GCRF African SWIFT - Science for Weather Information and Forecasting Techniques

## Synoptic weather Forecast sheet - ACMAD

2021 09 22 0600 UTC

Region **Africa** 

**Date** 

2021 09 22

**Forecast Time** 

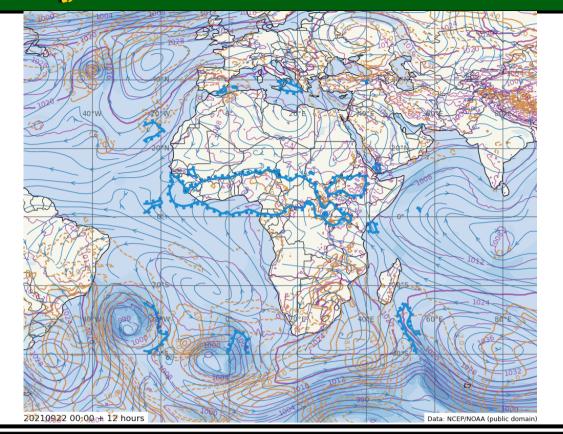
0000 + 12 hrs

**Data** 

GFS synthetic

analysis chart





6
Dry
Intrusion
Increasing

**Pressure Tendency** 

decreasing Pressure **Tendency** 

Wind **Streamlines** 

### 24 hr Regional Synoptic Summary

Azores high is expected to intensify from (1024hPa-1028hPa), ridging over coast of Mauritania and Senegal.

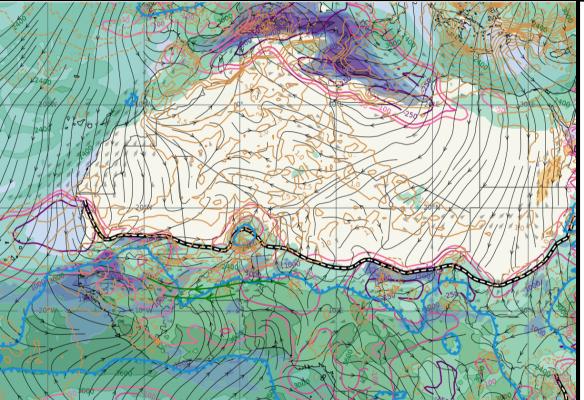
St Helena high center is expected to weaken from 1028hPa to 1020hPa sitting over the tip of Africa extending its ridge over east Africa region pushing the meridional arm of ITCZ eastward.

Mascarene is expected to remain strong at 1036hPa, extending its ridge towards eastern Africa region

Libyan high is expected to intensify up to 1012hPa, the ITD position will be quasistationary.

Deep moisture depth (3000 to 4200m) will be more concentrated over Nigeria, Cameroon and the rest of Central Africa region

Deep convections are expected over Nigeria, Cameroon and Central Africa.





**TEJ** 

**AEJ** 

ITD

Monsoon

trough

Monsoon

ridge

**Date** 2021 09 22

**Forecast Time** 0000 +45 hours

### **Data**

**GFS** synthetic analysis chart

24-72 hr Regional Synoptic Summary Azores high is expected to intensify from

(1024hPa-1028hPa), ridging over coast of Mauritania and Senegal.

St Helena high center is expected to weaken from 1028hPa to 1020hPa sitting over the tip of Africa extending its ridge over east Africa region pushing the meridional arm of ITCZ eastward.

Mascarene is expected to remain strong at 1036hPa, extending its ridge towards eastern Africa region

Libyan high is expected to intensify up to 1012hPa, the ITD position will be quasi-

Dry intrusion is expected to extend over all Sahel countries and maintain moist air of Gulf of Guinea countries

Monsoon influx expected to be between (from 3000m to 4000m) being the highest near the coastal area and decrease as it moves in land.

Deep convections are expected over Liberia Sierra Leone, Nigeria, Cameroon and Central Africa.

AEJ is expected over Mali, S. Burkina Faso, Niger N. Nigeria and S. Chad.

Vorticity associated with AEJ are expected over Nigeria, Benin and Togo.

20210922 00:00 45 hour

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SWIFT High impact weather Forecast sheet - Africa

2021 09 22 1200 UTC

2021-09-23 2021 -09-22 2021-09-24 Region Africa **Date** 2021 09 22 Time 22-24/09/2021 **Data** NCEP-NOAA/SWIFT, ECMWF, ARP-PUMA **Forecast Risk** Be aware **Weather Forecasting Risk Table Be Prepared** E5 Very high E1 E2 **E**3 **E**4 **Take Action Take Action Be Prepared** Likelihood **D1** D2 D3 D4 D5 High Be aware C2 **C**3 **Medium** C<sub>1</sub> C4 C5 Low risk **B1 B**2 **B3 B4 B5** Low **Weather Icons** A2 **A3 A4 A5** Very low **A1 Medium** High Very High Very low Low Rain Wind **Dust** Hail

**Impact** 

UKMO вотн х Which ensemble products have been used to determine the likelihood and forecast? ECWMF

Regions	<b>12-15hrs</b>	<b>15-18 hrs</b>	18-21 hrs	21-24 hrs
Diffa				
Zinder				
Maradi				
Tahoua				
Dosso Niamey Tillaberi				

### **Summary of 12-24 hour forecast**

A system currently located over Air shows signs of intensifying to produce some heavy rains over Agadez and its environs.



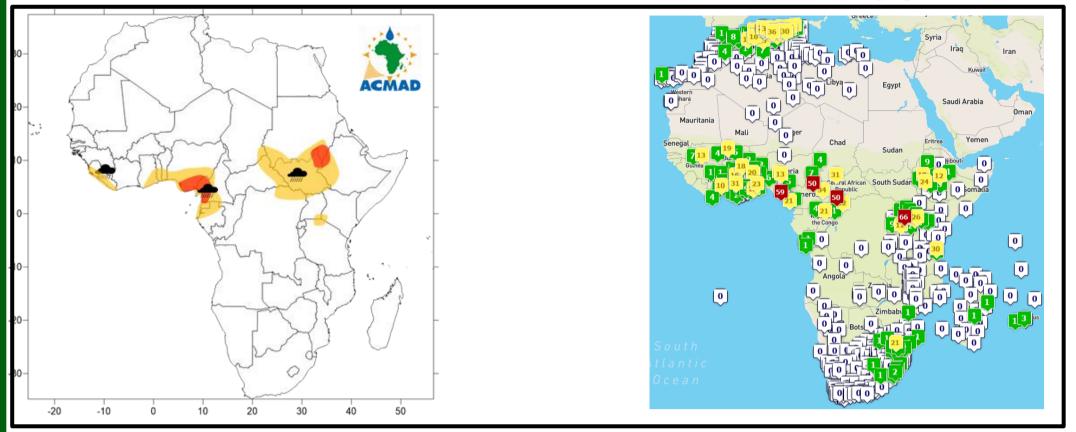
# S-WIFT

## SWILL High impact weather Forecast verification

VT: 2021 09 21

Forecast issued on 2021 09 21

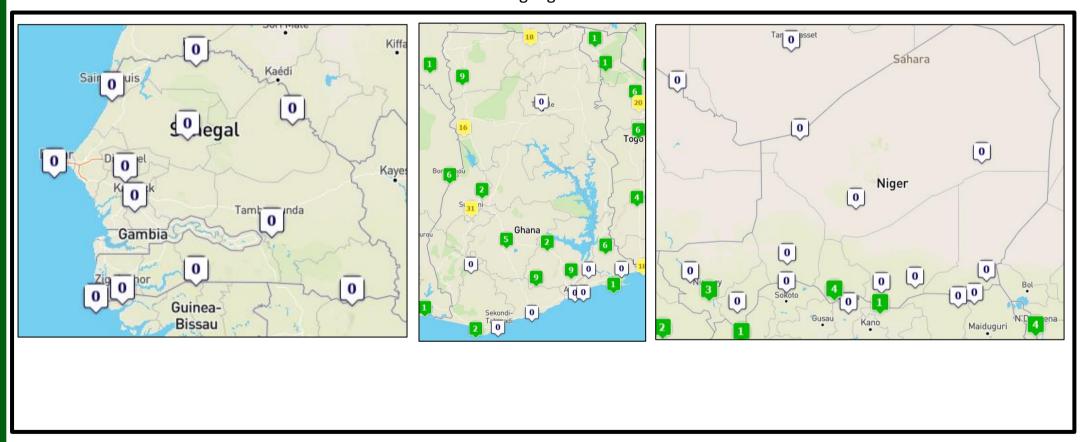
2021 09 21 24H rain gauge observation



Data: Reports from GTS on 2021 09 21 at 06UTC

http://154.66.220.45:8080/thredds/fileServer/ACMAD/WWFD/verificationservice/OBS/ARCHIVE/RR24 20210921.html

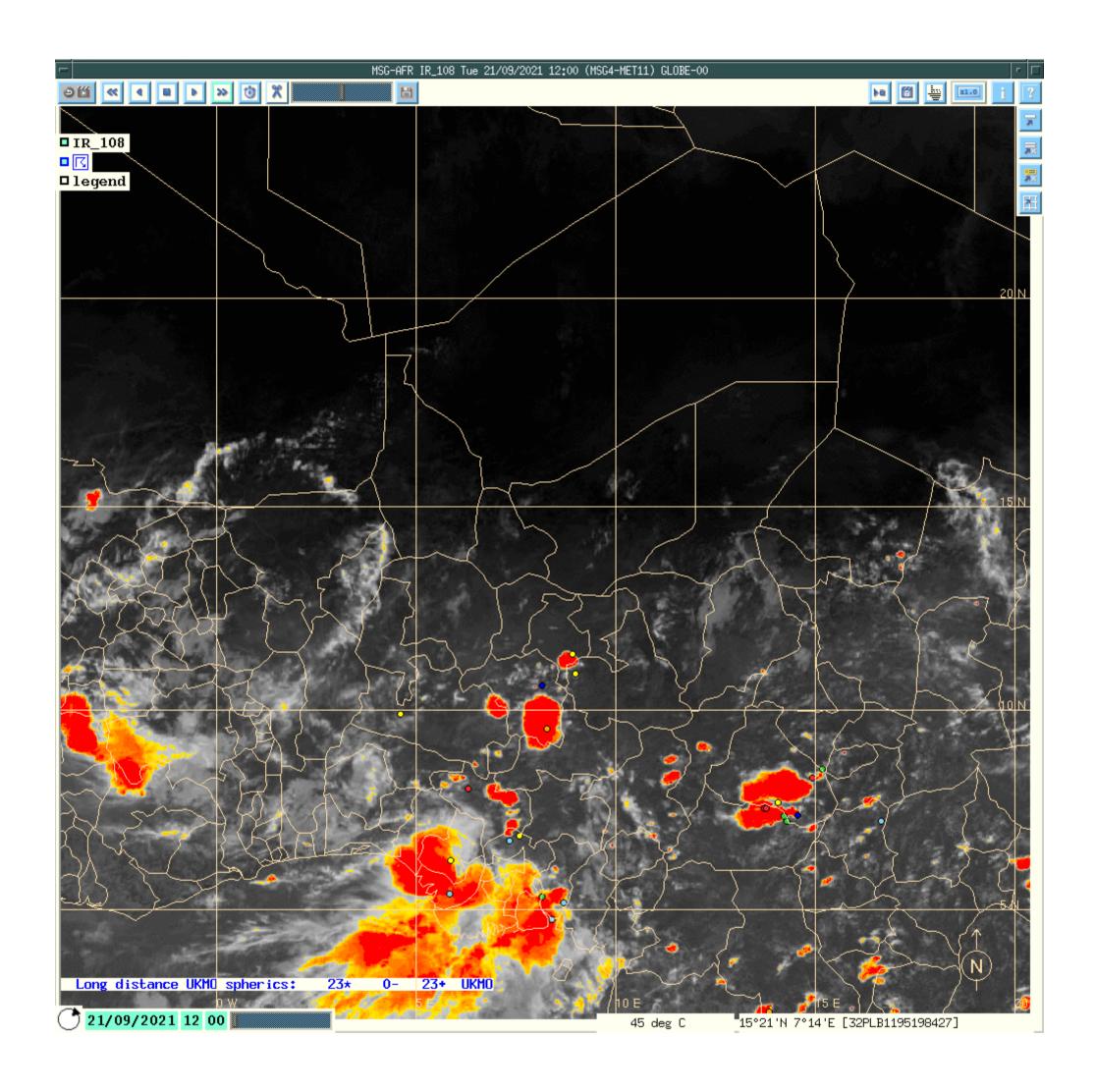
#### 2021 09 21 24H rain gauge observation







# 09212021 12UTC to 09222021 06UTC



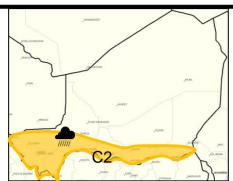
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## High impact weather Forecast sheet - Niger

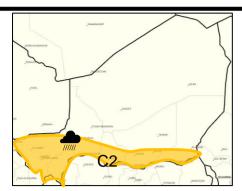
2021 09 22 1200 UTC



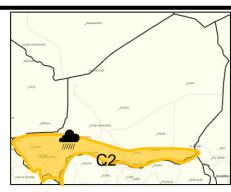




**18 UTC** 



**21 UTC** 



00 UTC

Region				
Niger				
Date				
2021 09 22				
Time				
1200 + 24 hrs				
Data				

SEVIRI 10.8 µm NCEP-NOAA/SWIFT, ECMWF, ARP-PUMA

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	Weather Forecasting Risk Table				le	
	Very high	E1	E2	E3	E4	<b>E</b> 5
	High	D1	D2	D3	D4	D5
	Medium	C1	C2	C3	C4	C5
	Low	B1	B2	В3	B4	B5
	Very low	A1	A2	A3	A4	A5
		Very low	Low	Medium	High	Very High

**Impact** 

**Take Action Be Prepared** Be aware Low risk

**Forecast Risk** Be aware **Be Prepared Take Action** 

Rain

**Weather Icons** Wind

Dust

Hail

Which ensem	nble products have been	used to determine the likeli	hood and forecast? ECWMI	UKMO[	Вотн 🗌

Regions	<b>12-15hrs</b>	15-18 hrs	18-21 hrs	21-24 hrs
Diffa	<ul><li>Partly Slight rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>
Zinder	<ul><li>Partly Slight rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>
Maradi	<ul><li>Partly Slight rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>
Tahoua	<ul><li>Partly Slight rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>
Agadez	■ Partly cloudy	■ Partly cloudy	Partly cloudy	Partly cloudy
Dosso	<ul><li>Slight rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>
Niamey	<ul><li>Slight rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>
Tillaberi	<ul><li>Slight rain</li></ul>	<ul><li>Partly</li><li>Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>	<ul><li>Partly Slight/Moderate rain</li></ul>

Summary of 12-24 hour forecast

