

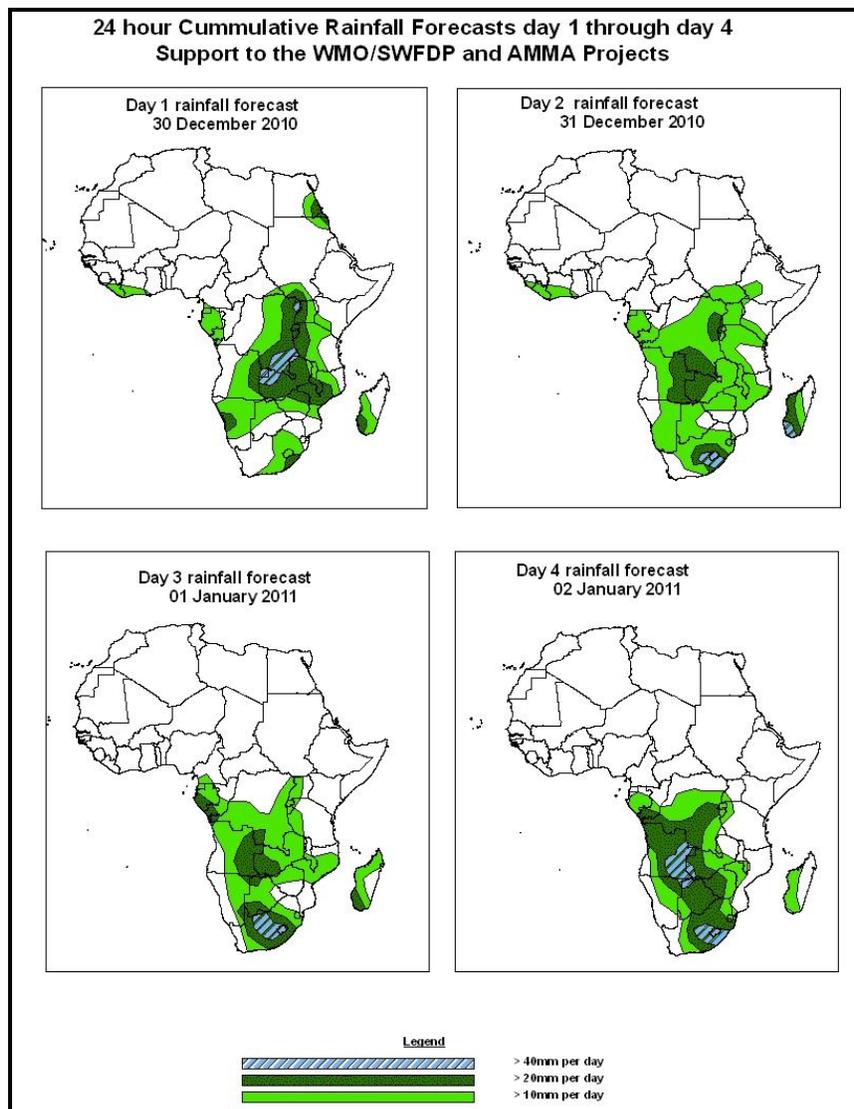


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 07Z of 30 DECEMBER – 06Z of 02 January 2011, (Issued at 14:00Z of 29 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, Angola, South Africa, Lesotho, Namibia, Madagascar, DRC and Uganda.

1.2. Models Comparison and Discussion-Valid from 00Z of 29 DECEMBER 2010.

According to the GFS, ECMWF and UKMET models a trough over Angola coast to west of South Africa across Namibia is expected to persist in the next 24 to 48 hours and then move southeast to Botswana becoming a cut off low. A cut off low over southern Namibia and northwestern parts of South Africa is expected to move to southwestern Botswana during the next 24 hours and then extends to Zimbabwe and Madagascar in the next 24 to 48 hours. A trough from West Africa coast is expected to persist in the next 48 hours. The models are also indicating over southern Sudan to DRC for the next 24 to 72 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. Slightly weakening is expected towards the end of the forecast period.

According to the GFS, ECMWF and UKMET models, St. Helena High pressure system over southern hemisphere is generally weak. However, during the next 24 to 48 hours St. Helena is expected to extend a ridge to the southeastern coast of South Africa. Also Mascarene high pressure system is expected to remain generally weak.

At 850hPa level, The GFS model indicates Convergence line over northern DRC is expected to move to northwest Zambia in the next 24 hours and then extends to Congo and Gabon in the next 48 to 72 hours. A cyclonic convergence over the Gulf of Guinea extending to Angola is expected to persist during the next 24 to 96 hours. Another convergence line over Lake Victoria and Zambia is expected to extend to Botswana and Namibia in the next 48 hours. Another cyclonic convergence over South Africa is expected to persist during the next 24 to 96 hours.

At 700hPa level, cyclonic convergence over Angola is expected to move to the coast of Congo in the next 24 to 48 hours. A convergence line over southern Mozambique and Zimbabwe is expected to become strong and move to Zambia and Angola in the next 48 hours. Another convergence line along the western part of South Africa is expected to move to Namibia in the next 48 hours and then extend to southern Mozambique and Zimbabwe in 72 hours. A convergence line over DRC is expected to persist.

At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet in the southern Hemisphere is expected to move to the eastern parts of South Africa in the next 24 to 48 hours. Wind speed is expected to be in the range of 90 to 110 kts.

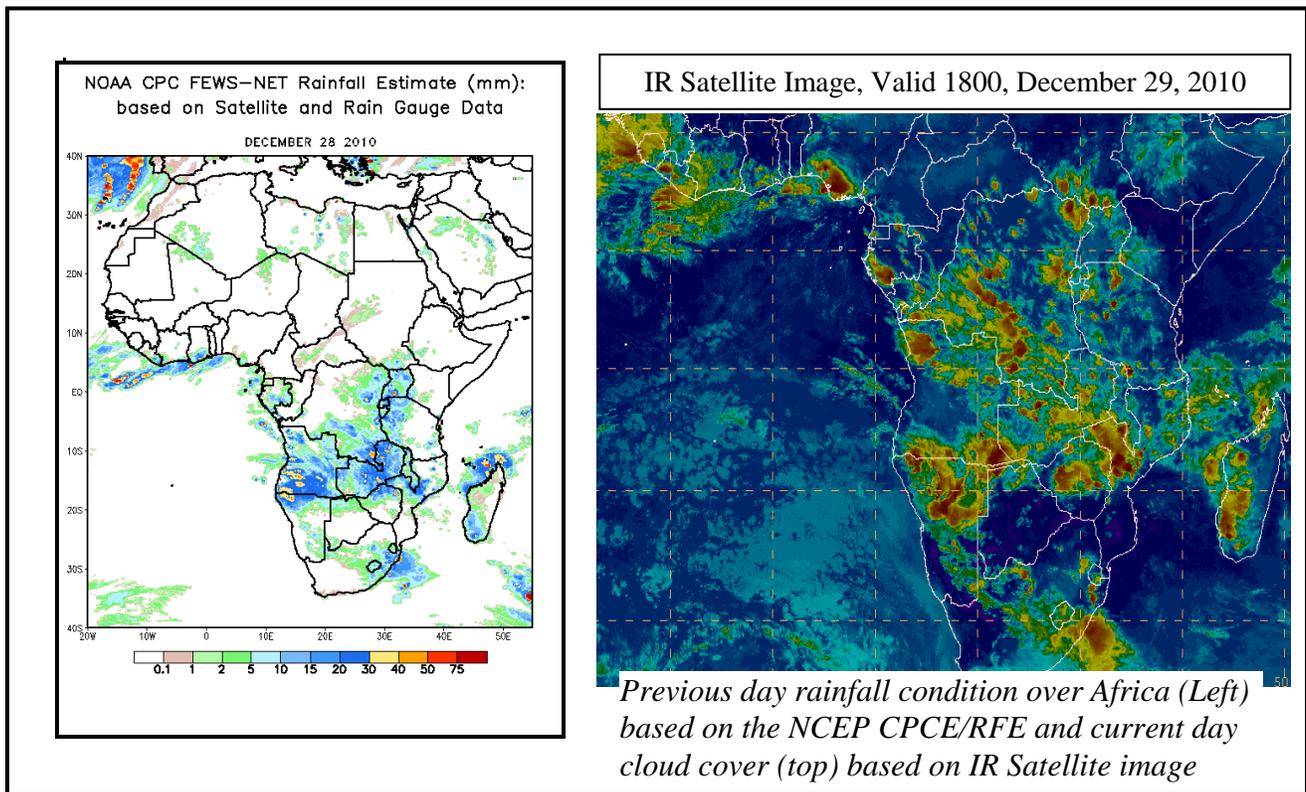
In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over Southern Africa, East Africa and DRC with chances of locally heavy rainfall over Zambia, Angola, South Africa, Lesotho, Namibia, Madagascar, DRC and Uganda.

2.0. Previous and Current Day Weather Discussion over Africa (29 December 2010 – 29 December 2010)

2.1. Weather assessment for the previous day (28 December 2010):

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

2.2. Weather assessment for the current day (29 December 2010): Intense clouds are observed over DRC, Angola, Nigeria, Mozambique, Zimbabwe, Madagascar and South Africa.



Author(s): Samwel Mbuya (Tanzania Meteorological Agency) / CPC-African Desk), samwel.mbuya@noaa.gov

Omar Gouled Allaleh (Djibouti Meteorological Office / CPC-African Desk)), omar.allaleh@noaa.gov

Disclaimer: This bulletin is for training purposes only and should be used as guidance. NOAA does not make forecasts for areas outside of the United States.