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

**Below Normal Accumulated Rainfall Totals Highly Likely for September to November (SON) 2017
But Flooding Risk Remains High**

Key Messages

- ✓ September to November (SON) 2017 is likely to be less wet than usual across Trinidad and Tobago but the potential for flooding remains high during heavy and extreme downpours;
- ✓ Chances are highest (40%) for the usual number of extremely wet days (> 25.0 mm) during SON; i.e. expect between 4 - 10 extremely wet days in Trinidad and 3-8 in Tobago;
- ✓ In the 3-month period SON, September has the most enhanced chances for below normal rainfall, with less than usual rainfall totals most likely; November is likely to be the wettest month with elevated potential for flooding.
- ✓ SON rainfall totals with highest chance of occurring range between 360mm and 930mm across Trinidad and 520mm and 795mm across Tobago;
- ✓ Both day and night temperatures are forecasted to be warmer than average for all of Trinidad and Tobago during SON;
- ✓ September to October is usually the end of the second heat season in Trinidad and Tobago. Expect a number of short hot spells and hot days (maximum temperatures equal to or greater than 34.0°C in Trinidad and 32.0°C in Tobago).

Likely Impacts

- ✓ Already soaked grounds and high water levels, along with less frequent but extremely heavy downpours maintain the risk for flash and riverine flooding, landslips and landslides;
- ✓ Continuation of increases in surface water ponding can promote mosquito breeding. This will increase the risk for higher incidences of vector borne diseases during SON;
- ✓ Warm, wet and humid conditions tend to promote rapid multiplication of some agricultural pests, diseases and fungal growth;
- ✓ Increased occurrence of rainfall is associated with more flies and flies are known to carry and spread diseases such as Gastroenteritis and Salmonella infections;
- ✓ Heat related health risks are enhanced during September and October for individuals most vulnerable to extremely hot conditions.

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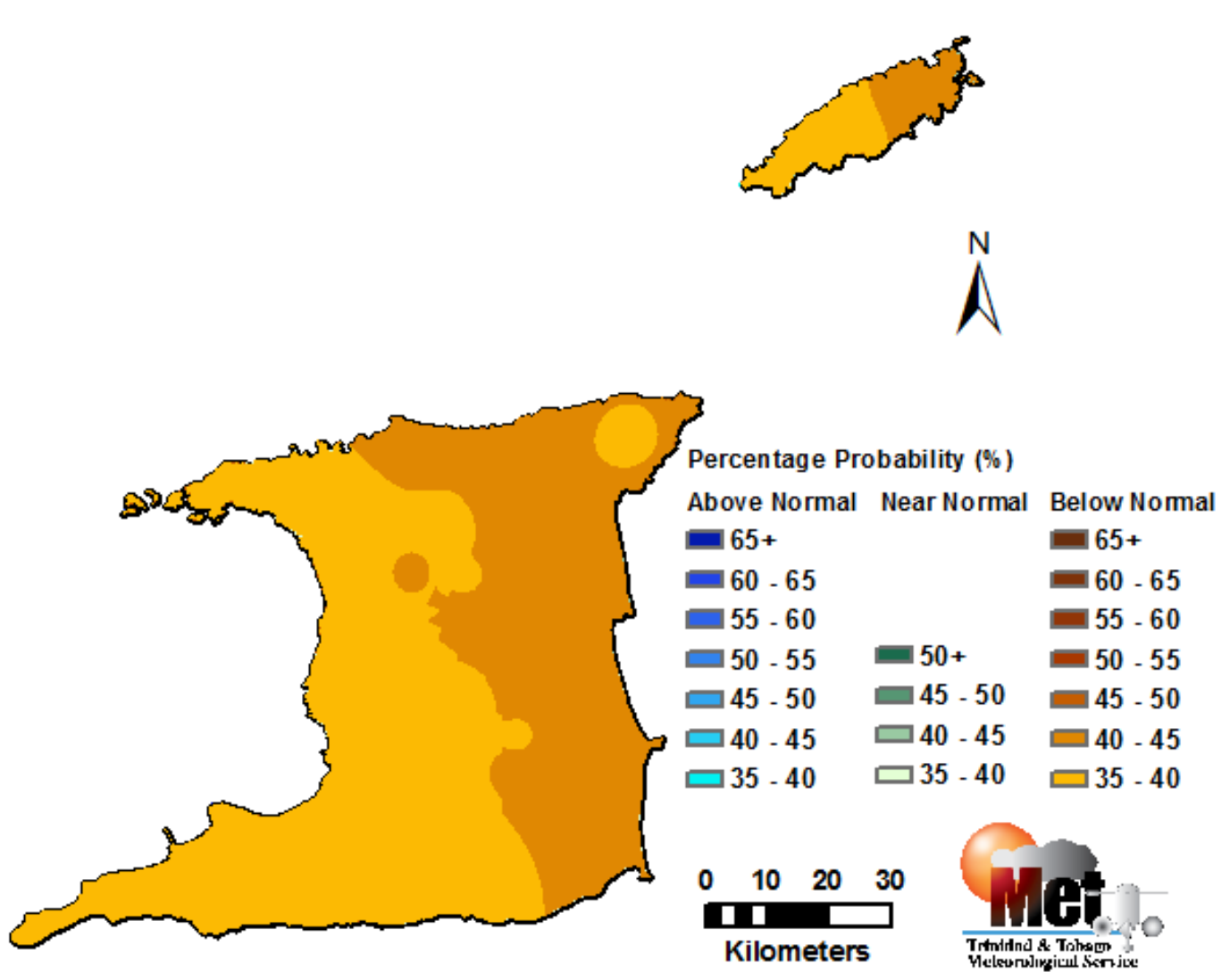


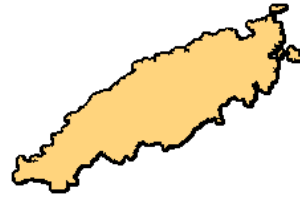
Figure 1: Category of rainfall likely for SON 2017 with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blue areas indicate places with an increased chance for above normal rainfall, brown areas show an increased chance for below normal rainfall, while green areas show an increased chance for near normal rainfall. Normal is defined by the rainfall that was observed in middle one-third of the SON period rainfall totals during the historical period used to produce the outlook.

- ✓ Enhanced chances exist for below normal rainfall totals over both Trinidad and Tobago during SON with chances most favourable in the vicinity of Sangre Grande, Manzanilla, Plum Mitan and the rest of the eastern half of Trinidad and in northeast Tobago;
- ✓ Chances are highest (40%) for near normal number of extremely wet days (> 25.0 mm) for SON; i.e. expect between 4-10 extremely wet days in Trinidad and 3-8 in Tobago, with most of these likely to occur in October and November.

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Chance of Extremely Low Rainfall September to November 2017



Risk of Extreme Low Rainfall (%)

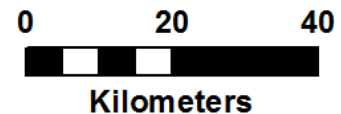
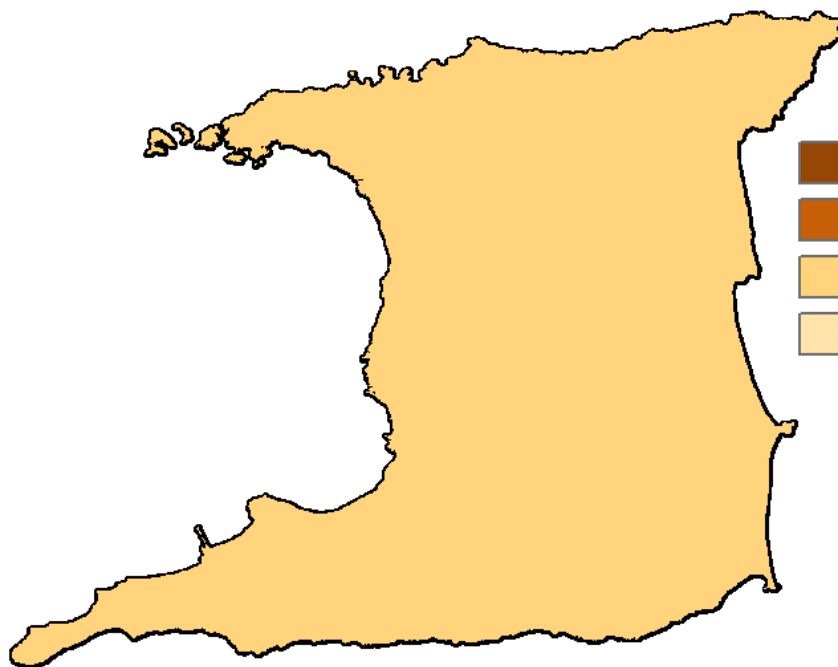
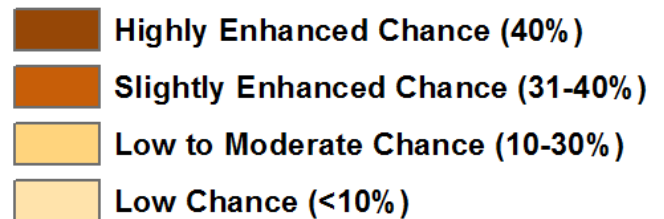


Figure 2: Risk of the SON being extremely drier than normal (accumulated rainfall totals within the lowest 10% on record).

- ✓ The risk of extremely drier than usual conditions is low to moderate (10 - 14%) over both island over Tobago;
- ✓ Most of the significant drying is likely to occur in September.

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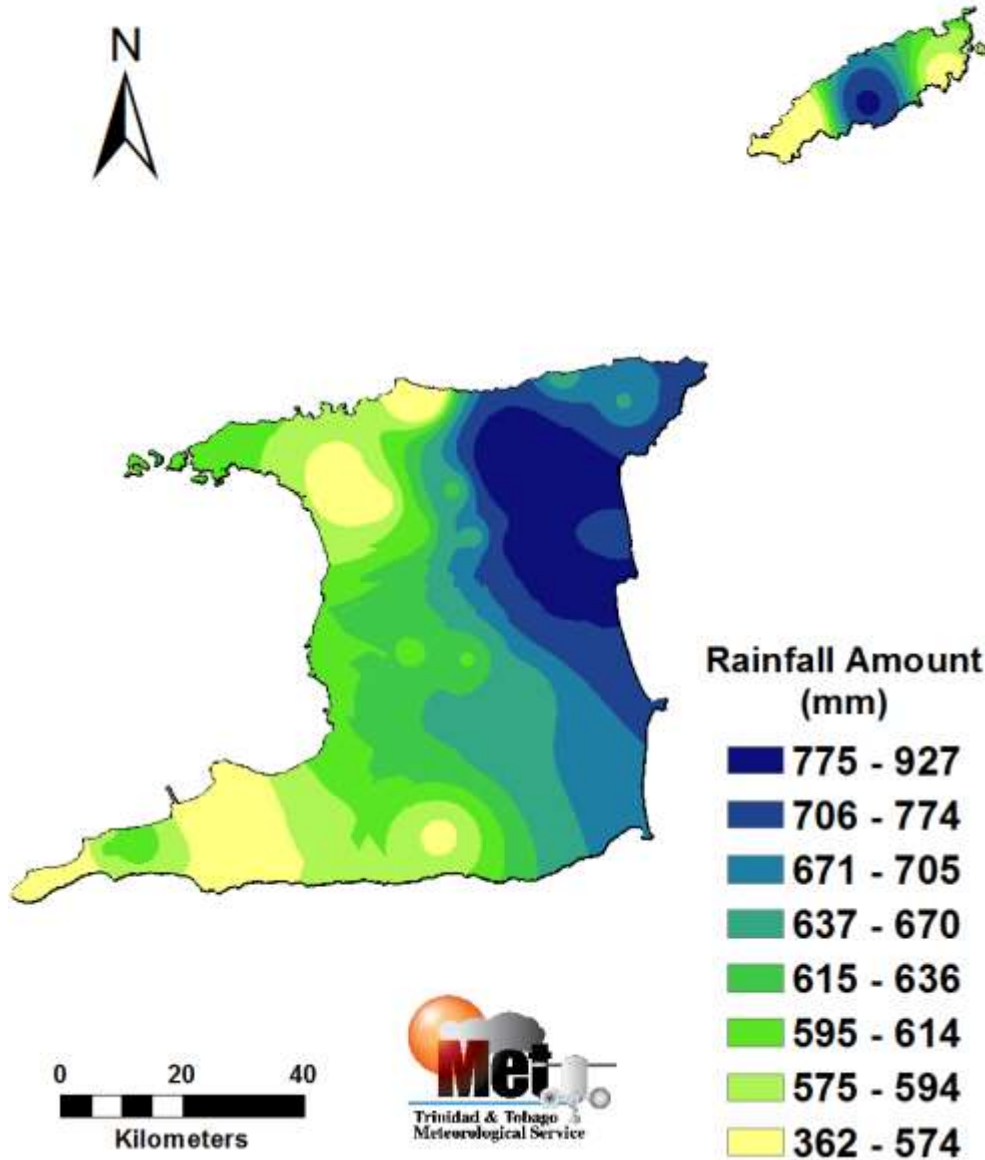


Figure 3: Possible accumulated rainfall totals with the highest chance of occurring, September to November 2017.

SON largest rainfall accumulated totals are likely to be near 930mm in areas such as Valencia, Sangre Grande and environs in east Trinidad; and near 790 mm in Mt Saint George and Goodwood areas of Tobago.

Tobago usually experiences its highest monthly rainfall totals during November, while Trinidad experiences a second peak in rainfall. A similar occurrence is forecasted for November, with the potential for flooding enhanced.

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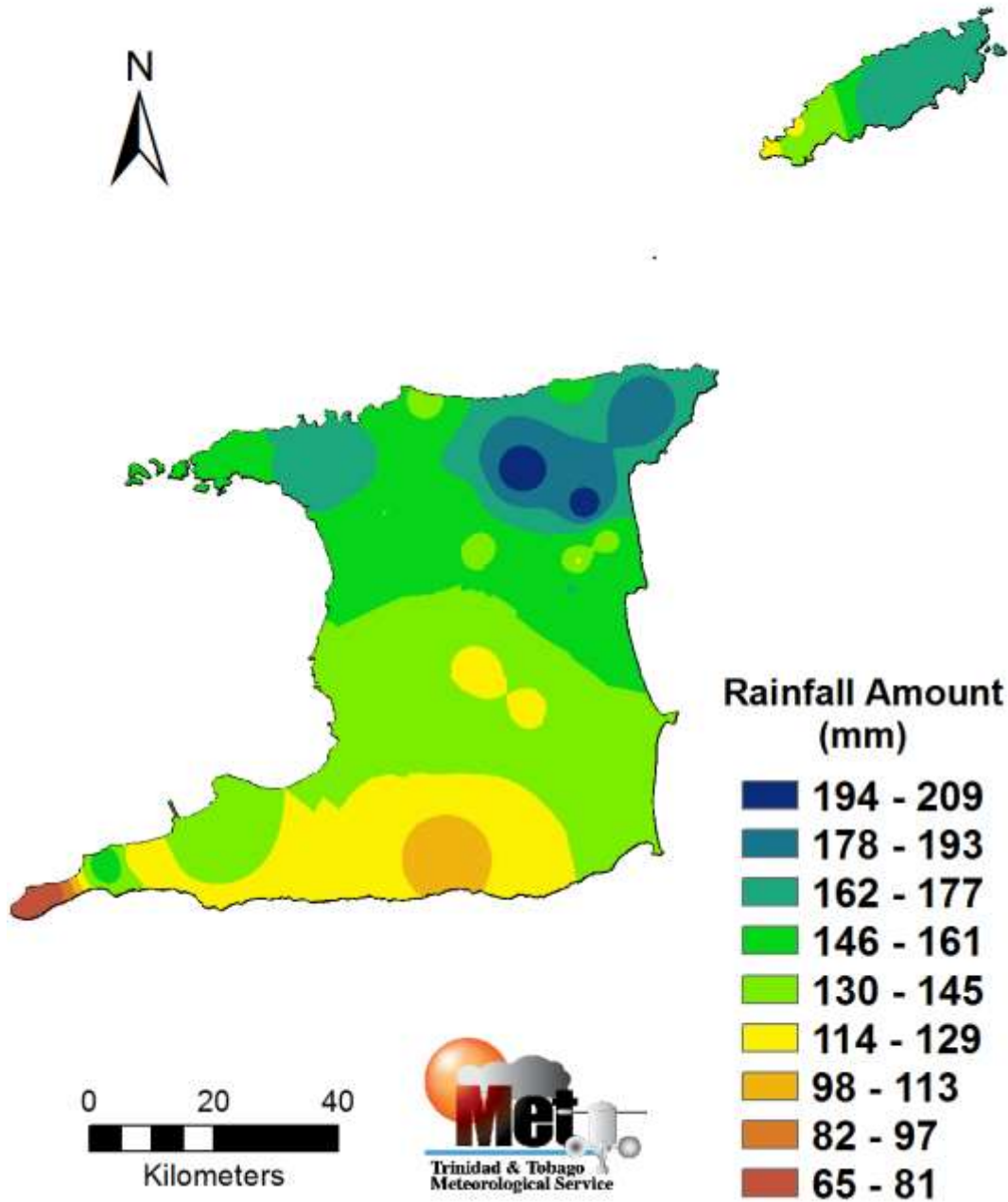


Figure 3: Possible rainfall totals with the highest chance of occurring for September 2017.

- ✓ September rainfall totals with highest chance of occurring range between 65mm and 210mm in Trinidad and 120 and 180mm in Tobago.

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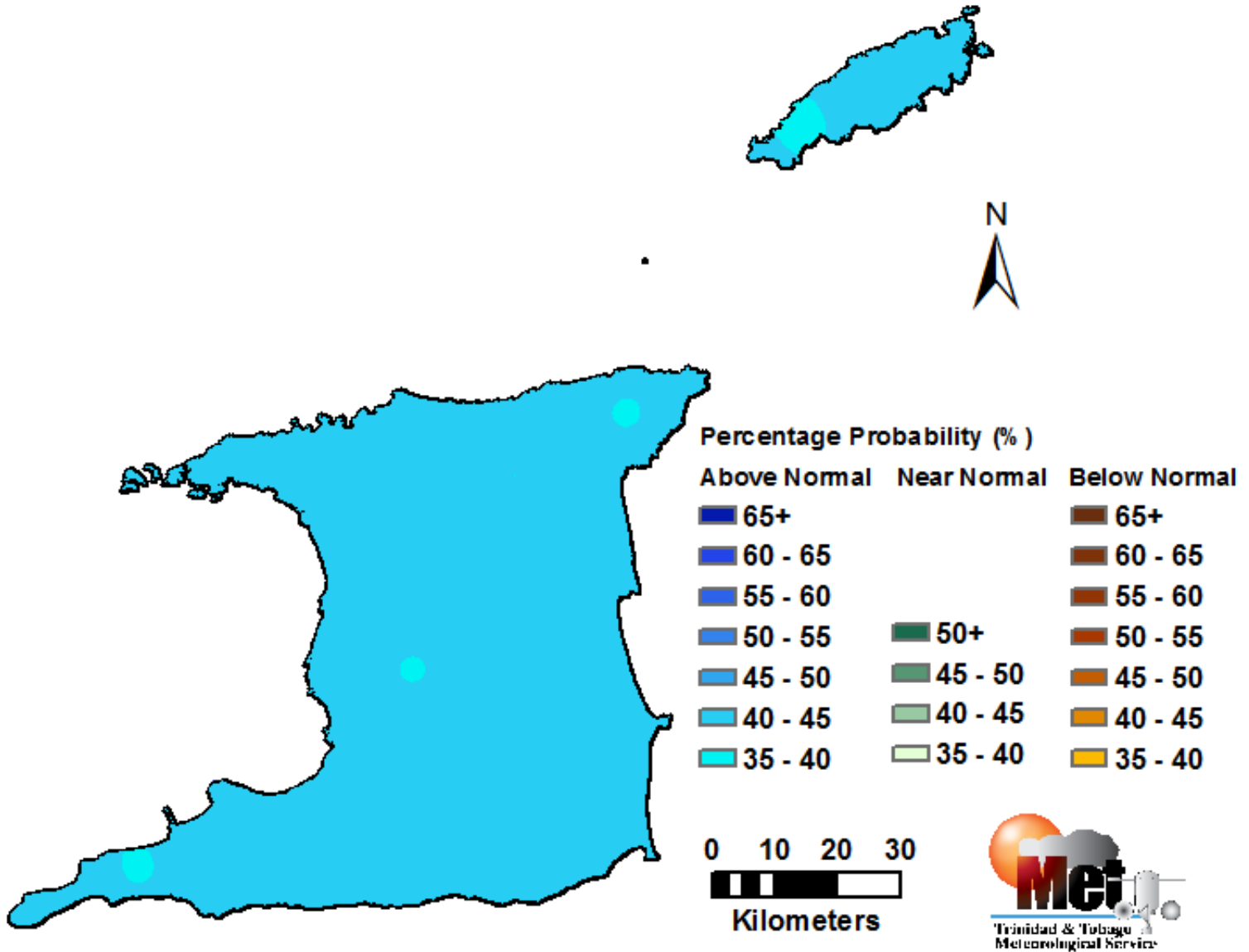


Figure 2: Category of rainfall likely for December 2017 to February 2018 (DJF) with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blue areas indicate places with an increased chance for above normal rainfall, brown areas show an increased chance for below normal rainfall, while green areas show an increased chance for near normal rainfall. Normal is defined by the rainfall that was observed in middle one-third of the DJF seasons during the historical period used to produce the outlook.

- ✓ DJF is likely to wetter than usual with accumulated rainfall totals favoured to be in the above average category across both islands.

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The Temperature Outlook Favours Hotter than Usual Temperatures for SON 2017

- ✓ Both daytime and night temperatures are likely to be hotter than average over both islands with a 67% chance for hotter than average maximum temperatures in Trinidad and 60 % chance in Tobago;
- ✓ Chances of warmer than average nights are highest in Trinidad where there is 72% chance; while Tobago has a 63% chance;
- ✓ Usually September and October is characterized as the latter part of the second heat season in Trinidad and Tobago. There is a high chance (72%) for increases in short duration hot-spells and hot days during September and October (hot day: maximum temperatures greater than or equal to 34.0°C in Trinidad and 32.0°C in Tobago; hot-spell: 3 or more successive hot days);
- ✓ Historically, September is the warmest month during SON. For the forecast period, October is likely to be the warmest month, with maximum temperatures likely to get as high as 35.0°C in Trinidad and 33.5°C in Tobago.

Likely Implications for Below Normal Rainfall and Warmer than Normal Temperatures

- ✓ Most areas in Trinidad are already ground soaked and water levels are high. With below normal rainfall totals, less frequent but extremely heavy downpours, there are still high risks for flash and riverine flooding, landslips and landslides;
- ✓ Recent increases in surface water ponding can promote mosquito breeding leading to increased risk for incidences of vector borne diseases;
- ✓ Any rainfall mixed with warm and humid conditions tend to promote rapid multiplication of some agricultural pests, diseases and fungal growth;
- ✓ Humid and wet conditions have been associated with increase in flies and flies are known to carry and spread diseases such as Gastroenteritis and Salmonella infection;
- ✓ Below normal rainfall could still lead to reduced traffic flows, disruptions in localized travel, longer travelling times and increased disruption of outdoor activities during and after heavy downpours;
- ✓ Hotter than usual temperatures can enhance some health risks that are sensitive to or related to extremely hot conditions. Those most likely to be affected include frail and fragile elderly persons, babies and young children, socially isolated and displaced, and persons with heat related illnesses.

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How Should You Respond?

Take Early Action!

Health Sector:

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

Disaster Risk Management Sector:

- ✓ Sensitize communities on the forecast and its negative impacts;
- ✓ Revisit early warning information dissemination channels;
- ✓ Alert communities in low lying areas (flood prone) to act early;
- ✓ Alert at risk residence and communities that are still prone to landslide and slip.

Agriculture & Food Security Sector

- ✓ Practice soil moisture conservation like mulching and trenches;
- ✓ Put in place disease control measures.
- ✓ Pay attention to the Agromet Forecasts and Bulletins for potential heavy rainfall and flood related days

Water, Drainage and Energy sector

- ✓ Continue routine de-silting of water channels, canals and reservoirs;
- ✓ Remove dry branches, trees and overhang near electrical wires.

General Public

- ✓ Proper preparation especially for persons at risk and in risk areas;
- ✓ Clean drains and surrounding areas of debris, be sand-bag ready;
- ✓ Conserve, store and manage water in a safe and adequate manner;
- ✓ Be watchful for extreme rainfall events especially on extremely hot days;
- ✓ Be watchful for extreme hot days and spells;
- ✓ Take measures to lessen the potential impacts from the expected increase in rainfall and warmer than average temperatures.

Be vigilant and visit the Met Service website regularly to keep up to date on local weather changes daily at www.metoffice.gov.tt follow us on Facebook and Twitter or download our mobile app on Google Play Store or Apple iStore.



Climatic Influencers and Context of the Outlook

- ✓ Currently, sea surface temperatures (SSTs) in waters surrounding Trinidad and Tobago and further east of the islands are warmer than average. Most climate models surveyed favour cooling during SON but remaining near to above average. This is likely to exert the greatest influence on local rainfall during SON.
- ✓ SST's in the Nino 3.4 region of the Pacific Ocean have cooled during the four weeks ending August 26 with ENSO-neutral condition on the cool side currently existing. ENSO-neutral cool is favoured to persist during SON. Historically, ENSO-neutral conditions have been associated with the suppression of local rainfall, but not always.
- ✓ After ending July in a positive phase, the North Atlantic Oscillation (NAO) transitioned to a negative phase for most of August and is forecast to return to positive phase during the first two weeks of September. Based on analysis, the immediate overall influence of the NAO is likely to be negative on local rainfall.
- ✓ Models indicate a low Madden Julian Oscillation (MJO) signal during mid to late August with the rainfall enhanced phase likely to encroach on the region. This can have a positive influence on late August rainfall.
- ✓ The Saharan Air Layer (SAL) remains active and is likely to continue exerting some influence on local rainfall during SON.

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