



MONTHLY RAINFALL SUMMARY

METEOROLOGICAL SERVICE, JAMAICA

HIGHLIGHTS FOR DECEMBER

- All thirteen (13) parishes received below-normal rainfall during December.
- Seven (7) parishes recorded meteorological drought conditions.
- Above-normal rainfall is forecast for January to March 2023.
- Near-normal to above-normal temperatures are expected for January to March 2023.

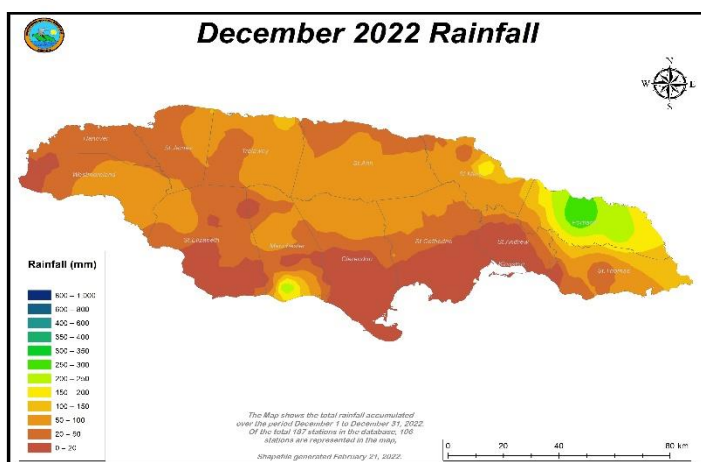


Fig.1. Distribution of Jamaica's Rainfall for December 2022

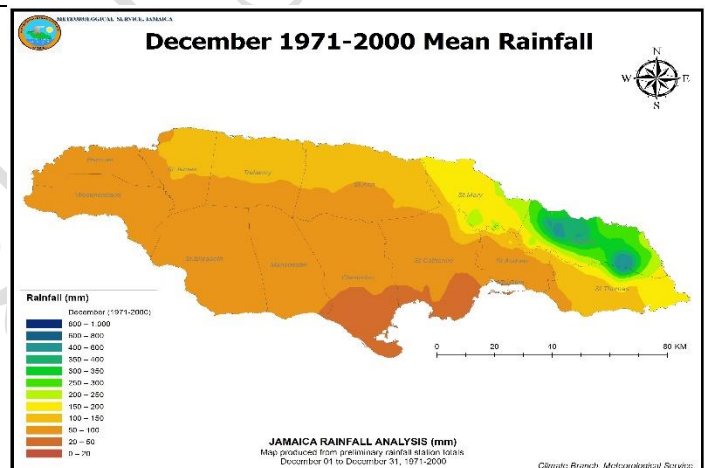
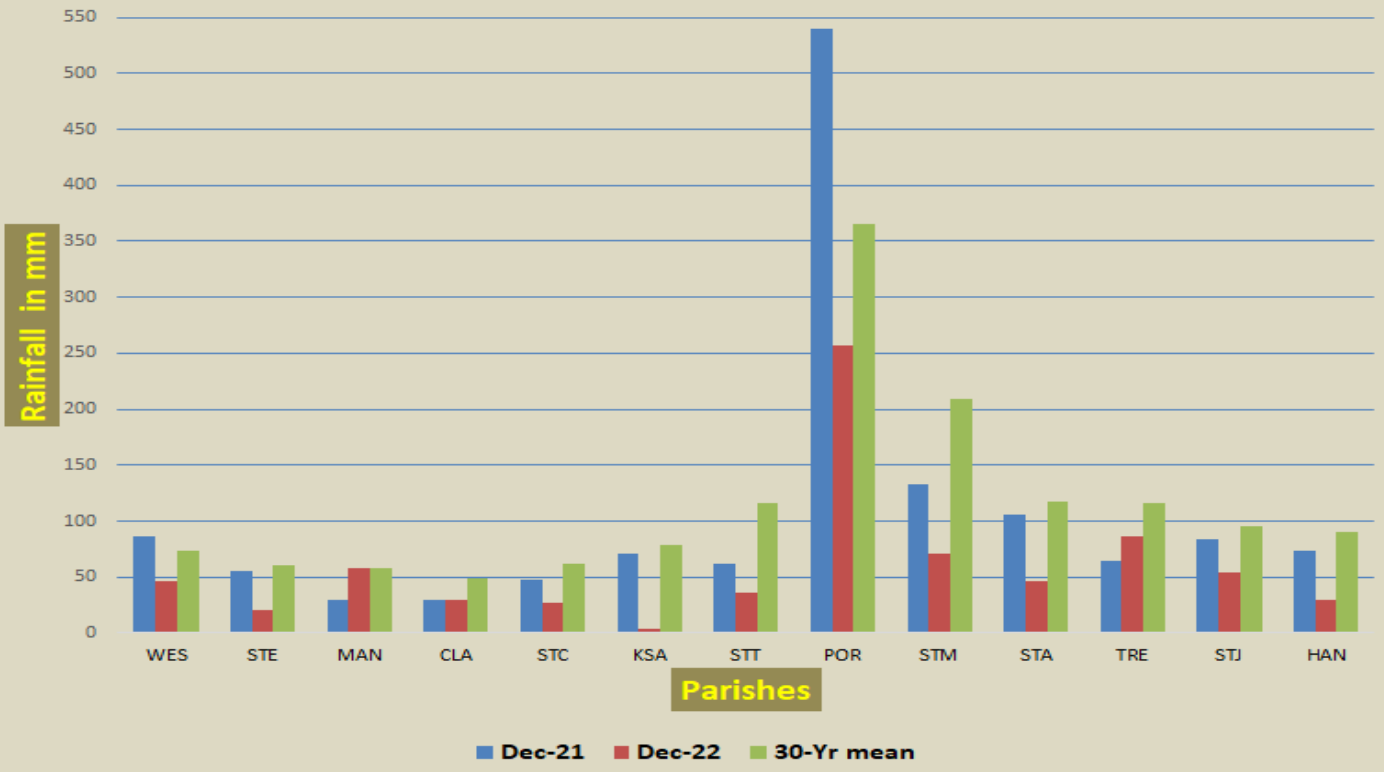


Fig.2. Mean Island Rainfall for December

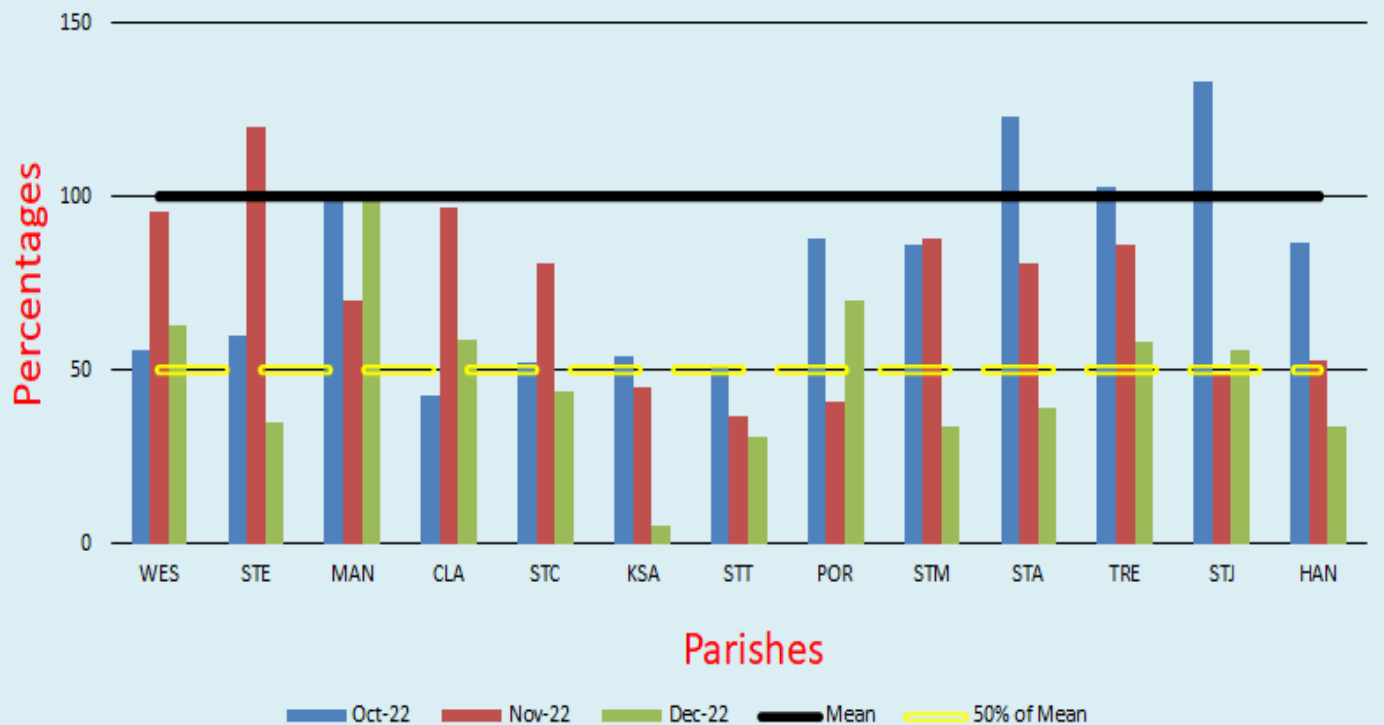
DECEMBER RAINFALL SUMMARY

For December 2022, all 13 parishes recorded below-normal (<100%) rainfall amounts, with values ranging from 5% to 99%, of their respective 30-year (1971-2000) monthly means. Therefore, no parish received above-normal (>100%). In general, Jamaica received 58 mm of rainfall or 48 mm less than it did in December 2021. For the November/December bi-monthly period, nine of 13 parishes recorded decreases in their SPI values while, four parishes recorded increases. Twelve of 13 parishes recorded negative SPI values and, therefore, experienced varying levels of dryness with rankings ranging from near-normal (dry) to severely dry. One parish recorded a positive SPI value and, was experiencing mild wetness with a ranking in the near-normal (wet) class. Seven parishes experienced meteorological drought conditions in the November/December period.

Parish Mean Rainfall December 2021 and December 2022 vs 30-Yr Parish Means

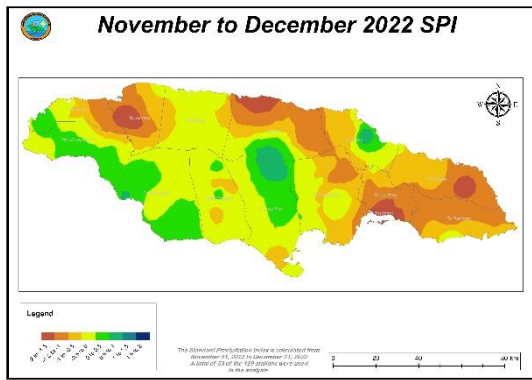


Parish Percentages of 30-Yr Monthly Mean Rainfall



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Drought (SPI) Discussion:



Analyses of the November/December parish SPI values indicated that, nine of 13 parishes recorded decreases in their SPI values while, four parishes recorded increases.

St. James recorded the largest decrease in SPI value with -1.46, followed by St. Ann and Hanover both with -1.19, St. Mary with -0.96 and Portland with -0.50, being the top five parishes to do so. St. Elizabeth recorded the largest increase in SPI value with +1.13, followed by

Westmoreland with +0.61, St. Catherine with +0.42 and Clarendon with +0.27.

Twelve of thirteen (13) parishes experienced varying levels of dryness, with rankings ranging from near-normal (dry) to severely dry. Meanwhile, one parish experienced mild wetness, with a ranking in the near-normal (wet) class.

The parish which recorded the largest decrease in SPI value, namely St. James, recorded a downward movement of four (4) severity classes; the most from among the parishes. Meanwhile, St. Ann experienced a downward movement by three (3) severity classes, St. Mary & Hanover both experienced downward movements by two (2) severity classes and St. Thomas & Portland both experienced downward movements by one (1) severity class.

St. Elizabeth and Westmoreland both in the west, experienced upward movements by two severity classes each and St. Catherine an upward movement by one severity class.

Manchester, Clarendon and Trelawny experienced no changes in severity class and hence, no change in conditions. Meanwhile, although KSA experienced no change in severity class (moderately dry), the decrease in SPI value was sufficient to bring the parish below the meteorological drought threshold (-0.80).

In addition to KSA experiencing meteorological drought conditions in the November/December period, St. Thomas and Portland were still experiencing similar conditions in this bi-monthly period. Four other parishes were also experiencing meteorological drought conditions in this bi-monthly period, namely St. Mary, St. Ann, St. James and Hanover all in the island's north.

St. Catherine and Westmoreland which both experienced drought conditions in the October/November period, were both above the drought classification in the November/December period.

Portland recorded the lowest SPI value of -1.57 while, St. Elizabeth recorded the highest SPI value of 0.34.

[Parish Drought \(SPI\) for September to December 2022 and the Drought Severity Classes \(click here to view\)](#)

Precipitation and Temperature Outlook

January to March 2023

The period December to March is regarded as Jamaica's dry season where, the island traditionally receives its lowest amounts of rainfall. For the months of January to March 2023 however, the island is projected to receive above-normal rainfall.

The below-normal rainfall received in Jamaica during the last quarter of 2022 makes it consecutive months of this occurring and, therefore, bringing drier conditions to many areas in most parishes, with seven (7) parishes experiencing meteorological drought conditions, at the start of the dry season. This should be cause for concern, especially during the period when reduced rainfall amounts are traditionally expected and, it is therefore likely, that dry/drought conditions could worsen in more areas across several parishes.

Confidence in the rainfall projections is however, not at the usual level, given recent trends. Therefore, water levels in storage facilities and in rivers, could continue to decline and as such, water management plans including conservation should be continued.

Temperatures over the three months from January to March are forecast to be near-normal to above-normal and this should make for comfortable day time and cooler night time conditions. There may, however, be occasionally cooler days and nights due to the passage of Cold Fronts.

As the Meteorological Service continues to monitor drought conditions across the island, the advice is for stakeholders particularly farmers, is to employ rainwater harvesting and other soil moisture retention methods, which may prove useful for the upcoming months.

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