



Date of Issue: 01/02/2018

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

### February to April 2018 Likely to Be Wetter and Warmer Than Usual

#### Key Messages

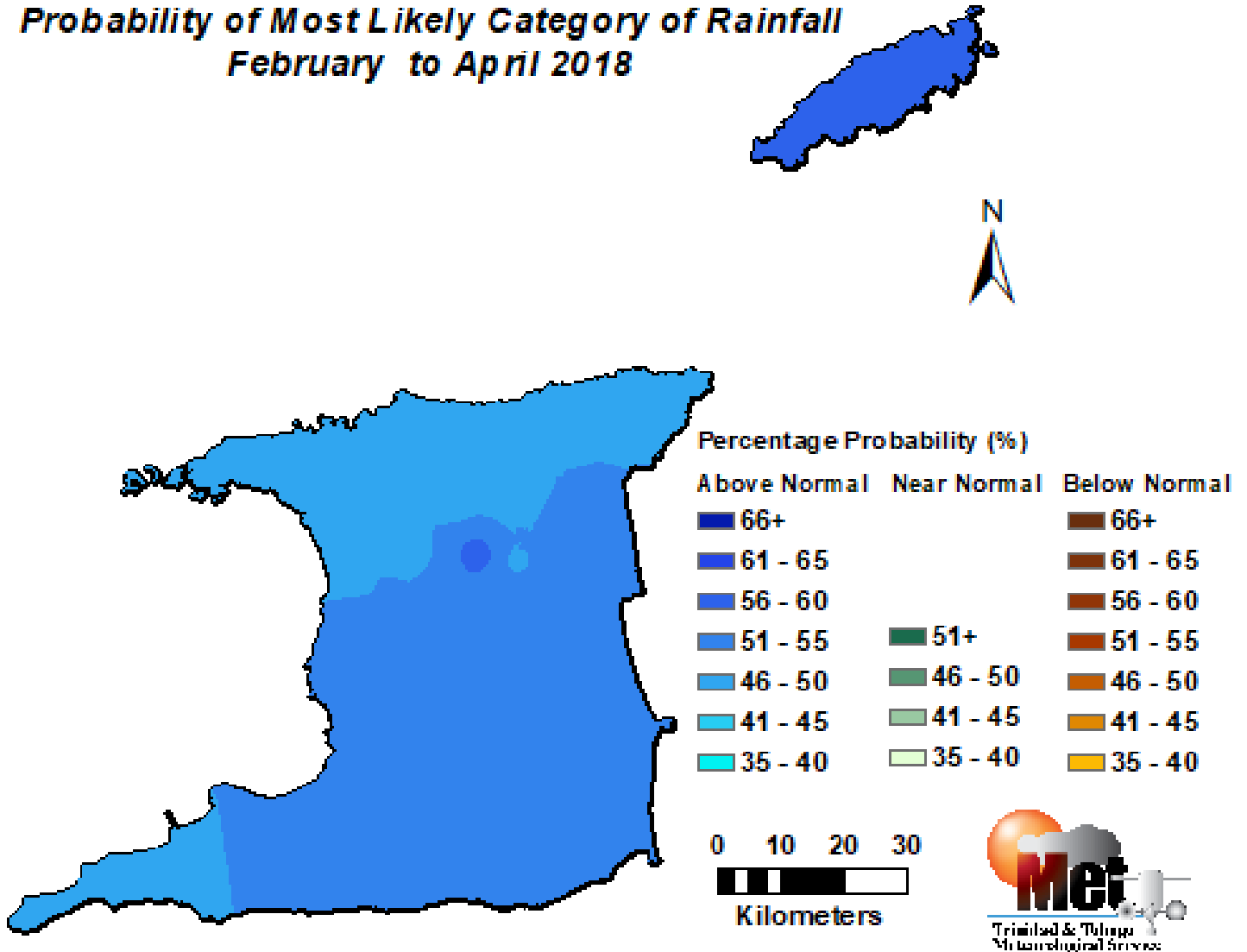
- ✓ February to April (FMA) 2018 rainfall outlook shows the highly increased chance for wetter than usual conditions, with accumulated rainfall totals likely to be in the above normal category (rainfall totals above 125% of the long term mean) across Trinidad and Tobago (**medium confidence**);
- ✓ There is 40-60% chance for accumulated rainfall totals in excess of 200 mm over the season;
- ✓ Moderate (50%-60%) chance for at most two 7-day dry spells (days with less than 1.0 mm) during FMA;
- ✓ The chance for FMA to be extremely dry is low or below 15% (**high confidence**);
- ✓ Preliminary analysis indicates that January rainfall was above average;
- ✓ May to July rainfall outlook shows the highest chances are for near usual rainfall (**low confidence**);
- ✓ Warmer days and nights are expected as both day and night temperatures are likely to remain higher than average for all of Trinidad and Tobago. Chances are higher in cities and built-up areas;
- ✓ Episodes of rough seas are typical during the FMA season;
- ✓ Episodes of severe dust-haze outbreaks are typical during the FMA season.

#### Likely Impacts

- ✓ Possibility of reduced water availability, water levels and water stress as the season progresses;
- ✓ Increased potential for grass, bush and forest fires as the season progresses;
- ✓ Potential for periods of excessive heat, which can increase heat-stress for persons with heat-sensitive ailments and for heat-exposed livestock and other animals, as the season progresses;
- ✓ Possibility of increased disruption in marine activities due to episodes of rough seas;
- ✓ Significant amounts of dust concentrations could increase air pollution. Persons whose are sensitive to dust (asthma cases and other respiratory ailments), should prepare early;
- ✓ Possibility of increased incidences of pests and diseases that thrive in drier conditions.

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 February to April 2018

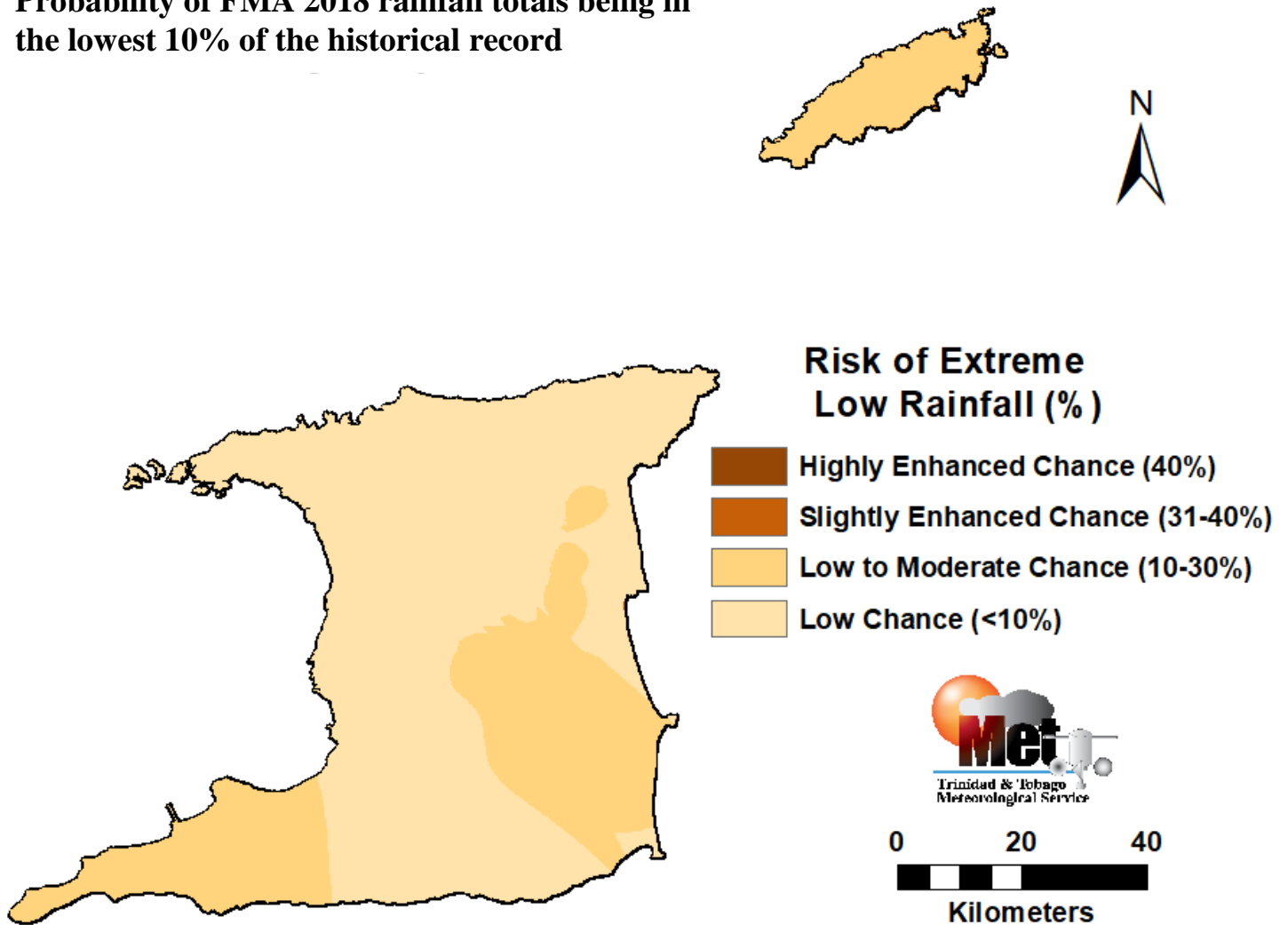


**Figure 1: Category of rainfall likely for FMA 2018 with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blue indicates that it is more likely for above normal rainfall to occur than for below normal or near normal, brown indicates it is more likely for below normal rainfall, while green indicates it is more likely for near normal rainfall. Normal is defined by the rainfall that was observed in middle one-third of the FMA period rainfall totals during the historical period used to produce the outlook.**

- ✓ The rainfall outlook for FMA 2018 favour wetter than usual conditions with above normal accumulated rainfall totals across Trinidad and Tobago having the highest chance of occurrence compared to the chance for below- or near-normal (**medium confidence**).
- ✓ This means most regions of the country are likely to receive total rainfall amounts that are above 125% of the long term mean. For instance at Piarco this means accumulated FMA rainfall totals greater than 174.8mm and greater than 162.3mm at Crown Point.

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.

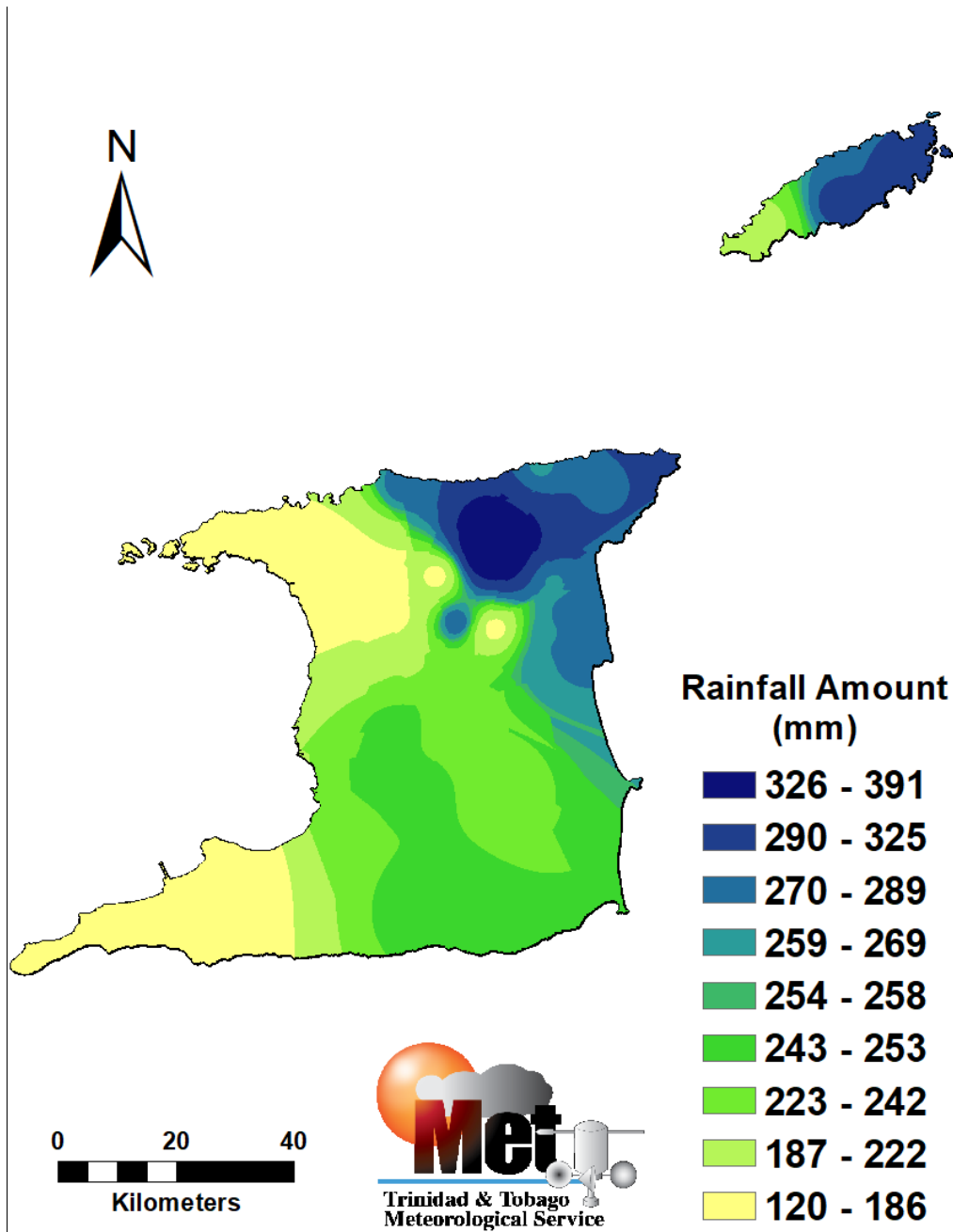
## Probability of FMA 2018 rainfall totals being in the lowest 10% of the historical record



**Figure 2: Risk of FMA 2018 being extremely drier than normal (accumulated rainfall totals in the lowest 10% on record).**

- ✓ The chance for the FMA period to be extremely dry is low to moderate (**high confidence**).
- ✓ While the chance is relatively small, if this should occur, it can have high impact on all sectors.
- ✓ Chances are moderately enhanced (50% -60%) for one or two 7-day dry spells (days with less than 1.0 mm of rainfall) during FMA;

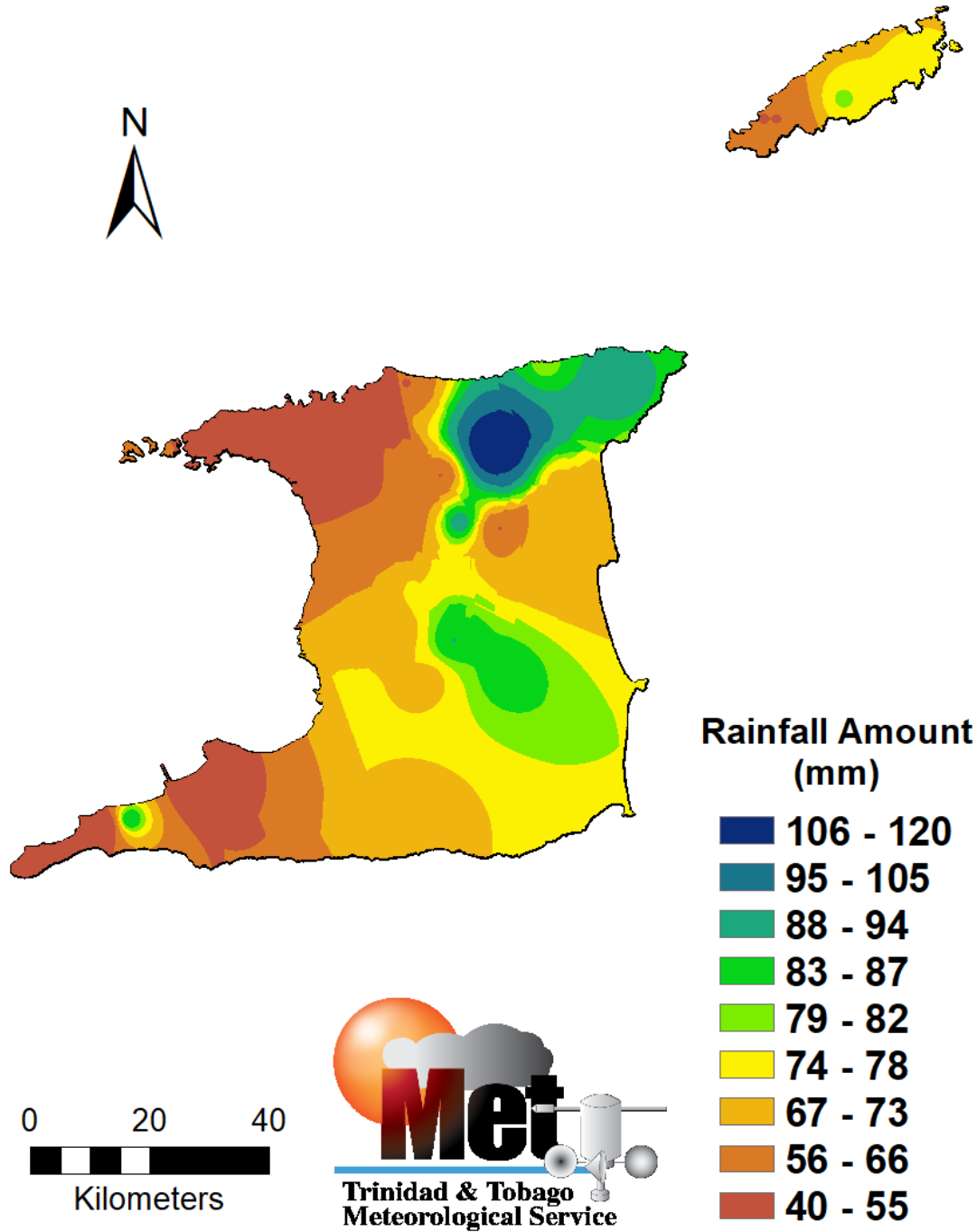
Disclaimer: This information is provided with the understanding that the Trinidad and Tobago Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the assessment or outlook contained in this document. This Outlook 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 3: Possible accumulated rainfall totals with the highest chance of occurring during February to April 2018.**

FMA largest rainfall accumulated totals are likely to be near 400.0mm in areas such as Valencia, Sangre Grande and environs in east Trinidad; and near 300.0mm in Mt Saint George and Goodwood areas of Tobago. Smallest totals are likely to be in the south-western areas of both islands (**moderate confidence**).

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.

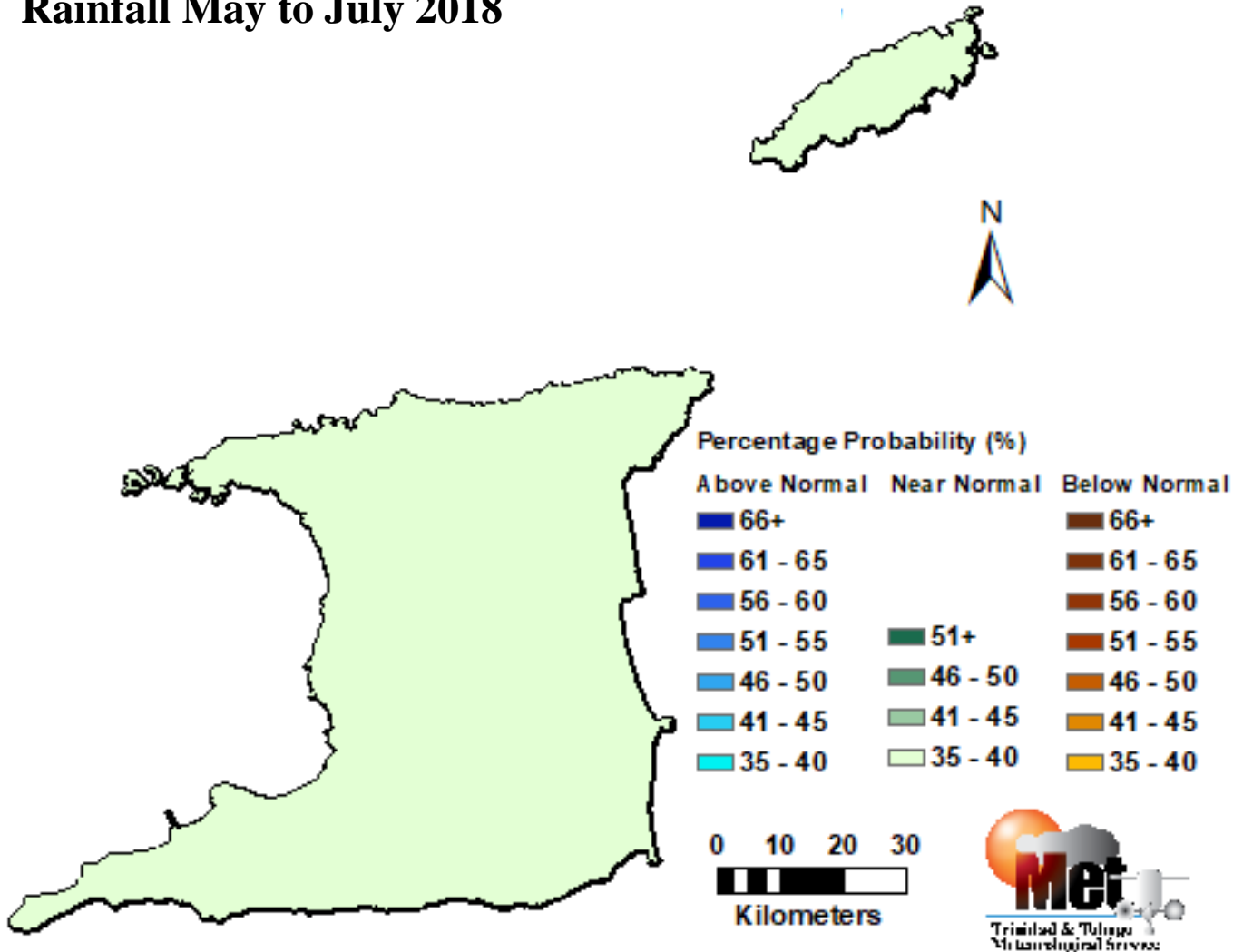


**Figure 4: Possible rainfall totals with the highest chance of occurring during February 2018.**

February rainfall totals with highest chance of occurring range between 40.0mm and 120.0mm in Trinidad and between 55.0mm and 79.0mm in Tobago (**moderate confidence**).

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 May to July 2018



**Figure 5: Category of rainfall likely for May to July (MJJ) 2018 with the highest chance of occurrence expressed as probabilities represented on the map. Blue indicates that it is more likely for above normal rainfall to occur than for below normal or near normal; brown indicates it is more likely for below normal rainfall; while green indicates it is more likely for near normal rainfall. Normal is defined by the rainfall that was observed in middle one-third of the MJJ period rainfall totals during the historical period used to produce the outlook.**

- ✓ May to July (MJJ) 2018 is likely to be as wet as usual with accumulated rainfall totals favoured to be in the near normal category, across both islands (**low confidence**).

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.



### **The Temperature Outlook Favours Higher than Usual Temperatures during FMA 2018**

Trinidad and Tobago is likely to get warmer than usual conditions during FMA;

Both day and night temperatures are favoured to be above average with maximum temperatures likely to exceed 34.0°C in Trinidad and 32.0°C in Tobago on occasions during March and April;

There is a strong possibility for one or two short duration hot spells (at least 3 consecutive days of temperature greater than 34.0°C in Trinidad and 32.0°C in Tobago) during March and April.

Chances for this to occur are higher in cities and built-up areas;

At the same time a few February nights are likely cool to minimum temperatures near 22.0°C.

### **Likely Implications**

- ✓ Reduced water availability, water levels and increased water stress later on in the season, given that wetter than usual conditions during the dry season may not be substantial rainfall amounts;
- ✓ Increased potential for grass, bush and forest fires as the season progresses;
- ✓ Increased potential for short periods of excessive heat. These can increase heat-stress for persons with heat-sensitive ailments and for heat-exposed livestock and other animals;
- ✓ Rough sea events are likely to disrupt marine activities and transportation and make sea-faring trips less comfortable;
- ✓ Likelihood of severe dust-haze outbreaks remains high especially during March and April. Significant amounts of dust concentrations could increase air pollution and this can impact persons whose health and well-being are sensitive to dust (such as persons with asthma and other respiratory ailments);
- ✓ Possibility of increased incidences of pests and diseases, such as the sweet potato weevil, which are associated with drier conditions.



**How Should You Respond?**

**Take Early Action!**

**Health Sector:**

- ✓ Conduct sensitization and awareness campaigns on sanitation and hygienic issues to reduce outbreak of climate-sensitive diseases;
- ✓ Ensure adequate availability of pharmaceuticals for respiratory ailments;
- ✓ Increase awareness among staff on the possibility of spikes in cases with excess-heat related ailment, vector and air borne illnesses.

**Disaster Risk Management Sector:**

- ✓ Continue to sensitize communities on the forecast and its negative impacts, including information about the impacts of bushfires, hot spells, and possibility of reduced water availability;
- ✓ Alert communities in bush-fire prone areas so that they can take early action;
- ✓ Revisit early warning information dissemination channels.

**Agriculture & Food Security Sector**

- ✓ Harvest water during the wetter days of the season;
- ✓ Use available water sparingly to ensure longer water availability for crop growing;
- ✓ Use mulching and trenching to prolong moisture at the crop root zone.

**Water, Drainage and Energy sector**

- ✓ De-silt water channels, canals and reservoirs;
- ✓ Excessive heat can cause health and safety issues for persons working outdoors in exposed heat conditions;
- ✓ Implement awareness campaigns on the efficient use of water.

**General Public**

- ✓ Conserve, store and manage water in a safe and adequate manner;
- ✓ Be watchful for extremely hot days;
- ✓ Be watchful when burning debris.

Be vigilant and visit the Met Service website regularly to keep up to date on local weather changes daily at [www.metoffice.gov.tt](http://www.metoffice.gov.tt), follow us on Facebook, Instagram and Twitter or download our mobile app on Google Play Store or Apple App Store.





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

- ✓ During the last four weeks, SSTs cooled but remain above-normal for this time of the year in waters surrounding Trinidad and Tobago and most of the North Atlantic Ocean. Warmer than normal SSTs tend to enhance local rainfall.
- ✓ Weak La Niña conditions continue but appear to be abating, even though it is still likely (~85-95%) to persist throughout February, with an expected transition to ENSO-neutral conditions during March. Historically, weakening La Niña conditions have shown some association with favouring local rainfall during FMA, but not always.
- ✓ Since early December 2017, the North Atlantic Oscillation (NAO) has been trending positive and this trend is likely to continue over the first two weeks of February. A positive NAO tends to aid in cooling SSTs in waters around Trinidad and Tobago. Cooler SSTs usually have a negative influence on local rainfall.
- ✓ The current signal of the Madden Julian Oscillation (MJO) suggests there is potential for it to influence local rainfall positively, during the next two weeks. The MJO increased in amplitude during late January with its rainfall enhancement phase currently in the Western Pacific Ocean. Dynamical and statistical model outputs show the most likely scenario is for the rainfall enhancement phase of the MJO to be within the region during early to mid-February

Multiple competing climatic influencers currently exist. The precipitation and temperature outlook is based on guidance from statistical and dynamical seasonal climate outlook models, the status of SSTs surrounding Trinidad and Tobago and known sub-seasonal to seasonal climate influencers (La Niña, Madden Julian Oscillation and North Atlantic Oscillation). The outlook compared well with global climate models that are favouring average or above average rainfall in the Caribbean region for the same the same period. This increases confidence in the outlook.