

***Near normal rainfall expected across most areas***

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

**SUMMARY:**

Station	Below (B) %	Normal (N) %	Above (A) %
<b>Jamaica Rainfall Outlook</b>	<b>33</b>	<b>33</b>	<b>33</b>
<b>Jamaica Temperature Outlook</b>	<b>20</b>	<b>35</b>	<b>45</b>

December through March represents the dry season for Jamaica. The rainfall outlook for January to March 2017 is reflecting near normal or what would be considered climatology with warmer days.

There was significant deficit in rainfall for Hanover and Westmoreland for October and November and likely for December as well due to the lack of significant rainfall activity during the month. Shortfall in activity was also seen in some southern parishes. Western and southern parishes are therefore likely to experience some level of drying for January through March due to the forecast showing reduced rainfall activity which is likely to exacerbate the existing deficit.

Rainfall activity will be closely monitored for southern and western parishes for the month of January to ensure that critical and sensitive sectors such as agriculture which depends heavily on rainfall can adjust plans as necessary in order to handle possible shortfall in water availability.

The findings from the models will be monitored in order to advise our farming communities of any significant changes which occurs.

**FORECAST VERIFICATION JANUARY TO MARCH 2016**

For the same period last year, the models predicted below normal rainfall for most stations across the island. A comparison with actual conditions indicates that the model did fairly well with 40-73% accuracy.

## Global Climate Model Outlook for January-March 2017

### From APEC Climate Centre

#### Global Temperature and Precipitation Outlook:

The images below represent the global temperatures and rainfall for the period January to March 2017.

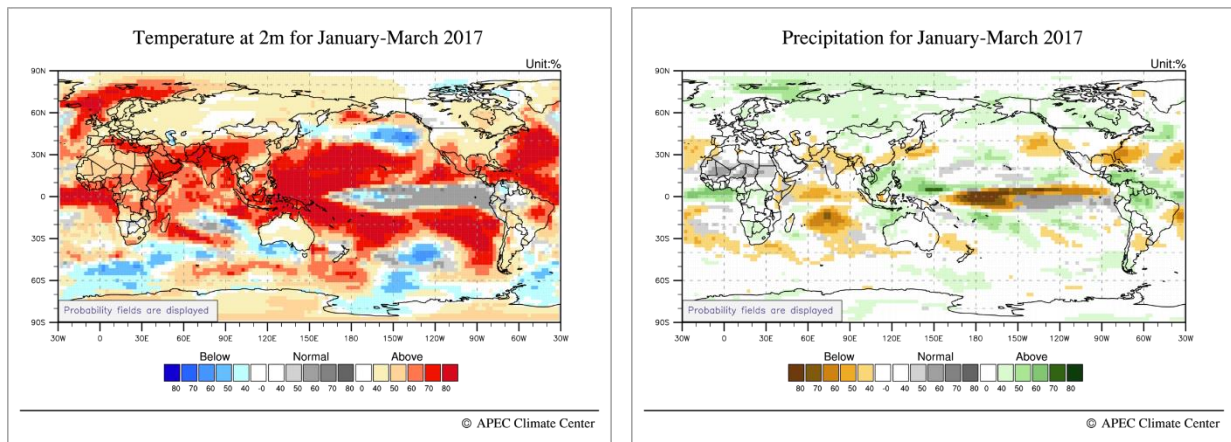


Figure 3 & 4: Dynamic model forecast for global temperatures and likely rainfall amount.

## Climate Predictability Tool (CPT) Station Outlook

Stations	Below (B) %	Normal (N) %	Above (A) %
Manley (Kingston)	30	35	35
Sangster (St. James)	33	33	33
Sav. (Westmoreland)	33	33	33
Beckford (Clarendon)	30	30	40
Serge Island (St. Thomas)	30	35	35
Cave Valley (St. Ann)	30	35	35
Tulloch Estate (St. Cath)	30	35	35
Y.S. Estate (St. Elizabeth)	30	40	30
Hampstead (St. Mary)	30	30	40
Orange Valley (Trelawny)	33	33	33
Langley (Kingston)	30	40	30
Mount Peto (Hanover)	30	40	30
Shirley Castle (Portland)	30	30	40
Suttons (Manchester)	30	20	50
Potsdam (St. Elizabeth)	40	35	25
Frome (Westmoreland)	35	35	30
Worthy Park (St. Cath)	35	20	45

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.

## Jamaica's Probabilistic Rainfall Outlook January-March 2017

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**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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