



SADC Climate Services Centre
P/ Bag 0095 ,
Gaborone ,
Botswana
Tel : + 267 - 3953411/13, 3951863
Fax + 267 - 3972848 / 3181070
Web : www.sadc.int

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OUTLOOK FOR JANUARY— FEBRUARY—MARCH 2017 UPDATE

HIGHLIGHTS

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GLOBAL SST FORECAST

- The El Niño–Southern Oscillation (ENSO) remains neutral—neither El Niño nor La Niña.
- Negative sea surface temperature (SST) anomalies over equatorial Pacific Ocean are close to long-terms average in early January 2017.
- Positive SST anomalies are observed over the southern Indian Ocean and negative SST over central parts.
- The Indian Ocean Dipole remains neutral.

OCTOBER – DECEMBER 2016 RAINFALL HIGHLIGHTS

- Since late November, the southern African summer monsoon has continued to be dominated by a dipole pattern: with suppressed rainfall in the northeastern parts of the region and Island of Madagascar, and enhanced rainfall in the southern parts of contiguous SADC .
- Some significant above-normal rainfalls conditions were observed last past 30 days, across portions of northwestern DRC, west and south of Namibia, Botswana, Zimbabwe and south Mozambique.

JFM 2017 UPDATE RAINFALLS OUTLOOK SUMMARY

For the period January to March 2017, there will be below-normal rainfall conditions over eastern DRC, Tanzania, extreme northern Zambia, Malawi, Mozambique and Madagascar.

Meanwhile, there will be greater likelihood of normal to above normal rainfall over southern parts of Zimbabwe and Mozambique, northern South Africa, eastern Botswana and Swaziland and Lesotho. Largely consistent previous projections from SARCOF-20.

For more information:
registry@sadc.int
 Tel: +267 3951 863

El Nino Southern Oscillation

SST anomalies for December 2016 show the equatorial Pacific Ocean is close to average (within 0.5 °C of the long-term average). Only a few small areas remain cooler than -0.5 °C. A band of weakly warmer-than-average water persists in the southwest Pacific (Fig. 1). Although almost all ENSO indicators are firmly within their neutral range, cloud and rainfall patterns continue to show some weak La Niña-like characteristics.

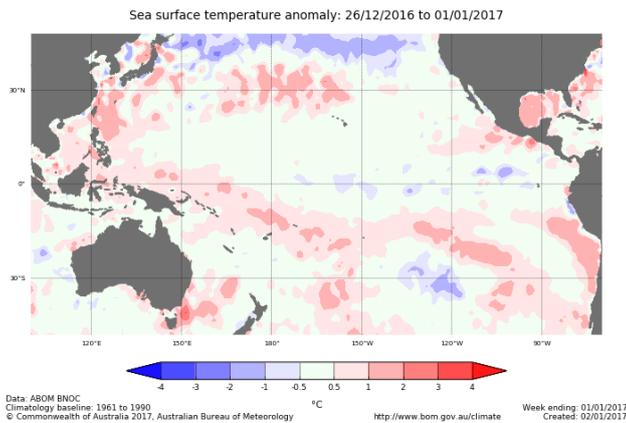


Fig. 1. December 2016 global SST showing neutral ENSO [Source: ABOM]

Most models maintain neutral SST outlooks through to at least May 2017; however, one model suggests strong warming may be possible in autumn, reaching El Niño thresholds in May (Fig.2).

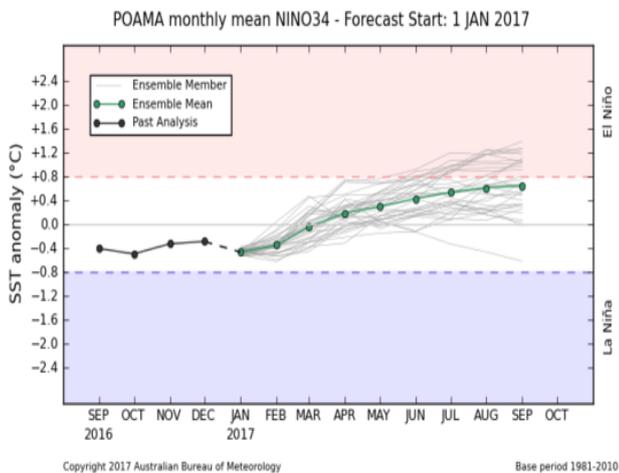


Fig.2. Ensemble Member model ENSO forecasts (Source: ABOM)

RAINFALL REVIEW

02 October — 30 December 2016)

During the last 90-days, the region experienced the above normal rainfall conditions over localized areas in DRC, southern Angola, northern Namibia, Botswana, Zimbabwe, eastern South Africa, central and southern Mozambique. In contrast, below-average rainfall was observed over portions of many parts of Angola and DRC, Zambia, Malawi, localities in Namibia, western and southern South Africa, northern Mozambique, and much of Tanzania and Madagascar (Fig.3).

The inter-tropical convergence zone (ITCZ) is very active and centered over the eastern parts of SADC region. This will favour mostly the eastern part of the region and Island States with rains during 09-30 Jan 2017. The short-term forecast is presented in the next page.

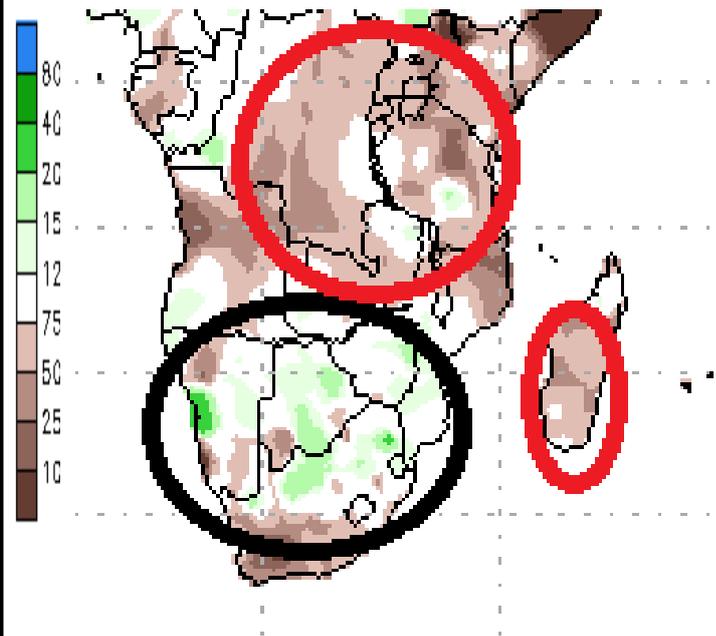


Fig. 3. Precipitation departure from normal (%) , 02 Oct — 30 Dec 2016 [Source: CPC]

This review of the first three month of the current 2016/17 rainy season shows the consistency between the observed rainfall trend and the OND 2016 rainfall outlook released at SARCOF-20.

SHORT-TERM FORECAST (09 to 25 January 2017)

The ITCZ is going to favour more rains over the diagonal axis covering northern Zimbabwe, Zambia, Malawi, Mozambique and south Madagascar, with the centred active rain pattern over the Mozambique channel Ocean. Suppressed rainfall conditions will predominate over DRC, Angola, Tanzania, parts of eastern Botswana, extreme north of South Africa, south Mozambique and Zimbabwe (Fig.4.a.b.).

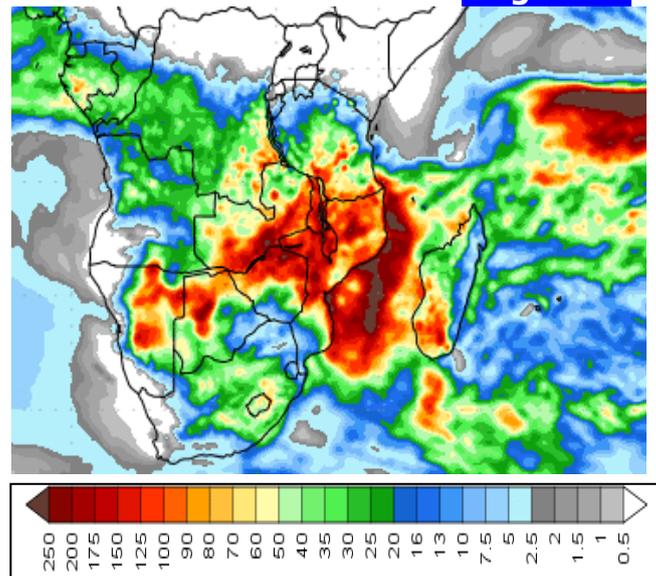


Fig.4.a: Precipitation (mm) forecast for 09 - 17 Jan, 2017 (source: IGES/COLA)

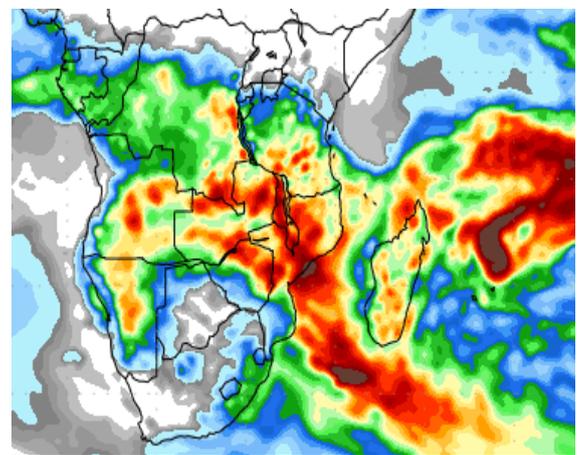


Fig.4.b: Precipitation (mm) forecast for 17 - 25 Jan, 2017

SADC mean rainfall for JFM for 1961-1990

The long-term mean for January-February-March rainfall shows maxima of above 600 millimetres over much of Malawi, Zambia, extreme southern of DRC, central and northern Mozambique as well as Mauritius and central Madagascar Figure 6. The remainder of the region receives rainfall less than 300 millimetres gradually decreasing southwestwards to southwest South Africa and Namibia where the mean rainfall is below 100 millimetres.

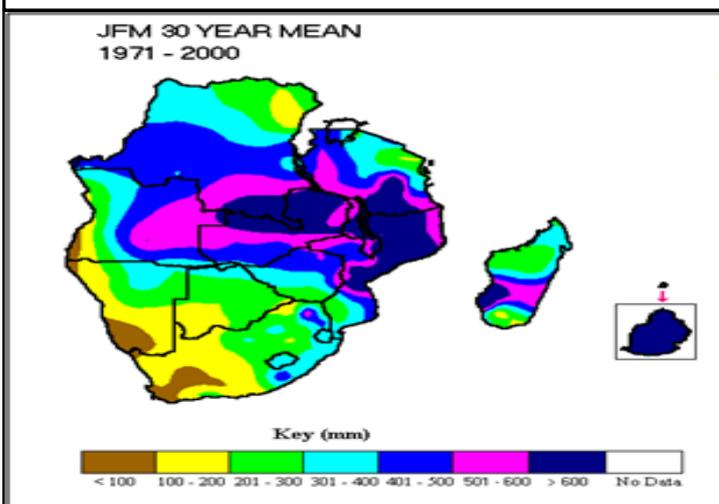


Fig. 6. SADC mean rainfall (mm) for December-January -February season for the period 1971–2000

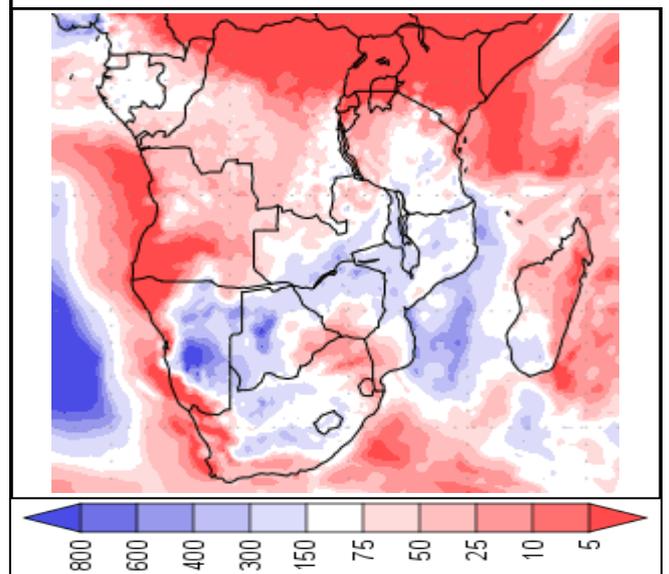
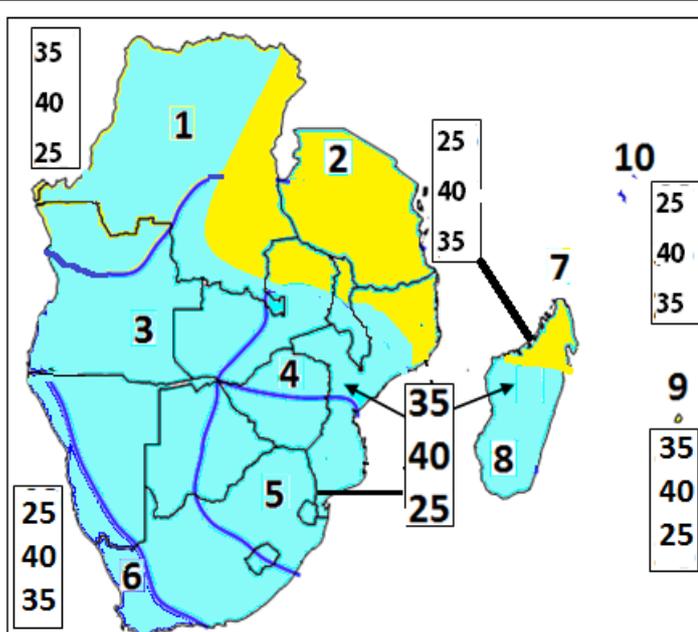


Fig.5. Precipitation (% of normal) forecast for 09–17 Jan, 2017 (source: IGES/COLA)



JFM 2017 FORECAST DETAILS

For January to March, 2017, the bulk of SADC region is expected to receive normal to above-normal rainfall. However, across the northeasternmost, normal to below-normal rainfall conditions.

Zone 1: North-western DRC, and extreme north Angola

Increased chances of normal to above-normal rainfall

Zone 2: Extreme North-eastern DRC, entire Tanzania, extreme north of Zambia, Malawi and Mozambique.

Increased chances of normal to below-normal rainfall

Zone 3: the bulk of Angola, most of Namibia, extreme half-western Botswana, south of DRC, western Zambia, central South Africa and west half of Lesotho.

Increased chances of normal to above-normal rainfall

Zone 4: Southern Zambia, half north of Zimbabwe, south Malawi and central Mozambique.

Increased chances of normal to above-normal rainfall

Zone 5: South-half of Zimbabwe, eastern Bot-

swana, north-eastern South Africa, eastern Lesotho, Swaziland and south Mozambique.

Increased chances of normal to above-normal rainfall

Zone 6: Western coastal of Namibia and extreme southwest of South Africa.

Increased chances of normal to below-normal rainfall

Zone 7: Extreme northern Madagascar.

Increased chances of normal to below-normal rainfall

Zone 8: Most of Madagascar.

Increased chances of normal to above-normal rainfall

Zone 9: Mauritius.

Increased chances of normal to above-normal rainfall

Zone 10: Seychelles.

Increased chances of normal to below normal rainfall

Notes:

1. The season is expected to have normal to above rainfall over the bulk of SADC Region.

2. The numbers in each zone (Fig. 7) indicate the probabilities of each of the three categories: Above-normal, Normal and Below-normal relative to the 1971-2000 climatological baseline (Fig. 7). The top number indicates the probability of rainfall occurring in the Above-normal category, the middle number for Normal and the bottom number for Below-normal category.

3. The users are strongly advised to contact their NMHSs for interpretation of this Outlook, finer details, updates and additional guidance.

4. Acknowledgements:

- SADC NMHSs,
- Global climate monitoring and prediction centres
- WMO