

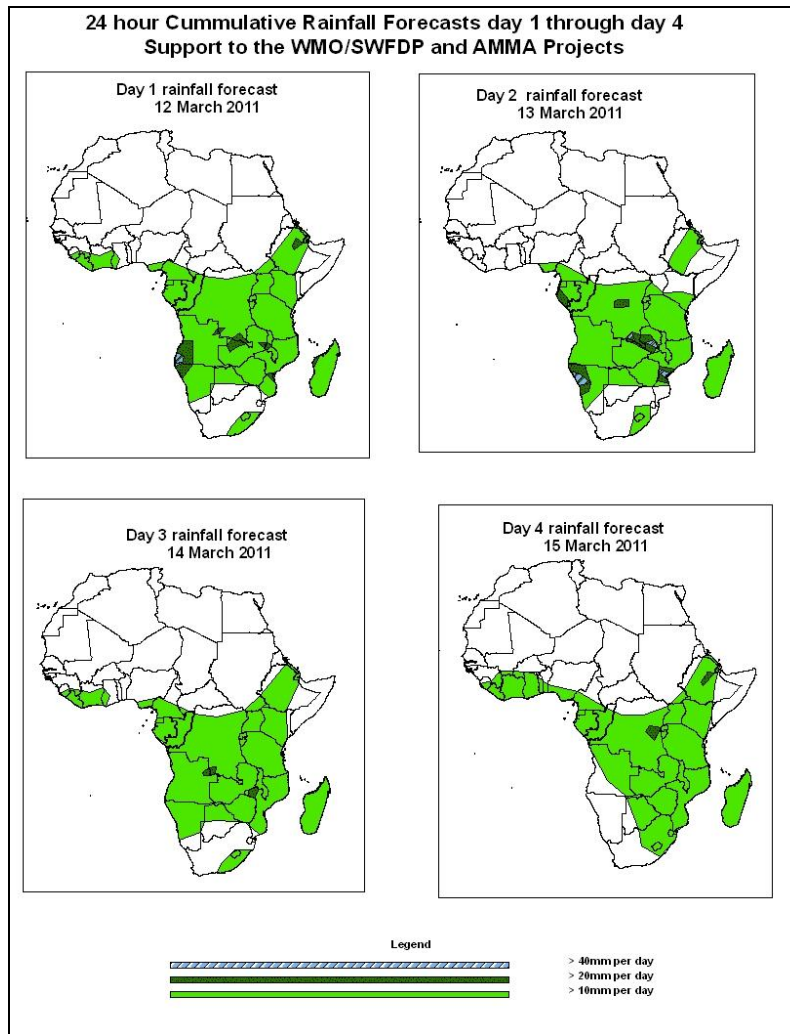


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 12 March – 06Z of 15 March 2011, (Issued at 12:30Z of 11 March 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

Within the next four days, we expect further reduction in rainfall over Madagascar and the Mozambique Channel as the tropical low pressure system dissipates within the next 24 hours. We expect mostly moderate rainfall over southern Africa with pockets of heavy rainfall as strong lower level convergence is noticeable over this region. Hence, there is an increased chance for rainfall to exceed 20mm per day over Mozambique, Madagascar, Zambia, DRC, Namibia, Angola, Ethiopia, Malawi and Zimbabwe.

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

A series of cut off lows over the southern parts of the Gulf of Guinea, parts of central African region and southern Sudan, forming an east-west oriented trough is expected to persist through the next four days as shown by the GFS, ECMWF and UKMET models. Along its eastern end (mainly over Central African Republic / Sudan region), a central pressure value between 1004 – 1005hpa is expected and a central value of 1005hpa along its western end. The lows associated with the meridional arm of the ITCZ are not very active. A low pressure system in the vicinity of Mozambique Channel and Madagascar, present by 24 hours, fills up thereafter. In general, there appears to be some level of similarity in pressure patterns as depicted by the GFS, ECMWF and UKMO models.

The St. Helena High pressure system over southeast Atlantic as presented by the GFS, ECMWF and UKMET models is expected to remain quasi-stationary with a central pressure value of 1024hpa all through. The Mascarene high pressure system over southwest Indian Ocean on the other hand is absent from its climatological position by 24 and 48 hours, but present by 72 and 96 hours with a central value of 1020hpa.

An east-west oriented convergence line in the region between the coastal areas of the Gulf of Guinea and northeast DRC as shown by the GFS model at the 850hpa level is expected to persist but shallow. The north-south oriented convergence line is present but not very active. Convergence lines over Angola region and the Mozambique Channel are equally expected weaken and fill up subsequently.

Mostly northeasterly to easterly winds dominate across western and central African countries at 700hPa level. A strong lower tropospheric convergence is expected to dominate the flow over Angola, Botswana, Zambia, Mozambique, Malawi, Zimbabwe, Namibia, southern DRC and the vicinity of the Greater Horn of Africa.

A zone of strong wind (>150Kts) at 200hPa associated with the Sub Tropical westerly Jet in the sub-tropical region of northwest Africa and the Atlantic is expected to attain a wavy pattern all through.

Similarly, strong winds (>90Kts) associated with the Sub-Tropical Westerly Jet in the Sub Tropical region of southern Africa is expected to be zonal and over the Atlantic ocean and the tip of South Africa.

Within the next four days, we expect further reduction in rainfall over Madagascar and the Mozambique Channel as the tropical low pressure system dissipates within the next 24 hours. We expect mostly moderate rainfall over southern Africa with pockets of heavy rainfall as strong lower level convergence is noticeable over this region. Hence, there is an increased chance for rainfall to exceed 20mm per day over Mozambique, Madagascar, Zambia, DRC, Namibia, Angola, Ethiopia, Malawi and Zimbabwe.

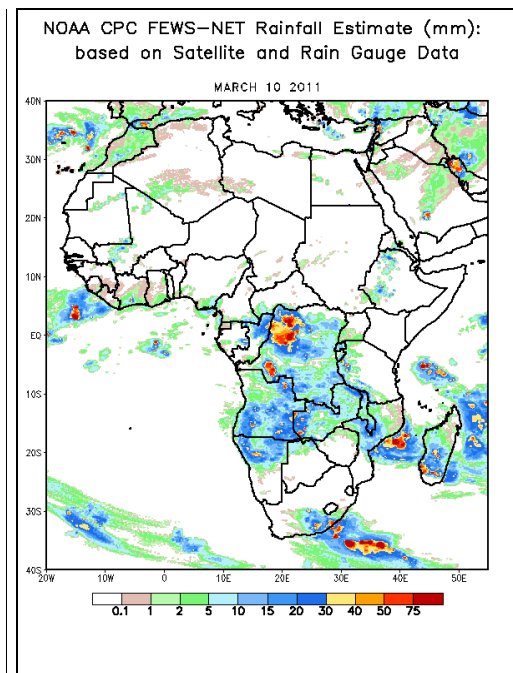
2.0. Previous and Current Day Weather Discussion over Africa (10 March – 11 March 2011)

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

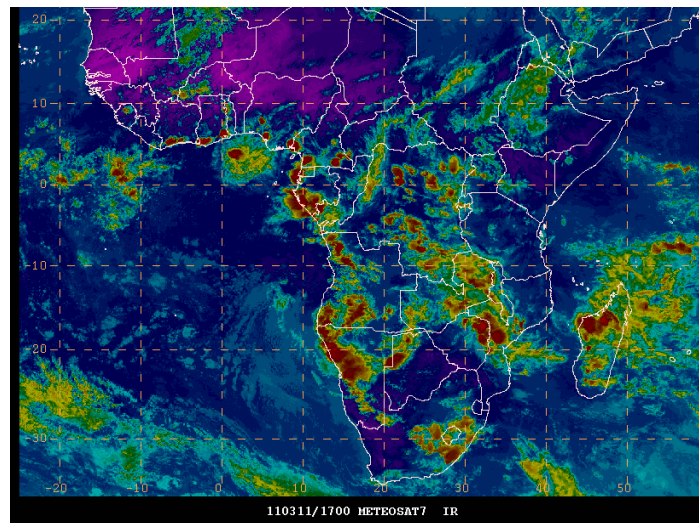
During the previous day, a combination of moderate and heavy rainfall was observed over Cote d'Ivoire, Congo, DRC, Angola, Namibia, Zambia, South Africa, Tanzania, Mozambique, Madagascar, Ethiopia, Malawi and Rwanda.

2.2. Weather assessment for the current day (11 March 2011):

Intense clouds are observed over the coast of Gulf of Guinea, DRC, Angola, Namibia, Botswana, Zambia, Mozambique, Madagascar, South Africa and Zimbabwe.



IR Satellite Image, Valid 1700Z, March 11, 2011



*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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