

Near normal to above normal rainfall expected

SEASONAL CLIMATE FORECAST PRODUCED BY THE CLIMATE PREDICTABILITY (CPT)

SUMMARY:

Station	Below (B) %	Normal (N) %	Above (A) %
Jamaica Rainfall Outlook	25	35	40
Jamaica Temperature Outlook	20	35	45

December signifies the start of the dry season in Jamaica and although the forecast over the period indicates most stations are likely receive near normal to above normal rainfall there could still be problems for some southern and western parishes that are currently receiving below average rainfall amounts.

The forecast for December to February indicates an increase in the rainfall amounts above the average with greater chance of this occurring in December and January which is mainly due to favourable environmental conditions. We will however continue to monitor the findings from the models in order to advise our farming communities should the situation change and warrant action on their part, especially those farmers over southern and western parishes.

FORECAST VERIFICATION DECEMBER 2015 TO FEBRUARY 2016

For the same period last year, the models predicted above normal rainfall for most stations across the island. A comparison with actual conditions indicates that the model did fairly well with 35-65% accuracy.

Global Climate Model Outlook for December 2016-February 2017

From APEC Climate Centre

Global Temperature and Precipitation Outlook:

The images below represent the global temperatures and rainfall for the period December 2016 to February 2017.

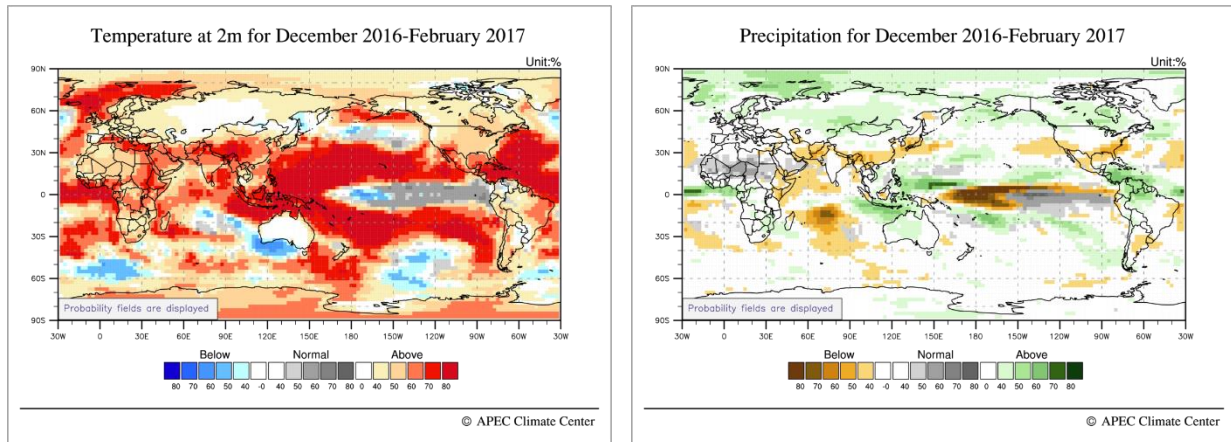


Figure 3 & 4: Dynamic model forecast for global temperatures and likely rainfall amount.

Climate Predictability Tool (CPT) Station Outlook

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

Jamaica's Probabilistic Rainfall Outlook December 2016-February 2017

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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