

## IMPACTS OF SEVERE WEATHER ON TRINIDAD AND TOBAGO

Shakeer Baig Director Trinidad and Tobago Meteorological Service



## **INTRODUCTION**

Different categories of extreme events produced adverse impacts on Trinidad and Tobago.

This presentation highlights impactful weather in 2022 from:

- Tropical Cyclonic Systems
- Active Tropical Wave Activity
- Localized Convergence on the western coasts of the islands
- Inter-Tropical Convergence Zone



# POTENTIAL TROPICAL CYCLONE 2 JUNE 2022





## ACTIVE TW STATEMENT ISSUED ON 26<sup>th</sup> JUNE 2022

OFFICIAL STATEMENT #1 Active Tropical Wave

Date: Sunday 26th of June 2022 Issuance Time: 08:48:29 AM

The Trinidad and Tobago Meteorological Service (TTMS) has been monitoring the progress of a strong Tropical Wave in the Atlantic, which has the potential for cyclone development over the next few days.

At 8:05am today (Sunday 26 June, 2022), the tropical wave is located in the central Atlantic. Its axis is along 40W/41W, south of 16N. It is moving westward at 28km/h. A weak cyclonic circulation is along the wave axis near 08N41W. Convection of the numerous moderate to strong type increased during the overnight hours. Environmental conditions appear conducive for further development, and a tropical depression is likely to form during the early to middle part of the upcoming week.

This system is forecast to continue on a westward track over the tropical Atlantic, approaching the Windward Islands on Tuesday then move across the south-eastern Caribbean Sea on Wednesday and Thursday. Interests in the Windward Islands should closely monitor the progress of this system. The chance of tropical cyclone formation is medium (40%) during the next 48hours, but high (70%) over the next 5 days (refer to Figure 1).

Regardless of intensifcation or development of the system significant moisture and peripheral instability will bring heavy rainfall and gusty winds to Trinidad and Tobago and the Windward Islands from Tuesday night into Wednesday morning.

There are no watches or warnings in effect at this time.

The TTMS will continue to closely monitor this system and will issue an update at 6:00 pm today (26 June, 2022) or earlier if the situation warrants. As always, pay close attention to information being issued by the TTMS by visiting www.metoffice.gov.tt, downloading our mobile app (search: TT Met Office) and following us on Twitter, Facebook and Instagram.





## TW ATTAINS STATUS OF POTENTIAL CYCLONE #2 JUNE 27<sup>TH</sup> TRIGGERS TROPICAL STORM WARNING IN T & T

PTC 2 was initially expected to cross the southernmost Lesser Antilles on the 29<sup>th</sup> (Wednesday) as a TD or weak TS.

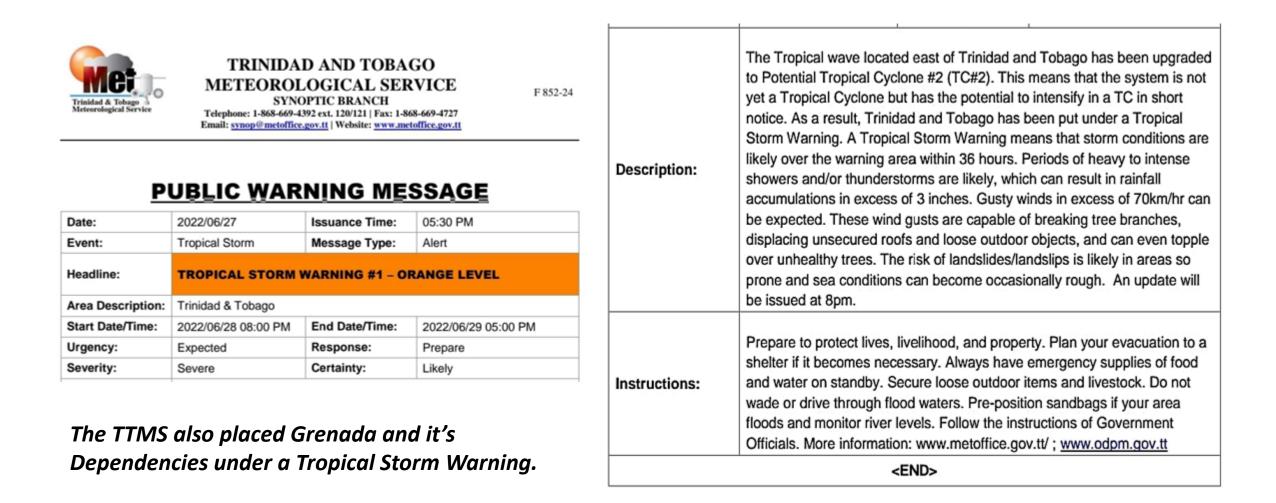
On the 27<sup>th</sup> (Monday) max sustained winds were 34kt but located at about 720 miles east of Trinidad but it lacked a closed low-level circulation to enable classification as a tropical cyclone.

NHC's forecast was that PTC 2 would develop into a Tropical Storm on Tuesday 28<sup>th</sup> June,





## **TROPICAL STORM WARNING #1**





## PTC2 – IMPACTS - TRINIDAD

The usually shallow and lazy river running through the north coast village of Grande Riviere, became a raging torrent late Wednesday because of the rainfall in the mountains.



## Update June 29, 8:30 am:

The Trinidad and Tobago Electricity Commission (T&TEC) said there are still some areas undergoing repairs as of Wednesday morning, following the passage of weather system Potential Tropical Cyclone #2.

This is to advise that as at 6:00 AM we have approximately five areas out across the country. These reports would have come in after our final update at 11:00 PM last night. The areas are Williamsville, Orange Hill and Studley Park in Tobago, Sangre Chiquito and Mt Dor. Crews are responding to those reports at this time.



## <u>PTC2 – IMPACTS - TOBAGO</u>

Update June 29, 8:30 am: The Trinidad and Tobago Electricity Commission (T&TEC) said there are still some areas undergoing repairs as of Wednesday morning, following the passage of weather system Potential Tropical Cyclone #2 The area with the most activity overnight was Tobago, with seven area outages."









# ACTIVE TROPICAL WAVE INVEST 91L OCT 5<sup>th</sup> – 8<sup>th</sup> 2022





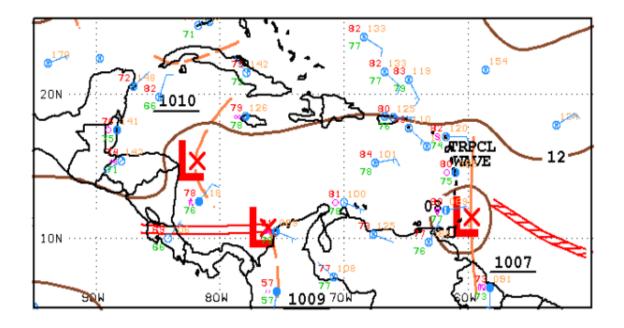
## ACTIVE TROPICAL WAVE 5<sup>TH</sup> OCTOBER (INVEST 91L)

On 5th October the TW and associated 1007mb low was located near 100 km east of Trinidad and Tobago.

Movement was westwards at 12kt.

Satellite imagery showed deep convective clusters.

There was significant strong thunderstorm activity and accompanying lightning over both Trinidad and Tobago.



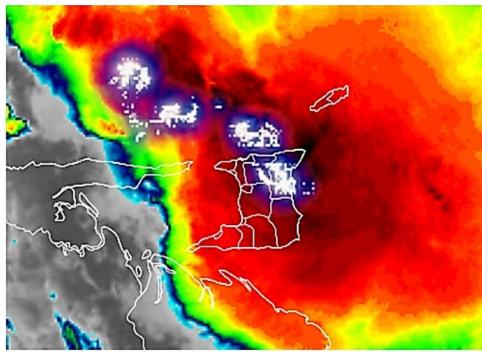


OGZ CARIBBEAN SURFACE ANALYSIS ISSUED: Wed Oct 5 08:36:05 UTC 2022

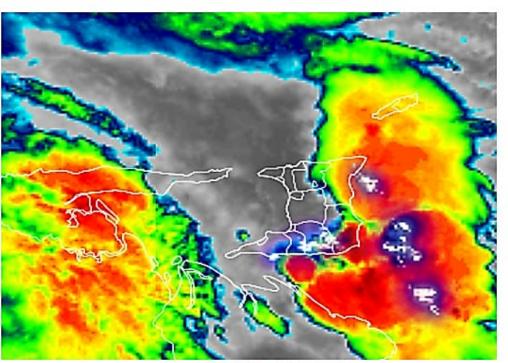
NATIONAL HURRICANE CENTER MIAMI, FLORIDA BY TAFB ANALYST: PC COLLABORATING CENTERS: NHC OPC



## ACTIVE TROPICAL (INVEST 91L) WAVE 5<sup>TH</sup> OCTOBER 2022



2022-10-05 13:30:20 UTC



2022-10-06 08:10:20 UTC



## ACTIVE TROPICAL WAVE 5<sup>TH</sup> (INVEST 91L) to 8<sup>th</sup> OCTOBER 2022 EARLY PUBLIC ADVISORIES FROM THE 2<sup>nd</sup> OCTOBER 2022







TRINIDAD AND TOBAGO METEOROLOGICAL SERVICE SWNOPTICERANCH Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727 Email: synopgemetoffice.gov.tt Website: www.metoffice.gov.tt

F 852-24

#### PUBLIC WARNING MESSAGE



| GREEN          | YELLOW             | ORANGE                   | RED                   |
|----------------|--------------------|--------------------------|-----------------------|
| Take no action | Monitor conditions | Secure yourself/property | Take shelter/evacuate |

| Event:     Flood     Meer@Price     Alert       Headline:     RIVERINGELOOD ALERT #1     VELION Column       Area Dectription:     Water courses of Trinidad, including the Dot Coropouche, Caroni and South<br>Oropouche. Water courses in Solige Undurement to Corols and Darrell spring rivers.       Start Date Time:     2022/20/06/0734U       End Date/Time:     2022/10/07/05:00 PM       Expecter     Response:     Monitor       Severity:     Moderate     Certainty:     Likely       Description:     After today's rainfail event, river levels of the major watercourses across Trinidad continue to<br>rise and are currently near 80% capacity. Weather conditions have since settled, however<br>occasional periods of heavy showers are likely. This additional rainfail, in combination with<br>spring tides, can keep the river levels elevated, so there remains a moderate risk to public  | Trinklini & Tohrgo<br>Michorological Scruce | TRINIDAD AND TOBAGO<br>METEOROLOGICAL SERVICE<br>SYNOPTIC BRANCH<br>Telephone: 1-868-669-4392 ext. 120/121   Fax: 1-868-669-4727<br>Email: synop@metoffic.ego.vt. Website: www.metoffic.ego.vt. Website: Website: www.metoffic.ego.vt. Website: www.metoffic.ego.v |                |                     |  |
|---|---|--|----------------|---------------------|--|
| Event:       Floor       Memory Net       Alert         Headline:       RIVERING LOOD ALERT #1 VELION CVEL         Area Decription:       More vater courses of Trinidad, including the loor Corpouche, Caroni and South<br>Or opouche. Water courses in SuggOrn during the Crooks and Darrell spring rivers.         Start Date Time:       2022/10/05 G and the Response       Monitor         Generative:       Moderate       Certainty:       Likely         Description:       After today's rainfall event, river levels of the major water courses across Trinidad continue to<br>rise and are currently near 80% capacity. Weather conditions have since settled, however<br>occasional periods of heavy showers are likely. This additional rainfall, in combination with<br>spring tides, can keep the river levels elevated, so there remains a moderate risk to public<br>safety, livelihood and property. Smaller water courses over both Trinidad and Tobago are also<br>elevated and can burst their banks with additional rainfall.         Instructions:       Carefully monitor weather conditions and river/water levels. Monitor updates from official<br>sources and plan safety measures, including emergency supplies of food and water. Do not<br>take unnecessary risks. Follow the instructions of government officials. More information:<br>www.metoffice.gov.tt/; www.odpm.gov.tt |   | PUBLICW  | AFINGAESSA     | 1 Inrt #1           |  |
| Headline:       RIVEPINELCODALERT #1 VELLOV SAL         Area Departulit:       Whor Water courses of Trinidad, including the Job Gropouche, Caroni and South Oropouche. Water courses of Sugedincluent the Crooks and Darrell spring rivers.         Start Date Time:       2022.0.0150 Gradu         Urgency:       Expected         Response:       Monitor         Severity:       Moderate         Certainty:       Likely         Description:       After today's rainfall event, river levels of the major watercourses across Trinidad continue to rise and are currently near 80% capacity. Weather conditions have since settled, however occasional periods of heavy showers are likely. This additional rainfall, in combination with spring tides, can keep the river levels elevated, so there remains a moderate risk to public safety, likelihood and property. Smaller water courses over both Trinidad and Tobago are also elevated and can burst their banks with additional rainfall.         Instructions:       Carefully monitor weather conditions and river/water levels. Monitor updates from official sources and plan safety measures, including emergency supplies of food and water. Do not take unnecessary risks. Follow the instructions of government officials. More information: www.metoffice.gov.tt/; www.odpm.gov.tt   | Date:                                       | 202/10/05  | Issuance Time  | Q5.13 TW            |  |
| Area Decription:       Moor Water courses of Trinidad. Including the Jose Oropouche, Caroni and South Oropouche. Water courses of Delegolinclusing the Crooks and Darrell spring rivers.         Start Dater Time:       2022/20/260 Cl 3 M/L       End Date/ Time:       2022/10/07 05:00 PM         Urgency:       Expected       Response:       Monitor         Severity:       Moderate       Certainty:       Likely         Description:       After today's rainfail event, rive levels of the major water courses across Trinidad continue to rise and are currently near 80% capacity. Weather conditions have since settled, however occasional periods of heavy showers are likely. This additional rainfall, in combination with spring tides, can keep the river levels elevated, so there remains a moderate risk to public safety, livelihood and property. Smaller water courses over both Trinidad and Tobago are also elevated and can burst their banks with additional rainfall.         Instructions:       Carefully monitor weather conditions and river/water levels. Monitor updates from official sources and plan safety measures, including emergency supplies of food and water. Do not take unnecessary risks. Follow the instructions of government officials. More information: www.metoffice.gov.tt/; www.odpm.gov.tt   | Event:                                      | Flood  | Message Type:  | Alert               |  |
| Area Decitivitin:     Or opouche. Water courses in segon during the Crooks and Darrell spring rivers.       Start Date Time:     2022/10/050 @3 AU     End Date/Time:     2022/10/07 05:00 PM       Urgency:     Expecter     Response:     Monitor       Severity:     Moderate     Certainty:     Likely       Description:     After today's rainfall event, river levels of the major water courses across Trinidad continue to rise and are currently near 80% capacity. Weather conditions have since settled, however occasional periods of heavy showers are likely. This additional rainfall, in combination with spring tides, can keep the river levels elevated, so there remains a moderate risk to public safety, livelihood and property. Smaller water courses over both Trinidad and Tobago are also elevated and can burst their banks with additional rainfall.       Instructions:     Carefully monitor weather conditions and river/water levels. Monitor updates from official sources and plan safety measures, including emergency supplies of food and water. Do not take unnecessary risks. Follow the instructions of government officials. More information: www.metoffice.gov.tt/; www.odpm.gov.tt  | Headline:                                   | RIVERINELO   | OD ALERT #1    | FLONGEL             |  |
| Urgency:         Expect         Response:         Monitor           Severity:         Moderate         Certainty:         Likely           Description:         After today's rainfall event, river levels of the major watercourses across Trinidad continue to rise and are currently near 80% capacity. Weather conditions have since settled, however occasional periods of the any showers are likely. This additional rainfall, in combination with spring tides, can keep the river levels elevated, so there remains a moderate risk to public safety, livelihood and property. Smaller water courses over both Trinidad and Tobago are also elevated and can burst their banks with additional rainfall.           Instructions:         Carefully monitor weather conditions and river/water levels. Monitor updates from official sources and plan safety measures, including emergency supplies of food and water. Do not take unnecessary risks. Follow the instructions of government officials. More information: www.metoffice.gov.tt/; www.odpm.gov.tt   | Area Description:                           |  |                |                     |  |
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| Instructions: sources and plan safety measures, including emergency supplies of food and water. Do not take unnecessary risks. Follow the instructions of government officials. More information: www.metoffice.gov.tt/; www.odpm.gov.tt  | Description:                                | occasional periods of heavy showers are likely. This additional rainfall, in combination with<br>spring tides, can keep the river levels elevated, so there remains a moderate risk to public<br>safety, livelihood and property. Smaller water courses over both Trinidad and Tobago are also   |                |                     |  |
| < END >   | Instructions:                               | sources and plan safety measures, including emergency supplies of food and water. Do not take unnecessary risks. Follow the instructions of government officials. More information:  |                |                     |  |
|   |   | 1  | < END >        |                     |  |
|   |   |  |                |                     |  |

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## FLASH AND RIVERINE FLOODS 5<sup>th</sup> & 6<sup>th</sup> OCTOBER 2022

F 852-24

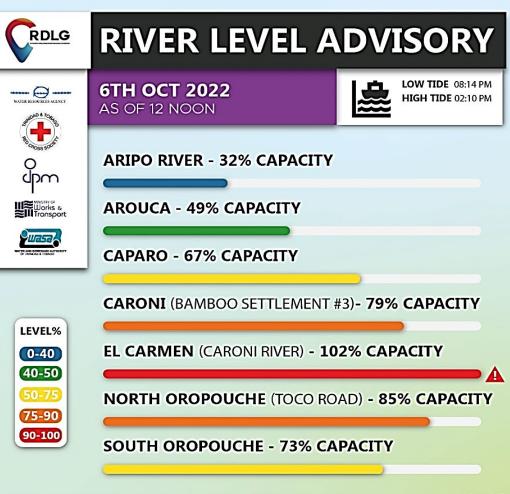


METEOROLOGICAL SERVICE SYN OPTIC BRANCH Telephone: 1-888-689-4392 ext. 120/121 | Fax: 1-868-689-4727 Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

TRINIDAD AND TOBAGO

#### PUBLIC WARNING MESSAGE

| Date:             | 2022/10/08  | Issuance Time:                         | 06:55 AM            |  |  |  |
|-------------------|---|--|---------------------|--|--|--|
| Event:            | Flood   | Message Type:                          | Update              |  |  |  |
| Headline:         | RIVERINEFLOOD   | RIVERINE FLOOD ALERT #2 - ORANGE LEVEL |                     |  |  |  |
| Area Description: | Major watercourses of Trinidad, i<br>Oropouche. Water courses in Tob  |  |                     |  |  |  |
| Start Date/Time:  | 2022/10/05 05:03 PM   | End Date/Time:                         | 2022/10/07 05:00 PM |  |  |  |
| Urgency:          | Immediate   | Response:                              | Prepare             |  |  |  |
| Severity:         | Severe  | Certainty:                             | Observed            |  |  |  |
| Description:      | Continuous rainfall over night has pushed major water courses to critical thresholds and some<br>may be dose to overspilling or already doing so. Periods of heavy showers, rain and<br>thunderstorms are still expected. This additional rainfall, in combination with spring tides, can<br>keep the river levels elevated and there now exists a severe risk to public safety, livelihood<br>and property. Smaller water courses over both Trinidad and Tobago are also elevated and can<br>burst their banks with additional rainfall. |  |                     |  |  |  |
| Instructions:     | Finalize preparations to protect lives, livelihoods, and property. Activate your safety plan.<br>Secure food, water, and medicine for at least 7 days in waterproof containers. Protect<br>important assets and documents. Do not take unnecessary risks. Follow the instructions of<br>government officials. Monitor official sources for information. More information:<br>www.metoffice.gov.tt/; www.odpm.gov.ttv  |  |                     |  |  |  |
| < END >           |   |  |                     |  |  |  |



THE PUBLIC IS ENCOURAGED TO CALL RESPECTIVE CORPORATIONS' DISASTER MANAGEMENT UNITS HOTLINE Report based on latest information generated by Corporations' Disaster Management Units. All reported incidents will be sent to relevant authorities for assessment and 

| GREEN        | YELLOW             | ORANGE                   | RED                   |
|--------------|--------------------|--------------------------|-----------------------|
| Takenoaction | Monitor conditions | Secure yourself/property | Take dhelter/evacuate |



## WIDESPREAD FLOODING 6<sup>th</sup> OCTOBER 2022



Footage of flooding in Trinidad! Invest 91L impacted Trinidad & Tobago with Heavy rain and storms (#worldisdangerous #flooding #Trinidad)



Cheryl-Ann Thomas looks at her Toyota Corolla car which was washed away by raging flood waters at Dunderhill Road, Arouca. Photo by Express photo editor Robert Taylor

## 1 Death Reported - Lopinot Woman Swept Away By Floodwaters





## WIDESPREAD FLOODING 5<sup>th</sup> to 7<sup>th</sup> OCTOBER 2022

https://trinidadexpress.com > News Extra

## Woman swept away by floods in Lopinot - Trinidad Express

5 Oct 2022 — Police are searching for a 44-year-old woman who was **swept away** this afternoon while attempting to cross a ravine.

https://guardian.co.tt > news > arima-man-rescued-after-...

## Arima man rescued after being swept away by flood waters

5 Oct 2022 — Fifty five year **old Drick Narine Pollard** was trying to help his mother secure her belongings when flood waters started to rise along the Arima ...

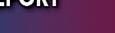
https://floodlist.com > trinidad-floods-october-2022

## Trinidad and Tobago – One Missing After Flash Floods

6 Oct 2022 — Flash flooding struck in the dual-island Caribbean nation of **Trinidad and Tobago** following heavy rain brought by a tropical disturbance.

## **INCIDENT SUMMARY REPORT**

07 OCTOBER, 2022 - 5PM

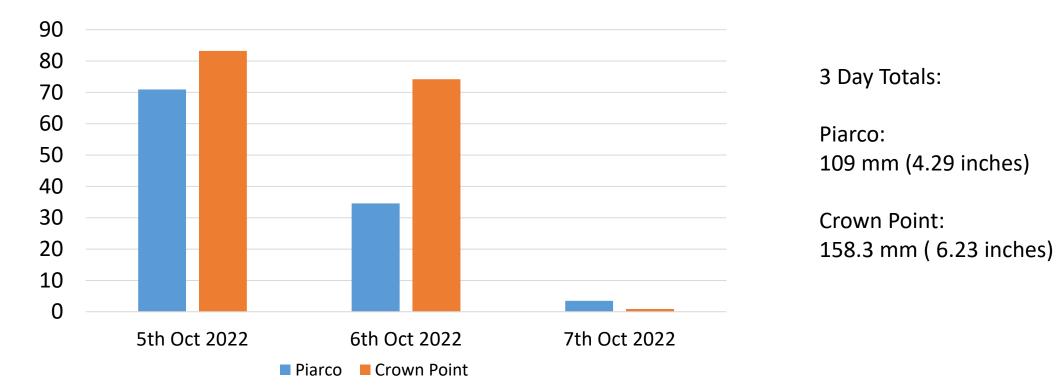






## WIDESPREAD FLOODING 6<sup>th</sup> OCTOBER 2022

Heavy rainfall associated with Invest 91L recorded at Piarco and Crown Point:



Rainfall (mm) 2pm to 2pm



For Trinidad, the Rainfall Index Loss

calculated for the CARE that started

on 5 October and ended on 7

October 2022, produced

government losses which were

above the attachment point of

Trinidad and Tobago's Excess

Rainfall policy for Trinidad. Final

calculations show that a payout of

US\$5,115,781.97 is due.

Covered Area Rainfall Event (CARE) (5/10/2022 to 7/10/2022) Trinidad and Tobago – Trinidad (5/10/2022 to 8/10/2022) Trinidad and Tobago – Tobago Excess Rainfall Event Briefing 13 October 2022 St

For Tobago, the Rainfall Index Loss calculated for the CARE that started on 5 October and ended on 8 October 2022, produced government losses which were also above the attachment point of Trinidad and Tobago's Excess Rainfall policy for Tobago. Final calculations show that a payout of US\$726,932.36 is due.



# DAYTIME HEATING TRIGGERS FLASH FLOODS – OCTOBER 25<sup>th</sup> 2022





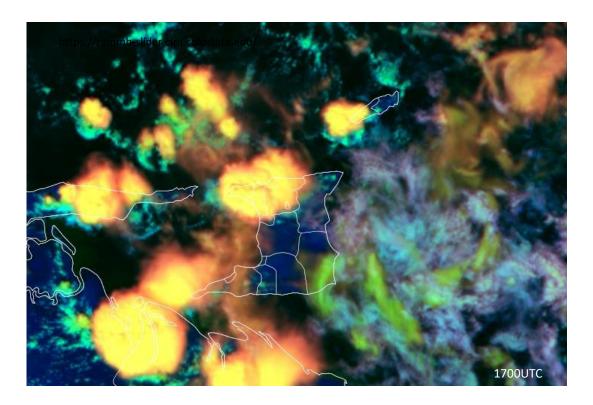
## WEST COAST CONVERGENCE IMPACTFUL WEATHER FROM DIURNAL CONVECTION

DATE : 25<sup>th</sup> October 2022 EVENT: Thunderstorm West Trinidad & Tobago

### METEOROLOGICAL DEVELOPMENT:

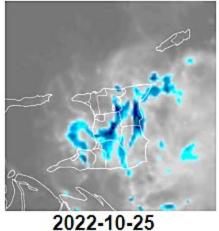
The atmosphere was very moist, but initially stable due to dissipating convection to the east. Strong daytime heating resulted in local effects over both islands.

*Trinidad: 34.5°C Tobago:31.5°C* 

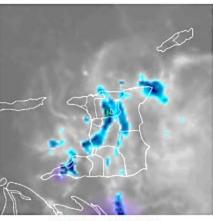




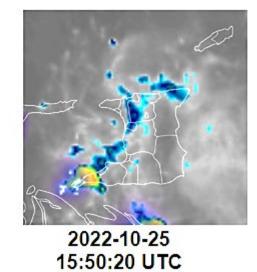
## **CONVECTIVE DEVELOPMENT TIME SERIES WITH GLM OVERLAYS**

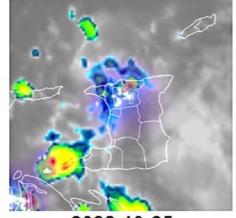


2022-10-25 14:50:20 UTC

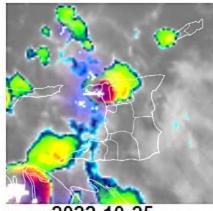


2022-10-25 15:20:20 UTC

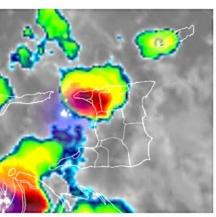




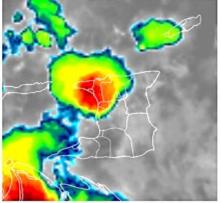
2022-10-25 16:20:20 UTC



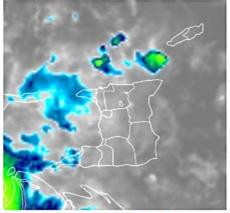
2022-10-25 16:50:20 UTC



2022-10-25 17:20:20 UTC



2022-10-25 17:50:20 UTC



2022-10-25 20:20:20 UTC



## TTMS EARLY WARNING SYSTEM

F 852-24



TRINIDAD AND TOBAGO METEOROLOGICAL SERVICE SYNOPTIC BRANCH Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727 Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

|                   | PUBLIC WARNING MESSAGE   |   |                     |  |  |  |
|-------------------|--|---|---------------------|--|--|--|
| Date:             | 2022/10/25   | 2022/10/25 Issuance Time: 06:21 AM                |                     |  |  |  |
| Event:            | Adverse Weather  | Message Type:                                     | Alert               |  |  |  |
| Headline:         | ADVERSE WEATHER ALERT #1 - YELLOW LEVEL  |   |                     |  |  |  |
| Area Description: | Trinidad and Tobago and surrour  | Trinidad and Tobago and surrounding marine areas. |                     |  |  |  |
| Start Date/Time:  | 2022/10/25 09:00 AM  | End Date/Time:                                    | 2022/10/25 05:00 PM |  |  |  |
| Urgency:          | Immediate  | Response:   | Monitor             |  |  |  |
| Severity:         | Moderate   | Certainty:  | Likely              |  |  |  |
| Description:      | Periods of rain and/or showers of varying intensities are expected today (25th October 2022), also with a 70% (high) chance of heavy showers and thunderstorms that can produce intense rainfall in excess of 25mm. Gusty winds in excess of 55 km/h may be experienced especially in the vicinity of heavy showers/thunderstorms. Street/flash flooding and localized ponding are also likely in heavy downpours. Seas can become agitated at times in sheltered areas. Landslides/landslips are also possible in areas so prone. |   |                     |  |  |  |
| Instructions:     | Do not wade or drive through flood waters. Monitor weather conditions and official updates.<br>More information: www.metoffice.gov.tt; www.odpm.gov.tt   |   |                     |  |  |  |
| < END >           |  |   |                     |  |  |  |

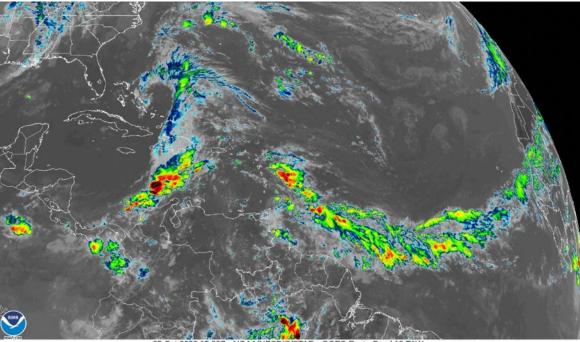
| GREEN          | YELLOW             | ORANGE                   | RED                   |
|----------------|--------------------|--------------------------|-----------------------|
| Take no action | Monitor conditions | Secure yourself/property | Take shefter/evacuate |



**Trinidad and Tobago Meteorological Service** Published by Ttms Staff **2** · 5 d · **3** 

Tuesday 25th October 2022 Weather Update

The axis of a tropical wave and associated weather is passing Trinidad and Tobago this morning. This triggered the issuance of an Adverse Weather Alert #1 - Yellow Level, which is ongoing. See http://www.metoffice.gov.tt/early\_warning for details.... See more



25 Oct 2022 15:00Z - NOAA/NESDIS/STAR - GOES-East - Band 13 TAW





TRINIDAD AND TOBAGO METEOROLOGICAL SERVICE SYNOPTIC BRANCH Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727 Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 852-24



TTMS EARLY WARNING SYSTEM -

**ORANGE LEVEL ATTAINED** 

TRINIDAD AND TOBAGO METEOROLOGICAL SERVICE SYNOPTIC BRANCH

Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727 Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt F 852-24

#### **PUBLIC WARNING MESSAGE**

| Date:             | 2022/10/27   | Issuance Time:                         | 07:57 PM            |  |  |
|-------------------|--|--|---------------------|--|--|
| Event:            | Flood  | Message Type:                          | Alert               |  |  |
| Headline:         | RIVERINE FLOOD   | RIVERINE FLOOD ALERT #1 - ORANGE LEVEL |                     |  |  |
| Area Description: | Trinidad: Caroni, South Oropouch   | ne and other major water o             | courses.            |  |  |
| Start Date/Time:  | 2022/10/27 08:00 PM  | End Date/Time:                         | 2022/10/29 08:00 PM |  |  |
| Urgency:          | Immediate  | Response:                              | Avoid               |  |  |
| Severity:         | Severe   | Certainty:                             | Observed            |  |  |
| Description:      | escription:<br>River levels are currently near threshold values in some parts, especially along the Caroni<br>River and South Oropouche basin with flooding ongoing in some areas along these river.<br>Expected rainfall overnight can increase the volume of already overwhelmed water courses<br>and overspilling of banks is expected. |  |                     |  |  |
| Instructions:     | Monitor weather conditions and river levels before venturing out. Avoid areas with flood waters. Monitor updates from official sources and plan safety measures, including emergency supplies of food and water. Follow the instructions of government officials. More information: www.metoffice.gov.tt/; www.odpm.gov.tt                 |  |                     |  |  |
| < END >           |  |  |                     |  |  |

| GREEN          | YELLOW             | ORANGE                   | RED                   |
|----------------|--------------------|--------------------------|-----------------------|
| Take no action | Monitor conditions | Secure yourself/property | Take shelter/evacuate |

#### PUBLIC WARNING MESSAGE

| Date:             | 2022/10/27  | Issuance Time:     | 03:51 PM            |  |  |
|-------------------|---|--------------------|---------------------|--|--|
| Event:            | Adverse Weather   | Message Type:      | Update              |  |  |
| Headline:         | ADVERSE WEATHER ALERT #4 - ORANGE LEVEL   |                    |                     |  |  |
| Area Description: | Trinidad and Tobago and surround  | ding marine areas. |                     |  |  |
| Start Date/ Time: | 2022/10/25 09:00 AM   | End Date/ Time:    | 2022/10/29 03:00 PM |  |  |
| Urgency:          | Immediate   | Response:          | Monitor             |  |  |
| Severity:         | Severe  | Certainty:         | Likely              |  |  |
| Description:      | The ITCZ continues to affect Trinidad and Tobago and a Tropical Wave is also expected on Friday (28th). Prolonged periods of rain and intense showers are expected overnight into tomorrow morning (Friday 28th), with a high (80%) chance of thunderstorm activity. Rainfall in excess of 75mm can result. Gusty winds in excess of 55 km/h may be experienced especially in the vicinity of heavy showers/thunderstorms. Street/flash flooding and localized flooding are also likely. Seas can become agitated at times in sheltered areas and landslides/landslips are also possible in areas so prone. |                    |                     |  |  |
| Instructions:     | Do not wade or drive through flood waters. Secure loose outdoor items and livestock.<br>Persons are advised to monitor weather conditions and river levels. More information:<br>www.metoffice.gov.tt; www.odpm.gov.tt  |                    |                     |  |  |
| < END >           |   |                    |                     |  |  |

| GREEN          | YELLOW             | ORANGE                   | RED |
|----------------|--------------------|--------------------------|-----|
| Take no action | Monitor conditions | Secure yourself/property |     |



## **IMPACTS**

## Incredible Flash Flood and Heavy Rains Hit Maraval! Trinidad ...

25 Oct 2022 — Trinidad Tobago metrology warnings and severe **floods**. Today is **October 25**, 2022. Heavy rains began to fall across the country.

## Violent floods reported in Maraval | Loop Trinidad & Tobago

Violent floods reported in Maraval. Parts of Maraval were under water on Tuesday as a result of raging floods. ... October 25, 2022 06:04 PM ET.

### Trinidad and Tobago turned into an ocean. Severe flash ...

25 Oct 2022 — Severe flash floods wipe out Maraval.Massive flash floods hit the Trinidad and Tobago region. ... Today is October 25, 2022.

## Port of Spain suburbs flooded as bad-weather alert extended

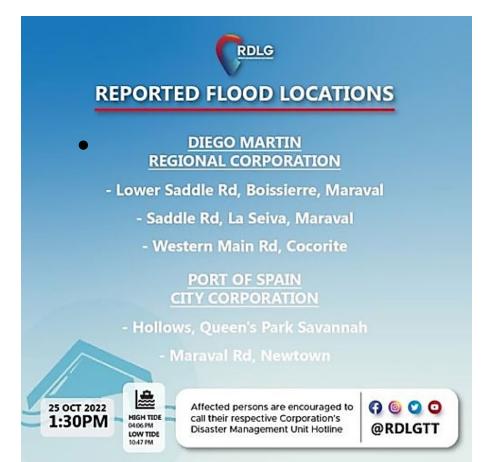
25 Oct 2022 — Tuesday **25 October** 2022 File photo - ... Affected areas included: Saddle Road and La Seiva, **Maraval**; Western Main Road, Cocorite; ...



Flooding at Queen's Park Savannah

Queen's Park Savannah flooded amid inclement weather Darece Polo | October 25, 2022 02:04 PM ET





## **IMPACTS**

loop T&T News 1 min read

## Violent floods reported in Maraval

Dareece Polo October 25, 2022 03:33 PM ET



https://tt.loopnews.com/content/violent-floodsreported-maraval-630513



## **<u>RIVER LEVELS ON 28<sup>TH</sup> AND DISCONTINUATION ON 29<sup>TH</sup></u>**





#### TRINIDAD AND TOBAGO METEOROLOGICAL SERVICE SYNOPTIC BRANCH

F 852-24

Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727 Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

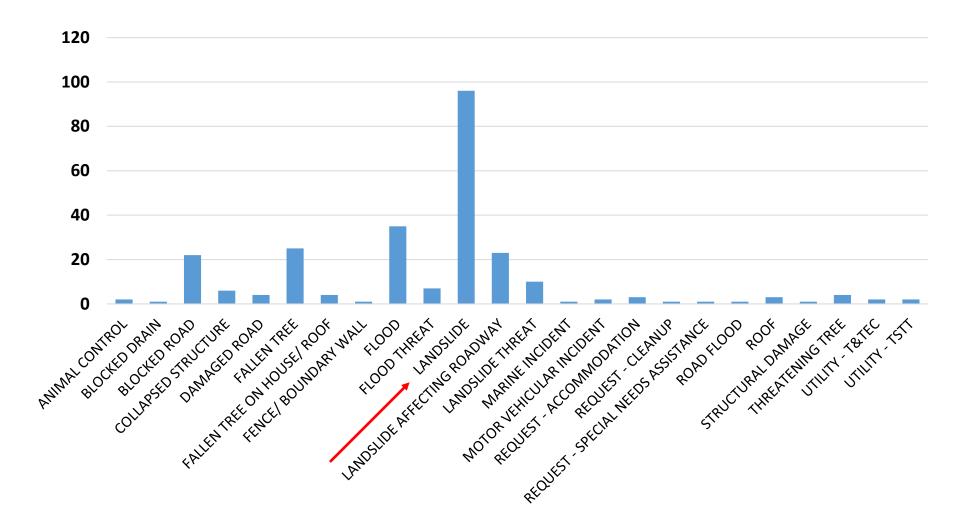
#### PUBLIC WARNING MESSAGE

| Date:             | 2022-10-29  | Issuance Time:   | 09:52 AM            |  |  |  |
|-------------------|---|--|---------------------|--|--|--|
| Event:            | Adverse Weather   | Adverse Weather Message Type: Cancel   |                     |  |  |  |
| Headline:         | ADVERSE WEATH<br>GREEN LEVEL                                      | ADVERSE WEATHER ALERT DISCONTINUATION -<br>GREEN LEVEL   |                     |  |  |  |
| Area Description: | Trinidad and Tobago and surro                                     | Trinidad and Tobago and surrounding marine areas.  |                     |  |  |  |
| Start Date/Time:  | 2022/10/29 10:00 AM   | End Date/ Time:  | 2022/10/29 03:00 PM |  |  |  |
| Urgency:          | Immediate   | Response:  | Monitor             |  |  |  |
| Severity:         | Minor   | Certainty:   | Observed            |  |  |  |
| Description:      | weather from the ITCZ has sign<br>waterlogged areas. The isolated | Generally over Trinidad and Tobago, more stable conditions have returned and impactful weather from the ITCZ has significantly decreased. Expected, also, is a gradual decrease of waterlogged areas. The isolated thunderstorm can still occur in a few areas, as is common during the rainy season. Gusty winds and street flooding can be expected but short lived near these thunderstorm. |                     |  |  |  |
| Instructions:     |   | Do not wade or drive through flood waters. Persons are advised to monitor weather conditions and river levels. More information: www.metoffice.gov.tt; www.odpm.gov.tt   |                     |  |  |  |
| < END >           |   |  |                     |  |  |  |

| GREEN          | YELLOW             | ORANGE                   | RED                    |
|----------------|--------------------|--------------------------|------------------------|
| Take no action | Monitor conditions | Secure yourself/property | Take shelter /evacuate |

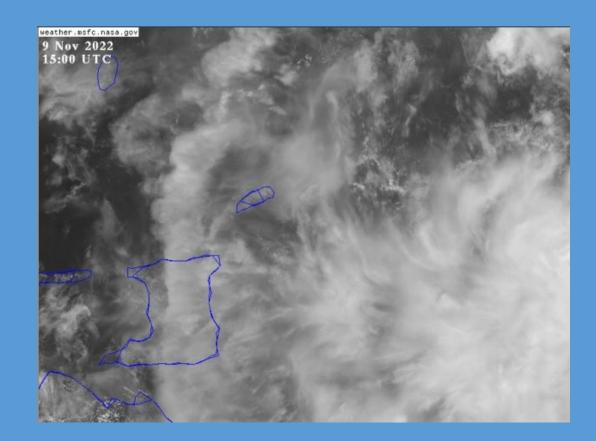


## TEMA (TOBAGO) OCTOBER REPORTS for ADVERSE WEATHER IMPACTS





# TROPICAL WAVE & ITCZ COMBINATION FLOODS ACROSS TRINIDAD & TOBAGO NOVEMBER 8<sup>th</sup> & 9<sup>th</sup> 2022





## **TROPICAL WAVE MODULATES ITCZ NOVEMBER 8<sup>TH</sup> 2022**

...



Trinidad and Tobago Meteorological Service

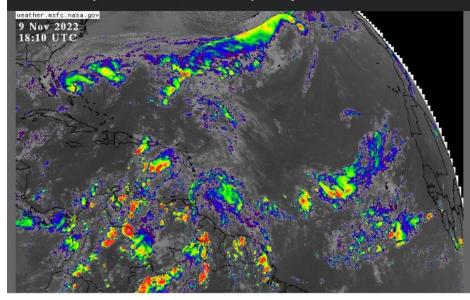
#### 09.11.2022 Weather Update

The axis of the tropical wave is on Trinidad and Tobago right now as we predicted. The forecast is for continuing periods of showers and some thunderstorm activity. The major concern is the street/flash flooding and riverine flooding.

The risk for landslips/landslides is elevated.

Please keep monitoring the forecasts and alerts from the Trinidad and Tobago Met. Service.

Forecasts are updated at 6 am, 10 am and 4 pm daily





TRINIDAD AND TOBAGO METEOROLOGICAL SERVICE SYNOPTIC BRANCH Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727 Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

#### **PUBLIC WARNING MESSAGE**

| Date:             | 2022/11/09  | Issuance Time: | 06:42 AM            |
|-------------------|---|----------------|---------------------|
| Event:            | Flood   | Message Type:  | Alert               |
| Headline:         |   | ALERT #1 - YEL | LOW LEVEL           |
| Area Description: | Major watercourses across Trinidad  |                |                     |
| Start Date/Time:  | 2022/11/09 06:45 AM   | End Date/Time: | 2022/11/11 04:00 PM |
| Urgency:          | Immediate   | Response:      | Monitor             |
| Severity:         | Moderate  | Certainty:     | Likely              |
| Description:      | After significant rainfall overnight, major river levels across Trinidad are currently near 80-<br>85% and rising. Smaller watercourses are currently overwhelmed in a few areas. Weather<br>conditions are currently settling, however, occasional periods of heavy rainfall can be<br>expected over the next 36 hours, particularly Wednesday afternoon (9th November 2022)<br>and Thursday morning (10th November 2022). This additional rainfall can continue to elevate<br>the river levels, so there remains a moderate risk to public safety, livelihood and property.<br>Run off will be slow at high tide times which are approximately 4:15pm for today (Wednesday<br>9th November 2022) and 5:15 am & 4:45pm tomorrow (Thursday 10th November 2022). |                |                     |
| Instructions:     | Carefully monitor weather conditions and river/water levels. Monitor updates from official sources and plan safety measures, including emergency supplies of food and water. Do not take unnecessary risks. Follow the instructions of government officials. More information: www.metoffice.gov.tt/; www.odpm.gov.tt   |                |                     |
| N:                | < ENI   | ) >            |                     |

| GREEN          | YELLOW             | ORANGE                   | RED                   |
|----------------|--------------------|--------------------------|-----------------------|
| Take no action | Monitor conditions | Secure yourself/property | Take shelter/evacuate |

F 852-24



## TROPICAL WAVE MODULATES ITCZ NOVEMBER 8<sup>TH</sup> 2022

Riverine Flood Alert #2 - Orange Level! Updated Issuance time #1 (local time)Wed, Nov 9, 2022 2:51 PM Start date (local time)Wed, Nov 9, 2022 6:45 AM End date (local time)Fri, Nov 11, 2022 4:00 PM



**ORANGE LEVEL** 



**HYDRO-MET** 

Serious injuries or casualties are possible.

vww.metoffice.gov.tt/early\_warning



| RIVER LEVEL A                              | DVISORY   |  |
|--|---|--|
| <b>9TH NOV 2022</b><br>AS OF 12PM          | HIGH TIDE 04:41 PM<br>LOW TIDE 11:29 PM   |  |
| ARIPO RIVER - 48% CAPACITY                 |   |  |
| AROUCA - 37% CAPACITY                      |   |  |
| CAPARO - 88% CAPACITY                      |   |  |
| EL CARMEN (CARONI RIVER) - 96% CAPACITY    |   |  |
| NORTH OROPOUCHE (TOCO ROAD) - 84% CAPACITY |   |  |
|  |   |  |
|  | 9TH NOV 2022<br>AS OF 12PM<br>ARIPO RIVER - 48% CAPACITY<br>AROUCA - 37% CAPACITY<br>CAPARO - 88% CAPACITY<br>EL CARMEN (CARONI RIVER) - 96 |  |

The ODPM & **Trinidad and Tobago Air Guard** aerial reconnaissance on the impact of **Riverine Flooding** 

**10 November, 2022** 









West of Piarco International Airport



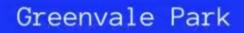
Madras Road













## Tulsa Trace, Penal



## TTMS DRONE FOOTAGE: AJIM BAKSH TRACE SANGRE GRANDE (Thurs 10<sup>th</sup> Nov 2022)





## **FLOOD EVENTS SOUTH TRINIDAD – PENAL**

loop T&T News 2 min read

## Penal residents advised: Brace for more floods

 The South Oropouche River bank has been compromised

 Beena Mahase
 November 9, 2022 01:01 PM ET



Flooded- Suchit Trace Penal. Photo courtesy Debe South Councillor Khemraj Seecharan.



The Cumuto Tamana Road is now impassable after flood waters washed away part of the roadway 8/11/2022 Express photojournalist Curtis Chase.



## PLUCK ROAD, WOODLAND, SOUTH TRINIDAD, 8<sup>th</sup> NOV 2022





## **CONCLUSION**

### BOTH TRINIDAD AND TOBAGO CONTINUE TO BE

**AFFECTED BY:** 

- TROPICAL WAVES
- ITCZ
- LOCALIZED DIURNAL CONVECTION
- TROPICAL CYCLONIC FEATURES

THE IMPACTS DURING 2022 INCLUDE:

WIDESPREAD FLOODING, LANDSLIDES,

INFRASTRUCTUAL LOSS, ECONOMIC LOSS,

AGRICULTURAL LOSS AND UNFORTUNATELY

LOSS OF PERSONAL PROPERTY AND LIFE.





Shank Mou

#### METEOROLOGICAL SERVICES DIVISION

**Piarco International Airport** 

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