

ENR 1.15 ATS CONTINGENCY PLAN

ATS CONTINGENCY PLAN FOR GUAYAQUIL FIR/UTA

1. PURPOSE

- 1.1 This contingency plan contains arrangements to guarantee the continuous safety of air navigation in the event of partial or total interruption of air traffic services (ATS) within the Guayaquil FIR/UTA and is related to ICAO Annex 11 - *Air traffic services*, Chapter 2, paragraph 2.32 and its Attachment C; as well as in standards and methods established in the DGAC air traffic manuals and regulations.
- 1.2 This contingency plan is designed to provide alternative routing, using existing airways, which will allow aircraft to fly through, or to avoid the airspace of Guayaquil FIR/UTA.

2. AFFECTED FLIGHT INFORMATION REGIONS (FIR)

- 2.1 The FIR's directly affected by this ATS contingency plan are the following:

COLOMBIA	Bogotá FIR (SKED)
PERÚ	Lima FIR (SPIM)
CENTRAL AMÉRICA	CENAMER FIR (MHCC)

3. AIR TRAFFIC MANAGEMENT

3.1 *ATS contingency levels*

- a) **Moderate or Partial ATS Contingency:** Means that the degradation in air navigation services still allows to maintain the use of ATS route network of Ecuador, therefore greater separations will be applied between aircraft entering/exiting the Guayaquil FIR/UTA.
- b) **Severe ATS Contingency or Zero ATC:** Means that the interruption and/or degradation in air navigation services does not allow to maintain the normal traffic flow of international flights in the ATS route network of Ecuador, greater separations will be applied between aircraft entering the Ecuadorian airspace and the **simplified route network** described in Tables 1 and 2 will be used.

3.2 *ATS responsibilities*

- 3.2.1 In case of partial or total disruption and that ATS cannot be provided within the Guayaquil FIR/UTA, the corresponding NOTAM will be published. If the disruption of services is foreseeable, the NOTAM must be issued 48 hours in advance.
This plan will be deactivated by means of a NOTAM of cancellation.
- 3.2.2 The ATS Contingency Operational Group (AOCG) authorized by the General Directorate of Civil Aviation (DGAC), is responsible for monitoring events and may order the execution of the contingency plan and the respective coordination arrangements.

ATS Contingency Operational Group (AOCG)		
Unit	Phones	E-mail
Air Navigation Services Directorate	593 2 2947400 Ext. 4510 Mobile: +593 99 814 3196	dsna@aviacioncivil.gob.ec
Air Traffic Internal Management	593 2 2947400 Ext. 4521 Mobile: +593 98 604 4550	atm@aviacioncivil.gob.ec
Internal Zonal Management Air Navigation Services	593 2 2947400 Ext. 2161 Mobile: +593 99 116 8621	sna.zonal@aviacioncivil.gob.ec
Guayaquil Area Control Center	593-2-2947400 Ext. 2187 Mobile: +593 98 586 1284	atmacc@aviacioncivil.gob.ec
General Supervisor of the Guayaquil Area Control Center	593 4 2924219 593 4 2925495 593 2 2947400 Ext. 2111 Mobile: +593 99 806 2369	accgve.supervisor@aviacioncivil.gob.ec

3.2.3 During a contingency situation, the General Supervisor of the Guayaquil ACC will act as liaison with the adjacent ATS units (Bogotá, Lima and CENAMER).

3.2.4 This Contingency Plan does not intend to cover all the contingencies, nor all the possible magnitudes of degradation in the ATS services; since these can be innumerable, so it will be the ATS units involved who will determine at the time, in a tactical way, the conducive and additional measures to avoid situations not foreseen in this plan.

4. SEPARATIONS AND PROVISIONS APPLICABLE TO ADJACENTS ATS DEPENDENCIES

4.1 The adjacent ACC must coordinate with the Guayaquil ACC, through the ATS coordination circuits or other available means, with no less than 30 minutes in advance, the estimated times over the entry points of the Guayaquil FIR/UTA. If this is not possible, numeral 6 of this Plan provides the applicable self-transfer procedures.

4.2 The adjacent ACC must transmit an estimate message (EST) to the first subsequent FIR of the Guayaquil FIR/UTA.

4.3 *Moderate or Partial ATS Contingency*

4.3.1 The adjacent ACC must authorize the entry of an aircraft into the Guayaquil FIR/UTA, using, at least, a longitudinal separation of 10 minutes at the same transfer point, regardless of the flight level.

- 4.3.2 Depending on the speed difference, the flight time in the contingency section and the conditions and intensity of the air traffic, the respective ACC Supervisors may, by mutual agreement, increase the minimum longitudinal separation to 15 minutes, when required, the Mach number technique (MNT) will be used.
- 4.3.3 In addition, to contribute to operational safety, the AOCG, through the Guayaquil ACC Supervisor, may temporarily coordinate measures or specific limitations for one or more airways or entry/exit points to the FIR/UTA Guayaquil with the adjacent ACCs. If necessary, these specific limitations can be incorporated in the NOTAM information.
- 4.3.4 If it is not possible to coordinate with the Guayaquil ACC, the adjacent ACC must instruct the pilots that fly over the Guayaquil FIR/UTA to maintain the last flight level and speed accepted by the Guayaquil ACC.
- 4.3.5 The adjacent ACC must instruct the aircraft, in the sense of establishing communication with the ATS units of the Guayaquil FIR/UTA, at least 5 minutes before the expected time of entry into the Guayaquil FIR/UTA.
- 4.3.6 During the validity of the contingency, flights of non-RVSM approved aircraft are not allowed in the RVSM airspace of the Guayaquil FIR/UTA, except flights with humanitarian status (HUM) and ambulance aircraft (MEDEVAC).

4.4 Severe ATS Contingency or Zero ATC

- 4.4.1 In this type of contingency, all flights must use the simplified network of ATS routes indicated in Tables 1 and 2, and the same conditions and limitations indicated in the previous paragraphs 4.3.2 and 4.3.3 will apply.
- 4.4.2 Considering the intensity of the ATS contingency in progress, the Guayaquil ACC may tactically coordinate the transfer of aircraft exiting the Guayaquil FIR/UTA at points other than those indicated in Tables 1 and 2, whenever air traffic conditions permit.
- 4.4.3 In the case of a total interruption (or zero ATS), in which it is not possible to provide any air traffic service, arrivals/departures are suspended at all airports in the Guayaquil FIR/UTA.

Note: The AOCG may establish mechanisms to tactically coordinate the transfer of aircraft to international airports within the Guayaquil FIR/UTA.

- 4.4.4 During the validity of the contingency, flights of non-RVSM approved aircraft are not allowed in the RVSM airspace of the Guayaquil FIR/UTA.
- 4.4.5 The adjacent ACC units must ensure that the aircraft that are going to enter the FIR/UTA Guayaquil maintain a minimum separation of 10 minutes between aircraft, regardless of the flight level. The Supervisors of the ACCs involved may, by mutual agreement, coordinate increasing the minimum longitudinal separation to 15 minutes.
- 4.4.6 The adjacent ACC must ensure that aircraft entering the Guayaquil FIR/UTA are leveled, in accordance with the provisions of Tables 1 and 2.

- 4.4.7 When air traffic coordination cannot be carried out due to the AIDC coordination protocol and inoperative voice coordination channels, but communication coverage with the aircraft is available, the traffic permit will be valid until the point of transfer of the FIR, with the condition that the authorization to enter the adjacent FIR will be carried out by the pilot, through the self-transfer procedure (See numeral 6).

5. PROVISIONS APPLICABLE TO AIRCRAFT

- 5.1 Only aircraft flights under IFR flight rules will be allowed.
- 5.2 Only RVSM approved aircraft may use flight levels between FL290 inclusive and FL410 inclusive. Exceptions are humanitarian and ambulance flights that may be accommodated prior coordination, in case of moderate contingency.
- 5.3 En-route aircrafts must communicate on the frequency corresponding to the Guayaquil ACC sector, and/or Guayaquil radio on HF 10024 KHZ and, if necessary, will use the air-to-air frequency 123.45 MHZ, to coordinate with other aircraft. The message must contain: aircraft identification, position, flight level and any other relevant information.
- 5.4 Any ascent or descent maneuver will be carried out to the right of the route axis.
- 5.5 Aircrafts must keep navigation and anti-collision lights continuously on while flying over the Guayaquil FIR/UTA.
- 5.6 Aircrafts must keep activated the last transponder code of which they have acknowledged receipt to an ATS unit, otherwise they will activate A2000.
- 5.7 It is mandatory that aircrafts must be equipped with an operational ACAS/TCAS system and have RNAV navigation capability with navigation specification approval in accordance with the route flown.
- 5.8 Aircrafts must use the TIBA (TRAFFIC INFORMATION BROADCAST BY AIRCRAFT) in-flight information broadcasting procedures, within 50 NM of the reporting points indicated in Tables 1 and 2, on the air-to-air frequency 123.45. MHZ.
- 5.9 When an interruption occurs in air-ground communications, flight crews must proceed with the following, using all available auxiliary communications means:
- a) Try to establish contact with the ACC Unit, on the assigned frequency;
 - b) Try to establish contact with another aircraft on the frequency assigned to the ACC Unit;
 - c) Try to establish contact with the ACC Unit or another aircraft on the ATC frequency of the alternate unit (See Table 3); either
 - d) Try to establish contact with another aircraft on the air-to-air frequency (123.45 MHZ).

If the aircraft cannot establish communications with the ACC Unit, it must:

- a) Proceed in accordance with the route of the updated flight plan;
- b) Maintain the last assigned speed and level;
- c) Apply TIBA procedures, preferably in the English language, using ATC and air-to-air frequencies (123.45 MHZ);

- d) Periodically try to re-establish communications; and
- e) In case of not being able to comply with the specifications established in the Contingency Plan, they must update their flight plan, avoiding the affected FIR.

5.10 If an aircraft is intercepted by another aircraft, the pilot must immediately:

- a) Follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals, in accordance with international procedures;
- b) If possible, notify the corresponding ATS unit;
- c) Try to establish radio communication with the intercepting aircraft, making a general call on the emergency frequency 121.5 MHz and 243 MHz, if it equipped for that purpose; and
- d) Set the transponder to code 7700, unless the corresponding ATS unit gives instructions to the contrary.

5.11 In the event that some of the instructions received by radio from any source are in contradiction with those given by the intercepting aircraft, the intercepted aircraft must request an immediate clarification while continuing to comply with the instructions given by the intercepting aircraft.

6. AUTO-TRANSFER PROCEDURES

6.1 When ATS units cannot carry out transfer coordination due to failure in the AFTN/AMHS fixed communications service (including AIDC), ATS voice channels, they must follow the following procedures:

6.1.1 The ACC of origin must:

- a) Inform the pilot of the unavailability of coordinating his transfer with the accepting ACC; and
- b) Provide the necessary instructions for the pilot to establish contact with the accepting ACC.

6.1.2 The pilot must:

- a) Try to contact the accepting ACC, on the corresponding sector frequency or alternate HF 10024 KHz, at least five (5) minutes before the ETO at the transfer point;
- b) Inform the accepting ACC that it is carrying out an auto-transfer;
- c) Transmit the following information: aircraft identification, origin, destination, route, flight level, transponder code, RVSM approval status, PBN approval status and estimated FIR fixed limit, as well as any other relevant information; and
- d) In the event of a failure in HF and VHF communications, the pilot can use satellite communications to contact the Guayaquil ACC at the numbers:

ACC Guayaquil: 473501 / 473502 (Satcom short code)

6.2 The ACCs must guide the pilots regarding compliance with these procedures.

7. SUSPENSION OF REPETITIVE FLIGHT PLANS (RPL)

7.1 While the contingency situation lasts, RPLs and flight plans filed or modified via AMHS (Direct filing) will be suspended.

8. APPLICABLE PROCEDURES WHEN THE CONTINGENCY OCCURS IN ADJACENT FIR

- 8.1 A simplified route network, entry/exit points and flight levels will be applied by the Guayaquil ACC, when the contingency occurs in the adjacent FIRs, as established in the Letters of Operational Agreement signed with each state.
- 8.2 The supervisors of the ACCs involved may agree, depending on the level of degradation of the services and facilities, to relax the limitations imposed.

TABLE 1
SIMPLIFIED ROUTE NETWORK IN CASE OF SEVERE ATS CONTINGENCY
IN THE GUAYAQUIL FIR/UTA

NORTH – SOUTH FLOW BOGOTA – GUAYAQUIL – LIMA FIR					
SKED FIR to SPIM FIR	Route	Waypoint	Entry/Exit FL	Separation	Coordination
	UM674	ENSOL	ODD FL 310	10 minutes	No coordination between FIR: Auto transfer method is used, with no less than 40 NM or 5 minutes before the waypoint.
		TOSES	ODD FL 310		
	UL305	PULTU	EVEN FL 300	10 minutes	
		TERAS	EVEN FL 300		
SOUTH - NORTH FLOW LIMA – GUAYAQUIL - BOGOTA FIR					
SPIM FIR to SKED FIR	Route	Waypoint	Entry/Exit FL	Separation	Coordination
	UL780	VAKUD	EVEN FL 300	10 minutes	No coordination between FIR: Auto transfer method is used, with no less than 40 NM or 5 minutes before the waypoint.
		UGUPI	EVEN FL 300		
	UM795	LOBOT	EVEN FL 300	10 minutes	
		BOKAN	EVEN FL 300		

TABLE 2

SIMPLIFIED ROUTE NETWORK IN CASE OF SEVERE ATS CONTINGENCY
IN THE GUAYAQUIL FIR/UTA

NORTH – SOUTH FLOW CENAMER – GUAYAQUIL - LIMA FIR					
MHCC FIR to SPIM FIR	Route	Waypoint	Entry/Exit FL	Separation	Coordination
	UL203 / UM542	LIXAS	ODD FL 310	10 minutes	No coordination between FIR: Auto transfer method is used, with no less than 40 NM or 5 minutes before the waypoint.
		ARNEL	ODD FL 310		
	UL401	OSELO	ODD FL 310	10 minutes	
		PABOB	ODD FL 310		
SOUTH - NORTH FLOW LIMA – GUAYAQUIL - CENAMER FIR					
SPIM FIR to MHCC FIR	Route	Waypoint	Entry/Exit FL	Separation	Coordination
	UL344	AMERO	EVEN FL 300	10 minutes	No coordination between FIR: Auto transfer method is used, with no less than 40 NM or 5 minutes before the waypoint.
		ARTOM	EVEN FL 300		

SIMPLIFIED NETWORK OF CONTINENTAL AND OCEANIC ROUTES

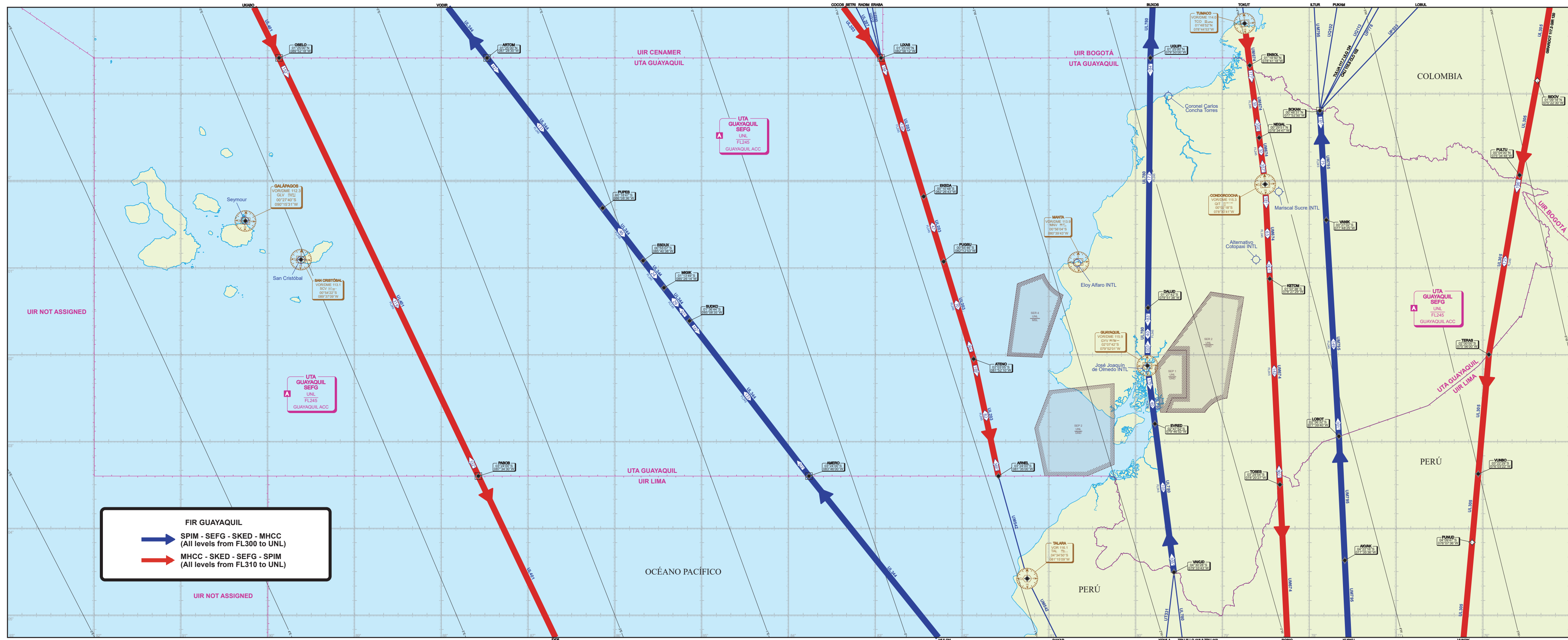


TABLE 3

UNITS AND FREQUENCIES IN CASE OF FAILURE OF AIR-GROUND COMMUNICATIONS

UNIT	MAIN FREQUENCY	ALTERNATE FREQUENCY
Guayaquil ACC - ACC 1	128.3 MHZ	123.9 MHZ
Guayaquil ACC - ACC 2	127.95 MHZ	128.0 MHZ
Bogotá ACC	125.10 MHZ	128.80 MHZ
CENAMER ACC	124.10 MHZ	10024 KHZ
Lima ACC	128.1 MHZ (North) 128.5 MHZ (East)	124.3 MHZ

