ICAO Traffic Information Broadcasts by Aircraft

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(call sign)

FLIGHT LEVEL (number)

(direction)

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*Fictitious example:*

“ALL STATIONS WINDAR 671 FLIGHT LEVEL 350 NORTHWEST BOUND DIRECT FROM PUNTA SAGA TO PAMPA POSITION 5040 SOUTH 2010 EAST AT 2358 ESTIMATING CROSSING ROUTE LIMA THREE ONE AT 4930 SOUTH 1920 EAST AT 0012 WINDAR 671 FLIGHT LEVEL 350 NORTHWEST BOUND OUT”

2.4.2 Before a change in flight level, the broadcast (referred to in 2.3 e)) should be in the following form:

ALL STATIONS

(call sign)

(direction)

(ATS route) (or DIRECT FROM (position) TO (position))

LEAVING FLIGHT LEVEL (number) FOR FLIGHT LEVEL (number) AT (position and time)

2.4.3 Except as provided in 2.4.4, the broadcast at the time of a change in flight level (referred to in 2.3 f)) should be in the following form:

ALL STATIONS

(call sign)

(direction)

(ATS route) (or DIRECT FROM (position) TO (position))

LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number)

followed by:

ALL STATIONS

(call sign)

MAINTAINING FLIGHT LEVEL (number)

2.4.4 Broadcasts reporting a temporary flight level change to avoid an imminent collision risk should be in the following form:

ALL STATIONS

(call sign)

LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number)

followed as soon as practicable by:

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ICAO Traffic Information Broadcasts by Aircraft

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ALL STATIONS

(call sign)

RETURNING TO FLIGHT LEVEL (number) NOW

### **2.5 Acknowledgement of the broadcasts**

The broadcasts should not be acknowledged unless a potential collision risk is perceived.

## **3. Related operating procedures**

### **3.1 Changes of cruising level**

3.1.1 Cruising level changes should not be made within the designated airspace, unless considered necessary by pilots to avoid traffic conflicts, for weather avoidance or for other valid operational reasons.

3.1.2 When cruising level changes are unavoidable, all available aircraft lighting which would improve the visual detection of the aircraft should be displayed while changing levels.

### **3.2 Collision avoidance**

If, on receipt of a traffic information broadcast from another aircraft, a pilot decides that immediate action is necessary to avoid an imminent collision risk, and this cannot be achieved in accordance with the right-of-way provisions of Annex 2, the pilot should:

- a) unless an alternative manoeuvre appears more appropriate, immediately descend 150 m (500 ft), or 300m (1 000 ft) if above FL 290 in an area where a vertical separation minimum of 600 m (2 000 ft) is applied;
- b) display all available aircraft lighting which would improve the visual detection of the aircraft;
- c) as soon as possible, reply to the broadcast advising action being taken;
- d) notify the action taken on the appropriate ATS frequency; and
- e) as soon as practicable, resume normal flight level, notifying the action on the appropriate ATS frequency.

### **3.3 Normal position reporting procedures**

Normal position reporting procedures should be continued at all times, regardless of any action taken to initiate or acknowledge a traffic information broadcast.

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ICAO Traffic Information Broadcasts by Aircraft

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## **IATA IN-FLIGHT BROADCAST PROCEDURE (IFBP) AFI REGION**

### **1. LISTENING WATCH**

1.1 A listening watch should be maintained on the designated frequency (126.9MHz in AFI Region), 10 minutes before entering the designated airspace until leaving this airspace. For an aircraft taking-off from an aerodrome located within the lateral limits of the designated airspace, listening watch should start as soon as appropriate and be maintained until leaving the airspace.

### **2. TIME OF BROADCAST**

2.1 A broadcast should be made in English:

- a) 10 minutes before entering the designated airspace or, for a pilot taking-off from an aerodrome located within the lateral limits of the designated airspace, as soon as appropriate;
- b) 5 minutes prior to crossing a reporting point;
- c) 5 minutes prior to crossing or joining an ATS route;
- d) at 20 minute intervals between distant reporting points;
- e) 2 to 5 minutes, where possible, before a change in flight level;
- f) at the time of a change in flight level; and
- g) at any other time considered necessary by the pilot.

### **3. OPERATING PROCEDURES**

3.1 Changes of Cruising Level

3.1.1 Cruising level change should not be made within the designated airspace unless considered necessary by pilots to avoid traffic conflicts, for weather avoidance, or for other valid operational reasons.

3.1.2 When cruising level changes are unavoidable, all available aircraft lighting which would improve the visual detection of the aircraft should be displayed while changing levels.

### 3.2 Collision Avoidance

3.2.1 If, on receipt a traffic information broadcast from another aircraft, a pilot decides that immediate action is necessary to avoid an imminent collision risk to his aircraft, and this cannot be achieved in accordance with the right-of-way provisions of Annex 2, he should:

- a) unless an alternative manoeuvre appears more appropriate descend immediately 1000 ft if above FL290 or 500 ft if at or below FL290;
- b) display all available aircraft lighting which would improve the visual detection of the aircraft;
- c) as soon as possible reply to the broadcast advising action being taken;
- d) notify the action taken on the appropriate ATS frequency; and
- e) as soon as situation has been rectified, resume normal flight level, notifying the action on the appropriate ATS frequency.

### 3.3 Normal Position Reporting Procedures

3.3.1 Normal position reporting procedures should be continued at all times, regardless of any action taken to initiate or acknowledge a traffic information broadcast.

### 3.4 Operation of Transponders

3.4.1 Pilots should ensure that transponder procedures as contained in ICAO PANS OPS Doc 8168 are complied with and in the absence of other directions from ATC, operate the transponder on Mode A and C Code 2000<sup>1</sup>.

### 3.5 Use of TCAS

3.5.1 TCAS equipped aircraft should have TA/RA mode selected at maximum range.

## 4. **THE IFBP IN AFI**

4.1 In many FIRs in the AFI Region communications both fixed and mobile have either not been implemented or operate well below the required reliability. This has an impact on the proper provision of Air Traffic Services, especially flight information service. Consequently, the AFI Regional Technical Conference has decided that the IATA In-Flight Broadcast Procedure (IFBP) should be used within designated FIRs in the region as an interim measure until such time as communications facilities affecting the FIR in question have been improved.

## 5. **DESIGNATED FREQUENCY IN AFI**

5.1 In the AFI Region the designated frequency for the IFBP is 126.9 MHz.

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<sup>1</sup> Pilots are advised to ensure operation of transponders even when outside radar coverage in order to enable TCAS equipped aircraft to identify conflicting traffic.

**6. AREA OF APPLICATION**

6.1 In the AFI Region the IFBP should be applied in the following FIRs and airspaces:

Accra	Beira	Entebbe	Lilongwe	N'Djamena
Addis Ababa	Brazzaville	Kano	Luanda	Nairobi
Alger	Bujumbura	Khartoum	Lusaka	Niamey
Antananarivo	Dakar	Kigali	Mauritius	Roberts
Asmara	Dar es Salaam	Kinshasa	Mogadishu	Tripoli

6.2 The In-Flight Broadcast Procedure need not be applied in the following FIRs:

Bloemfontein	Casablanca	Harare	Port Elizabeth	Tunis
Canaries	Dakar Oceanic	Johannesburg	Sal Oceanic	Windhoek
Cape Town	Durban			

**7. ENFORCEMENT**

7.1 All airlines operating in the AFI region are requested to:

- a) ensure that their air crews are fully briefed on the procedure and area of application described;
- b) ensure that their charts and flight documentation are fully amended to reflect the foregoing;

7.2 Any operator reported to IATA as not applying the procedure shall be contacted immediately, informed of the procedure, and requested to apply it.

7.3 Attention is drawn to the fact that during the Haj Pilgrimage period the number of east-west flights in the North-Central part of the AFI Region increases dramatically and with it the risk of ATS incidents and the importance of the In-Flight Broadcast Procedure.

**8. REVIEW**

8.1 The procedure and its area of applicability shall be reviewed by the AFI Regional Coordination Group from time to time and FIRs in which the procedure is to be applied may be added or excluded as necessary.

9. **DISTRIBUTION**

9.1 To assist in ensuring its widest possible applicability the procedure is distributed to all known operators in the AFI Region, as well as to the following agencies/organizations:

ATLAS	KSS department)	(Chart IBAA	Jeppesen
IAOPA	FAA	IACA	NATO

**EXAMPLE OF A BROADCAST**

- a) "ALL STATIONS" *given only once to attract attention;*
  - b) "THIS IS AZ....." (*callsign*);
  - c) "FL.....";
  - d) "NORTHEASTBOUND LAGOS-ROME VIA UA400";
  - e) "POSITION.....AT.....(UTC)";
  - f) "ESTIMATING POSITION.....AT.....(UTC)";
  - g) "AZ...." (*callsign*)
  - h) "FL....."
  - i) "NORTHEASTBOUND" (*direction of flight through the area*).
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## ICAO INTERCEPTION PROCEDURES

### Article 3 bis\*

- a) The contracting States recognize that every State must refrain from resorting to the use of weapons against civil aircraft in flight and that, in case of interception, the lives of persons on board and the safety of aircraft must not be endangered. This provision shall not be interpreted as modifying in any way the rights and obligations of States set forth in the Charter of the United Nations.

(Extract from ICAO Annex 2 — *Rules of the Air*)

### 3.8 Interception

*Note.— The word “interception” in this context does not include intercept and escort service provided, on request, to an aircraft in distress, in accordance with Volumes II and III of the International Aeronautical and Maritime Search and Rescue Manual (Doc 9731).*

3.8.1 Interception of civil aircraft shall be governed by appropriate regulations and administrative directives issued by Contracting States in compliance with the Convention on International Civil Aviation, and in particular Article 3(d) under which Contracting States undertake, when issuing regulations for their State aircraft, to have due regard for the safety of navigation of civil aircraft. Accordingly, in drafting appropriate regulations and administrative directives due regard shall be had to the provisions of Appendix 1, Section 2 and Appendix 2, Section 1.

*Note.— Recognizing that it is essential for the safety of flight that any visual signals employed in the event of an interception which should be undertaken only as a last resort be correctly employed and understood by civil and military aircraft throughout the world, the Council of the International Civil Aviation Organization, when adopting the visual signals in Appendix 1 to this Annex, urged Contracting States to ensure that they be strictly adhered to by their State aircraft. As interceptions of civil aircraft are, in all cases, potentially hazardous, the Council has also formulated special recommendations which Contracting States are urged to apply in a uniform manner. These special recommendations are contained in Attachment A.*

3.8.2 The pilot-in-command of a civil aircraft, when intercepted, shall comply with the Standards in Appendix 2, Sections 2 and 3, interpreting and responding to visual signals as specified in Appendix 1, Section 2.

*Note.— See also 2.1.1 and 3.4.*

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\* On 10 May 1984 the Assembly amended the Convention by adopting the Protocol introducing Article 3 bis. **Under Article 94 a) of the Convention, the amendment came into force on 1 October 1998 in respect of States which have ratified it.**

## INTERCEPTION OF CIVIL AIRCRAFT

(Appendix 2 of ICAO Annex 2 — *Rules of the Air*)

(*Note.*— See Chapter 3, 3.8 of the Annex)

### 1. Principles to be observed by States

1.1 To achieve the uniformity in regulations which is necessary for the safety of navigation of civil aircraft due regard shall be had by Contracting States to the following principles when developing regulations and administrative directives:

- a) interception of civil aircraft will be undertaken only as a last resort;
- b) if undertaken, an interception will be limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted or danger area or instruct it to effect a landing at a designated aerodrome;
- c) practice interception of civil aircraft will not be undertaken;
- d) navigational guidance and related information will be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established; and
- e) in the case where an intercepted civil aircraft is required to land in the territory overflown, the aerodrome designated for the landing is to be suitable for the safe landing of the aircraft type concerned.

*Note.*— In the unanimous adoption by the 25th Session (Extraordinary) of the ICAO Assembly on 10 May 1984 of Article 3 bis to the Convention on International Civil Aviation, the Contracting States have recognized that “every State must refrain from resorting to the use of weapons against civil aircraft in flight.”

1.2 Contracting States shall publish a standard method that has been established for the manoeuvring of aircraft intercepting a civil aircraft. Such method shall be designed to avoid any hazard for the intercepted aircraft.

*Note.*— *Special recommendations regarding a method for the manoeuvring are contained in Attachment A, Section 3.*

1.3 Contracting States shall ensure that provision is made for the use of secondary surveillance radar, where available, to identify civil aircraft in areas where they may be subject to interception.

### 2. Action by intercepted aircraft

2.1 An aircraft which is intercepted by another aircraft shall immediately:

- a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in Appendix 1;

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Traffic Acceptance Rates

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- b) notify, if possible, the appropriate air traffic services unit;
- c) attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency 243 MHz; and
- d) if equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit.

2.2 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

2.3 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

### 3. Radio communication during interception

If radio contact is established during interception but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in Table 2.1 and transmitting each phrase twice:

**Table 2.1**

<i>Phrases for use by INTERCEPTING aircraft</i>			<i>Phrases for use by INTERCEPTED aircraft</i>		
<i>Phrase</i>	<i>Pronunciation<sup>1</sup></i>	<i>Meaning</i>	<i>Phrase</i>	<i>Pronunciation<sup>1</sup></i>	<i>Meaning</i>
CALL SIGN	<u>KOL</u> SA-IN	What is your call sign?	CALL SIGN (call sign) <sup>2</sup>	<u>KOL</u> SA-IN (call sign)	My call sign is (call sign)
FOLLOW	<u>FOL</u> -LO	Follow me	WILCO	<u>VILL</u> -KO	Understood Will comply
DESCEND	DEE- <u>SEND</u>	Descend for landing	CAN NOT	<u>KANN</u> NOTT	Unable to comply
YOU LAND	<u>YOU</u> LAAND	Land at this aerodrome	REPEAT	REE- <u>PEET</u>	Repeat your instruction
PROCEED	PRO- <u>SEED</u>	You may proceed	AM LOST	<u>AM</u> LOSST	Position unknown
			MAYDAY	<u>MAYDAY</u>	I am in distress
			HIJACK <sup>3</sup>	<u>HI</u> -JACK	I have been hijacked
			LAND (place name)	LAAND (place name)	I request to land at (place name)
			DESCEND	DEE- <u>SEND</u>	I require descent

*.In the second column, syllables to be emphasized are underlined.*

*2.The call sign required to be given is that used in radiotelephony communications with air traffic services units and corresponding to the aircraft identification in the flight plan.*

3. *Circumstances may not always permit, nor make desirable, the use of the phrase "HIJACK".*

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Traffic Acceptance Rates

**CONTINGENCY CONTACT DETAILS**

NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
<b>BAHRAIN</b>						
Mr. Mohamed Ahmed Juman	973 321031/80 INMARSAT: 873 763688478 (H24)			973 321029 INMARSAT: 873 763688 479	cmcan@bahrain.gov.bh	Air Navigation Crisis Management Centre Operational on H24
Ali Ahmed Mohammed	+ 973 17321116		+ 973 39969399	+ 973 17329977	aliahmed@caa.gov.bh	
Sleem Mohammed Hasan	+ 973 17321117		+ 973 39608860	+ 973 17329977	sleemmh@caa.gov.bh	
Air Traffic Duty Supervisor	+ 973 17321081 + 973 17321082			+ 973 17329966		
<b>EGYPT</b>						
Mr. Mohamed Alkady	2022657849	202 6391792	20 106504438	202 2680627	elkady@nansceg.org mielkady@hotmail.com	
Mr. Aly Hussien Aly	202 6373950	202 4178460	20101609760	202 2680627		
IRAN Mr. M. Rasouli Nejad Deputy of IAC in Operations	+98214454435		+989123874921			
Mr. E. Shoustari General Director Of ATS	+982144544101		+989121861900	+982144544102		
Mr. A. Majzoubi Chief of ACC	+982144544114		+989123053095			
Mr. A. Golmohammadi DG of Operations	98214525493					Note during New Year Holidays in Iran (20 March – 5 April) Contact the Dep. of CAO in Operation or the Deps. of ATS
Mr. Momenirokh		21 4400753	98 9132274798	98214527194		

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NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
Deputy of CAO in Operation						
Mr. E.Shoushtari Deputy of ATS Dept.		21 6014235	98 911286100			
Mr. Khodakarami Deputy of ATS Dept.		21 4087386	98 9132843796			
<b>JORDAN</b>						
Mr. Majed Yousef Aqeel Director, ATM	9626 4897729		0795020100	9626 4891266	majedaqeel@yahoo.com	
<b>KUWAIT</b>						
Eng. Fozan M. Al-Fozan	9654760421			9654319232	evnedd@qualitynet.net	
Mr. Mukhled Kh. Al-Sawagh	+ 965 24346220		+ 965 97666979	+ 965 24346221	q8dgca_danoff@hotmail.com	
<b>LEBANON</b>						
Walid Al Hassanieh Chief Air Navigation Dept.	+ 961 1 628178		+961 70474517	+961 1 629023	<a href="mailto:hassaniehw@beirutairport.gov.lb">hassaniehw@beirutairport.gov.lb</a>	AFTN olbapzxx
<b>OMAN</b>						
Mr. Abdullah Nasser Al-Harthy	968519201		9689476806	968519939 /519930	Abdullah_nasser@dgcam.com.om	
Mr. Saud Al-Adhoobi	968519305		9689321664	968519939/519930	saud@dgcam.com.om	
<b>SAUDI ARABIA</b>						
Mr. Mohammad Al Alawi	96626401005		96655621582	9662 6401005	alalawi_m@yahoo.com	
<b>SYRIA</b>						
Mr.Hussein. Mahfoud Director General of Civil Aviation	963 113333815		093222553		dgca@net.sy	
<b>UNITED ARAB EMIRATES (UAE)</b>						
Mr. Riis Johansen Director, Air Navigation Services	9712 4054216			9712 4054316	atmuae@emirates.net.ae	

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NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
<b>YEMEN</b>						
Mr. Saleh A. Al-Theeb	9671 345402	9671 344048	73715516	9671 345403	Sanlans@hotmail.com	
<b>IATA – MID</b>						
Faqir Jihad	962 6 5698728	962 6 5811 994	962 79 5966559	962 6 5604548	Faqirj@iata.org	
<b>ICAO Cairo</b>						
S. Al Adhoobi (RO/ATM)	202 267 4845 ext 104		201 113910327	202 267 4843	sadhoobi@cairo.icao.int	
M.R. Khonji (DRD)	202 267 4841 ext. 116/115	202 415 2073	201 232 14946	202 267 4843	mkhonji@cairo.icao.int mkhonji@hotmail.com	
<b>ICAO Headquarters – Montreal</b>						
Vince Galotti (C/ATM)	1 514 954-6711	1 514 281-0731	1 514 951-0283	1-514-954 8197	vgalotti@icao.int	
Chris Dalton (TO/ATM)	1 514 954-8219 ext. 6710	1 514 485-3635		1-514-954 8197	cdalton@icao.int	
Gustavo De Leon (TO/ATM)	1 514 954-8219 ext. 6199	1 514 482-7182	1 514 883-4847	1-514-954 8197	gdeleon@icao.int g_deleon_p@hotmail.com	
Aleksandar Pavlovic (C/AIS/MAP)	1-514 954 8162	1-514 932 7632		1-514-954 6077	apavlovic@icao.int	
Hindupur Sudarshan (TO/RAO)	1-514 954 8219 ext 8190	1-514 486 4041		1-514-954 6077	hsudarshan@icao.int	

APPENDIX E

CRAME-03 FOCAL POINTS

<b>NAMES</b>	<b>PHONE (WORK)</b>	<b>PHONE (HOME)</b>	<b>MOBILE PHONE</b>	<b>FAX</b>	<b>E-MAIL</b>	<b>OTHER CONTACT DETAILS</b>
<b>BAHRAIN</b>						
Mr. Ali Ahmed Mohammed	973 17321116		973 39969399	973 17321 9977	<a href="mailto:aliahmed@caa.gov.bh">aliahmed@caa.gov.bh</a>	Bahrain ACC Duty Supervisor Tel: 973 1732 1081/1080 Fax: 973 1732 1029 Email : <a href="mailto:bahatc@caa.gov.bh">bahatc@caa.gov.bh</a>
Mr. Saleem Mohammed Hasan	973 1732 1117		973 39608860	973 17321 9966	<a href="mailto:saleemmh@caa.gov.bh">saleemmh@caa.gov.bh</a>	
<b>EGYPT</b>						
Mr. Moatassem Bellah Abd Elraheem Baligh	202 265 7849	202 639 1792	201001695252	202 268 0627	<a href="mailto:moatassem_5@hotmail.com">moatassem_5@hotmail.com</a>	
<b>IRAN</b>						
Mr. Ebrahim Shoushtari Deputy of ATS Department	9821 63148900	98 21 601 4235	989121861900	9821 63148906	<a href="mailto:E_shoushtari@yahoo.com">E_shoushtari@yahoo.com</a> <a href="mailto:E.shoushtari@airport.ir">E.shoushtari@airport.ir</a>	Note.- During New Year Holidays in Iran (20 March – 5 April) or for any urgent message Contact Tehran ACC on +9821-44544116
Mr. .A. Golmohammadi DG of Operations		9821 440 0753	98 913 227 4798	98 214 527 194		
Mr. Momenirokh Deputy of CAO in Operation		9821 440 0753	98 913 227 4798	98 214 527 194		
Mr. Khodakarami Deputy of ATS Dept		9821 408 7386	98 913 284 3796		<a href="mailto:mokhodakarmi@gmail.com">mokhodakarmi@gmail.com</a>	

<b>NAMES</b>	<b>PHONE (WORK)</b>	<b>PHONE (HOME)</b>	<b>MOBILE PHONE</b>	<b>FAX</b>	<b>E-MAIL</b>	<b>OTHER CONTACT DETAILS</b>
<b>IRAQ</b>						
Mr. Ali Mohsin Hashim ATS Director	96418133370	9647702997761	9647815762525		atc_iraqcaa@yahoo.com	
<b>JORDAN</b>						
Nayef Al Marshoud Director, ATM	9626 489 7729	962 5 3862584	962 797498992 962 777789470	9626 4891 266	<u><a href="mailto:navefmarshoud@hotmail.com">navefmarshoud@hotmail.com</a></u>  <u><a href="mailto:datm@carc.gov.jo">datm@carc.gov.jo</a></u>	
<b>KUWAIT</b>						
Mr. Adel S. Boresli	965 24710268		96599036556	965 24346221	as.buresli@dgca.gov.kw	
<b>LEBANON</b>						
Mr. Walid Al Hassainieh Chief, Air Navigation Department	9611 628 178	961 5 501 046	961 70 474 517	9611 629 023	<u><a href="mailto:hassaniehw@beirutairport.gov.lb">hassaniehw@beirutairport.gov.lb</a></u>	OLBAZPZX OLBAZRZX
<b>OMAN</b>						
Mr. Abdullah Nasser Al-Harthy	968 519 201		968 947 6806	968 519 939/ 519 930	<u><a href="mailto:Abdullah_Nasser@dgcam.com.om">Abdullah_Nasser@dgcam.com.om</a></u>	
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<b>SAUDI ARABIA</b>						
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