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

Best chance is for a drier than usual June to August and a wetter than usual September to December; but flooding potential remains high for the 2018 wet season, which is expected to be highly variable

Key Messages

- ✓ The outlook for the overall 2018 wet season indicates near normal rainfall totals (that is totals between 75% and 125% of average) have the most likely chance of occurring when compared with the chance for below normal and above normal totals (**High confidence**);
- ✓ June to August (JJA) 2018 rainfall outlook shows the best chance is for drier than usual conditions. Accumulated rainfall totals are likely to be in the below-average category (rainfall totals less than 75% of the long term mean), **High confidence**;
- ✓ There is a 30% -65% chance for accumulated rainfall totals in excess of 600 mm. Typically significant rainfall is needed to exceed the average during this period;
- ✓ The forecast indicates fewer wet days and wet spells than usual **(High confidence**);
- ✓ The chance for JJA to be extremely dry is moderate to slightly enhanced **(Medium confidence)**;
- ✓ June rainfall is likely to be less than usual **(High confidence)**;
- ✓ September to November accumulated rainfall outlook shows the best chance is for above-normal rainfall (**Medium confidence**);
- ✓ Both day and night temperatures are forecasted to remain higher than average ;
- ✓ Episodes of dust-haze outbreaks are not uncommon during the JJA.

Likely Impacts

- ✓ Possible gradual onset to the wet season in both islands;
- ✓ Possibility of reduced water availability and water levels leading to increased water stress as the season progresses;
- ✓ Possible slower than usual increase in surface wetness during the early wet season;
- ✓ Possible slower than usual recharge rates of water reservoirs/dams;
- ✓ Flooding potential associated with heavy rainfall and short duration wet spells is enhanced for flood prone areas;
- ✓ Possibility of increased incidences of pests and diseases that thrive in increased moist conditions.

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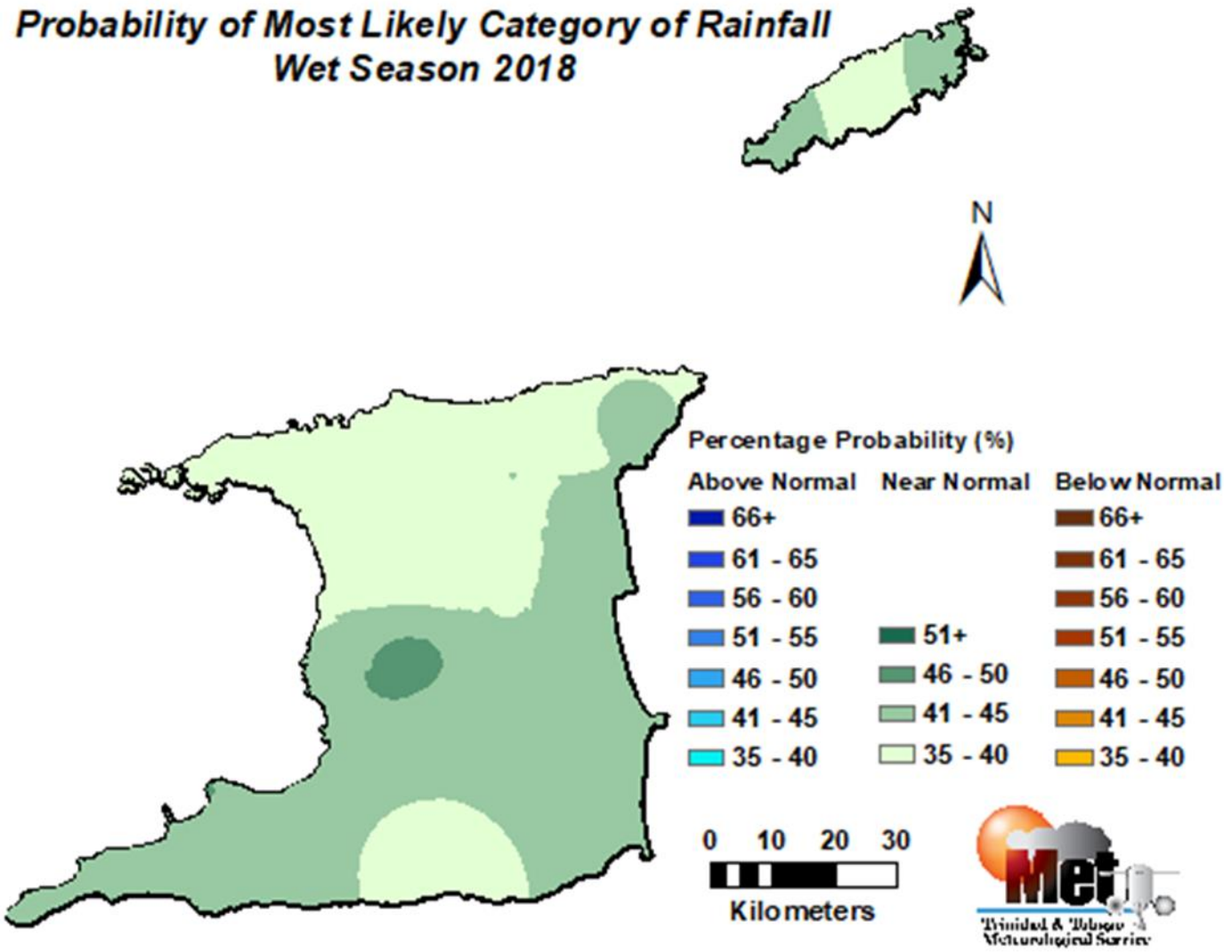

Figure 1: Category of rainfall likely for Wet Season 2018 with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blue indicates that it is more likely for above normal rainfall to occur than for below normal or near normal. Brown indicates it is more likely for 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 Wet Season rainfall totals during the historical period used to produce the outlook.

- ✓ The 2018 wet season is expected to be an erratic one, with daily to monthly extremes expected;
- ✓ Currently, there is no strong signal for an overall wetter or drier than average wet season. The likelihood is for near average/normal accumulated rainfall totals for the country. The chance of this occurring near 40% or greater.

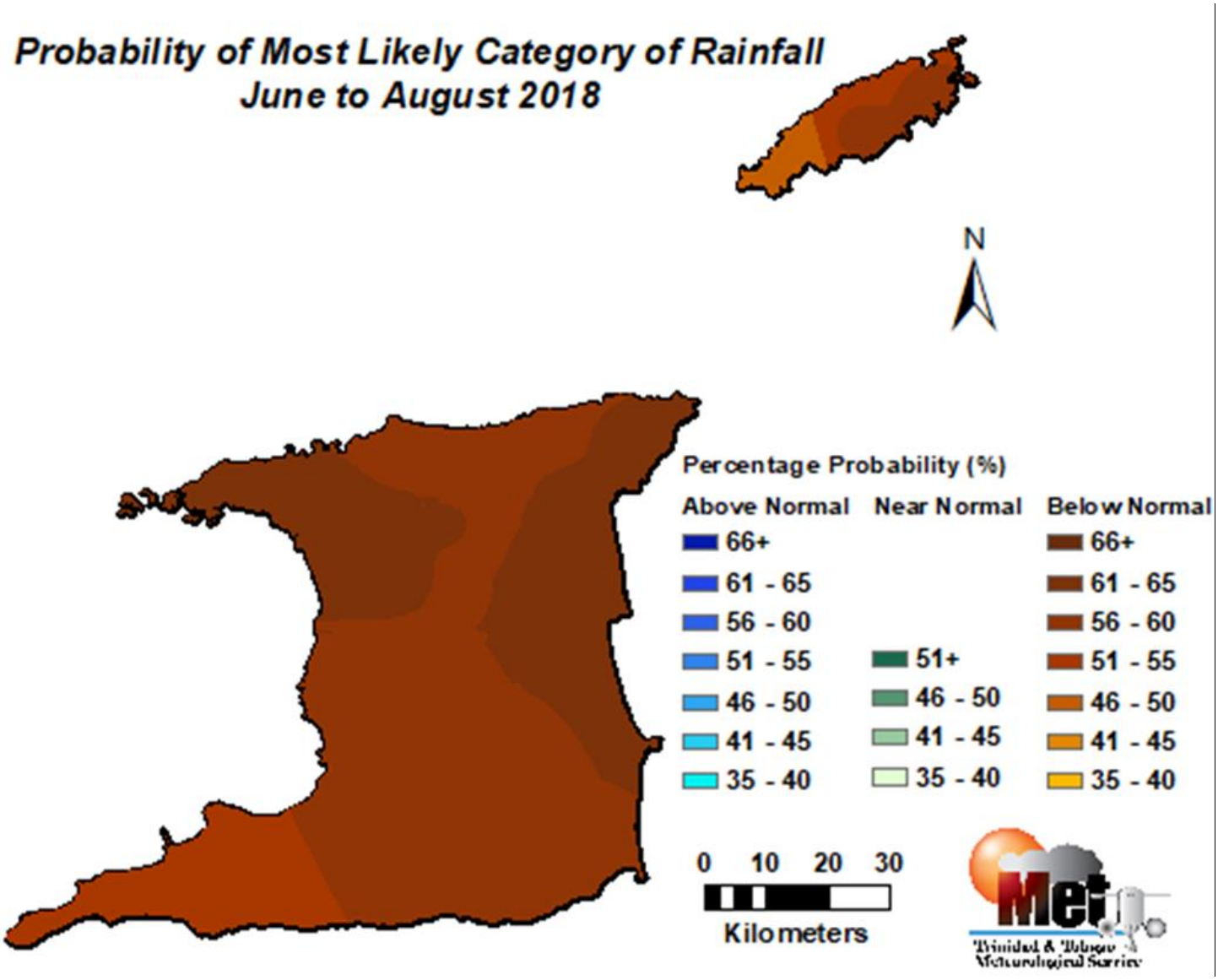

Figure 2: Category of rainfall likely for JJA 2018 with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blue indicates that it is more likely for above normal rainfall to occur than for below normal or near normal. Brown indicates it is more likely for below normal 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 JJA period rainfall totals during the historical period used to produce the outlook.

- ✓ The rainfall outlook for JJA 2018 has increased chances for less than the usual rainfall amounts with accumulated rainfall totals favoured to be in the below normal category, when compared with the chance for near- or above-normal **(high confidence).**

- ✓ This means all areas of the country are likely to receive total rainfall amounts that are less than 75% of the long term average. For instance, at Piarco, this means possible accumulated JJA rainfall totals less than 582.1 mm and at Crown Point less than 389.3 mm.

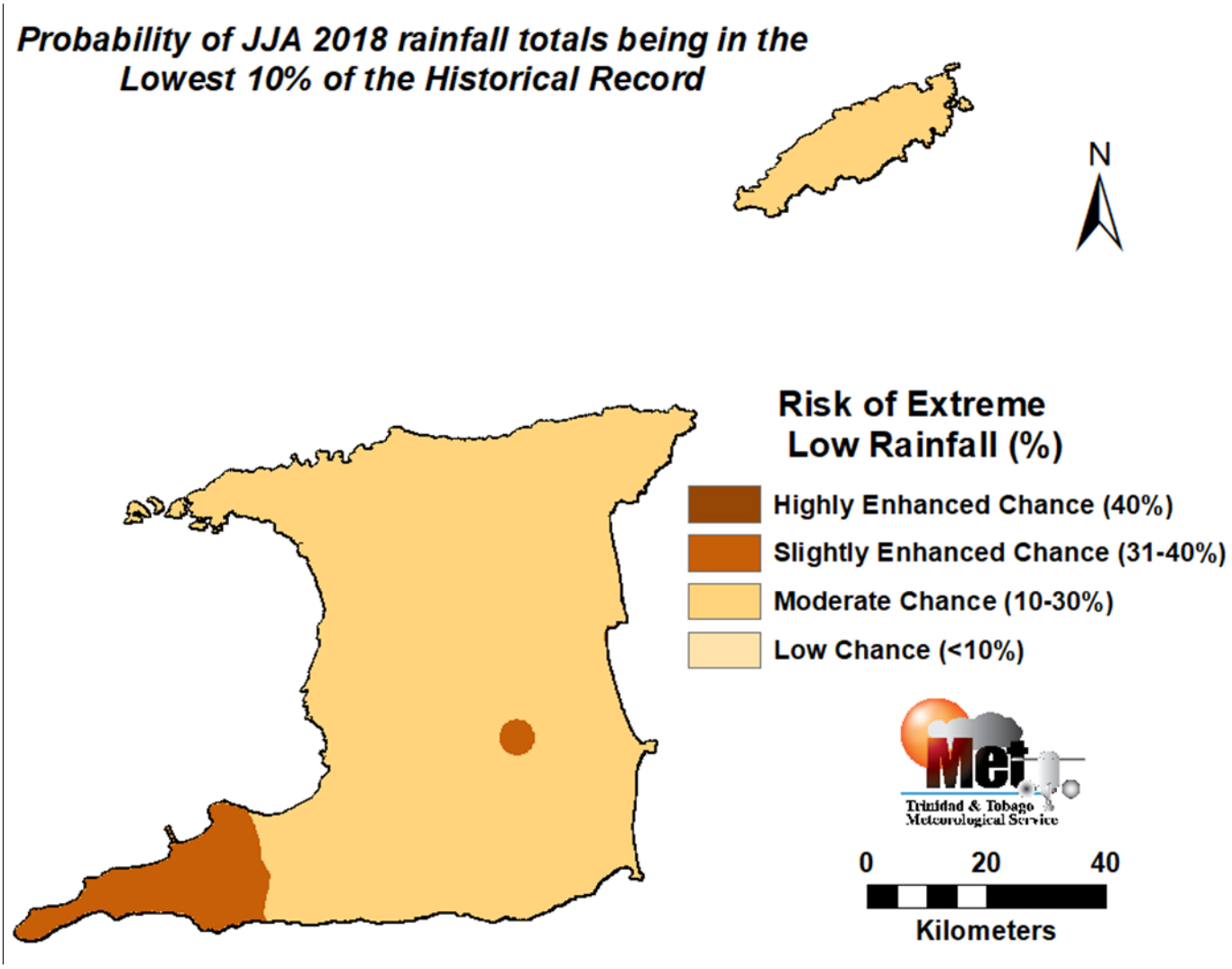

Figure 3: The map shows the chances for extremely dry conditions over the next three months. Extreme refers to the lowest 10% of June to August accumulated rainfall in the historical record.

- ✓ The chance for the JJA period to be extremely dry is slightly enhanced in southwest Trinidad and moderate elsewhere **(medium confidence);**

- ✓ Moderate to slightly enhanced chances are relatively high chances, and should be of concern, especially in areas where the country's key water intakes are located. Should this occur during JJA, it can have far reaching negative impacts on water, agriculture and other climate sensitive sectors.

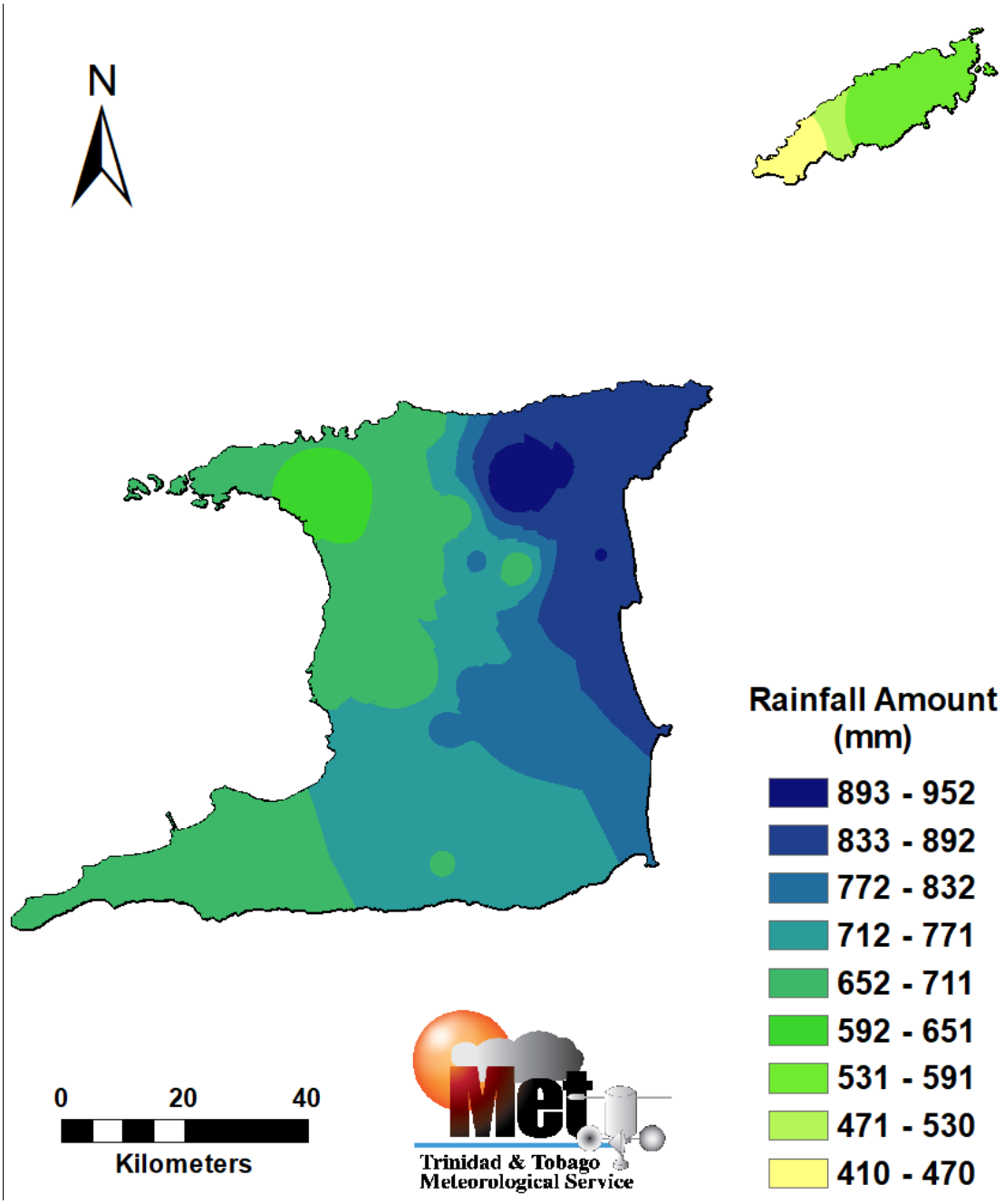

Figure 4: Possible accumulated rainfall totals with the highest chance of occurring during June to August 2018.

Largest rainfall accumulated totals are likely to be near 952.0mm in Valencia and surrounding environs in east Trinidad with smallest totals likely near the Port of Spain area;

Tobago's largest totals are likely to be near 550.0 mm in the Mt. Saint George and other northeastern areas while smallest totals are likely in the southwest, near Mt Irvine and environs.

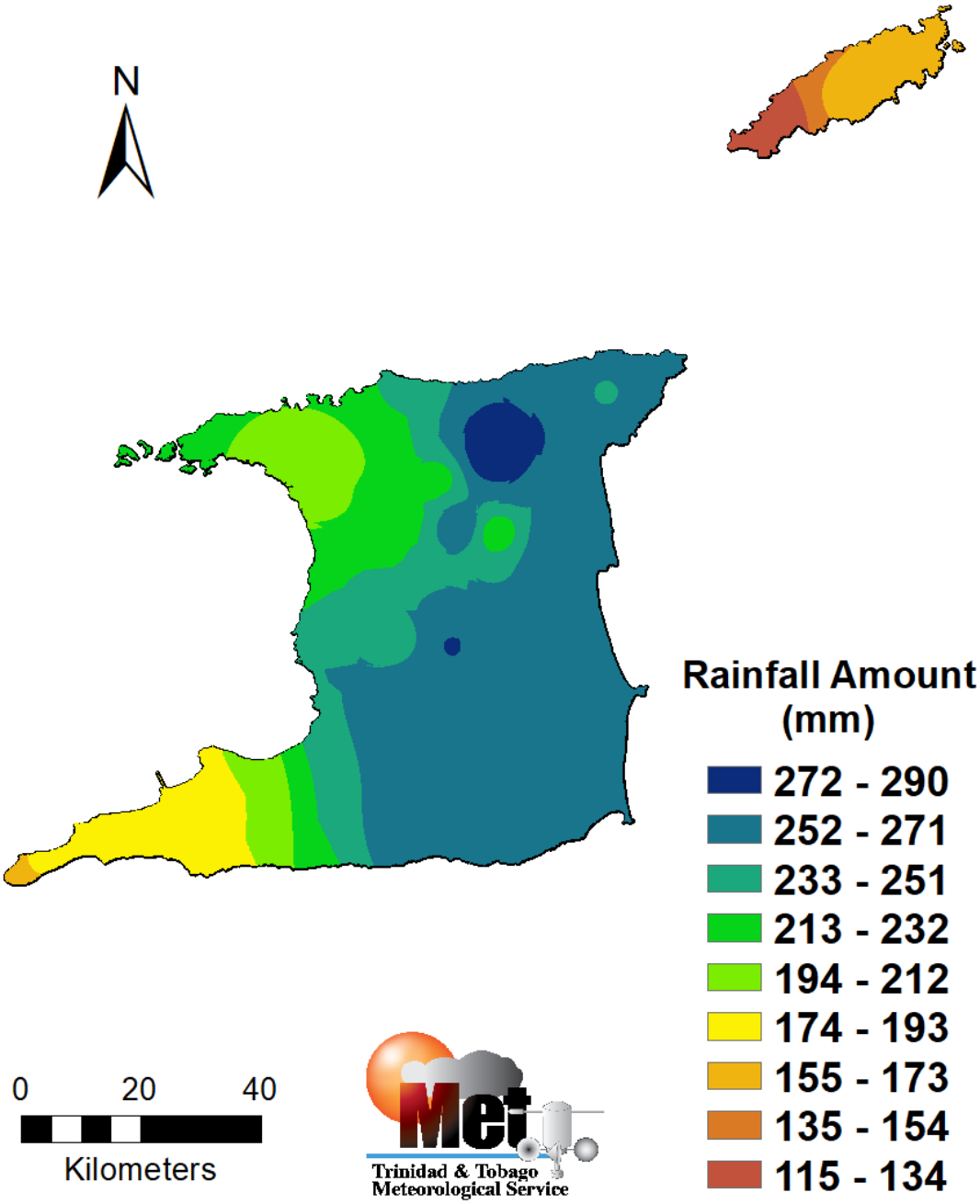

Figure 5: Possible rainfall totals with the highest chance of occurring during June 2018.

June 2018 is likely to be drier than usual with rainfall totals likely to be below average **(High confidence)**.

Possible rainfall totals range between 115.0 mm and 290.0 mm in Trinidad and between 115.0 mm and 173.0 mm in Tobago**.**

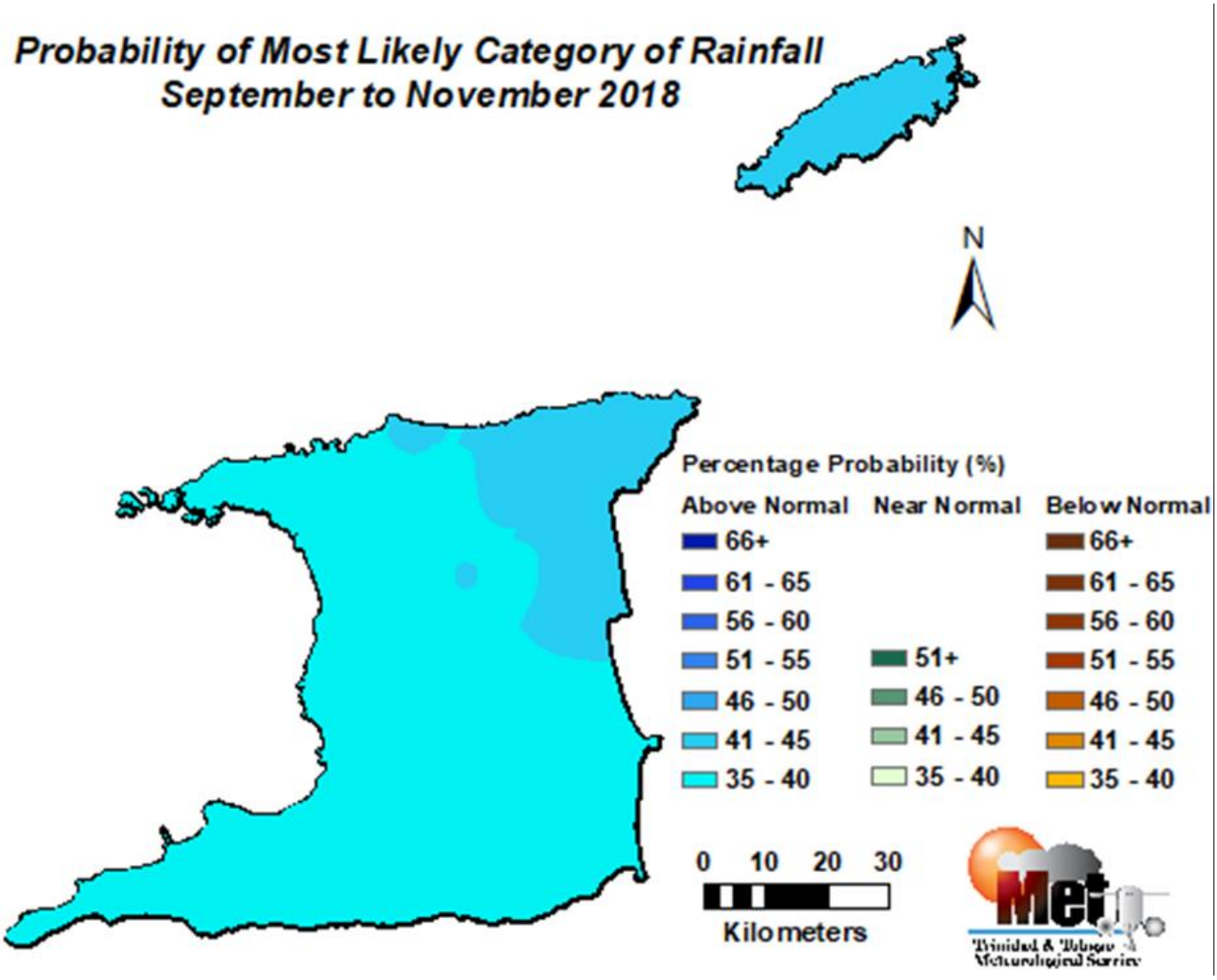

Figure 6: Category of rainfall likely for September to November (SON) 2018 with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blue indicates that it is more likely for above normal rainfall to occur than for below normal or near normal. Brown indicates it is 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 SON period rainfall totals during the historical period used to produce the outlook.

- ✓ September to November (SON) 2018 is likely to be as wet as usual with accumulated rainfall totals favoured to be in the above normal category, across both islands (**medium confidence**);
- ✓ Risk of flooding similar to last October remains high.

The Temperature Outlook Favours Higher than Usual Temperatures during JJA 2018

- ✓ Trinidad and Tobago is likely to get warmer than usual conditions during JJA with August days and nights likely to be warmest, on average;
- ✓ There is a 70% chance for maximum daytime temperatures to be hotter than average during June and a 55-65% chance during July to August;
- ✓ Chances are high (greater than 75%) for night temperatures to be warmer than average;
- ✓ There is a 45 - 55% chance for at least 7 hot spell days during the period with the chances for such days to occur being higher in Port of Spain and built-up areas.

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;
- ✓ Increased risk of flash and riverine flooding, landslips and landslides on heavy rainfall days, given that ground water recharge and surface water flows and levels are relatively high;
- ✓ Sunny skies during JJA can turn cloudy with intense rainfall in less than half an hour;
- ✓ Increases 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;
- ✓ More rainfall than normal is associated with more flies and flies are known to carry and spread diseases such as Gastroenteritis and Salmonella infection;
- ✓ Increased rainfall could lead to reduced traffic flows, disruptions in localized travel, longer travelling times and increased disruption of outdoor activities;

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

- ✓ De-silt drainage systems, canals, drains and river mouths. Perform maintenance on sluice gates;
- ✓ Clean and clear choked surface drains to allow fast drainage and to reduce flash flood;
- ✓ Clean under drains to keep their outlets open.

Waste Management Sector

- ✓ Ramp up 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

- ✓ Proper preparation especially for persons in at risk areas. Stock up on emergency supplies for 3-7 days;
- ✓ Clear dry branches/ tree-overhang near residence; Guard against the effects of excessive heat;
- ✓ 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 regularly to keep up to date with local weather changes and download our free mobile app on the Google Play Store or Apple iStore.

Climatic Influencers and Context of the Outlook

- ✓ Cooler than average sea surface temperatures (SST) in and around Trinidad and Tobago are forecasted to persist into June. This pattern typically dampens local rainfall occurrence in Trinidad and Tobago. However, most of the tropical North Atlantic SSTs are predicted to be above average by August;

- ✓ The El Niño–Southern Oscillation (ENSO) in the tropical Pacific Ocean is neutral (neither El Niño nor La Niña) and is expected to remain neutral throughout the early wet season. Most of the climate models forecast progressively warmer conditions in the tropical Pacific as the season progresses but limits warming to borderline El Niño levels by November;

- ✓ ENSO-neutral conditions during most of the wet season are likely to have little to no control on local rainfall. This means reduced chances for long-lasting very wet or dry conditions. Typically, neutral conditions during JJA do not favour any particular rainfall pattern for Trinidad and Tobago;

- ✓ Since the beginning of the year, the North Atlantic Oscillation (NAO) has mostly been in its positive phase, except for a period in March when it was in its negative phase. 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 Madden Julian Oscillation (MJO) is the main feature driving fluctuation in tropical weather on weekly to monthly timescales. The MJO is likely to be in an unfavourable phase to influence local rainfall during the first two weeks of the forecast period.

The precipitation and temperature outlook is based on statistical and dynamical seasonal climate models output and known seasonal climate influencers. The outlook is in good agreement with most of the global climate models, which favour either below average or near average rainfall in the Caribbean region for the same period. This increases confidence in the Wet Season Outlook.