

Acrra du 26 Fevrier au 1er Mars, 2024

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# Resultats des prévisions saisonnières: groupe de la climatologie

METEO BENIN

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# Overview

Variabilités et tendances climatiques

Années analogues

Analyses des SST

Situation et probable evolution de ENSO

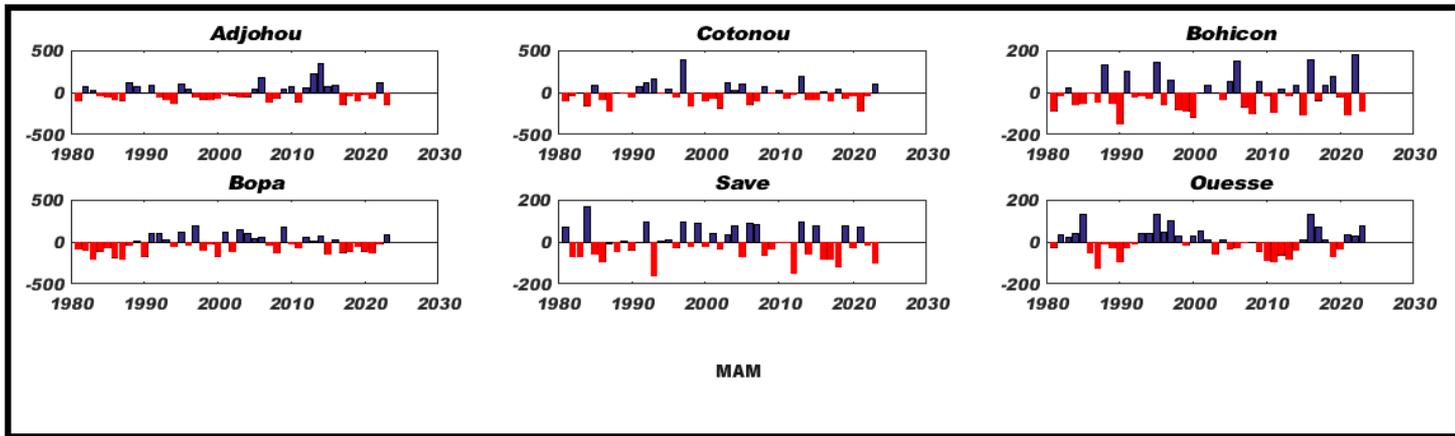
Analyses vents, MJO, OLR, TEJ, AEJ

Previsions des grands centres

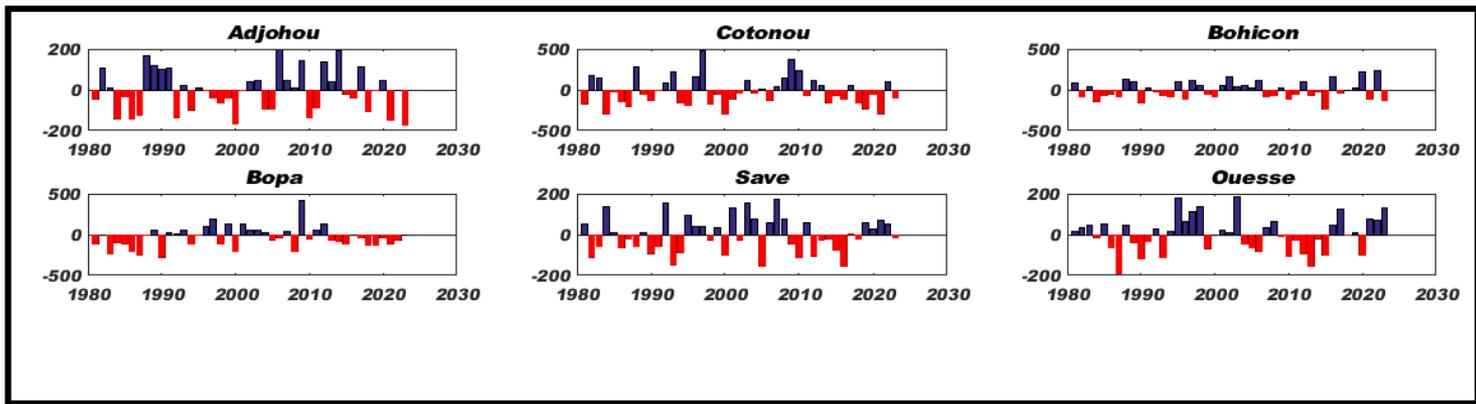
Sorties de CPT

Prevision MAM AMJ

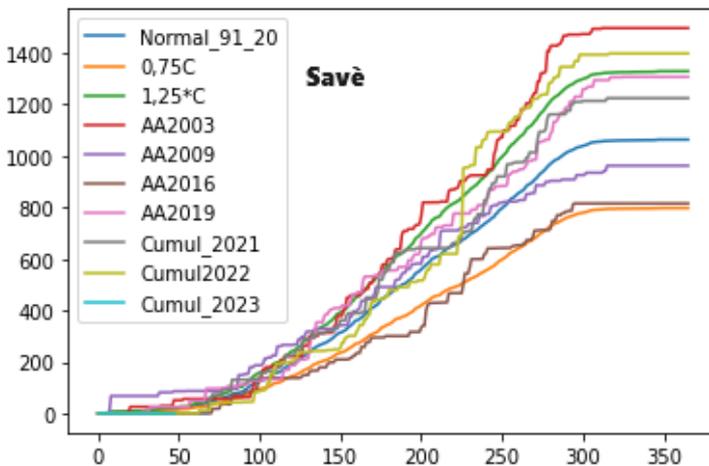
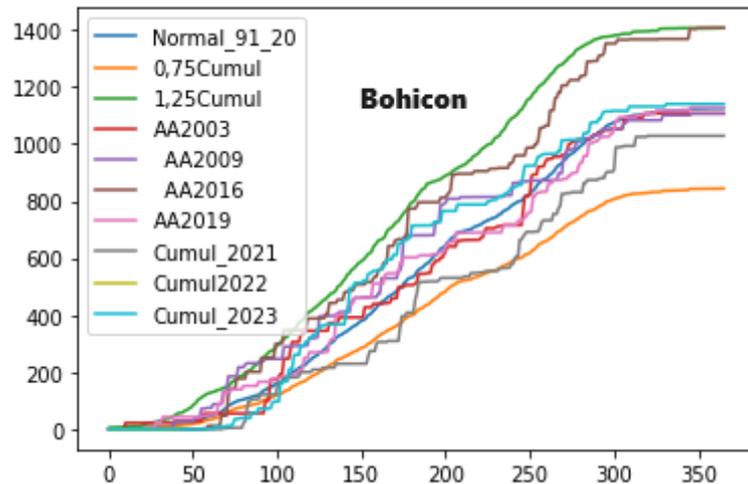
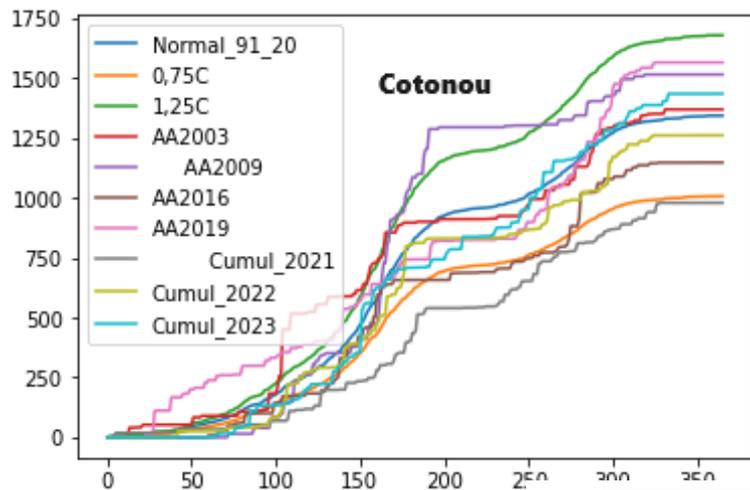
# Variabilités et tendances Climatiques



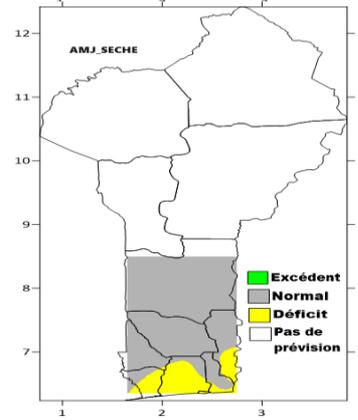
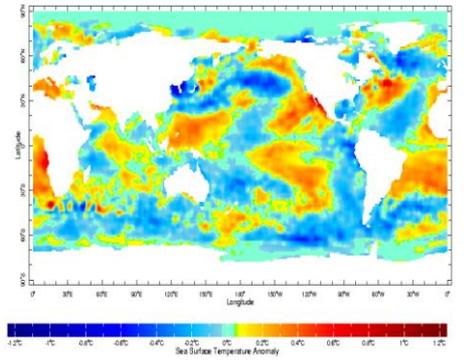
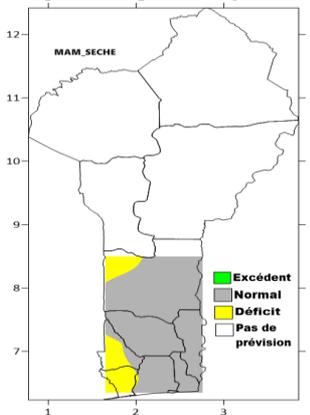
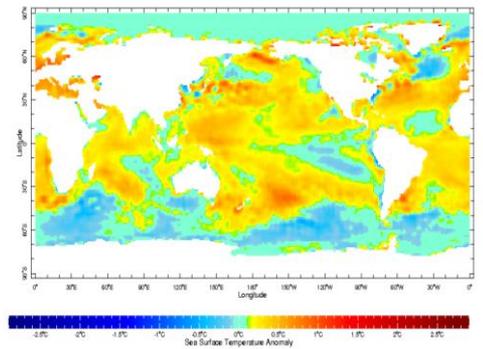
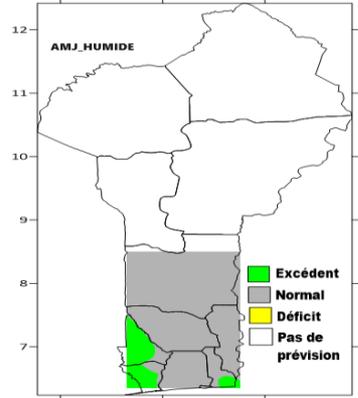
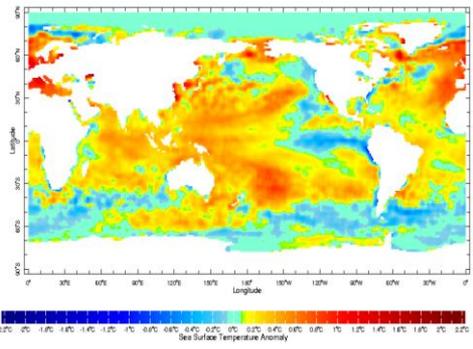
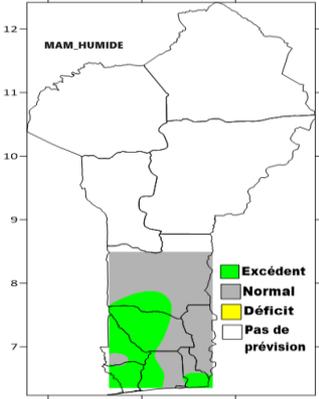
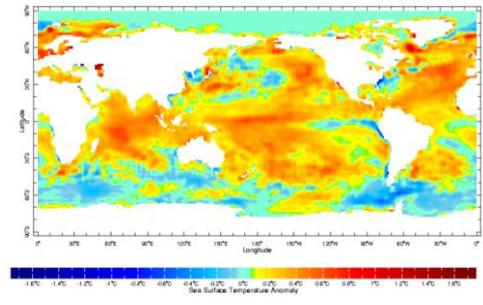
MAM



## Variabilités & tendance.....

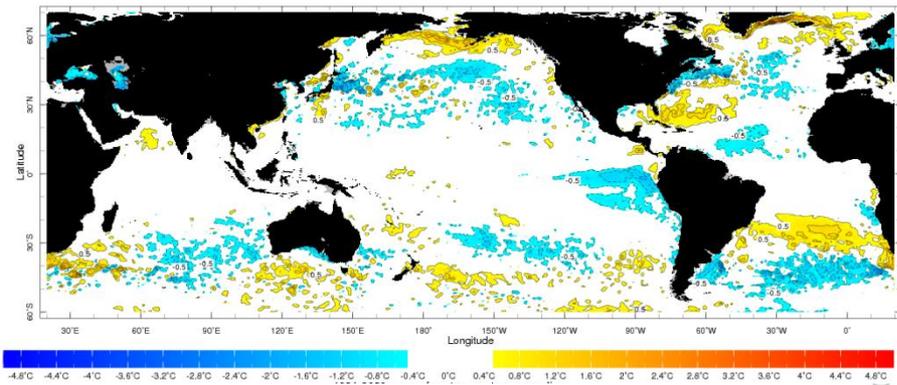


# Années humides & sèches

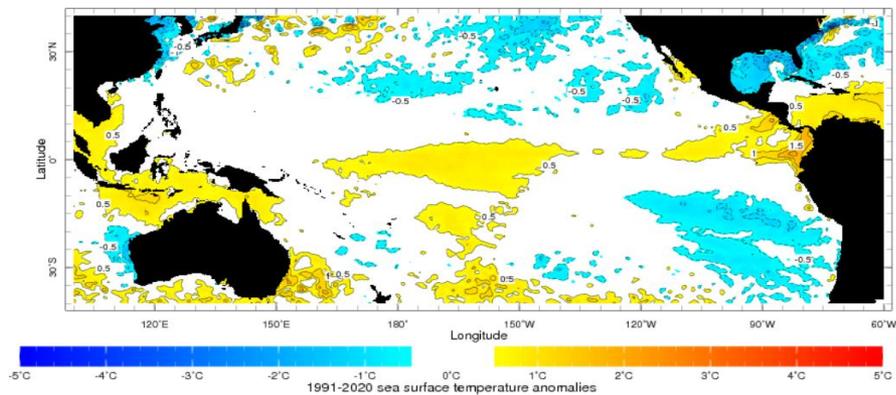


# Années analogues

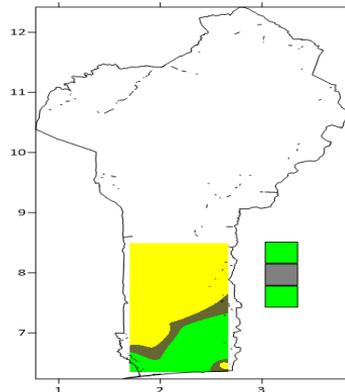
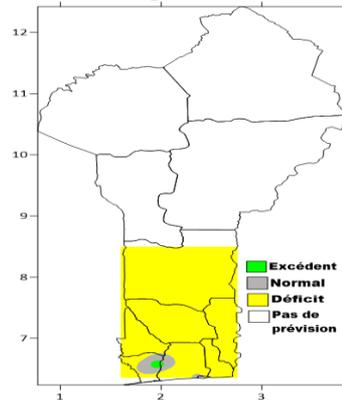
zlev 0.0 meters Time Mar-May 2003



zlev 0.0 meters Time Mar-May 2010

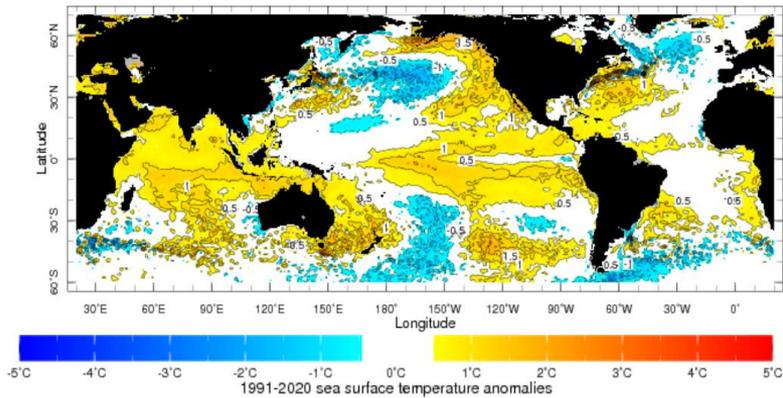


Année analogue MAM 2003

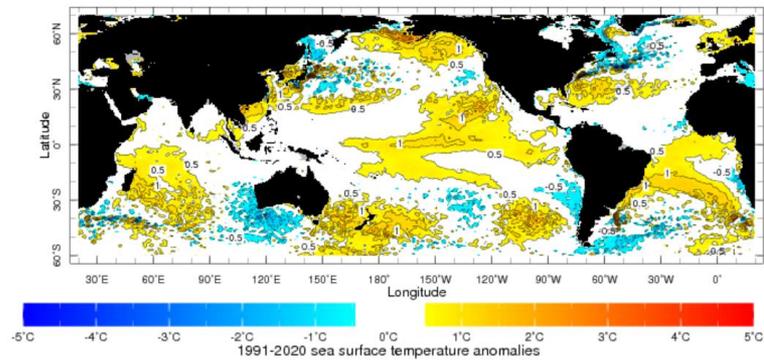


# Années analogues

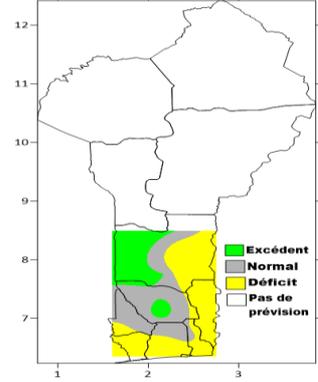
zlev 0.0 meters Time Mar-May 2016



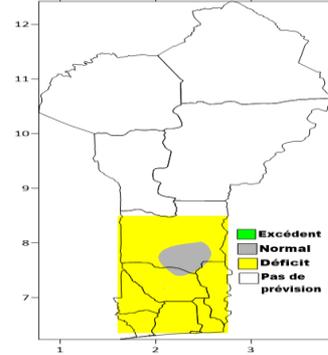
zlev 0.0 meters Time Mar-May 2019



Année analogue MAM 2016

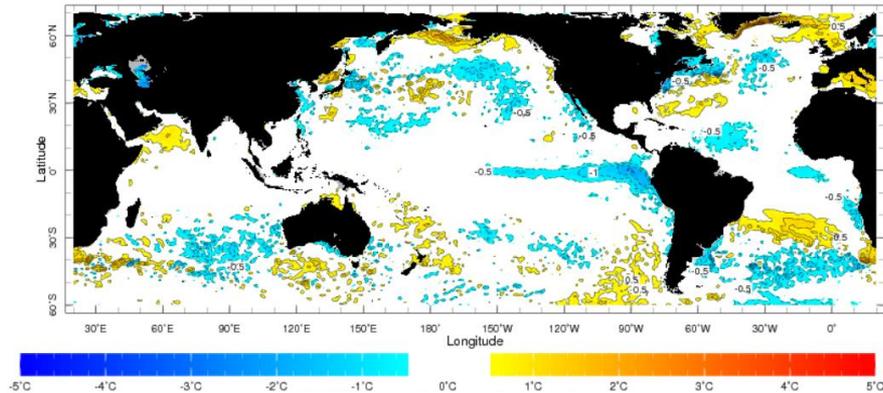


Année analogue MAM 2019

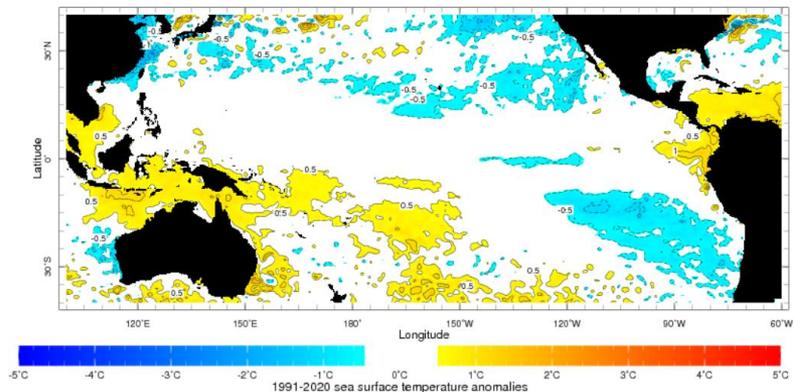


# Années analogues...

zlev 0.0 meters Time Apr-Jun 2003

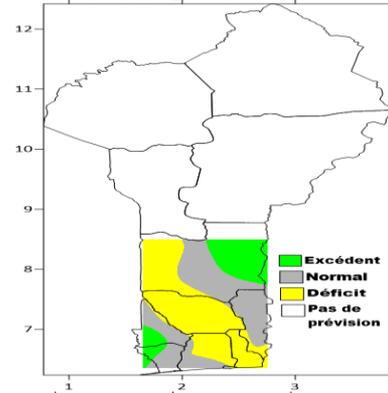


zlev 0.0 meters Time Apr-Jun 2010

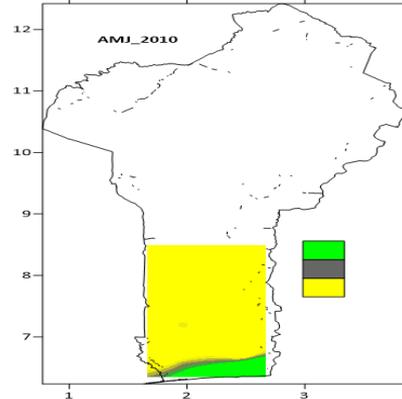


1991-2020 sea surface temperature anomalies

Année analogue AMJ 2003

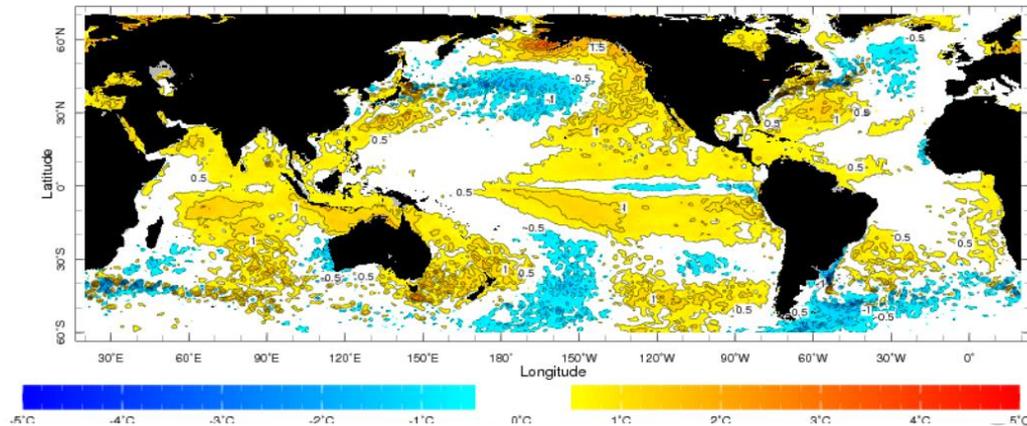


AMJ\_2010

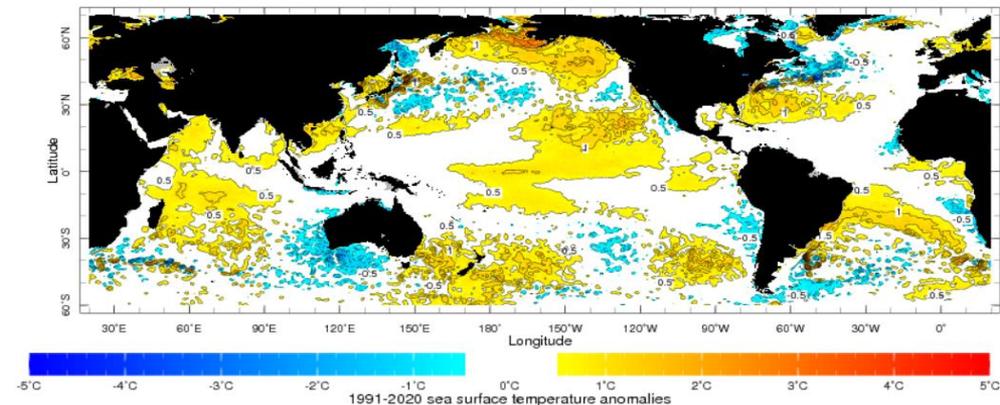


# Années analogues....

zlev 0.0 meters Time Apr-Jun 2016

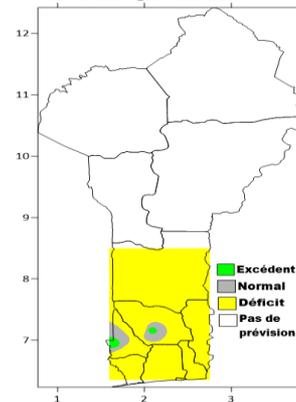


zlev 0.0 meters Time Apr-Jun 2019

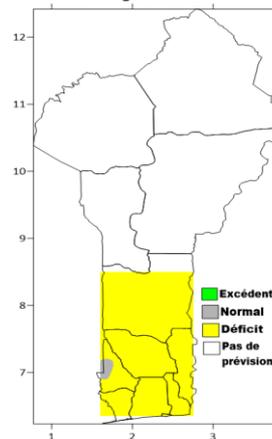


1991-2020 sea surface temperature anomalies

Année analogue AMJ 2016

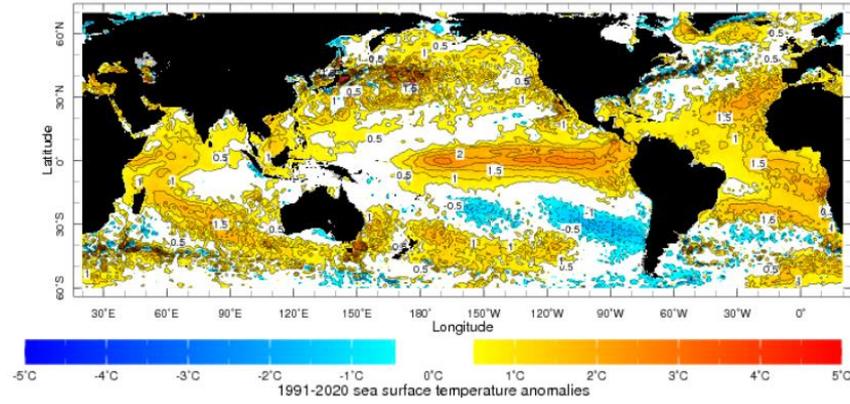


Année analogue AMJ 2019

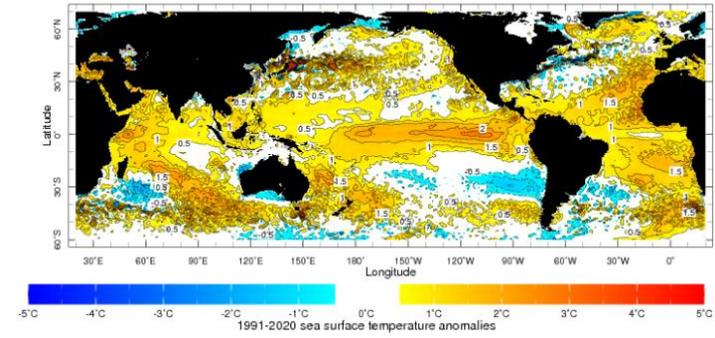


# Analyse des SST

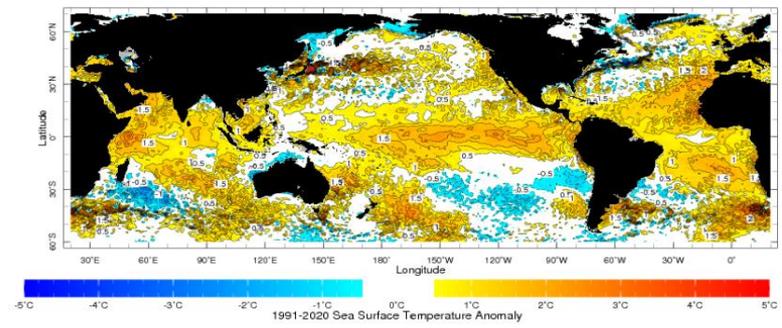
zlev 0.0 meters Time Dec 2023



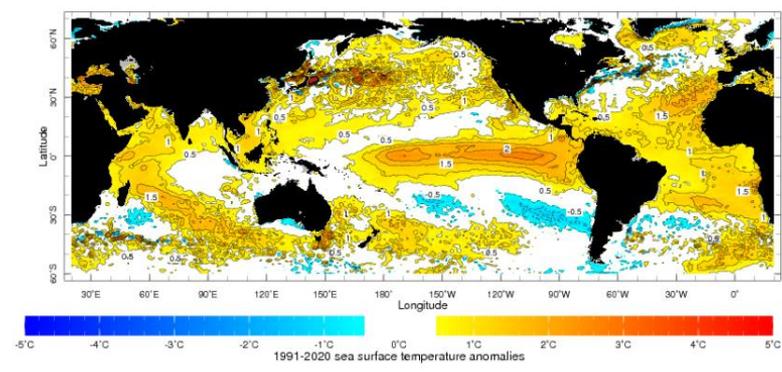
zlev 0.0 meters Time Jan 2024



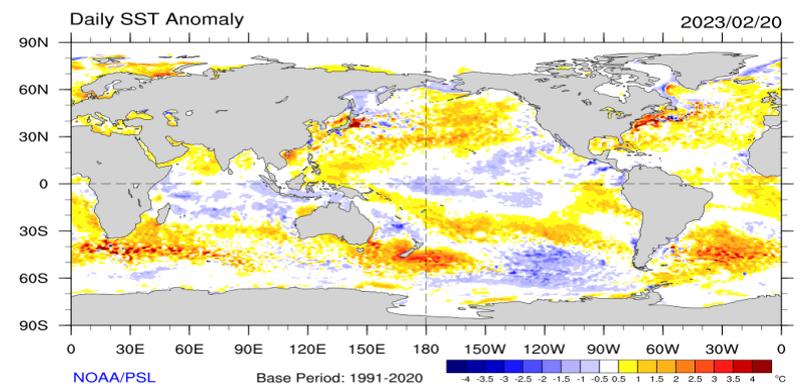
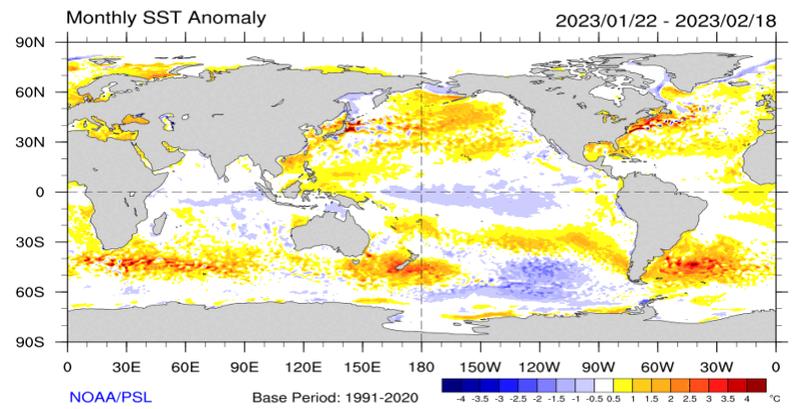
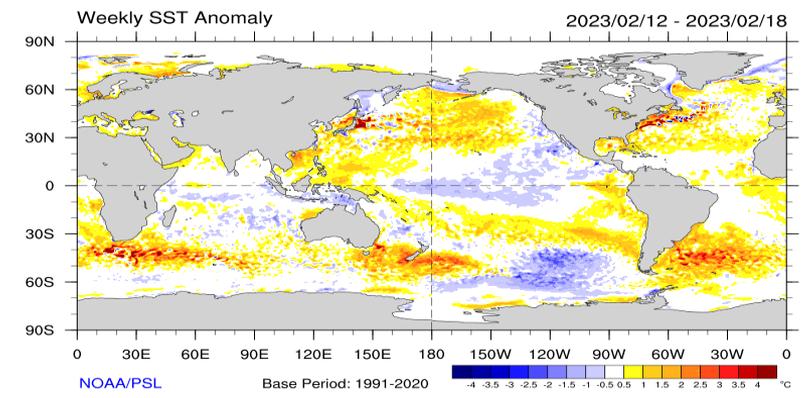
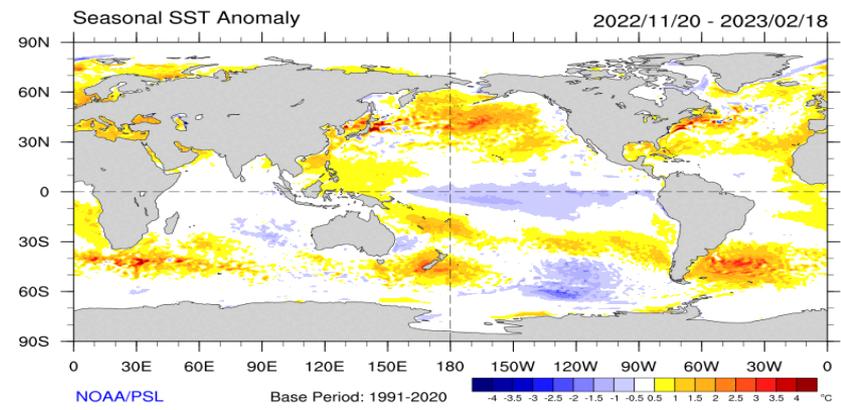
zlev 0.0 meters Time 30 Jan 2024 - 5 Feb 2024



zlev 0.0 meters Time Nov 2023 - Jan 2024

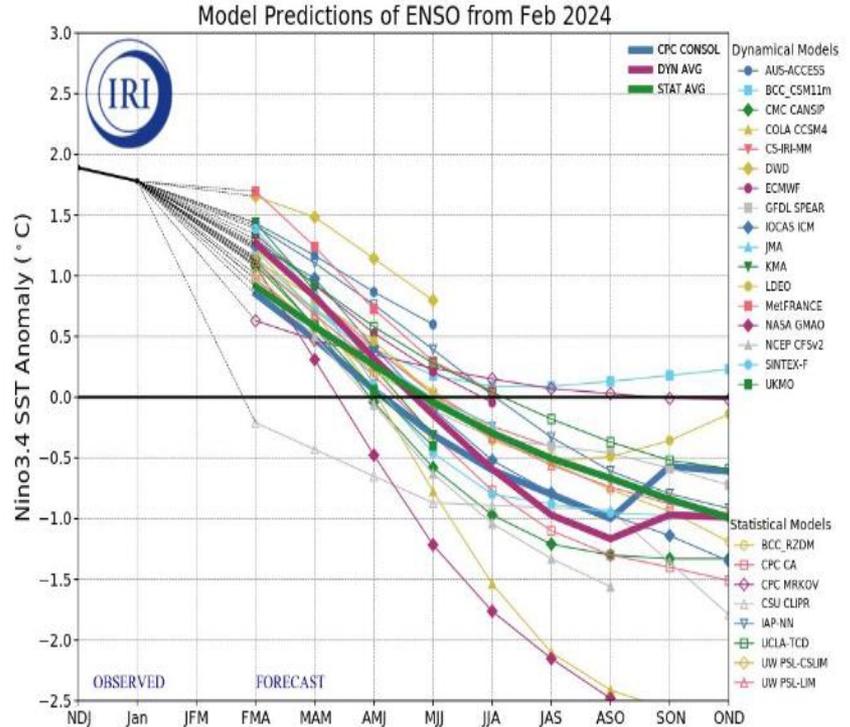
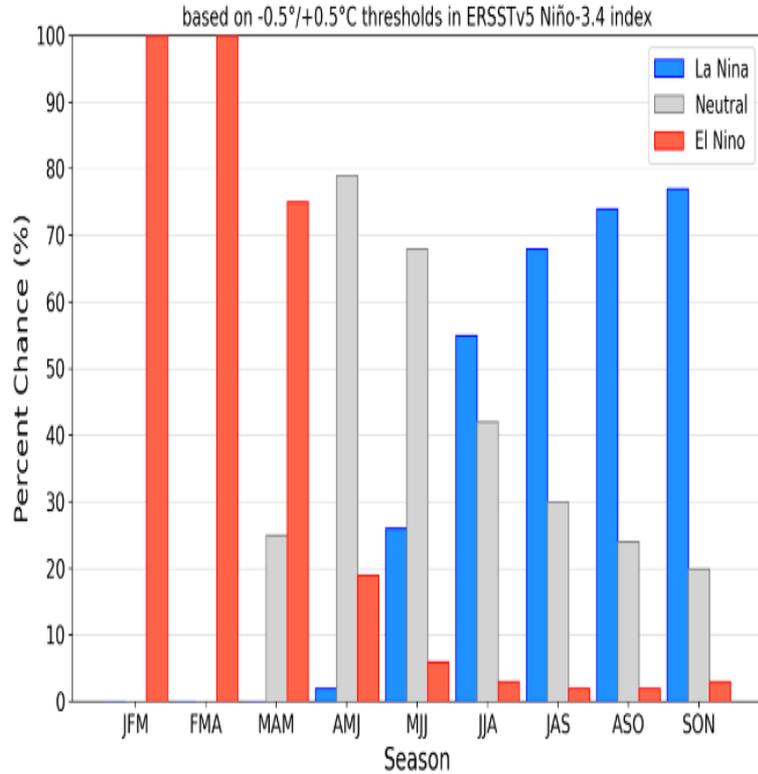


# Analyse des SST

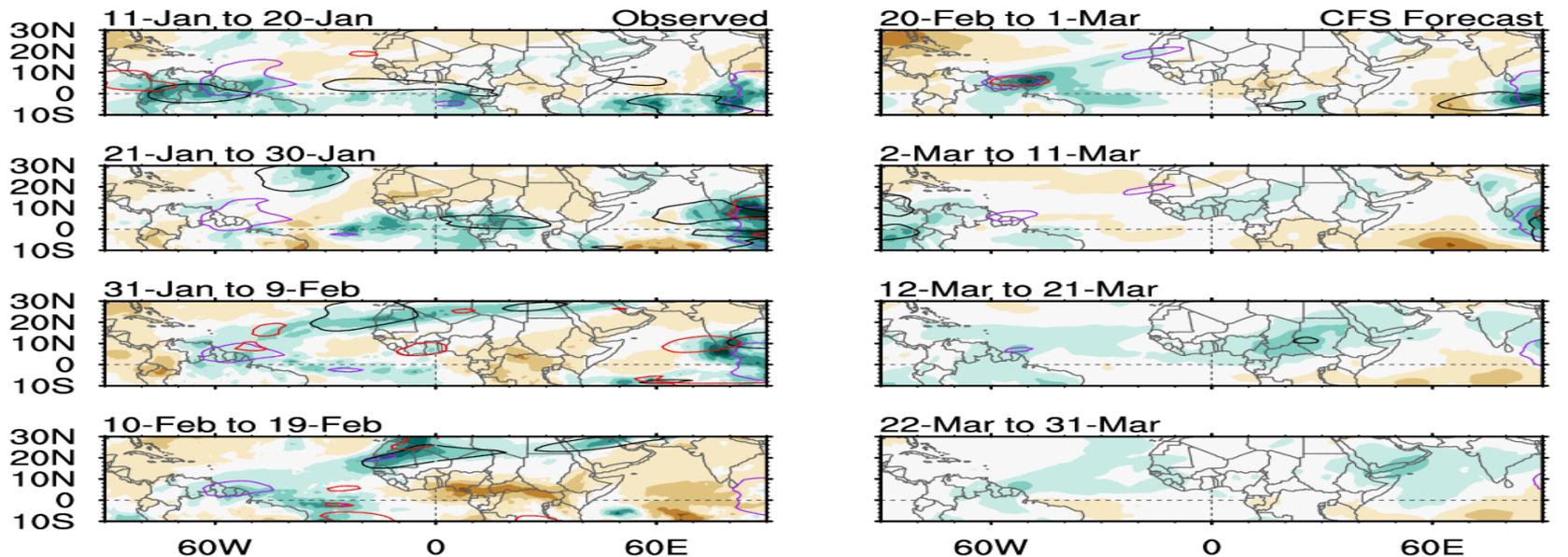


# Situation et probable evolution de Enso

Official NOAA CPC ENSO Probabilities (issued Feb. 2024)



# Out Longwave Radiation (OLM)



ncics.org/mjo



10-day OLR with CFS forecasts

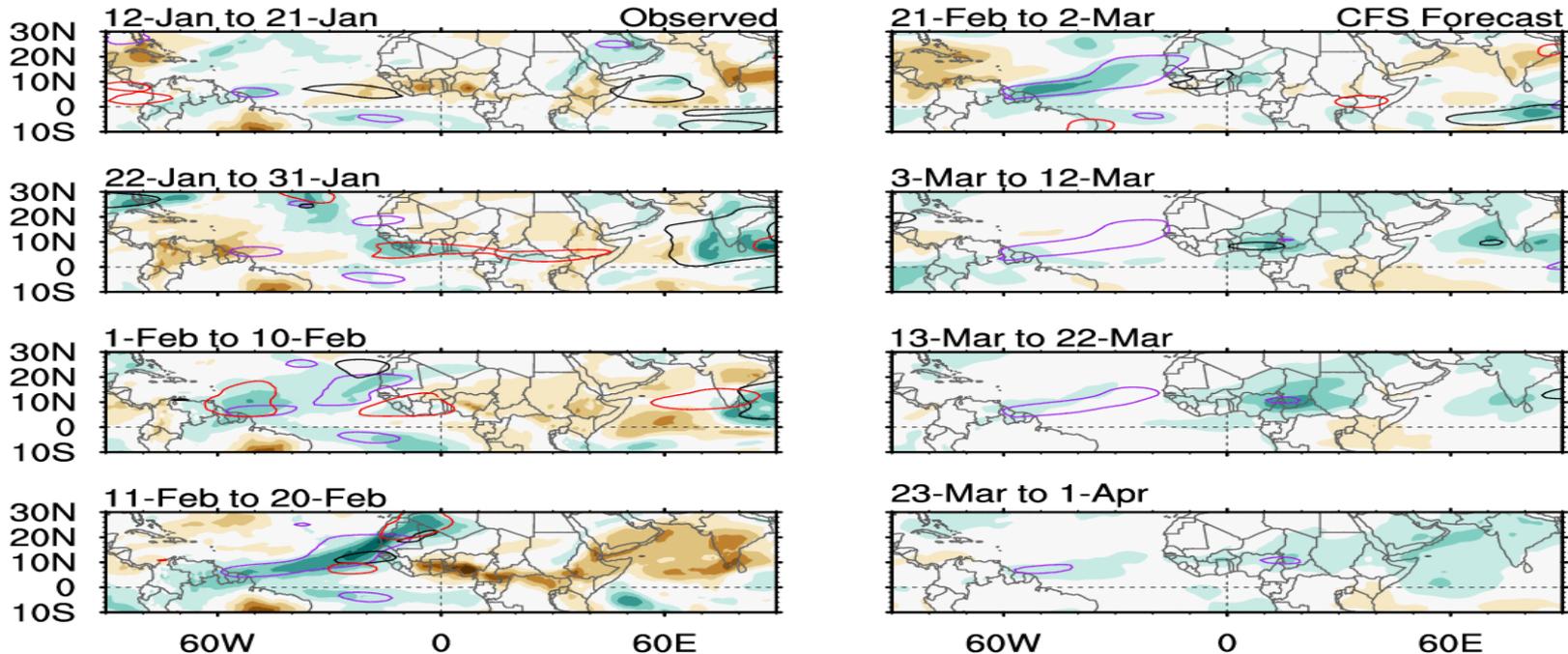
Mon 2023-02-20 1733 UTC

— MJO                      — Kelvin x2  
 — Low                      — ER

Contours at -12, -36 W m<sup>-2</sup>

Carl Schreck  
 carl\_schreck@ncsu.edu

# Precipitable water



[ncics.org/mjo](http://ncics.org/mjo)



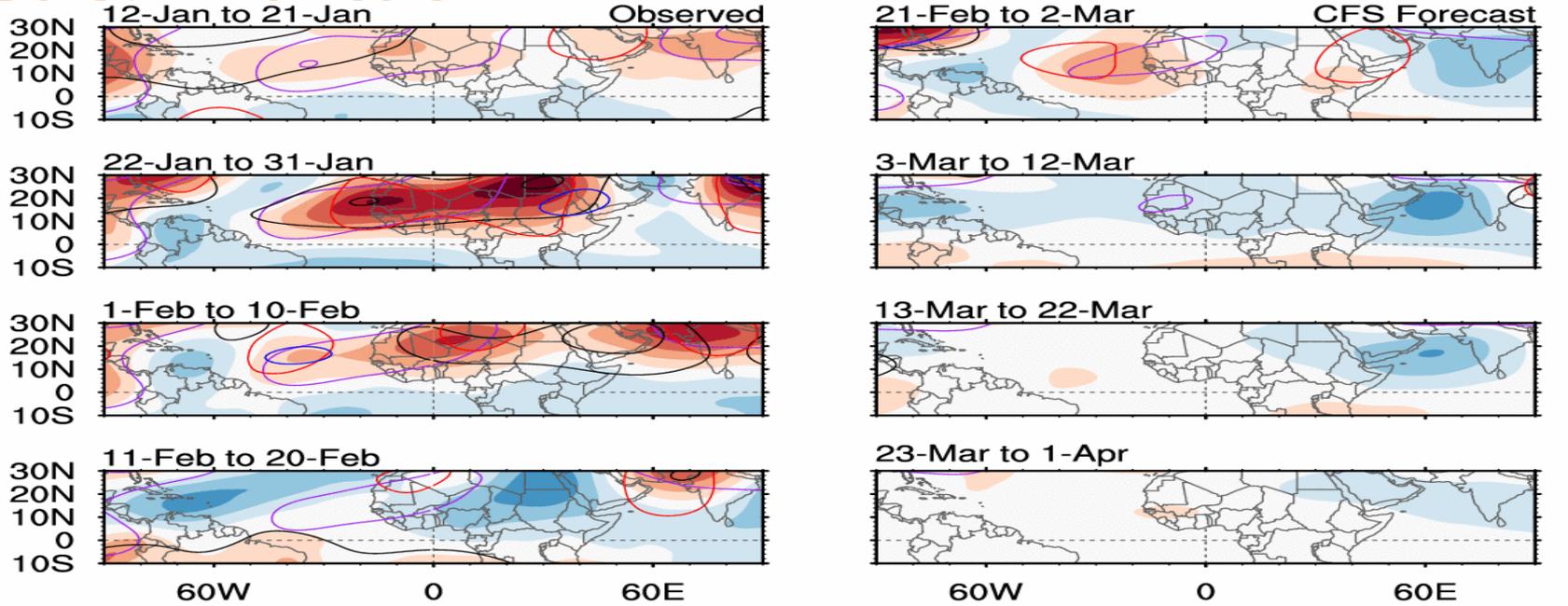
## 10-day PWAT with CFS forecasts

— MJO      — Kelvin x2  
— Low      — ER

Contours at 3, 9 kg m<sup>-2</sup>

Carl Schreck  
[carl\\_schreck@ncsu.edu](mailto:carl_schreck@ncsu.edu)

# Stream function



ncics.org/mjo

## 10-day PSI200 with CFS forecasts

Tue 2023-02-21 11:16 UTC

— MJO      — Kelvin x2  
 — Low      — ER

Contours at 4, 12 x 10<sup>6</sup> m<sup>2</sup> s<sup>-1</sup>  
 Carl Schreck  
 carl\_schreck@ncsu.edu

# Previsions des grands centres(wmo-lrf,Iri,UK)

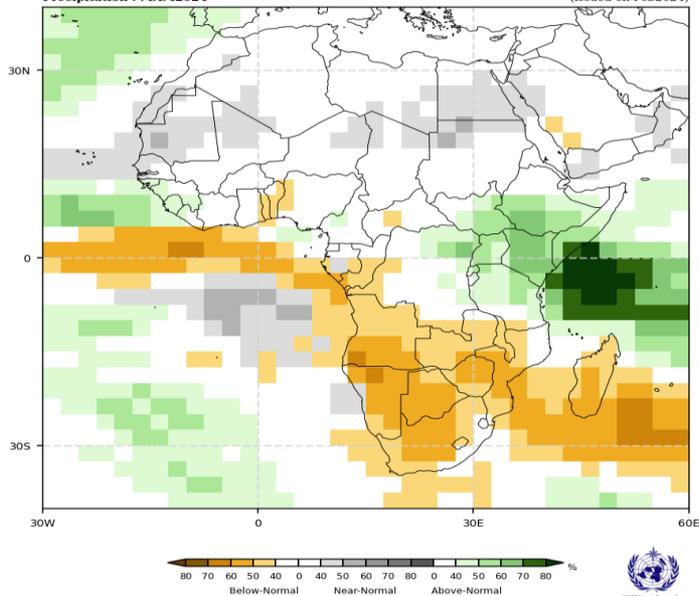
## WMO-LRF

### Probabilistic Multi-Model Ensemble Forecast

Beijing,CMCC,CPTEC,ECMWF,Exeter,Melbourne,Montreal,Moscow,Offenbach,Seoul,Tokyo,Toulouse,Washington

#### Precipitation : MAM2024

(issued on Feb2024)



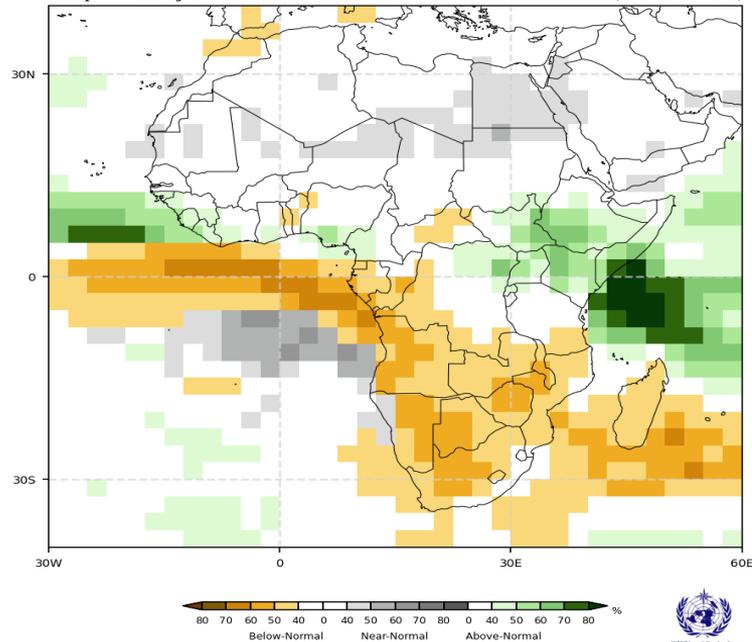
WMO Lead Centre for LRF WMO

### Probabilistic Multi-Model Ensemble Forecast

Beijing,CMCC,CPTEC,ECMWF,Exeter,Melbourne,Montreal,Offenbach,Seoul,Tokyo,Toulouse,Washington

#### Precipitation : AMJ2024

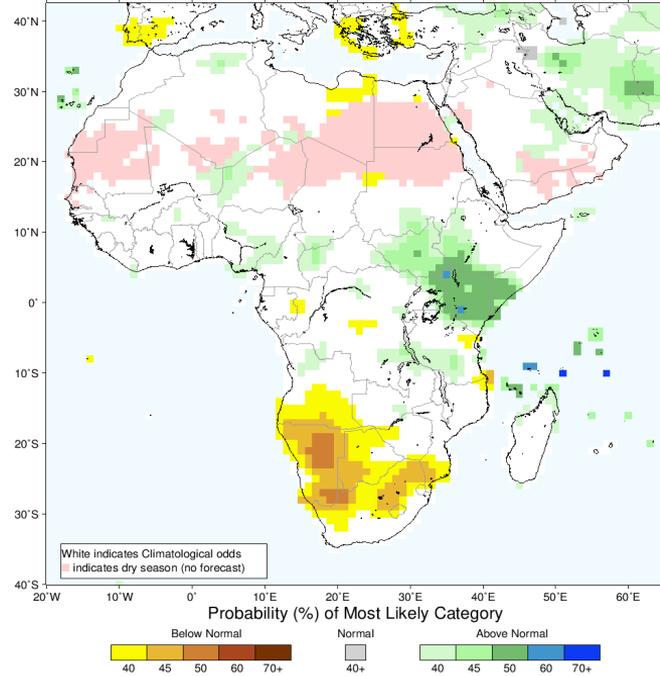
(issued on Feb2024)



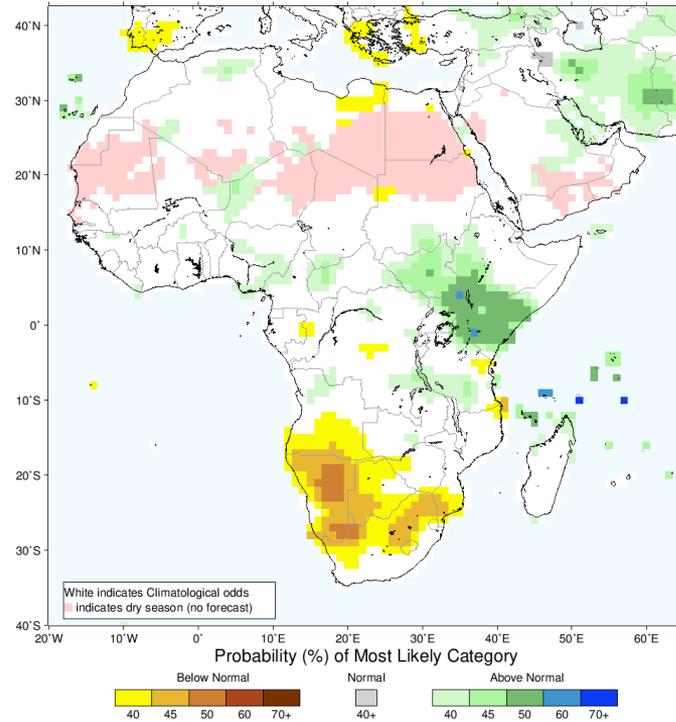
WMO Lead Centre for LRF WMO

# IRI

IRI Multi-Model Probability Forecast for Precipitation for March–April–May 2024, Issued February 2024

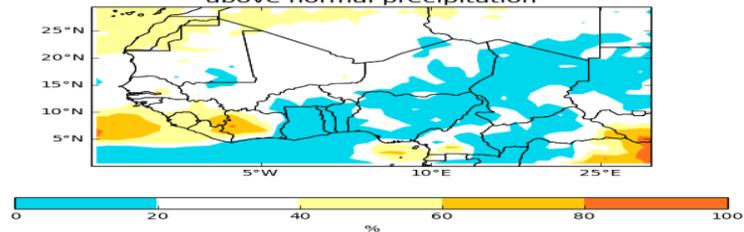


IRI Multi-Model Probability Forecast for Precipitation for March–April–May 2024, Issued February 2024

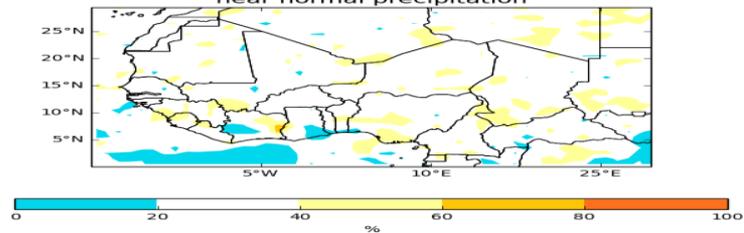


# UK

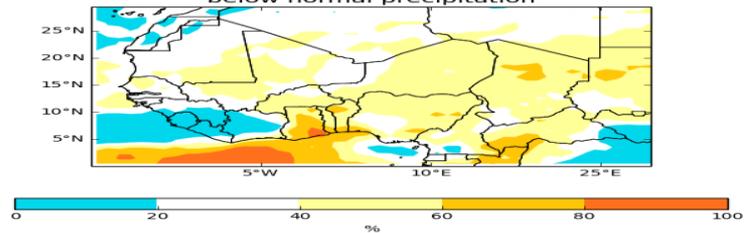
Probability of tercile categories Mar/Apr/May Issued February 2024  
above normal precipitation



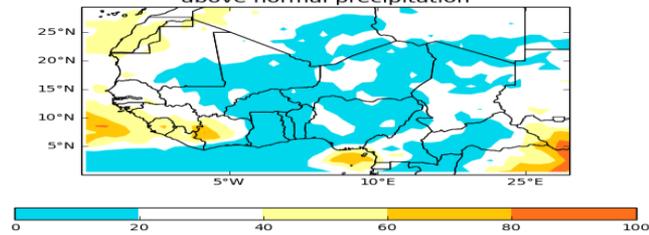
near normal precipitation



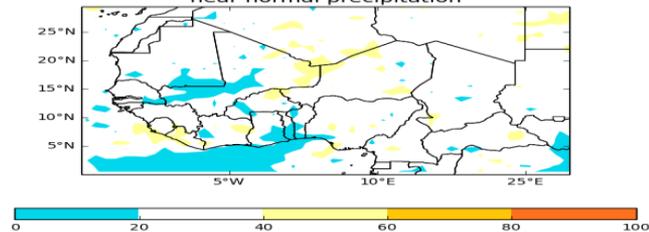
below normal precipitation



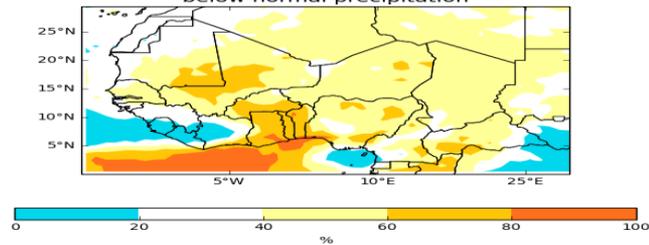
Probability of tercile categories Apr/May/June Issued February 2024  
above normal precipitation



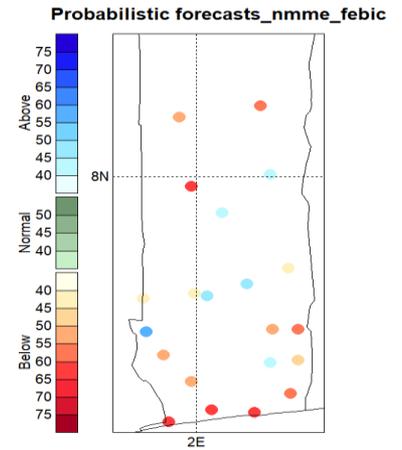
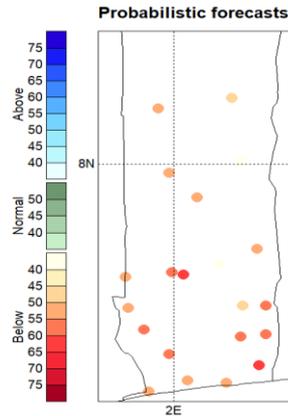
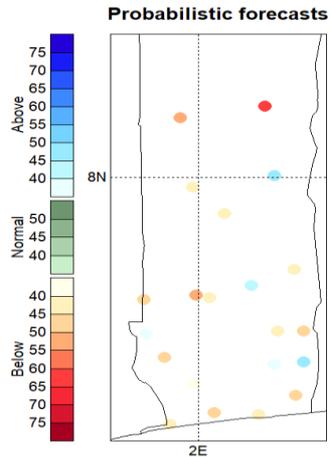
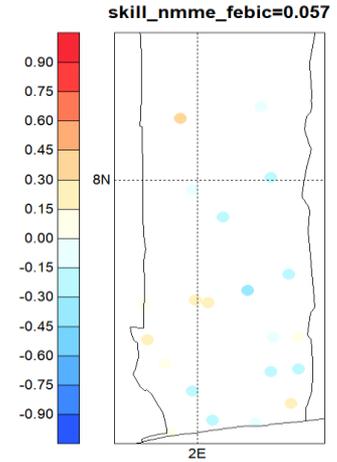
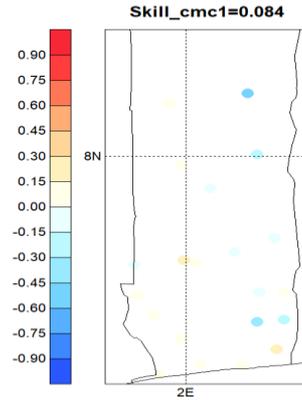
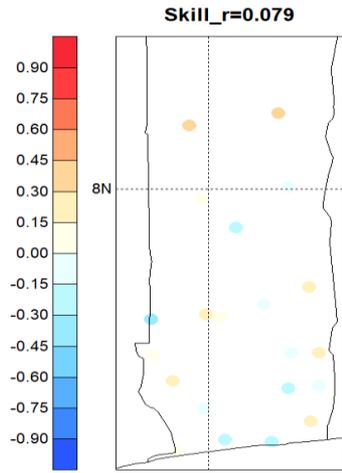
near normal precipitation



below normal precipitation

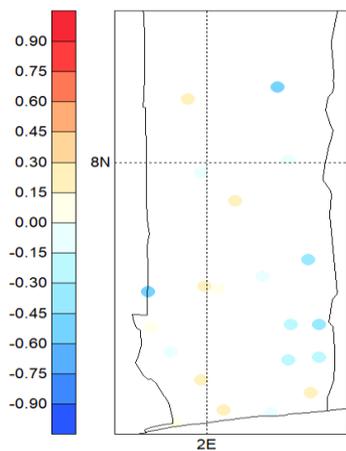


# SORTIES DE CPT

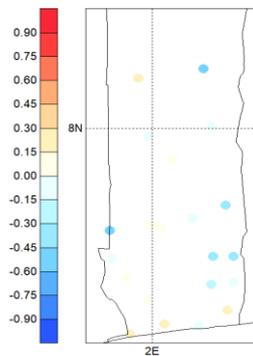


# CPT...

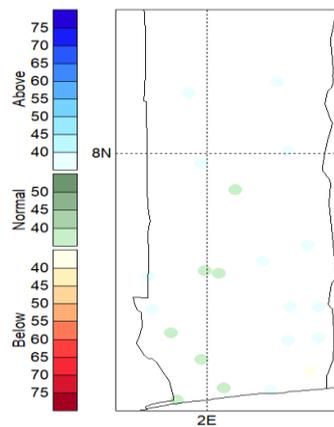
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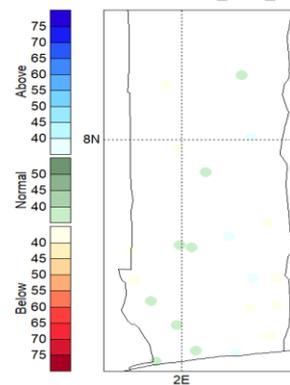
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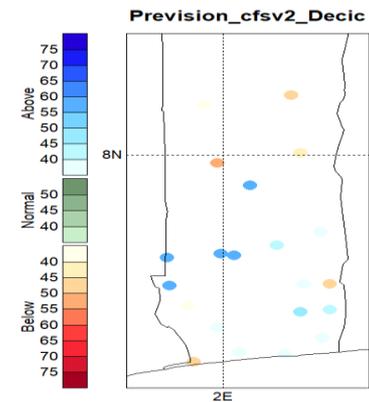
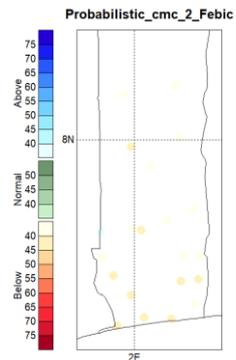
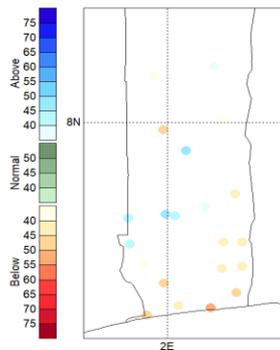
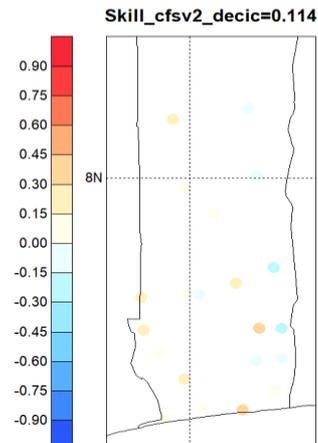
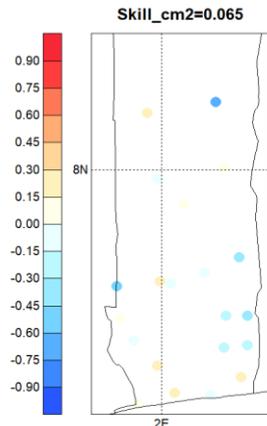
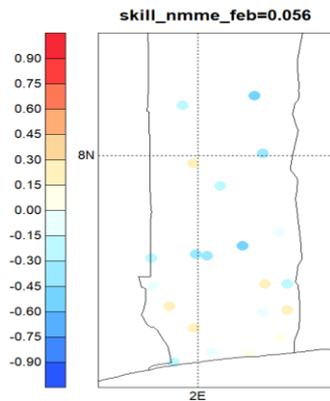
Probabilistic forecasts\_ncar\_ccsm4\_febic



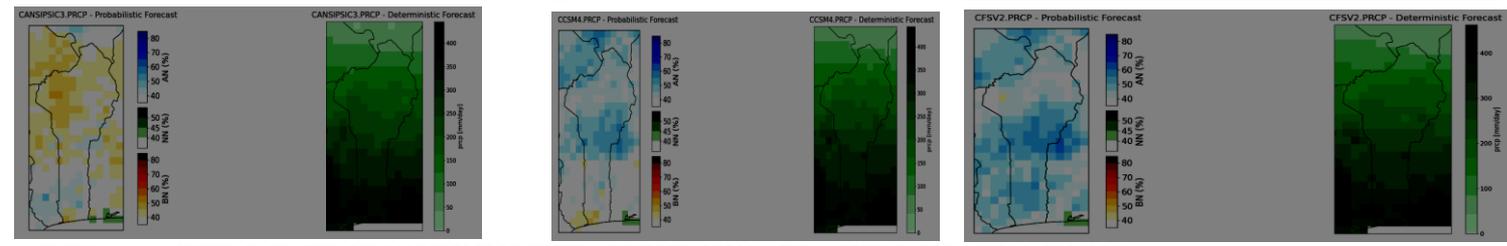
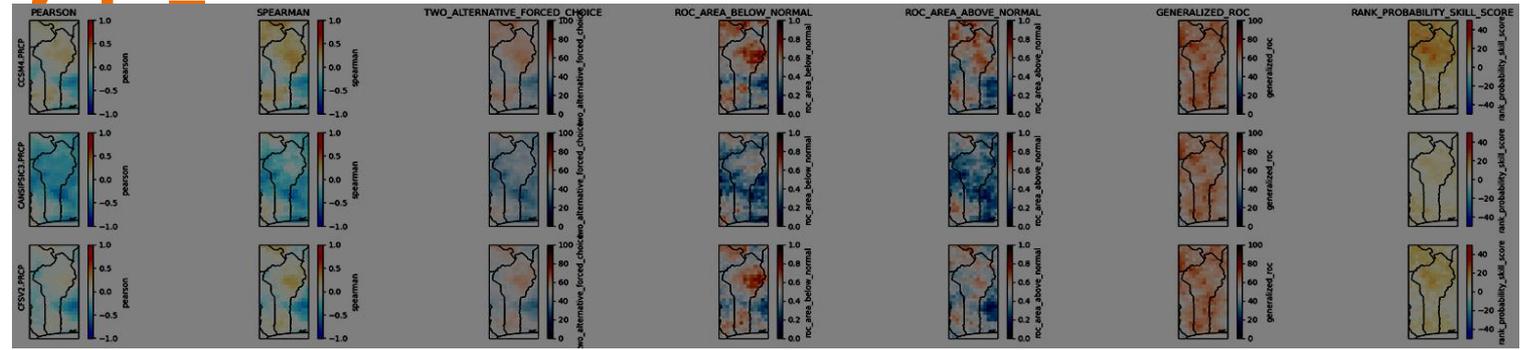
Probabilistic forecasts\_ncar\_ccsm4\_janic



# Sorties CPT AMJ



# pycpt\_MAM



Entrée [57]: `pycpt.plot_mme_skill(predictor_names, hexgen_skill, PUS, domain_dir, skill_metrics)`

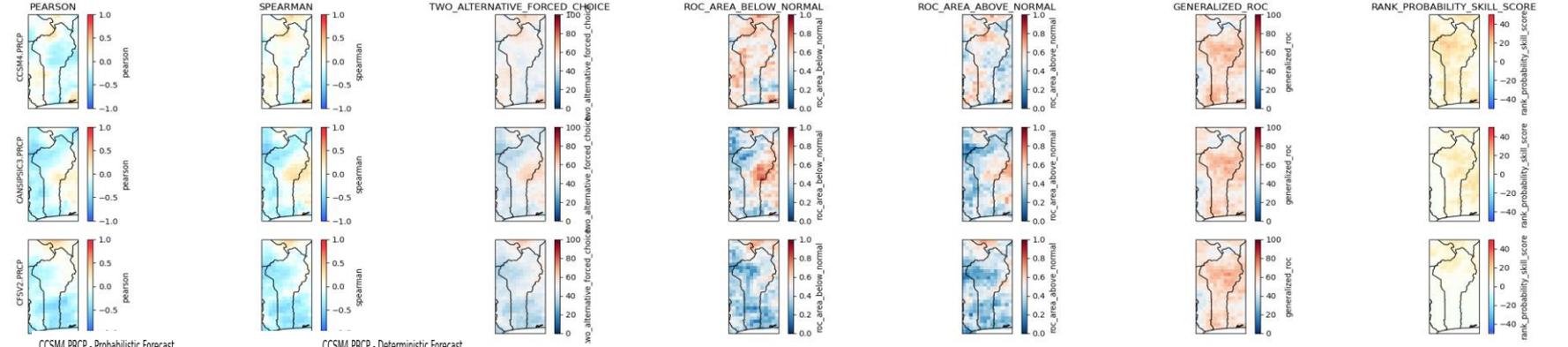


Plot MME Forecasts

Entrée [58]: `pycpt.plot_mme_forecasts(cpt_args, predictand_name, pr_fcst, MOS, domain_dir, det_fcst)`

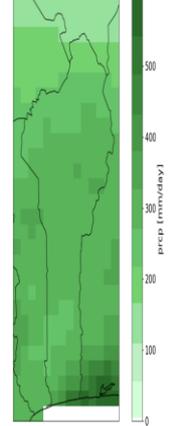
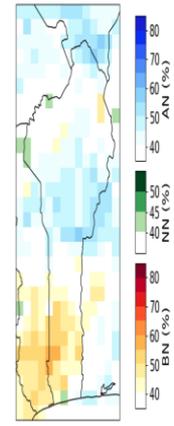


# pycpt\_AMJ

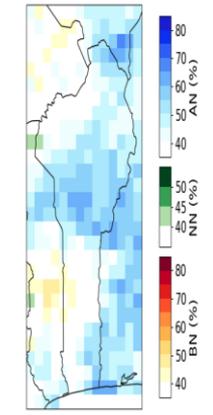


CCSM4.PRCP - Probabilistic Forecast

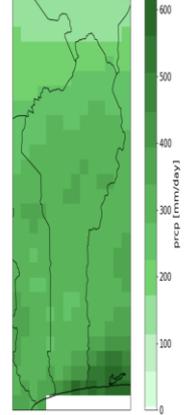
CCSM4.PRCP - Deterministic Forecast



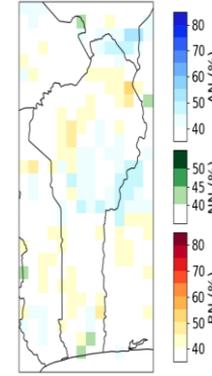
CANSIPSIC3.PRCP - Probabilistic Forecast



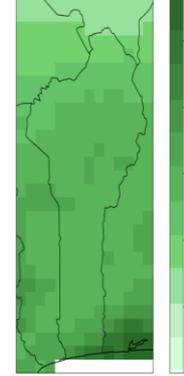
CANSIPSIC3.PRCP - Deterministic Forecast



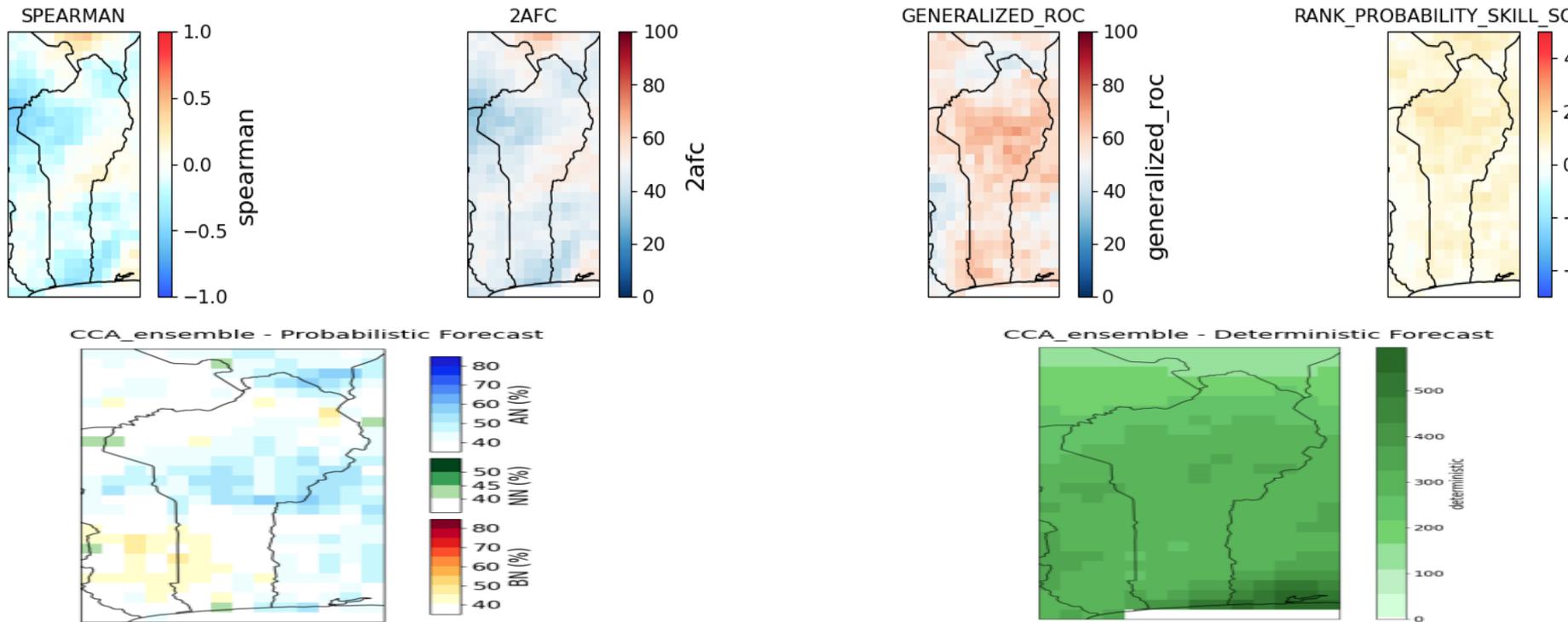
CFSV2.PRCP - Probabilistic Forecast



CFSV2.PRCP - Deterministic Forecast



# model\_ensemble



# Summarise

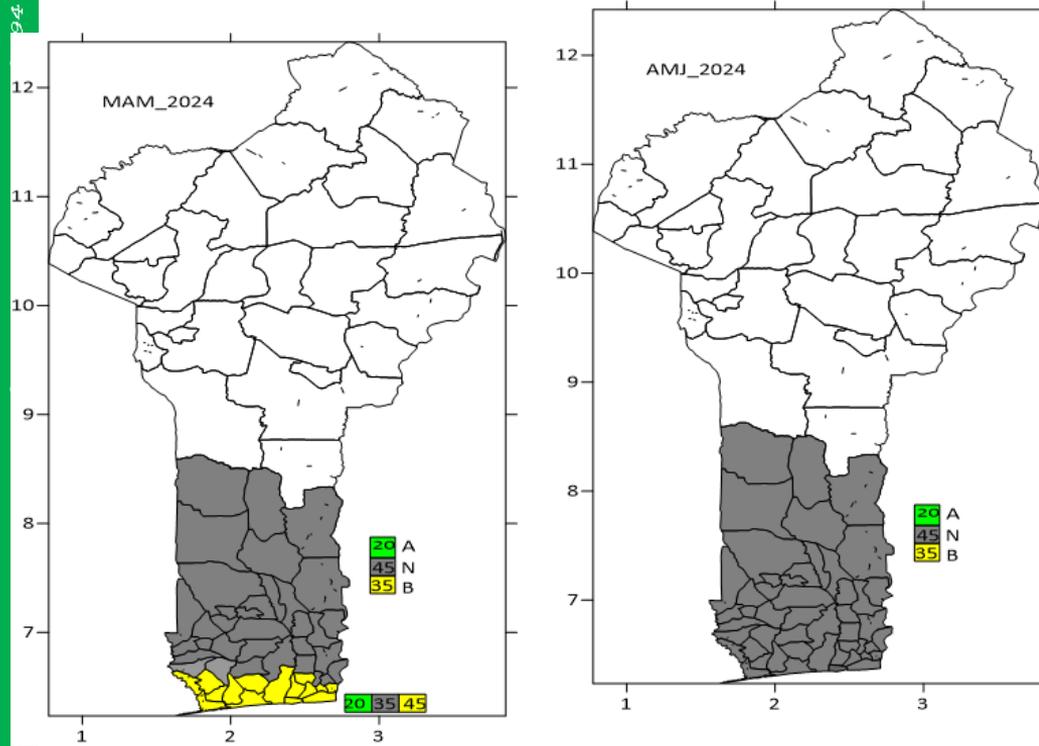
- Golfe de Guinée: chaud à neutre
- Indien et Pacifique équatorial: chaud à neutre

Probable transition de conditions chaudes à condition neutre

- Persistance de la phase positive des SST dans l'Atlantique tropicale
- Année analogue: précipitations déficitaires à normal pour MAM, normal à excédentaire pour AMJ

- Iri, wmo, uk, : situations deficitaire à normal pour MAM, AMJ
- CPT: deficitaire à normal pour MAM, Normal à deficitaire pour AMJ
- Pycpt: normal à deficitaire MAM, AMJ

# Prevision MAM&AMJ



**Sur la base de l'analyse de nos années analogues et des différentes configurations des bassins océaniques notamment celui du Golf de Guinée, les saisons MAM et AMJ seront humides dans leur globalité. En début de saison (MAM) on s'attend à une mauvaise mousson de façon générale occasionnant de déficit pluviométrique à l'intérieur de la saison. Elle occasionnera de cumuls pluviométriques déficitaires dans plusieurs localités en fin de saison MAM. A la fin de la saison (AMJ) on s'attend à une situation normale climatologique.**

# Q & A?