Trinidad & Tobago Meteorological Service	**Trinidad & Tobago Meteorological Service**	**Rainfall and Temperature Outlook for Trinidad and Tobago, 2018 Dry Season**

Date of Issue: 18/12/2017

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

January to March 2018 Likely to Be Wetter Than Usual

Key Messages

- ✓ January to March (JFM) 2018 climate outlook shows the highest 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 to high confidence)**;
- ✓ There is 60-75% chance for accumulated rainfall totals in excess of 200 mm over the season;
- ✓ High (65-80%) chance for at most three 7-day dry spells (days with less than 1.0 mm) during JFM;
- ✓ The chance for the dry season being extremely dry is low or just below 12% **(high confidence)**;
- ✓ Recent conditions show that November rainfall was below average in most areas;
- ✓ April to June has increased chances 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 likely higher, in cities and built-up areas;
- ✓ Episodes of rough seas are typical during the dry season;
- ✓ Episodes of severe dust-haze outbreaks are typical during the dry 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;
- ✓ Possibility of increased disruption in marine activities due to episodes of rough seas;
- ✓ Significant amounts of dust concentrations could increase air pollution. Persons who 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.

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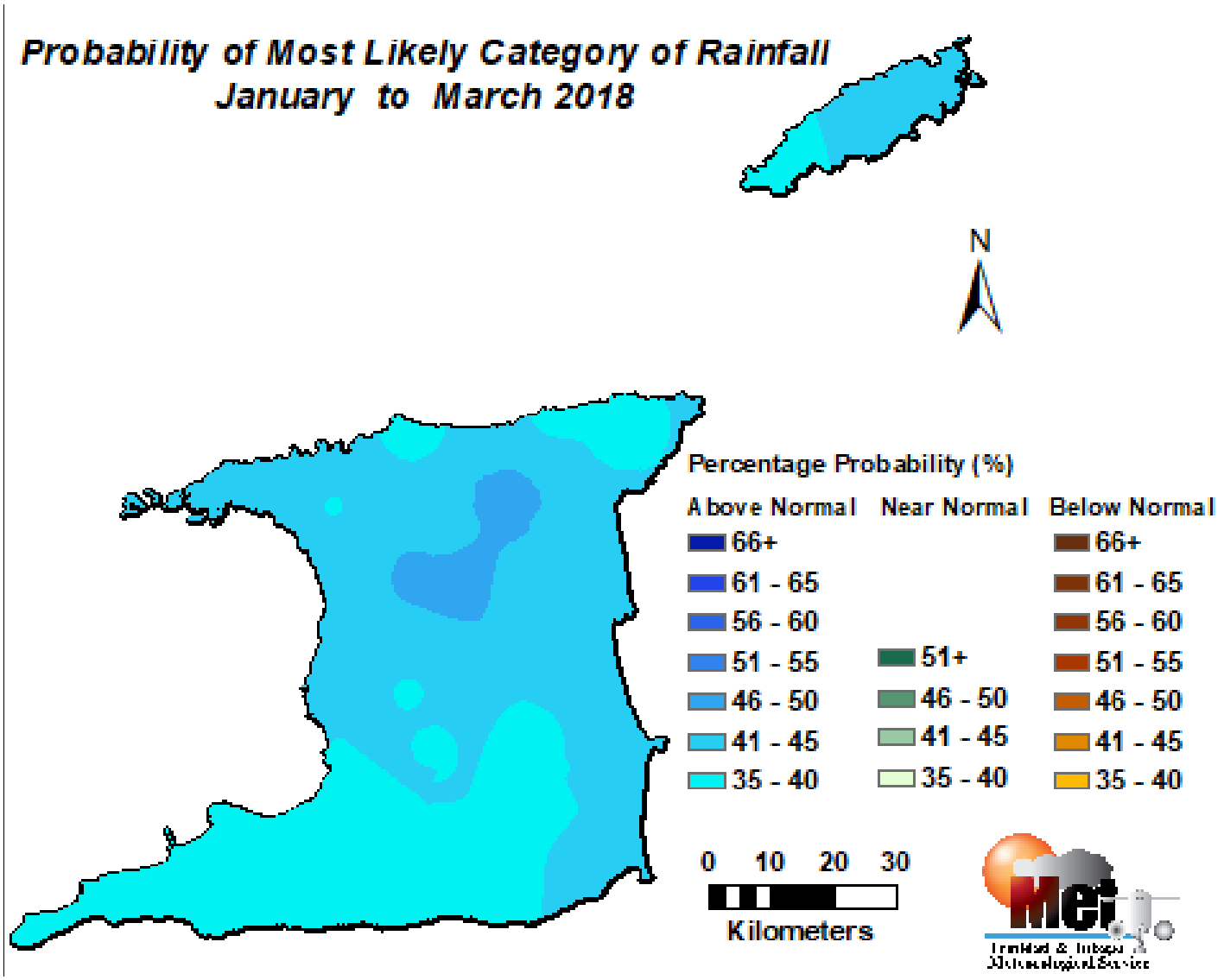

Figure 1: Category of rainfall likely for JFM 2018 with the highest chance of occurrence expressed as probabilities and colour coded on the map. Blue areas indicate places with an increased chance for above normal rainfall, brown areas show an increased chance for below normal rainfall, while green areas show an increased chance for near normal rainfall. Normal is defined by the rainfall that was observed in middle one-third of the JFM period rainfall totals during the historical period used to produce the outlook.

- ✓ The seasonal climate forecast for JFM 2018 favours wetter than usual conditions with increased chances for above normal accumulated rainfall totals across Trinidad and Tobago **(medium to high 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 JFM rainfall total greater than 158.7mm and at Crown Point greater than 162.2mm.

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Probability of JFM 2018 Rainfall Totals
In the Lowest 10% of the Historical Record

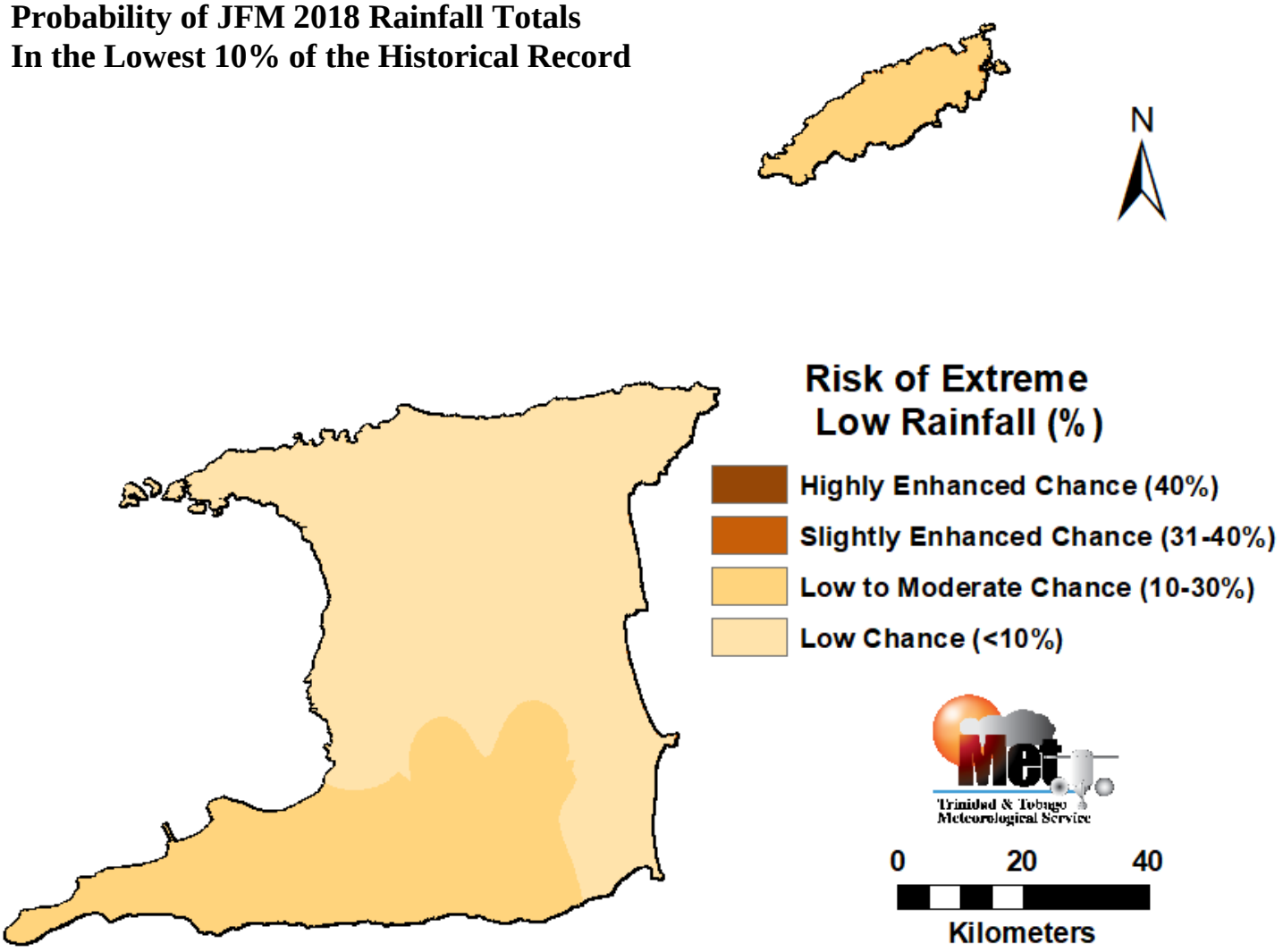

Figure 2: Risk of JFM 2018 being extremely drier than normal (accumulated rainfall totals in the lowest 10% on record).

- ✓ The chance for the dry season being extremely dry is low or just below 10%, over most areas of Trinidad but is slightly higher (12%) in southwest Trinidad and Tobago **(high confidence).**
- ✓ While the chance is relatively small, if this should occur, it can have high impact on all sectors.
- ✓ There is 60-80% chance for at most three 7-day dry spell (days with less than 1.0 mm) during JFM.

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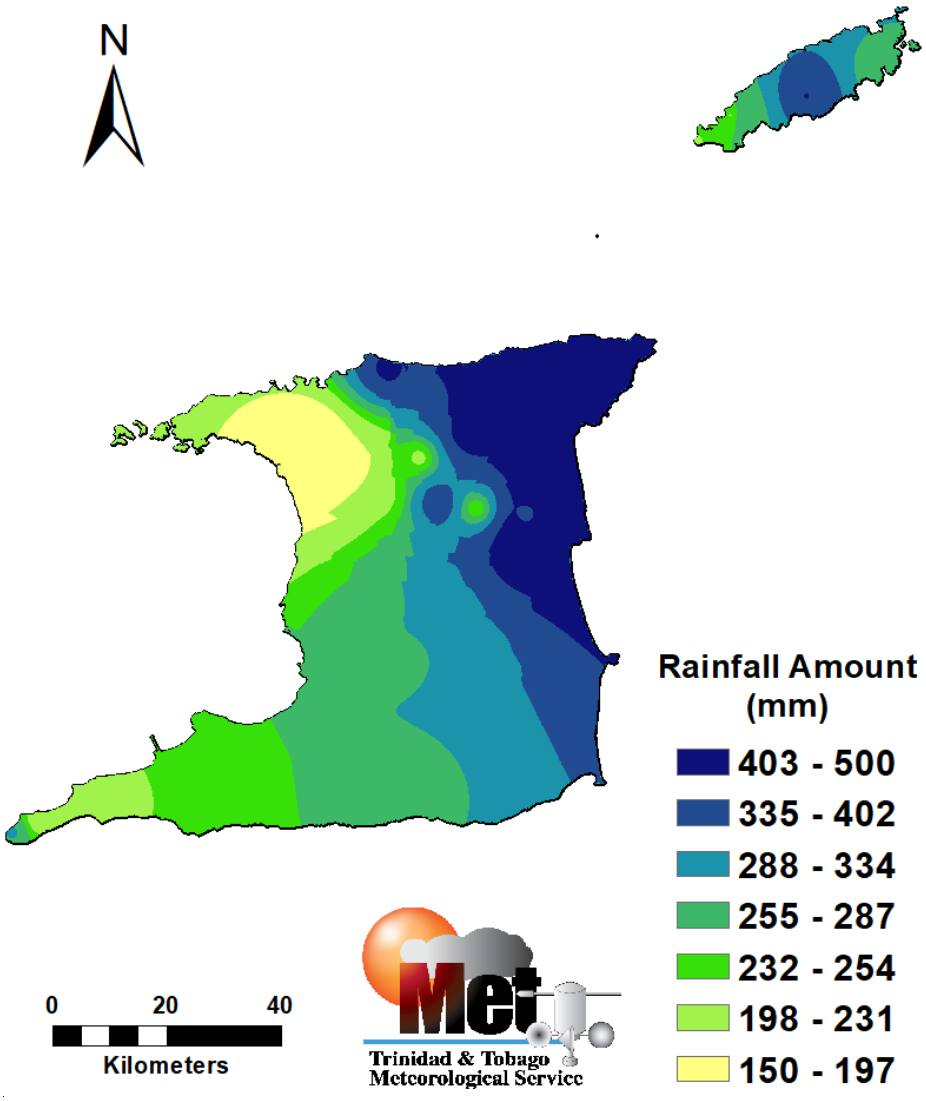

Figure 3: Possible accumulated rainfall totals with the highest chance of occurring over January to March 2018.

JFM largest rainfall accumulated totals are likely to be near 500.0mm in areas such as Valencia, Sangre Grande and environs in east Trinidad; and near 400.0mm in Mt Saint George and Goodwood areas of Tobago. Smallest totals are likely near Port of Spain and environs **(moderate confidence).**

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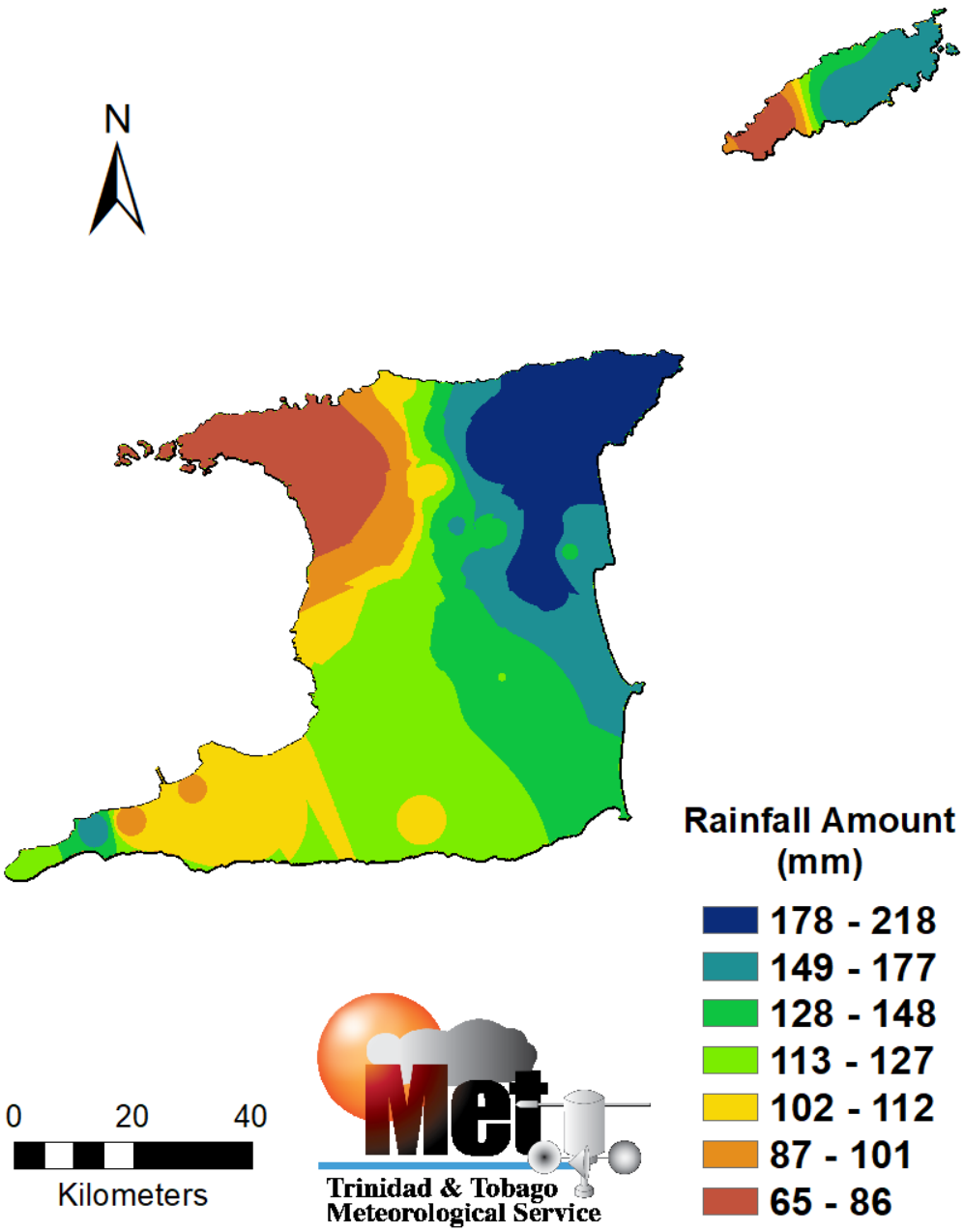

Figure 4: Possible rainfall totals with the highest chance of occurring during January 2018.

January rainfall totals with highest chance of occurring range between 218.0mm and 65.0mm in Trinidad and between 69.0mm and 170.0mm in Tobago **(moderate confidence).**

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Probability of Most Likely Category of Rainfall April to June 2018

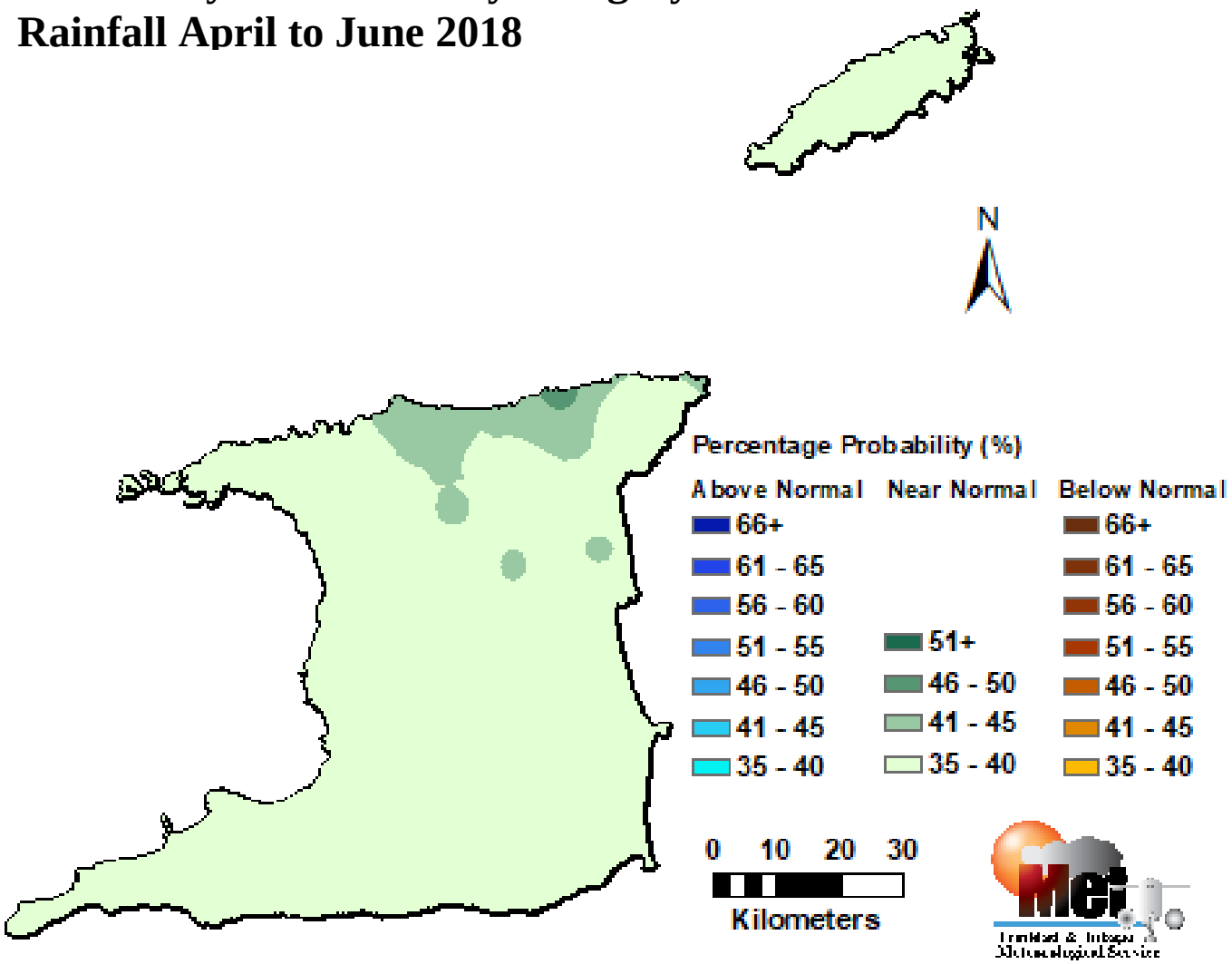

Figure 5: Category of rainfall likely for April to June (AMJ) 2018 with the highest chance of occurrence expressed as probabilities represented on the map. Blue areas indicate places with an increased chance for above normal rainfall, brown areas show an increased chance for below normal rainfall, while 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 AMJ seasons during the historical period used to produce the outlook.

- ✓ April to June (AMJ) 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**).

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The Temperature Outlook Favours Higher than Usual Temperatures during JFM 2018

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

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;

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

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

Likely Implications

- ✓ Reduced water availability, water levels and water stress later as the season progresses;
- ✓ 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 seafaring trips less comfortable;
- ✓ Likelihood of severe dust-haze outbreaks remains high. Significant amounts of dust concentrations could increase air pollution and this can impact persons who are sensitive to dust (such as persons with asthma and other respiratory ailments);
- ✓ Possibility of increased incidences of pests and diseases related to dry conditions, such as the sweet potato weevil.

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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 ailments, 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 rough seas, 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 irrigation;
- ✓ Use mulching and trenching to prolong moisture at the crop root zone.

Water, Drainage and Energy sector

- ✓ De-silt water channels, canals and reservoirs;
- ✓ Advise employees who work outdoors to take appropriate precautions during periods of excessive heat
- ✓ Implement awareness campaigns on the efficient use of water and energy.

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 at www.metoffice.gov.tt, follow us on Facebook, Twitter and Instagram or download our mobile app on Google Play Store or Apple iStore.

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Climatic Influencers and Context of the Outlook

Multiple competing climatic influencers currently exist.

- ✓ Sea Surface Temperatures (SSTs) in waters surrounding Trinidad and Tobago have cooled and remain close to near average for this time of the year. Near average SSTs tend to either dampen or enhance local rainfall.

- ✓ La Niña conditions persist and are predicted to continue (~65%-75% chance) at least through the end of March. Historically, strong La Niña conditions have been associated with enhancement of local rainfall during JFM, while weak La Niña conditions have some influence on local rainfall, but not always.

- ✓ After oscillating between its positive and negative phases during November, the North Atlantic Oscillation (NAO) has been trending positive since the start of December and this trend is likely to continue over the next two week. 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 during JF.

- ✓ The signal for the Madden Julian Oscillation (MJO) currently suggest little to no influence on local rainfall during the next two weeks.

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