

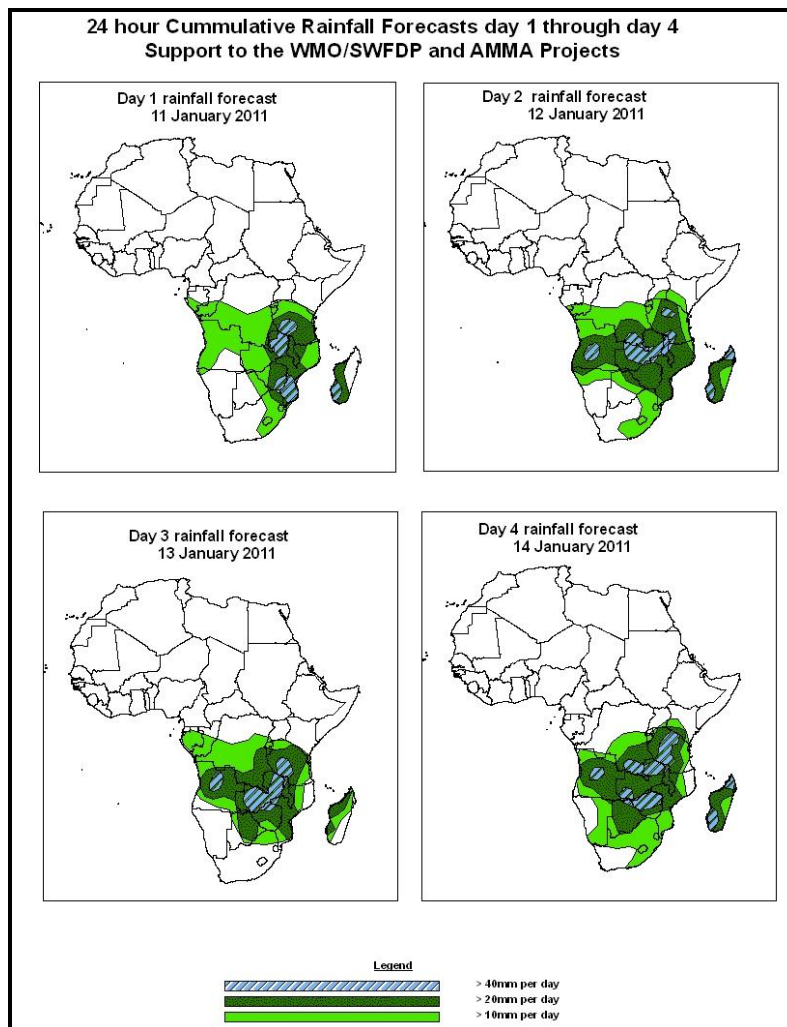


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 11 JANUARY – 06Z of 14 January 2011, (Issued at 14:00Z of 10 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 Zambia, Tanzania, Mozambique, Malawi, Angola, Zimbabwe and Madagascar

1.2. Models Comparison and Discussion-Valid from 00Z of 10 JANUARY 2011.

According to the GFS, ECMWF and UKMET models a trough over DRC and Uganda is expected to move to south DRC and extend to South Africa across Zambia and Botswana in the next 48 hours. Another cut off low over southern Zambia, Mozambique and Zimbabwe is expected to extend along the coastal areas of Madagascar in the next 48 to 72 hours. The UKMET is indicating a trough over Zambia, Malawi, Zimbabwe and southern Mozambique moving to Angola in the next 72 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 intensify slightly in the next 24 hours and extends a ridge to the east coast of South Africa. 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 and Gabon in the next 24 72 hours. Another Convergence line over Zambia, Botswana, Mozambique and Zimbabwe is expected to t persists during the next 72 to 96 hours. A convergence along the east coast of Madagascar is expected to move to Mozambique in the next 48 hours. A cyclonic convergence over southern Angola is expected to persist during the next 96 hours.

At 700hPa level, a convergence line over northern Mozambique is expected to extend to Malawi and northern parts of Zimbabwe during the next 48 to 96hours. A Cyclonic Convergence over Zambia is expected to move to eastern Angola in the next 72 to 96 hours. Another convergence over Southern DRC and Tanzania is expected to move westwards and extend to the northeastern parts of Angola in the next 48 to 72 hours. A convergence over eastern parts of South Africa is expected to move to southern Botswana 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 72 hours. The associated wind speed range between 90 and 110KT.

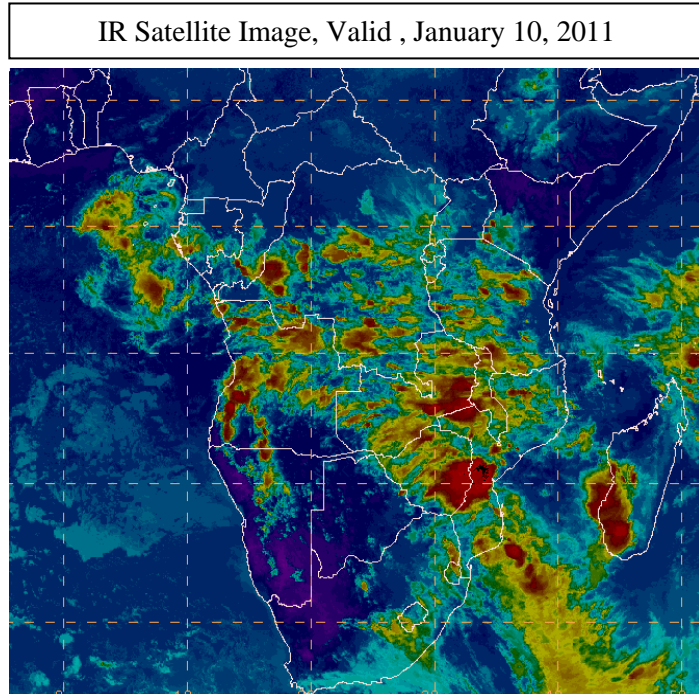
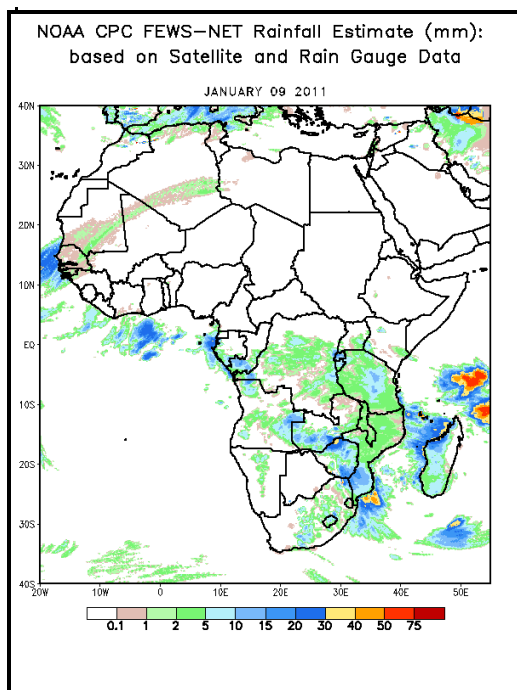
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2.0. Previous and Current Day Weather Discussion over Africa (09 January 2011 – 10 January 2011)

2.1. Weather assessment for the previous day (09 January 2011):

During the previous day, moderate rainfall was observed over Mozambique and Zimbabwe and Angola.

2.2. Weather assessment for the current day (10 January 2011): Intense clouds are observed over Tanzania, Zambia, Angola, Namibia, Zimbabwe, Mozambique, Malawi, 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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