

Progress of Rainfall and Agricultural season/Vulnerability Regional Agro-met briefing

2010 Regional Vulnerability Assessment & Analysis
Annual Dissemination Meeting



Gaborone, Botswana

30 July, 2010



Monitoring overview

- Seasonal rainfall monitoring process
 - Rainfall forecast (SARCOF)
 - Monitoring timeliness of start of rains
 - Monitoring rainfall distribution
 - Dry spells
 - Floods
 - * Impact on Agriculture
- At a regional level, monitoring is done through a combination of ground reports received from national partners (Met Depts, NEWUs, Partner organizations etc), remote sensing imagery, and rainfall/crop water balance modeled products



Introduction

- In the sub-region, 90% of agricultural production is dependent on rainfall, hence failure in rainfall has serious implication on availability, access and utilization of food.
- However, other factors affect agricultural production
- These include:
 - Input availability (seed, fertilizers, chemicals etc.)
 - Farm management (time of planting, fertilizer application, weeding, etc.)
 - Labour (cultivation, planting etc.)
 - State of health (HIV/AIDS etc.)
 - Socio-economic status (poverty etc, wealth (assets etc.)

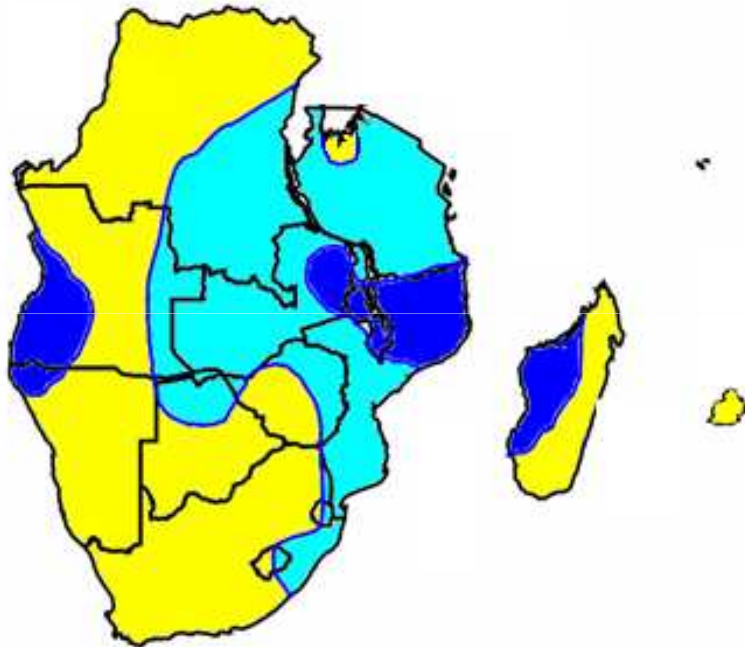


SARCOF 2009-10

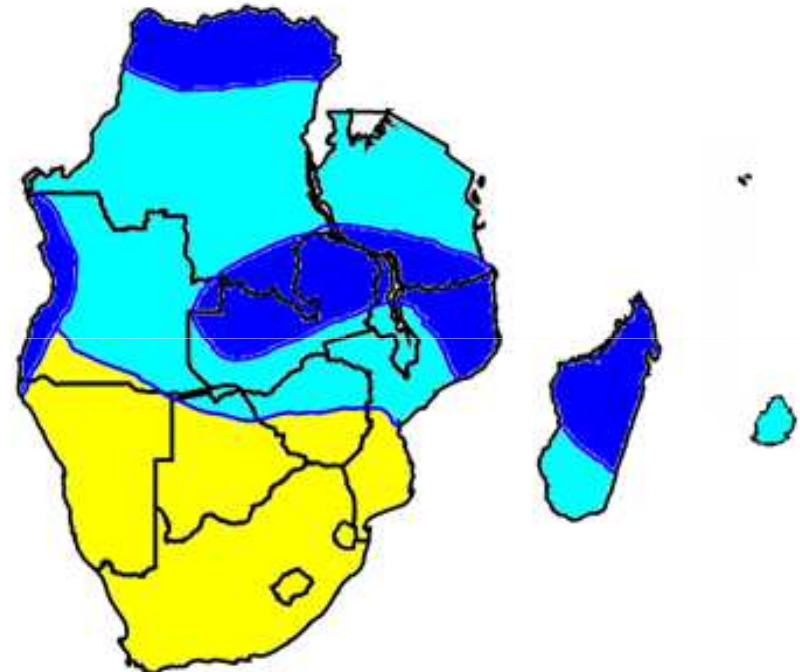
- The Southern Africa Regional Climate Outlook Forum (SARCOF) gave a forecast of probabilities of different rainfall outcomes – above/normal/below normal
- **Notes**
 - SARCOF is a consensus product of meteorologists which involves training and standardizing for improved forecasting techniques; Resource constraints
 - El Nino: normally associated with below normal rains in some areas (but 1997): comprehensive forecast still required




SARCOF 2009-10 outputs

Oct-Dec 2009 Rainfall Forecast



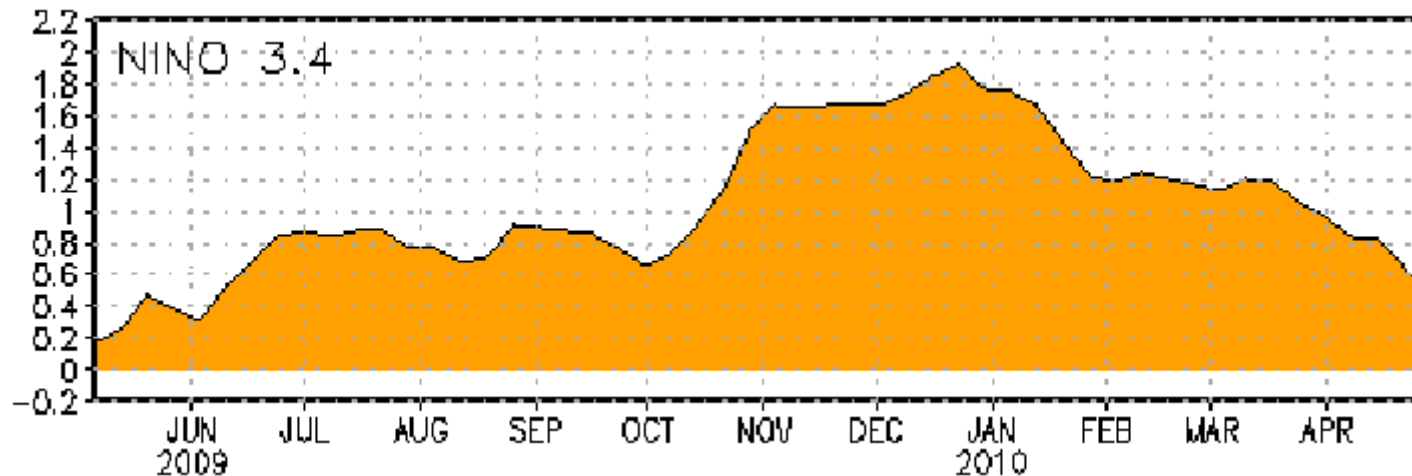
Jan-Mar 2010 Rainfall Forecast



-  **Most Likely:** Above normal rainfall, with a bias to normal rainfall; **Less likely:** below-normal
-  **Most Likely:** Normal rainfall, with a bias to above-normal rainfall; **Less likely:** below-normal
-  **Most Likely:** Normal rainfall, with a bias to below-normal rainfall; **Less likely:** above-normal

El Nino

- The 2009-2010 season was an El Nino season
- Initial indications of El Nino were for a weak El Nino, which was expected to strengthen.
- This was what happened as SSTs in the Nino 3.4 region strengthened from around Nov to Jan

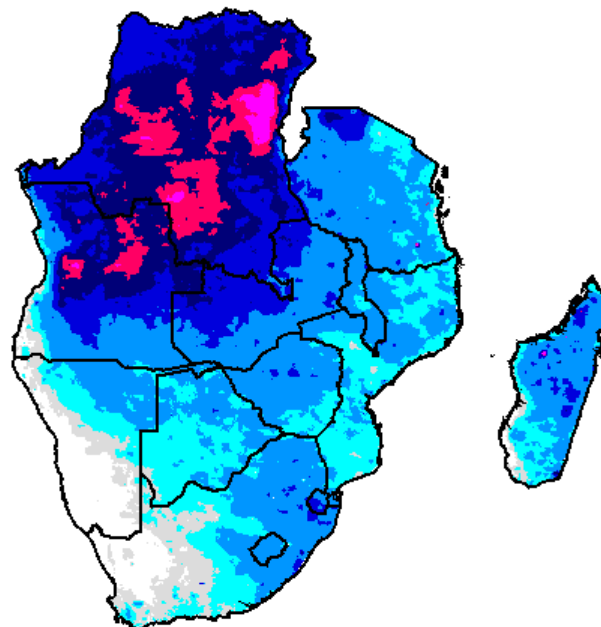


The image is a title slide for a presentation. It features a dark blue background with a lighter blue gradient at the top. The text "Rainfall monitoring" is centered in a light blue, sans-serif font. The top of the slide has a decorative wavy pattern with various shades of blue and green.

Rainfall monitoring

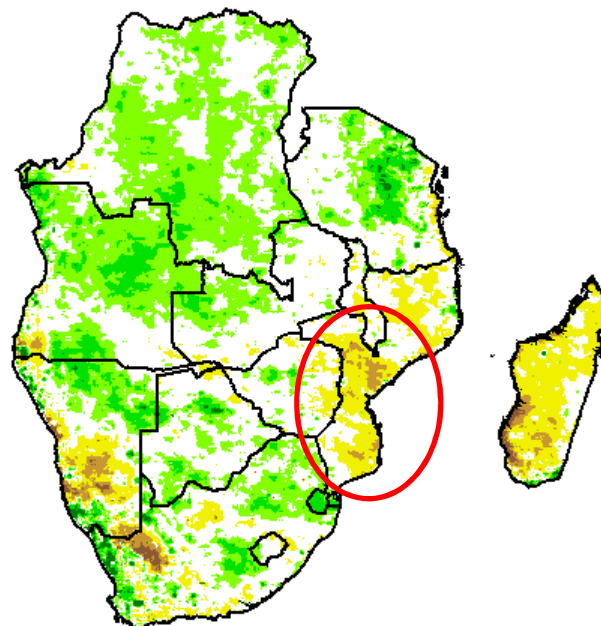
First half of season (Sep-Dec)

- Above normal rains in central parts of the region
- Below-normal rains in eastern/central parts, particularly Mozambique and Madagascar
- This was synonymous with a late start of the season, as well as a mid-season dry spell, especially in Mozambique and eastern Zimbabwe, and southern Zambia



Sadc Total Rainfall for 1 September to 31 December 2009

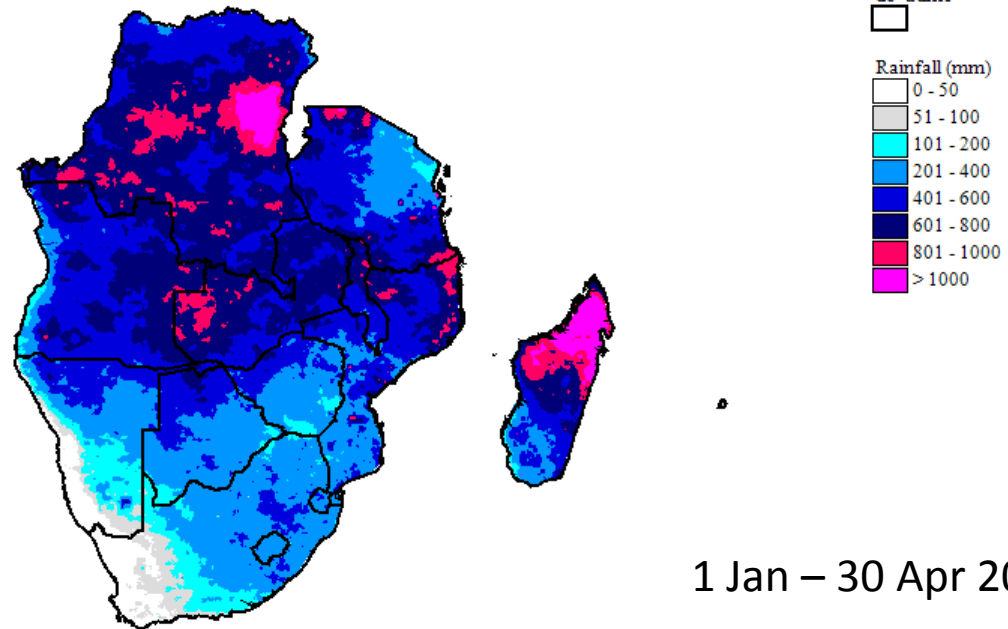
1 Sep-31 Dec 2009



Sadc Percentage of Average Rainfall for 1 September to 31 December 2009

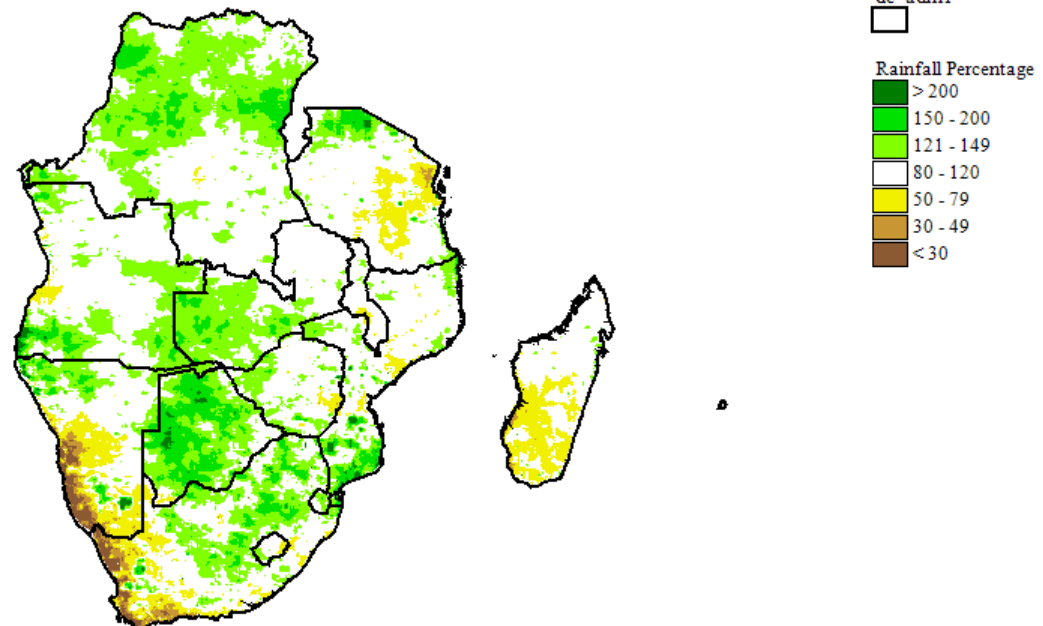
Second half of season (Jan-Apr)

- Above-normal rains in most parts of the region excluding Madagascar, Tanzania, southern Namibia and Western South Africa
- Above-normal rains led to flooding and waterlogging in some low-lying areas in Angola, Namibia, South Africa, and Zambia
- Dry spells and low rainfall were also experienced in areas including, but not limited to parts of Malawi, Mozambique, South Africa, Zambia and Zimbabwe



Sadc Total Rainfall for 1 January to 30 April 2010

1 Jan – 30 Apr 2010

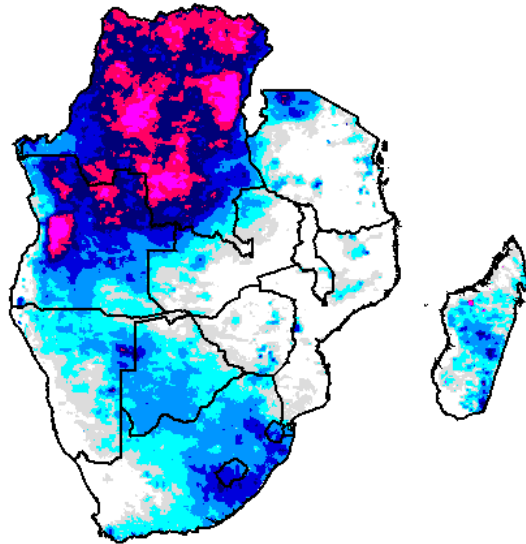
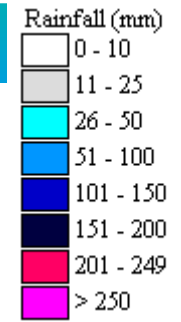


Sadc Percentage of Average Rainfall for 1 January to 30 April 2010

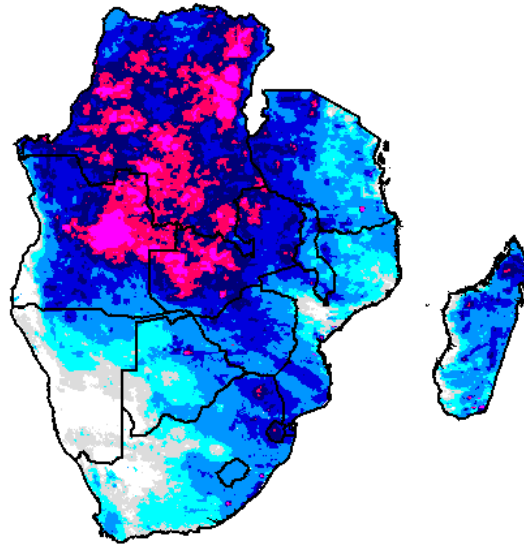
October 2009

November 2009

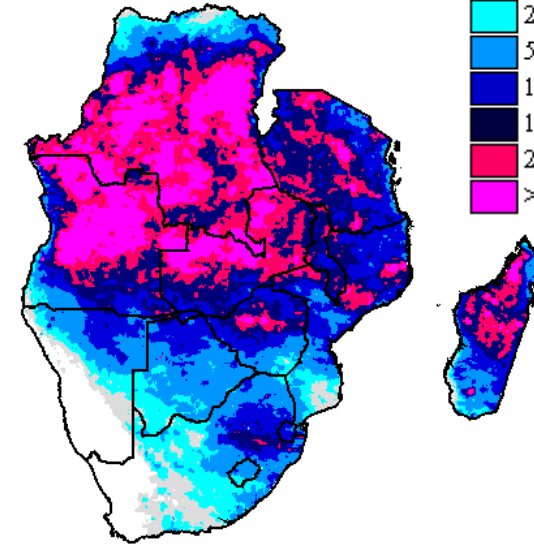
December 2009



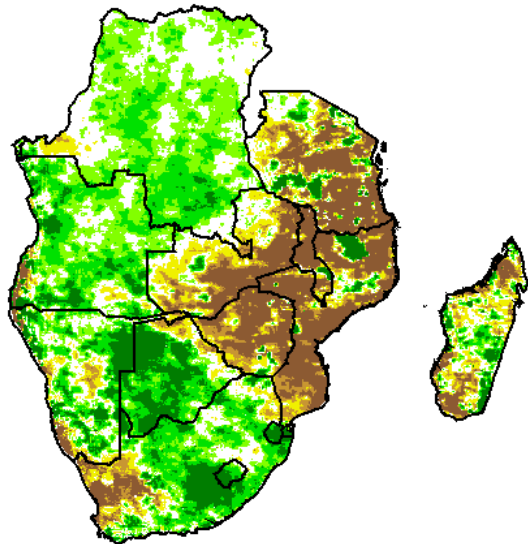
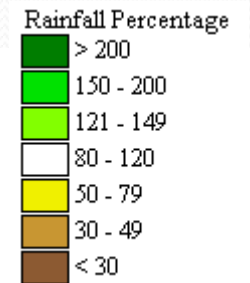
Sadc Total Rainfall for 1-31 October 2009



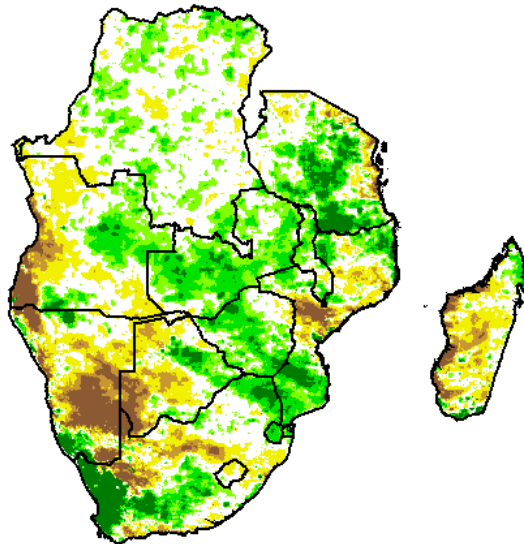
Sadc Total Rainfall for 1-30 November 2009



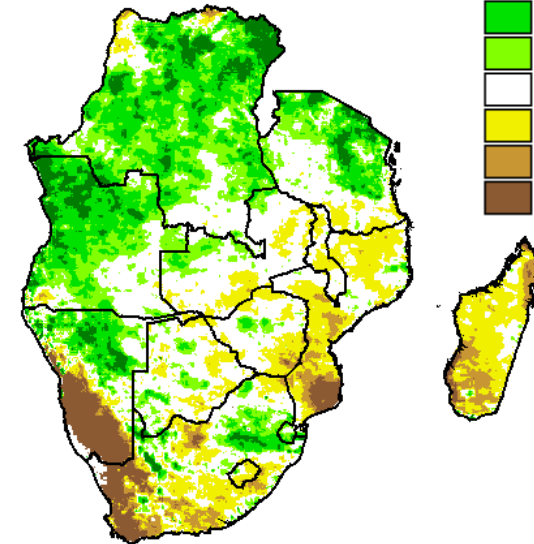
Sadc Total Rainfall for 1-31 December 2009



Sadc Percentage of Average Rainfall for 1-31 October 2009



Sadc Percentage of Average Rainfall for 1-30 November 2009

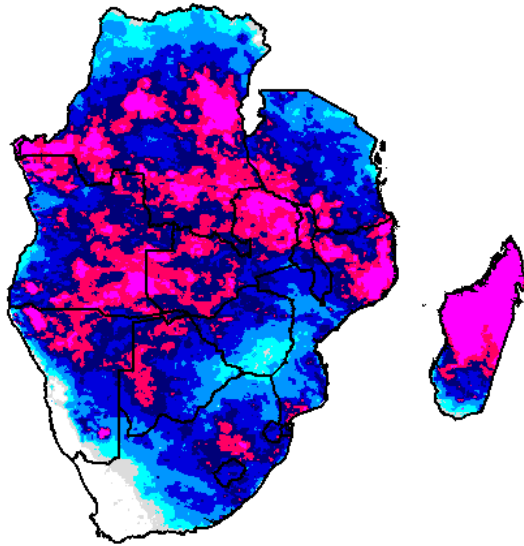
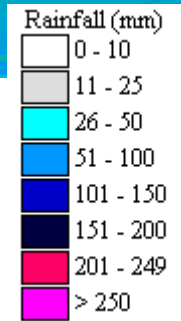


Sadc Percentage of Average Rainfall for 1-31 December 2009

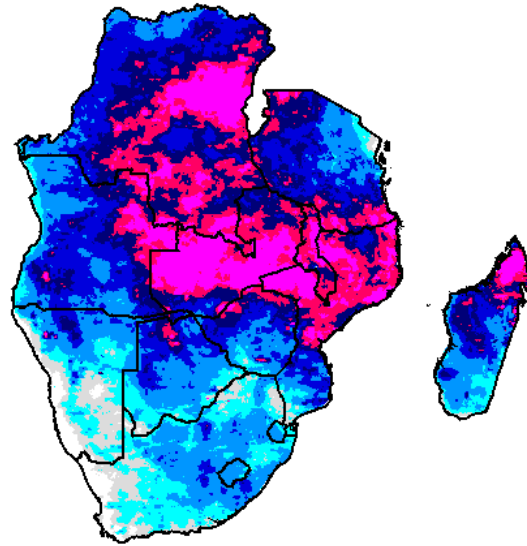
January 2010

February 2010

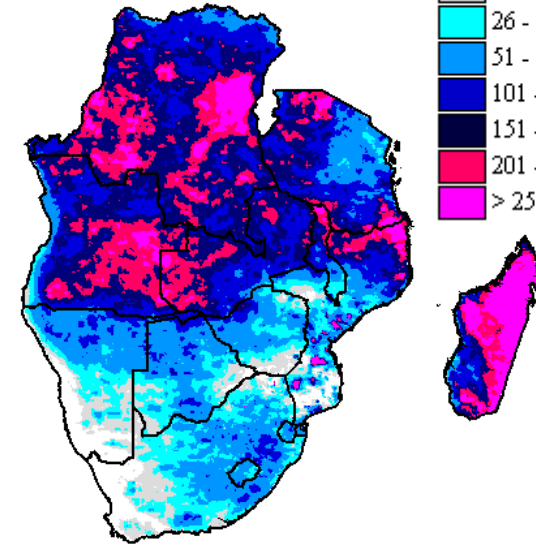
March 2010



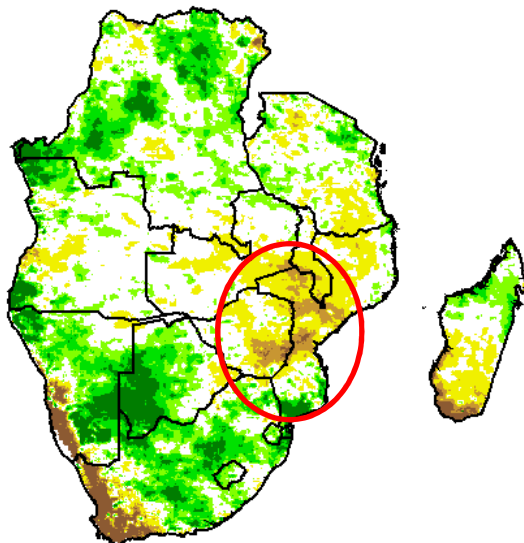
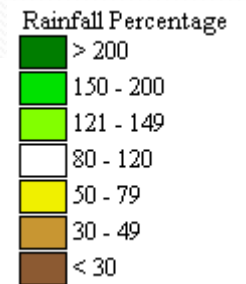
Sadc Total Rainfall for 1-31 January 2010



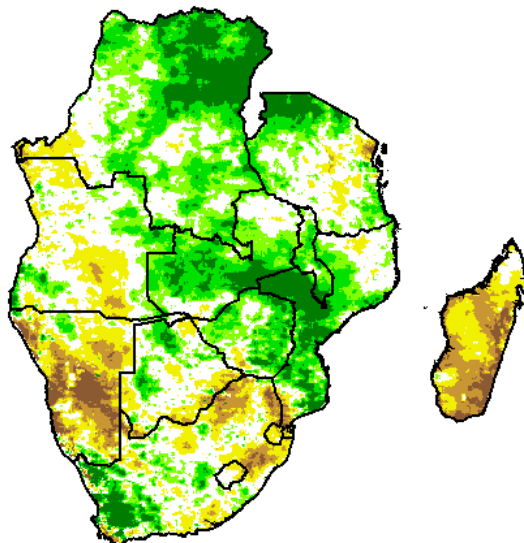
Sadc Total Rainfall for 1-28 February 2010



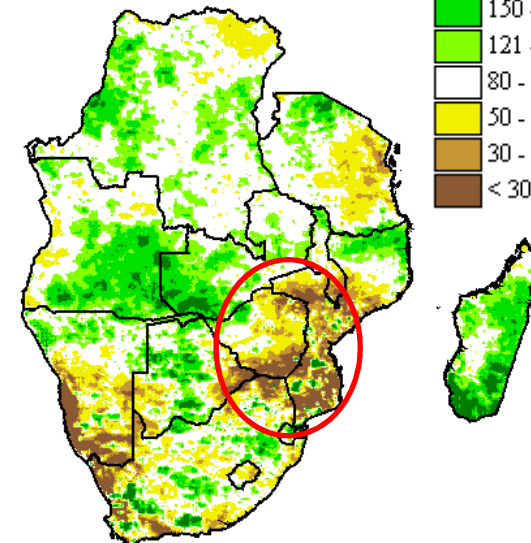
Sadc Total Rainfall for 1-31 March 2010



Sadc Percentage of Average Rainfall for 1-31 January 2010

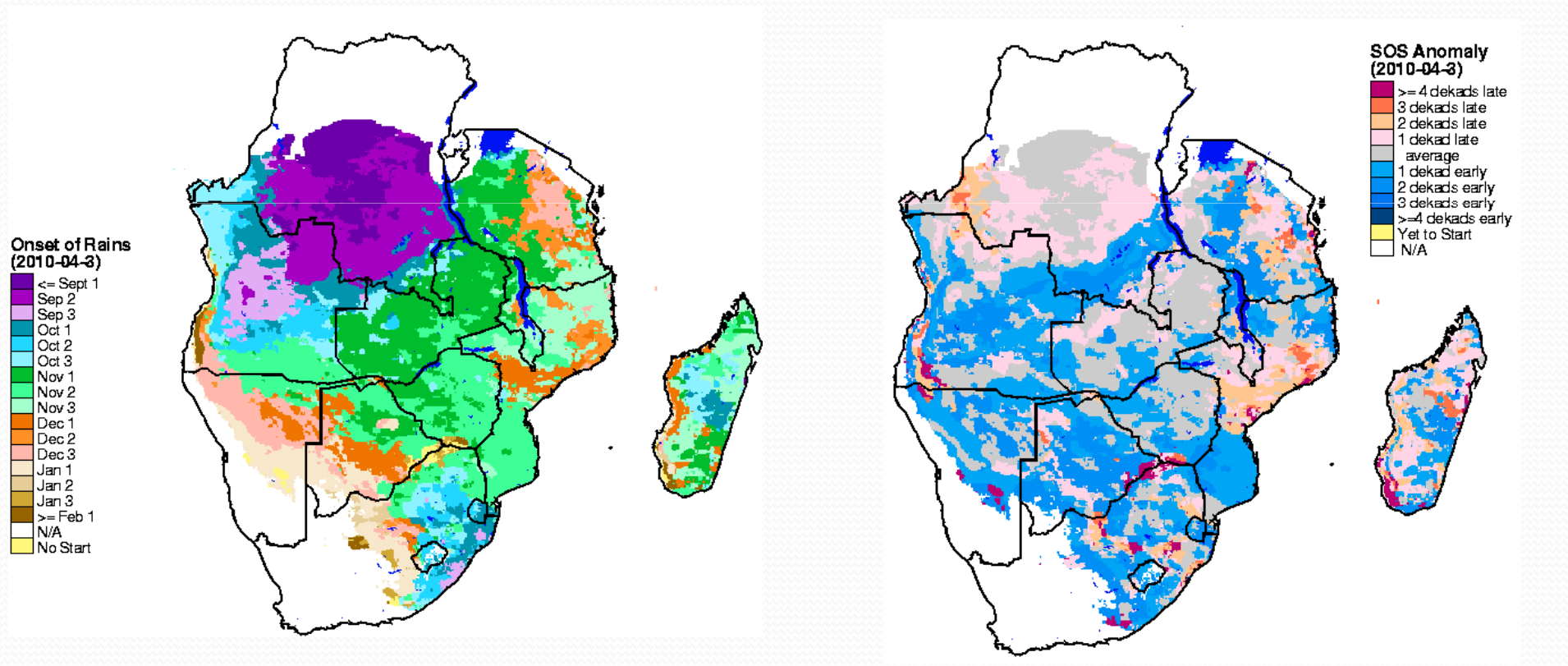


Sadc Percentage of Average Rainfall for 1-28 February 2010



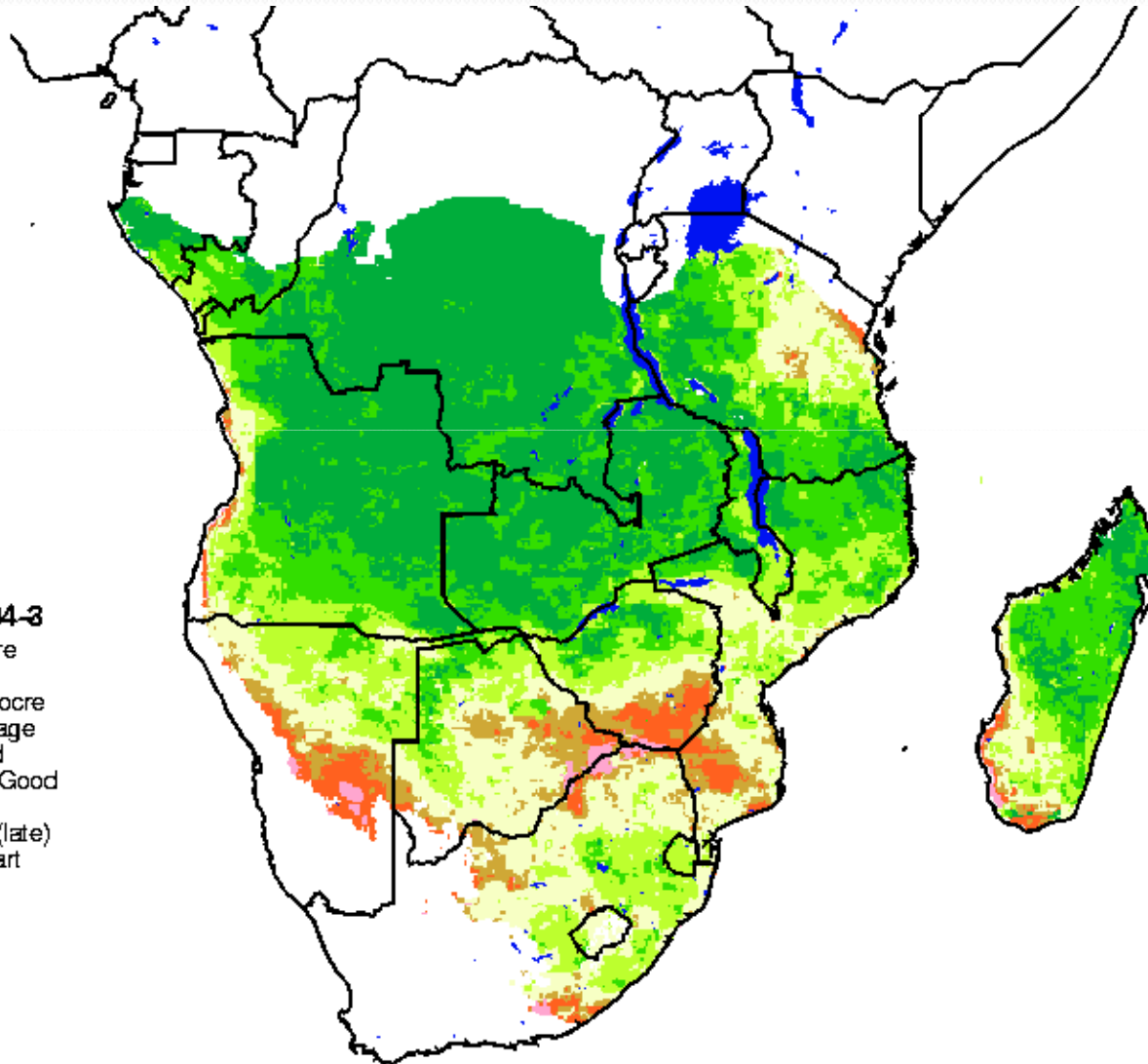
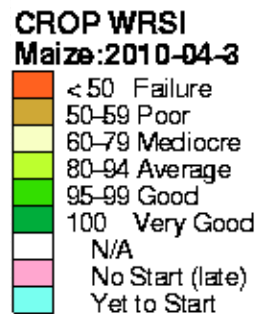
Sadc Percentage of Average Rainfall for 1-31 March 2010

Start of season



Meeting crop water needs

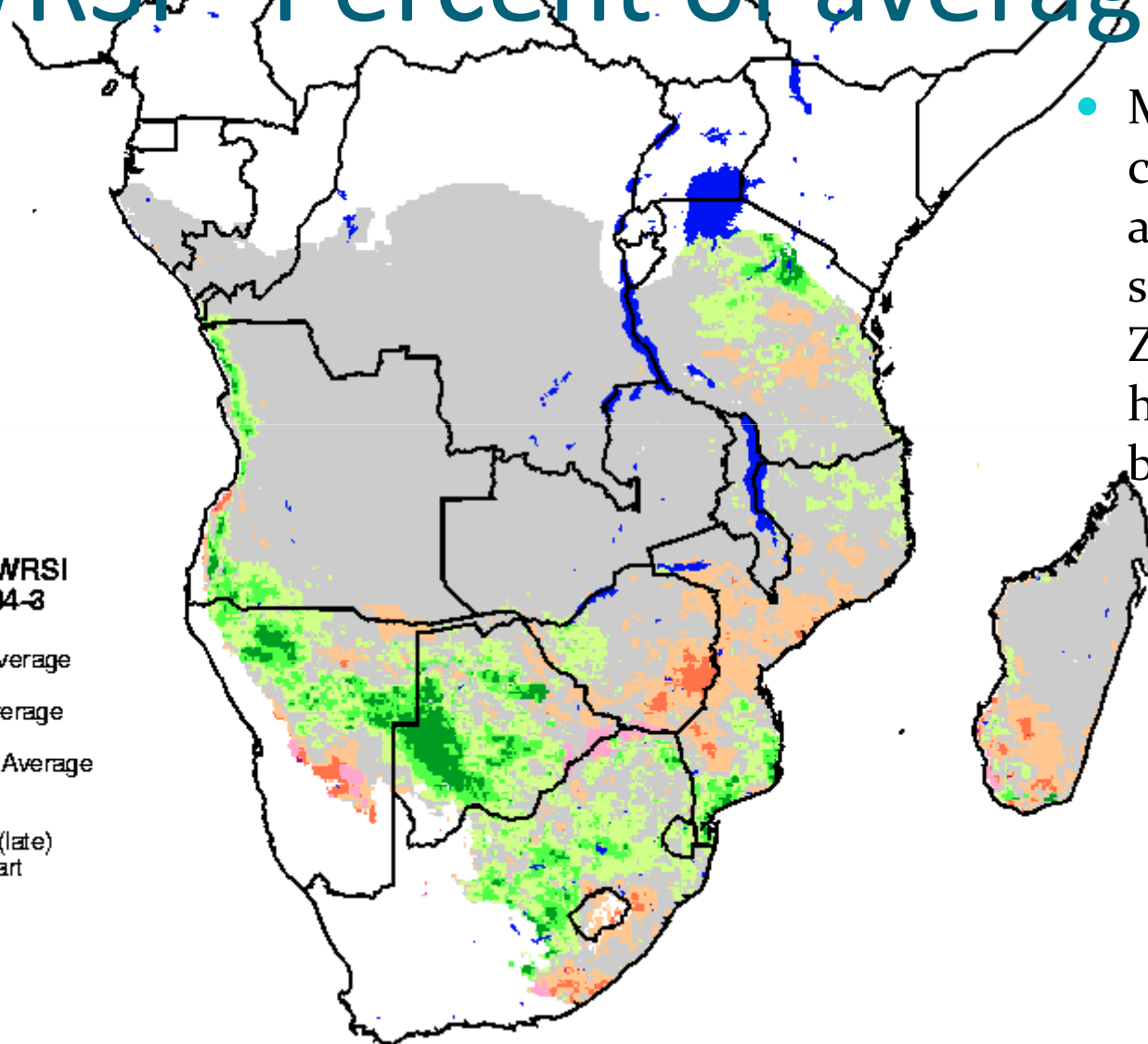
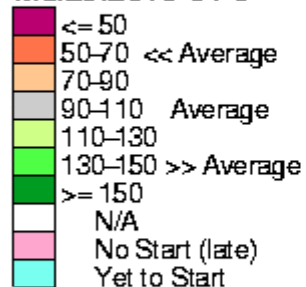
- Water requirements satisfaction index
- Compares crop's water needs with the available (rain) water



WRSI - Percent of average

- Many areas in central Mozambique and southern/eastern Zimbabwe rated as having performed below average

Pct-median:WRSI
Maize:2010-04-3





Summary of Crop Growing Season

- Season generally performed well in most parts of the region
- December to January dry spell caused crop failure in
 - southern and central Mozambique,
 - southern Malawi,
 - southern and eastern Zimbabwe

Detailed Summary of Crop Growing Season

- In parts of Angola such as Kuando Kubango and Moxico, above normal rains were experienced, as well as dry spells that led to reduction in crop production
- Most parts of the Botswana received normal to above-normal rainfall. A total national cereal production of 93,249 tons was realized
- Cassava Mosaic disease and Banana Bacterial Wilt caused production losses in eastern DRC
- Overall improved season in Lesotho, with significant increase in cereal production (over 135,000 MT) compared to previous year. However torrential rains in February affected crop growth.

Detailed Summary of Crop Growing Season

- Good season in most parts of Malawi, although a late onset in some areas, and dry spells between December and February in some areas affected production, particularly the south; overall good maize crop of 3.42 million MT, although 8% lower than previous season.
- Dry spells in southern/central Mozambique resulted in loss of 13% of first crop; extensive replanting in southern Mozambique after crop failure, but overall production in south/central below 5-year average; good rains in the north and surplus maize

Detailed Summary of Crop Growing Season

- Poor rainfall performance, and floods in north-east Namibia led to reduced production; in contrast, north-central areas received good rains - and hence good production; irrigated areas also had good harvests; overall, an increase in cereal production (40%) compared to previous season
- After a delayed onset in Swaziland, Highveld and Middleveld received normal to above-normal rains, while Lowveld had dry spells and consequent crop failure. Nationwide, a 6% increase in production, mainly due to increased planted area

Detailed Summary of Crop Growing Season

- South Africa experienced good season in high production areas and is expecting total maize crop of 13.923 million MT, 10.8% more than previous season, mainly due to increased cropped area. However low rains affected production in parts of western and eastern RSA.
- Despite the erratic onset, dry spells, and early cessation of rains that occurred in some bimodal parts of Tanzania during the second season, yield prospects are expected to be good, according to national agromet reports, which also indicate that yield prospects are also generally good in the unimodal areas, though some few areas received poor rains and hence face reduced production

Detailed Summary of Crop Growing Season

- Zambia experienced a good season except for dry spell in the Southern Province in December and January, and flooding and waterlogging that occurred in valleys and low-lying areas due to excessive rains
- Dry spell in Zimbabwe affected yields, resulting in overall cereal production of about 1.5 million MT, despite increased cropped area