High Chance Of Wetter Than Normal Season Over Most Areas

SEASONAL CLIMATE FORECAST PRODUCED BY THE CLIMATE PREDICTABILITY TOOL (CPT)

SUMMARY:

Station	Below (B) %	Normal (N) %	Above (A) %
Jamaica Rainfall Outlook	20	30	50
Jamaica Temperature Outlook	20	30	50

For the forecast period of February to April 2018, the models are indicating, a higher probability of above-normal rainfall over most areas of the island.

Over the upcoming three-month season, the forecast seems to be highly confident that the period will be wetter than normal. There are very little concerns for drought at this time as current and forecast conditions point to higher than average rainfall during the season. Temperatures for the same period are likely to remain near normal to above-normal.

The Meteorological Service will continue to monitor the findings from the models in the upcoming months, so as to advise our stakeholders, especially farmers, accordingly.

FORECAST VERIFICATION JANUARY TO MARCH 2017

For the same period last year, February-April 2017, the models under-performed, with accuracy in the range of 12-30 percentage points. This was due to very weak signals for the oceans during this transition period. The initial forecast indicated that rainfall was likely to be below-normal for the period; however, most stations recorded above-normal rainfall amounts.

Seasonal Forecast Outlook February-April 2018 and the Likely Scenarios

Local Precipitation Outlook Analysis:

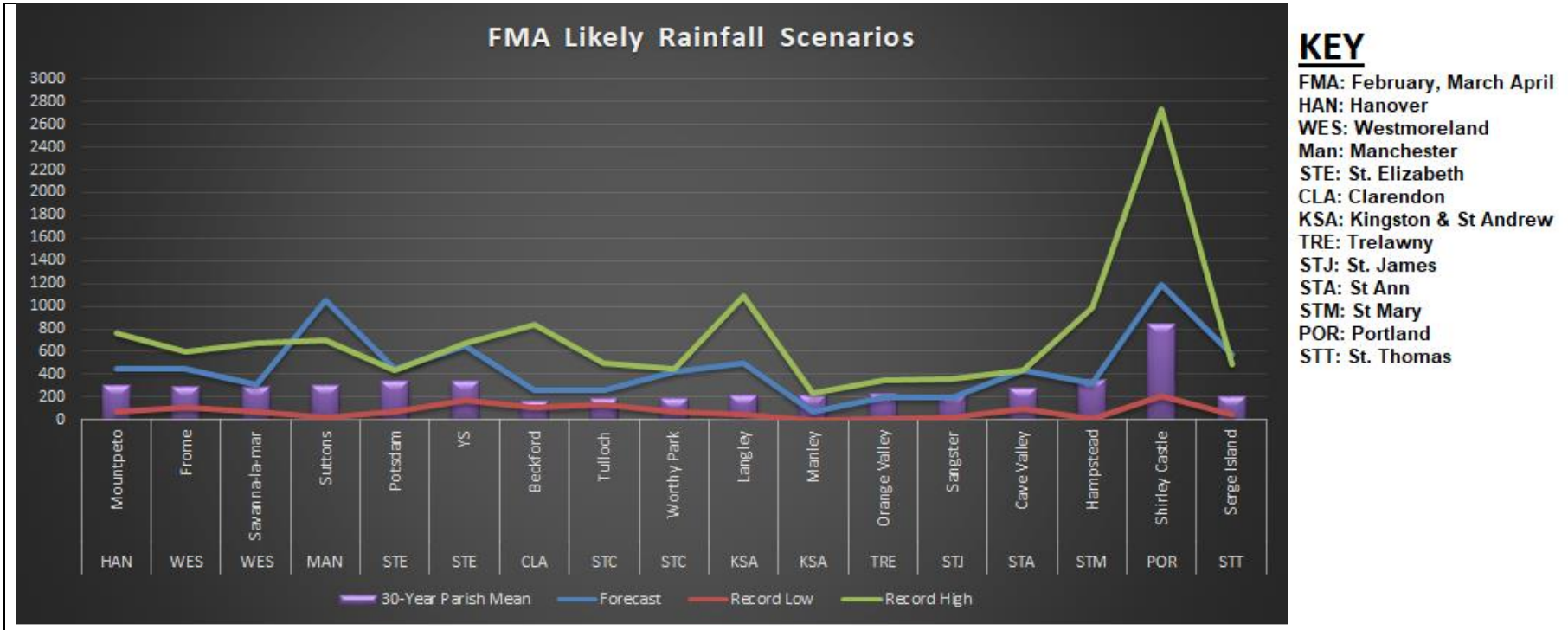

Figure 1: February-March-April likely Rainfall Scenarios. ***Parish Mean: 1981-2010***

As we take a closer look at the forecasted rainfall pattern for the upcoming three month period. (February, March and April) The data strongly favours an above-normal rainfall pattern. The graph listed above, indicates that the following stations, Mounpeto, Frome, Suttons, Potsdam, YS, Beckford Kraal, Tulloch, Worthy Park, Langley, Cave Valley, Shirley Castle and Serge Island are likely to experience wetter than normal conditions during the period. There is a high possibility that Suttons in Manchester is likely to experience the greatest shift towards increased rainfall amounts while Manley in Kingston could experience the least amount of rainfall during the period in comparison to other sample stations.

Climate Predictability Tool (CPT) Station Outlook

Parishes	Stations	Below (B) %	Normal (N) %	Above (A) %
Clarendon	Beckford	25	30	45
Hanover	Mountpeto	20	30	50
KSA	Manley	20	30	50
KSA	Langley	20	30	50
Manchester	Suttons	10	20	70
Portland	Shirley Castle	20	30	50
St James	Sangster	20	30	50
ST. Ann	Cave Valley	10	20	70
ST. Catherine	Tulloch	20	30	50
ST. Catherine	Worthy Park	15	25	60
ST. Elizabeth	YS	15	25	60
ST. Elizabeth	Potsdam	10	20	70
ST. Mary	Hampstead	30	30	40

ST. Thomas	Serge	10	20	70
Trelawny	Orange Valley	20	30	50
Westmoreland	SAV	10	30	60
Westmoreland	Frome	15	25	60

Key

A: Above normal rainfall means greater than 66 percentile of the rank data

N: Near normal rainfall means between 33 and 66 percentile of the rank data

B: Below normal rainfall means below 33 percentile of the rank data

Background

Human induced climate change and increasing climate variability, as well as other environmental issues such as land degradation, threaten the ability of the nation to meet the needs of its population for food. To address these challenges, it is important to integrate the issues of climate variability and climate change into resource use and developmental decisions.

Decreasing the vulnerability of agriculture to natural climate variability is a key issue for small islands like Jamaica. Introducing seasonal rainfall forecasts into management decisions can reduce this vulnerability of agriculture to droughts and floods. Therefore, short to long term precipitation forecasts as well as drought monitoring products will assist in making critical decisions about the growing seasons for crops as well as irrigation scheduling.

This seasonal rainfall summary is prepared by the Climate Branch of the Meteorological Service Division and takes into account a correlation between the rainfall totals and sea surface temperatures across the Pacific and Atlantic Oceans. The experiment also looks at a number of drivers of rainfall across the region, like El Niño and the North Atlantic Oscillation. Before we can arrive at the forecast, an extensive training period with a minimum of thirty years of data is used to work out the best forecast.

Indices and Definitions

El Niño: A phenomenon in the equatorial Pacific Ocean characterized by a positive sea surface temperature departure from normal (for the 1971-2000 base period) in the Niño3.4 region greater than or equal in magnitude to 0.5°C, averaged over three consecutive months.

La Niña: A phenomenon in the equatorial Pacific Ocean characterized by a negative sea surface temperature departure from normal (for the 1971-2000 base period) in the Niño3.4 region greater than or equal in magnitude to 0.5°C, averaged over three consecutive months.

ENSO (El Niño-Southern Oscillation): An ENSO warm phase refers to an El Niño event, and an ENSO cold phase refers to a La Niña event. As El Niño and the Southern Oscillation are related, the two phrases are often combined as ENSO (El Niño-Southern Oscillation). El Niño and La Niña events have now been clearly identified as perturbations of the ocean atmosphere system. In addition to changes in SSTs, there are typically changes in the strength and direction of the Trade winds.

NAO conditions and the Atlantic Subtropical High: The NAO is the dominant mode of winter climate variability in the North Atlantic region ranging from central North America to Europe and much into Northern Asia. The NAO is a large scale seesaw in atmospheric mass between the subtropical high and the polar low. The corresponding index varies from year to year, but also exhibits a tendency to remain in one phase for intervals lasting several years.

APCC: APEC (Asia-Pacific Economic Cooperation) Climate Center: Provides reliable real-time climate prediction system, through a state-of-the-art multi-model climate prediction system utilizing model predictions from member economies.

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