NATIONAL AGROMET BULLETIN

Issued by the

Climate Branch

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Highlights for April 2016

- **Wet conditions reported for most central stations.**
- **Below normal rainfall is forecast for most stations for June into July.**
- **Above normal temperatures forecast to continue through July 2016.**

Weather Summary for the month of April 2016

During the month of April weather conditions were influenced by a combination of High Pressure Ridges and Troughs, with Troughs being the dominant feature for the month. This resulted in above normal rainfall for the island for the month however, on a parish level this above normal activity occurred mainly over central parishes.

During the month, Sangster in the northwest recorded 18.4 mm of rainfall, while Norman Manley in the southeast recorded 26.4 mm of rainfall. Both Manley and Sangster recorded below normal rainfall however the percentage was significantly less for Sangster. There were four (4) rainfall days reported for Sangster Airport while Manley Airport reported three (3) rainfall days.

The highest maximum temperature recorded for Manley Airport was 33.3°C (29th April) while Sangster Airport recorded 33.2 °C (27th April). It was noted that the highest maximum temperatures exceed the 20-year (1992-2011) means at both stations.

Standardized Precipitation Index (SPI)

The Standardized Precipitation Index (SPI), developed by T.B. McKee, N.J. Doesken, and J. Kleist in 1993, is based only on precipitation. One unique feature is that the SPI can be used to monitor conditions on a variety of time scales namely 1- month, 3-month, 6-month, 9-month and 12-month periods. This temporal flexibility allows the SPI to be useful in both short-term agricultural and long-term hydrological applications.

KEY

SPI Value	Category		SPI Value	Category
-0.5 to -0.7	Abnormally Dry (30%tile)		**0.5 to 0.7**	Abnormal Wetness (70%tile)
-0.8 to -1.2	Moderate Drought (20%tile)		**0.8 to 1.2**	Moderate Wetness (80%tile)
-1.3 to -1.5	Severe Drought (10%tile)		**1.3 to 1.5**	Severe Wetness (90%tile)
-1.6 to -1.9	Extreme Drought (5%tile)		**1.6 to 1.9**	Extreme Wetness (95%tile)
-2.0 or less	Exceptional Drought (2%tile)		**2.0 or more**	Exceptional Wetness (98%tile)

Table 1. Rainfall and Drought Analyses for Selected Stations

Parish	Station	April Monthly Total (mm)	Percent of 30 year Mean (%)	SPI for April
Hanover	Mount Peto	163	84	0.53
Westmoreland	Sav-La-Mar	105	88	-0.42
Westmoreland	Frome	136	91	-0.99
Manchester	Sutton	852	487	2.69
St. Elizabeth	Y.S. Estates	405	194	0.68
St. Elizabeth	Potsdam	186	160	0.88
Clarendon	Beckford Kraal	270	227	0.99
St. Catherine	Tulloch	81	71	-0.65
St. Catherine	Worthy Park	225	229	1.02
Trelawny	Orange Valley	13	19	1.00
St. James	Sangster	18	30	0.65
St. Ann	Cave Valley	292	274	1.49
St. Mary	Hampstead	163	102	1.39
Portland	Shirley Castle	481	145	1.03
St. Thomas	Serge Island	178	201	0.47
KSA	Langley	83	55	-0.06
KSA	Manley Airport	26	88	-0.11

Standardized Precipitation Index Discussion

One station, Sutton in Manchester reported exceptional wetness, while Cave Valley in St. Ann and Hampstead in St. Mary reported severe wetness at the end of April. Abnormal or moderate wetness was reported for another nine (9) stations. In contrast Frome in Westmoreland reported moderate drought conditions and Tulloch in St. Catherine reported abnormally dry conditions. The month of April represents the start of the wet season. Jamaica received above normal rainfall activity for the month, and this is reflected in the wet conditions over a large number of areas with the most significant contribution being from central parishes and Portland in the east, while, below normal activity was seen over the extreme west and the southeast. This resulted in most areas being above drought conditions based on the cumulative effect of activity recorded from February to April as shown in the figure 1 (see below).

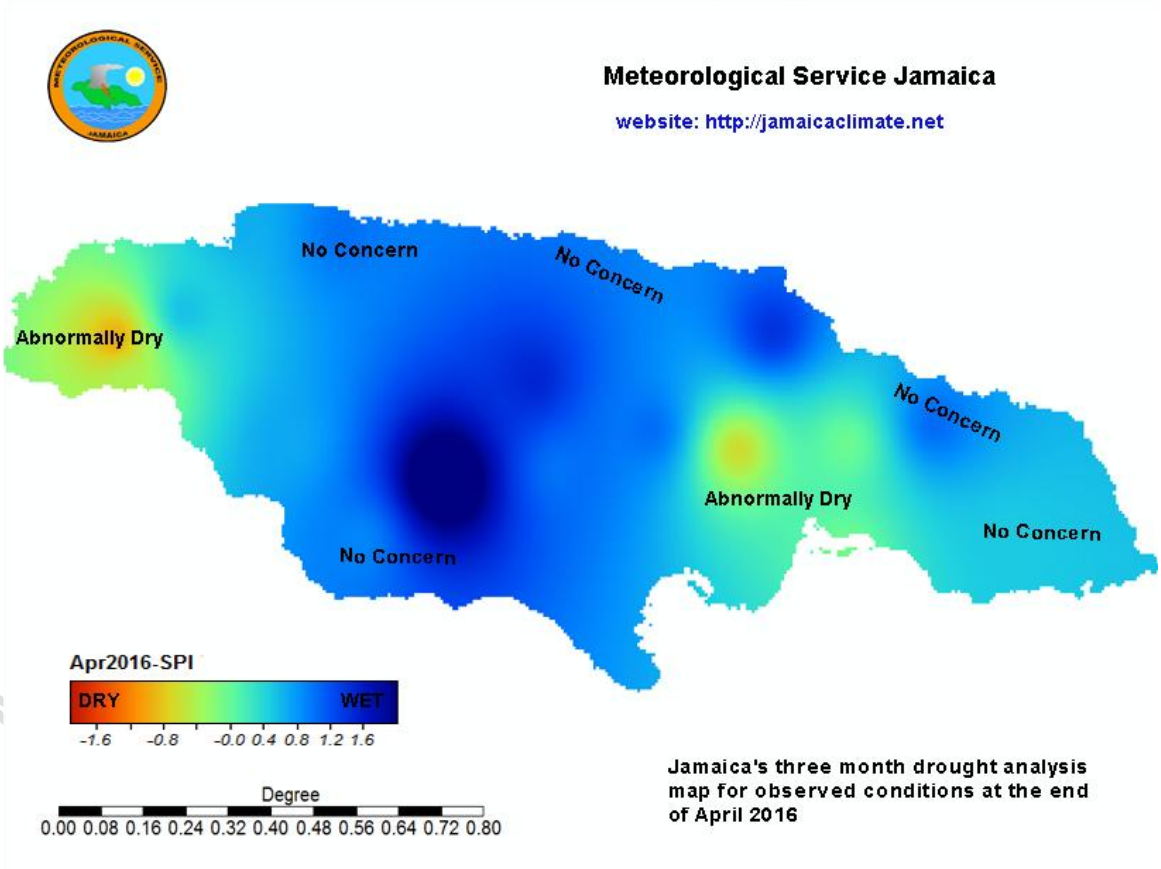

Fig.1 Station drought condition to April 2016

Precipitation Outlook – May to July 2016

Through the period May to July the models indicate a decrease in the forecast rainfall amounts across most areas. As we progress through the first rainfall season (May), expect the rainfall activities to ease the remaining dry patches still affecting sections of the island.

However as we enter the next dry period (July) expect a sharp decrease in rainfall activity. This decrease in rainfall could negatively affect key agricultural areas and therefore we are advising that plans be made to reduce any possible impacts.

Table 2. Climate Predictability Tool (CPT) Outlook MJJ 2016.

Stations	Below (B) %	Normal (N) %	Above (A)%
Manley (Kingston)	50	20	30
Sangster (St. James)	50	30	20
Sav. (Westmoreland)	70	10	20
Beckford (Clarendon)	50	20	30
Serge Island (St. Thomas)	50	20	30
Cave Valley (St. Ann)	40	25	35
Tulloch Estate (St. Catherine)	55	20	25
Y.S. Estate (St. Elizabeth)	50	30	20
Hampstead (St. Mary)	50	20	30
Orange Valley (Trelawny)	50	30	20
Langley (Kingston)	50	30	20
Mount Peto (Hanover)	65	15	20
Shirley Castle (Portland)	45	20	35
Suttons (Manchester)	45	25	30
Potsdam (St. Elizabeth)	50	30	20
Frome (Westmoreland)	60	15	25
Worthy Park (St. Catherine)	50	20	30
Jamaica	50	20	30

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

Drought Forecast – July 2016

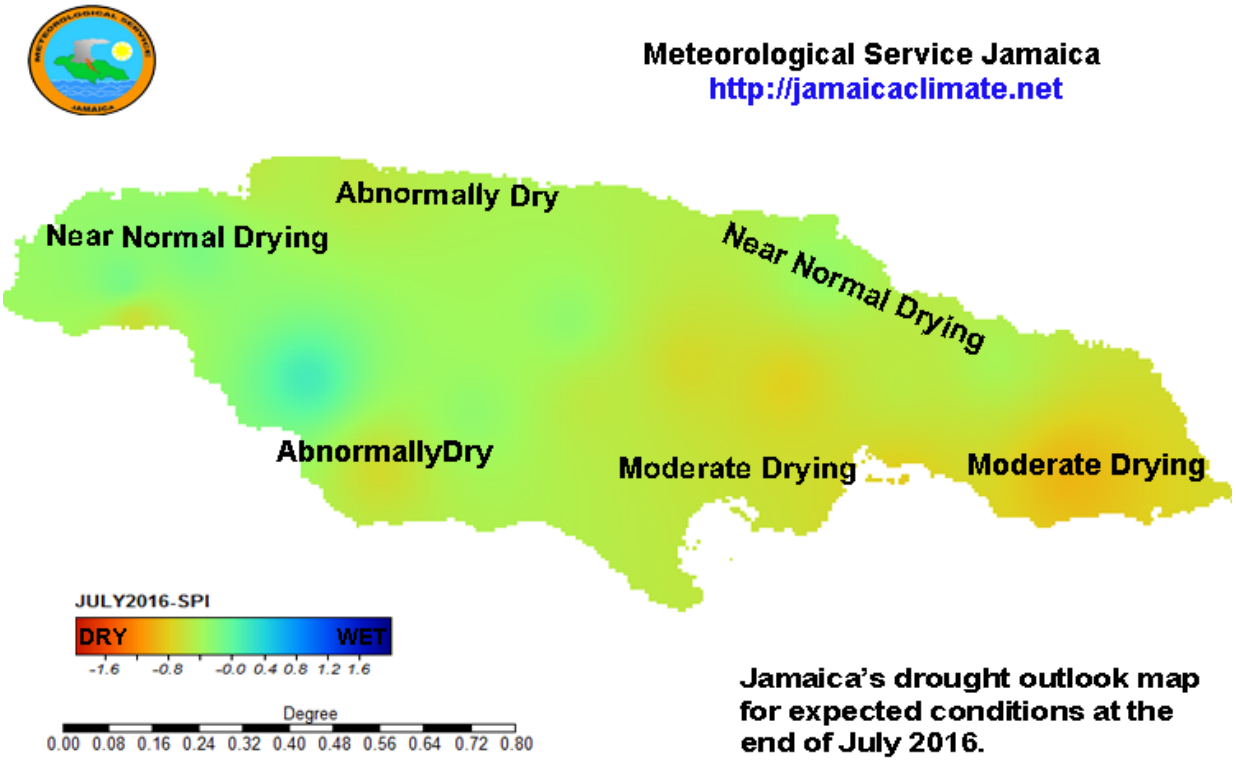

Fig.2 Expected drought conditions by the end of July 2016

Temperature Forecast – May to July 2016

Location	Below (B) %	Normal (N) %	Above (A) %
Jamaica Temperature Outlook	10	15	75

Summary and Expected Agricultural Impacts

As Jamaica progresses through the first rainfall season, the precipitation forecast through May shows normal to near normal levels for most stations and given the above normal rainfall received in April this should be a welcome relief from the drying/drought conditions and provide a much needed recharge of our depleted water systems.

However, as the next dry period approaches, rainfall activities seem likely to decline to below normal levels due to changing atmospheric conditions and therefore could again negatively impact our critical and sensitive sectors such as agriculture.