

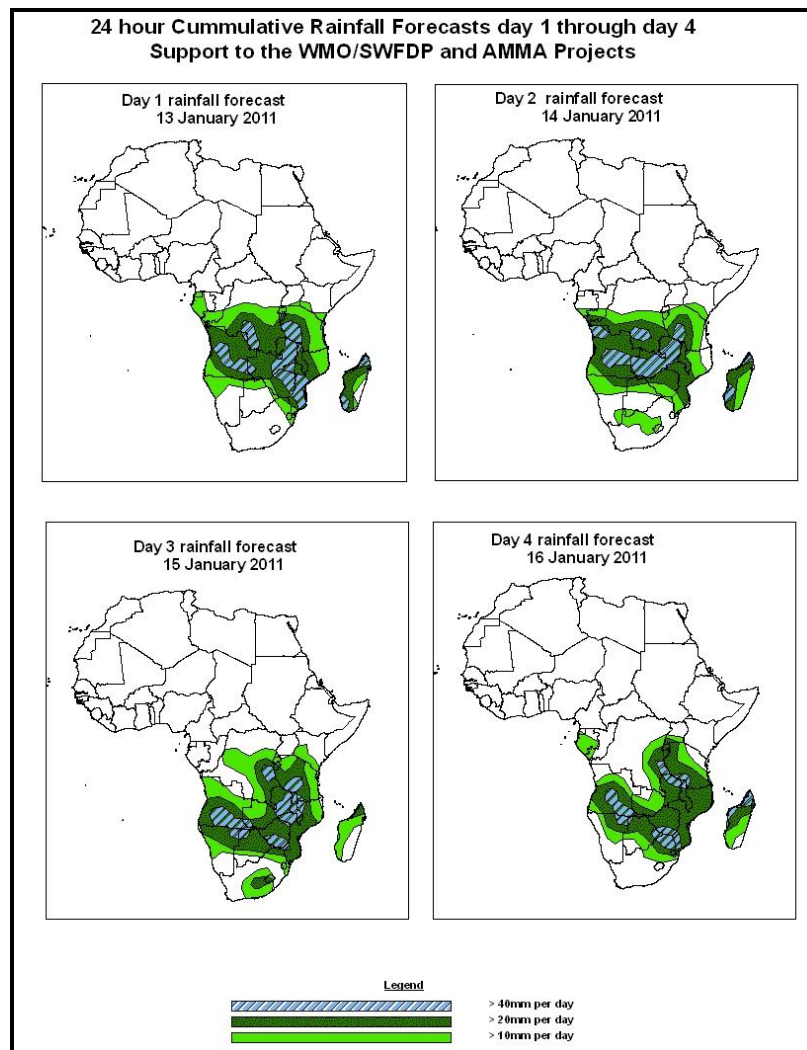


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 13 JANUARY – 06Z of 16 January 2011, (Issued at 14:00Z of 12 January 2011)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of probability of precipitation (POP) exceeded based on the NCEP, UK Met Office and the ECMWF NWP outputs, the NCEP global ensemble forecasts system (GEFS) and expert assessment.



Summary

In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over Southern Africa, East Africa and DRC with chances of locally heavy rainfall over Tanzania, Burundi, Zambia, Mozambique, Zimbabwe, Malawi, DRC, Angola, Botswana, South Africa and Madagascar.

1.2. Models Comparison and Discussion-Valid from 00Z of 12 JANUARY 2011.

According to the GFS, ECMWF and UKMET models a broad trough over DRC and Uganda extending to parts of Kenya in the next 24 to 42hours is expected to persist for the next 24 to 72hours. The trough is expected to become a cut off low limited over northeastern DRC in next 72hours. Another trough over southern Zambia and Mozambique is expected to extend along the coastal areas of Madagascar in the next 24 hours and then extend further to eastern Angola. The UKMET is indicating a cut off low over western Zambia and eastern Angola is expected to extend to Namibia across Botswana and Zimbabwe in the next 48 to 72 hours.

The seasonal low pressure trough system (Meridional component of the ITCZ) is expected to be active over the southern parts of the Continent including southern Tanzania associated with slightly westward retreating of the associated trough.

According to the GFS, ECMWF and UKMET models, St. Helena High pressure system over southern hemisphere is expected to relax in the next 24 to 96 hours. On the other hand the Mascarene high pressure system is expected to remain generally weak.

At 850hPa level, The GFS model indicates Convergence line over DRC and Lake Victoria is expected to extend slightly northwards in the next 72 hours. Another Convergence line over Zambia, Malawi and Mozambique is expected to extend to northeastern Botswana and Zimbabwe in the next 48 to 72 hours. Also another convergence area over Mozambique and Zimbabwe is expected to extend to southern Tanzania and Malawi in the next 48 hours. Another convergence line is expected to develop over South Africa during the next 24 hours and become cyclonic as it moves to Madagascar in the next 48 to 72 hours.

At 700hPa level, a convergence line over southwest DRC and northern Angola is expected to extend to southern Congo in the next 48. A Cyclonic Convergence over western Zambia is expected to move to southeast Angola in the next 48 to 72 hours. Another convergence over Southeast DRC and southwestern Tanzania is expected to remain over the region in the next 24 to 96 hours.

At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet in the southern Hemisphere is expected to move to the southeast coast of South Africa in the next 24 to 48 hours. The associated wind speed range between 90 and 110KT.

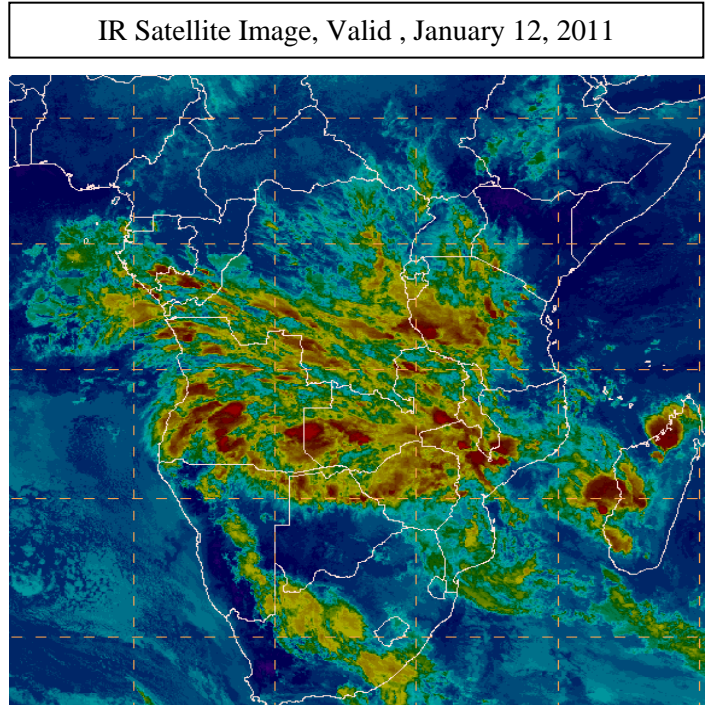
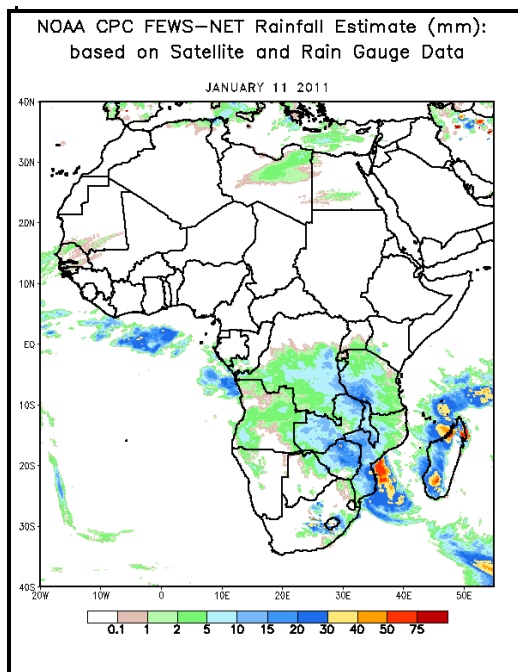
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2.0. Previous and Current Day Weather Discussion over Africa (11 January 2011 – 12 January 2011)

2.1. Weather assessment for the previous day (10 January 2011):

During the previous day, moderate rainfall was observed over Madagascar, Mozambique, Zambia, Zimbabwe and Tanzania.

2.2. Weather assessment for the current day (12 January 2011): Intense clouds are observed over Mozambique, Tanzania, Zambia, Angola, Zimbabwe, Mozambique and Madagascar.



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover (top) based on IR Satellite image

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