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OUTLOOK FOR JANUARY - MARCH 2010

HIGHLIGHTS

Inside this issue:

Outlook Highlights

- Largely normal to above-normal rainfall is expected across northern half of continental SADC, Madagascar and Mauritius. Floods are a threat in these areas
- Below-normal to normal with longer than normal dry spells rainfall conditions are likely in the remainder of the subregion.

SUMMARY
The rains have been episodic in many parts of SADC. The satellite picture of 18 January 2010 at 1200 hours (UTC) shows extensive areas of light shading depicting intense cloudiness and precipitation. Meantime, the January to March 2010 rainfall projections for most parts of SADC are still largely consistent SARCOF-13 (details in pages 3 and 4).

EL-NIÑO /LA NINA UPDATE`

- Positive SST anomalies in the tropical Pacific.
- SOI maintained trend of negative values
- Models project persistence of weak El Nino conditions through April/May 2010.

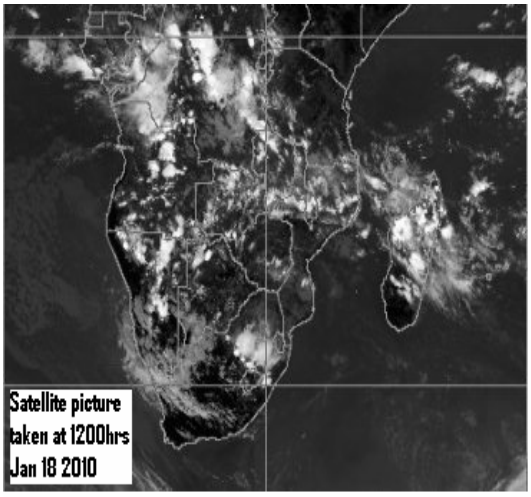

Fig 1.Satellite picture taken 12.00hrs (UTC)18/01/10

EL Nino Southern Oscillation (ENSO)

Warmer than average conditions have persisted in the tropical Pacific since early June. The low level zonal wind anomalies along the equatorial east Pacific have become westerly; the Southern Oscillation index, negative; and the thermocline depth anomalies positive during the last few months. Thus a basin-wide El Nino has become well-established. Dynamical and statistical forecast models, indicate persistence of warm El Nino-Southern Oscillation (ENSO) up to April 2010. Overall, based on model forecasts and current observations of the ocean surface and subsurface, the probability of El Niño conditions continuing is estimated at 90%, for the large part of 2009/2010. However, this decreases to about 50% up to June 2010 as the la Nina condition are forecast to start to increase.

EL-NIÑO UPDATE - WEAK WARM EPISODE FORECAST

SST anomalies (departures from average) over Pacific Basin continue to reflect above average conditions in Nino regions. Around Africa, it is warmer than normal over most of Atlantic and Indian Oceans. But colder than average south of Madagascar, Fig. 3.

Most of dynamical and statistical model forecasts from global climate prediction centres indicate a continuation of the EL Nino conditions in the next several months (Fig. 4).

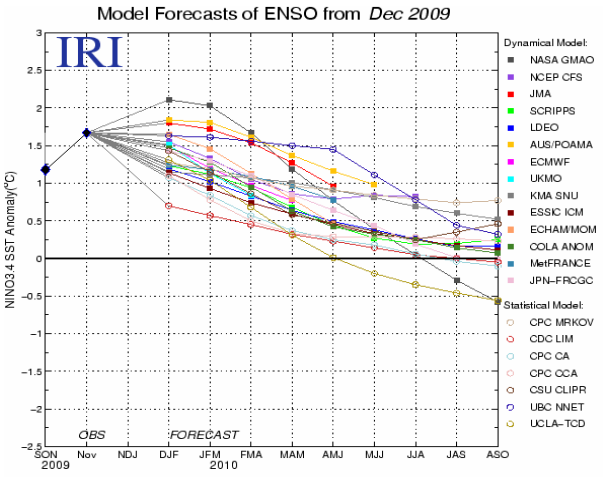

Fig.4: Model forecast for El-Niño event (Source: IRI)

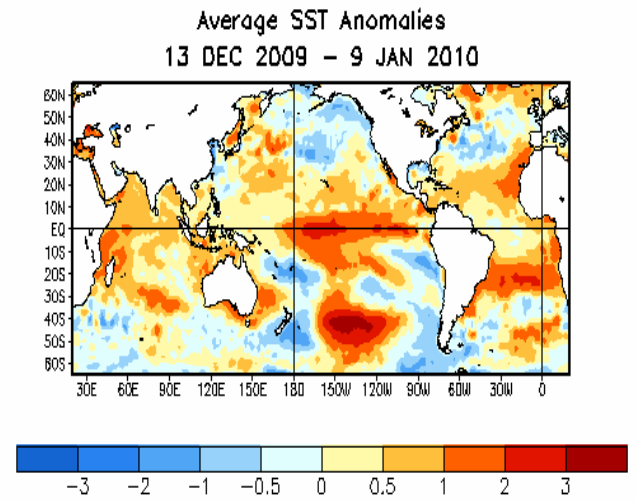

Fig 3, Mean SST anomalies over global oceans 13 Dec 2009 –9 Jan 2010 (Source: NOAA)

SADC DMC in conjunction with other partners will continue to closely monitor the status of evolution of El-Niño and relevant information and updates will be issued from time to time.

Meanwhile, the current Southern Oscillation Index (SOI) has maintained negative values since June 2009, Fig. 5. The SST anomalies for 1990 to 2010 Nino 3.4 region, are shown in Fig. 6. It can be seen that the SST anomalies became positive since 2009, consistent with El-Nino years.

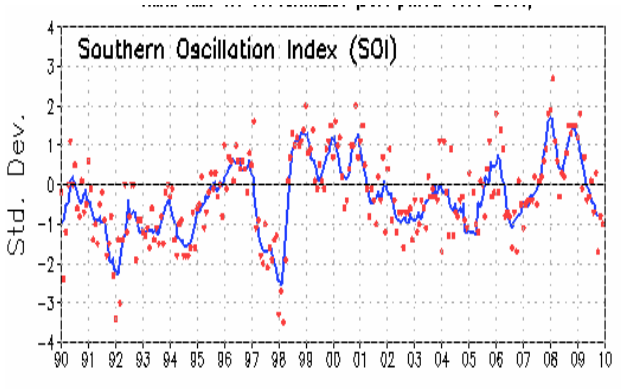

Fig. 5.SOI from 1990 to Sep 2009 (Source: NOAA)

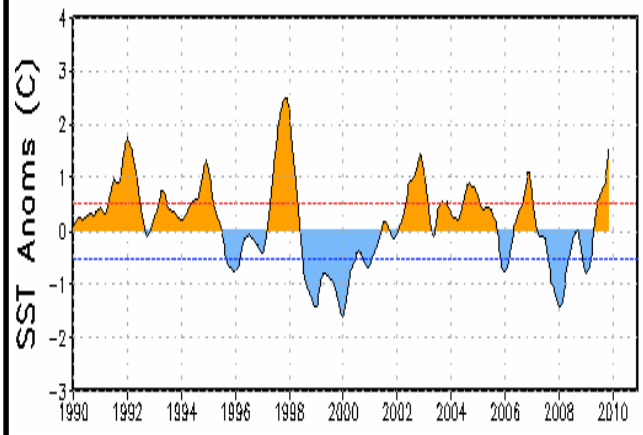

Fig. 6. SST anomalies in Nino 3.4 region from 1990 to Jan 2010 (Source: NOAA)

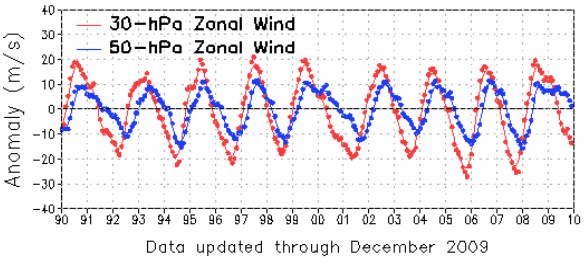

Fig.7. QBO from 1990 to Dec 2009 (Source: NOAA)

The Quasi-Biennial Oscillation (30 hPa level zonal wind) has been easterly and strengthening since mid-2009, Fig. 7. It should remain in an easterly phase the next several months before it reverses into westerly phase.

JANUARY- MARCH, THIRTY—YEAR MEAN RAINFALL (1971—2000)

The mean total rainfall map shows maxima of above 600 mm over much of Malawi, Zambia, Angola, southern half of DRC, central and northern Mozambique. Mauritius, Madagascar and Seychelles experience maxima from 500 beyond 600 mm. The remainder of the region receives rainfall less than 400 mm gradually decreasing southwestwards up to southwest South Africa and Namibia where the mean rainfall is below 100 mm (Fig. 8).

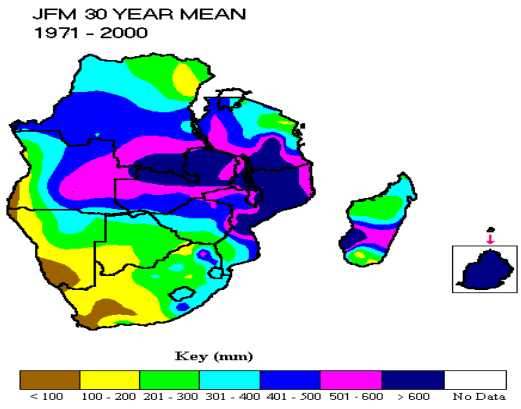

Fig 8 Jan- Mar 30-year mean rainfall (1971-2000)

RAINFALL FORECAST (JANUARY TO MARCH 2010)

FORECAST DETAILS

Zone I: (Northern DRC)

Likelihood of Normal to Above-normal rainfall

Zone II (Northern Tanzania)

Likelihood of Above-normal to normal rainfall

Zone III: (Southern DRC and northern Angola)

Likelihood of Normal to Above-normal rainfall

Zone IV: (Northernmost Mozambique, southern Tanzania, northern Malawi, northern and western Zambia, southern DRC, most of Angola, eastern Namibia, western Botswana, southern portions of SA, southern Lesotho)

Likelihood of Normal to Above-normal rainfall

Zone V: (Central Mozambique, southern Malawi, northern Zimbabwe, central and southeastern Zambia and southern tip of DRC**)**

Likelihood of Normal to Above-normal rainfall

Zone VI: (Southern Zimbabwe, southern Mozambique, eastern Botswana, Swaziland, northern Lesotho and northern portion of South Africa)

High likelihood of Below-normal to normal rainfall

Zone VII: (Southwest Angola, western Namibia and southwestern SA)

High likelihood of Below-normal to normal rainfall

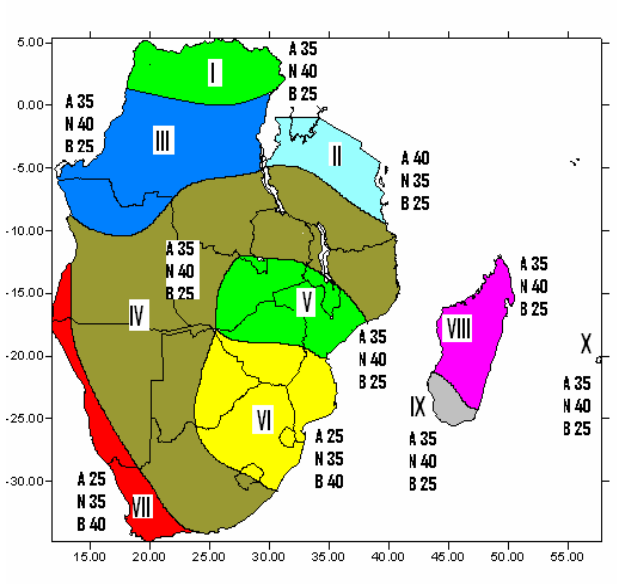

Fig 9. JFM 2010 SADC rainfall outlook

Zone VIII: (Most of Madagascar)

High likelihood of Normal to above-normal rainfall

Zone IX: (Southernmost Madagascar)

High likelihood of Above-normal to normal rainfall

Zone X: (Mauritius)

High likelihood of Above-normal to normal rainfall

N.B. *The outlook presentation has been made using the climatologically consistent, homogeneous zone of January-February-March rainfall in order to relate forecast to the rain-producing systems. In this case, zones may have the same forecasts but have been separated so as to maintain their identities.*

Map caption

The number for each zone indicate the probabilities of rainfall in each of the three categories: Above normal, Normal and Below normal (Fig. 9). 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. For example, in the case of Zones I, III, and V which have identical forecasts there is a 35% probability for rainfall occurring in the Above-normal category; a 40% probability for rainfall in the Normal category; and 25% probability for rainfall for a Below-normal category. It is emphasized that boundaries between zones should be considered as transition zones.

Note: This update is relevant only for three monthly time scales and relatively large areas. Local to month to month variations may occur.

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