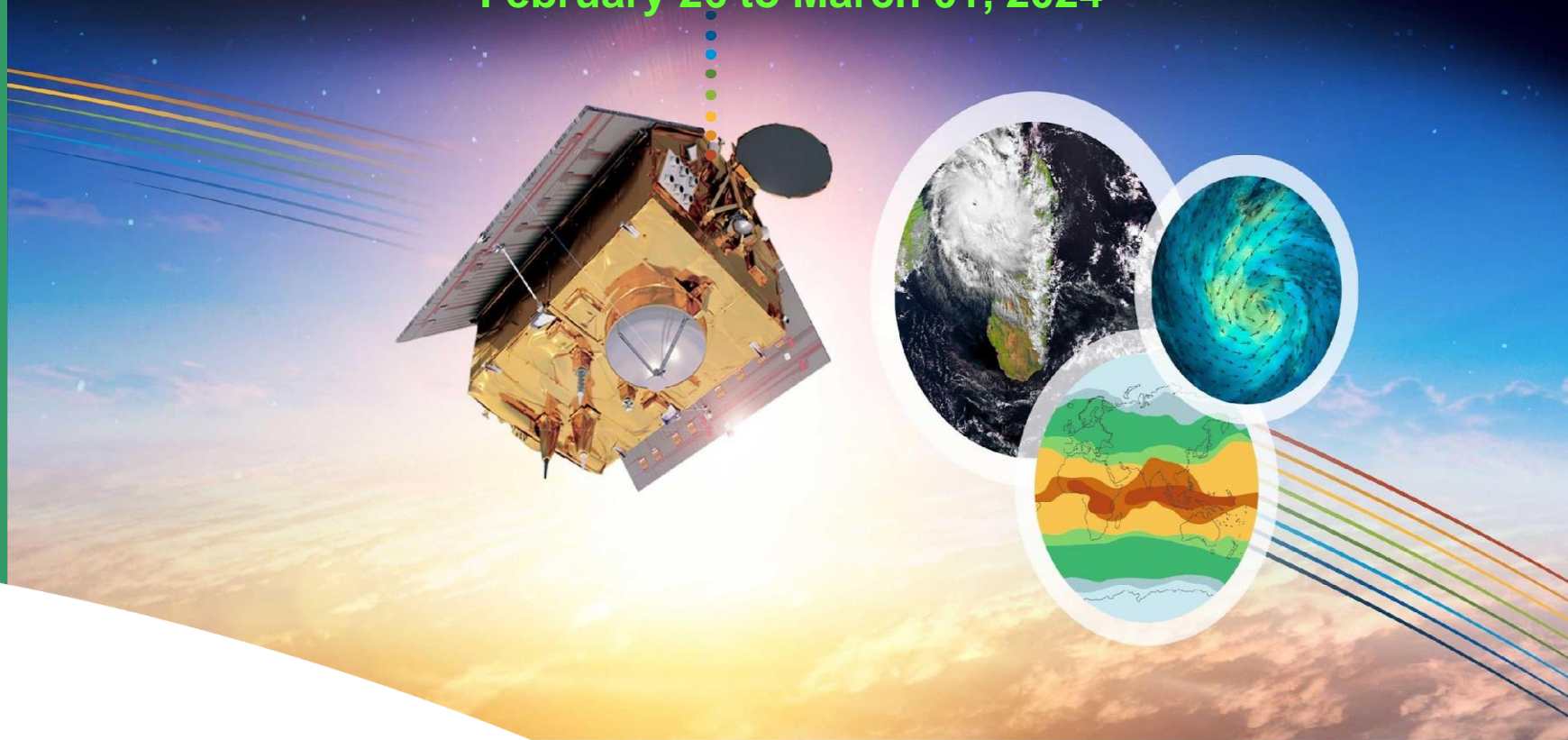


Seasonal Forecasting Workshop on agro-hydro-climatic characteristics of the main rainfall season in the Gulf of Guinea countries / PRESAGG -11

Accra, GHANA

February 26 to March 01, 2024



Rainfall Outlook MAM & AMJ 2024

Issued: Feb 2024



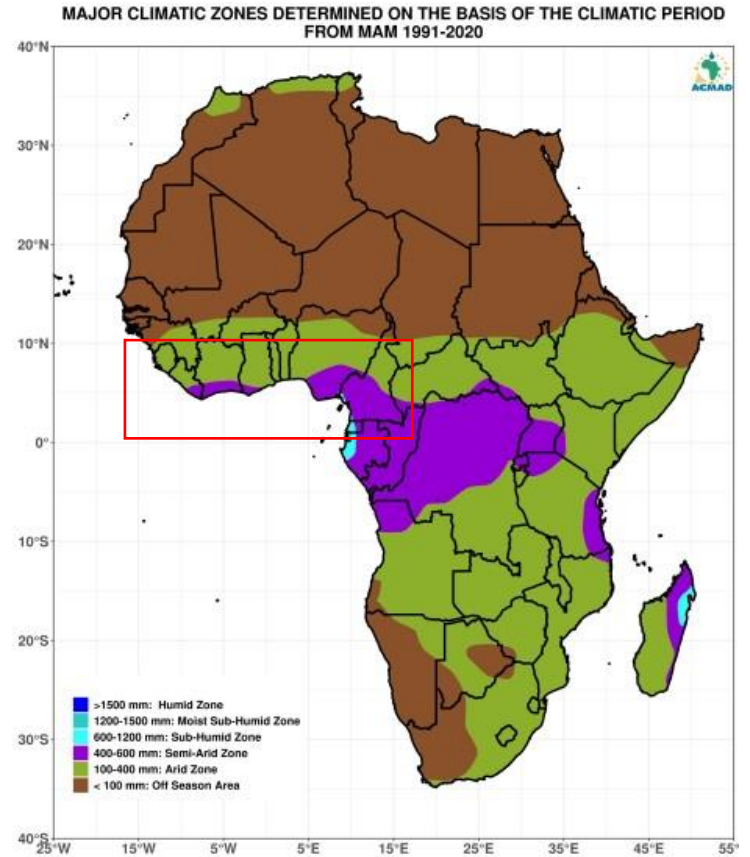
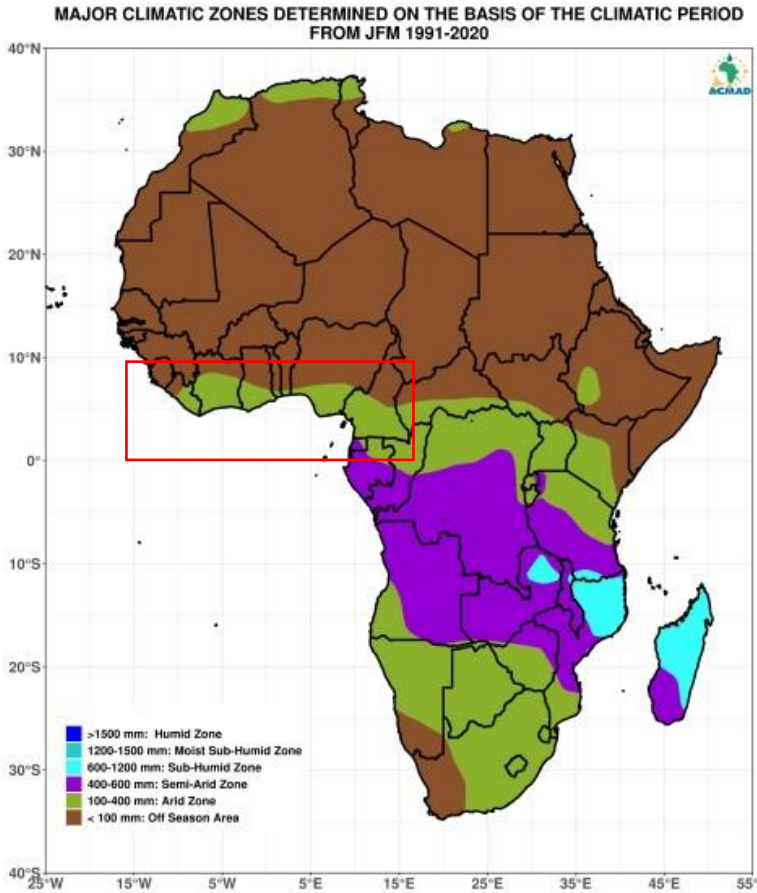
An initiative of the Organisation of African, Caribbean and Pacific States funded by the European Union

Prepared By: Climate Group

Time series analysis of Climate variability and trends (Climatic zones)

Season 1 = MARCH-APRIL-MAY

Season 2 = APRIL-MAY-JUNE

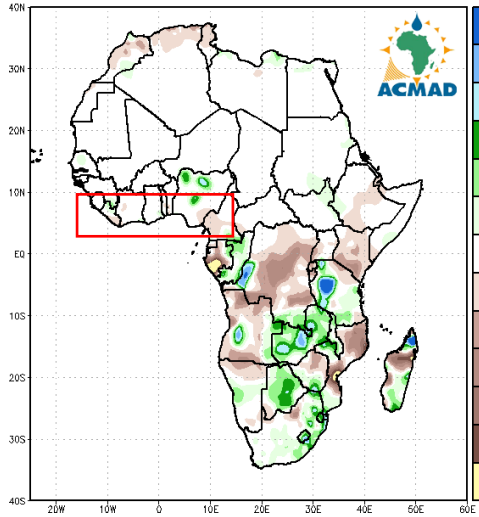




Time series analysis of Climate variability and trends(Persistence forecast)

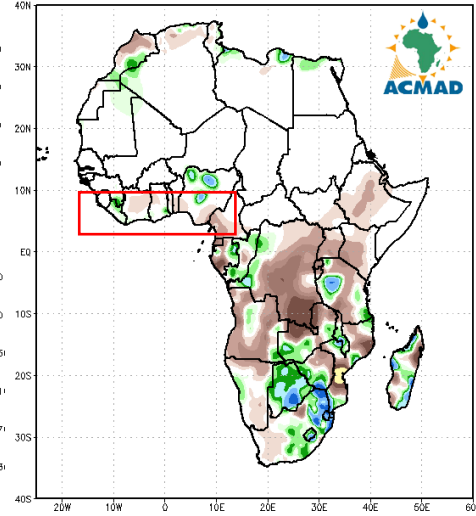
Latest 90-days

CPC-Uni 90day Precip Anomaly (mm)
Period: 22Nov2022 to 19Feb2023



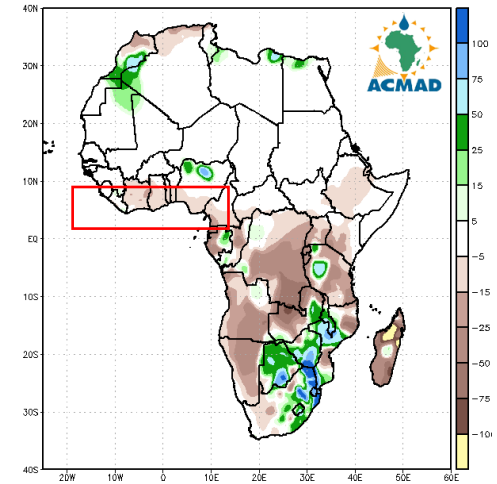
Last 30-days

CPC-Uni 30day Precip Anomaly (mm)
Period: 21Jan2023 to 19Feb2023

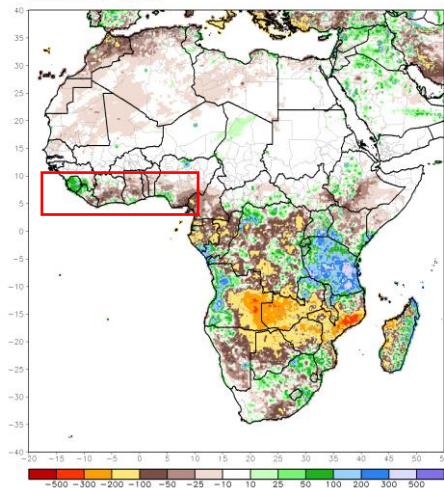


Last 10-days

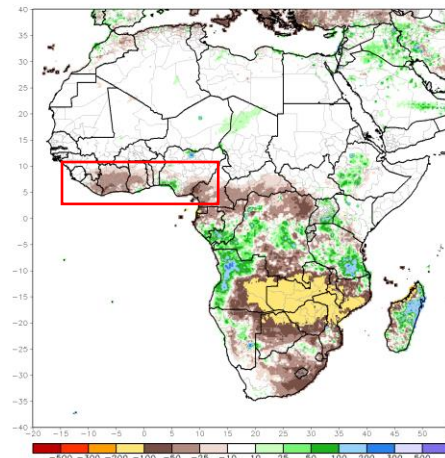
CPC-Uni 10day Precip Anomaly (mm)
Period: 10Feb2023 to 19Feb2023



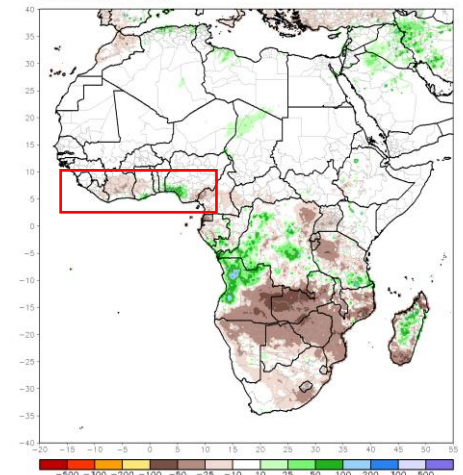
RFE2 90-Day Total Rainfall Anomaly (mm)
Period: 27Nov2023 - 24Feb2024



RFE2 30-Day Total Rainfall Anomaly (mm)
Period: 26Jan2024 - 24Feb2024



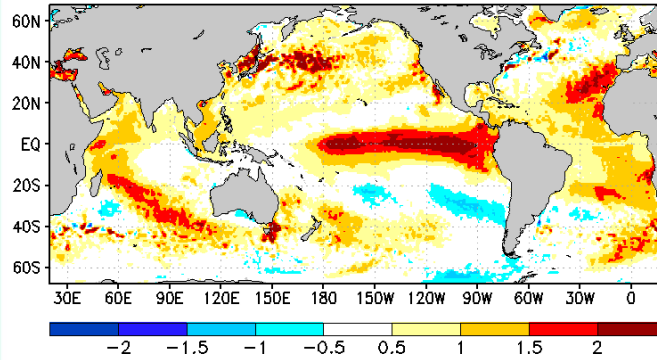
RFE2 10-Day Total Rainfall Anomaly (mm)
Period: 15Feb2024 - 24Feb2024



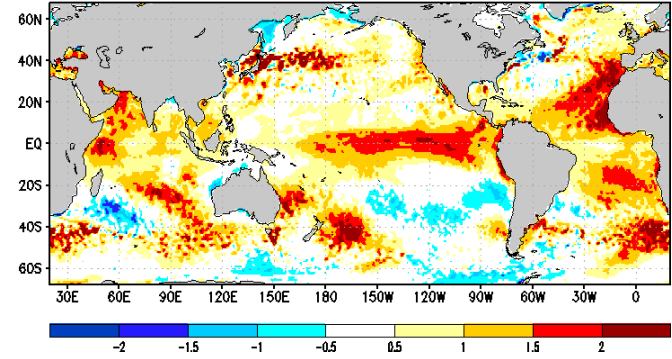


State of the Global Ocean – Current Status

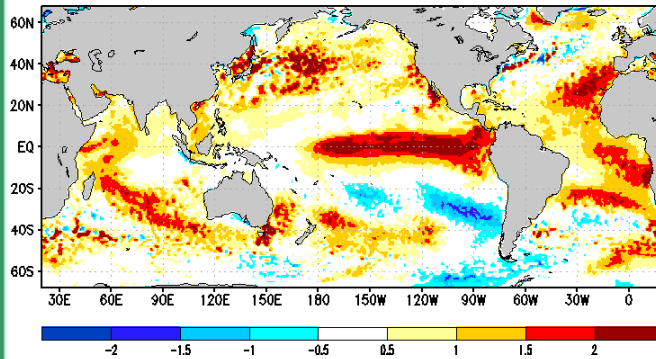
SST Anom. NDJ 2023/2024



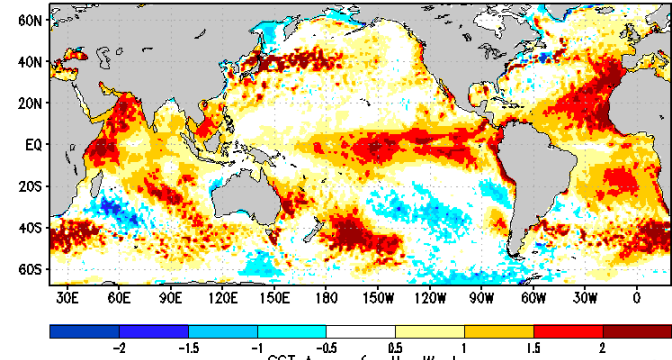
SST Anom. for the Week
From 21Jan2024 to 17Feb2024



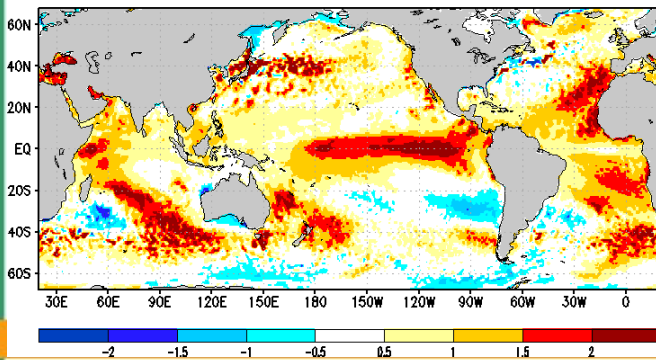
SST Anom. for Dec2023



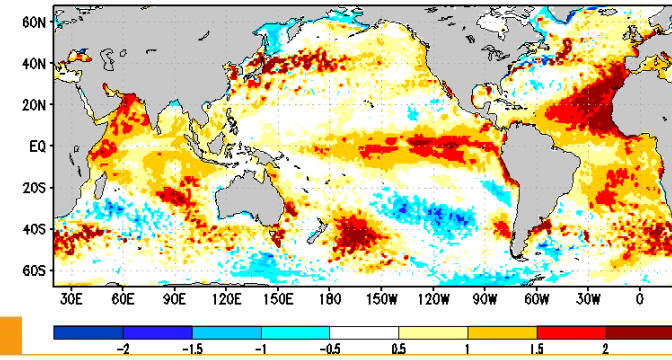
SST Anom. for the Week
From 04Feb2024 to 10Feb2024



SST Anom. for Jan2024



SST Anom. for the Week
From 11Feb2024 to 17Feb2024



Identification of Analogue Years (2)



Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2000	-1.7	-1.4	-1.1	-0.8	-0.7	-0.6	-0.6	-0.5	-0.5	-0.6	-0.7	-0.7
2001	-0.7	-0.5	-0.4	-0.3	-0.3	-0.1	-0.1	-0.1	-0.2	-0.3	-0.3	-0.3
2002	-0.1	0.0	0.1	0.2	0.4	0.7	0.8	0.9	1.0	1.2	1.3	1.1
2003	0.9	0.6	0.4	0.0	-0.3	-0.2	0.1	0.2	0.3	0.3	0.4	0.4
2004	0.4	0.3	0.2	0.2	0.2	0.3	0.5	0.6	0.7	0.7	0.7	0.7
2005	0.6	0.6	0.4	0.4	0.3	0.1	-0.1	-0.1	-0.1	-0.3	-0.6	-0.8
2006	-0.9	-0.8	-0.6	-0.4	-0.1	0.0	0.1	0.3	0.5	0.8	0.9	0.9
2007	0.7	0.2	-0.1	-0.3	-0.4	-0.5	-0.6	-0.8	-1.1	-1.3	-1.5	-1.6
2008	-1.6	-1.5	-1.3	-1.0	-0.8	-0.6	-0.4	-0.2	-0.2	-0.4	-0.6	-0.7
2009	-0.8	-0.8	-0.6	-0.3	0.0	0.3	0.5	0.6	0.7	1.0	1.4	1.6
Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2010	1.5	1.2	0.8	0.4	-0.2	-0.7	-1.0	-1.3	-1.6	-1.6	-1.6	-1.6
2011	-1.4	-1.2	-0.9	-0.7	-0.6	-0.4	-0.5	-0.6	-0.8	-1.0	-1.1	-1.0
2012	-0.9	-0.7	-0.6	-0.5	-0.3	0.0	0.2	0.4	0.4	0.3	0.1	-0.2
2013	-0.4	-0.4	-0.3	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.3
2014	-0.4	-0.5	-0.3	0.0	0.2	0.2	0.0	0.1	0.2	0.5	0.6	0.7
2015	0.5	0.5	0.5	0.7	0.9	1.2	1.5	1.9	2.2	2.4	2.6	2.6
2016	2.5	2.1	1.6	0.9	0.4	-0.1	-0.4	-0.5	-0.6	-0.7	-0.7	-0.6
2017	-0.3	-0.2	0.1	0.2	0.3	0.3	0.1	-0.1	-0.4	-0.7	-0.8	-1.0
2018	-0.9	-0.9	-0.7	-0.5	-0.2	0.0	0.1	0.2	0.5	0.8	0.9	0.8
2019	0.7	0.7	0.7	0.7	0.5	0.5	0.3	0.1	0.2	0.3	0.5	0.5
Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2020	0.5	0.5	0.4	0.2	-0.1	-0.3	-0.4	-0.6	-0.9	-1.2	-1.3	-1.2
2021	-1.0	-0.9	-0.8	-0.7	-0.5	-0.4	-0.4	-0.5	-0.7	-0.8	-1.0	-1.0
2022	-1.0	-0.9	-1.0	-1.1	-1.0	-0.9	-0.8	-0.9	-1.0	-1.0	-0.9	-0.8
2023	-0.7	-0.4	-0.1	0.2	0.5	0.8	1.1	1.3	1.6	1.8	1.9	2.0

Analogue Years

2003

2010

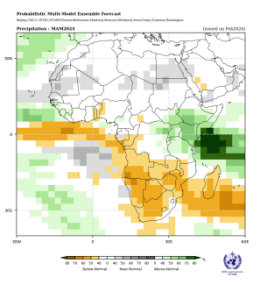
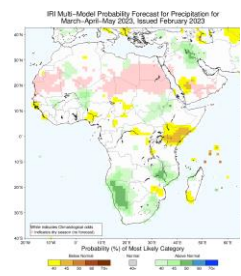
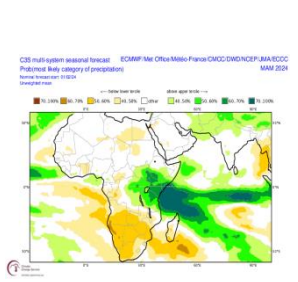
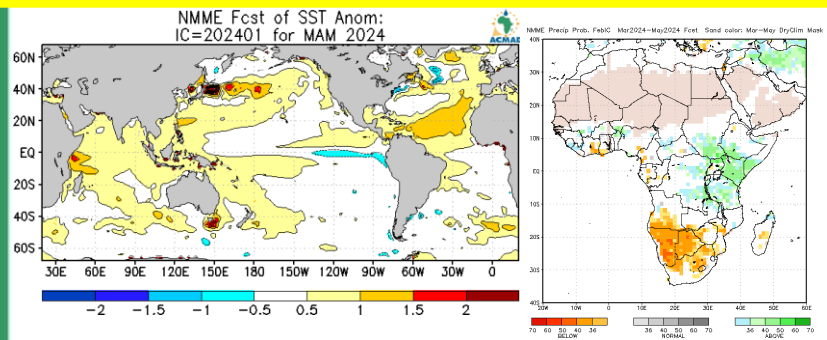
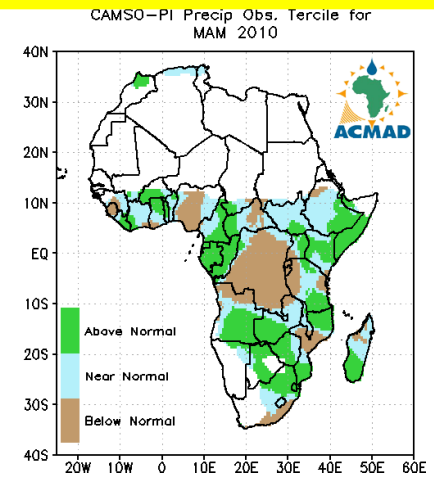
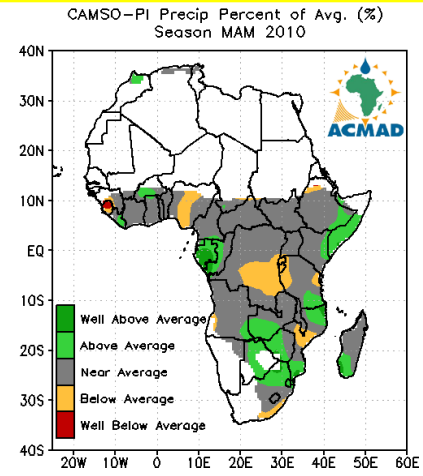
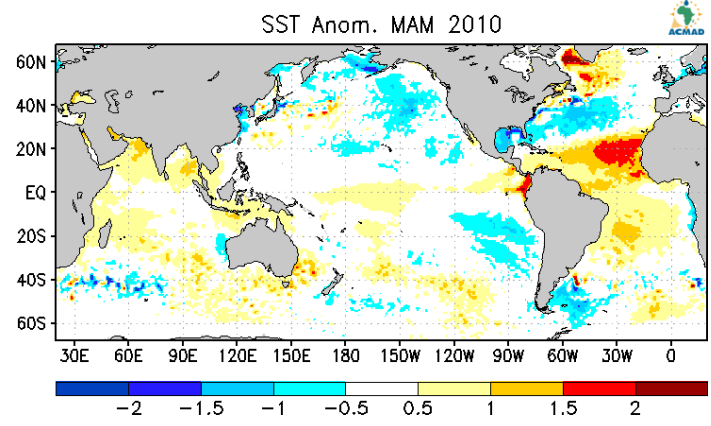
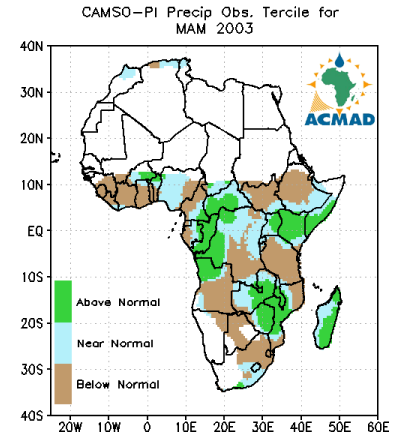
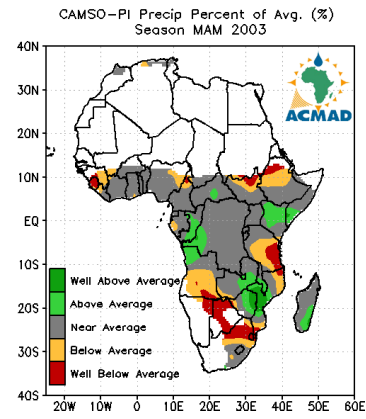
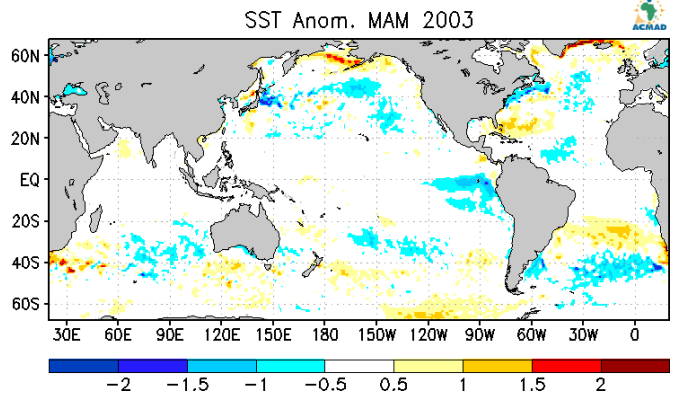
2016

2019

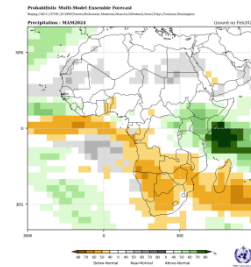
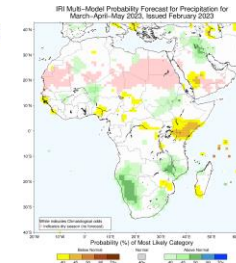
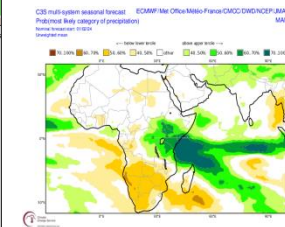
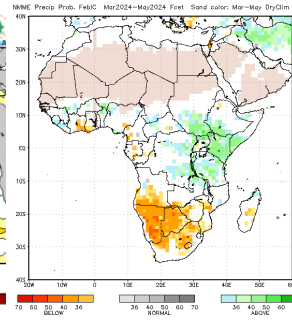
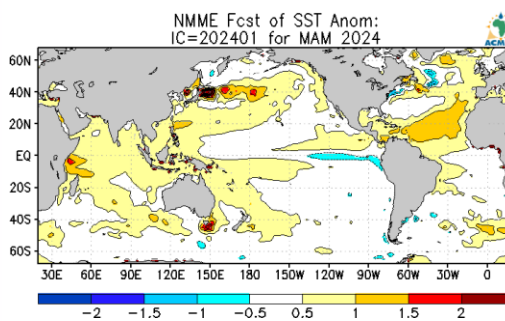
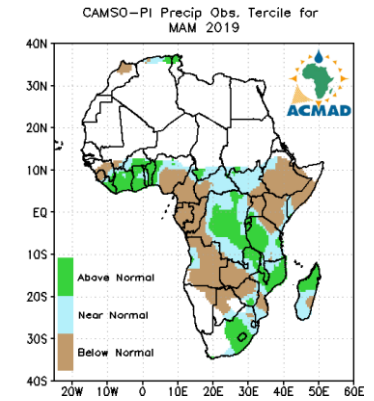
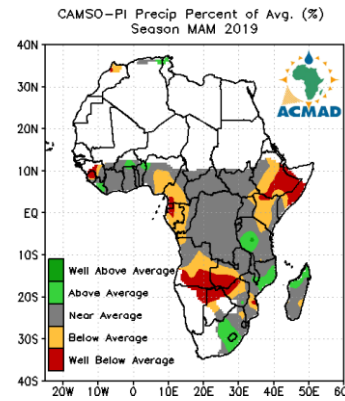
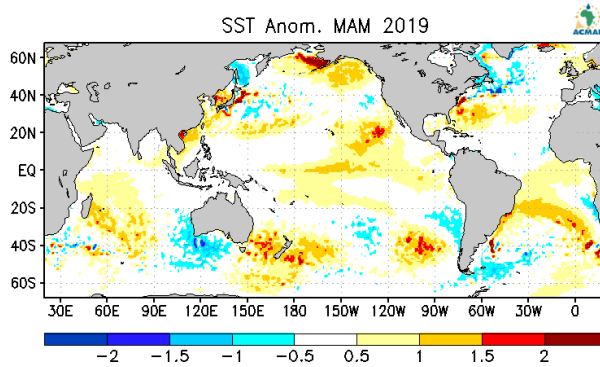
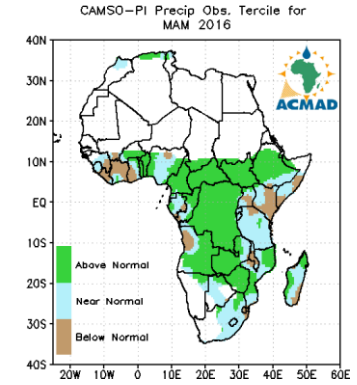
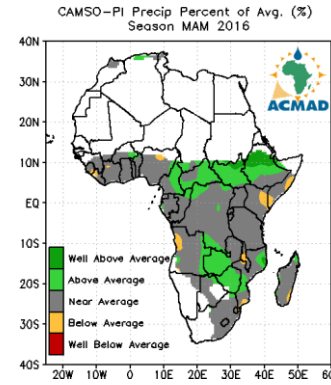
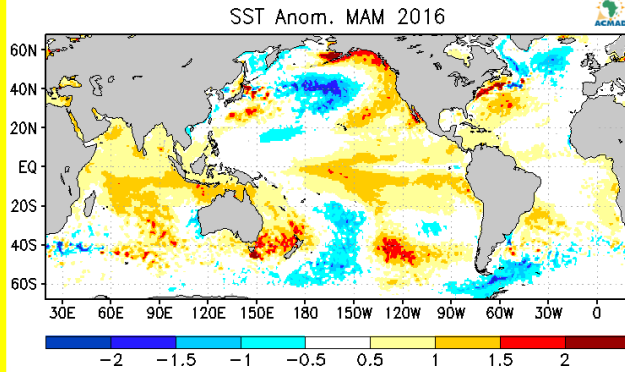
Blue – La Nina

Red – El Nino

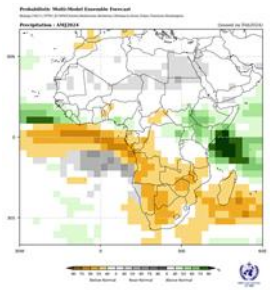
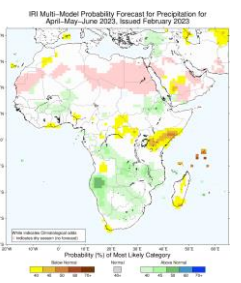
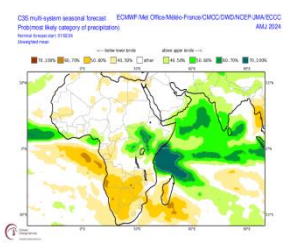
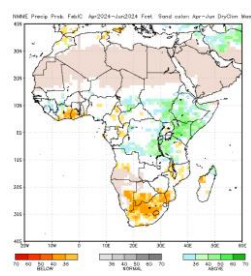
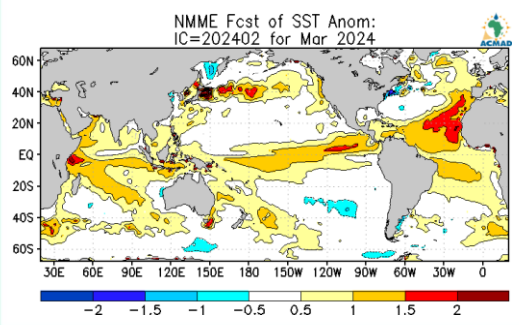
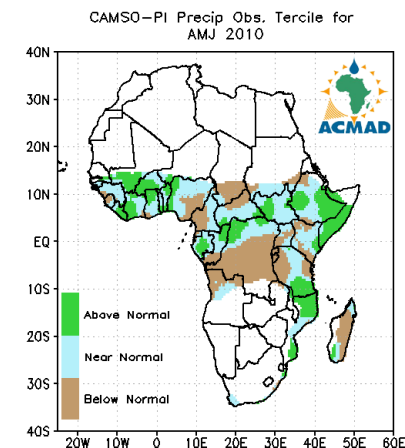
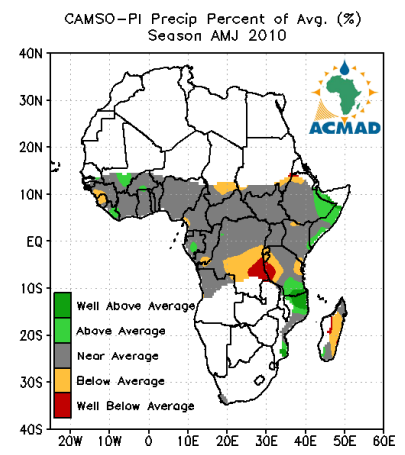
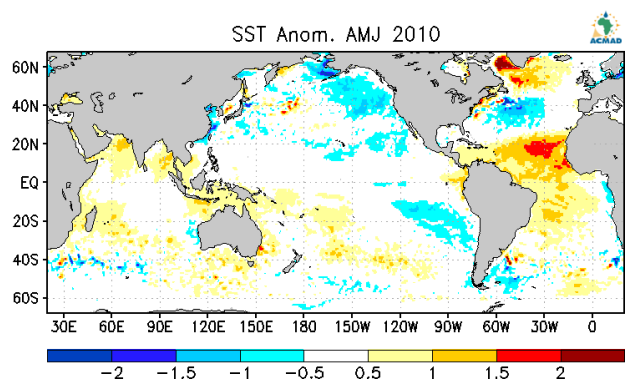
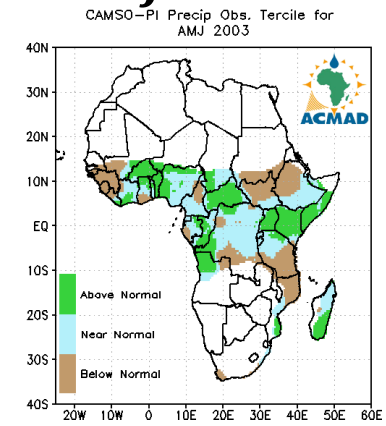
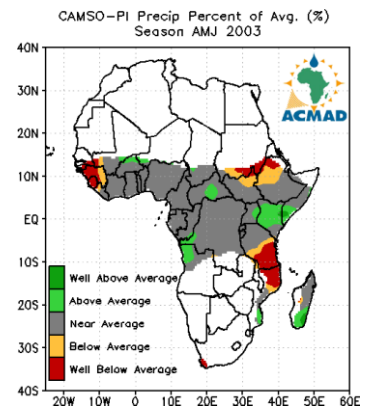
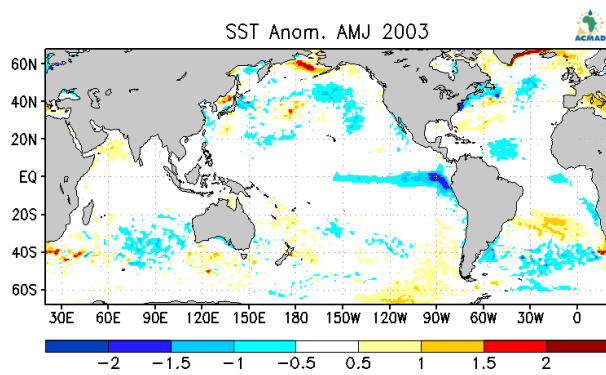
Analogue Analysis (3) – Identical Years– MAM



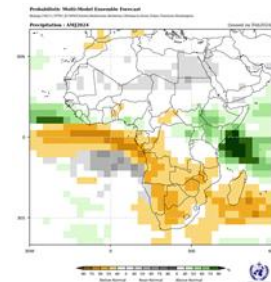
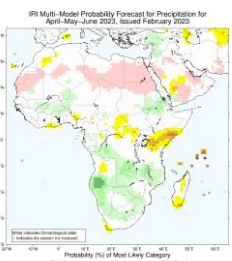
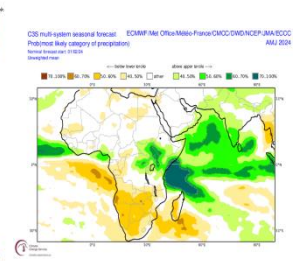
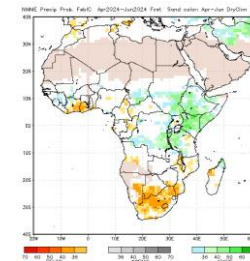
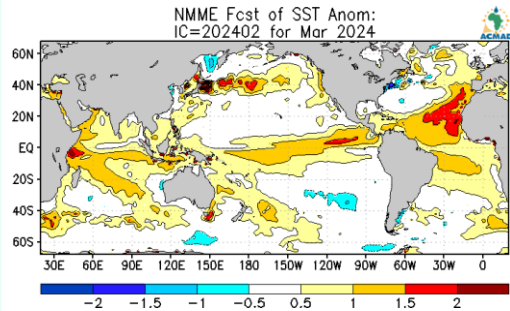
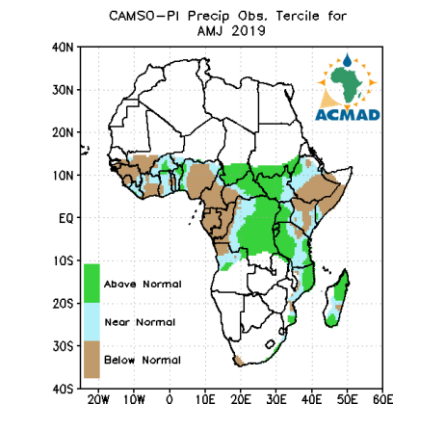
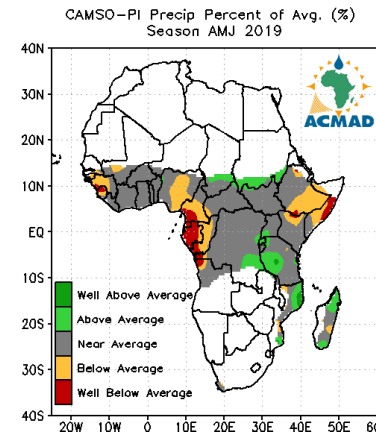
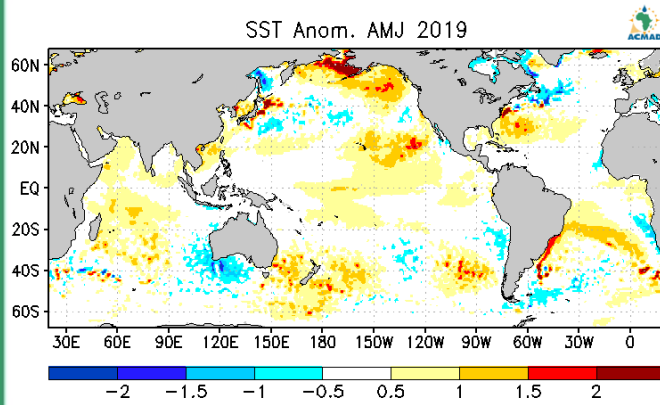
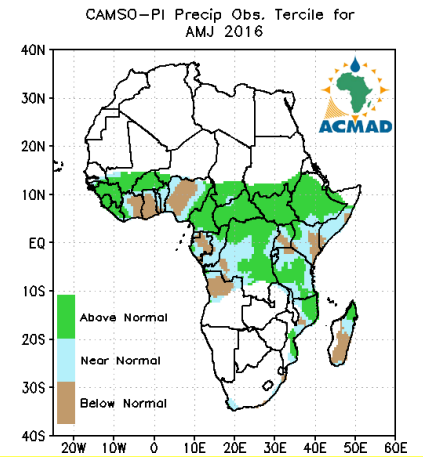
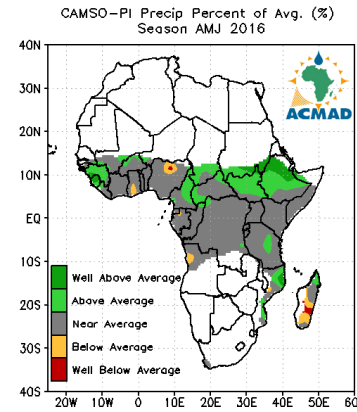
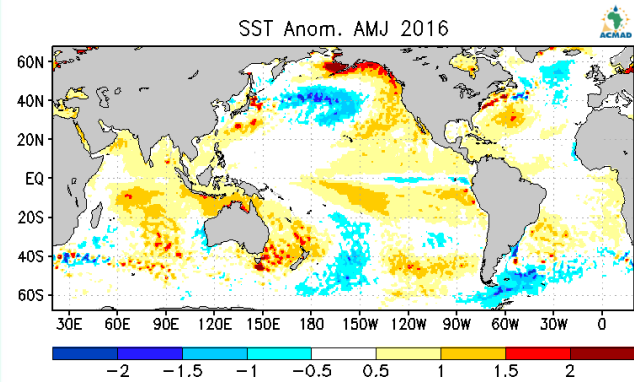
Analogue Analysis (3) - Identical Years- MAM



Analogue Analysis (3) - Identical Years- AMJ

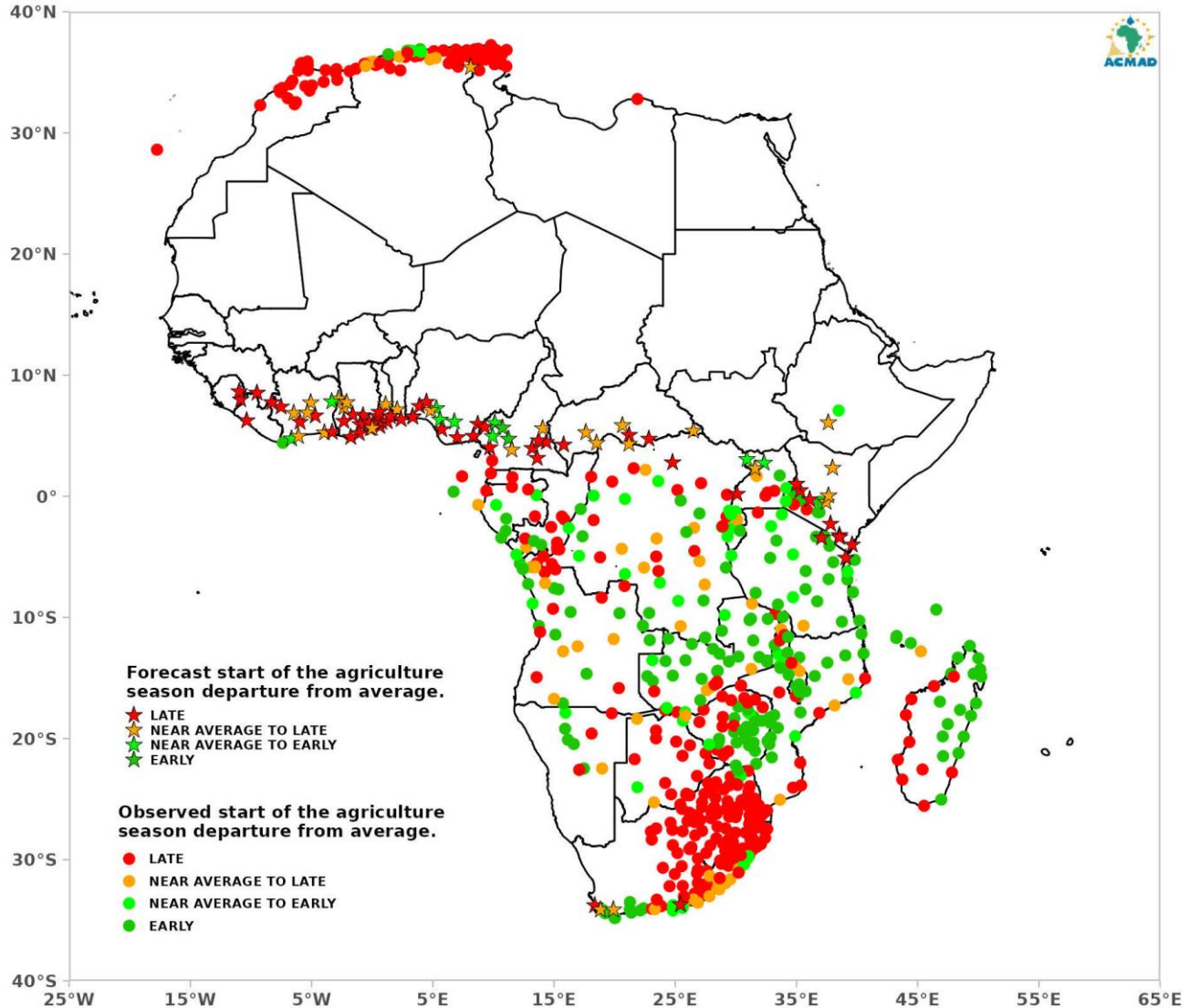


Analogue Analysis (3) - Identical Years- AMJ



ONSET

MONITORING OF OBSERVED ANOMALIES ON THE START OF THE AGRICULTURE SEASON AND OUTLOOK
MONITORING PERIOD: Jul-2023 to Feb-2024
OUTLOOK VALIDITY PERIOD: From Feb-23-2024 to Mar-08-2024
DATE OF ISSUE: FEB-23-2024.



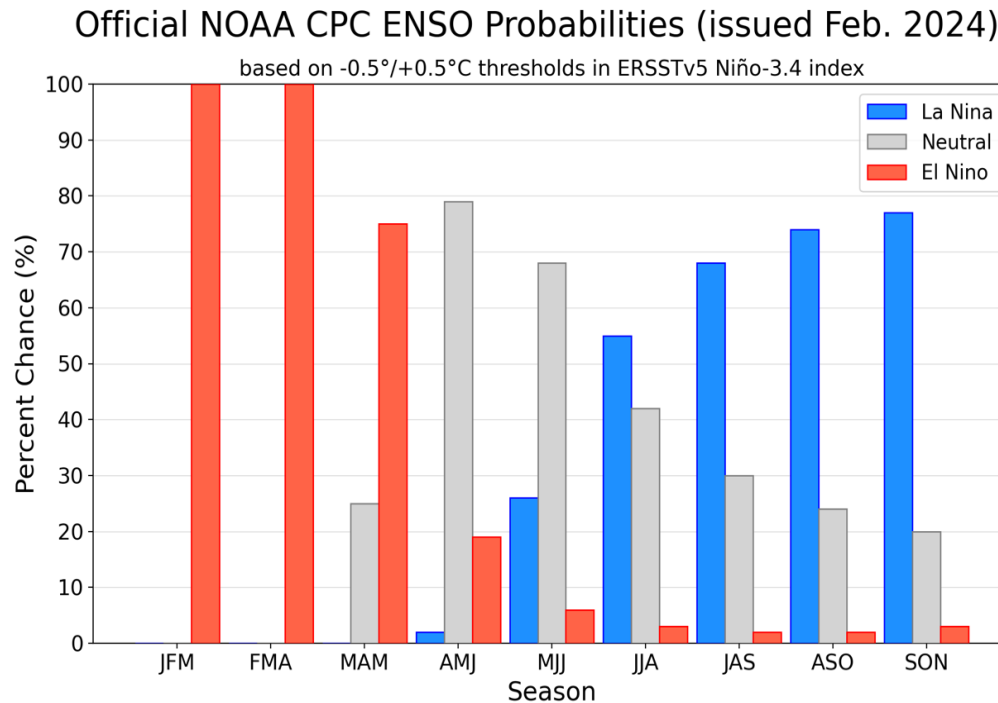


Teleconnections analysis (i,e ENSO, AMO, IOD, SIOD, Atlantic Dipole, NAO, AO, SAM, Benguela Nino, Mediterranean SSTAs)

CPC Probabilistic ENSO Outlook

Updated: 8 February 2024

A transition from El Niño to ENSO-neutral is expected by April-June season 2024, with ENSO-neutral persisting through May-July 2024. Thereafter, La Niña is favored in June-August, and chances increase through the September-November season.



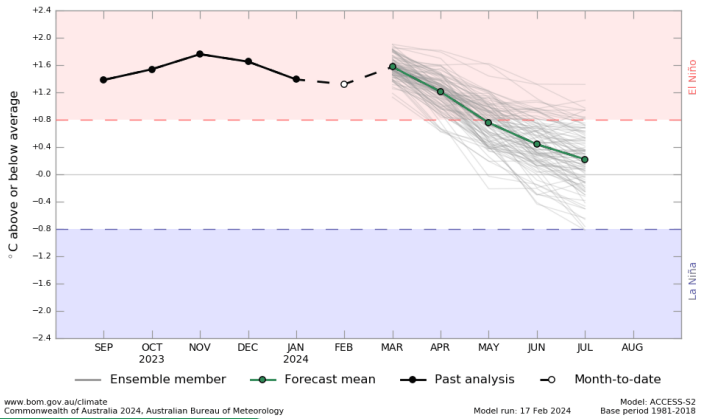
Teleconnections analysis (i,e ENSO TNA and TSA) - Index plumes



ENSO Plumes

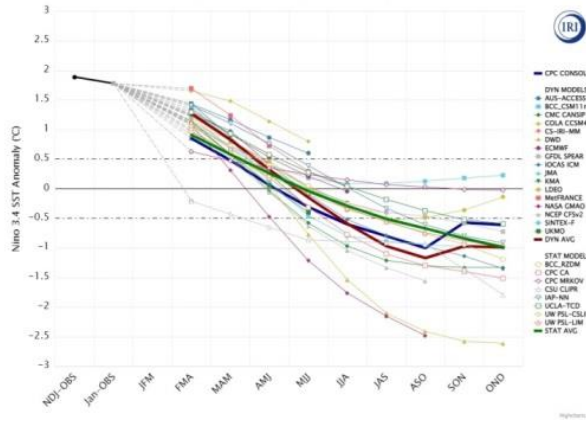
BoM

Monthly sea surface temperature anomalies for NINO3.4 region

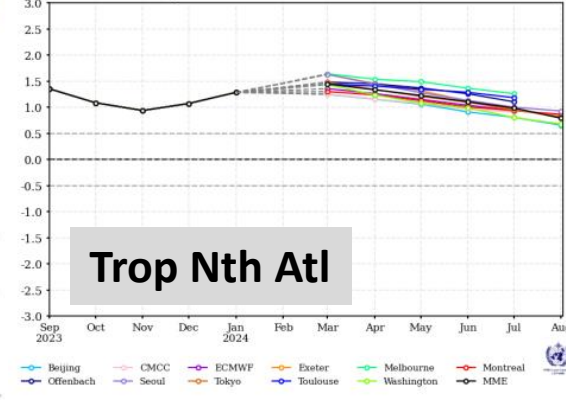


IRI

Model Predictions of ENSO from Feb 2024

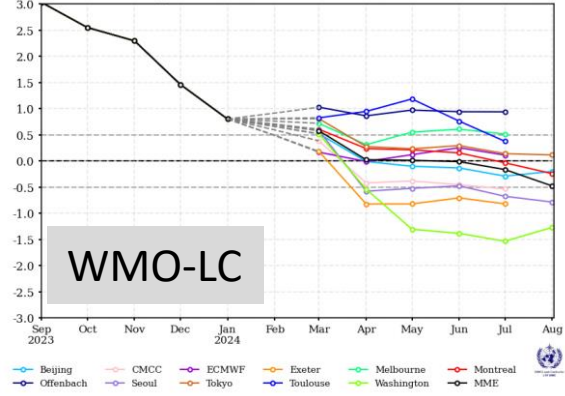


Forecast of TNA (Tropical North Atlantic Index) Mar2024 to Aug2024 (Issued on Feb2024)



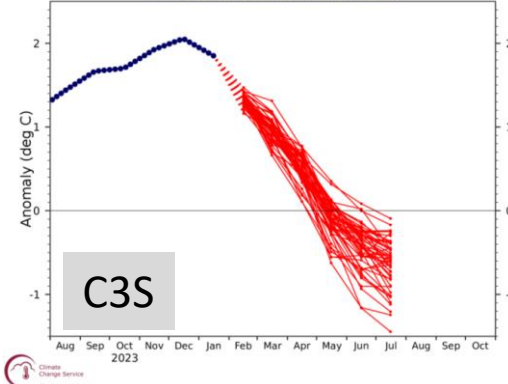
Trop Nth Atl

Forecast of Nino1+2 Mar2024 to Aug2024 (Issued on Feb2024)



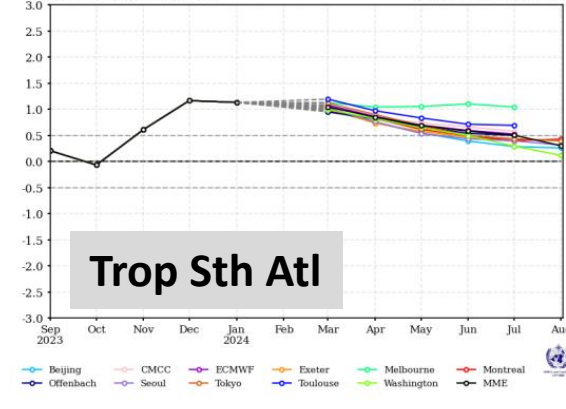
WMO-LC

NINO3.4 SST anomaly plume
C3S: CMCC contribution from 1 Feb 2024
Monthly mean anomalies relative to ERA5 1981-2010 climatology



C3S

Forecast of TSA (Tropical South Atlantic Index) Mar2024 to Aug2024 (Issued on Feb2024)



Trop Sth Atl

Moderate to neutral El Niño

Positive TNA and TSA

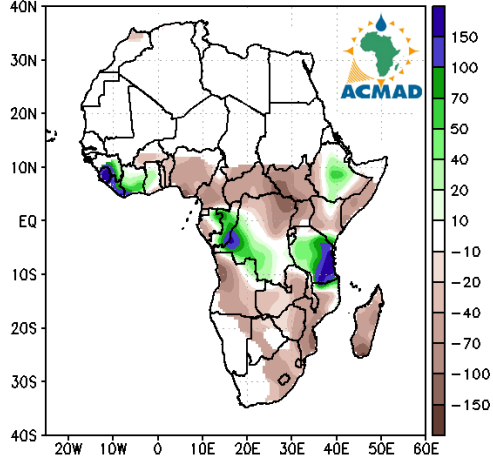


Teleconnections analysis – Likely impacts on the within the region

MAM

Mod El Nino

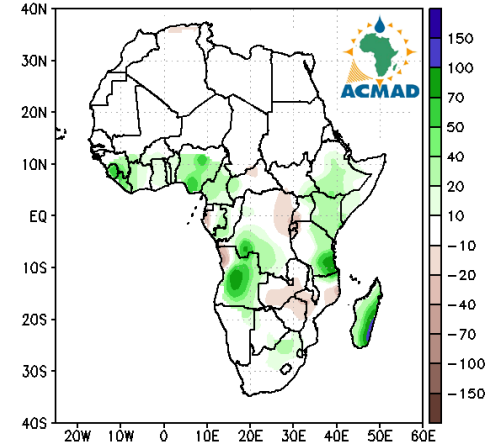
CAMS–OPI Precipitation Anomaly Associated with Moderate El Nino Events during the Season MAM



Identified Years are:
1983 1992

Weak El Nino to Neutral pos

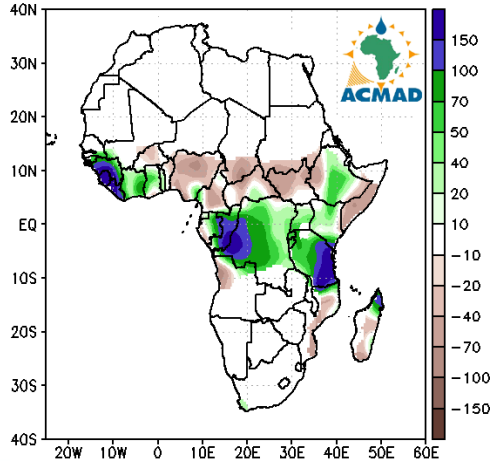
CAMS–OPI Precipitation Anomaly Associated with Neutral (+) Events during the Season MAM



Identified Years are:
1982 1990 1991 1994 1995 1997 2002 2004 2005
2010 2014 2017 2020

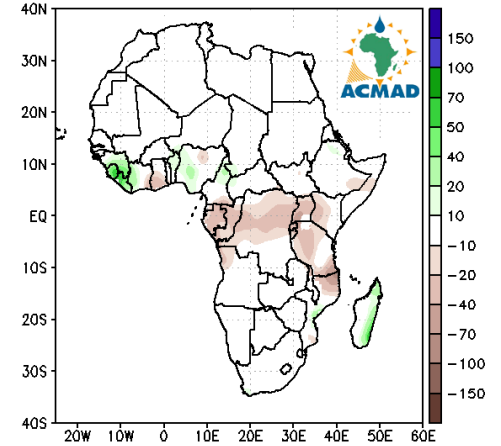
AMJ

CAMS–OPI Precipitation Anomaly Associated with Moderate El Nino Events during the Season AMJ



Identified Years are:
1983 1992

CAMS–OPI Precipitation Anomaly Associated with Neutral (+) Events during the Season AMJ



Identified Years are:
1990 1991 1994 1995 1998 2002 2004 2005 2009
2014 2016 2017



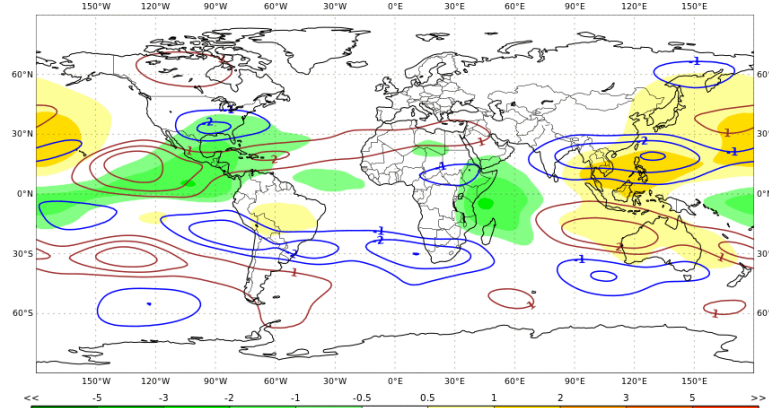
Interactions analysis between seasons and regions for the same target season – Impact of Tropical Activity



Interaction with Tropical Activity – Season 1



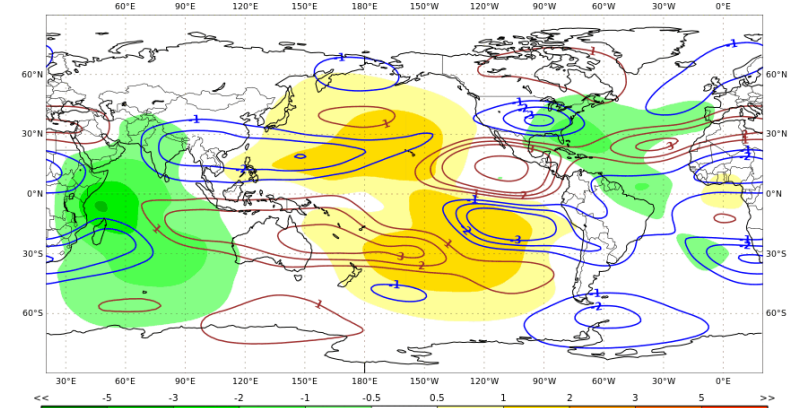
Meteo-France system 8 - Forecast
For MAM 2024 (issued February 2024)



200hPa velocity potential and 200hPa streamfunction - zonal mean
3-months ensemble mean anomaly unit : km2/s



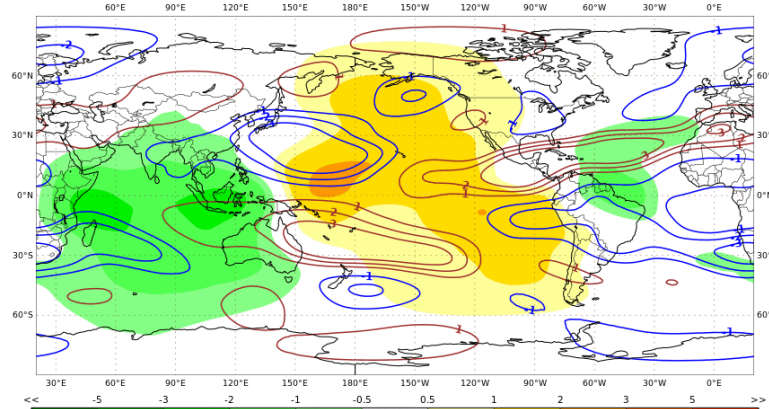
ECMWF SEAS5 - Forecast
For MAM 2024 (issued February 2024)



200hPa velocity potential and 200hPa streamfunction - zonal mean
3-months ensemble mean anomaly unit : km2/s



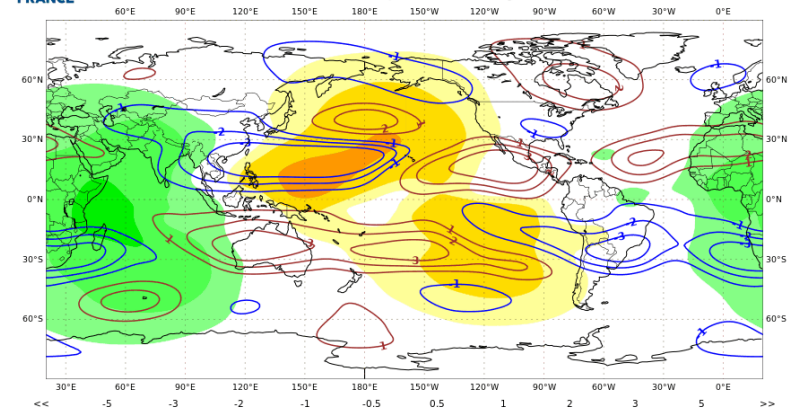
NCEP CFS v2 - Forecast
For MAM 2024 (issued February 2024)



200hPa velocity potential and 200hPa streamfunction - zonal mean
3-months ensemble mean anomaly unit : km2/s



CMCC system 3.5 - Forecast
For MAM 2024 (issued February 2024)



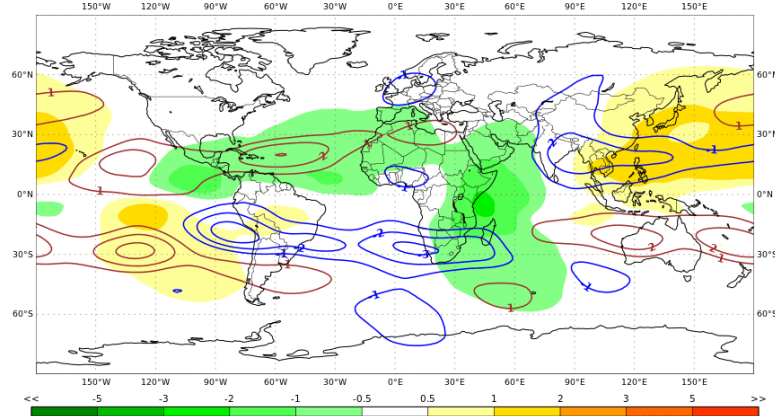
200hPa velocity potential and 200hPa streamfunction - zonal mean
3-months ensemble mean anomaly unit : km2/s



Interaction with Tropical Activity – Season 2



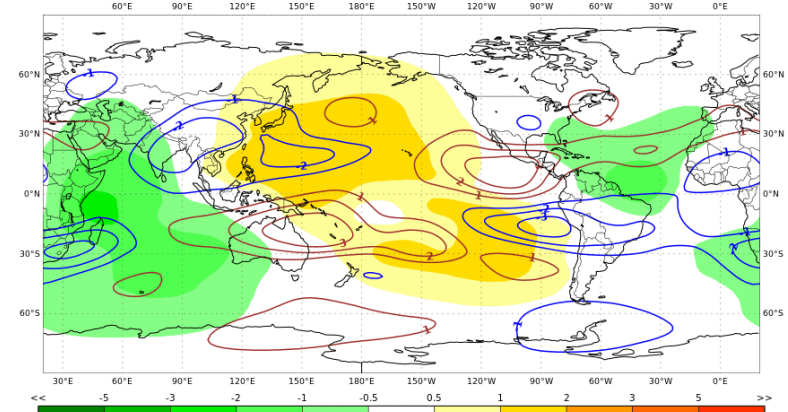
Meteo-France system 8 - Forecast
For AMJ 2024 (issued February 2024)



200hPa velocity potential and 200hPa streamfunction - zonal mean
3-months ensemble mean anomaly unit : km2/s



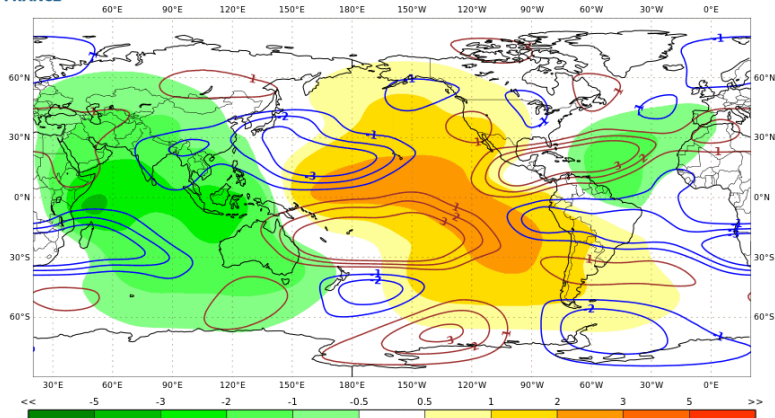
ECMWF SEAS5 - Forecast
For AMJ 2024 (issued February 2024)



200hPa velocity potential and 200hPa streamfunction - zonal mean
3-months ensemble mean anomaly unit : km2/s



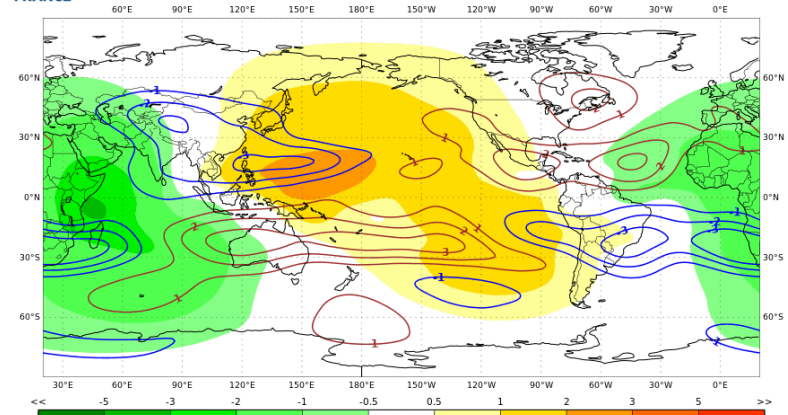
NCEP CFS v2 - Forecast
For AMJ 2024 (issued February 2024)



200hPa velocity potential and 200hPa streamfunction - zonal mean
3-months ensemble mean anomaly unit : km2/s



CMCC system 3.5 - Forecast
For AMJ 2024 (issued February 2024)



200hPa velocity potential and 200hPa streamfunction - zonal mean
3-months ensemble mean anomaly unit : km2/s

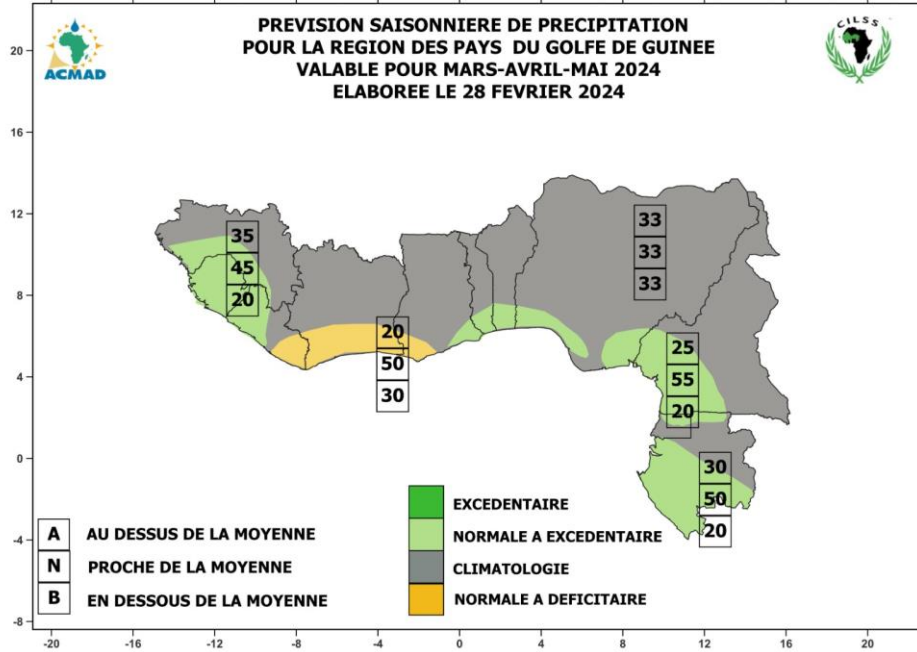


Consensus Outlook

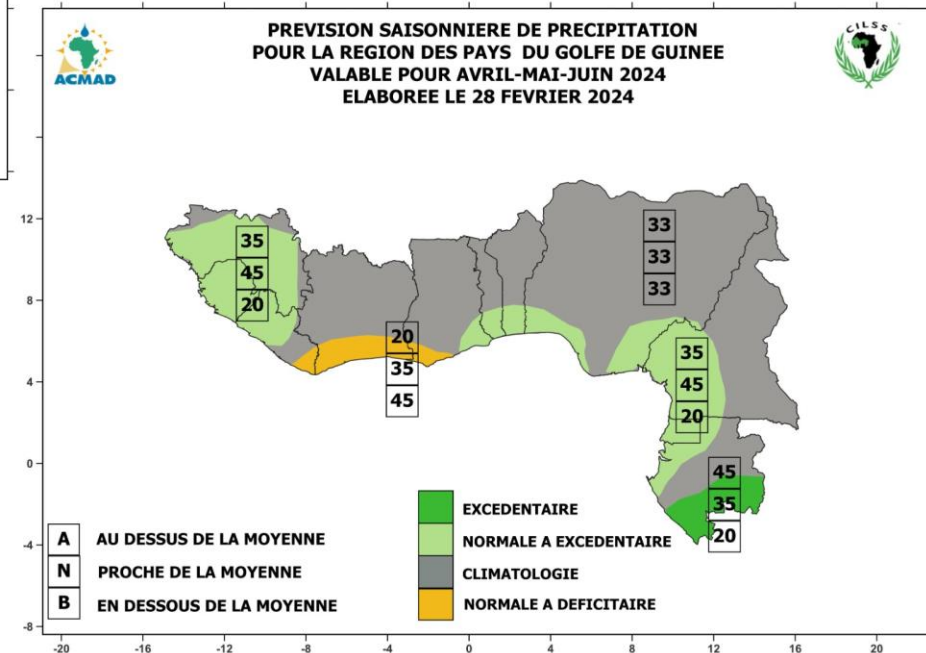
SEASONAL PRECIPITATION OUTLOOK FOR MAM & AMJ 2024



PREVISION SAISONNIERE DE PRECIPITATION
POUR LA REGION DES PAYS DU GOLFE DE GUINEE
VALABLE POUR MARS-AVRIL-MAI 2024
ELABOREE LE 28 FEVRIER 2024



PREVISION SAISONNIERE DE PRECIPITATION
POUR LA REGION DES PAYS DU GOLFE DE GUINEE
VALABLE POUR AVRIL-MAI-JUIN 2024
ELABOREE LE 28 FEVRIER 2024





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