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INFORMATION PAPER

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**NAM/CAR AIR NAVIGATION IMPLEMENTATION WORKING GROUP (ANI/WG)/AIR TRAFFIC FLOW
MANAGEMENT (ATFM) IMPLEMENTATION TASK FORCE MEETING (ATFM/TF)**

On line, 17 to 19 May 2021

Agenda Item 4: ATFM Contingency Procedures

**TRINIDAD AND TOBAGO ATFM/CDM UPDATE AND CONTINGENCY PROCESS DURING THE LA
SOUFRIERE VOLCANIC ERUPTION**

(Presented by Trinidad and Tobago)

EXECUTIVE SUMMARY

This information paper provides a brief update on Trinidad and Tobago's ATFM/CDM progress, and describes the contingency measures employed during the pre-explosive and explosive phase of the La Soufriere Volcanic in St. Vincent and the Grenadines.

Strategic Objectives:

- Safety
- Air Navigation Capacity and Efficiency
- Security & Facilitation
- Environmental Protection

References:

- Minutes of the Ninth E/CAR/CATG ATM Committee Follow-up Meeting; 26 February 2019.
- Minutes of the Eighth E/CAR/CATG ATM Committee Follow-up Meeting; 10 May 2018.
- WP/23, Fourth Caribbean Civil Aviation Technical Group (E/CAR/CATG/4) Meeting Saint George's, Grenada, 6 to 7 September 2018.

1. Introduction

1.1 This paper provides an update on Trinidad and Tobago's Air Traffic Flow Management (ATFM) operation. The paper also describes the Contingency process, employed by Trinidad and Tobago, during the impact of the ongoing La Soufriere Volcanic eruption in St. Vincent and the Grenadines.

2. Trinidad and Tobago's ATFM Update

2.1 Trinidad and Tobago has developed an ATFM/CDM procedure Manual and has provided in-house training to Air Traffic Controllers. Trinidad and Tobago also attended the ATFM Basic Training, developed jointly by the ICAO ANI/WG ATFM Task force and CADENA, in the Dominican Republic, from 5 to 8 June 2018.

2.2 Trinidad and Tobago continues to monitor the COVID-19 situation internationally and its impact on air traffic demand both locally and regionally. Information on airline schedule is received periodically and factored into the demand forecast.

2.3 Trinidad and Tobago continues to share operational information, daily through the CADENA Operational Information System (OIS), and weekly through participation on the CADENA planning telecons.

2.4 Trinidad and Tobago presented its ATFM operational Tools to the Eastern Caribbean (E/CAR) States at the Ninth (9th) E/CAR Civil Aviation ATM Committee Follow-up web meeting, held on 26 February 2019. Trinidad and Tobago is planning to operationalize its ATFM/CDM web-based tools, and will begin sharing information, on a test basis, with local and regional stakeholders. The Trinidad and Tobago Meteorological Service has already been provided with user credentials and share information on a test basis.

2.5 A local helicopter company and one of the Eastern Caribbean States with a Terminal Control Area (TMA) will receive credentials to connect to the ATFM web-based tools on a test basis. A User Manual, and online training on the ATFM system, will be provided. The intention would be to use the period of testing to refine procedures for the sharing of operational information via this common platform.

2.6 A common platform to share operational information within the Eastern Caribbean would improve general situational awareness among the ANSPs and Airspace Users, particularly during periods of disruptions to air traffic due to meteorological, volcanic, and/or other events.

3. Contingency Event - La Soufriere Volcanic Eruption

3.1 The La Soufriere Volcano, which, prior to the explosive events, had been having continuous effusive eruptions. The volcano erupted explosively on 9 April 2021, and has had several explosive events since the initial eruption. The Volcano is currently in the explosive phase and continues to show the typical signs of seismic activity. The University of the West Indies Seismic Research Centre (UWISRC) has advised that explosive events can take place with little or no warning.

3.2 The resultant ash clouds and ash fall from each explosive event disrupted traffic flows within the Piarco UTA/CTA/FIR and some Eastern Caribbean Terminal Control Areas (TMAs). Heavy ash fall resulted in the temporary closures of all the Airports within the territory of St. Vincent and the Grenadines, and Barbados. Ash fall also affected, to a lesser extent, the International Airports in the island of St. Lucia.

3.3 The following paragraphs describe the actions taken, and continue to be taken, by Trinidad and Tobago during this contingency.

3.4 Prior to the Explosive Phase

3.4.1 Prior to the first explosive event, the regional contingency group was activated and carried out continuous monitoring of the La Soufriere Volcano.

3.4.2 Trinidad and Tobago convened a virtual strategic planning meeting, on 29 March 2021, with the ICAO NACC Regional Office for ATM/SAR, Eastern Caribbean (E/CAR) States, and the University of the West Indies Seismic Research Centre Belmont Advisory, Caribbean Airlines, CADENA and other agencies.

3.4.3 The main purpose of the meeting was to agree on the following:

- Contingency measures to mitigate the adverse effects to aviation of an explosive eruption; and
- A method of communication to keep all stakeholders informed and updated, in the quickest possible time, of any developments affecting the safe operation of aircraft.

3.4.4 Trinidad and Tobago updated its contingency procedures as they related to volcanic events, and ensured that Air Traffic Controllers were fully briefed on these procedures.

3.4.5 The University of the West Indies Seismic Research Centre (UWISRC) had been noting seismic and pre-eruption activity, consistent with an eminent explosive event, from 23 March to 8 April 2021. During this period, the alert phase had been changed from ORANGE to RED, and Trinidad and Tobago ensured that the Civil Aviation Authority and Meteorological Service were in a state of preparedness.

3.4.6 Trinidad and Tobago formed a Volcanic Contingency WhatsApp group, for sharing pertinent information among relevant stakeholders. Members on the WhatsApp group included, but was not limited to, key strategic personnel from the following organisations:

- Airlines,
- Eastern Caribbean States Air Navigation Services Organisations,
- ICAO,
- Trinidad and Tobago Civil Aviation Authority Air Navigation Services Department,
- Trinidad and Tobago Meteorological Service,
- St. Vincent and the Grenadines National Emergency Management Office,
- University of the West Indies Seismic Research Centre Belmont Observatory,
- Volcanic Ash Advisory Centre, Washington

3.5 During the Explosive Phase

3.5.1 The first series of explosive events took place on 9 April 2021, followed by several subsequent explosive events. All initial pertinent information was communicated to the ATM community, Airlines and other stakeholders, almost instantaneously, via the Volcanic Contingency WhatsApp group.

3.5.2 Special Air Reports pertaining to the approximate position, height, direction and speed of Volcanic Ash (VA) cloud, were relayed to the Trinidad and Tobago Meteorological Service (TTMS). These reports were also relayed, in almost real time, to stakeholders via the WhatsApp group.

3.5.3 The Trinidad and Tobago Civil Aviation Authority (TTCAA) Air Navigation Services (ANS) Department provided volcanic activity updates, several times daily, as required, to stakeholders, via the contingency WhatsApp group. Special Air Reports on volcanic activity were included on these updates.

3.5.4 Trinidad and Tobago also added a dedicated page on the TTCAA website for the dissemination of these updates.

3.5.5 The aforementioned updates were also uploaded to and shared via the CADENA Operational Information System web page.

3.5.6 These updates were numbered chronically and comprised of the following information:

- Ash Movement
- Volcanic Advisories from the VAAC Washington
- Special Air Reports on Volcanic Ash/Eruption (PIREPS)
- SIGMETs provided by the TTMS
- Affected Airport Status
- Traffic Demand Information
- Mitigation and Clean-up Guidelines
- Contact Information for TTCAA Personnel

3.6 Traffic Management Measures

3.6.1 The traffic demand within the Piarco UTA/CTA/FIR remained below average due to the impact of COVID-19, and therefore, it was not necessary to implement TMMs to manage the traffic during explosive events. However, airspace users were constantly provided with information on Volcanic Ash, and aircraft deviations and reroutes were handled tactically.

4. Conclusion

4.1 The timely, almost real-time sharing of pertinent and critical information, via the WhatsApp platform, proved to be a huge operational benefit to all stakeholders.

4.2 The regular updates provided by Trinidad and Tobago via the TTCAA website and CADENA OIS, also facilitated the dissemination of information to strategic decision makers from organizations beyond the WhatsApp group.

4.3 Trinidad and Tobago recommends that, going forward, in addition to the WhatsApp contingency chat group, an official platform be introduced for the sharing of operational information. In addition to the current volcanic activity, the region is faced with the seasonal occurrences of tropical cyclonic activity. The sharing of critical operational information among stakeholders, via a common operational system, would improve situation awareness during the Atlantic Hurricane Season, 1 June to 30 November.

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4.4 As mentioned earlier in this report, Trinidad and Tobago will continue sharing operational information via its ATFM tools, on a test basis with local and regional stakeholders.

4.5 Trinidad and Tobago will endeavour to operationalize the Operational Information System (OIS) feature of these tools, to provide a common platform where all stakeholders can share and receive pertinent operational information, particularly during contingency events.

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