



MINISTRY OF ENVIRONMENT, WATER AND CLIMATE
Meteorological Services Department

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All correspondences should be addressed to the Director



Minimising Risks through Science

2018/19 SEASONAL RAINFALL FORECAST FOR ZIMBABWE

METEOROLOGICAL SERVICES DEPARTMENT

28 August 2018

THE ZIMBABWE NATIONAL CLIMATE OUTLOOK FORUM

Introduction

The Meteorological Services Department of Zimbabwe (MSD) annually convenes a National Climate Outlook Forum (NACOF) where the seasonal rainfall forecast for the upcoming rainfall season is presented to national stakeholders. This follows the regional forum, Southern Africa Regional Climate Outlook Forum (SARCOF). It should be noted that the SARCOF Statement is relevant only to seasonal (overlapping three-monthly) time-scales and covers relatively large areas. As a result, it may not fully account for all factors that influence national climate variability, such as local and month-to-month variations.

Users are strongly advised to contact the Meteorological Services Department for interpretation of this Outlook, additional guidance and updates.



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Multi-sectoral stakeholders will use this planning tool which is critical for enhancing socio-economic development of the nation since weather and climate information is invaluable to all sectors of the economy.

Methodology

Using statistical, other climate prediction schemes and expert interpretation (including personnel from academic institutions), the climate scientists determined likelihoods of above-normal, normal and below-normal rainfall for each area i.e. October-November-December (OND), and January-February-March (JFM). The climate scientists took into account oceanic (sea surface temperatures) and atmospheric factors that influence our climate over SADC region (which includes Zimbabwe), in particular the El Niño-Southern Oscillation (ENSO).

ENSO is the interaction of anomalous sea surface temperatures and atmospheric pressure over the eastern tropical Pacific Ocean. This phenomenon affects climatic patterns around the globe. The term ENSO refers both to El-Niño and La-Niña phenomena and the Southern Oscillation. In the case of Zimbabwe, a rainfall season that follows an El Niño has a high probability of being dry while a season that follows a La Nina event is highly likely to be wet.

There are other indicators that are also used such as the Indian Ocean Dipole (IOD), sea surface temperatures (SST) among others.

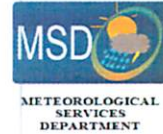
Seasonal Rainfall Outlook for Zimbabwe for 2018/19



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The seasonal rainfall forecast is divided into two sub-seasons: October to December 2018 (OND) and January to March 2019 (JFM). The country is demarcated into three (3) zones according to the country's climate drivers as illustrated in **Figure 1**.

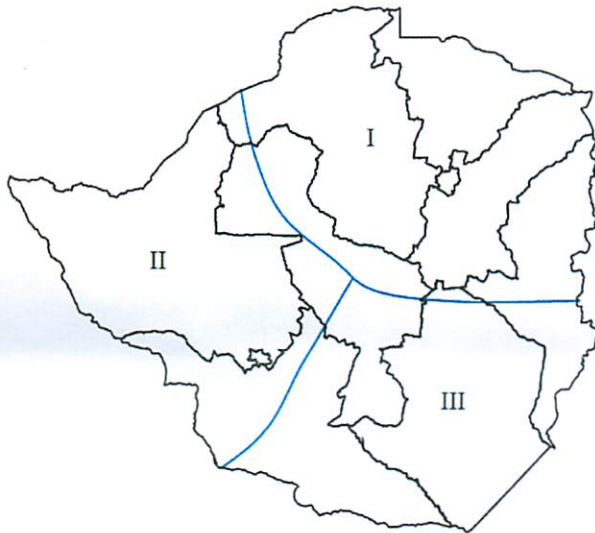


Figure 1: Zimbabwe's Homogeneous Rainfall Zones

The October 2018 to March 2019 forecast is as follows:

a) Rainfall outlook for the October to December (OND) 2018 period

Region I: Harare, much of Mashonaland East, Mashonaland West, Mashonaland Central, northeastern parts of Midlands, most of Manicaland
Normal with a bias towards below normal

Region II: The greater part of Matabeleland North, parts of Midlands and parts of Mashonaland West.



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Normal with a bias towards below normal

Region III: Masvingo, the bulk of Midlands, the extreme southern parts of Manicaland and the bulk of Matabeleland South.

Normal with a bias towards below normal

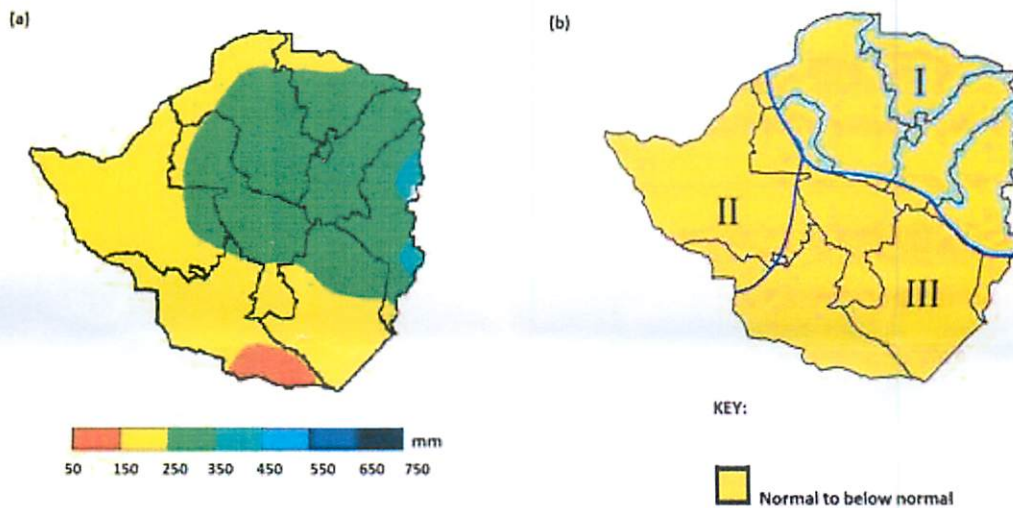


Figure 2(a) Long term mean rainfall for October-November-December (1981-2010), (b) Seasonal outlook for October-November-December.

(b) Rainfall outlook for the January to March (JFM) 2019 period

Region I: Mashonaland Provinces, Harare, most of Manicaland, northern parts of Masvingo and northern parts of Midlands.

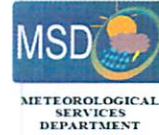
Normal with a bias towards below normal



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Region II: The greater part of Matabeleland North, northwest Matabeleland South, Bulawayo.

Normal with a bias towards below normal

Region III: The greater part of Masvingo, the extreme southern parts of Manicaland, southeast Matabeleland South and the southern parts of Midlands

Normal with a bias towards below normal

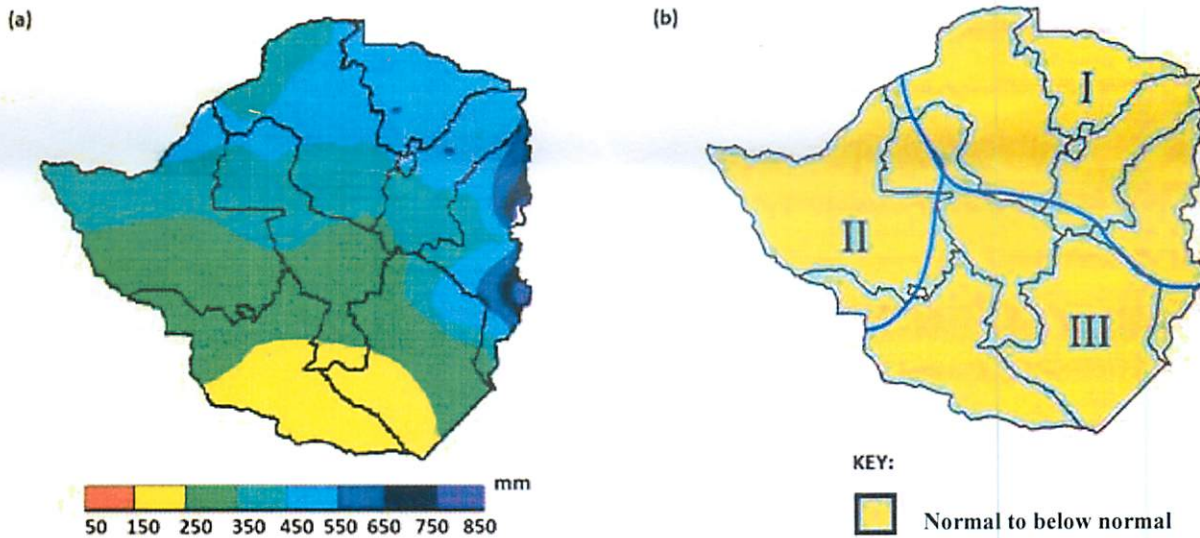


Figure 2(a) Long term mean rainfall for January-February-March (1981-2010), (b) Seasonal outlook for January-February-March.

Please Note: The Meteorological Services Department will continue to monitor all the available seasonal climate indicators which influence Zimbabwe’s rainfall as

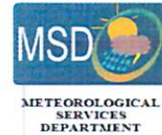


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they evolve. Thus, the seasonal rainfall predictions will be updated on a monthly basis beginning end of October. In addition, there will be daily weather forecasts and 10-day weather bulletins that will take into account any changes.

IMPLICATIONS OF THE 2018/19 RAINFALL SEASON OUTLOOK

Please note:

- ✚ The 2018/19 rainfall season is expected to be erratic in space and time. The forecast is for total seasonal rainfall amount.
- ✚ October rains are generally erratic for rain-fed agriculture, more meaningful rains normally begin at the end of November into December.
- ✚ It would be prudent to put in place measures for early cloud seeding programme in light of the expected erratic rainfall season throughout the country.
- ✚ In view of the moisture availability and suitable temperature thresholds, those with irrigation facilities should not wait for the main rains to fall. They can plant any time now, taking into account the high temperature needed for germination;
- ✚ Violent storms, prolonged dry spells, flash floods and tropical cyclones cannot be ruled out as the season progresses.

There is need to continue with water harvesting programmes.



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- ✚ The policies of small dam construction and borehole drilling/ deepening, conservation and protection of wetlands should continue, more so in the Southern Provinces of the country;
- ✚ Application of fertilizers should be guided by the 10-day weather forecasts as well as advice from Agricultural authorities; (Conservation, e.g., contouring and ridging/ smart agriculture); The 10-day weather forecasts will be issued from October until end of season.
- ✚ Development partners, research institutions and all stakeholders should continually monitor the rainfall season and provide the necessary assistance when need arises.