

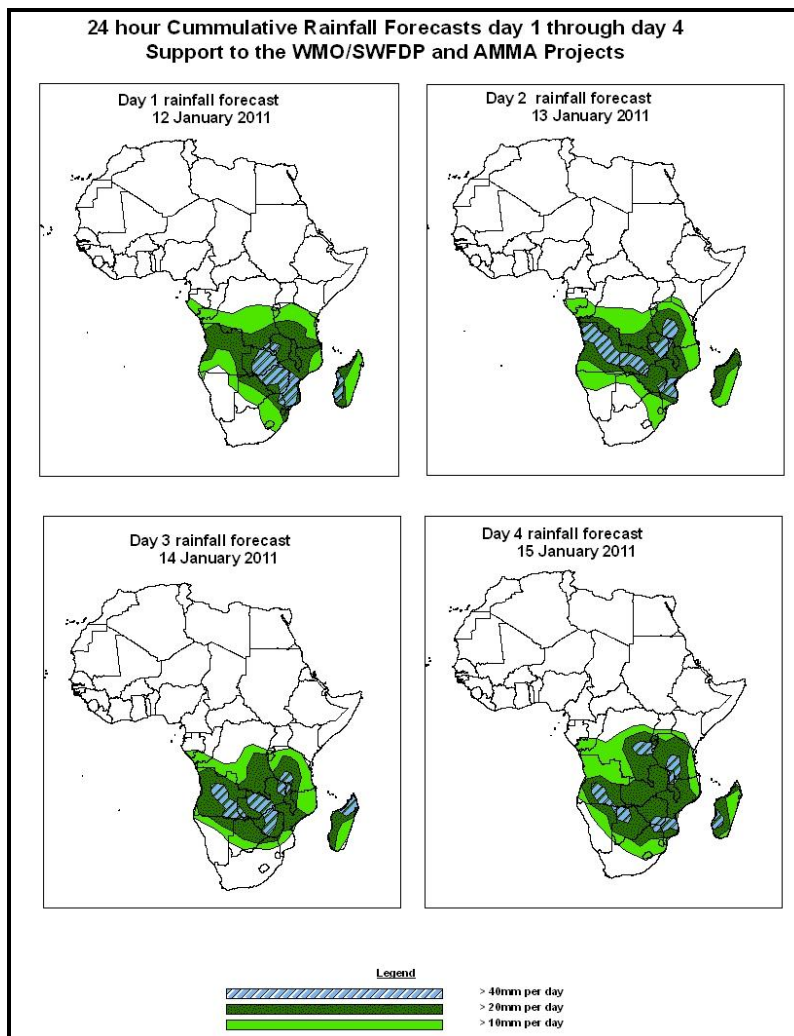


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 12 JANUARY – 06Z of 15 January 2011, (Issued at 14:00Z of 11 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 and Madagascar.

1.2. Models Comparison and Discussion-Valid from 00Z of 11 JANUARY 2011.

According to the GFS, ECMWF and UKMET models a trough over DRC is extending to South Africa across Angola and Namibia in the next 24 hours. Another trough over southern Zambia and Mozambique is expected to extend along the coastal areas of Madagascar in the next 24 to 48 hours and then extend further to southern Botswana and Zimbabwe during the next 72 to 96 hours. The UKMET is indicating a trough over Zambia, Malawi, Zimbabwe and southern Mozambique moving to Angola in the next 48 hours.

The seasonal low pressure system (Meridional component of the ITCZ) is expected to be active over the southern parts of the Continent including central and southern Tanzania associated with persistently eastwards shift of the position of the 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 northern DRC and Lake Victoria is extending to Congo in the next 24 48 hours. Another Convergence line over Zambia and Angola is expected to move to northeastern Namibia and Botswana in the next 72 to 96 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 48 hours.

At 700hPa level, a convergence line over southeast Mozambique is expected to extend to Malawi and northern parts of Zimbabwe during the next 48 to 72 hours. A Cyclonic Convergence over Zambia is expected to move to eastern Angola in the next 72 to 96 hours. Another convergence over Southeast DRC and southwestern Tanzania is expected to move westwards and extend to the northeastern parts of Angola and Congo in the next 48 to 96 hours. A cyclonic convergence over western parts of Zambia is expected to northwards in the next 48 to 72 hours.

At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet in the southern Hemisphere is expected to move to east across the southern tip of

South Africa in the next 48 to 72 hours. The associated wind speed range between 90 and 110KT.

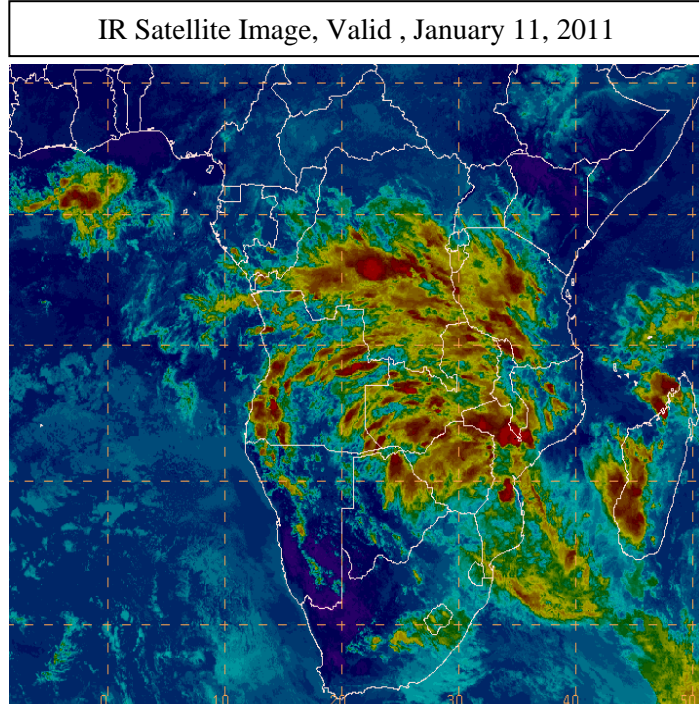
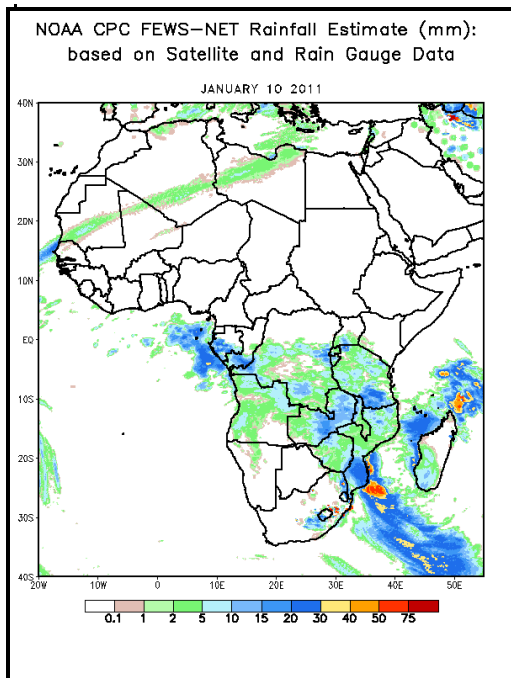
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2.0. Previous and Current Day Weather Discussion over Africa (10 January 2011 – 11 January 2011)

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

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

2.2. Weather assessment for the current day (11 January 2011): Intense clouds are observed over Mozambique, Tanzania, Zambia, Angola, Zimbabwe, DRC 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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