	Trinidad & Tobago Meteorological Service	**Rainfall and Temperature Outlook for Trinidad and Tobago, October to December 2017**

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

Above Normal Accumulated Rainfall Totals Likely for October to December (OND) 2017
High Flooding Risks Exist

Key Messages

- ✓ The October to December outlook shows high chance of wetter than usual conditions across Trinidad and Tobago.
- ✓ October is likely to be wetter than usual for all of Trinidad and Tobago, but areas in northeast Trinidad and portions of Tobago are likely to be the wettest.
- ✓ The month of November is likely to be the wettest month during the period. This means there is strong potential for increased flood events.
- ✓ Chances are highest (54%) for above average number of extremely wet days (> 25.0 mm) during OND; with 4-8 extremely wet days likely in Trinidad and 3-6 in Tobago;
- ✓ OND accumulated rainfall totals with highest chance of occurring range between 500.0mm and 1165.0mm across Trinidad and 595.0mm and 965.0mm across Tobago;
- ✓ Both day and night temperatures are likely to be warmer than average for all of Trinidad and Tobago during OND, with chances highest in city and built-up areas;
- ✓ October is usually the end of the second heat season in Trinidad and Tobago. Expect one or two short hot spells (when maximum temperatures equal or exceed 34.0^{o}C in Trinidad and 32.0^{o}C in Tobago, over 3 or more consecutive days).

Likely Impacts

- ✓ Already soaked grounds and high water levels, along with expected heavy downpours maintain the risk for flash and riverine flooding, landslips and landslides;
- ✓ 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 October for individuals most vulnerable to extremely hot conditions.

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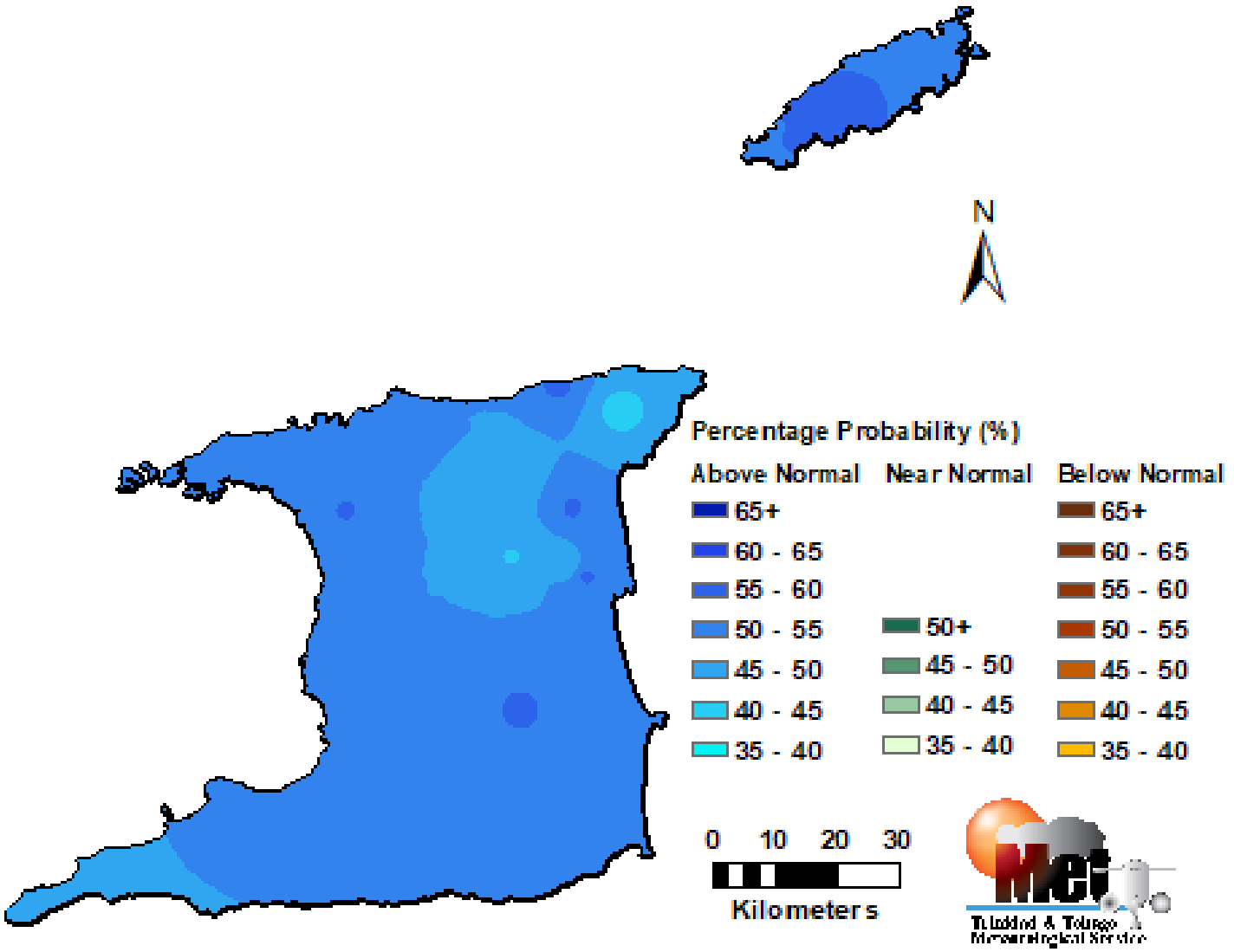

Figure 1: Category of rainfall likely for OND 2017 with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blue areas indicate places with an increased chance for above normal rainfall, brown areas show an increased chance for below normal rainfall, while green areas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

- ✓ Enhanced chances exist for above normal rainfall totals over both Trinidad and Tobago during OND with highest chances existing 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 (54%) for more than usual number of extremely wet days (> 25.0 mm) for OND; i.e. expect between 4-8 extremely wet days in Trinidad and 3-6 in Tobago, with most of these likely to occur in October and November.

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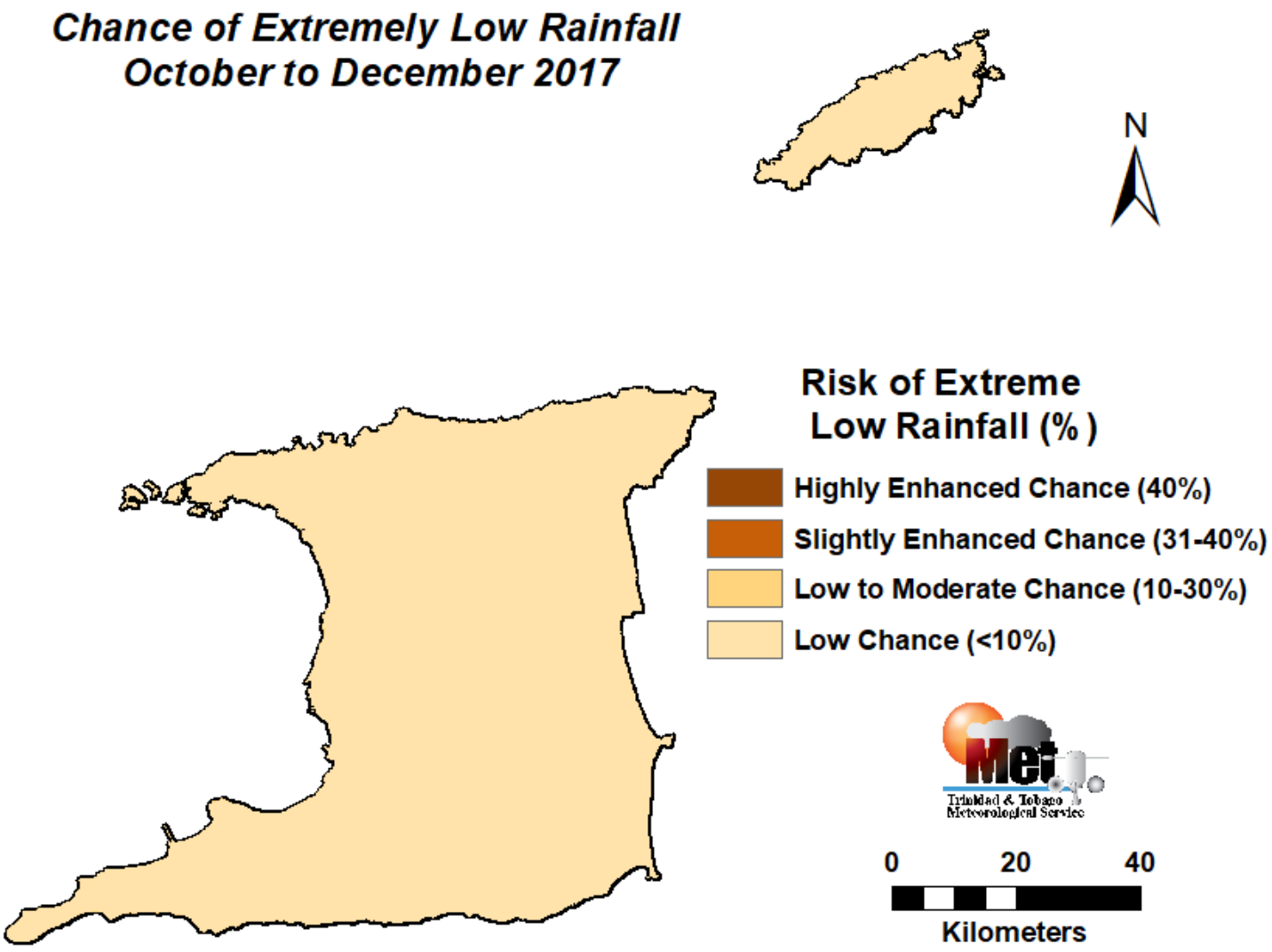

Figure 2: Risk of the OND being extremely drier than normal (accumulated rainfall totals within the lowest 10% on record).

- ✓ The risk of extremely drier than usual conditions is very low (1- 6 %) over both islands;

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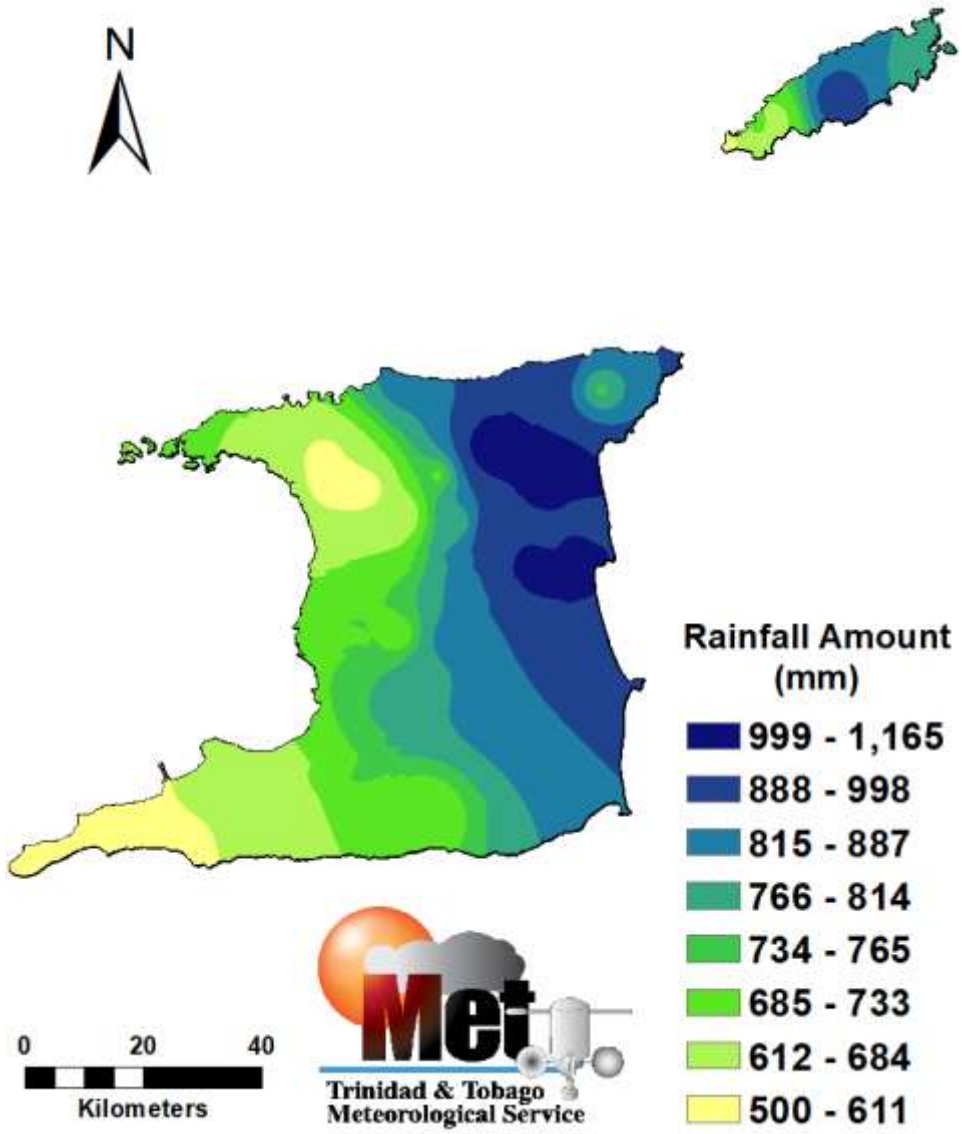

Figure 3: Possible accumulated rainfall totals with the highest chance of occurring, October to December 2017.

- OND largest rainfall accumulated totals are likely to be near 1165.0mm in areas such as Valencia, Sangre Grande and environs in east Trinidad; and near 965.0mm in Mt Saint George and Goodwood areas of Tobago.
- Typically, the month of November is Tobago's wettest month in a given year while Trinidad tends to experience a secondary peak in rainfall. This is likely to occur during November 2017.

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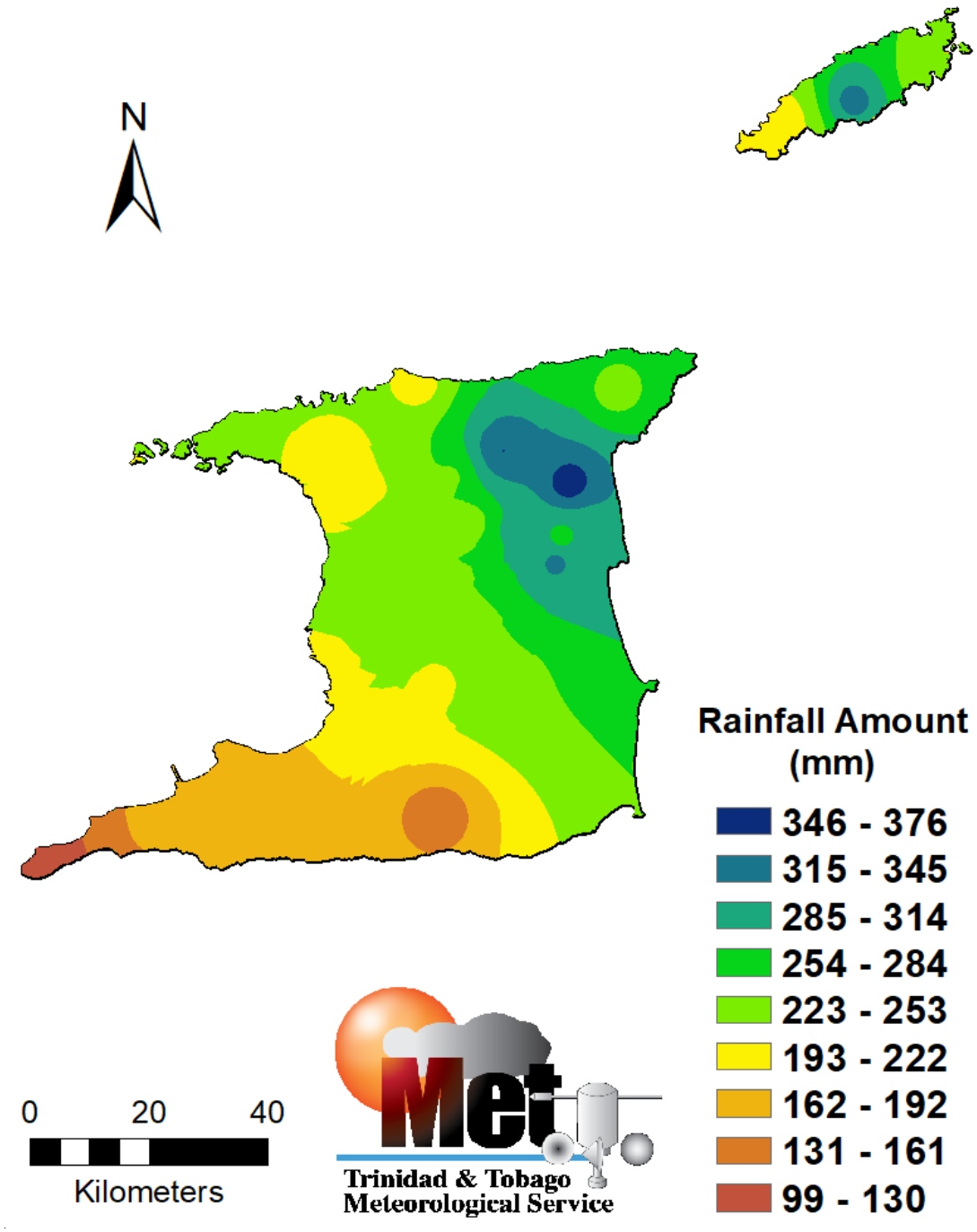

Figure 3: Possible rainfall totals with the highest chance of occurring for October 2017.

- ✓ October rainfall totals with highest chance of occurring range between 99.0mm and 376.0mm in Trinidad and 201 and 327.0mm in Tobago.

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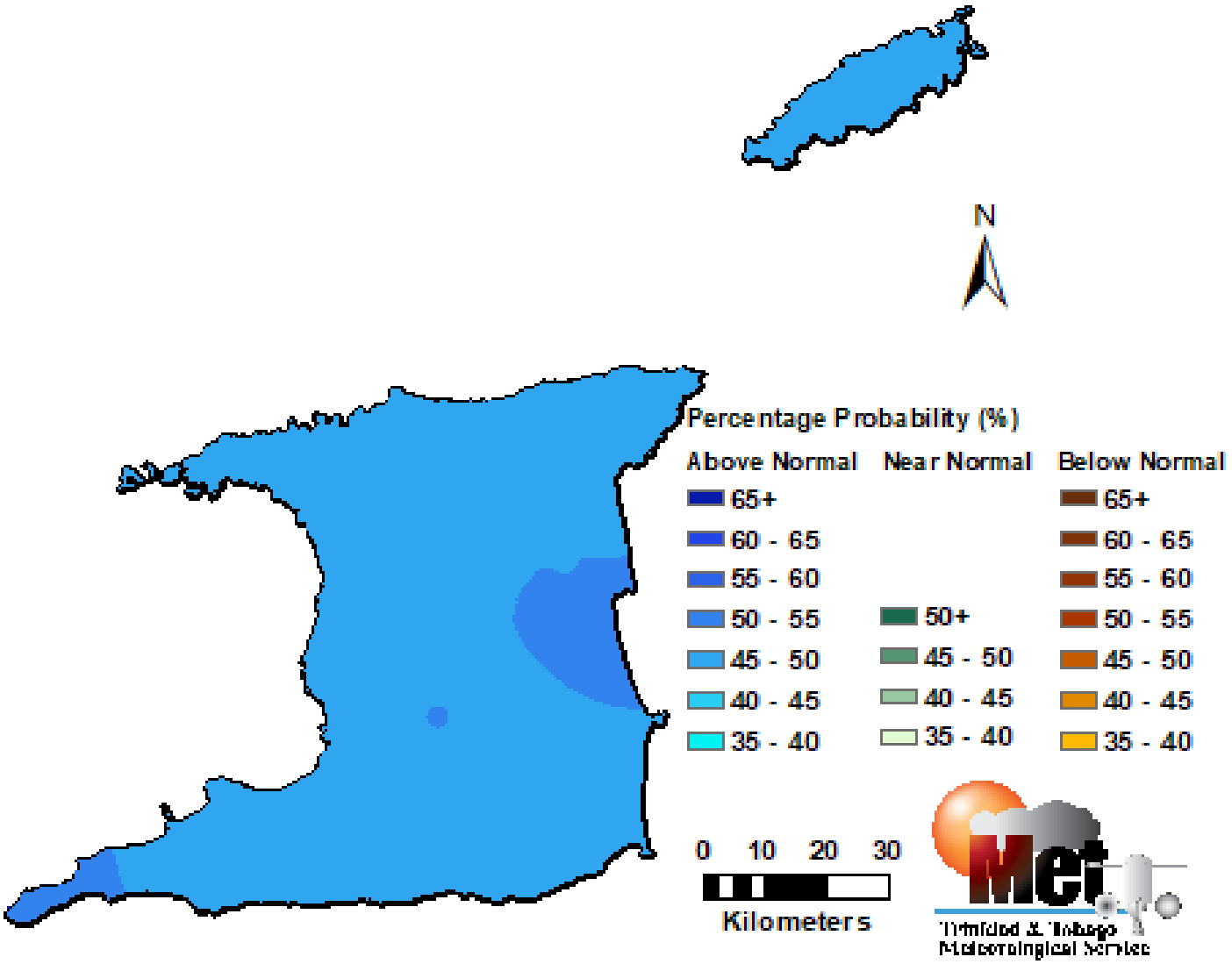

Figure 2: Category of rainfall likely for January to March 2018 (JFM) with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blue areas indicate places with an increased chance for above normal rainfall, brown areas show an increased chance for below normal rainfall, 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 JFM seasons during the historical period used to produce the outlook.

- ✓ January to March (JFM) 2018 is likely to be 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 OND 2017

- ✓ Both daytime and night temperatures are likely to be warmer than average across both islands. There is a 57% chance for hotter than average maximum temperatures in Trinidad and a 52 % chance in Tobago;
- ✓ There is a 54% chance for warmer than average nights in Trinidad and a 49% chance in Tobago.
- ✓ Usually October is characterized as part of the second heat season in Trinidad and Tobago. There is a relatively high chance (65%) for a number of short duration hot-spells and hot days during October (hot day: maximum temperatures greater than or equal to 34.0^{o}C in Trinidad and 32.0^{o}C in Tobago; hot-spell: 3 or more successive hot days);
- ✓ October is likely to be the warmest month of the period, with maximum temperatures likely to get as high as 35.0^{o}C in Trinidad and 33.5^{o}C in Tobago.

Likely Implications for Above Normal Rainfall and Warmer than Normal Temperatures

- ✓ Most areas in Trinidad are already ground-soaked and water levels are high. With above normal rainfall totals and frequent heavy downpours, the potential for flash and riverine flooding, landslips and landslides is enhanced;
- ✓ More than usual rainfall may lead to increase surface water ponding which can provide mosquito breeding sites and increase the 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;
- ✓ Above normal rainfall is usually associated with more frequent rainfall. Frequent rainfall may lead to reduced traffic flows, disruptions in localized travel, longer travelling times and increased disruption of outdoor activities;
- ✓ 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 prone to landslide and slip.

Agriculture & Food Security Sector

- ✓ 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.

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Climatic Influencers and Context of the Outlook

- ✓ Sea Surface Temperatures (SSTs) in waters surrounding Trinidad and Tobago continue to be warmer than usual. Even though some cooling is expected during OND, SSTs are forecast to remain warmer than average. Warmer than average SSTs tend to have a positive influence on local rainfall.

- ✓ Since mid-July, SST anomalies in the in Niño-3.4 region have steadily decreased, and are now negative and extend to the surface. Current SST anomalies are pushing towards La Niña threshold and the most recent predictions from two of the more reputable Niño-3.4 prediction models favour increasing chances (50-60%) for the formation of La Niña during OND 2017. This is a reasonable and acceptable prediction given the recent cooling of surface and sub-surface temperature anomalies in the Nino-3.4 region and the known increase in forecast skill at this time of year by these models.

- ✓ Historically, La Niña conditions have been associated with enhancement of local rainfall, but not always. This along with warmer than usual SSTs in water around the islands are likely to exert the greatest influence on local rainfall during OND.

- ✓ In addition, since the beginning of August the North Atlantic Oscillation (NAO) has been in negative phase and is forecast to remain in negative phase during the first two weeks of October. Based on analysis, the overall influence of the NAO is likely to be positive on local rainfall.

- ✓ Models indicate a favourable rainfall enhancing Madden Julian Oscillation (MJO) signal during early October over the region.

- ✓ The Inter-Tropical Convergence Zone (ITCZ) has been quite active since June and exerted high influence on local rainfall. This is likely to continue during OND.

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