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OUTLOOK FOR FEBRUARY—MARCH— APRIL 2016

HIGHLIGHTS

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GLOBAL SST FORECAST

- El Niño remains strong, but continues its gradual decline. Climate models suggest a return to neutral levels in the second quarter of 2016.
- Positive SST anomalies persisted over the central and southern Indian Ocean.
- Indian Ocean sea surface temperatures remain very warm across the majority of the basin which may provide extra moisture for rain systems across the sub-region.

NOVEMBER 2015– JANUARY 2016 RAINFALL HIGHLIGHTS

The Southern African region is facing the common El Niño impact of the extended periods of below normal rains in most of contiguous SADC region and warmer than average normal temperature during the period. This has also at times led to health threatening heat waves, according to media reports; and decimation of crops.

Significant wetter-than-normal conditions occurred over the Island States and north-eastern and south-western parts of continental SADC.

The current El Niño will continue to have significant regional climatic impacts. Thus abnormal patterns of temperature and precipitation patterns should persist across the southern African region during the upcoming months.

FMA 2016 RAINFALL OUTLOOK SUMMARY

For the period February to April 2016, there is a high likelihood of:

- **normal to below-normal rainfall conditions to continue in the bulk portions of continental SADC.**
- **normal to above-normal rainfall conditions in the eastern parts of the region, as well as over the Island States**

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El Nino Southern Oscillation

Most models indicate that a strong El Niño will continue and weaken with a transition to ENSO-neutral during the early winter 2016. The Southern Oscillation Index (SOI) remained strongly negative. The combined atmospheric and oceanic state reflect the continuation of a strong El Niño episode (Fig.1)

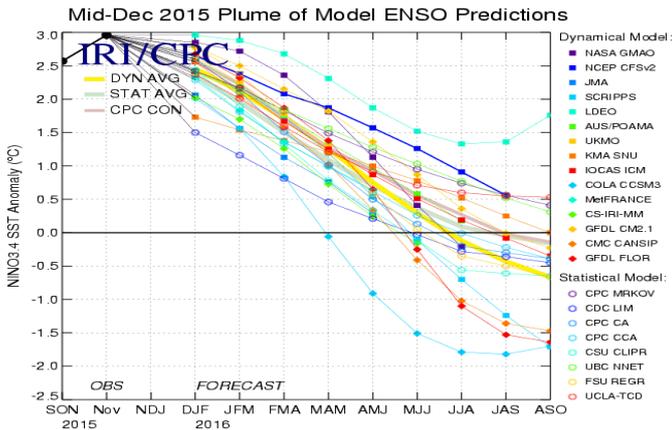


Fig. 1. Multi-model ENSO forecasts
 (Source: IRI CPC/NOAA)

The SST anomaly map for December 2015—January 2016 shows warm SST anomalies extended across nearly the entire equatorial Pacific. Moderate to strong warm anomalies persisted across much of the Indian Ocean. (Fig. 2).

Significant warmer than average temperatures were recorded over the majority of observed land areas. For the continent of Africa, 2015 currently ranks as the second warmest year on record (WMO).

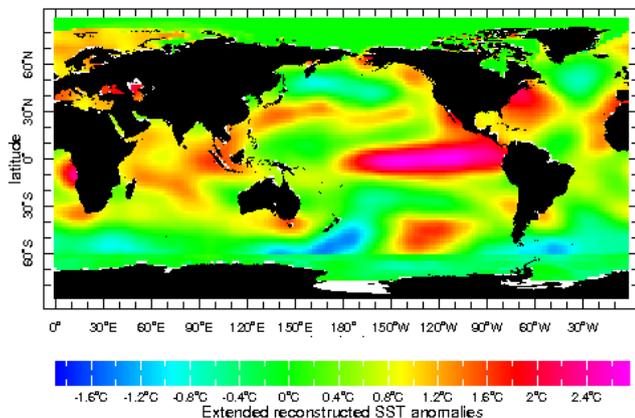


Fig. 2. Dec 2015-Jan 2016 global SST anomalies
 [Source: NOAA]

RAINFALL REVIEW

02 November 2015 — 31 January 2016

SADC region had observed suppressed rainfall condition during the period. Northern DRC, portions of Angola, northern Namibia, Zambia, Zimbabwe, portions of Botswana, South Africa, Malawi, central and southern Mozambique, and portions of Madagascar have had below-average rainfall.

On three-monthly averages, some countries in the region experienced normal rainfall conditions [blank color over the land] (Fig.3). However, eastern parts over DRC, western Namibia, most Tanzania, extreme north of Mozambique and extreme north of Madagascar were under above normal rainfall conditions.

Since the beginning of the rainy season, climate conditions were unfavourable to some climate sensitive sectors. The delayed onset, the below normal rains associated with the above normal temperature which also led to heatwave in many countries. Daily maximum temperature of more than five consecutive days exceeded the average maximum temperature by 5 °C. This affected the agricultural crop development, the livestock, the water resource management and the human health and comfort.

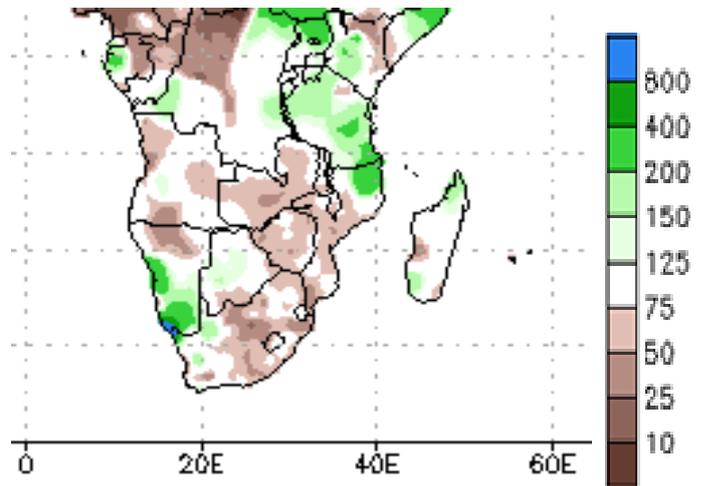


Fig. 3. Precipitation departure from normal (%) ,
 03 November 2015 — 31 January 2016 [Source: CPC]

SHORT-TERM FORECAST (09 to 25 February 2016)

The active rain pattern is centred over the Indian Ocean. Meantime, the southern parts of the continental region will persist with below normal conditions, while the northern parts will be graced by moderate rains over northern Angola, south DRC, most Tanzania, north-east Zambia and north Mozambique. Areas of increased rainfall conditions will gradually decrease (Fig.4.a.b.).

Largely drier than normal conditions are expected during the next weeks over the bulk of the region. (Fig.5).

SADC mean rainfall for FMA for 1971-2000

The long-term mean for February-March- April rainfall shows maxima of above 600 millimetres over much of Malawi, extreme southern of DRC, central and northern Mozambique as well as Mauritius and northern Madagascar, Fig. 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.

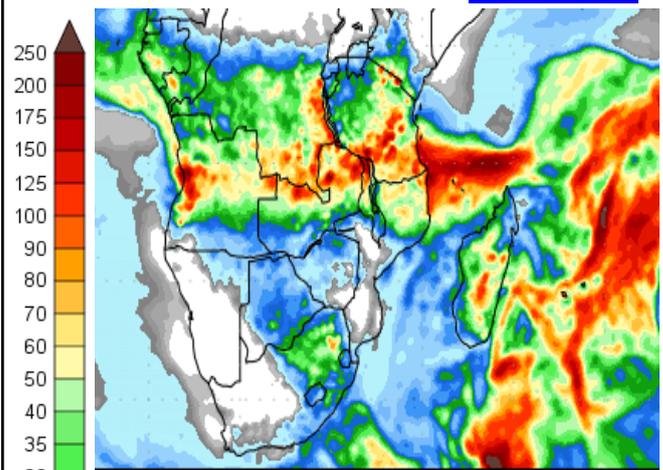


Fig.4.a: Precipitation (mm) forecast for 09 - 17 Feb, 2016

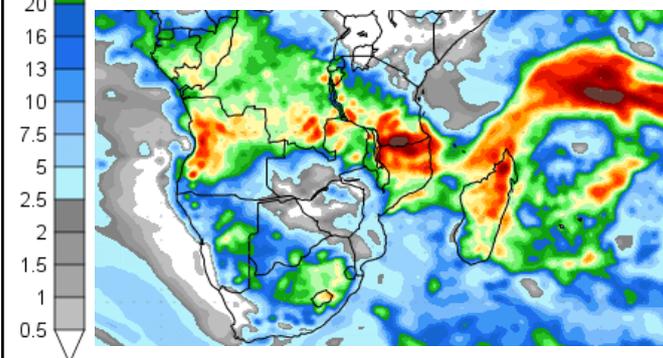


Fig.4.b: Precipitation (mm) forecast for 17 - 25 Feb, 2016 (source: IGES/COLA)

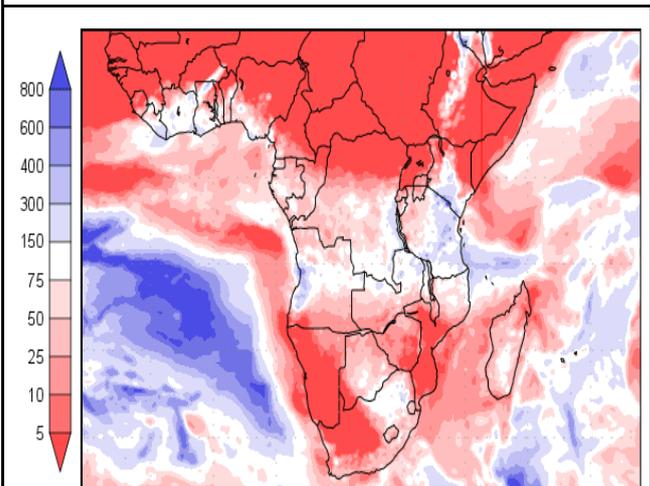


Fig.5. Precipitation (% of normal) forecast for 09 –17 Feb, 2016 (source: IGES/COLA)

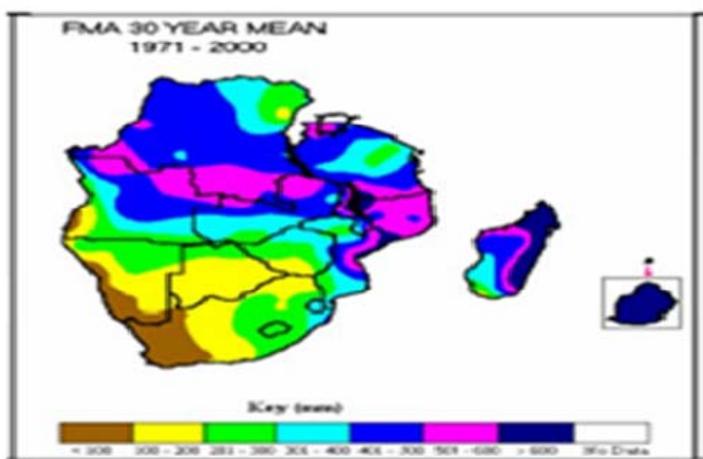
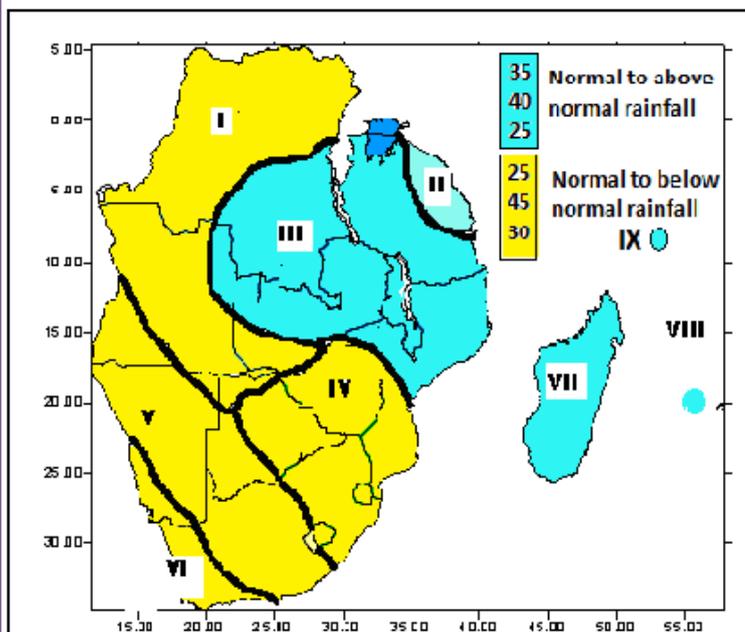


Fig. 6. SADC mean rainfall (mm) for February -March- April season for the period 1971– 2000



FMA 2016 FORECAST DETAILS

Persistent below-normal to normal rainfall conditions will continue to grip the southwestern of contiguous SADC, during February to April, 2016. However, Island States and northeasternmost continental SADC are expected to receive normal to above-normal rainfall.

Zone I: (North-western of DRC, bulk of Angola, north-eastern Namibia, extreme north of Botswana and south-western Zambia).

Increased chances of normal to below-normal rainfall

Zone II: (Northern-eastern Tanzania).

Increased chances of normal to above-normal rainfall

Zone III: (Northern Mozambique, bulk of Tanzania, Malawi, most of Zambia and south-eastern DRC).

Increased chances of normal to above-normal rainfall

Zone IV: (South-easternmost Zambia, Zimbabwe, eastern Botswana, northern and eastern parts of South Africa, eastern Lesotho, Swaziland and southern Mozambique).

Increased chances of normal to below-normal rainfall

Zone V: (South-western parts of Angola, most of Namibia, north and central South Africa, western Lesotho and south-western Botswana).

Increased chances of normal to below-normal rainfall

Zone VI: (Western fringes of Namibia and western of South Africa).

Increased chances of normal to below-normal rainfall

Zone VII: (Madagascar).

Increased chances of normal to above-normal rainfall

Zone VIII: (Mauritius).

Increased chances of normal to above-normal rainfall

Zone IX: Seychelles

Increased chances of normal to above normal rainfall

Notes:

- The numbers associated with colour in the legend (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. 6). 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.
- The users are strongly advised to contact their NMHSs for interpretation of this Outlook, finer details, updates and additional guidance.
- Acknowledgements:**
 - SADC NMHSs,
 - Global climate monitoring and prediction centres
 - WMO