

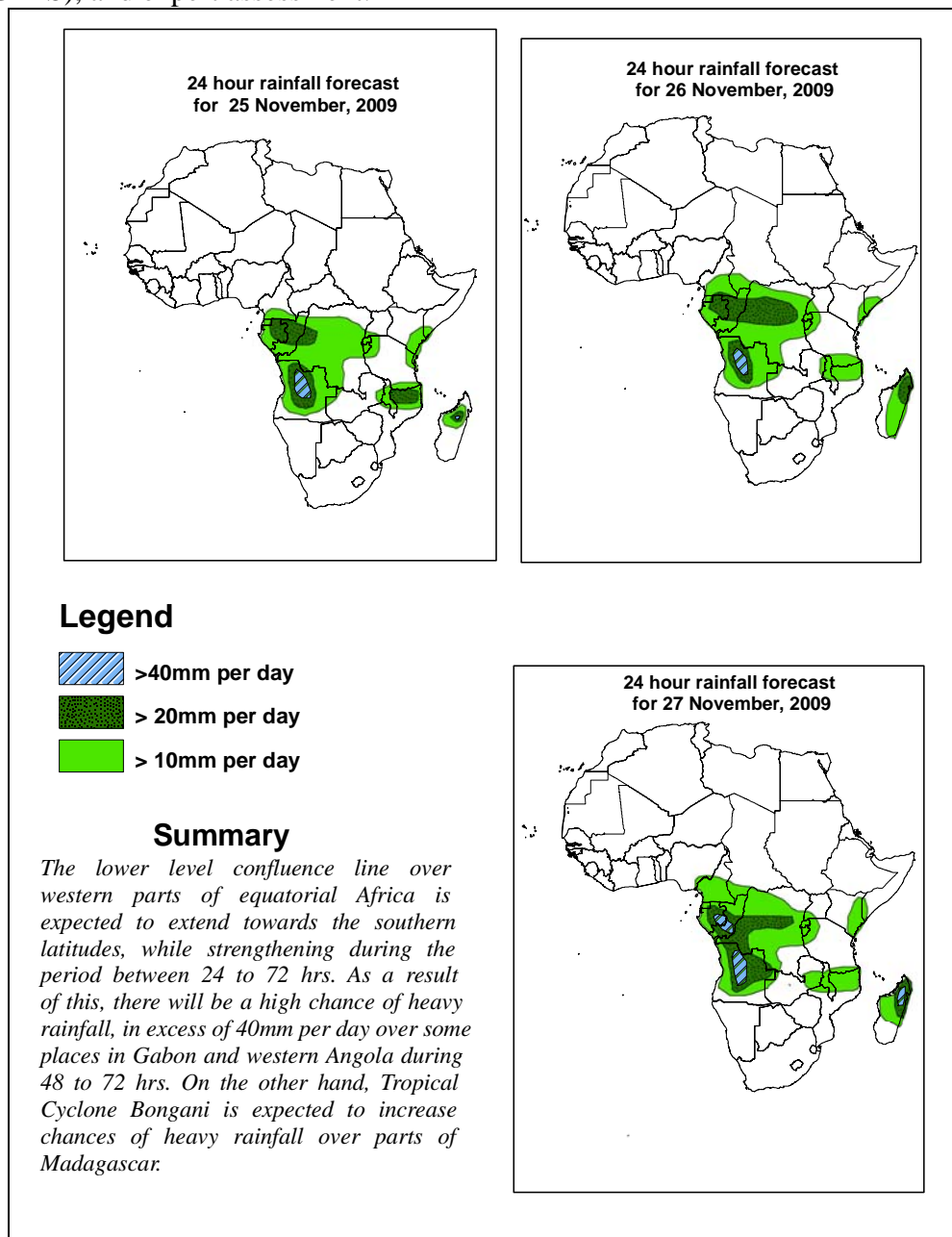


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 25 November – 06Z of 27 November 2009, (Issued at 14:00EST of 24 November 2009)

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; 25, NOVEMBER, 2009):

Valid from 00Z of 24 November 2009

THE 850mb WIND FORECASTS OF GFS AND ECMWF INDICATE STRONG COFLUENCE AND CONVERGENCE OVER WESTERN PARTS OF EQUATORIAL AND SOUTHERN AFRICA BETWEEN DRY NORTHEASTERLIES AND MOIST EASTERLIES, WHILE, THE CONVERGENCE OVER THE CONGO AIR BASIN IS EXPECTED TO WEAKEN.

THE LOWER LEVEL CONVERGENCE OVER THE CONGO AIR BOUNDARY IS EXPECTED TO BECOME ACTIVE THROUGH 48 TO 72 HOURS OVER THE GREAT LAKE AREAS, WHILE THE STRONG COFLUENCE OVER WESTERN PARTS OF EQUATORIAL AND SOUTHERN AFRICA IS EXPECTED TO PERSIST INCREASING THE RAINFALL TO OVER 40MM PER DAY IN SOME PLACES. DURING 72 HOURS THE CONFLUENCE LINE OVER EQUATORIAL WEST AFRICA IS EXPECTED TO STRENGTHEN FURTHER AND EXTENDS TOWARDS SOUTHWESTERN ANGOLA, ON 850MB WIND FORECASTS OF ECMWF AND GFS MODELS. HOWEVER, THE UK MET OFFICE MODEL FORECAST FAILED TO INDICATE THE SHIFTING OF THE LOWER LEVEL CONVERGENCE TOWARDS WESTERN PARTS OF EQUATORIAL AND SOUTHERN AFRICA, BY PREDICTING ACTIVE CONVERGENCE OVER THE CAB REGION THROUGH 24 TO 72 HRS.

ON THE OTHER HAND, THE JTWC TROPICAL CYCLONE WARNING INDICATES WESTWARD MOVEMENT OF TROPICAL CYCLONE (BONGANI) FROM ITS CURRENT POSITION NORTHEAST OF MADAGASCAR TOWARDS NORTHERN PART OF MOZAMBIQUE CHANNEL IN THE COMING 72HRS. HOWEVER, THE MEAN SEA LEVEL PRESSURE VALUES AND THE LOWER TROPOSPHERIC WINDS PREDICTED BY THE GFS, ECMWF AND UK MET OFFICE MODELS ARE NOT AS STRONG AS INDICATED IN THE TROPICAL CYCLONE ADVISORY OF JTWC. ASSOCIATED WITH THE TROPICAL CYCLONE, THE RAINFALL IS EXPECTED TO INCREASE OVER 40MM PER DAY IN THE COMING 72HRS OVER PORTIONS OF EASTERN AND NORTHERN MADAGASCAR.

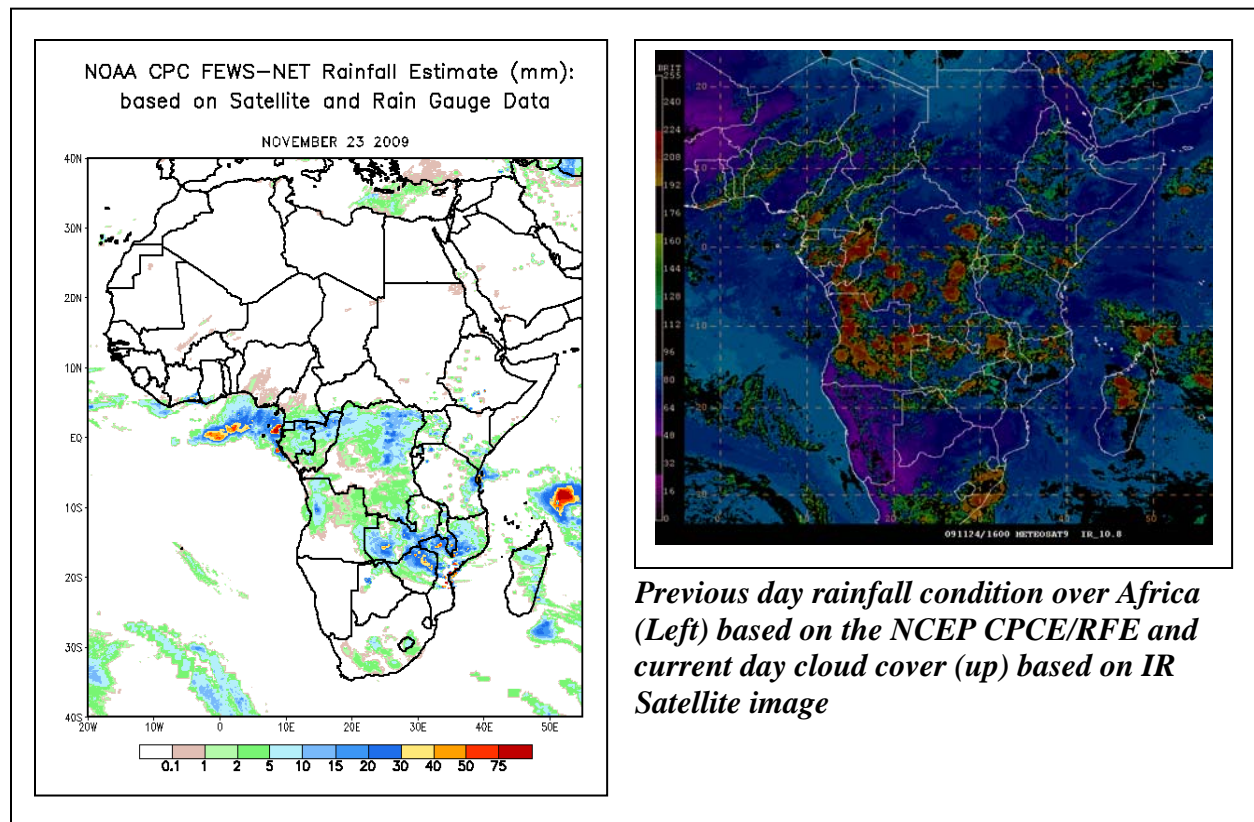
EXPECT THE ASSOCIATED WITH THIS CYCLONIC CIRCULATION, THE ECMWF MODEL INDICATES MAXIMUM WIND SPEED OF 35KTS DURING 24 AND 48HRS, WHILE THE UK MET OFFICE MODEL PREDICTED MAXIMUM WIND SPEED OF 25KNTS THROUGH 24 HRS. THE 500mb WIND FORECASTS OF GFS, ECMWF AND GFS MODELS INDICATE A PERSISTENT WESTERLY TROUGH OVER NORTHEAST AFRICA EXTENDING TOWARDS NORTHERN SUDAN THROUGH 24 TO 72HRS. ON THE OTHER HAND, THE SOUTHERN HEMISPHERE MID-TROPOSPHERIC TROUGH IN THE WESTERLIES IS EXPECTED TO MOVE EASTWARDS ACROSS SOUTH AFRICA DURING THE PERIOD OF 24 TO 72 HRS.

IN GENERAL, THE LOWER LEVEL CONFLUENCE LINE OVER WESTERN PARTS OF EQUATORIAL AFRICA IS EXPECTED TO EXTEND TOWARDS THE SOUTHERN LATITUDES, WHILE STRENGTHENING DURING THE PERIOD BETWEEN 24 TO 72 HRS. AS A RESULT OF THIS, THERE WILL BE A HIGH CHANCE OF HEAVY RAINFALL, IN EXCESS OF 40MM PER DAY OVER SOME PLACES IN GABON AND WESTERN ANGOLA DURING 48 TO 72 HRS. THERE IS ALSO A HIGH CHANCE FOR RAINFALL TO INCREASE TO OVER 20 MM IN SOME PARTS OF DRC AND MADAGASCAR.

2. Previous and Current Day Weather Discussion over Africa (23-24 November 2009)

2.1. Weather assessment for the previous day (23 November 2009): During the previous day, moderate to heavy rainfall events were observed over parts of southern Cameroon, Gabon, northern Congo, western Kenya, central Zambia, northern Zimbabwe and central Mozambique.

2.2. Weather assessment for the current day (24 November 2009): Intense clouds are observed over parts of Gabon, Congo, DR Congo, East African Countries, northern Angola, northern Zimbabwe, Zambia, southern Mozambique, South Africa and Madagascar.



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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 State.