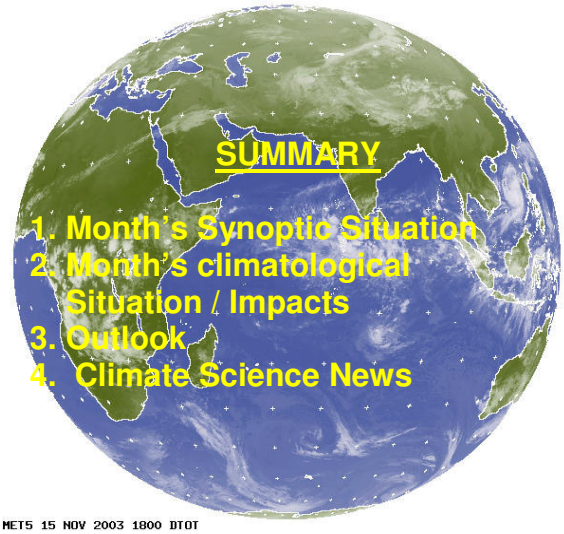
AFRICAN CENTRE OF METEOROLOGICAL APPLICATIONS FOR DEVELOPMENT
CENTRE AFRICAIN POUR LES APPLICATIONS DE LA METEOROLOGIE AU DEVELOPPEMENT

CLIMATE WATCH AFRICA BULLETIN

N° 09
SEPTEMBER 2008




SUMMARY



HIGHLIGHTS: Observed the highest spatial and intensity of rainfall over Gulf of Guinea countries, central Africa countries, the northern and western parts of Greater Horn of Africa (GHA) countries with a decrease over the Sahel. However, most of the GHA countries experienced severe rainfall deficits

1. SITUATION DURING THE MONTH OF SEPTEMBER, 2008

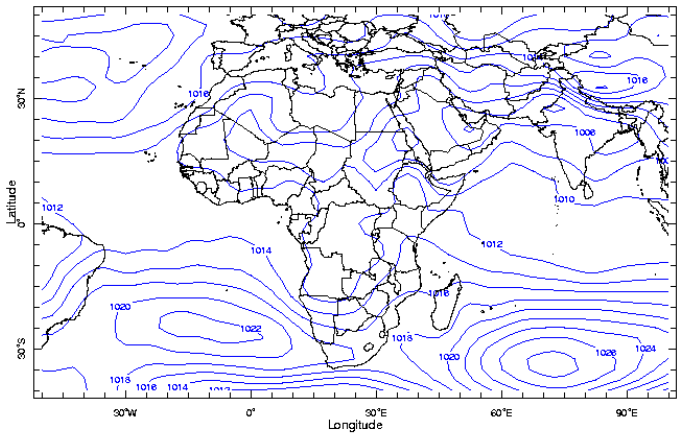
1.1 Centres of Anticyclone

The Azores high pressure at 1020hPa weakened by 2hPa and shifted to the northeast at about 43°N/30°W.

The St Helena high pressure of 1022hPa weakened by 2hPa compared to the previous month and shifted to the northeast at 27°S/10°W.

The Saharan thermal low of 1010hPa filled up by 2hpa covering a limited area over central Chad, central Niger, north Mali and south Algeria.

The Mascarene high pressure at 1028hPa maintained its intensity and shifted its centre to the northwest at 35°S/72°E with a strong ridge over eastern Africa.



Mean surface pressure during the Month of September, 2008 (Source : IRI)

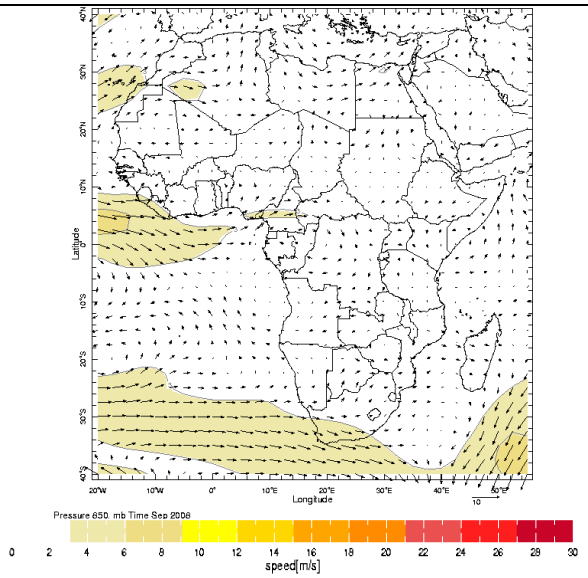
1.2 Low level wind anomaly flow at 850hPa

At 850hPa level, the strong continental southwesterly winds anomalies were observed over western coast of Morocco veering to westerlies over western Algeria.

Over western part of the Gulf of Guinea strong westerly wind anomalies prevailed backing to southwesterlies over southern Nigeria and central Cameroon.

In the southern Atlantic strong westerly wind anomalies were observed up to southern coast of South Africa.

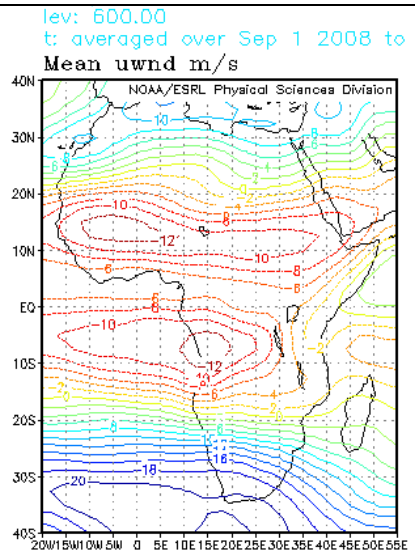
The average wind anomaly speed (shaded) was observed at about 08 m/s and above.



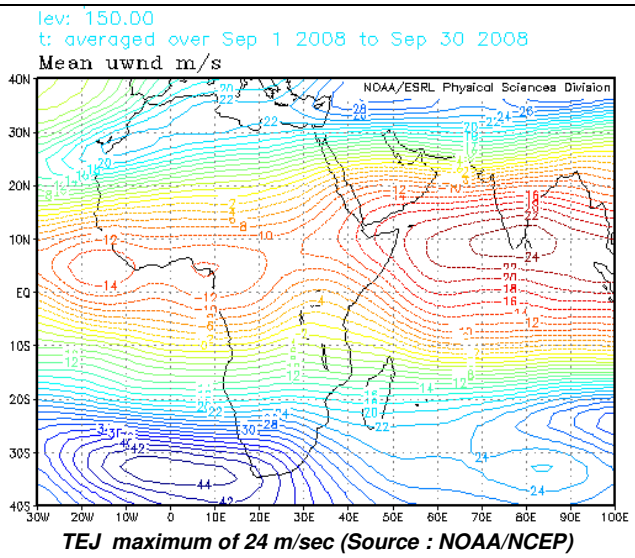
September 2008, Wind Anomalies at 850Hpa (Source : NOAA/NCEP)

1.3 African Easterly Jet (600hPa) and Tropical Easterly Jet (150hPa)

The mean maximum speed of African Easterly Jet (AEJ) at 600hPa was 12 m/s with axis located at about 15°N over south Mauritania, Mali, Burkina Faso and Niger.
The mean maximum speed of Tropical Easterly Jet (TEJ) at 150hPa was 24 m/s over north Indian Ocean with secondary peaks of about 14 m/S over coastal part of Gulf of Guinea countries.



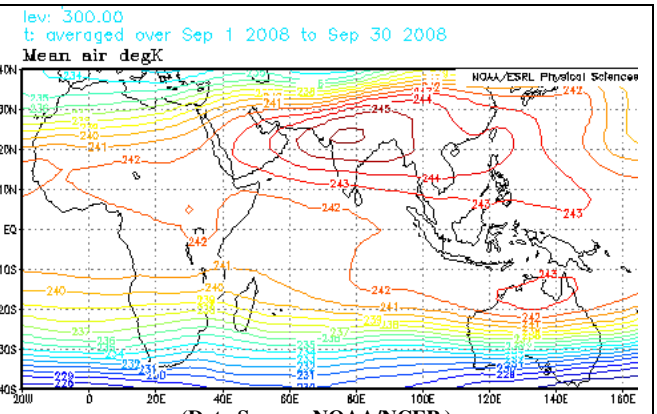
AEJ maximum of 12m/sec. (Source : NOAA/NCEP)



TEJ maximum of 24 m/sec (Source : NOAA/NCEP)

1.4 Thermal index

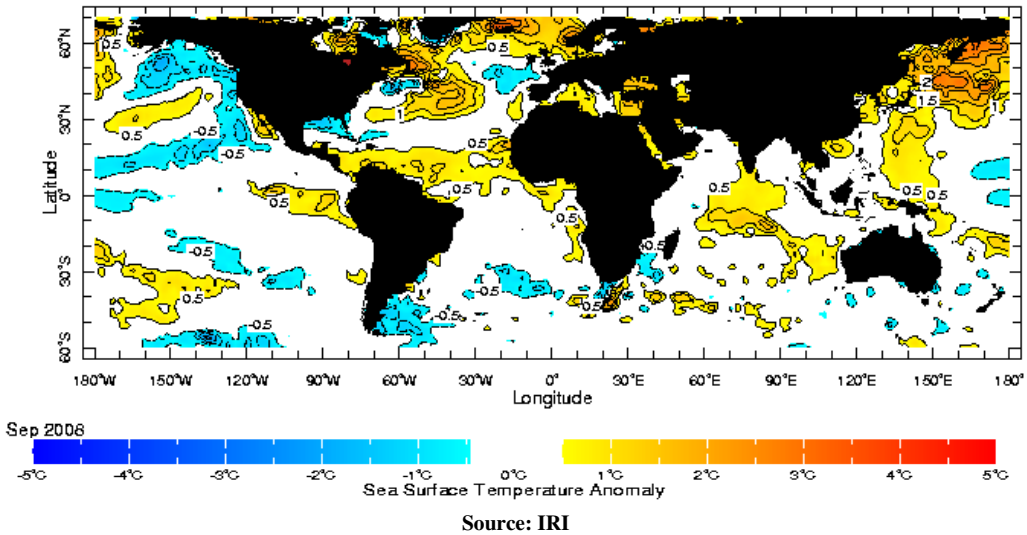
In the month of September, 2008, the thermal index (TI) regime at 300hPa, map shown, had a near-threshold value of 242°K isotherm over extreme northern parts of Gulf of Guinea countries, western and eastern of the Sahel countries, northern part of central Africa countries and northern part of GHA countries that maintained reasonable conditional instability associated heavy rainfall. The threshold value of 243°K and above maintained the highest conditional instability associated with heavy convective rainfall with severe floods over Asia and north Australia. The low TI regime value of 241°K and below was associated with suppressed convection and rainfall deficits over southern part of central, southern and northern African countries.



(Data Source: NOAA/NCEP)

1.5 Sea Surface Temperature (SST) and El Nino/Southern Oscillation (ENSO)

A neutral to cooling prevailed in the central equatorial and north eastern Pacific Ocean, while warming conditions prevailed in central, eastern, western and south western Pacific Ocean. A neutral to warming condition was observed over most of the Atlantic Ocean except its southern, northeastern and northwestern parts where some cooling conditions were observed. A neutral to warming condition was observed over most of Indian Ocean. The neutral to cooling conditions were observed over Mozambique Channel with warming observed in the south.



Source: IRI

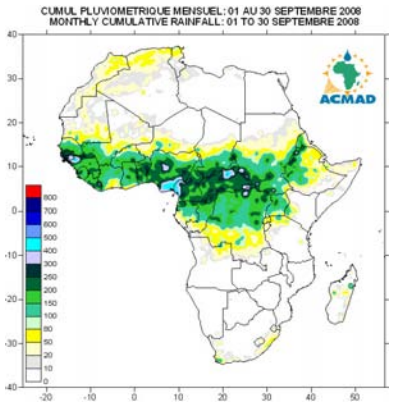
2. CLIMATOLOGICAL SITUATION AND IMPACTS DURING THE MONTH OF SEPTEMBER, 2008

2.1 Rainfall

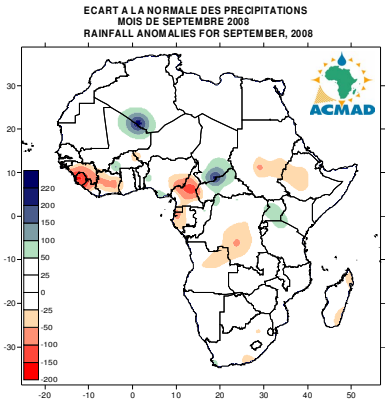
The estimated rainfall map below shows slight spatial rainfall increase over Gulf of Guinea countries, Central Africa countries and the GHA countries, northern Africa countries and southern Africa countries, while the Sahel had a decrease. In summary.

- **North Africa** had spatial and rainfall intensity increase recording rainfall amounts ranging from 10mm to 100 mm over Algeria, Morocco and Tunisia.
- **The Sahel** countries had decrease in rainfall activities recording amounts ranging from 10mm to 250 mm and above.
- **Gulf of Guinea** countries experienced slight spatial rainfall increase recording heavy amounts ranging from 50mm to 300mm with peaks of 300mm to 500mm over Guinea, southeast Nigeria and Cameroon.
- **Central Africa** countries experienced slight spatial rainfall increase recording amounts ranging from 10mm to 300mm with peaks of 300mm to 600mm over north Central African Republic and north Democratic Republic of Congo.
- **GHA** countries experienced slight spatial rainfall increase with intensity decrease recording amounts ranging from 10mm to 250mm with peaks of above 300mm over northwestern Ethiopia and southern Sudan. However, most of the countries experienced severe rainfall deficits.
- **Southern Africa** countries experienced slight spatial rainfall increase recording some localized rainfall amounts ranging from 10mm to 150 mm and above over Southern part of South Africa and central Madagascar with a isolated peaks of above 200mm over north Madagascar.

The September 2008, anomaly map shows significant rainfall deficits over, Guinea, Sierra Leone Liberia, Côte d'Ivoire, west Niger/east Burkina Faso, east Nigeria central Cameroon, east Sudan/west Ethiopia, south Democratic Republic of Congo/northeast Angola, south of South Africa and north and southeast Madagascar, while excessive rainfall were recorded over extreme south Algeria/north Mali, south Chad/north Central African Republic, west Burkina Faso, Uganda, south Nigeria, extreme northwest democratic Republic of Congo and over Cape town.



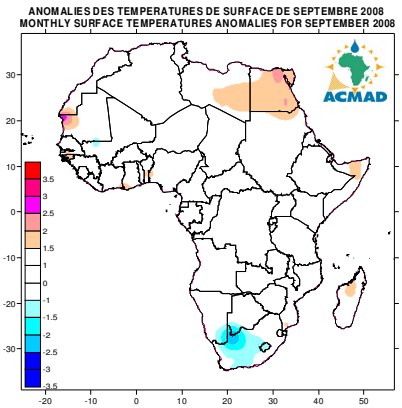
(Data Source: NOAA/NCEP)



(Data Source: NOAA/NCEP)

2.2 Surface Temperature Anomalies

In September 2008, the temperature anomalies over most of African countries were generally normal (1℃ to –1℃). However, high temperature anomalies above 1.5℃ were observed in north Madagascar, north Somalia, central Benin, southwest Ghana/Côte d'Ivoire, south Senegal/guinea Bissau, east Libya, Egypt, northwest Mauritania/south Morocco with the highest above 2.5℃ in the east Egypt and northwest Mauritania, while, negative temperature anomalies below –1.5℃ were observed in south Mauritania/Mali, south Namibia, south Botswana and western part of South Africa.



(Data Source: NOAA/NCEP)

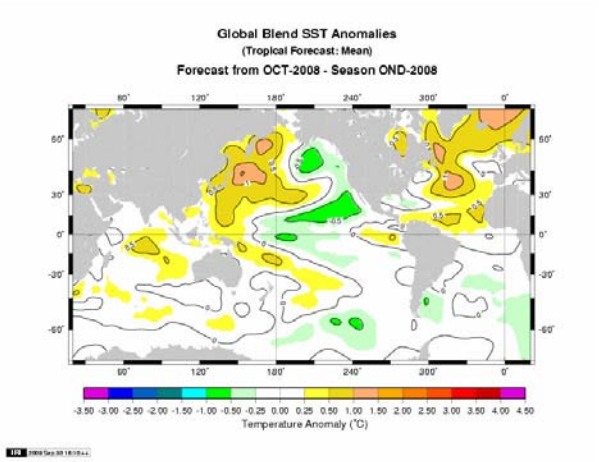
OUTLOOK

3.1 Forecast Sea Surface Temperature (SST)

Pacific Ocean: Neutral to cooling conditions will continue in the central, north eastern and south Pacific Ocean, but warming is expected over its western and south central part. However, the set of dynamical and statistical model forecasts of ENSO over Nino 3.4 domain (5°N – 5°S, 120°W – 170°W) indicated a spread of possible SST anomalies maintaining neutral conditions throughout the forecast period.

Atlantic Ocean: A neutral to cooling condition is expected over southern Atlantic Ocean, while warming trend is expected to continue over northern Atlantic.

Indian Ocean: Neutral to warming condition is expected over the Indian Ocean.

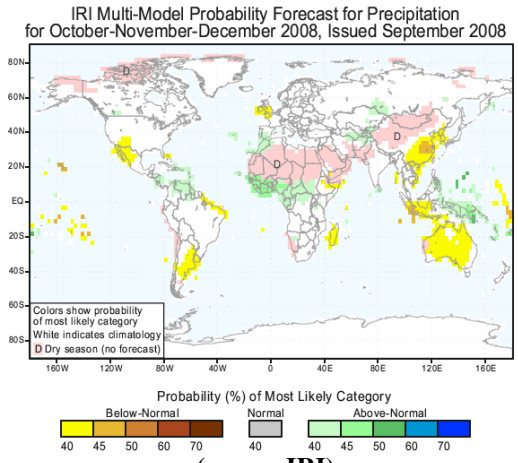


(source IRI)

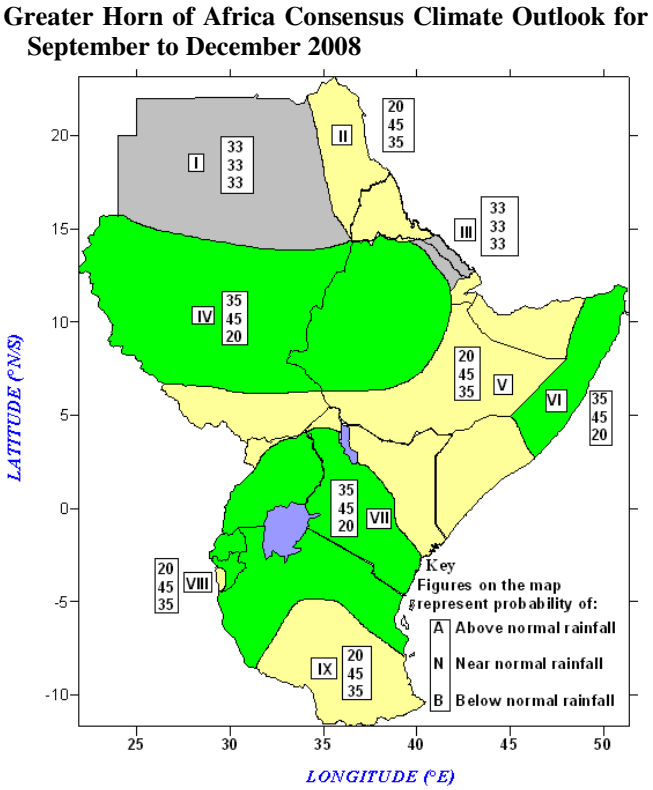
3.3 Rainfall

With the southward displacement of the ITD, leading to significant reduction of moisture influx over the Sahel the convective zone is expected southward causing rainfall reduction over the Sahel and northern parts of the Gulf of Guinea countries. While rainfall activities are expected to intensified over southern parts of Gulf of Guinea countries, central African countries and western parts of GHA countries.

The IRI forecast shown below indicates above normal rainfall over extreme southern parts of the Sahel, Gulf of Guinea countries and northern part of central African countries, while below normal rainfall was forecast over northeastern part of GHA countries which is consistent with the ICPAC consensus Climate outlook for September to December 2008.



(source IRI)



African Centre of Meteorological Applications for Development --- (A c m a D)

PRESAC-03

IDRC CRDI Adaptation

3rd REGIONAL CLIMATE OUTLOOK FORUM IN CENTRAL AFRICA

Date and venue: 24th October, 2008 - BANGUI, Central African Republic
Theme: Seasonal Climate Prediction, Water Resources Management, Agro-forestry and Health

ANNOUNCEMENT

Introduction and Objectives

The African Centre of Meteorological Applications for Development **(ACMAD),** in a partnership with the National Meteorological Service of Central African Republic and the support of World Meteorological Organization (WMO), its partners in Seasonal Forecasting and the IDRC ACCA program for climate change adaptations, is organizing the **3rd REGIONAL CLIMATE OUTLOOK FORUM IN CENTRAL AFRICA (PRESAC-03),** on the theme**: "Seasonal Climate Prediction, Water Resources Management, Agro-forestry and Health"** in **BANGUI, Central African Republic on 24th October, 2008**.

The PRESAC-03 is programmed to prepare the rainfall seasonal forecasts for 2008 rainy season in Central Africa and assess their impacts on socio-economical activities in the region. This 2008 forum will have the following three main components throughout presentations of selected experts and discussions.

1. Presentation of the seasonal forecast of rainfall for the period October-November-December, 2008 by participating countries and International Centers and presentation of the consensus 2008 seasonal climate forecast of the rainfall for the region.
2. Discussions on the use and impacts of seasonal climate forecast by specific users
3. Strategy for improved applications and dissemination of climate forecast products to end-users – Specific communications by users, development community, research community and media.

Participation:

The forum will gather representatives from the development community (water resources management, agro-forestry, health, energy, and natural ecosystems…); Natural disasters actors and managers; National Meteorological and Hydrological Services (NMHSs), Representatives of regional and international institutions; Climate scientists and Professionals in communication;

If you wish to participate or participate and make an oral presentation please fill the form below and Fax it to: + 227 20 72 36 27 or Email it to **presac03@acmad.ne** before 1st October 2008

PRESAC-03 (Bangui 24th October, 2008)
PARTICIPANT FORM[1]

FAMILY NAME……FIRST NAME……

INSTITUTION
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ADDRESS
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Tel: ……Fax:……email :……

☐ I will participate without communication ☐ I will participate with communication[2]

Date…….. Signature……

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