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Third Airport Collaborative Decision Making (A-CDM) Seminar/Workshop

Greg Byus, FAA

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Lima, Perú, 25 – 27 September 2017

Introduction

- Airport-CDM Optimisation through Collaboration: An Introductory Guide for ANSPs presents the basic elements of A-CDM, including the process, principles and expected benefits.
- The document concentrates on the strategies rather than the technicalities.
- This CANSO Guide is a first step to help ANSPs understand A-CDM.

Silo Effect

Primary Sources of Silos between Airport Stakeholders

- Lack of Common Vocabulary and Definitions
- Lack of Information Exchange and Communication
- Disconnected Strategies and Working in Isolation

A-CDM

A Philosophy of Open Communication Exchange

- Transparency obligates operating in such a way that it is easy for others to see what actions are, or will be performed, and to understand the rationale behind the actions.

- Sharing information - It is a fundamental principle that quality data and timely information that can improve the safety and efficiency of the aircraft flight should be shared with concerned stakeholders.

A-CDM Stakeholders

A-CDM Stakeholders

ANSPs are able to provide information on:

- Estimated arrival times
- Estimated departure times based on planning data provided by handling agent
- Runway in use and runway capacity

The airport operators should provide information on:

- Stand and gate allocation
- Environmental information
- Special events such as air shows, major sport events
- Reduction in airport capacity
- Runway availability
- Aircraft movement data

A-CDM Stakeholders

The apron control is a partner that is responsible for acting on information related to arrival and departure information, such as:

- landing times
- In-block times
- Off-block times
- Start-up approval times

Also take-off time while sharing the information with the ANSP, the airlines and the airport operator.

Ground handling operators are able to provide information on:

- Changes in turn-round times
- Target off-block time (TOBT) updates
- Planning data
- Information concerning de-icing

A-CDM Stakeholders

Having up-to-date information available on the overall flight and related processes will allow airlines to deliver a better service to the end customer. Information to be provided by airlines

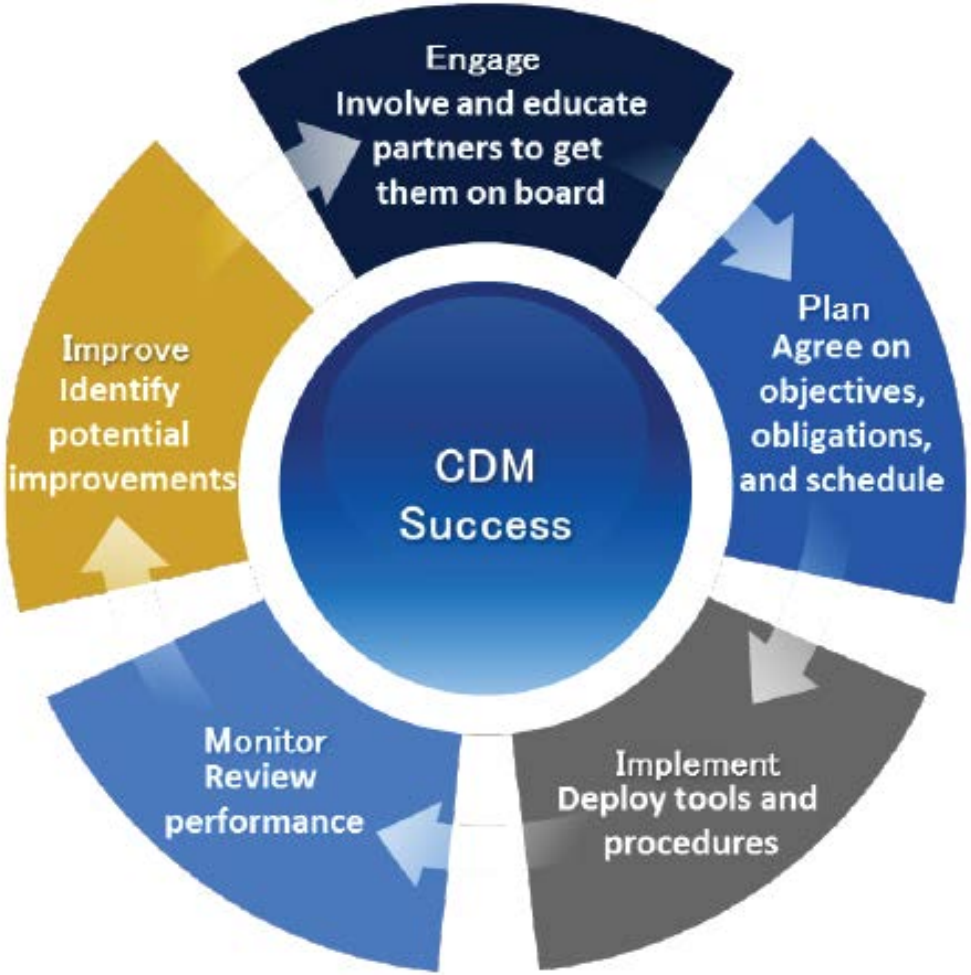
- Priority of flights
- Flight plans
- Aircraft registration
- Aircraft type

A-CDM Levels

There is no 'one-size-fits-all' A-CDM process or tool set that can be bought off-the-shelf and implemented ready-to-use.

ANSPs, airports and airlines differ in terms of size, strategy, status, constraints, and business models, and each of these differences may require a different form or level of airside A-CDM. Implementation is shaped by the benefits sought by the stakeholders and involves various levels of collaboration and sharing information.

Steps to Success



Benefits of an A-CDM initiative

As A-CDM, by definition, is a joint undertaking of various stakeholders, it is important to emphasise that this act of collaboration in itself brings major benefits.

- Cost Reductions
- Environmental Benefits
- Capacity Optimisation
- Improving Efficiency

Recommendations

Sharing information and collaboration among stakeholders enables them to make better informed decisions, to use the available resources more efficiently, agree to the most efficient and effective actions, and to make those actions predictable and known to the other stakeholders

The basis of A-CDM is sharing information, such as *available runway capacity, stand and gate resources, landing times, intended take-off times, and forecast weather*. This shared information enables shared awareness and facilitates collaborative decision-making to increase the overall efficiency of the system instead of focusing on optimising individual processes. *Quite often A-CDM is connected to other external stakeholders and systems, like ATFM units, which provides even greater system benefit.*

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FROM THEORY TO PRACTICE AND IMPLEMENTATION

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CANSO ATFM Data Exchange Network for the Americas

Why?

Purpose and Objectives of CADENA

- Exchange operational information
  - CADENA members are working to implement data exchange through FAA's SWIM network
  - Trinidad and Tobago is connected to FAA´s SWIM and other CADENA members are in process
  - Airlines, airports, and other aviation stakeholders will be able to access such data in the near future
- Promote common situational awareness
- Enhance operational safety
- Improve operational efficiency

Motivation for the Region

- Has multiple FIRs in a compact, complex area
- Has the third-highest traffic count for outbound US traffic after Canada and Mexico
- Rapid growth (ICAO expects 5-8% annual growth)
- Heavily reliant on aviation for tourism and trade
- No integrated network for Regional situational awareness and ATFM
- Inconsistent operations across FIR boundaries
- Significant tropical weather disruptions and airspace complexity causing ripple delays and disruptions

CADENA ANSP Participants

- CGNA (Brazil)
- COCESNA (Cenamer)
- DC-ANSP (Curaçao)
- EANA (Argentina)
- ECASA (Cuba)
- FAA (DCC, ZMA, SJU, ZNY, ZHU)
- IDAC (Dominican Republic)
- JCAA (Jamaica)
- SENEAM (Mexico)
- TTCAA (Trinidad)

CADENA Stakeholder Participants

Current

- ACI
- Aeroméxico
- ALTA
- American
- Azul Airlines
- Caribbean Airlines
- Copa
- Delta
- IATA
- ICAO (SAM-NACC)
- Jet Blue
- NBAA
- United
- SKY Airline
- United Airlines
- UPS
- Spirit
- Volaris

CADENA Stakeholder Participants

Planned

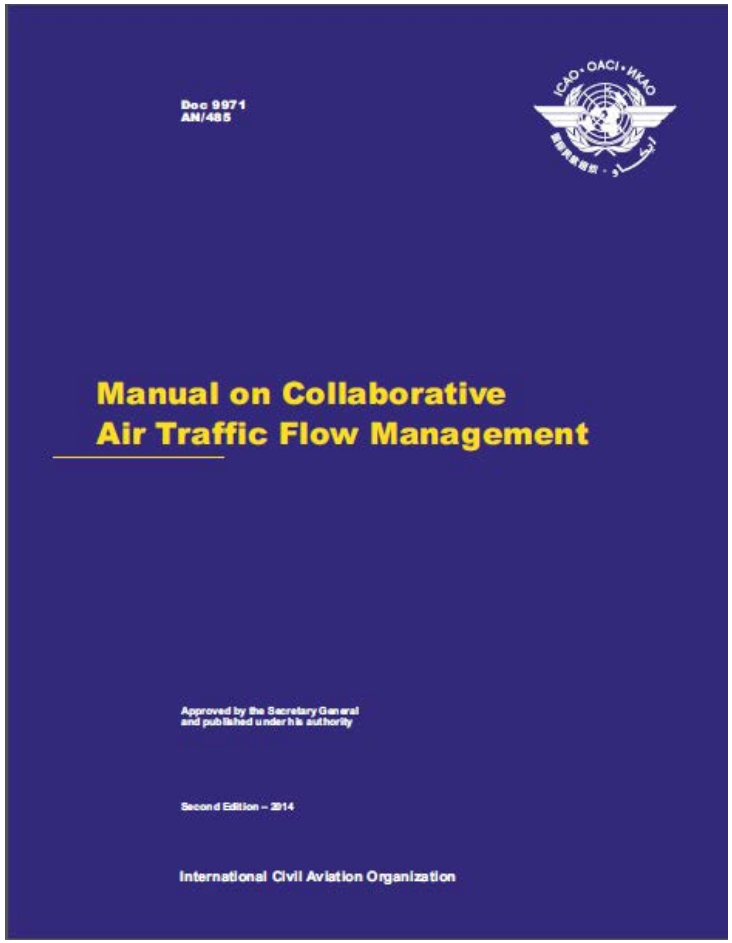
- Avianca
- Cubana
- Island Air
- Fly Jamaica Airways
- LAN Chile
- LATAM
- TACA

How?

- Governance through CANSO
- CANSO: Global association of ANSPs
- Members support over 85% of the world's air traffic
  - 167 members globally
  - 88 ANSPs
  - 79 Associate Members
  - 9 Members located within the LAC region
- Three Standing Committees
  - Operations, Safety, Strategy and Integration

In Concert with ICAO

- CAR/SAM ATFM CONOPS
- ICAO DOC 9971
- CADENA is designed to implement the processes and procedures from DOC 9971



When?

- Aug 2016: 1st CADENA meeting - Havana
- Oct 2016: 2nd CADENA meeting - Buenos Aires
- Dec 2016: Multilateral ATM/CDM LOA – Costa Rica
- Dec 2016: Live CADENA Ops Planning Conference
- Jan 2017: Stakeholders join Planning Conference
- Feb 2017: 3rd CADENA meeting & Industry Day – Curaçao
- Jun 2017: 4th CADENA meeting
- CADENA RIG Remote Meetings - Monthly
- CADENA RIG Face-to-Face Meetings – 3 times per year

Accomplishments to-date

- CADENA Terms of Reference
- CADENA Roles and Responsibilities
- CDM Letter of Agreement
- Operational Web Conferences (Weekly)
- CADENA ATFM-CDM Procedures Manual (Draft)
- Shared best practices
- Data Exchange via SWIM
- Trained Hurricane Planning web conference procedures

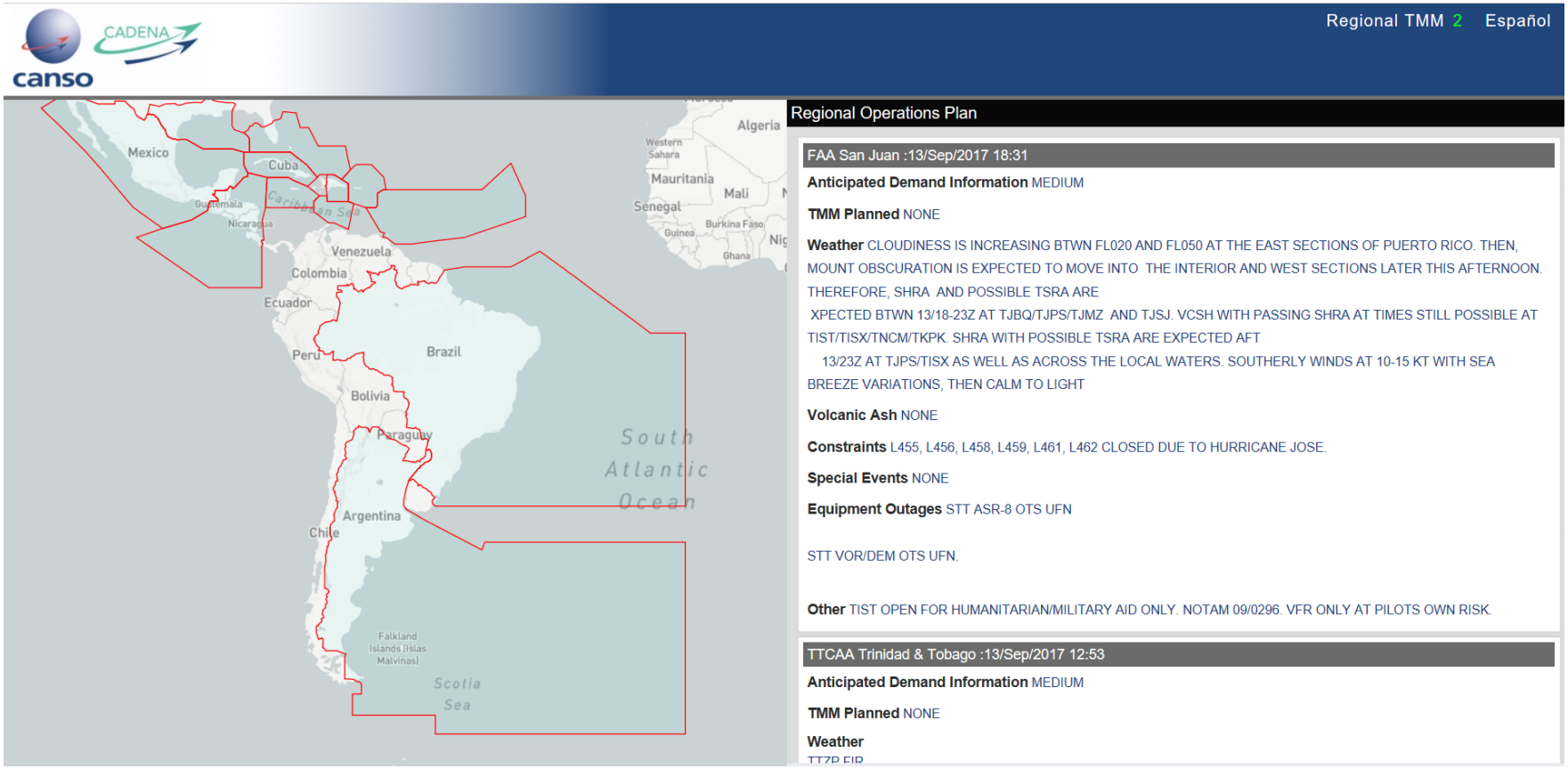
CADENA Benefits - Observed by IATA

- ATFM coordination has moved from single ANSP perspective to a regional perspective allowing improved coordination.
- CADENA initiative utilizes CDM, allowing the entire aviation community to participate and provide input to the strategic planning. This provides operators a forum to inform of deviation in the number of operations for planning purposes.
- Reduction in surprise to operators allowing for improved operational performance.
- Early detection of constraints and identification of real alternative routes and trajectories.
- Awareness of special events including VIP movements and expected impact to the day's operations.

What's Next

- Encourage TFM flight data exchange via FAA SWIM
- Shared Operational Information System
  - Web hosted service
  - Daily Operations Plan - ANSP and Regionally via OIS
  - Impacted Routes
  - Current and Planned Restrictions – text and graphical
  - View for Member ANSPs, Stakeholders, and Public

CADENA Operational Information System



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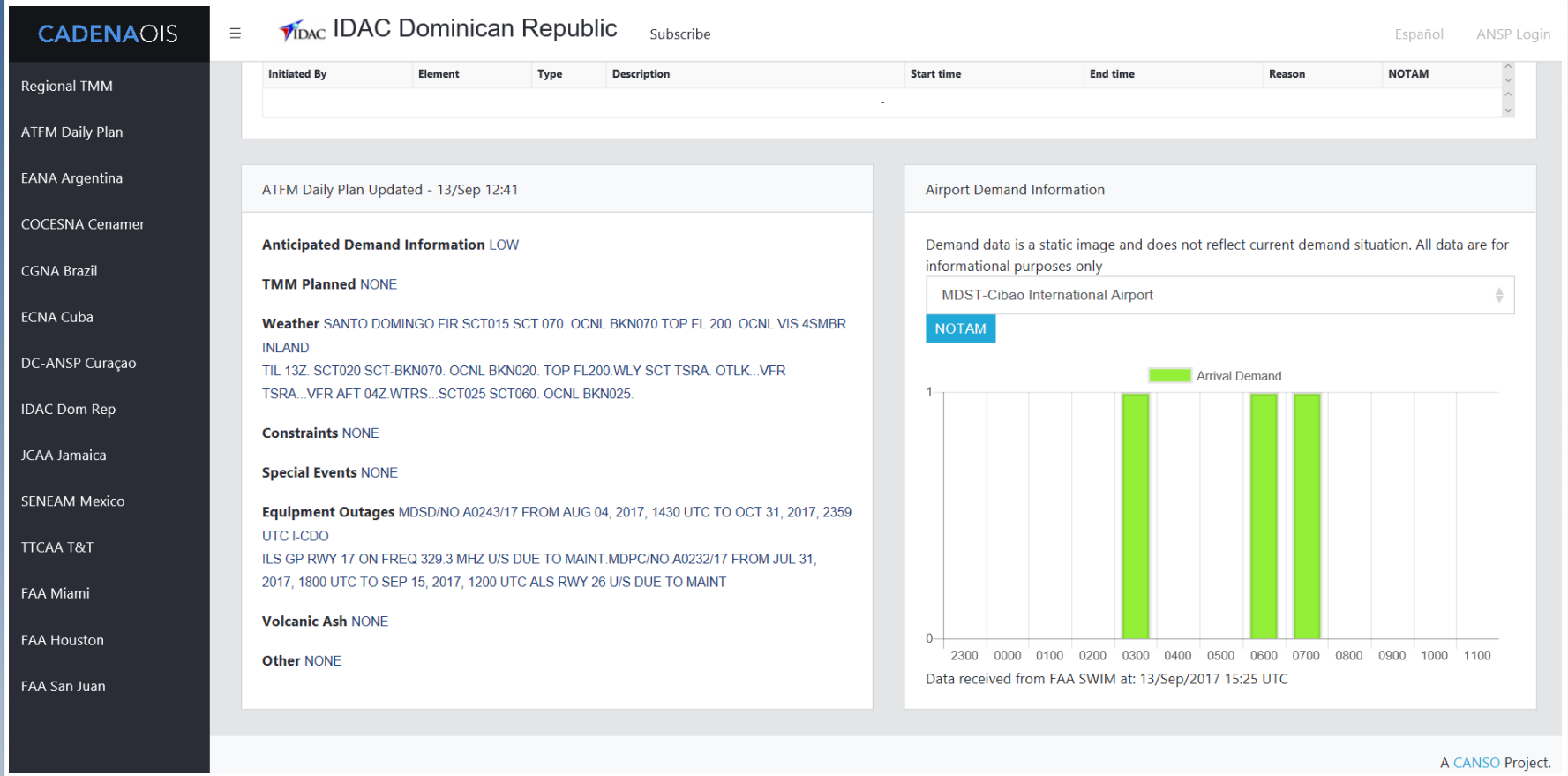
CADENA Operational Information System



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CADENA Operational Information System

What's Next (cont.)

- Regional TMM Log
- Analysis and trending
- Establish quantifiable metrics
- Develop and train to hurricane scenarios
- Train ATFM procedures and best practices
- Post operations analysis and lessons learned sharing
- Regional review process

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CADENA
OPERATIONS PLANNING
WEB CONFERENCE

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Web Conference Attendance

- Required
  - All CADENA Member Traffic Management Units (TMUs)
  - Any Traffic Management Area (TMA) or control tower that may have a significant constraint will be requested to attend
- Optional
  - Airlines and other aircraft operators, airport authorities, military organisations, and other aviation stakeholders

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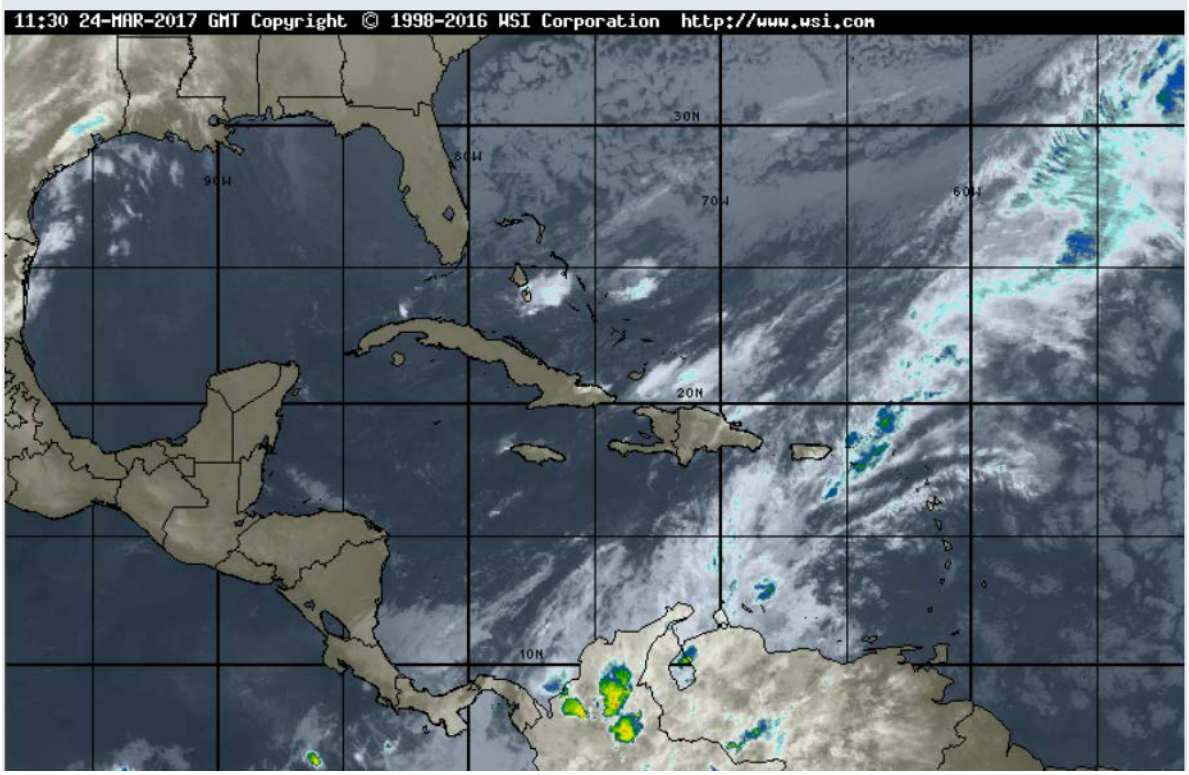
WEATHER OVERVIEW



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STAFFING	COMBINED SECTORS	✓ SPECIAL EVENTS ✓ EQUIPMENT OUTAGES ✓ OTHER ISSUES
FULL STAFFING	NORTH AND SOUTH SECTORS OPERATED SEPARATELY BETWEEN 1930Z – 2300Z.	• CPDLC UNAVAILABLE TIL MAY 21, 2017, ADS-C LOGON AVAILABLE

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TERMINAL / ENROUTE WEATHER CONDITIONS	TERMINAL / ENROUTE CONSTRAINTS
• TTZP FIR - NO SIG WEATHER . • TTPP – NO SIG WEATHER • TTCP – NO SIG WEATHER	• TTCP - TURNING BAY AT 1750M MARK U/S. NO 180 TURNS ALLOWED ON RWY EXCEPT LIGHT ACFT (A0329/17 NOTAMN) • TTPP - PORTION OF TAXIWAY BRAVO CLSD, from 150 M WEST 'B1' to 'B3' DAILY FROM MAR 23-25, (A0377/17 NOTAMN) . ACFT TO BACKTRACK RWY 10 FOR DEPARTURES. AAR/ADR REDUCED AS A RESULT • TTPP ILS 'IPOS' 109.70 CH34X RWY 10 U/S, (A0382/17 NOTAMN) UNTIL MAR 25, 2300Z

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ANTICIPATED DEMAND	TRAFFIC MANAGEMENT MEASURES
• MODERATE	• NONE

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PIARCO

AIRPORT	RWY CONFIG.	AAR	ADR
TTPP	10	15	14
TTCP	11	05	04

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Stakeholder comments / questions

ACI-LAC
Airlines
ALTA
IATA
ICAO

CADENA

Any additional comments or questions?

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Special Hurricane and Contingency web conferences to inform of potential operational impact. These practices were exercised with Tropical Storms Bret, Franklin, and Lidia, for Hurricane Irma and most recently for Hurricane Maria.

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CADENA invites all ANSPs to participate at the weekly web conferences and the use of the OIS

Questions?

Thank you!

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