

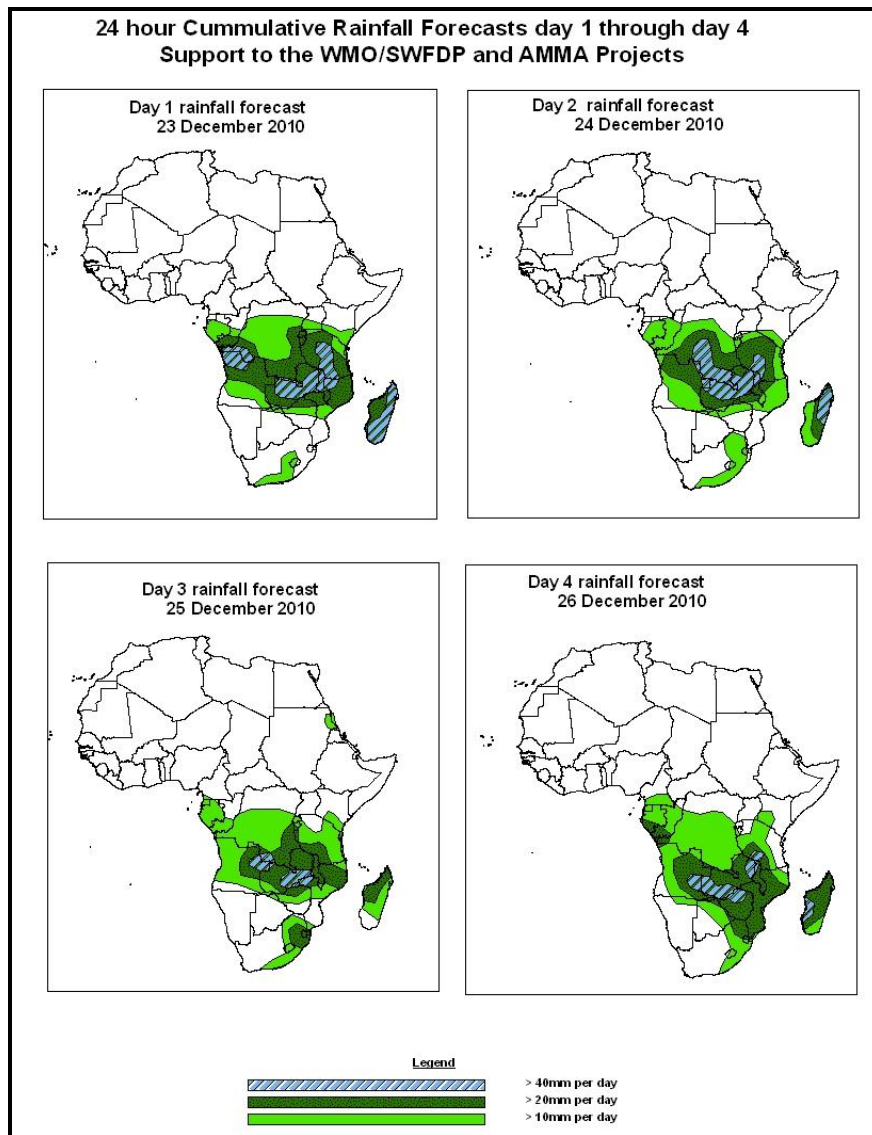


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 07Z of 23 DECEMBER – 06Z of 26 DECEMBER 2010, (Issued at 14:00Z of 22 DECEMBER 2010)

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, Malawi, Angola, DRC, Mozambique and Madagascar.

1.2. Models Comparison and Discussion-Valid from 00Z of 22 DECEMBER 2010.

According to the GFS, ECMWF and UKMET models a cut off low over eastern Madagascar, Mozambique and South Africa is expected to become slightly weak during the next 72 to 96 hours. Another cut off low over Northern Tanzania and DRC is expected to persist and extend slightly to the northeastern DRC in the next 24 to 72 hours. Another cut off low over Angola is expected to move to the west coast of Angola in the next 24 to 72 hours. The models are also indicating a weak trough across the West African and the Gulf of Guinea during the next 24 to 48 hours.

The seasonal low pressure system (Meridional component of the ITCZ) is expected to be active over the southern parts of the Continent and DRC.

According to the GFS, ECMWF and UKMET models, St. Helena High pressure system over southern hemisphere is expected to be weak (central pressure 1016hPa) over southwest of the continent. Also Mascarene high pressure system is expected to remain generally weak.

At 850hPa level, The GFS model indicates convergence line over the Lake Victoria in the next 24 hours becoming cyclonic convergence and extending to DRC in the next 48 to 72 hours. Another cyclonic convergence over Angola is expected to move to the boarder of Angola/DRC in the next 48 hours. A convergence along the Mozambique coast extending to Malawi, Zambia and Botswana is expected to persist during the next 24 to 96 hours.

At 700hPa level, convergence over northern Angola, Congo and Gabon is expected to persist during the next 72 hours and extends to southeast DRC. A cyclonic convergence over Zambia is expected to extend to Angola in the next 72 to 96hours. GFS model also indicates a cyclonic convergence over southern Namibia and southwestern parts of South Africa in the next 24 hours. The convergence is expected to become cyclonic and move eastwards during the 72 hours. Another convergence over Mozambique, Zimbabwe and southern Madagascar is expected to weaken in the next 72 to 96hours.

At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet in the southern Hemisphere is expected to move off the east coast of South Africa in the next 72 hours. Wind speed is expected to be in the range of 90 to 110 kts.

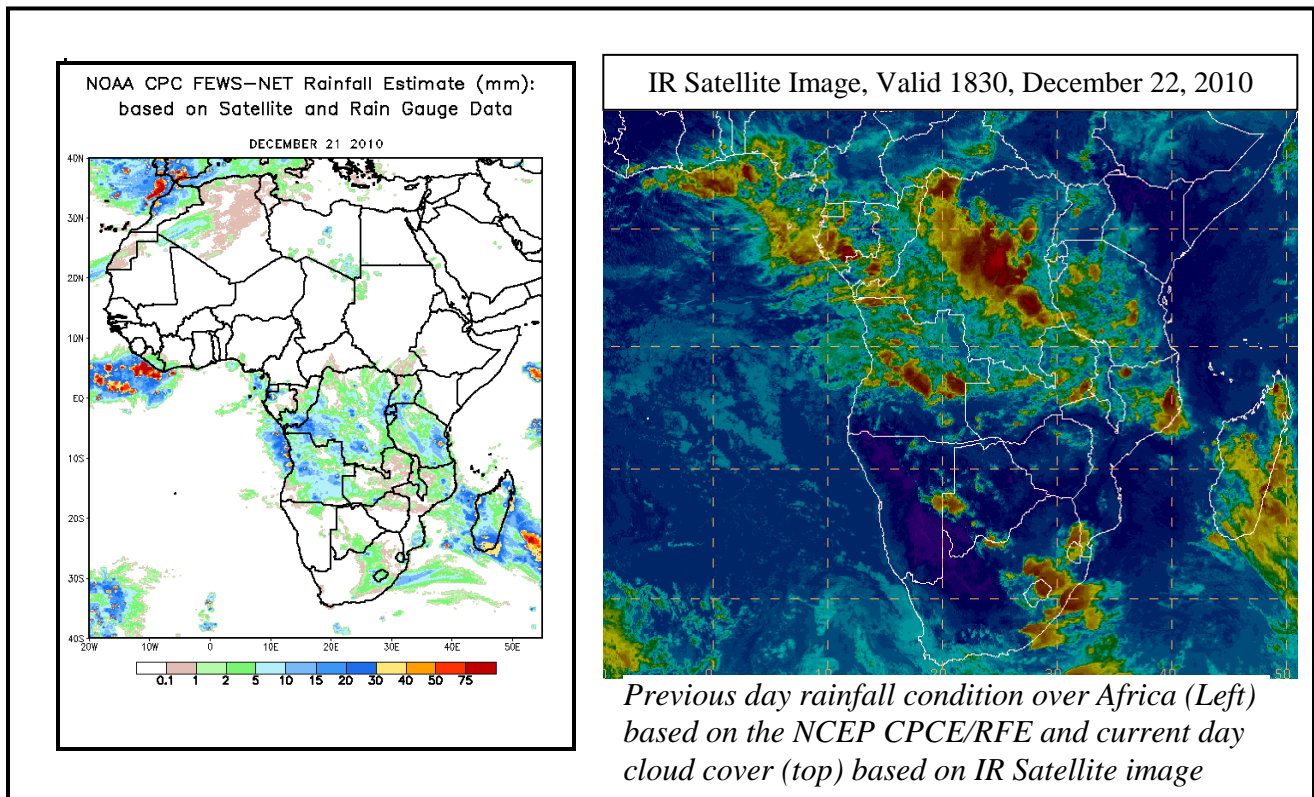
In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over Southern Africa, East Africa and DRC with chances of locally heavy rainfall over Zambia, Tanzania, Malawi, Angola, DRC, Mozambique and Madagascar.

2.0. Previous and Current Day Weather Discussion over Africa (21 December 2010 – 22 December 2010)

2.1. Weather assessment for the previous day (21 December 2010):

During the previous day, no heavy rainfall was observed.

2.2. Weather assessment for the current day (22 December 2010): Intense clouds are observed over DRC, Angola, Congo, Gabon, Mozambique and South Africa.



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