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# Briefing on CADENA Annual Hurricane / Tropical Storm Training

For: ICAO NAM/CAR/CONT/3

Date: May 11, 2023

By: CADENA Team - Al Castillo and Midori Tanino

# Introduction

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CANSO ATFM Exchange Network for Americas (CADENA) conducted its first Hurricane Training for the Latin America and Caribbean region in the spring of 2017. CADENA has continued to provide Hurricane Training for the LAC region once each year. Hurricane Training participants include LAC region ANSPs, airlines, and other stakeholders.

This briefing provides an overview of the CADENA Annual Hurricane Training. The CADENA Annual Hurricane Training consists of two main sections:

- Hurricane refresher training based on the CADENA ATFM/CDM Procedures Manual
- Hurricane exercise

The final section of this briefing provides a partial listing of actual hurricane events in which CADENA activated a hurricane web conference.



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# CADENA Annual Hurricane and Tropical Storm Training – Refresher Training

# CADENA Hurricane Refresher Training - Background

- The Hurricane/Tropical Storm refresher training consists of a review of CADENA's training philosophy and the Hurricane/Tropical Storm section of the CADENA ATFM/CDM Procedures Manual.
- Section 3.3 of the CADENA ATFM/CDM Procedures Manual contains Hurricane /Tropical Storm roles/responsibilities and other guidance.
- The CADENA ATFM/CDM Procedures Manual Appendix B – Sample hurricane/tropical storm web conference slides.
- The CADENA ATFM/CDM Procedures Manual Appendix E – Hurricane/Tropical storm contingency event checklists.

Civil Air Navigation Service Organisation  
Air Traffic Flow Management  
Data Exchange Network for the Americas

CADENA  
Air Traffic Flow Management  
and  
Collaborative Decision Making  
Procedures Manual

November 1, 2022  
Version 5.8



# Training Philosophy

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## Our goal is to train like we respond.

- Operational and personnel safety come first!
- Ensure good communication and teamwork among all the stakeholders.
- Use the capabilities of the CADENA Virtual Support Team (VST).
- Use the procedures in the:
  - ✓ CADENA ATFM/CDM Procedures Manual
  - ✓ CADENA Hurricane Contingency Event checklist
- Use the capabilities in the:
  - ✓ CADENA OIS
  - ✓ Flight Radar 24
  - ✓ CADENA WhatsApp

# CADENA Virtual Support Team Responsibilities

The CADENA Virtual Support Team (VST) is a small group of LAC region leaders that support CADENA Headquarters during contingency and unusual events. They aid in ensuring good communication and coordination during disruptive or potentially disruptive events.

## CADENA VST Actions - Exercise



### ▪ The CADENA VST will:

- Open and refer to the CADENA ATFM-CDM Procedures Manual Section 3.3, CADENA Hurricane / Tropical Storm Web Conferences.
- Open and use the Appendix E Checklist, "Hurricane or Tropical Storm."
- Update the CADENA OIS.
  - Urgent Advisory [ "Exercise, Exercise" ]
    - ✓ VST - EANA [Flavia/Julian]
  - CADENA Contingency Form [ "Exercise" ]
    - ✓ VST - CADENA HQ [Joe/Al]
  - Monitor Chat

### ▪ On the day of the event:

- Gather the pertinent operational information.
- Schedule and conduct a 1400 UTC (or as coordinated) CADENA Hurricane Web Conference.
  - Hosted by a CADENA Virtual Support Team participant.



# CADENA ATFM/CDM Procedures Manual Appendix E

## (1 of 2)

The CADENA ATFM/CDM Procedures Manual Appendix E contains a Hurricane/Tropical Storm checklists for ANSPs and the VST.

The first is an “Initial ATFM Action” Checklist

### 9: Hurricane or Tropical Storm

#### Initial ATFM Action

- FMUs will monitor their tropical weather resources, and when possible, advise CADENA leadership 2 to 3 days before a hurricane or tropical storm will impact their FIR
- Prepare to gather and report information related to:
  - Projected path
  - Projected duration per affected airport
  - Projected capacity for airport recovery
  - If airport services are affected, then the priority for recovery
  - Projected airport closures and openings
  - Projected route closures and openings
  - Reports of significant equipment outages
  - Staffing issues
  - Planned TMMs

# CADENA ATFM/CDM Procedures Manual Appendix E

## (2 of 2)

The second checklist is for  
“Follow-Up ATFM Actions.”

### Follow-Up ATFM Actions

- Starting 2 to 3 days before landfall at a participating ANSP, CADENA leadership will schedule a daily 1400 UTC (or at the time coordinated) CADENA Hurricane Web Conference
- The Host will be selected based on the location and the projected path of the hurricane
- Only those ANSPs affected by the hurricane and its bands, and those where traffic may be rerouted, will be required to participate in the hurricane web conference.
- Notification of the pending hurricane web conference will be announced through the CADENA OIS
- Impacted ANSPs will upload the applicable set of PowerPoint slides via the CADENA OIS for the Host by 1200 UTC (during U.S. daylight savings time) each day the hurricane web conference is conducted
- As a backup, the slides can be emailed to the Host



# CADENA Hurricane/Tropical Storm Conference: Host Pre-Conference Responsibilities

The Hurricane Web Conference Host's pre-conference responsibilities are reviewed as outlined in the Procedures Manual.

## Host Pre-Conference Actions - Exercise



### 3.3.1 Host: Pre-conference responsibilities

- For hurricane and tropical storm web conferences, prepares the Host master slide deck template with correct date and time, current weather product snapshot, and other relevant information.
- Reviews the weather forecast products and prepares a brief overview of regional weather and other constraints.
- Retrieves the hurricane or tropical storm slides from the CADENA OIS for the participating CADENA FMUs.
- Logs in to the web conference at least fifteen minutes prior to the start of the conference in order to ensure connectivity and to conduct a sound check.

*CADENA ATFM/CDM Procedures Manual Section 3.3.1.*



# CADENA Hurricane/Tropical Storm Conference: FMU Pre-Conference Responsibilities

The Hurricane Web Conference FMU's pre-conference responsibilities are reviewed as outlined in the Procedures Manual.

## CADENA Hurricane/Tropical Storm Conference: FMU Pre-Conference Responsibilities

### 3.3.4 Participating FMU: Pre-conference responsibilities

Reviews the following areas of concern and inputs the information into the ANSP slide deck template, including pertinent input of operational information provided by underlying ANSPs, TMAs, and airports. The ANSP hurricane slide deck template is shown in Appendix B.

Submits the Hurricane / Tropical Storm slides to the Host by uploading the slide deck through the CADENA OIS ANSP home page. The slide deck shall be submitted at least two hours prior to the scheduled start time of the web conference. The slide deck should include the following information.

- Projected path.
- Projected duration per affected airport / FIR.
- Projected capacity for airport recovery.
- If airport services are affected, then the priority for recovery.
- Projected airport closures and openings.
- Reports of significant equipment outages.
- Projected route closures and openings.
- Planned TMMs.
- Other issues.

NOTE: Include maps of impacted airways and any other graphics that may help explain the operational situation.

# Participating ANSP Actions

Participating ANSP responsibilities are reviewed as outlined in the CADENA ATFM/CDM Procedures Manual.

## Participating ANSP Actions - Exercise



- **CADENA ATFM/CDM Procedures Manual - Section 3.3**
- **Participating CADENA ANSPs shall follow these procedures:**
  - Impacted ANSPs will upload through the CADENA OIS the set of Hurricane/Tropical Storm slides (PowerPoint or .pdf) to the Host by 1200 UTC (during U.S. daylight savings time) each day the hurricane web conference is conducted.
  - See APPENDIX B: SAMPLE HURRICANE / TROPICAL STORM WEB CONFERENCE SLIDES. As a backup, these can be emailed to the Host.
  - The Host for the hurricane web conferences may change to accommodate the expected movement of the storm. The Host for the following day will be announced at the close of each web conference.





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# CADENA ATFM/CDM Procedures Manual – Appendix E Web Conference Slides

## HURRICANE (NAME) UPDATE – 1400 UTC – DATE

### ANSP Name

#### PROJECTED PATH IN YOUR AIRSPACE

- THE CADENA HOST WILL ADD A GRAPHIC OF THE PROJECTED PATH
- ADD SLIDES, IF NEEDED
- Recommend a screenshot from: <https://www.nhc.noaa.gov/>

# HURRICANE (NAME) UPDATE – 1400 UTC – DATE

## ANSP Name

### PROJECTED IMPACT

#### DAY 1

AIRPORT CLOSING (DATE/TIME)

STAFFING ISSUES

EQUIPMENT OUTAGES

#### DAY 2

AIRPORT CLOSING (DATE/TIME)

STAFFING ISSUES

EQUIPMENT OUTAGES

#### WHEN APPLICABLE

AIRPORT RE-OPENING (DATE/TIME)

# HURRICANE (NAME) UPDATE – 1400 UTC – DATE

## ANSP Name

IMPACTED ROUTES	PLANNED TRAFFIC MANAGEMENT MEASURES
<ul style="list-style-type: none"><li>• ADD GRAPHICS, IF ABLE</li><li>• ADD SLIDES, IF NEEDED</li><li>• Recommend a screenshot from a website like: <a href="https://skyvector.com/">https://skyvector.com/</a></li></ul> <p>Use “World Hi” Add layers, if applicable</p>	<ul style="list-style-type: none"><li>• FOR EXAMPLE: REROUTES, MIT, MINIT</li><li>• LIST THE IMPACTED NEIGHBORING ANSPs</li></ul>

## HURRICANE (NAME) UPDATE – 1400 UTC – DATE

### ANSP Name

#### OTHER ISSUES

- 1
- 2
- 3

“TELL US WHAT WE DO NOT KNOW”

“PLEASE KEEP YOUR NOTAMS UP-TO-DATE”



# Hurricane/Tropical Storm Web Conference: Host Responsibilities

Review of the Host's web conference and post conference responsibilities.

## Hurricane/Tropical Storm Web Conference: Host Responsibilities

- **CADENA ATFM/CDM Procedures Manual - Section 3.3**
- **Host: Web Conference Responsibilities**
  - Provides a short synopsis of the regional weather conditions and significant events.
  - Calls on each FMU, in turn, to provide their briefing.
  - NOTE: Not all participating ANSPs will be required to attend these web conferences – only those impacted by the track of the storm.
  - Listens carefully and take notes of relevant discussions.
  - Ensures stakeholder questions and concerns are heard and addressed.
  - Provides a short summary at the end of the web conference and thanks the participants for their contributions.
  - Announces the date and time of the next Hurricane / Tropical Storm web conference.
- **Host: Post-conference responsibilities**
  - Prepares the Hurricane Master slide deck, and uploads it through the CADENA OIS within one hour from the completion of the web conference.

*NOTE: The Hurricane Master slide deck will be displayed on the CADENA OIS under "Master Slide Deck" for access by the public.*

# Hurricane/Tropical Storm Web Conference: FMU Responsibilities

Review of the FMU's web conference and post conference responsibilities.

## Hurricane/Tropical Storm Web Conference: FMU Responsibilities

### 3.3.5 Participating FMU: Web conference responsibilities

- Participates in the web conference and briefs participants on the information contained in the slides, including operational information provided by underlying ANSPs, TMAs and airports.
- Answers questions posed by participants.

NOTE: If an underlying ANSP, TMA, or airport has joined the web conference, they may be called on to brief pertinent information.

### 3.3.6 Participating FMU: Post-conference responsibilities

- Briefs facility management on the outcome of the web conference.
- Takes appropriate follow-up action based on the outcome of the web conference.
- Updates the CADENA OIS ATFM Daily Plan, as needed. This update will reflect the information provided on the Web Conference slides.

*CADENA ATFM/CDM Procedures Manual Section 3.3.5 and 3.36*

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# CADENA Annual Hurricane and Tropical Storm Training – Exercise Section

# Background

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- Several days before the Hurricane/Tropical Storm exercise, participating ANSPs are provided with the hurricane/tropical storm simulation details:
  - Level of hurricane
  - Projected path
  - Forecasts (timeline), etc.
- The details of the hurricane are based on historical hurricane events.
- Each year, the path of the hurricane is varied to provide an opportunity for other ANSPs to participate.
- Hurricane Web Planning hosts are also alternated from year-to-year.
- Participating ANSPs prepare Hurricane Web Conference slides (CADENA ATFM/CDM Procedures Manual – Appendix E) based on the information provided.
- A day or two before the exercise, the participating ANSPs send the slides to CADENA Headquarters.
- The slides in the following section are from the most recent CADENA Hurricane Exercise held on March 29, 2023.



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# Exercise: CADENA Hurricane Charlie Planning Web Conference

March 29, 2023

1400 UTC

# Hurricane Charlie



# Hurricane Charlie

- Hurricane Charlie has just passed by Jamaica and is classified as a Category 4 hurricane as it approaches the Yucatan Peninsula
- Hurricane force winds are reported out to 200 NM from the eye of the storm

# EXERCISE

# CADENA Contingency Form

Impacted Facility / Sector: Kingston and Mexico FIRs  
REF #: Hurricane Charlie Update March 29, 2023 at 1400 UTC

## Type of Contingency

Communication     Facility     Surveillance     Staffing     Other

## Detail

Hurricane Charlie has passed over Jamaica and is approaching the Yucatan peninsula. The Hurricane is expected to make landfall within the next 24 hours near Cancun

## Traffic Management measures

Miles-in-trail (MIT)     Minutes-in-trail (MINIT)     Re-routing  
 Fix Balancing     Level Capping     Tunnelling  
 Airborne Holding     Ground Delay Program (GDP)     Ground Stop (GS)

## Detail

Expect miles-in-trail, minutes-in-trail to select airports and tactical reroutes in the Kingston and Mexico FIR due to the track of Hurricane Charlie.

## FIRs Affected

TTZP     TJZS     SVZM     TNCF     MDSC  
 MTEG     KZMA     KZWY     KZHU     MUFH  
 MKJK     MMFR     MHCC     MPZL     SKEC  
 SKED     SARR     SACF     SAEF     SAVF

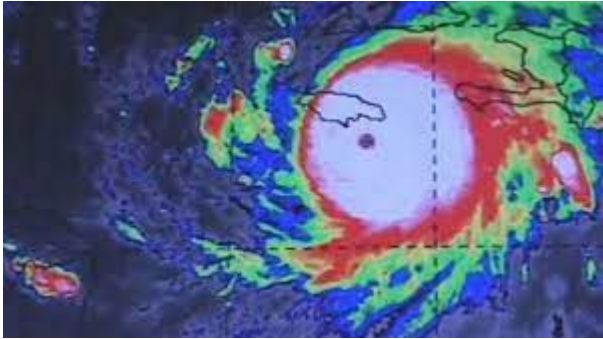




# Hurricane Charlie

## WEATHER OVERVIEW

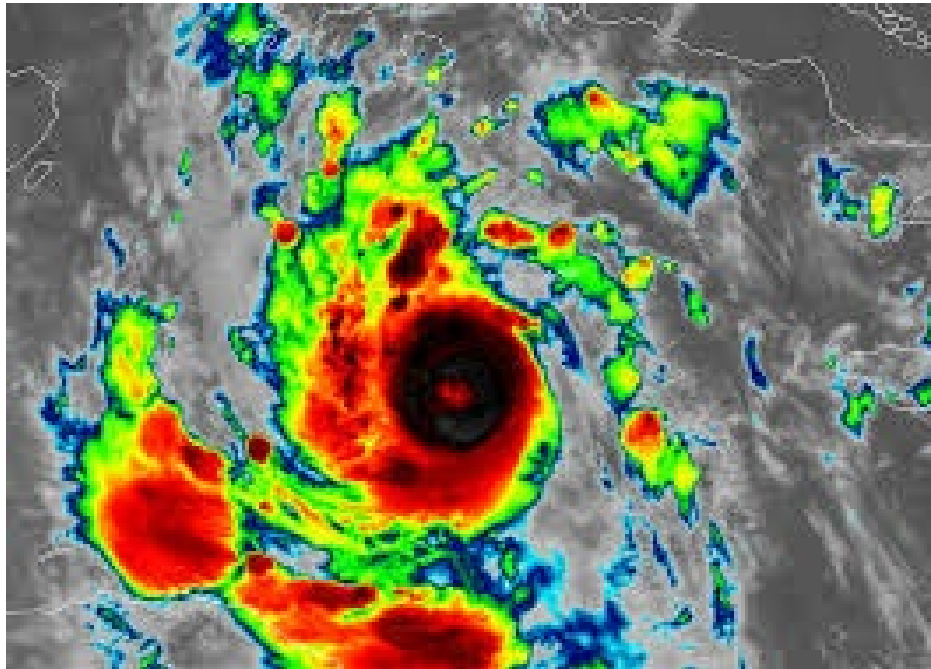
### Damage is reported in Kingston



# Hurricane Charlie

## WEATHER OVERVIEW

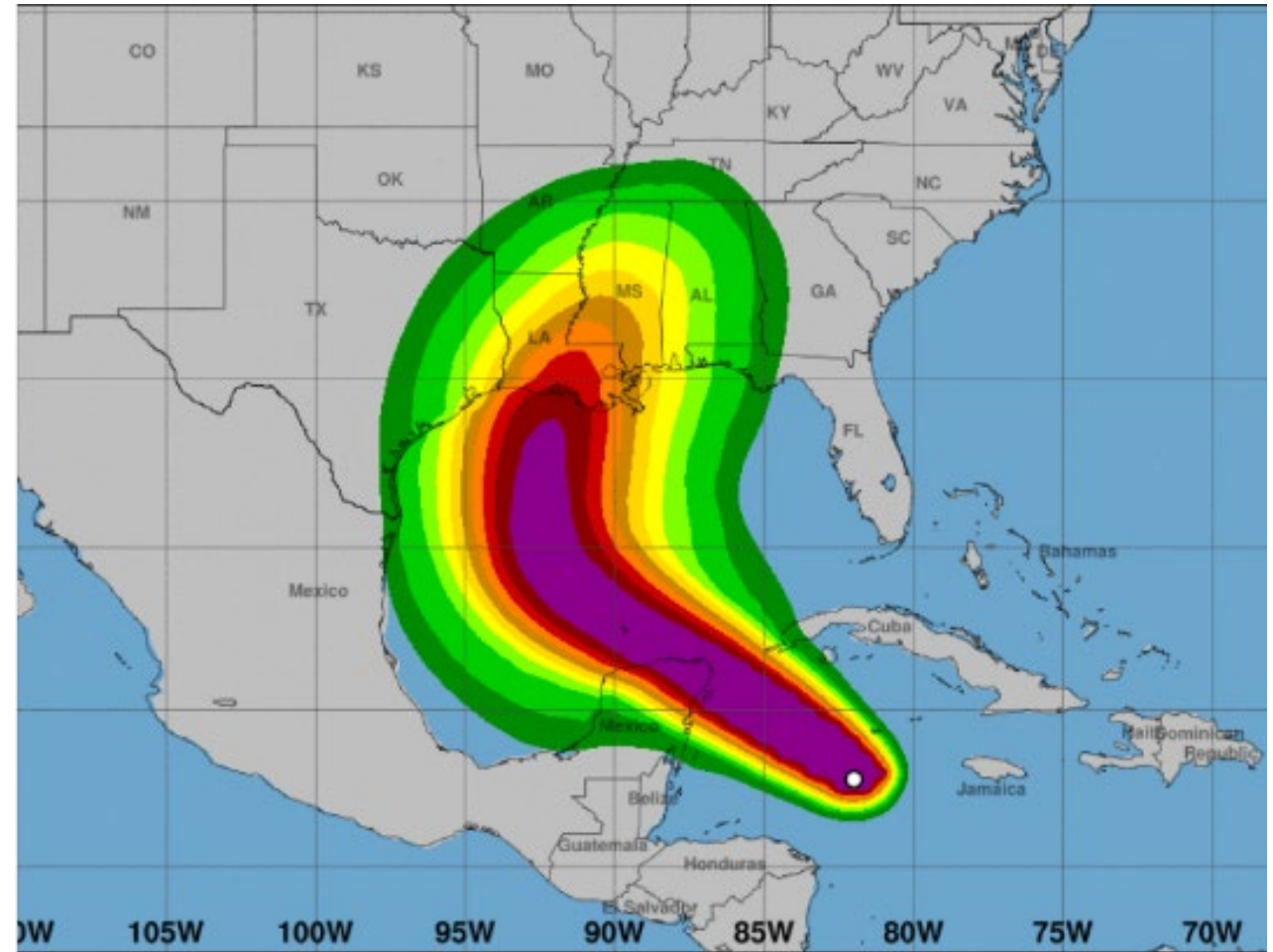
The hurricane is approaching Cancun



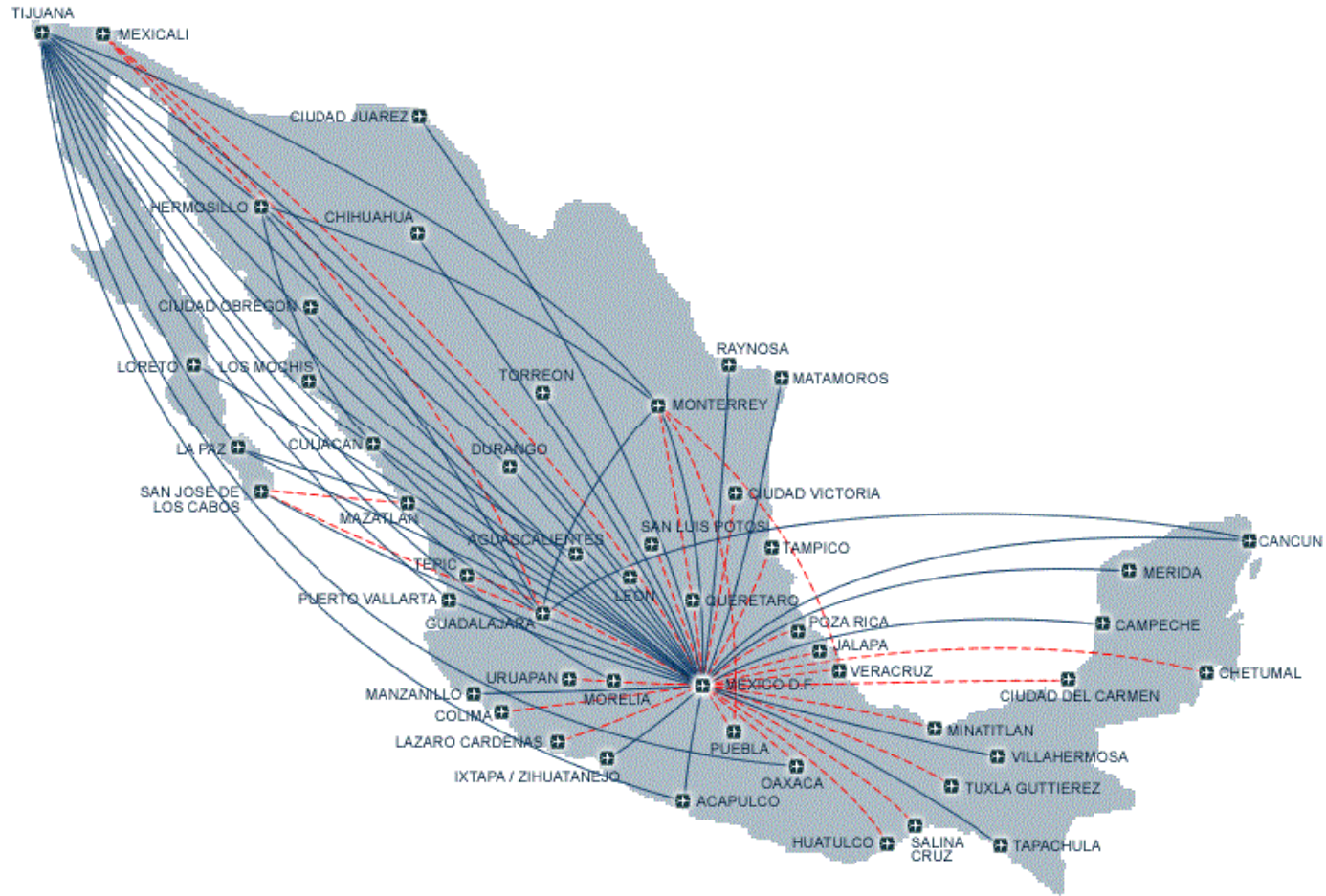
# Hurricane Charlie

## WEATHER OVERVIEW

### Expected Track



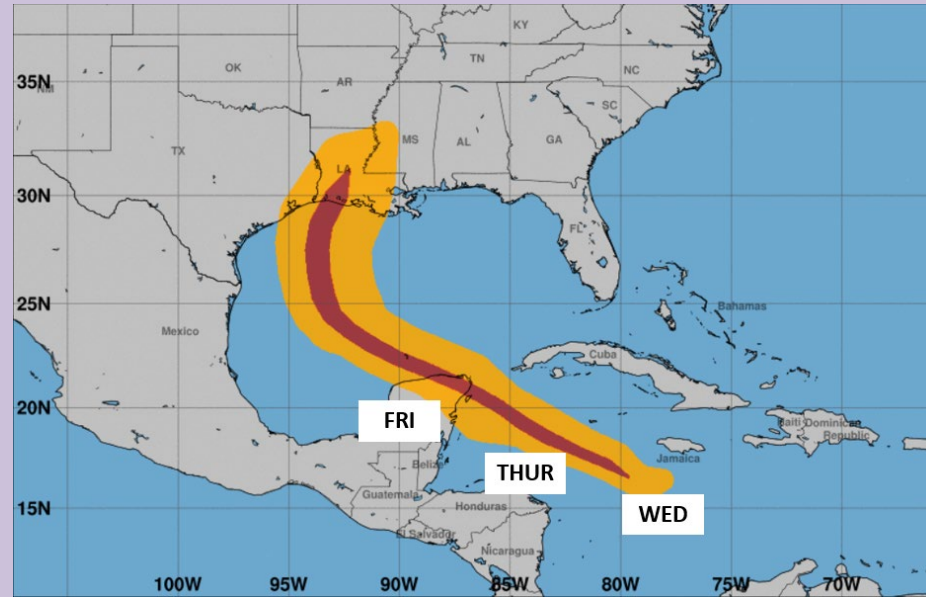
# CADENA



# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## SENEAM

### PROJECTED PATH IN YOUR AIRSPACE



# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## SENEAM

### ZOOM TABLE

#### CANCUN INTERNATIONAL AIRPORT EMERGENCY PLAN

Promedio de Escalas	detección o más de 72	72 a 60 horas	60 a 48 horas	48 a 36 horas	36 a 24 horas	24 a 18 horas	18 a 12 horas	12 a 6 horas	menos de 6 horas
0 a 0.99	Blue	Green	Green	Green	Yellow	Yellow	Orange	Orange	Red
1 a 1.99	Blue	Green	Green	Yellow	Yellow	Orange	Orange	Orange	Red
2 a 2.99	Blue	Green	Yellow	Yellow	Orange	Orange	Orange	Orange	Red
3 a 3.99	Blue	Green	Yellow	Yellow	Orange	Orange	Orange	Orange	Red
4 a 4.99	Blue	Green	Yellow	Yellow	Orange	Orange	Orange	Orange	Red
5	Blue	Green	Yellow	Yellow	Orange	Orange	Orange	Orange	Red

#### Tabla de Alejamiento / Parte trasera del ciclón

Promedio de Escalas	0 a 100 km	100 a 150 km	150 a 200 km	200 a 250 km	250 a 300 km	300 a 350 km	350 a 400 km	400 a 500 km	500 a 750 km	mayor a 750 km
0 a 0.99	Red	Orange	Orange	Yellow	Yellow	Yellow	Green	Green	Green	Blue
1 a 1.99	Red	Orange	Orange	Yellow	Yellow	Yellow	Green	Green	Green	Blue
2 a 2.99	Red	Orange	Orange	Yellow	Yellow	Yellow	Green	Green	Green	Blue
3 a 3.99	Red	Orange	Orange	Yellow	Yellow	Yellow	Green	Green	Green	Blue
4 a 4.99	Red	Orange	Orange	Yellow	Yellow	Yellow	Green	Green	Green	Blue
5	Red	Orange	Orange	Yellow	Yellow	Yellow	Green	Green	Green	Blue

# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## SENEAM

ALERT LEVEL
CANCUN INTERNATIONAL AIRPORT EMERGENCY PLAN
<ul style="list-style-type: none"><li>• <b>BLUE ALERT:</b> 72 HOURS BEFORE. MINIMUM DANGER. BULLETINS EVERY 24 HOURS.</li><li>• <b>GREEN ALERT:</b> BETWEEN 72 &amp; HOURS. LOW DANGER. BULLETINS EVERY 12 HOURS.</li><li>• <b>YELLOW ALERT:</b> BETWEEN 60 &amp; 12 HOURS. MODERATE DANGER. BULLETINS EVERY 6 HOURS.</li><li>• <b>ORANGE ALERT:</b> 36 &amp; 6 HOURS. HIGH DANGER. BULLETINS EVERY 3 HOURS.</li><li>• <b>RED ALERT:</b> LESS THAN 18 HOURS. MAXIMUM DANGER. BULLETINS EVERY 3 HOURS.</li></ul>

# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## SENEAM

### PROJECTED IMPACT

#### DAY 1: THU (24 HOURS)

CONTACT SENEAM HEADQUARTERS

CHECK STAFF INTERNAL PROCEDURES

PREPARE STAFFING TEAMS

VERIFY SUPPLY OF EMERGENCY PLANTS

CHECK NAVAIDS & EQUIPMENT PROTECTION PROTOCOLS



# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## SENEAM

### PROJECTED IMPACT

DAY 2: FRI 0800 UTC

AIRPORT CLOSURE IS DECLARED

NAVAIDS & EQUIPMENT MUST BE CLOSED

EVACUATE SENEAM STAFF

KEEP FUEL SUPPLY TO RESTART OPERATIONS

ADVISE SENEAM HEADQUARTERS

STAY COMMUNICATED WITH LOCAL AIRPORT SECURITY COMMITTEE



# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## SENEAM

### AIRPORT OPENING

#### DAY 2: FRI AFTER IMPACT

CONTACT AIRPORT AUTHORITIES & AIRPORT ADMINISTRATOR TO ASSESS  
DAMAGE AND ESTIMATE OPERATION TIME

THE EMERGENCY LEVEL SHOULD NOT BE REDUCED AS LONG AS  
OPERATIONS ARE NOT NORMALIZED

# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## SENEAM

**AIRPORT OPENING**

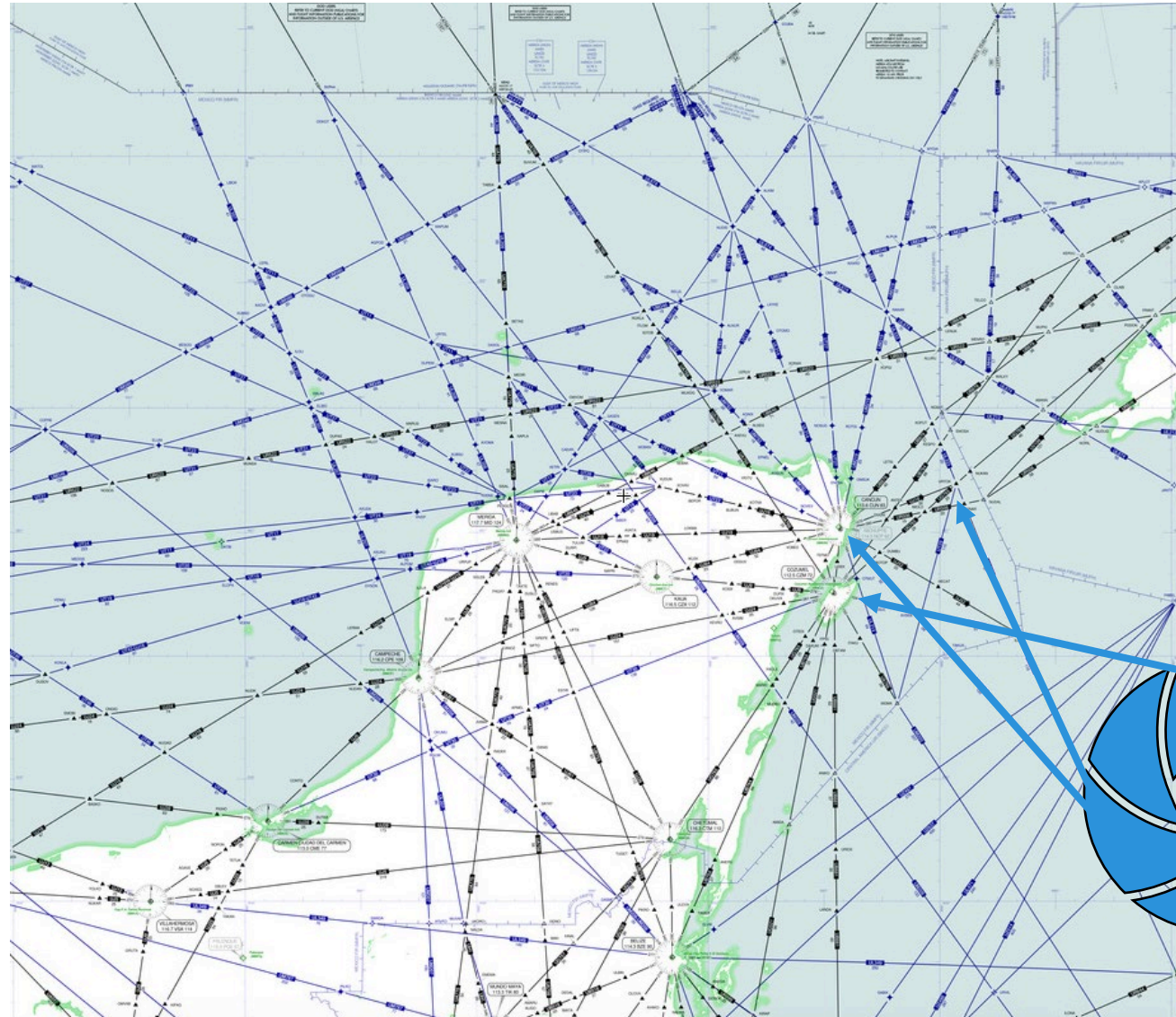
**DAY 2: FRI 1900 UTC**

WHEN AFAC & ASUR REPORT AIRPORT OPERATIVE  
MMUN WILL RESTART OPERATIONS

# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## SENEAM

IMPACTED ROUTES  
DAY 1 THU

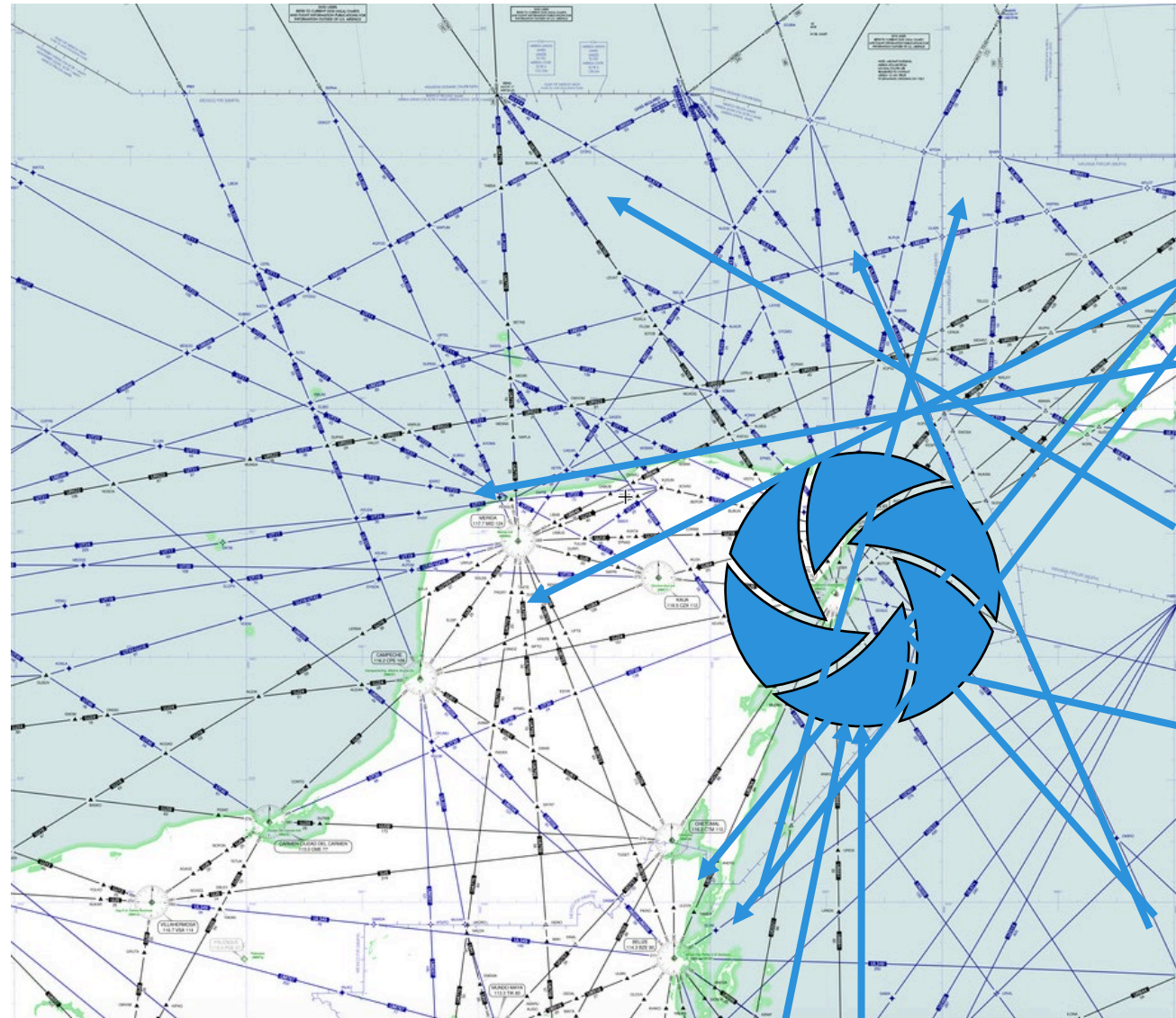


**UL333**  
**UL577**  
**UM782**

# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## SENEAM

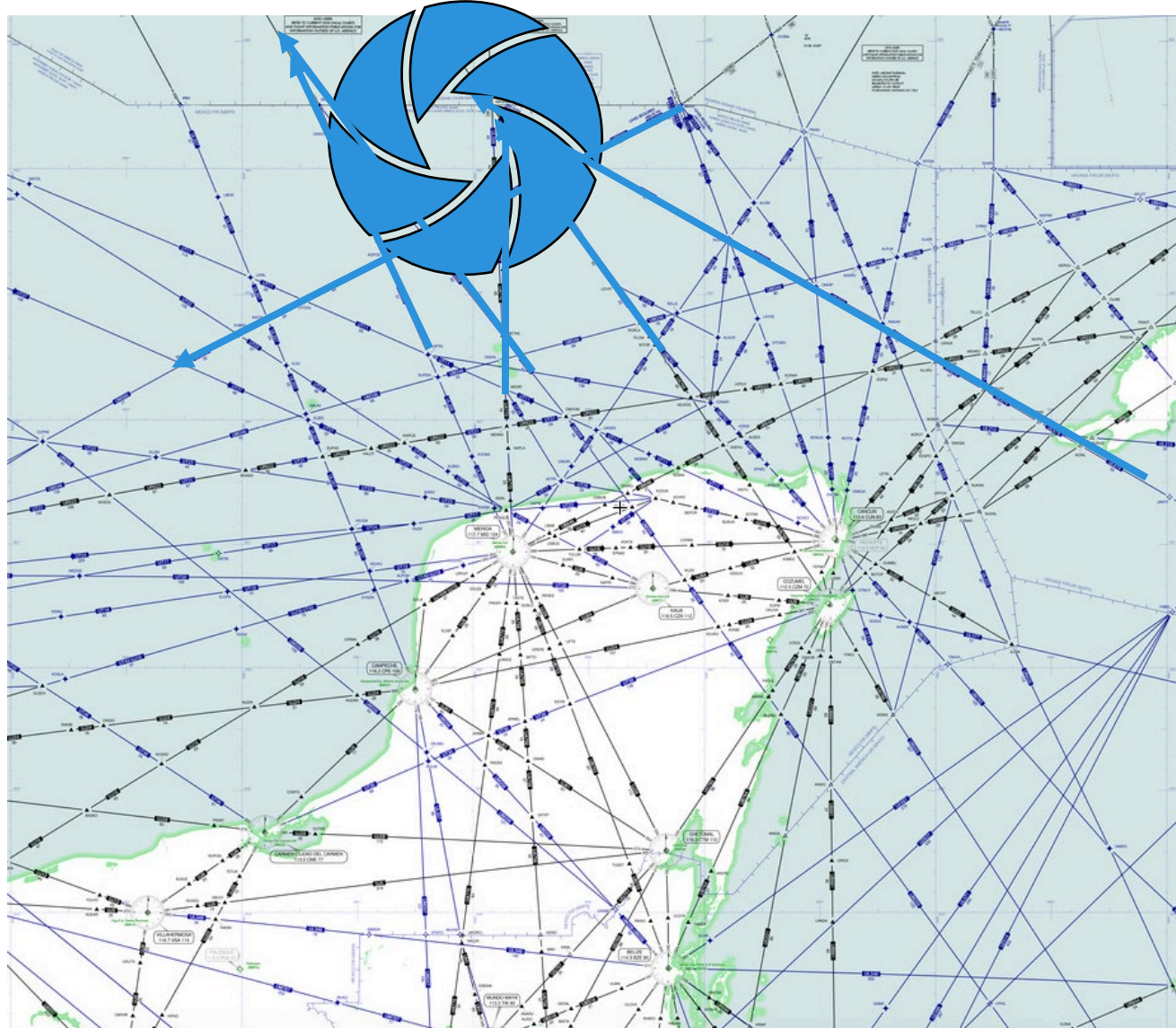
IMPACTED ROUTES  
DAY 2 FRI



- UL333
- UL577
- UM782
- UB646
- UR522
- UG521
- UG765
- UB881
- UL674
- UM219

# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## SENEAM



**IMPACTED ROUTES  
DAY 3 SAT**

- UL674
- UA766
- UA770
- UM209
- UL208
- UL207
- UM580



**SENEAM**

**PLANNED TRAFFIC MANAGEMENT MEASURES**

- 20 MIT TO MMUN ALL DAYS
- NO TRAFFIC VIA KEHLI A766/UM782/UT35 DEST MMUN
- OTHER POSSIBLE TMM AFTER MMUN AIRPORT STATUS REPORT (AFP, IN EXAMPLE)

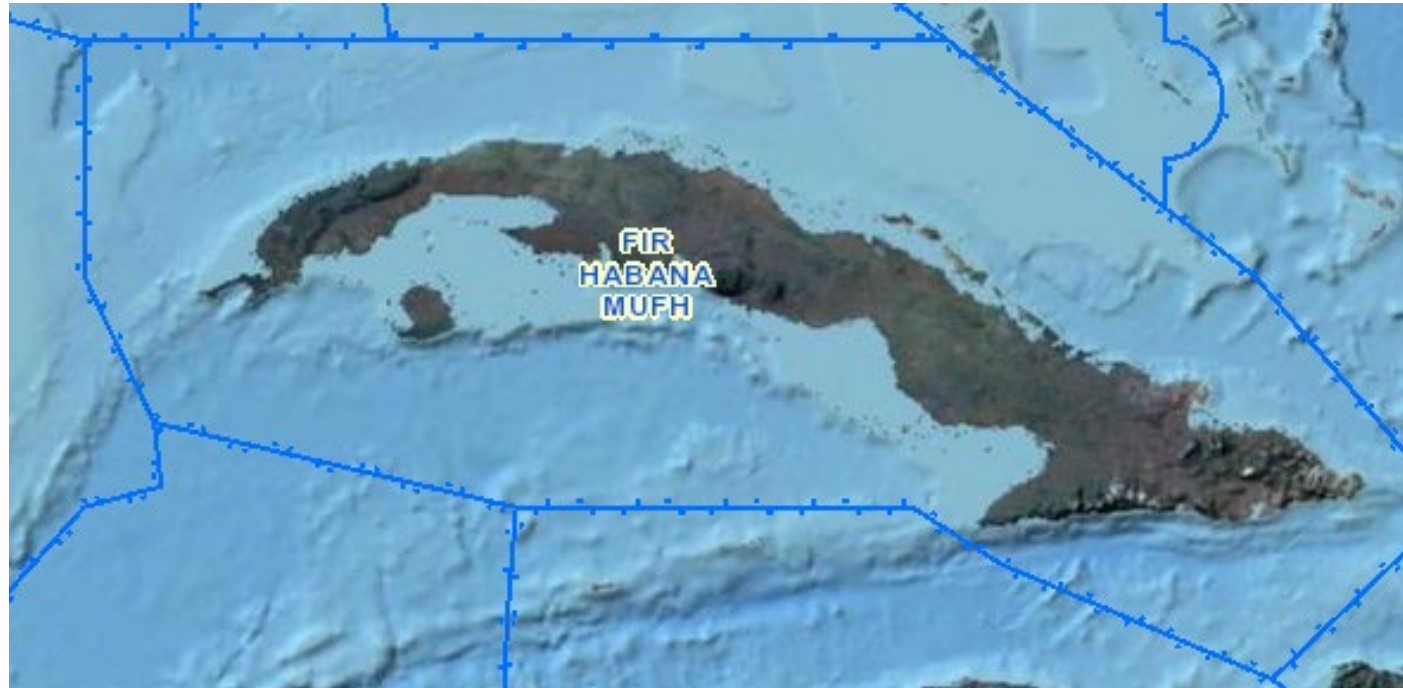
## SENEAM

### OTHER ISSUES

- Humanitarian Flights coordinated via AFAC
- MMMD Main alternate airport for MMUN & MMCZ
- On day 1 big GENAV movement to MMMD
- SENEAM does not close airways, it is up to AFAC to rule over this determination, and to airlines to file best suitable route if needed



# CADENA



### HURRICANE CHARLIE UPDATE – 1400 UTC – March 29<sup>th</sup>, 2023



### HURRICANE CHARLIE UPDATE – 1400 UTC – March 29<sup>th</sup>, 2023



#### HURRICANE CHARLIE NOTICE NO.15 MARCH 29<sup>th</sup>, 2023 1100 UTC

CHARLIE is located at 0900 UTC on Lat 18.8N and Long 80.9W. This position places it 40nm (65km) East of Grand Cayman, and 440nm (710km) E of Tulum, Mexico. CHARLIE is forecast to maintain its hurricane category later today. CHARLIE moves near W (280 degrees) at the rate of 14kt (26km / h). A general motion towards W / WNW is expected during the next few days. On the forecast track, CHARLIE's core is away from the W coast of Jamaica. It is forecast to move near or over the Cayman islands this morning and then approach the Yucatan peninsula in Mexico tonight or early on Friday. Maximum winds are in the order of 65kt (121km / h) with higher gusts. Hurricane force winds extend up to 115nm (185km) from the center. The estimated minimum pressure is 980hpa (735.06mm). Tropical storm conditions influence the south of the FIR and along the south coast of Cuba today and early on Thursday.



### HURRICANE CHARLIE UPDATE – 1400 UTC – March 29<sup>th</sup>, 2023



#### PROJECTED IMPACT

##### DAY 1

AIRPORT CLOSING: NONE  
STAFFING ISSUES: NONE  
EQUIPMENT OUTAGES: NIL

##### DAY 2

AIRPORT CLOSING: NONE  
STAFFING ISSUES: NONE  
EQUIPMENT OUTAGES: NIL


##### WHEN APPLICABLE

AIRPORT RE-OPENING: DOES NOT PROCEED



HURRICANE CHARLIE UPDATE – 1400 UTC – March 29<sup>th</sup>, 2023



IMPACTED ROUTES	PLANNED TRAFFIC MANAGEMENT MEASURES
LATERAL DEVIATIONS ON: ➤ A899/UM779 ➤ G430/UP406 ➤ M/UM221 ➤ UL780 ➤ R/UR644 ➤ R630/UM330 ➤ M/UM335 ➤ G/UG877 ➤ G/UG448 ➤ M/UM328 ➤ UL345	• TO BE TACTICALLY TAKEN DEPENDING ON CHARLIE'S TRAJECTORY. 



HURRICANE CHARLIE UPDATE – 1400 UTC – March 29<sup>th</sup>, 2023



HURRICANE CHARLIE UPDATE – 1400 UTC – March 29<sup>th</sup>, 2023



OTHER ISSUES

ECNA WILL KEEP OBSERVING THE EVOLUTION AND TRACK OF HURRICANE "CHARLIE".  
 THE TACTICAL MEASURES TO PUT INTO PRACTICE IN THE COMING DAYS WILL DEPEND ON CHARLIE'S POSITION AND DEVELOPMENT.



# CADENA



## HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

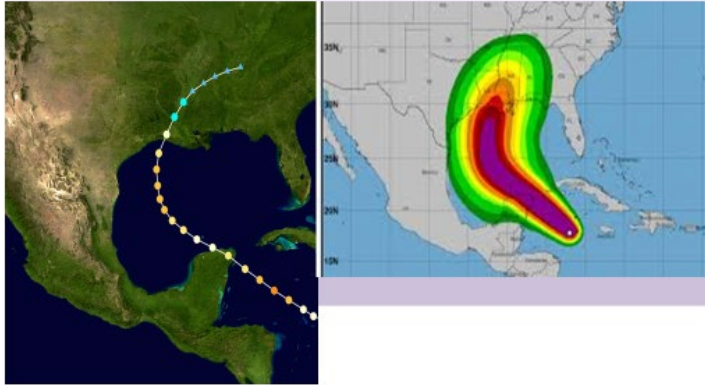




### JRRICANE CHARLIE UPDATE – 1400 UTC – March 29, 2023

### JCAA

#### PROJECTED PATH



### HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

### JCAA

#### PROJECTED IMPACT

AERODROME	CLOSURE DATE	STAFF ISSUES	EQUIPMENT OUTAGES	REOPEN DATE (EST)	STATUS
MKJP	03/28/23	STBY STAFF AVAILABLE	PAPIS, ILS OTS & VOR/DME OTS. RWY DEBRIS	04/02/23	CLOSED
MKJS	03/29/23	EM. STAFF AVAILABLE	NONE	03/30/23	CLOSED EXCEPT H. FLIGHTS
MKBS	03/29/23	NONE	NONE	03/30/23	CLOSED
MWCR	03/29/23	NONE	NONE	03/30/23	CLOSED
MWCB	03/29/23	NONE	GCM VOR/DME US	03/30/23	CLOSED



### HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023



#### IMPACTED ROUTES

- ROUTES WITHIN THE WEST SECTOR & SOME SECTIONS OF THE EAST SECTOR OF THE KFIR IMPACTED. EASTERLY DEVIATIONS ANTICIPATED.

- ✓ UM335
- ✓ UL465
- ✓ UR644
- ✓ UM330
- ✓ UG877
- ✓ UG448
- ✓ UG633
- ✓ UP536
- ✓ UM782

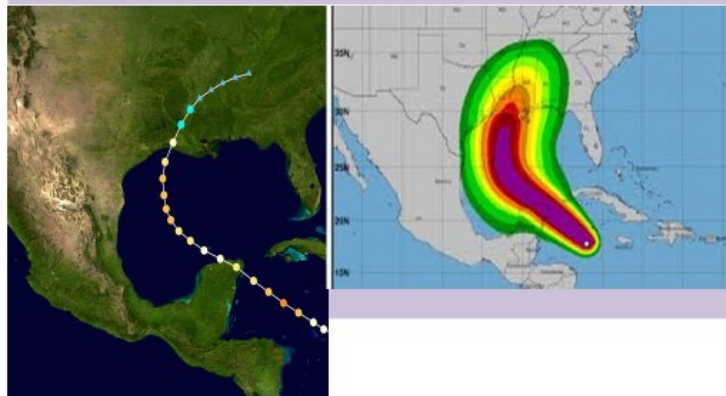




# HURRICANE CHARLIE UPDATE – 1400 UTC – March 29, 2023

## JCAA

### PROJECTED PATH



# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

## JCAA

### PROJECTED IMPACT

AERODROME	CLOSURE DATE	STAFF ISSUES	EQUIPMENT OUTAGES	REOPEN DATE (EST)	STATUS
MKJP	03/28/23	STBY STAFF AVAILABLE	PAPIS, ILS OTS & VOR/DME OTS. RWY DEBRIS	04/02/23	CLOSED
MKJS	03/29/23	EM. STAFF AVAILABLE	NONE	03/30/23	CLOSED EXCEPT H. FLIGHTS
MKBS	03/29/23	NONE	NONE	03/30/23	CLOSED
MWCR	03/29/23	NONE	NONE	03/30/23	CLOSED
MWCB	03/29/23	NONE	GCM VOR/DME US	03/30/23	CLOSED



# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023



### IMPACTED ROUTES

- ROUTES WITHIN THE WEST SECTOR & SOME SECTIONS OF THE EAST SECTOR OF THE KFIR IMPACTED. EASTERLY DEVIATIONS ANTICIPATED.

- ✓ UM335
- ✓ UL465
- ✓ UR644
- ✓ UM330
- ✓ UG877
- ✓ UG448
- ✓ UG633
- ✓ UP536
- ✓ UM782





### HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

#### JCAA

##### PLANNED TRAFFIC MANAGEMENT MEASURES (MAR /29/23-MAR/31/23)

##### REROUTE

- WEST SECT. TFC REROUTED TO EAST SECTOR
- NBND TFC (NIBEO UM221 COLBY) &
- SBND TFC (PUTUL UP406->SIA->HANCK UL347 KASOR).

##### MITs

- 40NM BTW TFC AT DIFF. LVLs, SIM. RTE
- 80NM BTW TFC AT SIM. LVLs, SIM. RTE

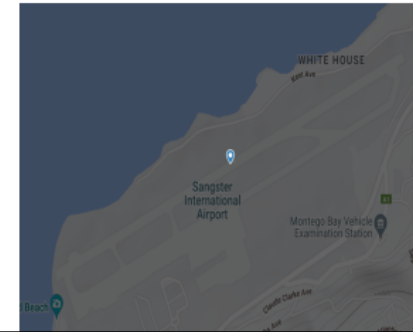
##### IMPACTED NEIGHBORING ANSPs

- HAVANA, CENAMER & NORTHERN SECTION OF PANAMA impacted.



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- MKJS OPEN BUT ONLY TO H.FLIGHTS
- 10 PARKING RAMP SLOTS AVBL
- MAX 3 WIDE BODIES CAN ACCOMODATED AT A TIME
- MBJ (AIRPORT OPERATORS), ODPEM & JDF ARE RESPONSIBLE FOR COORDINATING THESE FLIGHTS.
- KATCC & MKJS TWR RESPONSIBLE FOR PROVIDING ATS.
- THE AIRPORT AUTHORITY (MBJ) WILL ENSURE THAT THE RAMP SPACE IS UTILIZED EFFICIENTLY TO MAXIMIZE THE RELIEF EFFORTS.



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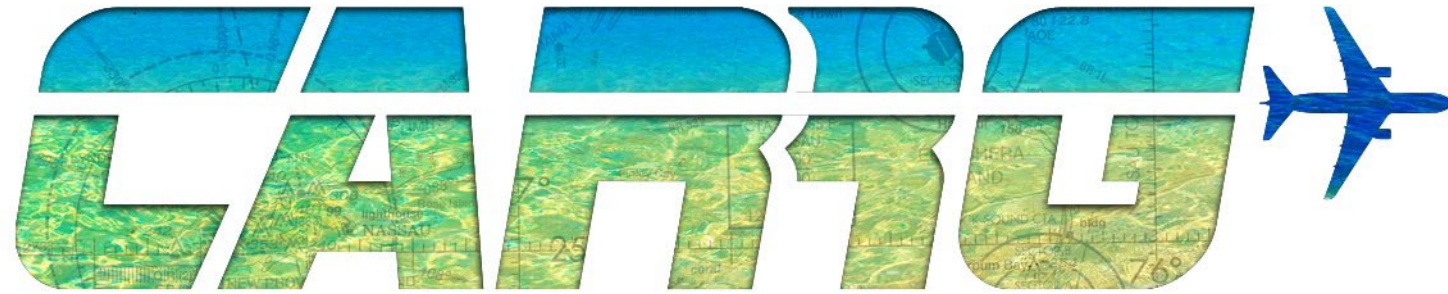
#### JCAA

##### OTHER ISSUES

- ROADWAY (PALISADOES) LEADING TO NORMAN MANLEY AIRPORT SEVERLY IMPACTED BY STORM SURGE WHICH IS HAMPERING RESTORATION EFFORTS
- LIMITED ELECTRICITY EASTERN & SOUTHERN SECTION OF THE ISLAND
- MANLEY RADAR OTS.



# HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023



*Caribbean Aviation Resilience and Recovery Group*






# CARRG

- CARRG will coordinate and share any communication on the civil-aviation situation with CADENA
- FAA CARRG members will channel any request received for support from any external organizations to the appropriate FAA/USG office
- FAA Office of International Affairs will share any information on major humanitarian shipments from USAID/US humanitarian groups with CADENA for possible prioritized routing
  - ✓ Relay information on airport operating status/share information from CADENA with US humanitarian organizations


# ANSP/Stakeholder Feedback


After the exercise, ANSPs and Stakeholders are given an opportunity to provide feedback and ask questions.

**CADENA** 


Stakeholder comments / questions

Airlines  
IATA  
ALTA  
ACI



**CADENA** 

Any additional comments or questions?



# Partial List of Actual CADENA Hurricane/Tropical Storm Web Conferences

- September 4, 2017 – Hurricane Irma
- September 16, 2017 – Hurricane Maria
- June 10, 2018 – Tropical Storm Bud
- September 14, 2018 – Hurricane Isaac
- September 27, 2018 – Tropical Storm Kirk
- October 8, 2018 – Hurricane Michael
- October 8, 2018 – Hurricane Sergio
- August 26, 2019 – Tropical Storm Dorian
- September 20, 2019 – Hurricane Gerry
- September 22, 2019 – Tropical Storm Karen
- June 1, 2020 – Tropical Storm Amanda
- June 2, 2020 – Tropical Storm Cristobal
- July 31, 2020 – Hurricane Isaias
- May 23, 2021 – Tropical Storm Ana
- June 29, 2021 – Tropical Storm Enrique
- July 2, 2021 – Hurricane Elsa
- August 15, 2021 – Hurricane Grace
- September 16, 2022 – Tropical Storm Fiona
- September 26, 2022 – Hurricane Ian
- October 9, 2022 – Hurricane Julia





# QUESTIONS AND ANSWERS

**Thank you!**

**¡Gracias!**