



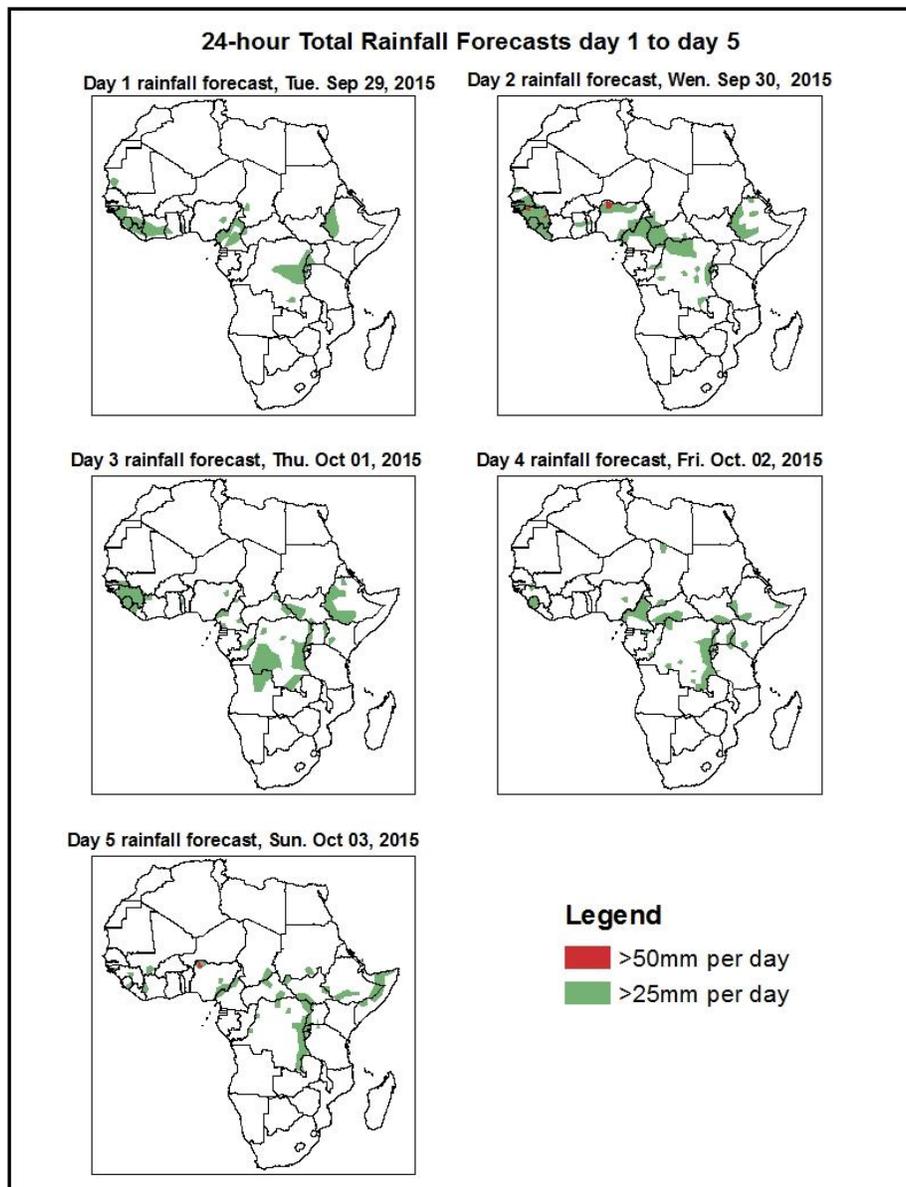
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall and Dust Concentration Forecasts

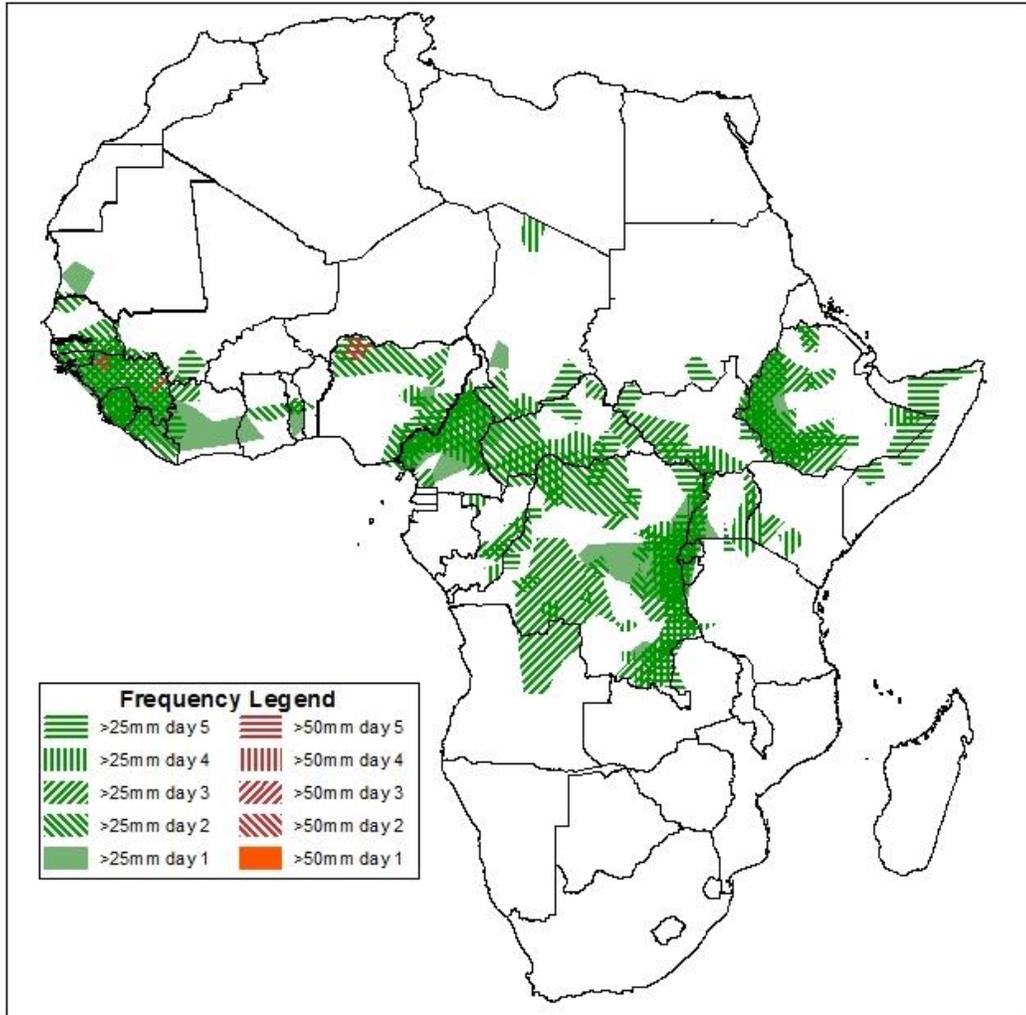
Valid: 06Z of Sep 29 – 06Z of Oct 03 2015. (Issued on September 28, 2015)

1.1. 24-hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of high probability of precipitation (POP), based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



Five Days Rainfall Forecast Summary 29 - 03 October, 2015

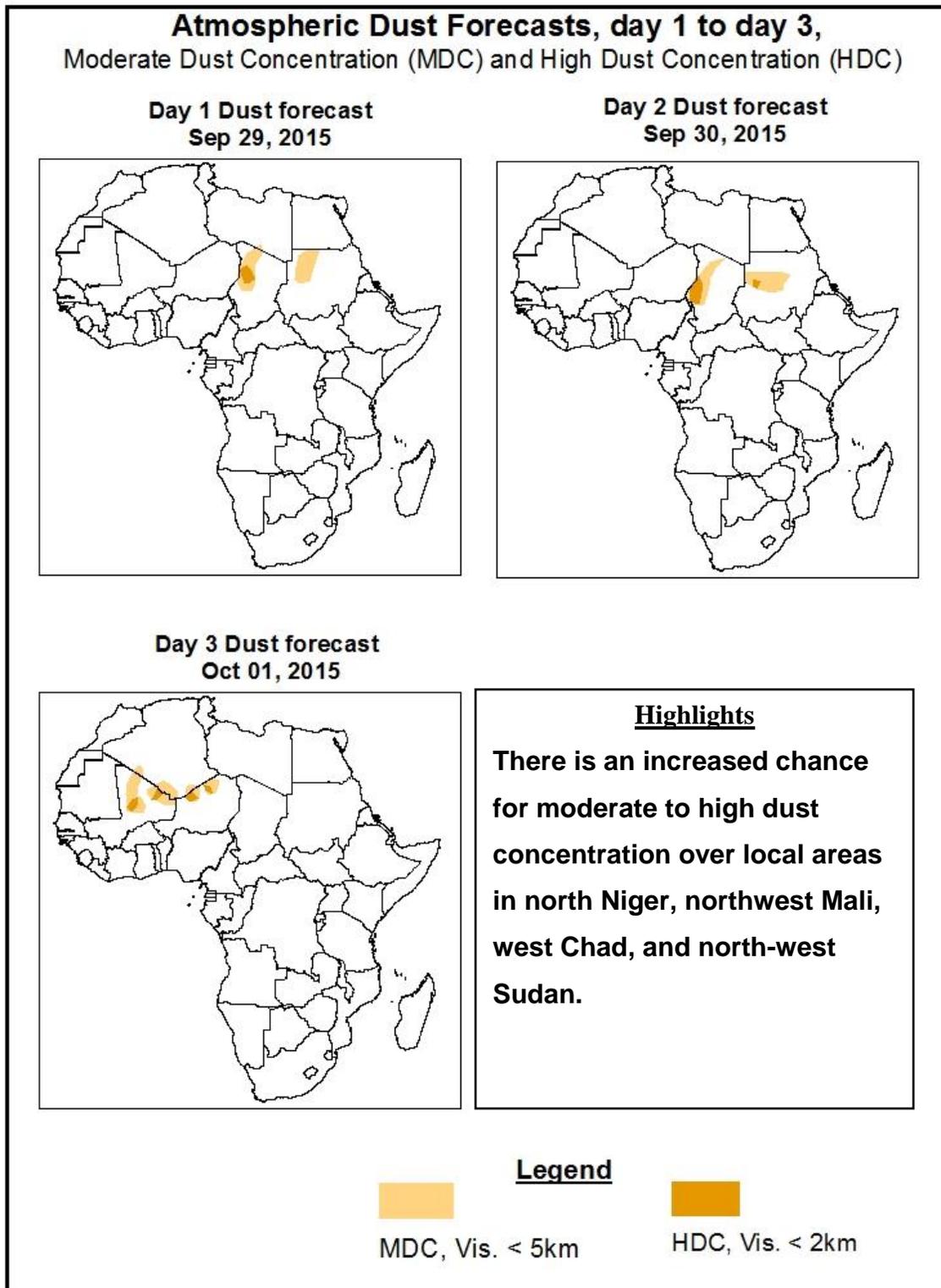


In the coming five days, monsoon flow from the Atlantic Ocean with its associated convergence across West and Central Africa will continue enhancing rainfall over southern Senegal, Guinea-Bissau, Guinea-Conakry, Sierra Leone, Liberia, South Mali, southern Ivory Coast, central Ghana, north and eastern part of Nigeria, large part of Cameroon, portions of south Chad and south Sudan and some parts of South Sudan. Seasonally moderate to heavy rainfall is also expected to continue across western Ethiopia and part of Somalia, northeastern and eastern DRC and major parts of Rwanda and Burundi.

1.2. Atmospheric Dust Concentration Forecasts

Valid: 12Z of Sep 29 – 12Z of Oct 03, 2015

The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



1.3. Model Discussion, Valid: 29 – 03 October, 2015

The Azores high pressure system over Northeast Atlantic Ocean with its central pressure value of 1021 mb is expected to strengthen slightly in 72 hours while moving further north toward Western Europe. The High pressure system will start moving gradually from the northern position toward northwestward Atlantic Ocean reaching 1024 mb before returning to its climatological position at the end of the forecast period according to the GFS model.

The ridge associated with the St Helena high pressure system over the Southeast Atlantic Ocean is expected to vary between 1026 mb and 1028 mb in 48 hours. It will continue to extend its influence to southwestern Indian Ocean weather pattern by changing its position before the subtropical high pressure systems resume their climatological position towards the end of the forecast time period with a central pressure value reaching 1032 mb.

The Mascarene high pressure system will increase slightly within 48 hours with central pressure value varying from 1036 mb up to 1032 mb then will slightly weaken while moving toward western Indian Ocean with expected central pressure value of 1030 mb at the end of the forecast period.

A thermal low with central pressure value between 1009 mb and 1008 mb are expected to propagate westward through 24 to 120 hours while slightly deepening and covering region between Mali, Niger and Sudan. The Low pressure systems over Chad and Sudan are expected to deepen slightly up to a central pressure value of 1007 mb towards the end of the forecast period while moving westward.

At 925 mb, a cyclonic circulation over Niger is expected to propagate towards the coastal area of Senegal across Mali through 24 to 120 hours. Strong Zonal wind convergence is expected to prevail across Sudan and Mali during the forecast period. Meridional wind convergence is expected to remain active in the region between Sudan and Northeast DRC towards western coast of Ethiopian region during the forecast period.

At 850 mb level, a cyclonic circulation over Niger is expected to propagate towards coastal area of Senegal by passing through Mali during the forecast period.

At 700 mb level, an easterly flow is expected to propagate westwards in the region between central Sudan toward the gulf of Guinea during the forecast period.

In the coming five days, monsoon flow from the Atlantic Ocean with its associated convergence across West and Central Africa will continue enhancing rainfall over southern Senegal, Guinea-Bissau, Guinea-Conakry, Sierra Leone, Liberia, South Mali, southern Ivory Coast, central Ghana, north and eastern part of Nigeria, large part of Cameroon, portions of south Chad and south Sudan and some parts of South Sudan. Seasonally moderate to heavy rainfall is also expected to continue across western Ethiopia and part of Somalia, northeastern and eastern DRC and major parts of Rwanda and Burundi.

2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (September 27, 2015)

Moderate to locally heavy rainfall was observed over western Mali, southwestern Nigeria, central Cameroon, southern Niger, western Sudan and western parts of Ethiopia.

2.2. Weather assessment for the current day (September 28, 2015)

Intense clouds are observed portions of West Africa and central Africa, southern part of Chad, west of Ethiopia, many places in east African countries: East of DRC, Rwanda, Burundi and Uganda.

