

STATEMENT TO PARLIAMENT ON DROUGHT

BY

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ENVIRONMENT AND CLIMATE CHANGE

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Mr. Speaker, I begin my presentation by mentioning a chemical formula...two parts hydrogen, and one part oxygen. This formula touches every single aspect of life on this planet and is one that many of us take for granted, that is, until our supply is depleted. Of course, I am referring to water, Mr. Speaker.

As I address this honourable House, we are now experiencing a meteorological drought in a number of parishes, which is currently impacting on our access to this precious resource and will continue to do so in the very near future.

Although we have had some rain over the past two days, “A shower doth not a drought break”, and as such, we cannot fail to carry out the drought mitigation measures being put in place, on which I will enlighten this Honourable House shortly.

Mr. Speaker, I believe it is prudent to define the term ‘drought’ as opposed to the term ‘dry period’ and to make a distinction between the various types of droughts that we may experience.

Drought

Drought is a slow creeping natural hazard that occurs as a consequence of natural climate change. There has been growing concern worldwide, that the incidence of

drought experienced by several countries may be increasing in frequency and severity due to Climate Change.

Droughts are known to have significant economic, social and environmental impacts, and persistent droughts have the most detrimental consequences.

Definition and Types of Drought

Drought may be simply defined as a long period without rain. More precise definitions for specific areas of concern most commonly used are:

- Agricultural Drought—which refers to a period when soil moisture is inadequate to meet the demands for crops to initiate and sustain plant growth
- Hydrological Drought—which is a period of below normal stream flow and/or depleted reservoir storage and
- Meteorological Drought—which refers to a period of well below average precipitation (rainfall) that spans from a few months to a few years.

As I said before, we are now experiencing a Meteorological Drought in some parishes.

Rainfall Pattern

Mr. Speaker Jamaica has a bimodal rainfall pattern which simply means that there are two peak periods with higher values of rainfall broken by periods of lower rainfall amounts. The primary peak occurs in October and the secondary in May.

The lowest amounts of rainfall occur during the period February to March and in July. This pattern has been established based on a long term 30 year analysis of rainfall over the island.

A comparison of the two 30 year periods for which the analysis has been done, first between 1951 and 1980 and then 1971 and 2000, indicates that there have been some changes with wetter dry periods and drier wet periods all due to Climate Change

Drought Assessment by Parishes

Mr. Speaker, I will now report on the findings of a drought assessment conducted in some of the affected parishes.

For the two month period October to November 2012, the parish of Hanover experienced normal drought with 51% of normal rainfall but this worsened for the November to December period to 41% of normal rainfall.

Clarendon experienced no drought in the October to November period but in the November to December period, normal drought was experienced with 54% of normal rainfall.

Westmoreland experienced no drought in the period October to November but experienced normal drought for the November to December period with 54% of the normal rainfall.

St. Catherine experienced severe drought in the October to November period with 39% of the normal rainfall but normal drought in the November to December period with 46% of normal rainfall

St. Mary experienced no drought in the October to November period but experienced normal drought in the November to December period with 55% of normal rainfall

St. Thomas experienced normal drought in the October to November period with 58% of normal rainfall but this worsened in the November to December with 48% of normal rainfall

Mr. Speaker, when I say normal rainfall, I am referring to the parish averages.

So for example, if St. Mary is used to receiving 100 millimeters of rainfall and receives 55 percent of this amount, then the parish would be considered to be experiencing normal drought conditions.

The Standardized Precipitation Index (SPI) calculated monthly for selected stations across the island gives more details about the drought conditions on a community level.

There is currently only one station per parish and the SPI derived from the measurements from these stations give a more precise indication than that derived from the parish drought index which I just described.

The SPI recognizes conditions of increasing severity from moderately dry, severely dry, extremely dry and the most severe, exceptionally dry.

Based on the SPI indices, most of the weather stations have been indicating more severe drought conditions in January.

These weather stations are situated in Savanna-la-mar in Westmoreland (extremely dry), Mount Peto in Hanover (moderately dry), Orange Valley in Trelawny (severely dry), Tulloch in St. Catherine (extremely dry) and Serge Island in St. Thomas (extremely dry).

Mr. Speaker, please note that extremely dry is one level before exceptionally dry which is the worst case for the SPI.

The parish drought index corresponds well with the SPI confirming that drought conditions now exist in the parishes indicated.

However, while the parish index may be showing normal drought, the SPI has indicated that conditions are much worse in sections of these parishes.

Precipitation Outlook

Mr. Speaker, regarding the Precipitation Outlook, a total of five stations across the island were examined and four of these stations indicated below normal rainfall while one station returned above normal rainfall.

The forecast continues to show strong signals across most stations for below normal rainfall. The overall average for Jamaica therefore, reflects a near normal to below normal rainfall pattern for the period January through to March 2013 with strong signals and high forecast confidence.

The general conclusion is that while several stations are now experiencing extremely dry conditions the outlook for January through to March is for a worsening situation with normal to below normal activity with a greater likelihood for below normal rainfall. Realization of this prediction will only exacerbate the existing drought conditions.

Drought Impacts and Mitigative Measures

Mr. Speaker, I now turn to Drought Impacts and Mitigative Measures. The drought has affected the water supplies of both the Parish Councils and the National Water Commission (NWC). The areas most affected are in western Jamaica (Lucea-Negril water supply) and the small systems in rural Jamaica.

The systems most affected are those that originate on the impermeable volcanic formations that depend entirely on rainfall to support flow. Systems that tap the limestone formations have not been affected and have a more reliable yield due to base flow support from the limestone aquifers.

The impact in some areas on the public water supply is due not just to a decline in the sources but also as a result of an increased demand, both legal and illegal, as well as irrigation usage as other sources dry up.

The National Water Commission has therefore moved to implement a number of drought mitigation initiatives.

However, some customers served by systems that are currently being impacted by drought conditions are already being affected by no water conditions, intermittent water supply, and/or low water pressures.

The measures include:

- Accessing additional sources of water for treatment and distribution;
- Maximizing the use of existing sources of supply;
- Modifying the distribution systems to reduce losses from the systems and to optimize flows to customers;

- Improving the capacity to share water from the least-affected systems with the worst-affected systems;
- Accelerating the water supply improvement projects that could assist in drought mitigation;
- Reducing, alternating, diverting or transferring water within and among impacted water supply systems and areas;
- Increasing the trucking of water with priority to be given to hospitals, health centres, schools, public institutions and communities which are severely affected for prolonged periods;
- Installing, restoring and/or utilizing community/Rapid Response and other tanks as well as other water harnessing and storage facilities;
- Increasing activities to reduce Non Revenue Water (NRW) and particularly leaks and overflows;
- Maximizing the use of existing storage tanks of which there are 445 across the island after an assessment of the condition and status of each.

Distribution of Water Storage Tanks

Mr. Speaker, the National Water Commission has a total of 445 tanks throughout the island with the exception of Kingston. The numbers are broken down as follows:

SURREY	Kingston	0			
	Saint Andrew	60			
	Saint Thomas	19			
	Portland	22			
MIDDLESEX	Manchester	49			
	Clarendon	38			
	Saint Catherine	29			
	Saint Mary	18			
	Saint Ann	51			
CORNWALL	Trelawny	30			
	Saint James	61			

	Hanover	27			
	Westmoreland	11			
	Saint Elizabeth	30			
TOTAL		445			

A. The NWC is embarking on a major program to replace or rehabilitate several of these tanks to restore them to full functionality. A provision of \$3.0B is being made for this purpose under the K-Factor Program.

B. Over the next three months, approximately \$100M will be spent on bushing, inspection, assessment and performance of minor repairs on these facilities. In addition, for tanks in areas affected by drought, more significant emergency work totaling an additional \$100M will also be carried out over the three-month period.

C. The remaining funds are expected to be used for engineering, major rehabilitation or replacement of other tanks requiring such intervention.

In addition, the Ministry through the Rapid Response Unit has 70 wayside tanks throughout the island, many of which have fallen into disrepair following the winding up of the Rapid Response Unit by the former Administration. It will cost a total of approximately J\$7million to repair these tanks.

Mr. Speaker we realize that given the current drought conditions, these tanks need to be rehabilitated and to be put back into service, and so my Ministry will be moving expeditiously to undertake the necessary repairs.

Whereas the major storage facilities serving the capital city of Kingston (Mona Reservoir and Hermitage Dam) are presently at near 100% capacity, it is expected that these storage levels will decline during a prolonged dry season.

It is therefore imperative that the public conserve on its use of water over the next 3-4 months until the other expected period of precipitation in May.

On that note Mr. Speaker, I am happy to report that the Yallahs Pipeline has been restored at a cost of J\$75million.

Mr. Speaker it goes without saying that the mitigating activities to be carried out by the NWC in the various affected parishes will result in an increase in its expenditure.

Among the areas that will contribute to increased costs are:

- the increase in the need for trucking;
- the increase in night time valve regulations that result in increased Operation & Maintenance costs,
- the need to rehabilitate water facilities or establish new ones to increase available quantities of water and improve the capacity to deliver to consumers.

Mr. Speaker, Cabinet has approved the financing of J\$30 million to support the overall drought remedial programme.

My Ministry is partnering with the Ministry of Local Government and Community Development (MLGCD) to allocate funds for the trucking of water to the drought-affected areas across Jamaica, especially those areas not served by the National Water Commission.

The funds will be allocated to the respective Parish Councils for the trucking of water to those areas, districts and communities identified by the Members of Parliament, as being in need. This process is underway as a matter of urgency. However, let me state categorically, that the Councils which now have balances from last year's allocation will not receive any new allocation until the balances have been cleared. Our records indicate that the three Parish Council that have depleted their allotments are Portland, St. Thomas and Clarendon.

Mr. Speaker, as it stands, there are 21 Rapid Response Units operating islandwide as follows:-

- 2 units in the Metro Region which comprises Kingston and St Andrew. These are based at the NWC's compound on Marescaux Road.
- 9 units in the central region comprising Manchester, St. Elizabeth and Clarendon. Four of these units are based at the NWC's compound at May Pen; four are housed the National Irrigation Commission in Houslow, St. Elizabeth and one is housed at the St. Elizabeth Parish Council.
- Four units in the Northern region comprising St. Mary, Portland and St. Ann. These are located at the NWC's base in Port Maria.
- And 6 units in the Western region which comprises Trelawny, St. James, Hanover and Westmoreland. These are based at the NWC's compound at Bevin Avenue in Montego Bay.

Mr. Speaker, there are 26 additional units which we will be repairing in the short term. J\$10million has been allocated so far for the repairs. Once the repairs are completed these will be put into service as follows.

- 6 in Kingston
- 7 in St. Catherine
- 8 in St. James and
- 5 in Manchester

Forest Fires in the Dry Season

The projected/protracted dry season is expected to impact our forest reserves and forest estates islandwide with increased chances of forest fires. Forests, particularly those located in St. Thomas, St. Andrew, Clarendon and Manchester, are especially prone to forest fires, and the Forestry Department, which falls within my Ministry, will be stepping up compliance and enforcement activities to ensure the integrity of our forests during the period. There will be increased presence of Forest Officers to ensure that forest fires related to breaches of the Forest Act 1996 and Regulations 2001 are minimized.

Any breach in the Forest Act or Regulation can attract fines of up to \$200,000 and \$50,000 respectively. In default of payment of the fine the convicted person can be imprisoned for up to 2 years under the Act of one (1) year under the Regulations. Therefore it is of the utmost importance that persons living near forests adhere to the rules and regulations governing the use of our forests and forest management areas both in the short and long-term.

In addition to increased presence by Forest Officers, the Forestry Department will also be maintaining fire breaks or fire lines in the forests to prevent fires from moving from one area to another.

In very short order Jamaica will have its own Forest Fire Management Plan. The Agency, with funding under the EU Climate Change Adaptation and Disaster Risk Reduction Project is currently working with the US Forest Service to develop a comprehensive Fire Management Plan for the island with emphasis being placed on the Yallahs and Hope Watersheds.

The Plan will outline how and the mechanisms by which forest fires are handled to minimize their effects on the country.

Even as the Agency seeks to complete this document, in the short term community members are encouraged to get involved in protecting the forests. Should community members witness any breaches in the forests, they are advised to call the Forestry Department and in the case of fires, the Fire Department.

Future Drought Planning

Mr. Speaker, while the Ministry and the Government deal with the immediate situation there has to be planning for future droughts which as stated in my introduction are increasing in frequency and severity due to Climate Change.

The decision has been taken to resuscitate the National Drought Management Committee. This committee will play a proactive role in mitigating the impacts of drought on the economy.

The Committee will assess the current situation, and formulate short and medium term measures to mitigate the drought situation facing the country and to minimize the impact on the vulnerable in the society in particular schools, hospitals and the elderly.

The drought committee consists of representatives from the following agencies;

- The Ministry of Water, Land, Environment and Climate Change (MWLECC)
- The Water Resources Authority (WRA)
- The National Water Commission (NWC)
- The National Meteorological Service
- The National Environment and Planning Agency (NEPA)
- The Forestry Department
- The National Irrigation Commission (NIC)
- Rural Agricultural Development Authority (RADA)
- The Office of Disaster Preparedness and Emergency Management (ODPEM)
- The Ministry of Local Government
- The Jamaica Fire Brigade
- Chairman of the Climate Change Advisory Committee

Mr. Speaker I will Chair this Committee and I tend to convene the first meeting shortly.

Mr. Speaker, the Government is cognizant of the magnitude of the drought situation. We are therefore developing strategies and taking these actions to ensure minimal impacts on the socio-economic situation of the country.

"It's not that drought effects the amount of water in the ground. Drought affects the amount of water that we use."

-Marlon Cook