



**Key Words:** below-normal (“less than usual”), near-normal (“usual”) or above-normal (“More than usual”)

**Wetter than usual conditions most likely in Trinidad, drier than usual in Tobago during August to October: Risk of Flooding Remains High**

**Key Messages**

Date of Issue: 02/08/2018

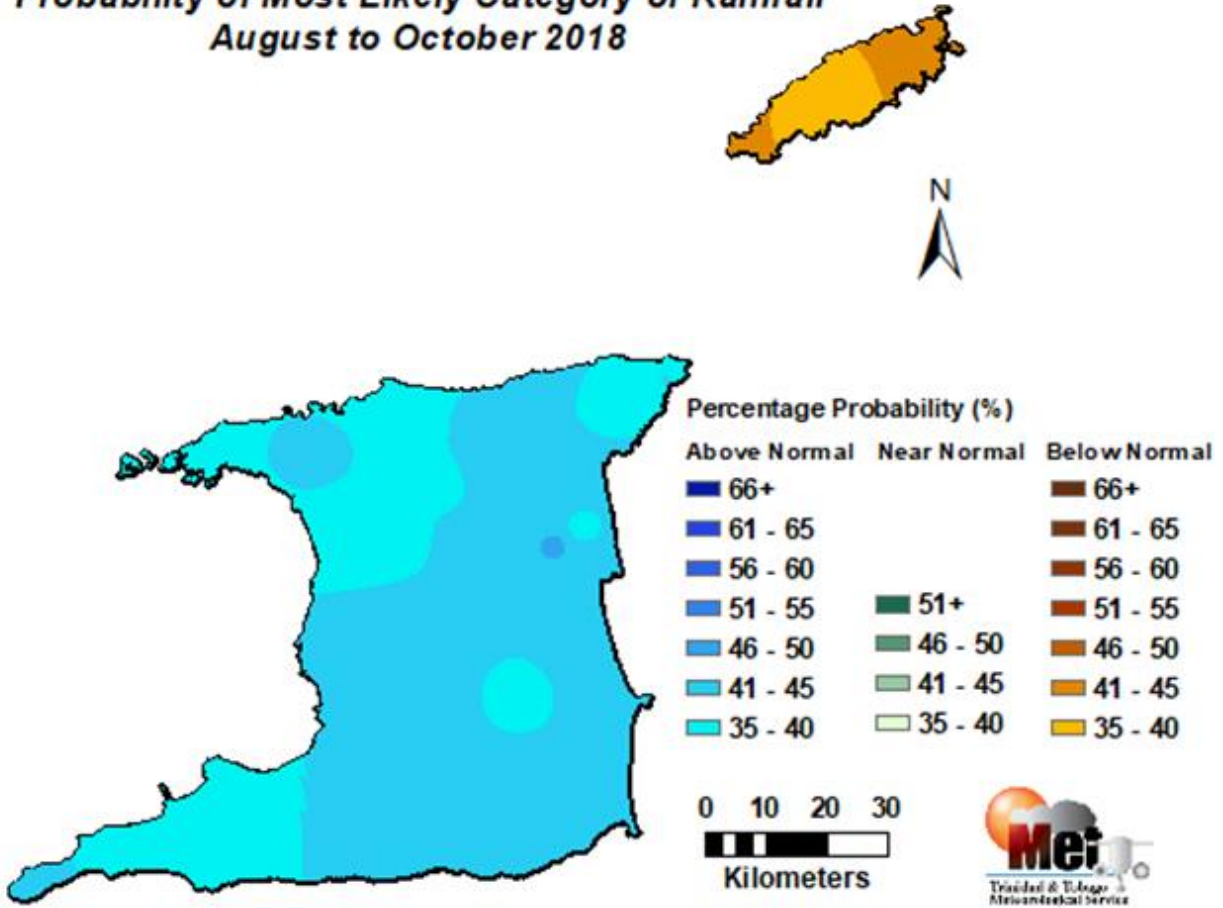
- ✓ The August to October (ASO) 2018 rainfall outlook shows Trinidad is likely to be wetter than average while Tobago is likely to be drier than average (**medium confidence**);
- ✓ Much of the country have experienced a drier than usual start to the wet season, so an outlook with increased chances of wetter than usual conditions over the next three months suggests probable relief from the rainfall deficits over the previous three months, while drier than usual will subdue relief;
- ✓ There is a 60-70% chance for accumulated rainfall totals in excess of 700 mm in Trinidad and a 40-50% chance for rainfall in excess of 400 mm in Tobago;
- ✓ The outlook indicates an increase in the number of excessively wet days (**Medium confidence**);
- ✓ The chance for ASO to be extremely dry is low to moderate (**Medium confidence**);
- ✓ August rainfall is likely to be greater than usual with larger number of wet days than usual (**High confidence**);
- ✓ More wet days than usual in Trinidad during ASO, fewer wet days than usual likely in Tobago;
- ✓ Days and nights are likely to be warmer than average during August to October with September days very likely to be the warmest.
- ✓ At least eight (8) hot-spell days are expected during ASO with September and October likely to produce the most;

**Likely Impacts**

- ✓ Warmer than average temperatures can aid more intense showers. Flooding potential associated with heavy rainfall days is enhanced for flood prone areas;
- ✓ More reliable rains for agriculture and water resource management in areas with chances for wetter than usual condition. This is likely to reduce water stress in areas where this exists;
- ✓ Less reliable rains in areas with chances for drier than usual conditions, which is likely to increase water stress in areas where they exist;
- ✓ Surface wetness is likely to increase at a faster rate during the period over most of the country.

Disclaimer: This information is provided with the understanding that the Trinidad and Tobago Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the assessment or outlook contained in this document. This Outlook provides possible temperature and rainfall conditions over the next 3-6 months and is part of a suite of early warning climate forecasts designed for contingency planners which should not be used in isolation but used along with daily weather and shorter-range forecasts and warnings available from the TTMS. The information may be used freely by the public with appropriate acknowledgement of its source but shall not be modified in content and then presented as original material.

**Probability of Most Likely Category of Rainfall  
August to October 2018**



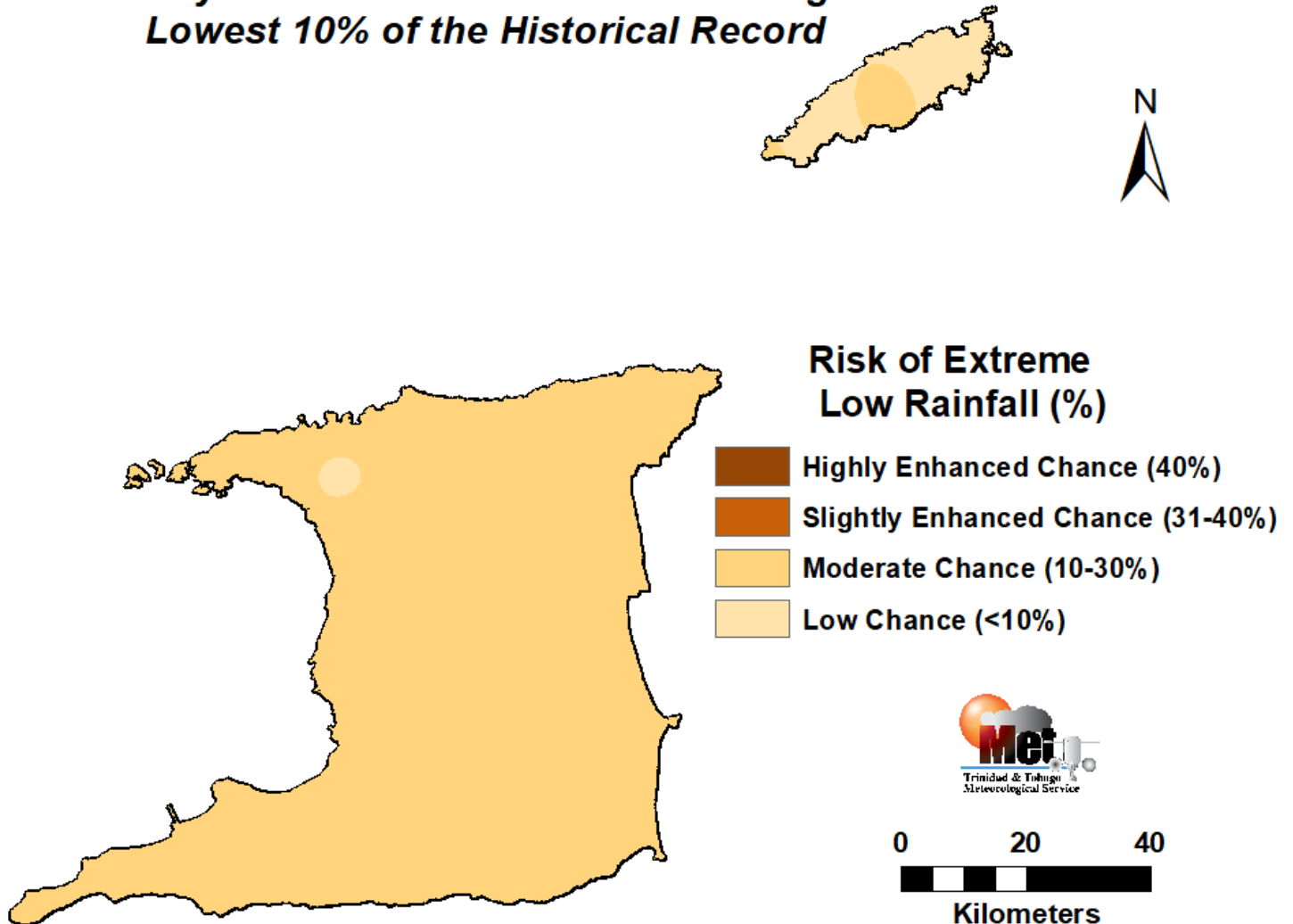
**Figure 2: Category of rainfall likely for August to October (ASO) 2018 with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blues indicate that it is more likely for above normal rainfall to occur than for below normal or near normal. Browns indicate it is more likely for below normal rainfall, while greens indicate it is more likely for near normal rainfall. Normal is defined by the rainfall that was observed in middle one-third of the ASO period rainfall totals during the historical period used to produce the outlook.**

- ✓ The rainfall outlook for August to October indicates it is most likely to be wetter than usual in Trinidad with accumulated rainfall totals favoured to be in the above normal category, when compared with the chance for near- or below-normal. Chances for this to occur are greater than 40% for most of Trinidad. At the same time, Tobago is likely to be drier than usual with below normal rainfall totals as the favoured category (**medium confidence**).
- ✓ This means all areas of the country are likely to receive total rainfall amounts that are greater than 125% of the long term average in Trinidad and less than 75% of the long term average in Tobago. For instance, at Piarco, this means possible accumulated ASO rainfall totals greater than 729.0mm and at Crown Point less than 491.0mm.

Disclaimer: This information is provided with the understanding that the Trinidad and Tobago Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the assessment or outlook contained in this document. This Outlook provides possible temperature and rainfall conditions over the next 3-6 months and is part of a suite of early warning climate forecasts designed for contingency planners which should not be used in isolation but used along with daily weather and shorter-range forecasts and warnings available from the TTMS. The information may be used freely by the public with appropriate acknowledgement of its source but shall not be modified in content and then presented as original material.



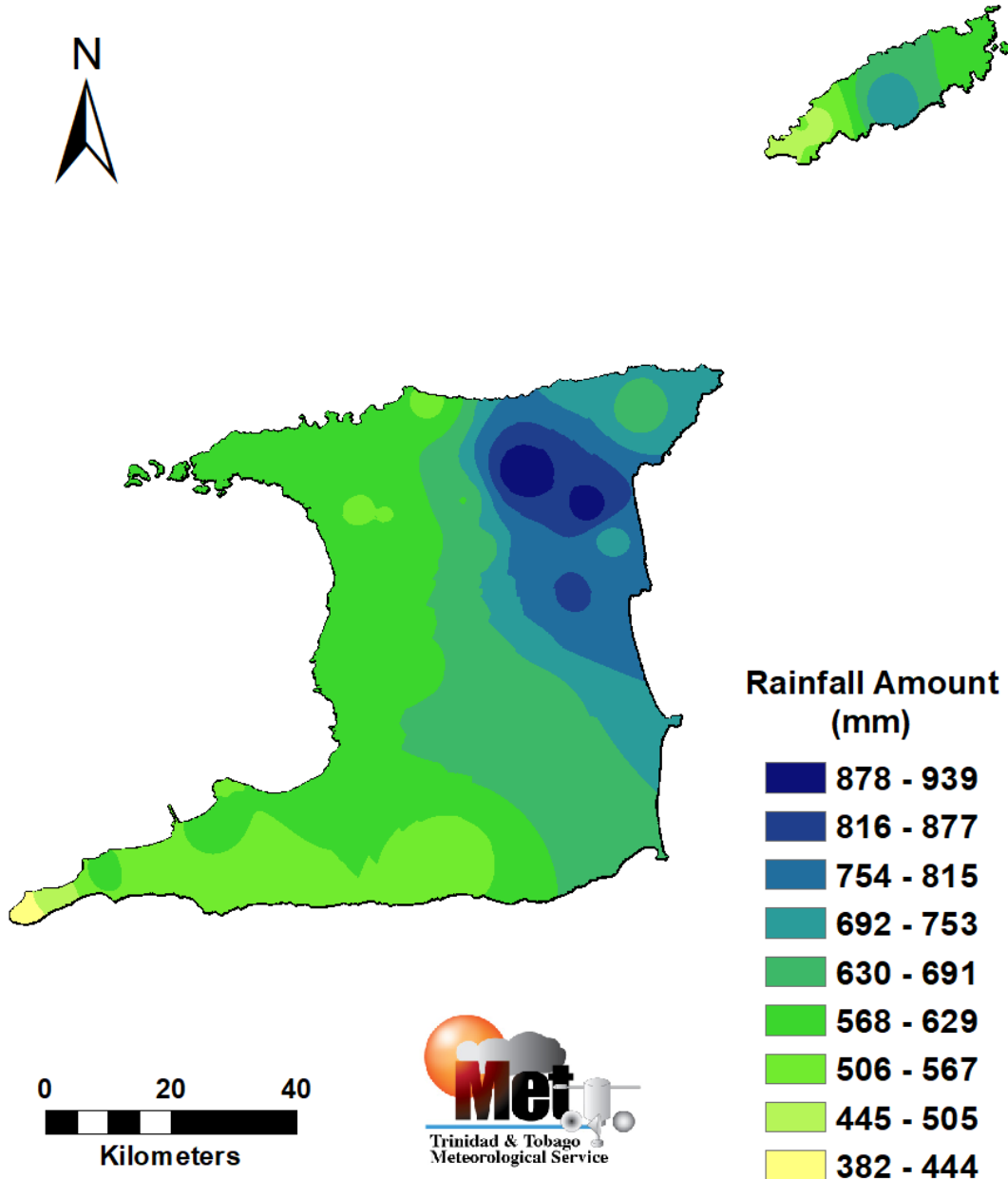
**Probability of ASO 2018 rainfall totals being in the  
Lowest 10% of the Historical Record**



**Figure 3: The map shows the chances for extremely dry conditions over the next three months. Extreme refers to the lowest 10% of August to October accumulated rainfall in the historical record.**

- ✓ The chance for the ASO period to be extremely dry is moderate (**medium confidence**);
- ✓ While the chances for this to occur range between 10-20 %, should this occur, it can have far reaching negative impacts on water, agriculture and other climate sensitive sectors later on;
- ✓ The outlook indicates a 30% chance for at least three (3) periods of seven (7) consecutive dry days during ASO.

Disclaimer: This information is provided with the understanding that the Trinidad and Tobago Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the assessment or outlook contained in this document. This Outlook provides possible temperature and rainfall conditions over the next 3-6 months and is part of a suite of early warning climate forecasts designed for contingency planners which should not be used in isolation but used along with daily weather and shorter-range forecasts and warnings available from the TTMS. The information may be used freely by the public with appropriate acknowledgement of its source but shall not be modified in content and then presented as original material.

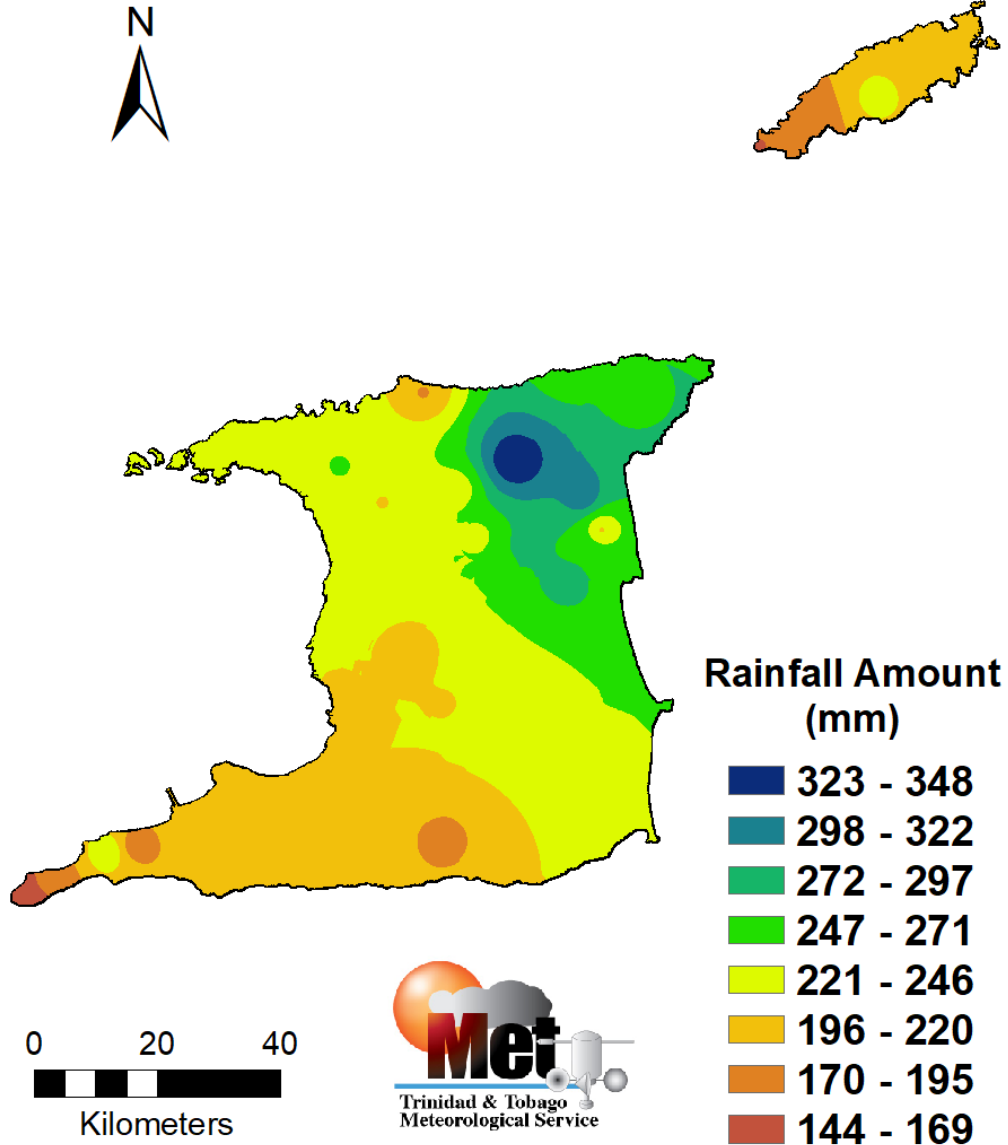


**Figure 4: Possible accumulated rainfall totals with the highest chance of occurring during August to October 2018.**

Largest rainfall accumulated totals are likely to be near 940.0mm in Valencia and surrounding environs in east Trinidad with smallest totals likely near Icacos, Cedros and environs;

Tobago’s largest totals are likely to be near 750.0 mm in Hillsborough and other northeastern areas while smallest totals are likely in the southwest, near Bon-Accord and environs.

Disclaimer: This information is provided with the understanding that the Trinidad and Tobago Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the assessment or outlook contained in this document. This Outlook provides possible temperature and rainfall conditions over the next 3-6 months and is part of a suite of early warning climate forecasts designed for contingency planners which should not be used in isolation but used along with daily weather and shorter-range forecasts and warnings available from the TTMS. The information may be used freely by the public with appropriate acknowledgement of its source but shall not be modified in content and then presented as original material.



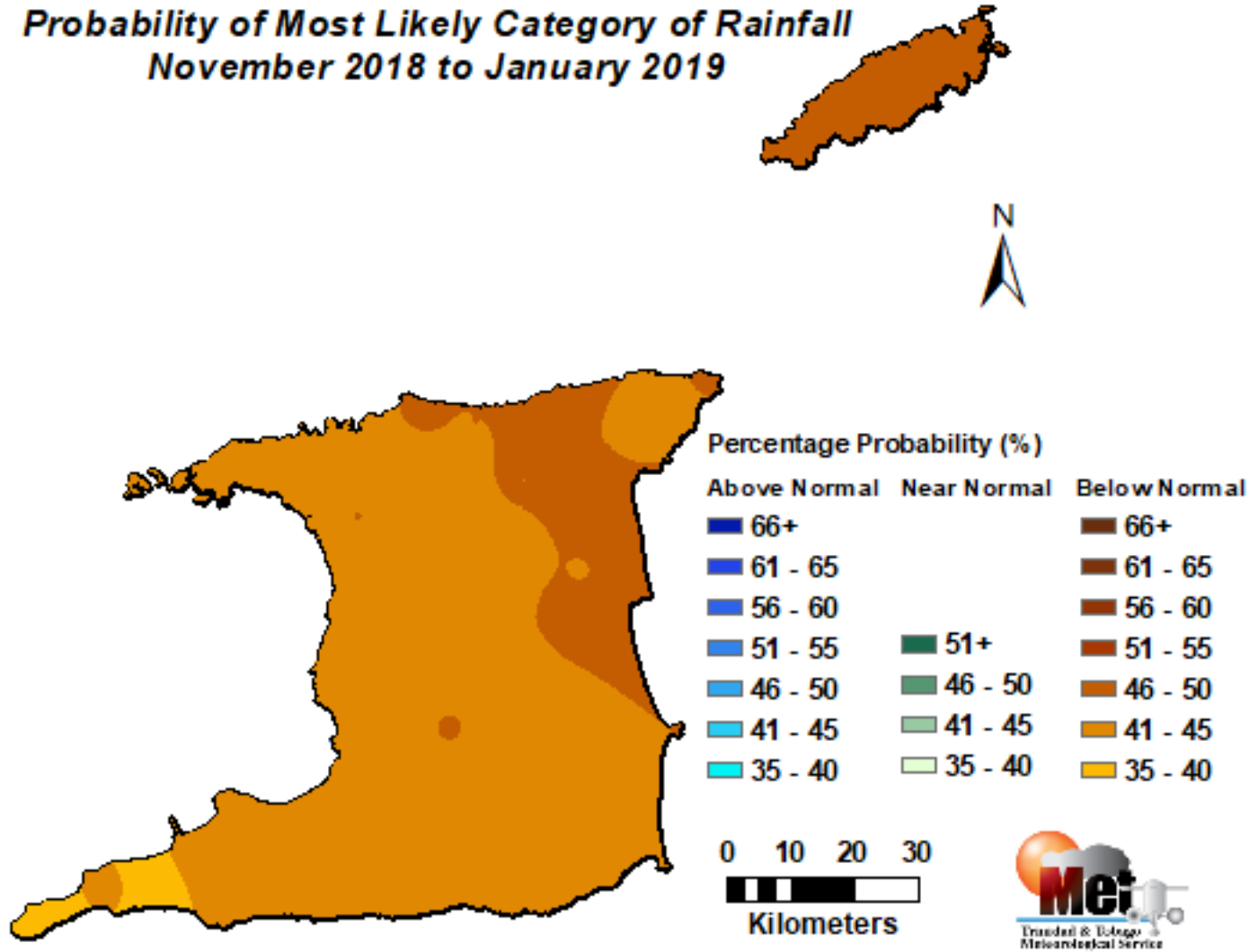
**Figure 5: Possible rainfall totals with the highest chance of occurring during August 2018.**

August is likely to be wetter than usual with most parts of the country having a greater than 40% chance for rainfall totals above average (**medium confidence**).

Possible rainfall totals range between 144.0 mm and 350.0 mm in Trinidad and between 168.0 mm and 228.0 mm in Tobago.

Disclaimer: This information is provided with the understanding that the Trinidad and Tobago Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the assessment or outlook contained in this document. This Outlook provides possible temperature and rainfall conditions over the next 3-6 months and is part of a suite of early warning climate forecasts designed for contingency planners which should not be used in isolation but used along with daily weather and shorter-range forecasts and warnings available from the TTMS. The information may be used freely by the public with appropriate acknowledgement of its source but shall not be modified in content and then presented as original material.

**Probability of Most Likely Category of Rainfall  
November 2018 to January 2019**



**Figure 6: Category of rainfall most likely for November 2018 to January 2019 (NDJ) with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blues indicate that it is more likely for above normal rainfall to occur than for below normal or near normal. Browns indicate it is more likely for below normal rainfall; while greens indicate it is more likely for near normal rainfall. Normal is defined by the rainfall that was observed in middle one-third of the NDJ period rainfall totals during the historical period used to produce the outlook.**

- ✓ November 2018 to January 2019 (NDJ) is likely to be drier than usual with greater than 35% chance for accumulated rainfall totals to be in the below normal category, across both islands (**low confidence**);
- ✓ November is likely to be wetter than usual, so the risk of flooding remains relatively high for the period.

Disclaimer: This information is provided with the understanding that the Trinidad and Tobago Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the assessment or outlook contained in this document. This Outlook provides possible temperature and rainfall conditions over the next 3-6 months and is part of a suite of early warning climate forecasts designed for contingency planners which should not be used in isolation but used along with daily weather and shorter-range forecasts and warnings available from the TTMS. The information may be used freely by the public with appropriate acknowledgement of its source but shall not be modified in content and then presented as original material.



### **Temperature Outlook:**

- ✓ In most years, August to October is the second heat season in Trinidad and Tobago, with September often the hottest month;
- ✓ Warmer than average daily temperatures observed across Trinidad and Tobago during June are likely to continue during August to October;
- ✓ There is a greater than 60% chance for August to October days and nights to be warmer than average with September and October days and nights likely to be the warmest;
- ✓ Likewise, August days and nights have a greater than 80% chance to be warmer than average for most of Trinidad and Tobago, but especially so in cities and built-up areas;

There is a 40-50% chance for at least 7 hot-spell days (greater than 33.9°C in Trinidad, greater than 32.0°C in Tobago) from August to October, with September likely to produce the most.

### **Likely Implications**

- ✓ Warmer than average temperatures can aid more intense showers, which will increase the risk for flash floods on hot days, especially in the cities and built-up areas;
- ✓ Risk of flash and riverine flooding, landslips and landslides on heavy rainfall days and prolonged wet spells remains relatively high;
- ✓ Increase in recharge rates at water reservoirs associated with wetter than usual conditions. Slower than usual recharge rates at water reservoirs in areas with drier than usual conditions.
- ✓ Increase in surface water ponding can promote mosquito breeding, leading to higher risk for spikes in vector borne diseases;
- ✓ Increased rainfall, mixed with warm and humid conditions tend to promote rapid multiplication of some agricultural pests, diseases and fungal growth;
- ✓ Increased rainfall could lead to reduced traffic flows, disruptions in localized travel, longer travelling times and increased disruption of outdoor activities;
- ✓ Excessive heat on hot spell days could lead to increased heat stress in the vulnerable population and small livestock, until October.

Disclaimer: This information is provided with the understanding that the Trinidad and Tobago Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the assessment or outlook contained in this document. This Outlook provides possible temperature and rainfall conditions over the next 3-6 months and is part of a suite of early warning climate forecasts designed for contingency planners which should not be used in isolation but used along with daily weather and shorter-range forecasts and warnings available from the TTMS. The information may be used freely by the public with appropriate acknowledgement of its source but shall not be modified in content and then presented as original material.





**How Should You Respond? Don't be vulnerable. Be sensible! Act now and prepare for heavy rainfall, flood, high-wind, hot spells and spikes in dengue cases.**

#### Drainage

- ✓ Continue de-silting and cleaning of drainage systems, canals, drains, outlets and river mouths;
- ✓ Clean and clear choked surface drains to allow fast drainage and to reduce flash flood.

#### Waste Management Sector

- ✓ Continue efforts to prevent waste from entering drains and water courses in order to reduce flooding and water pollution;
- ✓ Implement anti-litter activities to raise awareness on the impacts of poor solid waste management.

#### Health Sector

- ✓ Clear bushes, open drainage systems, fumigate in and around residences;
- ✓ Revisit contingency plans to manage spike in vector borne incidences.

#### Disaster Risk Management Sector

- ✓ Sensitize communities on the forecast and its negative impacts;
- ✓ Revisit early warning information dissemination channels;
- ✓ Alert communities and citizens in flood and landslide prone areas to act early.

#### Agriculture & Food Security Sector

- ✓ Put in place disease control measures;
- ✓ Ready pumps for clearing waterlogged drainage;
- ✓ Clear or clean poorly maintained and choked surface drains to prevent waterlogging.

#### Water and Energy sector

- ✓ Conduct routine de-silting of reservoirs and riverine flooding channels. Harvest excess rainfall now;
- ✓ Remove dry branches, trees and overhang near electrical wires, especially in landslip prone areas.

#### General Public

- ✓ Continue proper preparation especially for persons in at risk areas. Stock up on emergency supplies for 3-7 days;
- ✓ Clean drains and canals; Conserve, store and manage water in a safe and adequate manner;
- ✓ Take measures to lessen impacts from flooding. Be sand-bag ready;

Be vigilant and visit the Met. Service website at [www.metoffice.gov.tt](http://www.metoffice.gov.tt) regularly to keep up to date with local weather changes and download our free mobile app on the Google Play Store or Apple iStore.

Disclaimer: This information is provided with the understanding that the Trinidad and Tobago Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the assessment or outlook contained in this document. This Outlook provides possible temperature and rainfall conditions over the next 3-6 months and is part of a suite of early warning climate forecasts designed for contingency planners which should not be used in isolation but used along with daily weather and shorter-range forecasts and warnings available from the TTMS. The information may be used freely by the public with appropriate acknowledgement of its source but shall not be modified in content and then presented as original material.





### **Climatic Influencers and Context of the Outlook**

- ✓ Waters Cooler than average to near average Sea surface temperatures (SST) in and around Trinidad and Tobago have warmed over the last month but remain cooler than average to near average. Warming is forecasted to persist during August to October. This is likely to enhance local rainfall occurrence in Trinidad and Tobago and tilt the odds towards above average.
- ✓ El Niño–Southern Oscillation (ENSO)-neutral conditions- neither El Niño nor La Niña - persisted during the first two months of the wet season with near to above average sea surface temperatures (SSTs) across the central and eastern equatorial Pacific Ocean, but the chance for El Niño development during August to October increases to 65%. This is strengthened by sub-surface temperature continuing to warm and remain warmer than average.

ENSO-neutral conditions are likely to have limited control on local rainfall. This means reduced chances for long-lasting very wet or dry conditions; however, when an El Niño pattern is in place during the late wet season, November rainfall tends to exceed average totals, while other months tend to have suppressed rainfall.

- ✓ The North Atlantic Oscillation (NAO) has persisted its positive phase during June and July. A positive NAO tends to aid in cooling SSTs in waters around Trinidad and Tobago, while a negative phase tends to aid rainfall. Cooler SSTs usually have a negative influence on local rainfall. The NAO is forecasted to trend towards its negative over the next two weeks;
- ✓ The Madden Julian Oscillation (MJO) is the main climate driver usually influencing fluctuation in the local weather on the sub-seasonal scale (weekly to monthly timescales). The MJO, even though weak, is likely to be in a favourable phase to influence local rainfall during early August.

The precipitation and temperature outlook is based on statistical and dynamical seasonal climate models output and known seasonal climate influencers. Multiple competing climatic factors are at play but waters in and around Trinidad and Tobago are likely to dominate. The current outlook reflects this. The outlook is in good agreement with some of the global climate models but not all. This reduces our confidence slightly.