Warmer than normal temperatures with chance of Above-Normal rainfall

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

SUMMARY:

Station	Below (B) %	Normal (N) %	Above (A) %
Jamaica Rainfall Outlook	30	30	40
Jamaica Temperature Outlook	25	35	40

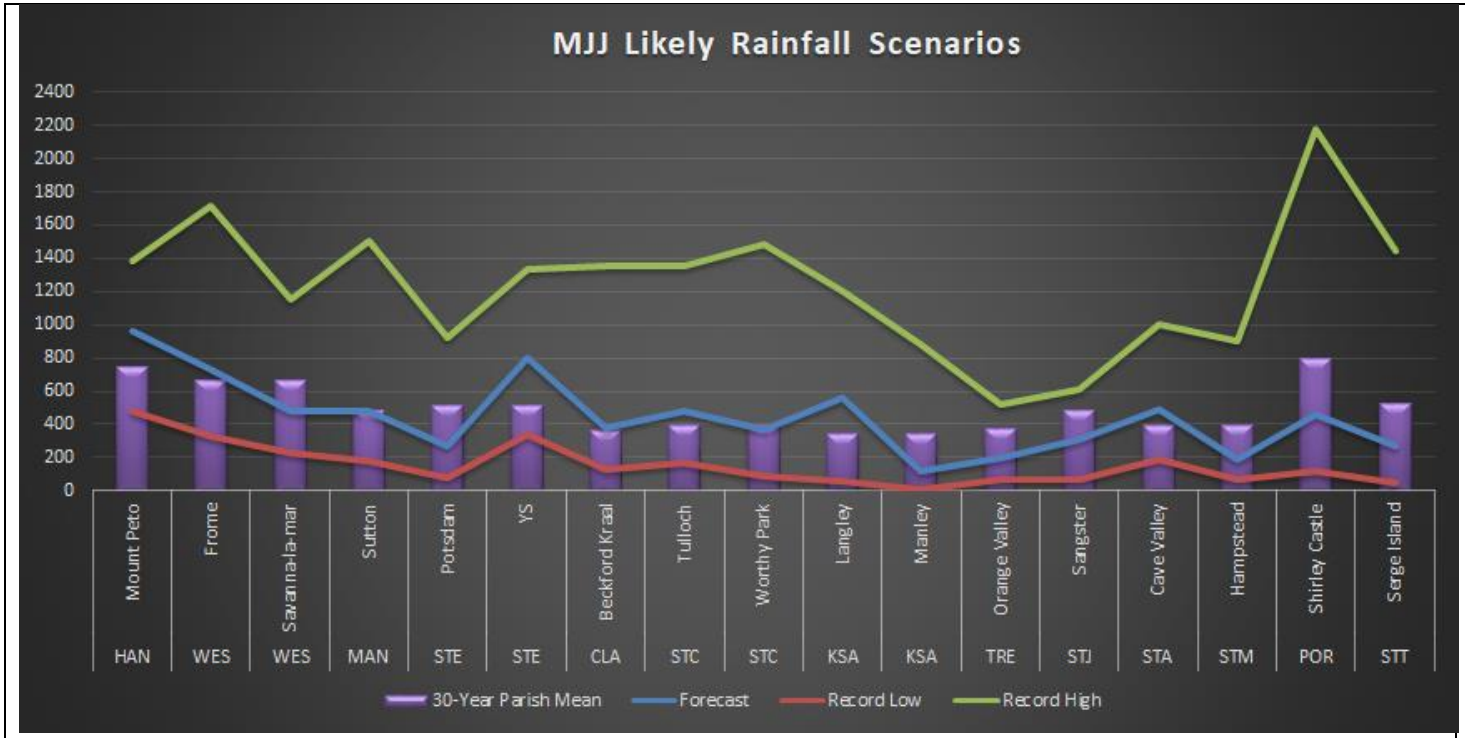
As we enter into what is considered the secondary rainfall season, the forecasts are indicating warmer than normal temperatures with a chance of above-normal rainfall. During January-March, there were no reports of drought as the island experienced an increase in rainfall across most parishes.
Although, with current projections now indicating a decline in rainfall over some stations compared to the average over the next three months, there is a possibility that this could lead to isolated occurrence of drought conditions in selective areas.

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

FORECAST VERIFICATION MAY TO JULY 2017

For the same period last year, May-July 2017, the models under-performed, with accuracy in the range of 30-45 percentage points. This was due to very weak signals from the oceans during this transitional 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 May-July 2018 and the Likely Scenarios



KEY

MJJ: May-June-July

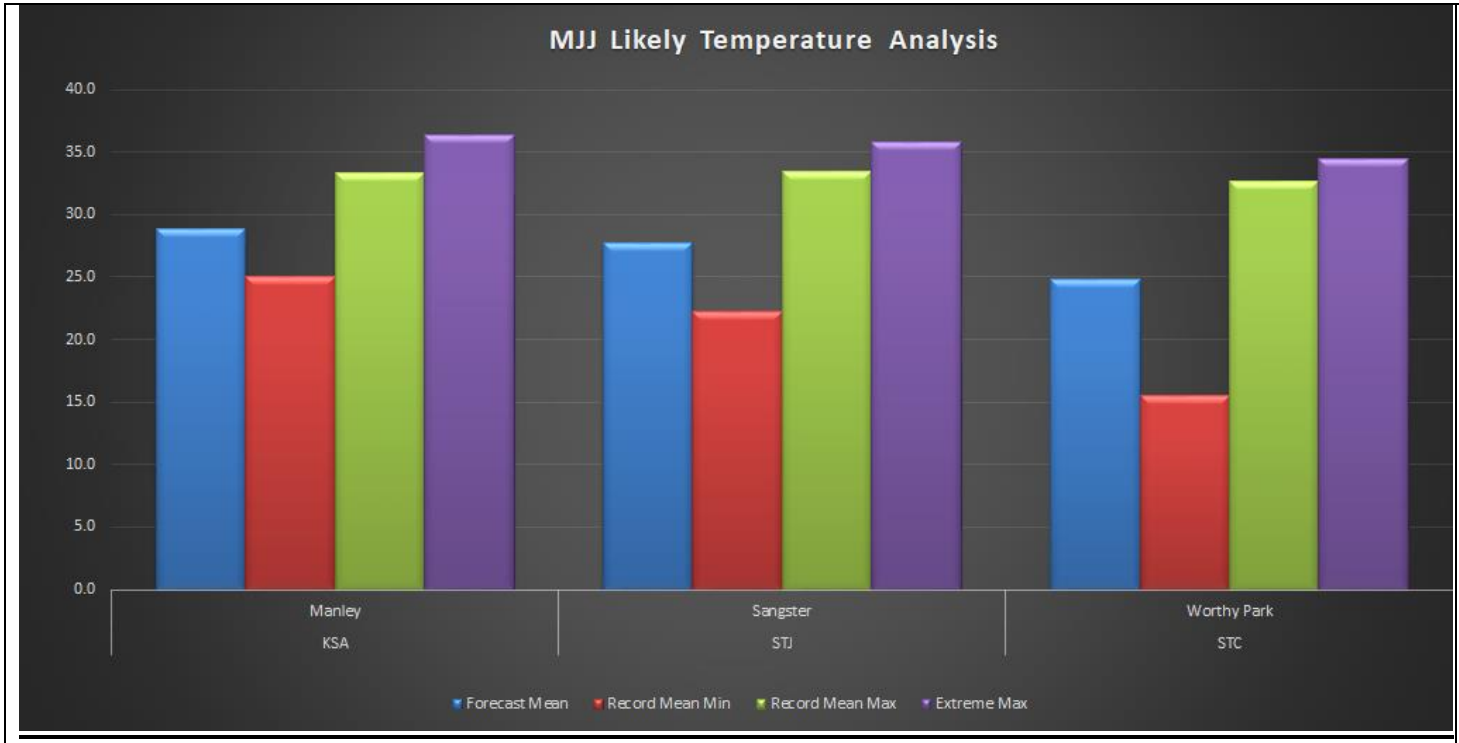
HAN: Hanover
WES: Westmoreland
MAN: Manchester
STE: St Elizabeth
CLA: Clarendon
STC: St. Catherine
KSA: Kingston/St Andrew
TRE: Trelawny
STJ: St James
STA: St Ann
STM: St Mary
POR: Portland
STT: St Thomas

Figure 1: May-June-July likely Rainfall Scenarios.

Parish Mean: 1981-2010

Local Precipitation Outlook Analysis:

The forecasted rainfall pattern for the upcoming three months period, (May, June and July). The data favours a near-normal to above-normal rainfall pattern. The graph above, indicates that most stations are likely to receive about average rainfall. However, the following stations, Mount Peto, YS and Langley are likely to experience wetter than normal conditions during the period. YS in St Elizabeth 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.



KEY

MJJ: May-June-July

KSA: Kingston/St Andrew
STJ: St James
STC: St Catherine

Figure 2: April-May-June likely Temperature Scenarios.

Local Temperature Outlook Analysis:

Over the period, temperature values are likely to be above normal with mean temperatures varying between 25-29 degrees Celsius. Manley in the Southeast is likely to experience the warmest temperatures, while Worthy Park is forecast to experience the lowest temperatures during the period in comparison to other stations.

Climate Predictability Tool (CPT) Station Outlook

Parishes	Stations	Below (B) %	Normal (N) %	Above (A) %
Clarendon	Beckford Kraal	40	30	30
Hanover	Mount Peto	20	35	45
KSA	Manley	45	30	25
KSA	Langley	20	30	50
KSA	Lawrence Tavern	20	30	50
Manchester	Sutton	30	30	40
Portland	Shirley Castle	40	30	30
St James	Sangster	25	30	45
ST. Ann	Cave Valley	20	30	50
ST. Catherine	Tulloch	40	35	25
ST. Catherine	Worthy Park	40	30	30
ST. Elizabeth	YS	15	25	60
ST. Elizabeth	Potsdam	40	30	30
ST. Mary	Hampstead	50	25	25

ST. Thomas	Serge	60	25	15
Trelawny	Orange Valley	40	30	30
Westmoreland	SAV	50	30	20
Westmoreland	Frome	15	35	50

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.

Prepared by
Climate Branch
Meteorological Service Division
Web page: http://jamaicaclimate.net