

Meteorological Service Jamaica
Jamaica's Seasonal Climate Outlook March to May 2022

Below-normal to Near-normal Rainfall Season Expected

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

SUMMARY:

Station	Below %	Normal %	Above %
Jamaica Rainfall Outlook	35	35	30
Jamaica Temperature Outlook	33	33	33

The forecast for the upcoming three-month period of March to May 2022 indicates that rainfall is likely to be below-normal to near-normal, while temperatures are expected to be near-normal.

During the upcoming season, the island will transition from the dry season to the early wet season; a period typically characterized by an increase in rainfall. Jamaica is expected to experience low amounts of rainfall in March and thereafter, see an increase beginning in April. In general, temperatures should continue to be seasonally tolerable within this period. There may, however, be occasionally cooler days and nights due to the passage of Cold Fronts.

The Meteorological Service will continue to monitor the findings from the computer models in the coming months and advise our stakeholders accordingly.

FORECAST VERIFICATION MARCH TO MAY 2021

For the same period a year ago, March to May 2021, the model performed poorly, with a range of accuracy from 12 to 47 percentage points. The forecast indicated that rainfall was likely to be near-normal and based on observations most stations recorded below-normal rainfall.

Meteorological Service Jamaica

Jamaica's Seasonal Climate Outlook March to May 2022

Seasonal Forecast Outlook March to May 2022 and the Likely Scenarios

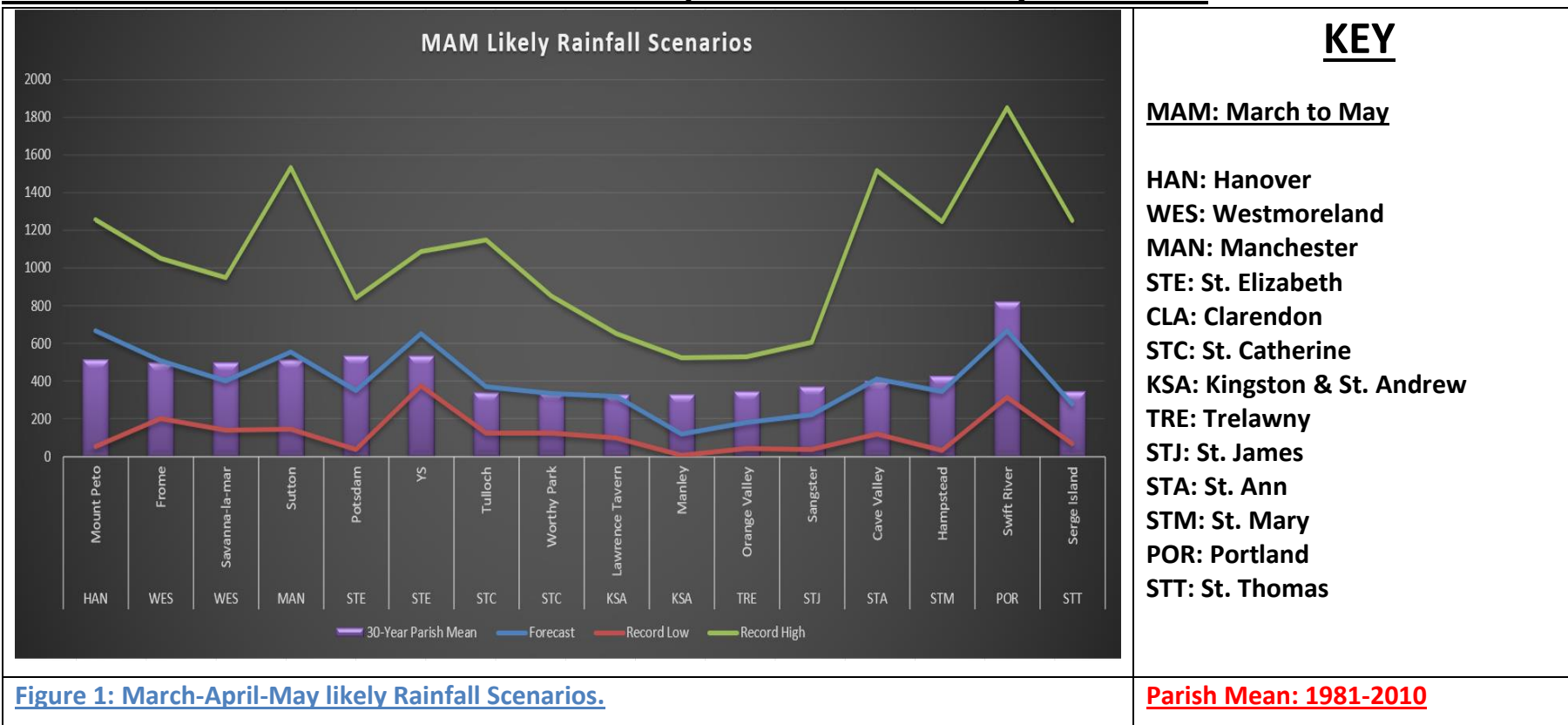
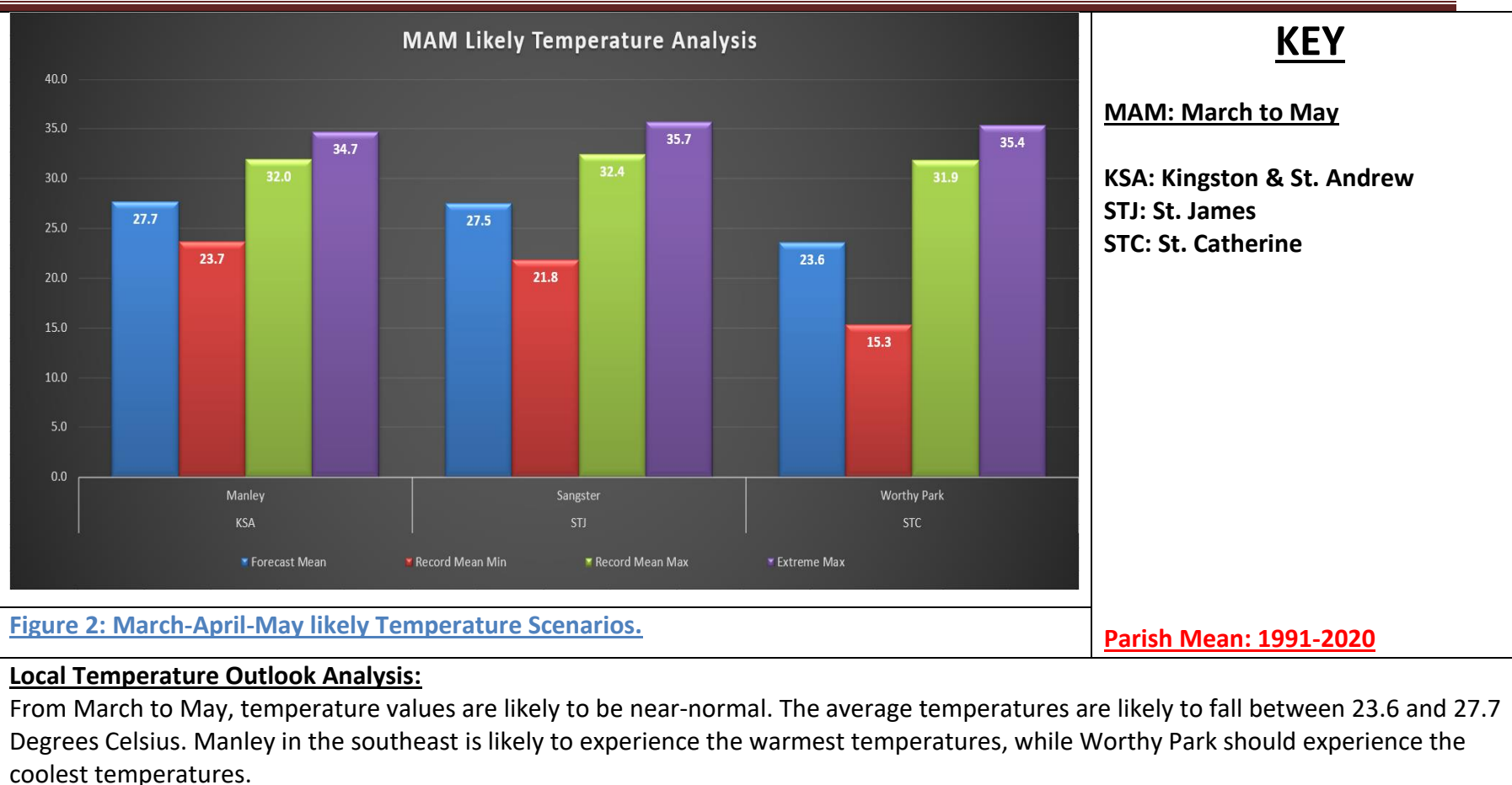


Figure 1: March-April-May likely Rainfall Scenarios.

Local Precipitation Outlook Analysis:

The rainfall outlook from March to May indicates that most stations are likely to receive below-normal to near-normal amounts. From the subset of stations used in the analysis (figure 1), among those that should experience rainfall **greater** than their parish means are Mount Peto, Sutton, and YS. Meanwhile, Potsdam, Manley, Orange Valley, Sangster, and Swift River could experience the least amounts of rainfall by similar comparison.

Meteorological Service Jamaica Jamaica's Seasonal Climate Outlook March to May 2022



Meteorological Service Jamaica

Jamaica's Seasonal Climate Outlook March to May 2022

Background

Human-induced climate change activities 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 Jamaica 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 several 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 identified as perturbations of the ocean-atmospheric system. In addition to changes in SSTs, there are typically changes in the strength and direction of the Trade Winds.

Meteorological Service Jamaica
Jamaica's Seasonal Climate Outlook March to May 2022

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 tends 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: <https://metservice.gov.jm/seasonal-outlook/>