



Agenda Item 2: ATM Developments
2.6 Follow-up on ATS Contingency Plans.

FOLLOW-UP ON ATS CONTINGENCY PLANS BY TRINIDAD AND TOBAGO

(Presented by Trinidad and Tobago)

SUMMARY

This Information Paper presents an ATS Contingency Plan proposed by Trinidad and Tobago for the Piarco FIR

1. Introduction

1.1 During the last E/CAR/WG Meeting, the E/CAR/DCA/20, the CAR/WG/1 and the E/CAR/DCA/21 Meeting the matter relating to ATS Contingency Planning was raised.

1.2 Trinidad and Tobago for some time now has been working on a Contingency Plan.

2. Discussion

2.1 The attached ATS Contingency Plan was previously presented as a Document in Draft Form at the E/CAR DCA/20. Since then it was tested through its application when there was a disruption of ATS during 2007 October.

2.2 In reviewing the Plan it was found that its operational applicability and efficiencies met the intended purpose although there were some teething problems during the first day of its implementation. Thereafter, incremental increase of capacity was experienced resulting in ATS operations reaching near normalcy on the third and final day of the disruption of the service.

2.3 Following on that experience the Plan was fine tuned and is provided for the information of the Meeting.

2.4 It should be noted that the relevant amendment relating to routes A312/UA312, A632/UA632, L451/UL451 and L462/UL462 will be included on 2008 June 05 at 0001 UTC.

3. Suggested action

3.1 That the meeting take note of the attached ATS Contingency Plan

3.2 States, Territories and International Organisations that are impacted by this ATS Contingency Plan are invited to coordinate their concerns with the MATS, ANS Division, Trinidad and Tobago CAA.

APPENDIX *

SUBREGIONAL ATM CONTINGENCY PLAN

PIARCO (CTA /UTA) FIR

1. OBJECTIVE:

- 1.1 This Contingency Plan contains arrangements to ensure the continued safety of air navigation in the event of partial or total disruption of air traffic services (ATS) within the Piarco Flight Information Region and is related to **ICAO Annex 11 - Air Traffic Services**.
- 1.2 This Contingency Plan is designed to provide alternate routes, using existing air routes in most cases, which will allow aircraft operators to fly through or avoid airspace within the Piarco (CTA/UTA) FIR.

2. AIR TRAFFIC MANAGEMENT

2.1 Air Traffic Services Responsibilities

- 2.1.1 Tactical air traffic control (ATC) considerations during periods of over-loading may require re-assignment of routes or portions thereof.
- 2.1.2 Alternative routes are designed to maximise the use of existing ATS route structure, communications, navigation and surveillance services.
- 2.1.3 In the event that ATS cannot be provided within the Piarco (CTA/UTA) FIR, the Trinidad and Tobago Civil Aviation Authority (TTCAA), through the Piarco Area Control Centre (ACC) shall publish or cause to be published, the corresponding NOTAM indicating the following:
 - a. *Time and Date of the beginning of the Contingency Measures;*
 - b. *Airspace (Air Routes) available for arriving, departing and over-flying traffic, and airspace to be avoided;*
 - c. *Details of the facilities and services available or not available and any limits on the provision of ATS (e.g. ACC, TMA, APP, TWR and FIS), including an expected date/time of restoration of services if available;*
 - d. *Information on the provisions made for alternate services;*
 - e. *ATS Contingency routes;*
 - f. *Procedures to be followed by neighbouring ATS Units;*
 - g. *Procedures to be followed by pilots; and*
 - h. *Any other details with respect to the disruption and actions being taken that aircraft operators may find useful.*
- 2.1.4 In the event that the Piarco ACC is unable to issue the NOTAM, the alternate ACC (San Juan) will take action to issue the NOTAM of closure of airspace upon notification by the TTCAA (Piarco ACC) or the ICAO NACC Regional Office.

2.2 Separation

- 2.2.1** Separation criteria will be applied in accordance with the **ICAO *Procedures for Air Navigation Services-Air Traffic Management (PANS-ATM, Doc 4444)* and the *Regional Supplementary Procedures (Doc 7030)***.

2.3 Level Restrictions

- 2.3.1** Where possible, aircraft on long-haul international flights shall be given priority with respect to cruising levels.

2.4 Other Measures

- 2.4.1** Other measures related to the closure of airspace and the implementation of the Contingency Plan within the Piarco CTA/UTA may be taken as follows:
- a. Suspension of all VFR Operations
 - b. Delay or suspension of General Aviation IFR Operations; and
 - c. Delay or suspension of commercial IFR Operations.

3 TRANSITION TO CONTINGENCY PLAN

- 3.1** During times of uncertainty when airspace closures seem possible, aircraft operators should be prepared for a possible change in routing while en-route. Familiarisation of the alternate routes outlined in the Contingency Plan as well as what may be promulgated by Trinidad and Tobago (Piarco ACC) via NOTAM or AIP is necessary.
- 3.2** In the event of airspace closure that has not been promulgated, Piarco ATC would, if possible, broadcast or cause to be broadcast to all aircraft in the airspace under its jurisdiction, what airspace is being closed /affected and to stand by for any further instructions.
- 3.3** Trinidad and Tobago ATS (Piarco ACC) recognise that when closures of airspace or airports are promulgated, individual airlines might have different company requirements as to their alternate routings. In that regard Piarco ATC would be alert to respond to any request by aircraft and react commensurately with safety.

4. TRANSFER OF CONTROL AND COORDINATION

- 4.1** The transfer of control and communications shall be at the common FIR boundary between ATS units unless there is mutual agreement between adjacent ATS units.
- 4.2** Trinidad and Tobago ATS (providers) would keep under review current coordination requirements in light of contingency operations or short notice of airspace closure.

5. PILOTS AND OPERATOR PROCEDURES

- 5.1 Pilots need to be aware that in light of current international circumstance, a Contingency Routing requiring aircraft to operate off normal traffic flows could result in an intercept by military aircraft. Aircraft Operators must therefore be familiar with international intercept procedures contained in **ICAO Annex 2 to the Chicago Convention, paragraph 3.8 and Appendix 2, Section 2 and 3.**
- 5.2 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 secondarily 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.
- 5.3 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 ATS 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.*
- 5.4 If any instructions received by radio from any source 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.

6 OVERFLIGHT APPROVAL

- 6.1 Where required, Aircraft Operators should obtain over-flight approval from States for flights operating through airspace under their jurisdiction.
- 6.2 In a contingency situation, flights may be rerouted at short notice and it may not be possible for operators to give the required advance notice in a timely manner to obtain approval.
- 6.3 States responsible for the airspace in which contingency routes are established should consider making special arrangements to expedite flight approvals in these contingency situations.

7 CONTINGENCY UNIT

- 7.1 The ATM National Contingency Unit assigned the responsibility of monitoring developments that may dictate the enforcement of the Contingency Plan and coordination of contingency arrangements is:
 - a. TTCAA - Air Navigation Services Division
 - b. **Trevor Dowrich** - Executive Manager Air Navigation Services (EMANS)
 - c. Tel: (1-868) 669 - 4302
 - d. Fax: (1-868) 669 - 5397
 - e. tdowrich@caa.gov.tt
- 7.2 The National Contingency Unit (Office of the EMANS) will liaise with the ICAO NACC Regional Office.

- 7.3 The ICAO NACC Regional Office will:
- closely monitor the situation and coordinate with all affected States and the IATA Regional Office, so as to ensure air navigation services are provided to international aircraft operations in the CAR Region;
 - take note of any incidents reported and take appropriate actions;
 - provide assistance as required on any issue with the Civil Aviation Administration/s involved in the Contingency Plan; and
 - keep the President of the Council of ICAO, the Secretary General, the Chief Regional Affairs Officer, the Director of the Air Navigation Bureau and the Chief of the Air Traffic Management Section continuously informed on developments, including activation of the Contingency Plan.

8. REROUTING SCHEME

- 8.1 In the event of a complete Air-to-Ground/Ground-to-Air and Point-to-Point Communications Failure at the Piarco ACC aircraft operators should file their flight plans using the alternative Contingency Routes (CR) listed in the Scheme provided in this ATM Contingency Plan in order to ensure receipt of an ATS Service.
- 8.2 All aircraft should establish and maintain contact on published VHF frequencies with the (designated) ATS Unit (APP/TMA/ACC) responsible for the airspace being transited. Additionally, aircraft should broadcast their position and intention on Emergency Frequency 121.5 MHz and on pilots' air to air frequency 123.45 MHz.
- 8.3 All aircraft shall be cleared to maintain a cruise flight level correlated to track/direction of flight.
- 8.4 List of Points of contact of all concerned States, IATA and ICAO NACC Office.

State/Intl. Org.	P.O.C.	Telephone/Fax	E-Mail
TTCAA – EMANS	Trevor Dowrich	Tel: (1-868) 669 - 4302 Fax: (1-868) 669 - 5397	tdowrich@caa.gov.tt
Piarco ACC Manager ATS	Samuel M. Lampkin	Tel: (1-868) 669 - 8789 /4806 Fax: (1-868) 669 - 0635	slampkin@caa.gov.tt
Adams TMA Unit			
Dakar OAC			
Georgetown ACC			
Guadeloupe TMA Unit			
IATA LATAMCAR			
ICAO NACC			
Maiquetia ACC			
Martinique TMA Unit			

State/Intl. Org.	P.O.C.	Telephone/Fax	E-Mail
New York OAC			
Paramaribo ACC			
Point Salines TMA Unit			
Rochambeau ACC			
Sal OAC			
San Juan ACC			
Santa Maria ACC			
St. Vincent and the Grenadines			
V.C. Bird TMA Unit			

APPENDIX 'A'

CONTINGENCY ROUTES (CRs)

Routing available for Traffic transiting from the North Atlantic destined to Airports within the Piarco FIR shall be as follows and **at the stated Route Altitude/s**:

DESTINATION AIRPORT	CONTINGENCY ROUTE DESIGNATOR	CONTINGENCY ROUTES (CR) AVAILABLE	FLIGHT LEVEL	FIRS/TMAS/CTRS (ATS UNITS) INVOLVED
V.C. Bird (TAPA)	CR 01	18N060W-DCT-ANU	FL 300	KZNY/TTZP/TAPA
Le Raizet (TFFR)	CR 02	18N060W-DCT-PPR	FL 300	KZNY/TTZP/TAPA/T FFR
Le Lamentin (TFFF)	CR 03	18N058W-DCT- 16N060W-DCT-BONID- DCT-FOF	FL 300	KZNY/TTZP/TFFF
Hewanorra (TLPL)	CR 03A	18N058W-DCT- 16N060W-DCT-BONID- DCT-FOF- A324-BNE	FL 300	KZNY/TTZP/TFFF/TL PL
Adams (TBPB)	CR 04	18N056W-DCT-BGI	FL 300	KZNY/TTZP/TBPB
Point Salines (TGPY)	CR 04A	18N056W-DCT-BGI- UA561-A561-GND	FL 300	KZNY/TTZP/TBPB/T GPY
Crown Point (TTCP)	CR 04B	18N056W-DCT-BGI-DCT- TAB	FL 300	KZNY/TTZP/TBPB/T TPP
Piarco (TTPP)	CR 04C	18N056W-DCT-BGI- UR515/R515-POS	FL 300	KZNY/TTZP/TBPB/T TPP

Routing available for Traffic from Airports within the Piarco FIR destined to the North Atlantic shall be as follows and **at the stated Route Altitude/s**:

DEPARTURE AIRPORT	CONTINGENCY ROUTE DESIGNATOR	CONTINGENCY ROUTES (CR) AVAILABLE	FLIGHT LEVEL	FIRs (ATS UNITS) INVOLVED
V.C. Bird (TAPA)	CR 05	ANU-UA632-TOTEM- and as cleared by San Juan ACC	FL 290	TAPA/TTZP/TJZS
Le Raizet (TFFR)	CR 02	PPR-DCT-18N060W- Atlantic Route	FL 290	TFFR/TAPA/TTZP/KZNY
Le Lamentin (TFFF)	CR 03	FOF-DCT-BONID-16N060W-DCT-18N058W- Atlantic Route	FL 290	TFFF/TTZP/KZNY
Hewanorra (TLPL)	CR 03A	BNE-A324-FOF-DCT-BONID-16N060W-DCT-18N058W- Atlantic Route	FL 290	TLPL/TFFF/TTZP/KZNY
Adams (TBPB)	CR 04	BGI-DCT-18N056W Atlantic Route	FL 290	TBPB/TTZP/KZNY
Point Salines (TGPY)	CR 04A	GND-A561/UA561-BGI-DCT-18N056W Atlantic Route	FL 290	TGPY/TTZP/KZNY
Crown Point (TTCP)	CR 04B	TAB-R515-BGI-DCT-18N056W Atlantic Route	FL 290	TTCP/TTZP/KZNY
Piarco (TTPP)	CR 04C	POS-R515/UR515-BGI-DCT-18N056W Atlantic Route	FL 290	TTPP/TTZP/KZNY

Routing available for Transiting Traffic from the Maiquetia FIR destined to the North Atlantic or originating from the North Atlantic transiting to the Maiquetia FIR **shall be accommodated along TWO (2) routes only** (UA551-ONGAL-UA551FOF-18N058W **and reverse**, and UA561-DAREK-UA561-BGI-18N056W **and reverse**) and **at the stated Route Altitude/s** as follows:

PRESENT ATS ROUTE	CONTINGENCY ROUTE DESIGNATOR	CONTINGENCY ROUTES (CR) AVAILABLE	FLIGHT LEVEL	FIRs (ATS UNITS) INVOLVED
UA550-ITEGO-UA550-PPR-18N060W-FPL and UA551-ONGAL-UA551-FOF-18N058W-FPL	CR 06	UA551-ONGAL-UA551FOF-18N058W- and reverse	FL 330 FL 360	SVZM/TTZP/KZNY
UA551-ONGAL-UA551-FOF-18N058W-FPL	CR 07	UA561-DAREK-UA561-BGI-18N056W- and reverse	FL 370 FL 400	SVZM/TTZP/KZNY

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PRESENT ATS ROUTE	CONTINGENCY ROUTE DESIGNATOR	CONTINGENCY ROUTES (CR) AVAILABLE	FLIGHT LEVEL	FIRS (ATS UNITS) INVOLVED
and UA561-DAREK- UA561-BGI- 18N056W and UA552/UA563-MEGIR- UA552/UA563- POS-UR515- BGI-18N056W FPL				

Routing for Transiting Traffic from the San Juan FIR destined to the Georgetown, Paramaribo and Rochambeau FIRs **shall be accommodated along THREE (3) routes only (ODKAM UA312 DALGA and reverse, ILURI UA555 TRAPP and reverse, and ANADA UG449 POS UA324 MINDA and reverse) and at the stated Route Altitude/s** as follows:

PRESENT ATS ROUTE	CONTINGENCY ROUTE DESIGNATOR	CONTINGENCY ROUTES (CR) AVAILABLE	FLIGHT LEVEL	FIRS (ATS UNITS) INVOLVED
ILURI- UA555- TRAPP and reverse	CR 08	ILURI-UA555-TRAPP- and reverse	FL 390 FL 320	TJZS/TTZP/SMPM
ANADA- UG449- KORTO and Reverse; and ANADA- POS-UA324- MINDA and Reverse	CR 09	ANADA-UG449-POS- UA324-MINDA- and reverse	FL 310 FL 340	TJZS/TTZP/SYGC
ODKAM- UA312- DALGA and Reverse; ODKAM- UA312- ANU- UA632- EGEMA and Reverse; TOTEM- UA632-BGI- 0855N057W and Reverse; TOTEM- UA632-	CR 10	ODKAN-UA312-DALGA- and reverse	FL 350 FL 380	TJZS/TTZP/SYGC

PRESENT ATS ROUTE	CONTINGENCY ROUTE DESIGNATOR	CONTINGENCY ROUTES (CR) AVAILABLE	FLIGHT LEVEL	FIRs (ATS UNITS) INVOLVED
EGEMA				

Routings for Traffic transits from the FIRs of San Juan, Maiquetia, Georgetown, Paramaribo and Rochambeau terminating at Airports within the Piarco FIR and vice versa **shall be accommodated along the following routes and at the stated Route Altitude/s:**

PRESENT ATS ROUTE	CONTINGENCY ROUTE DESIGNATOR	CONTINGENCY ROUTES (CR) AVAILABLE	FLIGHT LEVEL	FIRs (ATS UNITS) INVOLVED
ANU-UA312-PPR- A550/UA550- ITEGO and ANU-UA312- FOF- A551/UA551- ONGAL	CR 06A	ANU-A312- FOF- A551/ONGAL and reverse	FL 240 FL 230	TAPA/TFFR/TFFF/SVZM
BGI- A511/UA511- BOGSI and BGI- A561/UA561- DAREK	CR 07A	BGI-A561-BGI and reverse	FL 240 FL 230	TBPB/TTZP/SVZM
ANU-UA312- FOF-UA555- TRAPP	CR 08A	BGI-A555- TRAPP and reverse	FL 230 FL 240	TAPA/TFFR/TFFF/TBPB/TTZP/SMPM
DALGA- A312/UA312- ANU	CR 11	EGEMA- A632-BGI- A555-FOF- A312-ANU and reverse	FL 240 FL 230	SYGC/TTZP/TBPB/TFFF/TFFR/TAPA
ANU-UA312- FOF-A324- POS- A324/UA324- MINDA and FOF-A324- POS- G449/UG449- KORTO	CR 12	ANU-A312- FOF-A324- POS-A324- MINDA and reverse	FL230 FL240	TAPA/TFFR/TFFF/TTZP/SYGC
BGI- R515/UR515- POS and BGI- R515/UR515- POS- A562/UA562- PARIA	CR 13	BGI-R515- POS-A562- PARIA	FL230 FL240	TBPB/TTZP/SVZM

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POS-A552/A563 – AU552/UA563- MEGIR	CR14	POS-A552/A563- MEGIR	FL230 FL240	TTZP/SVZM
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Routings for Traffic originating from within and terminating within the Piarco FIR **where applicable**

SHALL be accommodated within the airspace of the TMAs and elsewhere in accordance with the following Routings and **at the stated Route Altitude/s**

DEPARTUR E ARRIVAL AIRPORTS	PRESENT ATS ROUTE	CONTINGEN CY ROUTE DESIGNATO R	CONTINGENCY ROUTES (CR) AVAILABLE	FLIGH T LEVEL	FIRS (ATS UNITS) INVOLVED
TTTP – TLPL TTTP – TLPC TTTP – TFFF TTTP – TFFR TTTP – TAPA and reverse	POS-A324- GND-A324- SV-A324- BNE-A324- FOF-UA312- PPR-UA312- ANU and reverse; ANU- UL205-POS and reverse;	CR 12A	POS-A324-GND- A324-RIBOR BNE- and reverse	FL 220 FL 210 and below	TTZP/TFFF TFFR/TAPA
TTTP – TGPY TTTP – TVSV	POS-A324- GND-A324- SV	CR 12B	POS-A324-GND- A324-SV	FL200 FL190 and below	TTZP/TGPY/TV SV
TTTP – TBPB and reverse	POS-UR515- BGI and reverse	CR 04D	POS-R515-BGI and reverse	FL 230 FL 220 and below	TTZP/TBPB
TTCP – TBPB and reverse	POS-R515- BGI and reverse	CR 04E	POS-R515-BGI and reverse	FL 230 FL 220 and below	TTZP/TBPB
TTCP – TGPY and reverse	TAB-DCT- GND and reverse	CR 15	TAB-DCT-GND and reverse	FL130 FL120 and below	TTZP/TGPY

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