

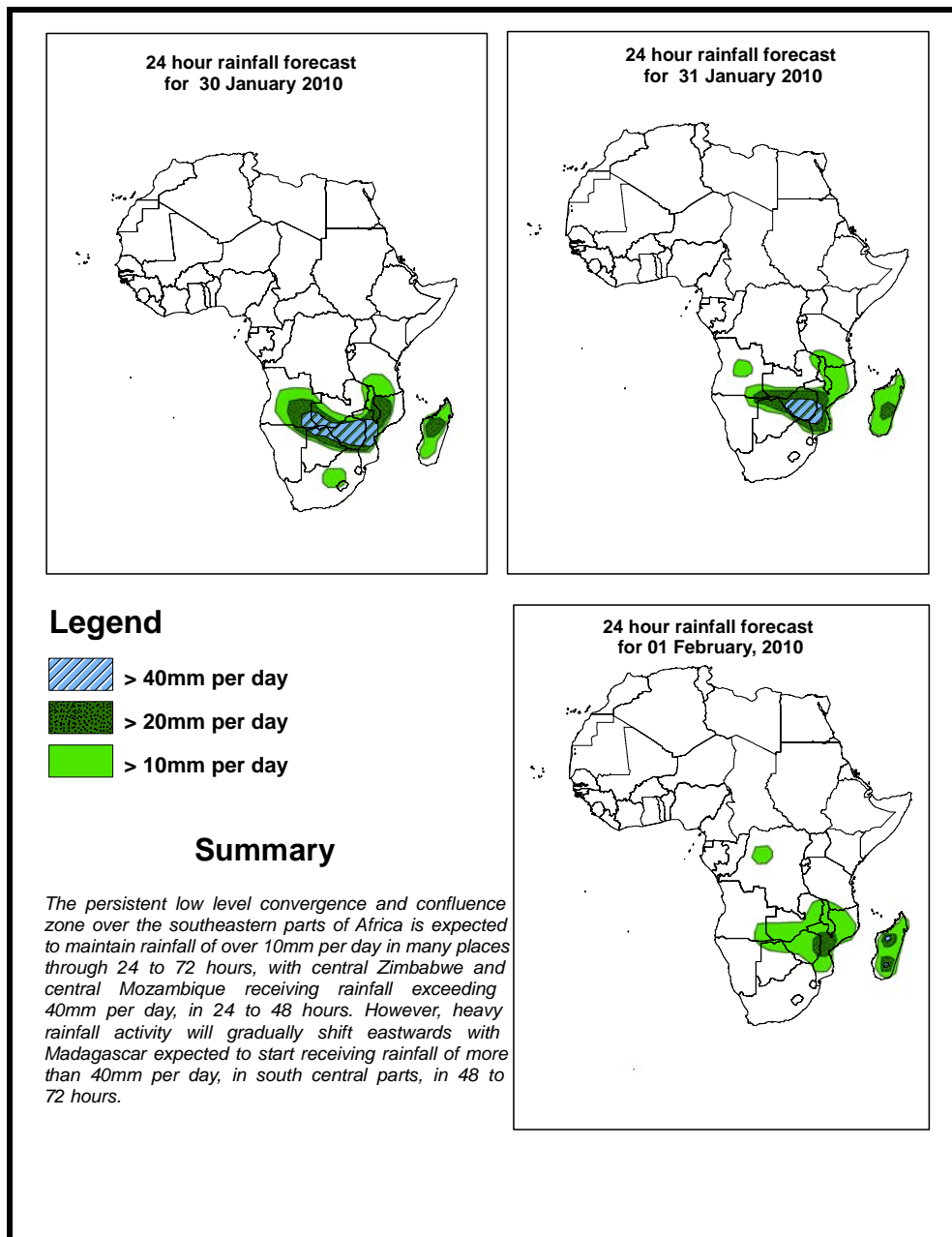


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 30 January –06Z of 01 February 2010, (Issued at 14:00EST of 29 January 2010)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of probability of precipitation (POP) exceedence based on the NCEP, UK Met Office and the ECMWF NWP outputs, the NCEP global ensemble forecasts system (GEFS) and expert assessment.



1.2. Models Comparison and Discussion - Valid from 00Z of 30 January 2010

A cut of high from the Azores high is expected to form the Saharan high and while merging with the Arabian high is expected to weaken the interaction between the low pressure system over southern Europe and the tropics in 24 to 72 hours. On the other hand, a ridge extension from the Arabian high is expected to extend southwards up to the Horn of Africa in 24 to 72 hours.

In 24 to 72 hours, the equatorial trough is expected to maintain its presence and coverage with places assuming central pressure values of 1010mb over the Gulf of Guinea, 1009mb over Central Africa Republic, northern DRC, southern Sudan and southern Chad. Furthermore, places over southern Africa are expected to attain pressure values of 1010mb over Namibia, Botswana, Zimbabwe and South Zambia, while central Mozambique and the Mozambique Channel will reach central pressure values of 1006mb. A ridge from St. Helena high is expected to penetrate the east coast of South Africa extending northwards towards the Botswana and Zimbabwe borders in 48 to 72 hours.

At 850mb level, the mid-latitude cyclonic circulation is expected to extend eastwards up to central Iran, covering most of North Africa and slightly weakening the northern ridge of the Arabian anticyclone, in 24 to 72 hours. Its southward extent is expected to reach up to about 18⁰N in 24 to 72 hours.

Seasonal convergence over the CAB region is expected to persist in 24 to 72 hours. Besides, the strong convergence of the northeasterly to easterly flow, from the east African monsoon, and westerly flow from the Atlantic Ocean is expected over most parts of east central and southern Africa through 24 to 72 hours. Localized convergence is expected to persist over southern Angola and Namibia through 24 to 48 hours. In addition, a cyclonic system is expected to develop over coastal central Mozambique while maintaining its position through 48 to 72 hours.

At 500mb level, much of North Africa is expected to assume a weak wavy flow in the westerly in 24 to 48 hours, tending to be zonal in 48 to 72 hours. On the other hand, the southern hemisphere is expected to have a wavy pattern in the sub tropical areas through 24 to 72 hrs.

At 200mb, much of North Africa will be influenced by a mid-latitude zonal flow with wind speeds of up to 110 knots in 24 to 72 hours, while a narrow zone over northern Libya covering the southeast of Mediterranean Sea up to Egypt will have wind speeds of up to 130 knots in 24 to 48 hours.

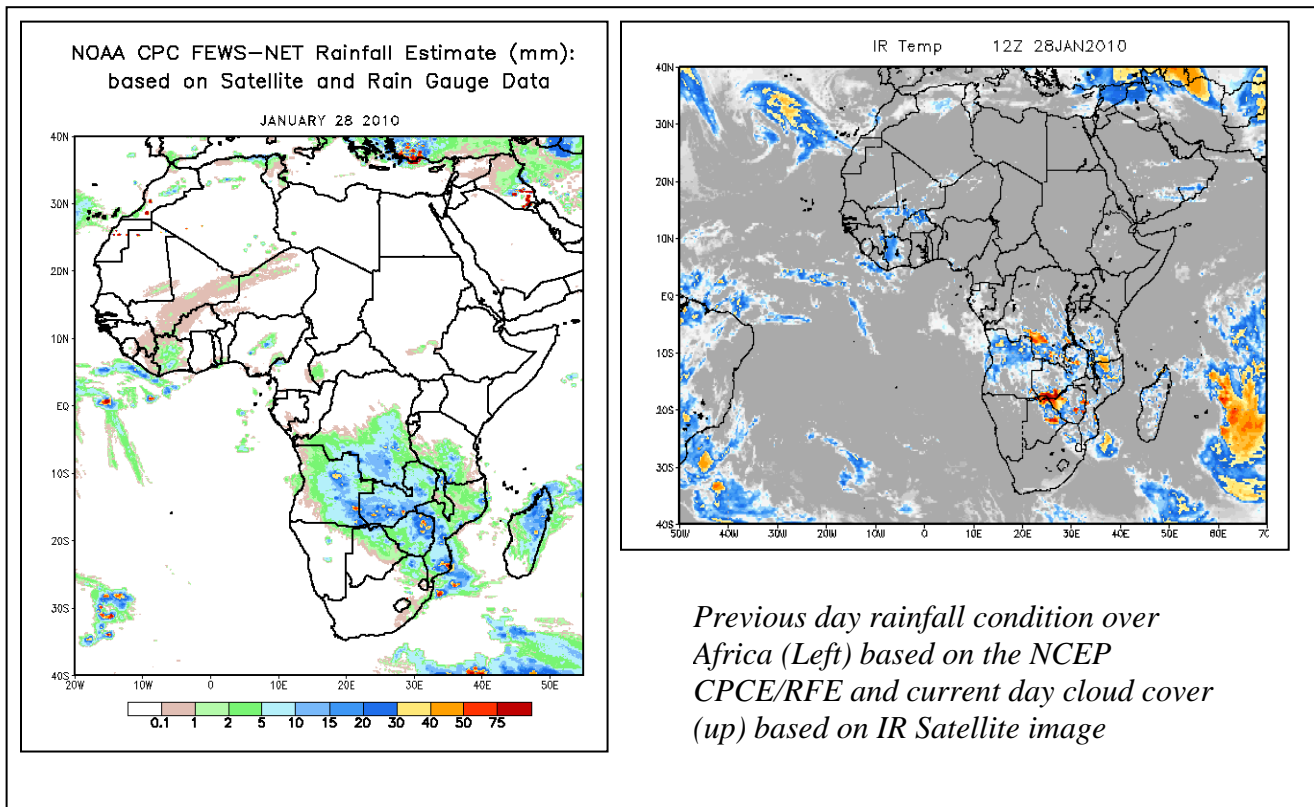
The persistent low level convergence and confluence zone over the southeastern parts of Africa is expected to maintain rainfall of over 10mm per day in many places through 24 to 72 hours, with central Zimbabwe and central Mozambique receiving rainfall

exceeding 40mm per day, in 24 to 48 hours. However, heavy rainfall activity will gradually shift eastwards with Madagascar expected to start receiving rainfall of more than 40mm per day, in south central parts, in 48 to 72 hours.

2. 0. Previous and Current Day Weather Discussion over Africa (28 –29 January 2010)

2.1. Weather assessment for the previous day (28 January 2010): During the previous day, moderate to heavy rainfall events were observed over southern Mozambique, Zambia, eastern Zimbabwe, southern parts of DRC and west central Angola and northern Madagascar.

2.2. Weather assessment for the current day (29 January 2010): Intense cloud patches are observed over parts of Zambia, Zimbabwe, DRC, Mozambique and Angola.



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