

Monitoramento da situação do El Niño na Região Nordeste

JULHO/ 2023



MINISTÉRIO DA
CIÊNCIA, TECNOLOGIA
E INOVAÇÃO





Update prepared by:
Climate Prediction Center / NCEP
10 July 2023

ENSO Alert System Status: **El Niño Advisory**

El Niño conditions are observed.*

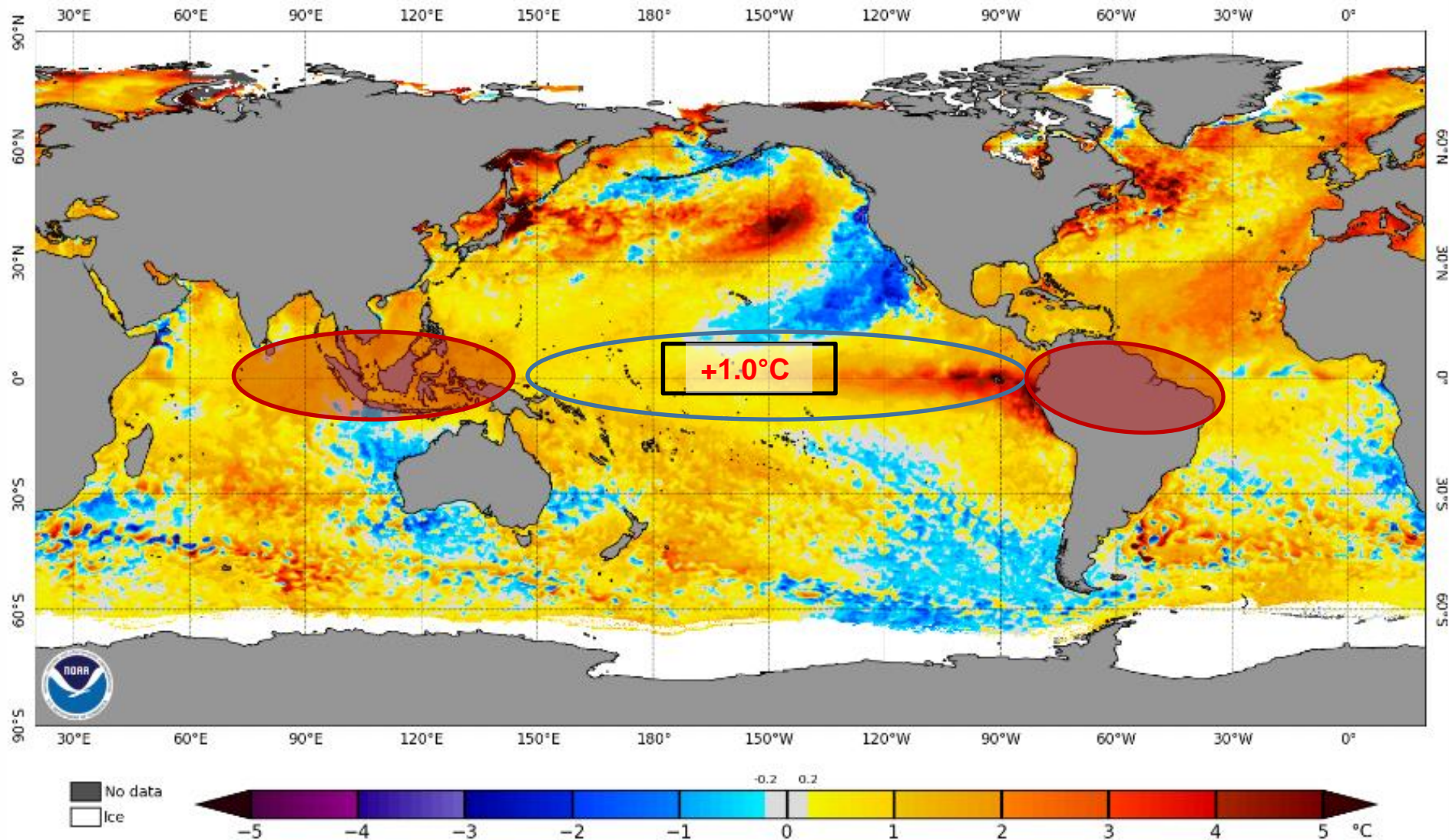
Equatorial sea surface temperatures (SSTs) are above average across the east-central and eastern Pacific Ocean.

The tropical Pacific atmospheric anomalies are consistent with weak El Niño conditions.

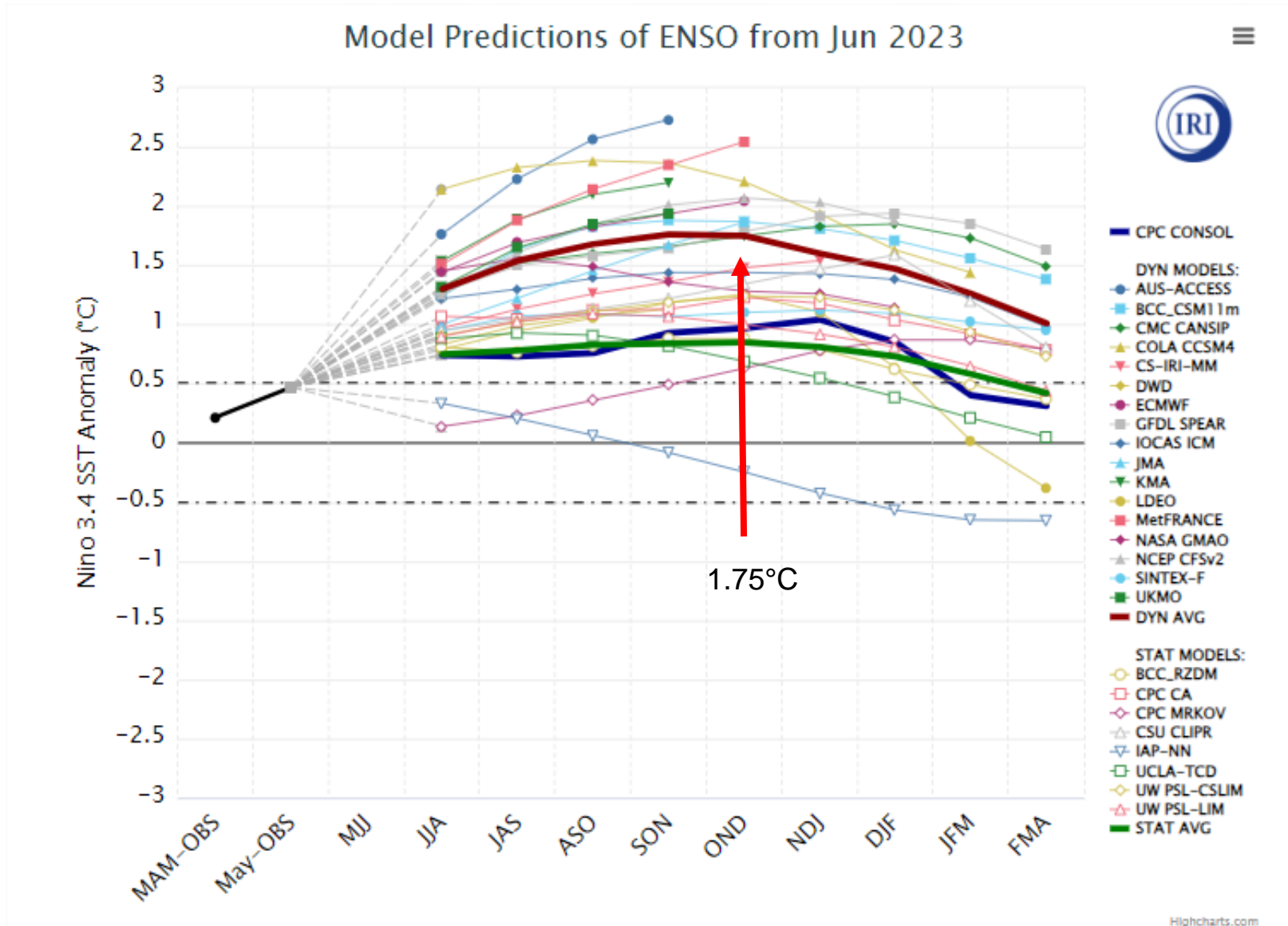
El Niño conditions are expected to gradually strengthen into the Northern Hemisphere winter 2023-24.*

Status Atual: El Niño

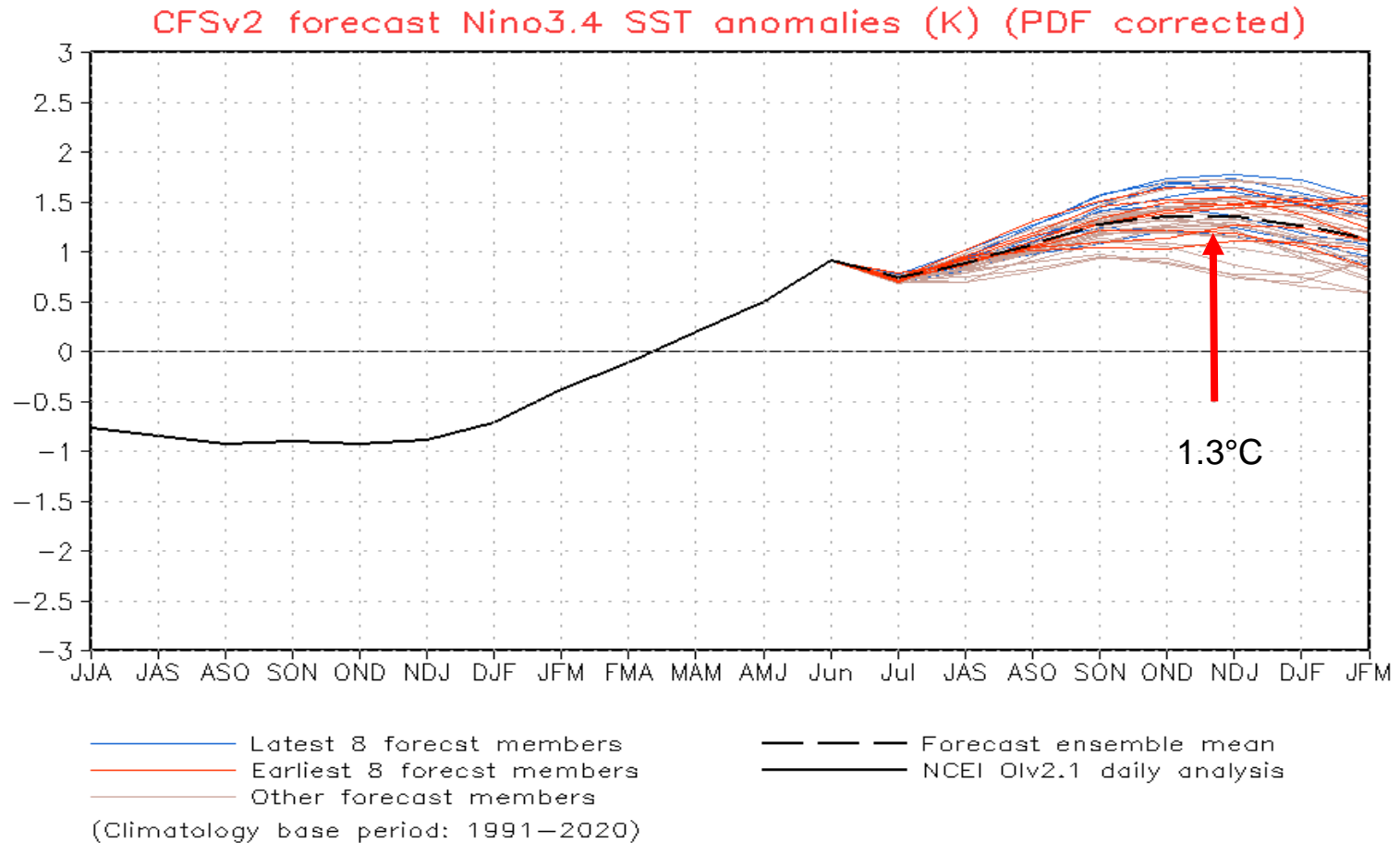
NOAA Coral Reef Watch Daily 5km SST Anomalies (v3.1) 11 Jul 2023



Previsão do “ENSO”



Previsão do “ENSO”

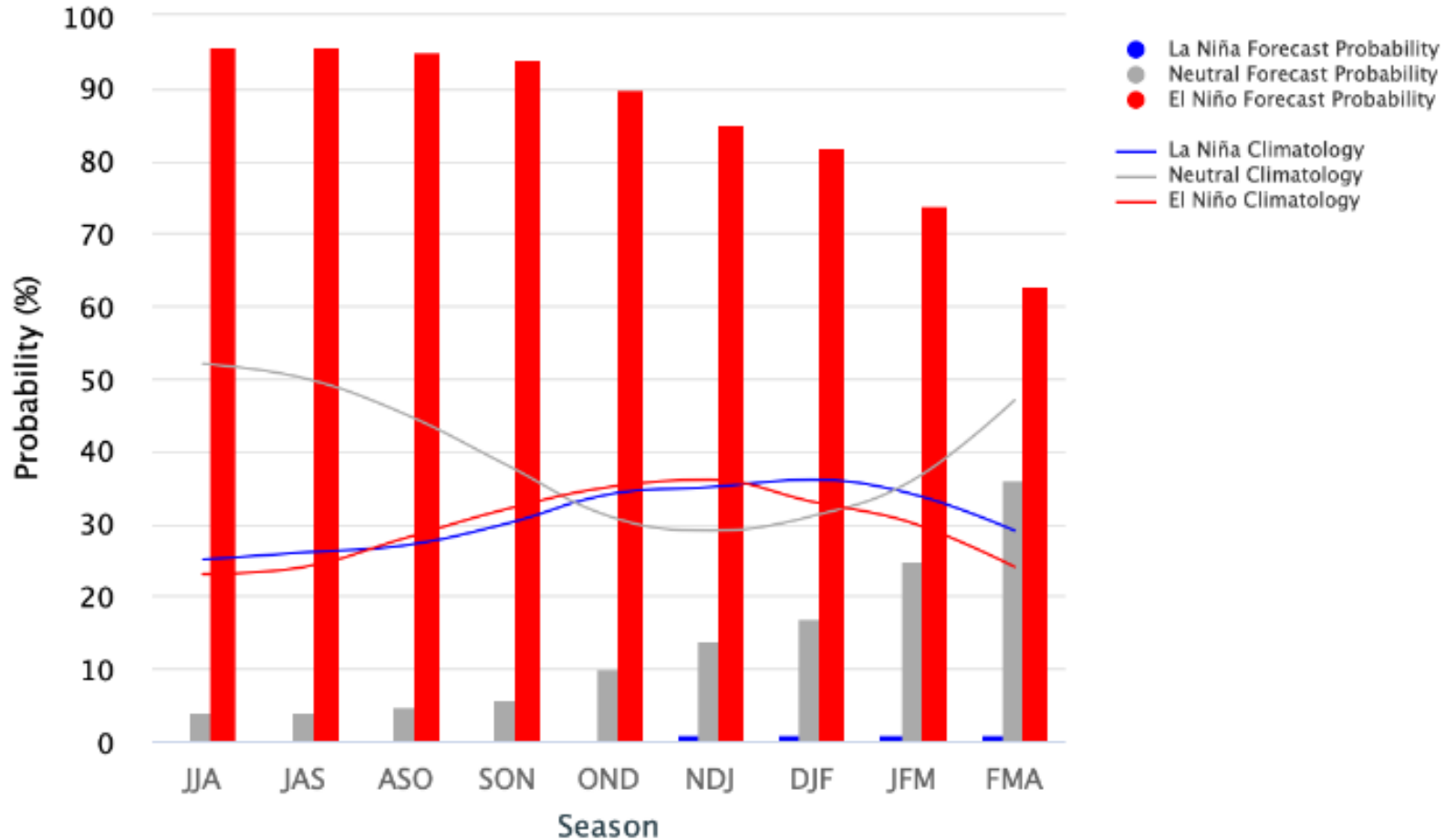


Atualizado: 10 de julho 2023

Previsão do “ENSO”

Mid-June 2023 IRI Model-Based Probabilistic ENSO Forecasts

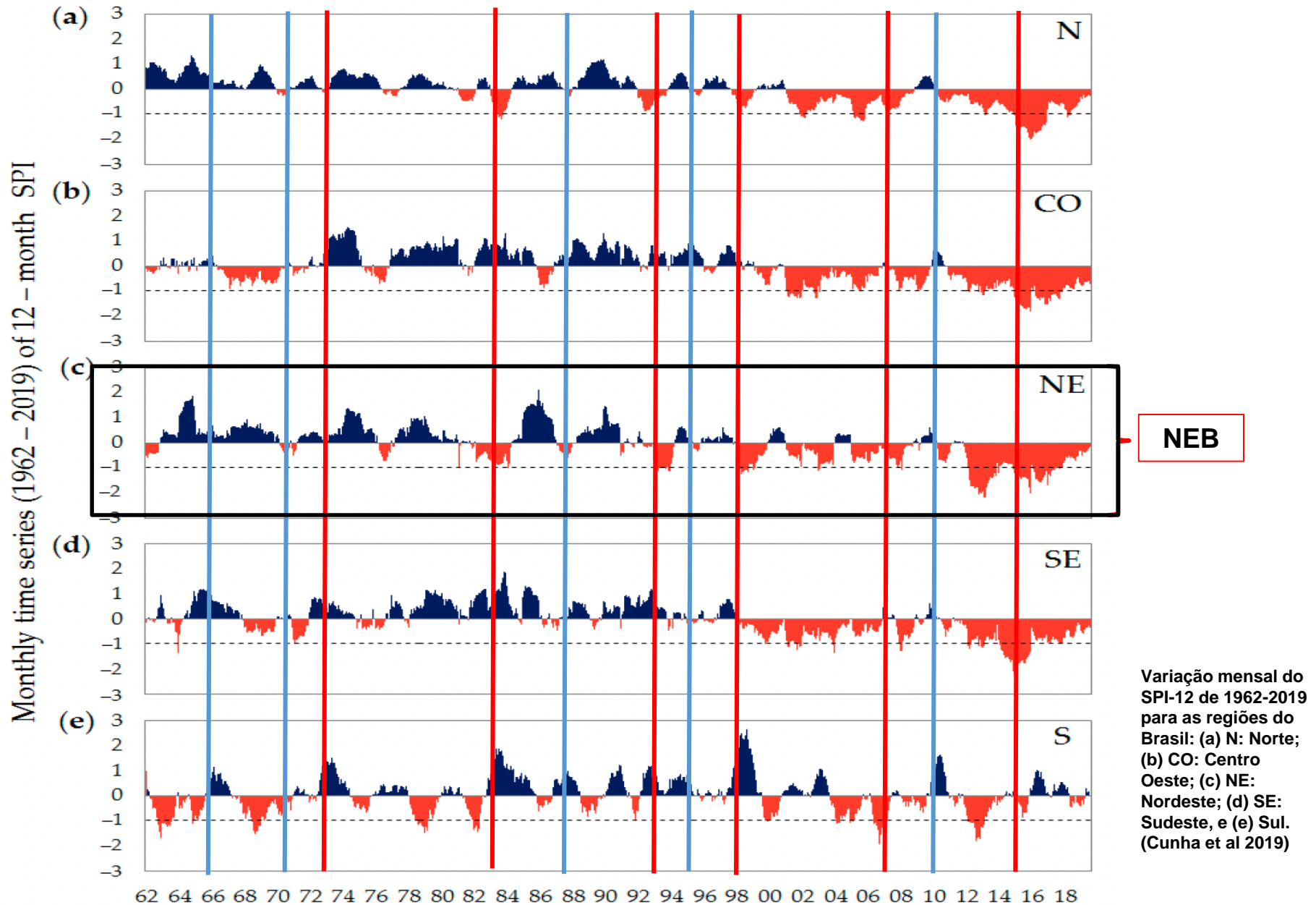
ENSO state based on NINO3.4 SST Anomaly Neutral ENSO: $-0.5\text{ }^{\circ}\text{C}$ to $0.5\text{ }^{\circ}\text{C}$



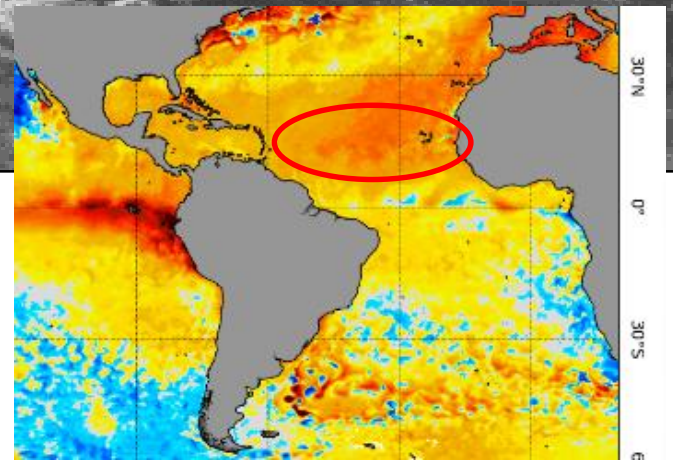
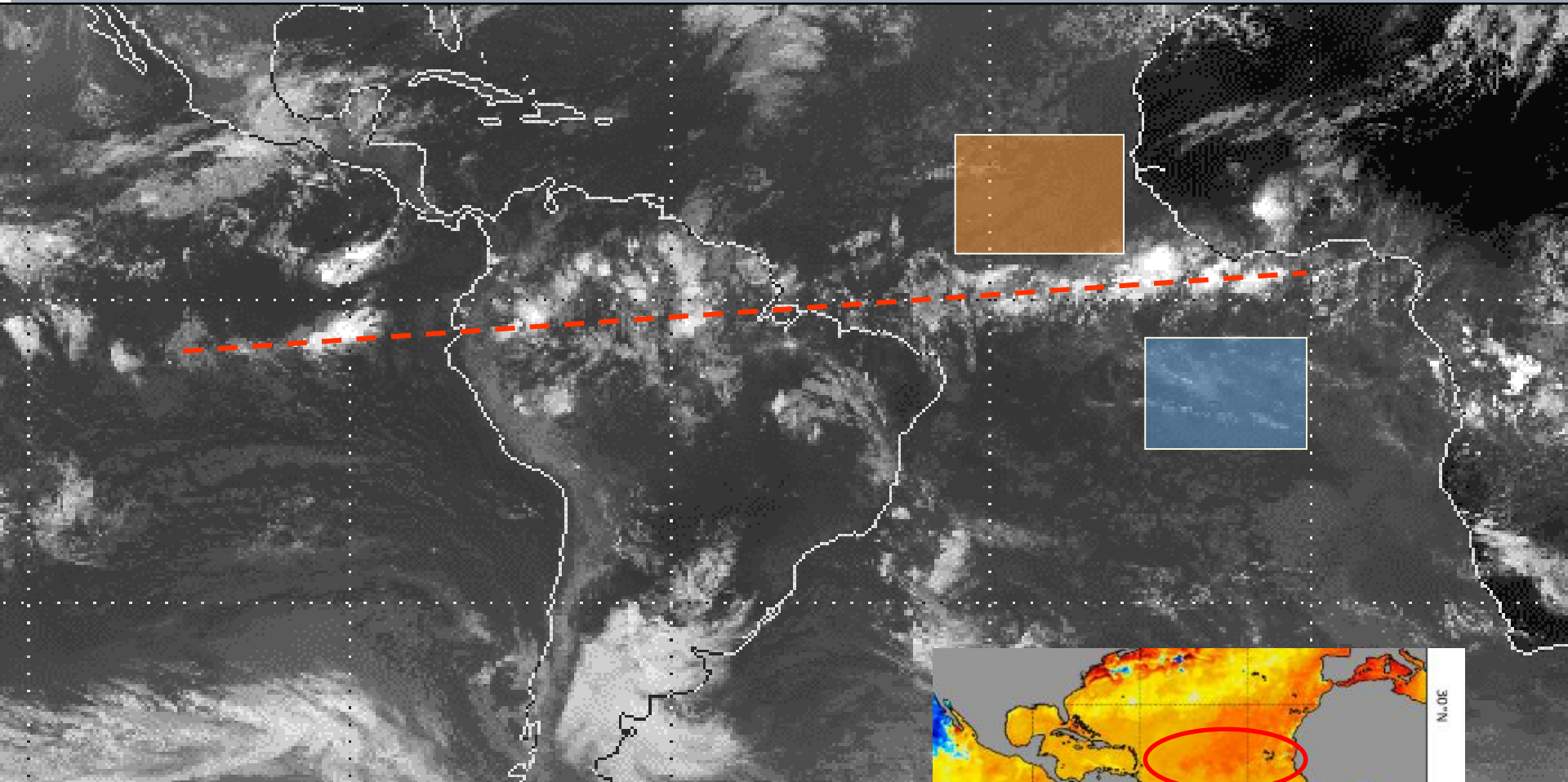
Status Atual: **El Niño**

FONTE: NOAA

Impacto na Precipitação

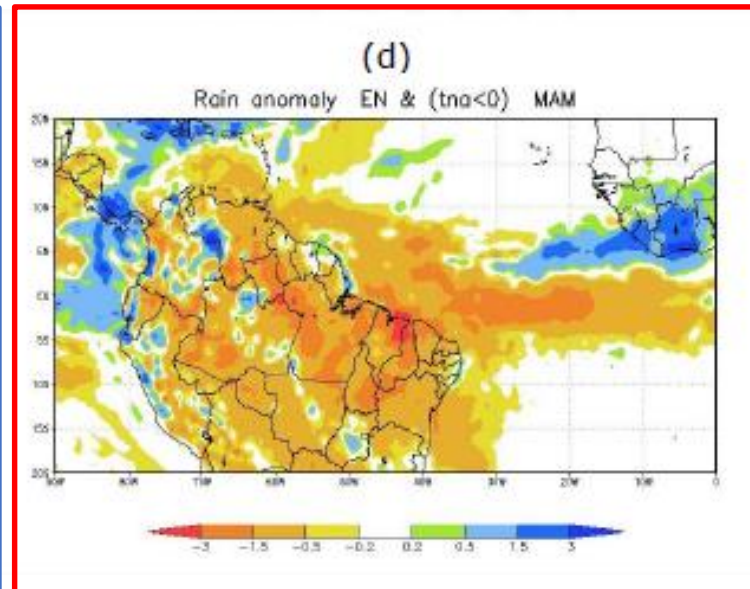
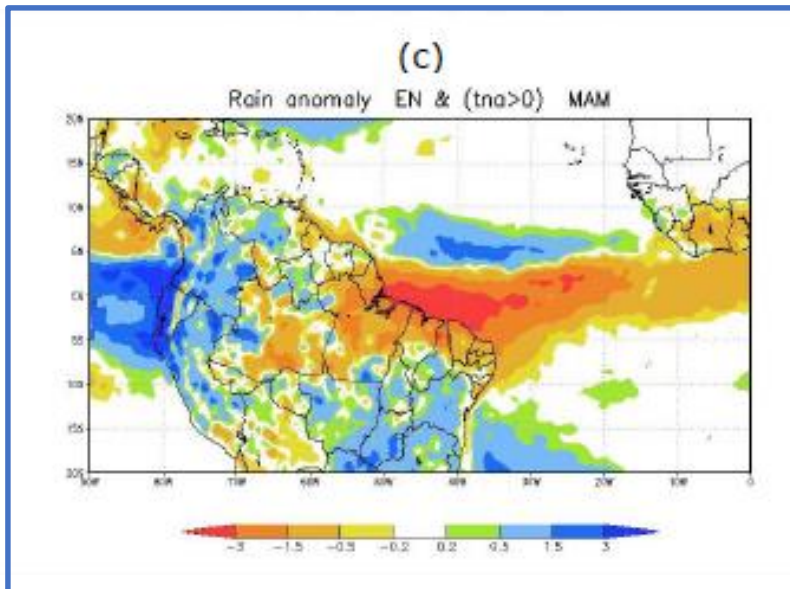


Zona de Convergencia Intertropical



Influência do Pacífico e Atlântico

Embora os efeitos do ENOS sejam observacionalmente evidentes na América do Sul, não se deve avaliar a precipitação nesta região sem levar em consideração o padrão das anomalias de TSM no Atlântico Tropical. Como será mostrado, o padrão das anomalias de precipitação sobre o continente pode diferir nos casos de EN e de LN em que ocorram concomitantemente anomalias positivas ou negativas de TSM no Atlântico Tropical Sul (*Tropical Southern Atlantic* – TSA) ou no Atlântico Tropical Norte (*Tropical Northern Atlantic* – TNA).



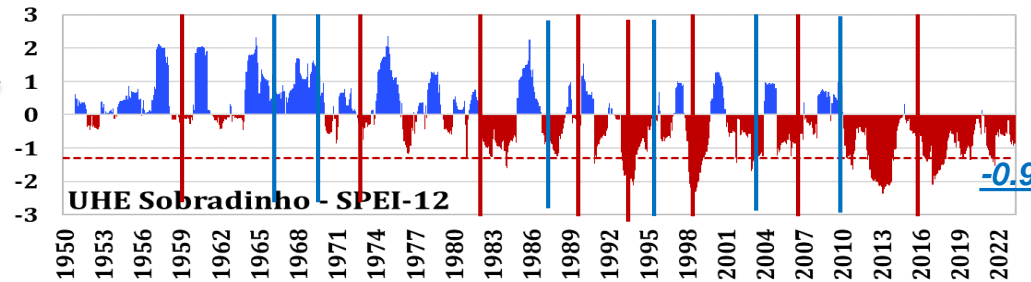
EN+ Dipolo negativo
Pode “mascarar o
efeito do EM”

Combinação EN+
Dipolo positivo
Provoca as secas mais
severas

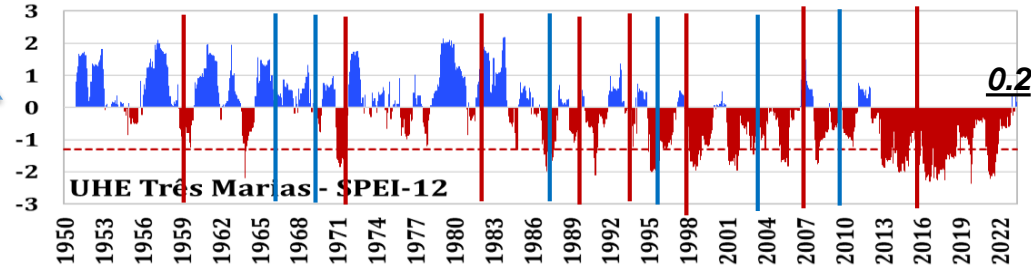
Monitoramento bacia do São Francisco

Seca Moderada

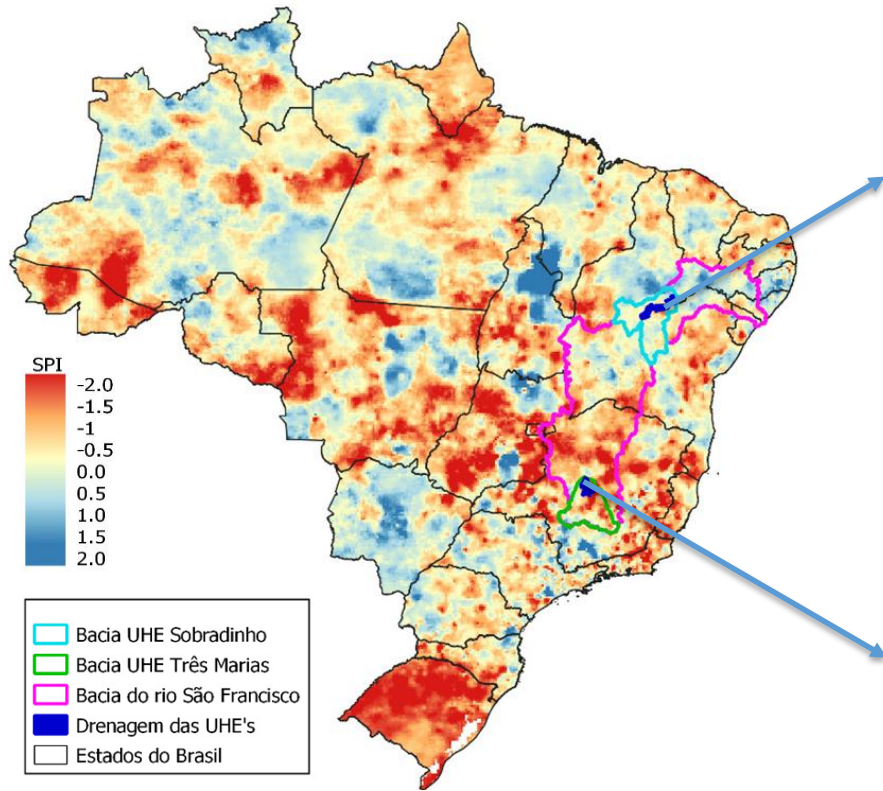
Índice Padronizado Precipitação/Evapotranspiração (SPEI)



Índice Padronizado Precipitação/Evapotranspiração (SPEI)



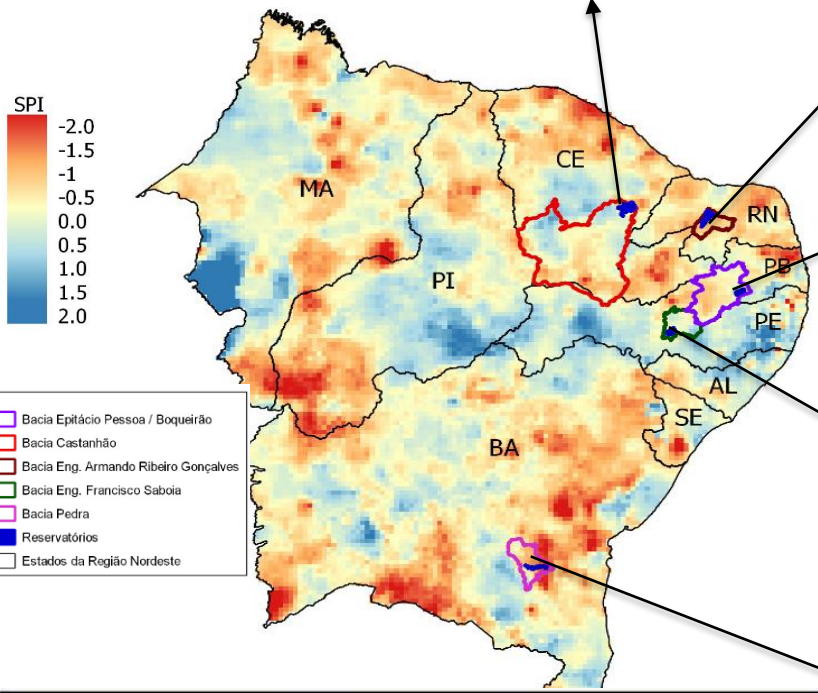
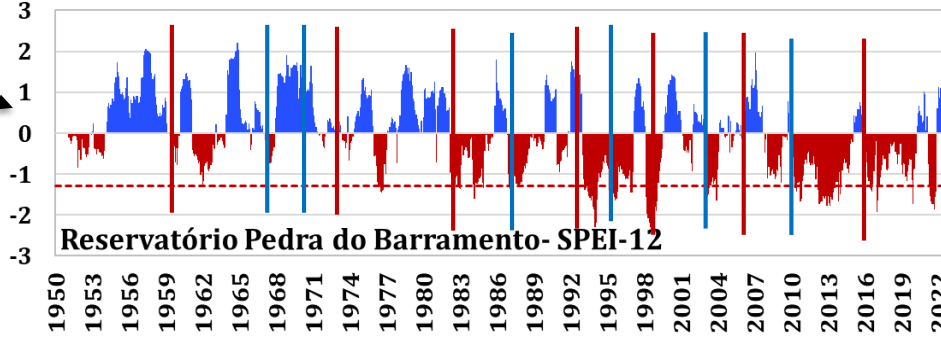
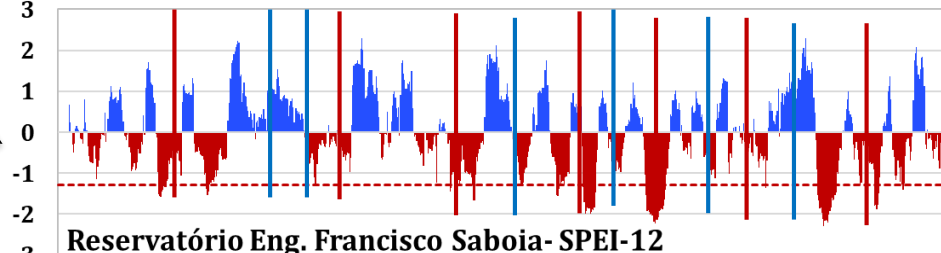
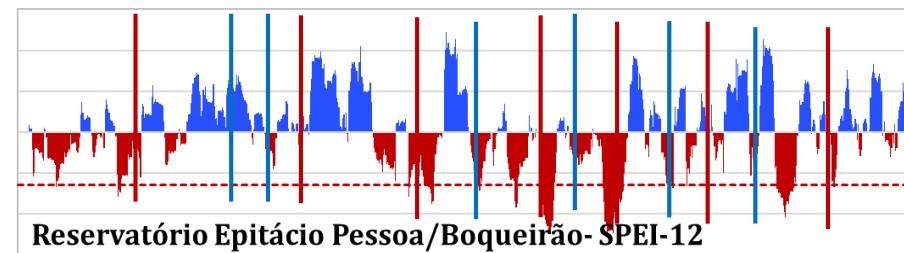
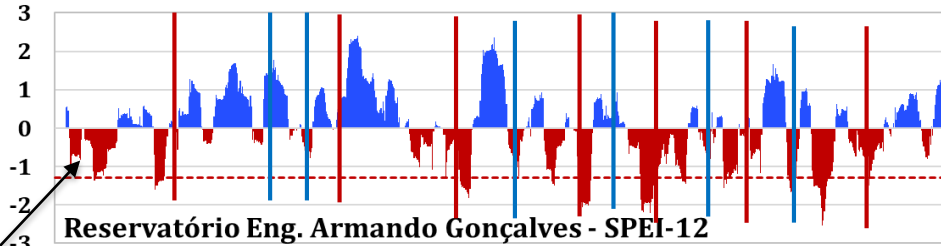
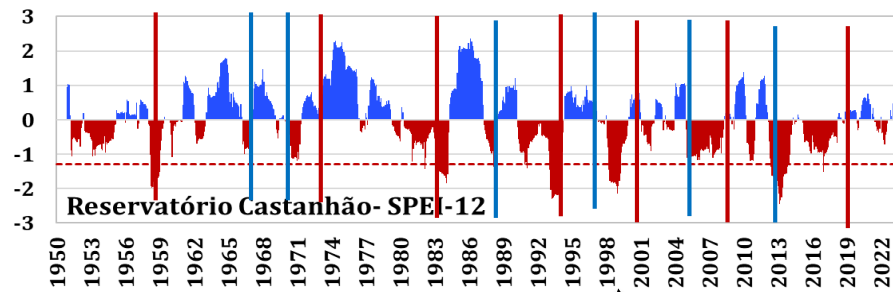
Condição de Normalidade



SPI 12 - Junho de 2023

| Bacia | Excepcional | Extrema | Severa | Moderada | Fraca | Normal |
|---------------|-------------|---------|--------|----------|-------|--------|
| São Francisco | 3% | 5% | 6% | 15% | 11% | 60% |
| Sobradinho | 0% | 0% | 0% | 3% | 3% | 93% |
| Três Marias | 9% | 7% | 8% | 21% | 10% | 46% |

Monitoramento Nordeste

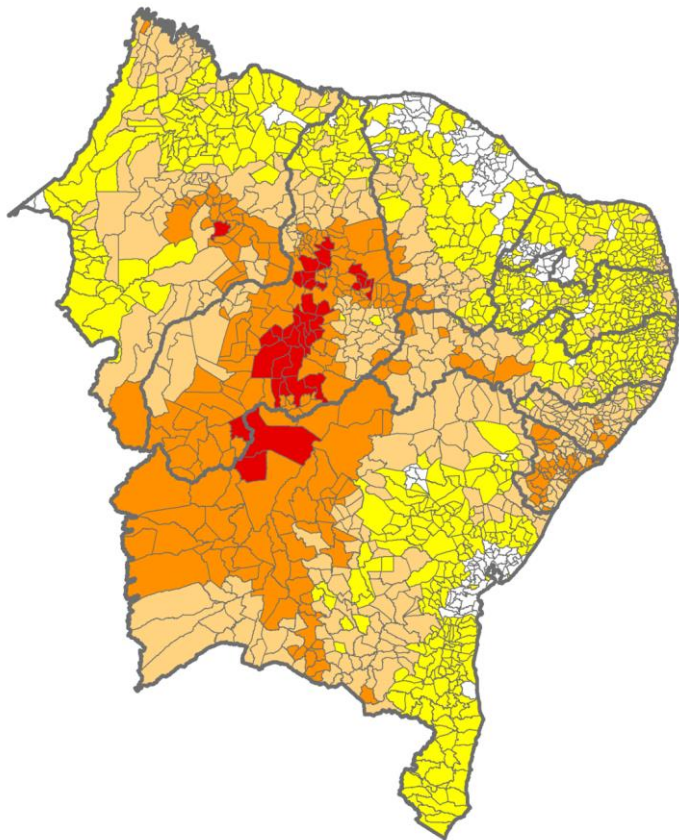


| SPI 12 - Junho de 2023 | | | | | | |
|--------------------------------|-------------|---------|--------|----------|-------|--------|
| Bacia | Excepcional | Extrema | Severa | Moderada | Fraca | Normal |
| Castanhão | 0% | 0% | 1% | 5% | 11% | 83% |
| Eng. Armando Ribeiro Gonçalves | 0% | 0% | 0% | 18% | 57% | 25% |
| Epitácio Pessoa / Boqueirão | 0% | 0% | 0% | 1% | 18% | 81% |
| Eng. Francisco Saboia | 0% | 0% | 0% | 0% | 0% | 100% |
| Pedra | 4% | 7% | 4% | 33% | 7% | 46% |

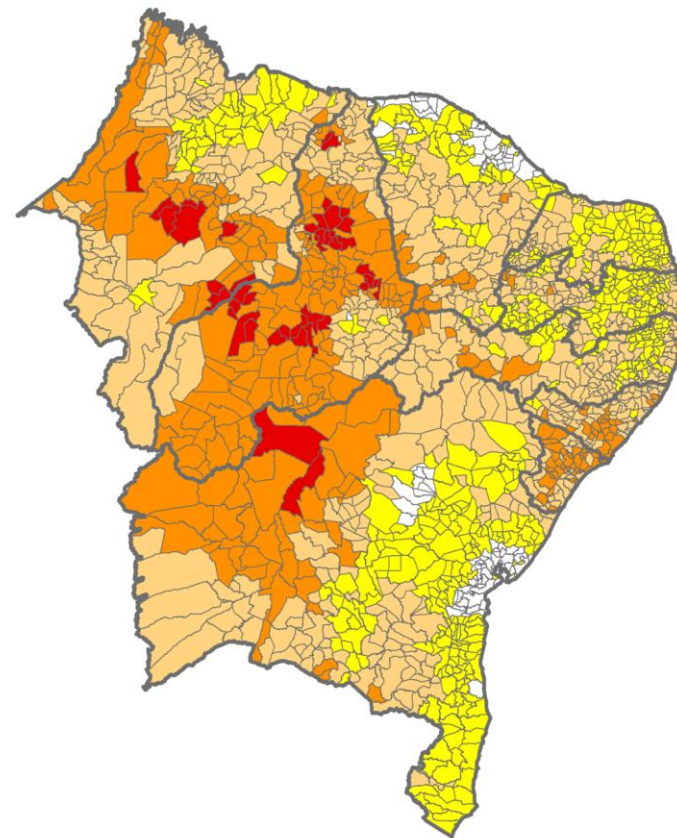
ÍNDICE INTEGRADO DE SECA - IIS

(SPI3 E 6 + VHI + AUS): **AGOSTO/2015**

IIS 3 MESES



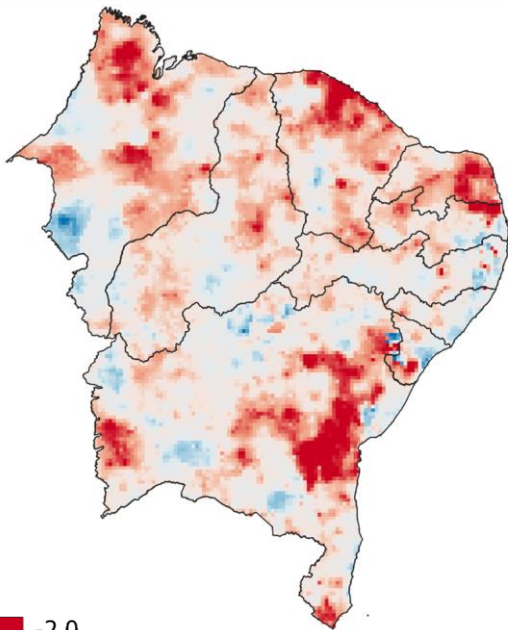
IIS 6 MESES



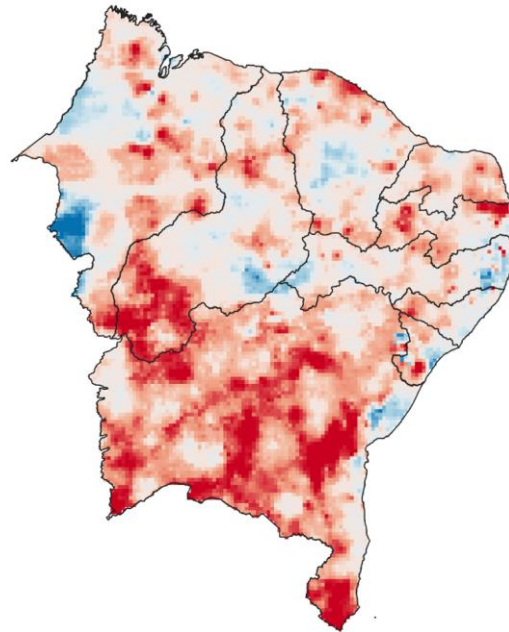
- Seca Excepcional
- Seca Extrema
- Seca Severa
- Seca Moderada
- Seca Fraca
- Normal

SPI: JUNHO2023

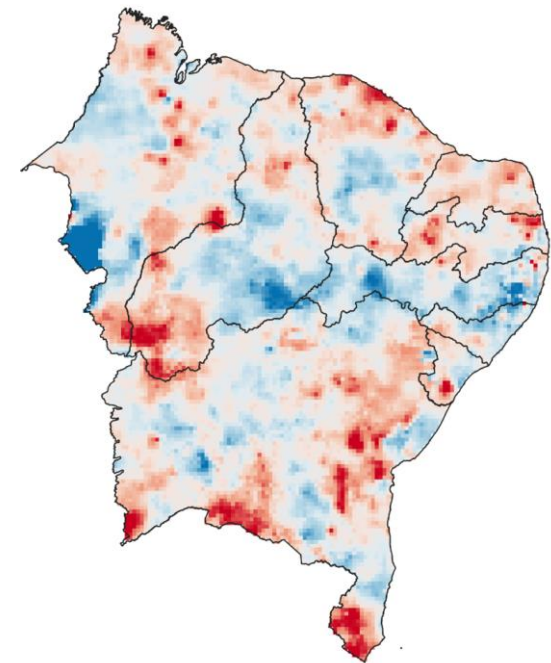
SPI03



SPI06



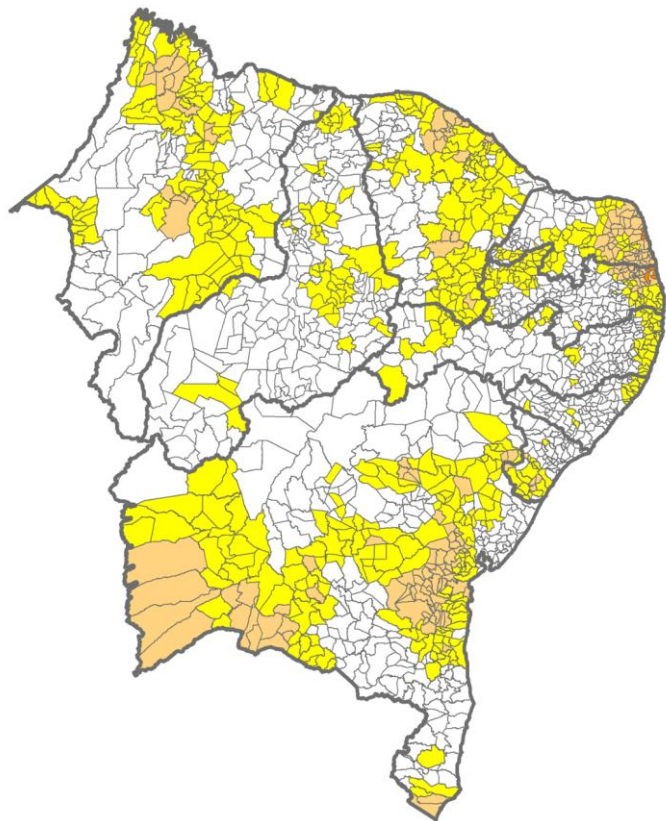
SPI12



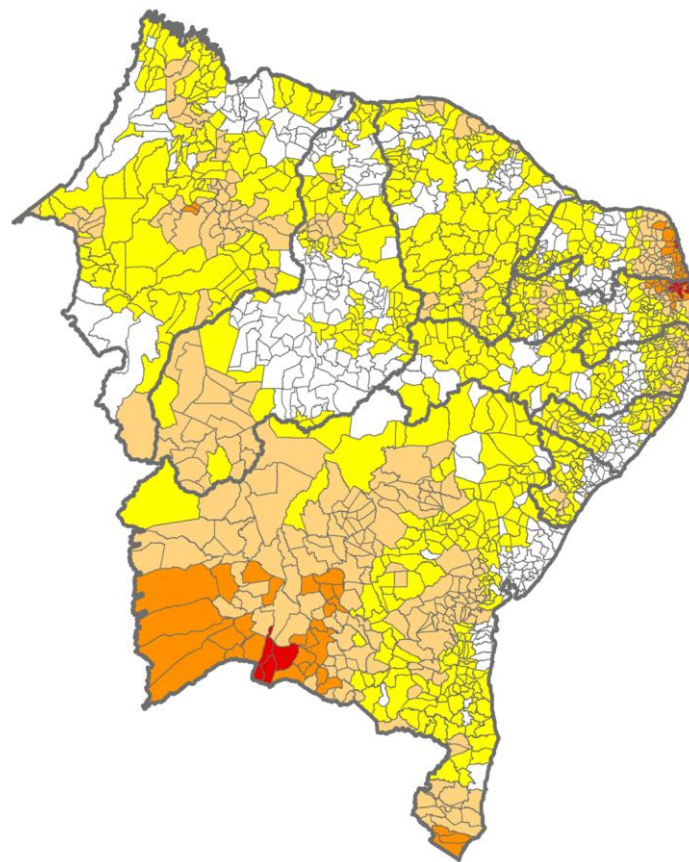
ÍNDICE INTEGRADO DE SECA - IIS

(SPI3 E 6 + VHI + AUS): JUNHO/2023

IIS 3 MESES



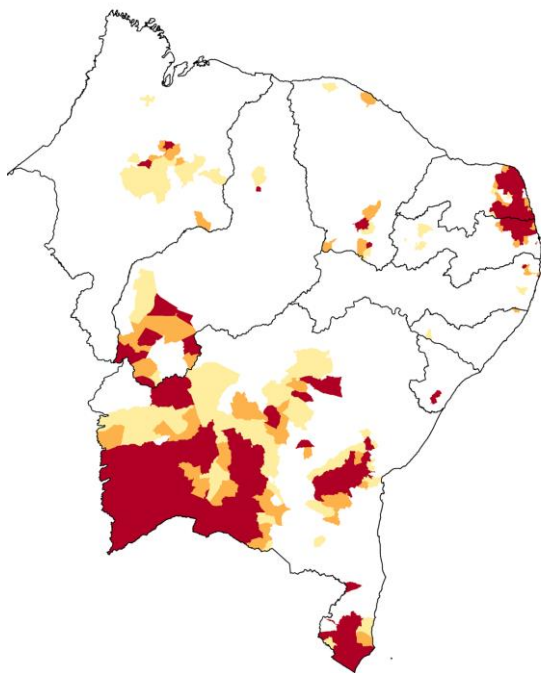
IIS 6 MESES



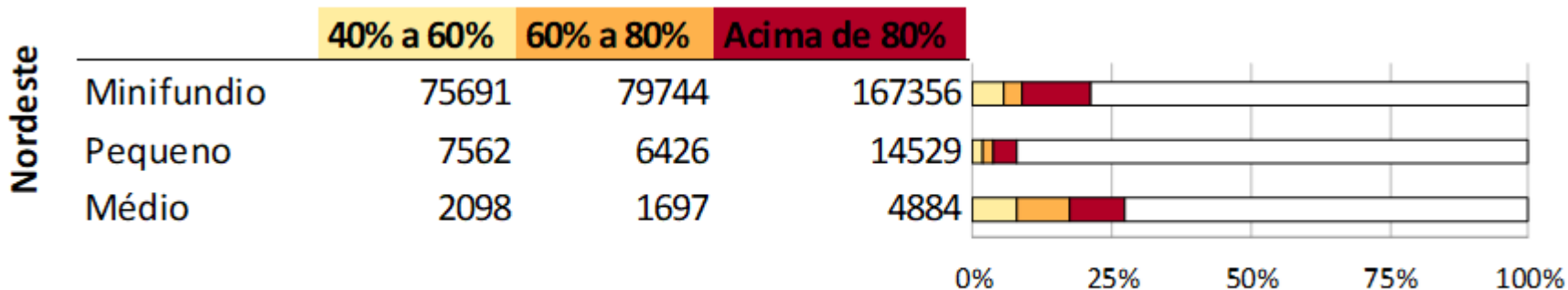
- Seca Excepcional
- Seca Extrema
- Seca Severa
- Seca Moderada
- Seca Fraca
- Normal

ÁREAS DE PASTAGENS E AGRÍCOLAS AFETADAS PELA SECA

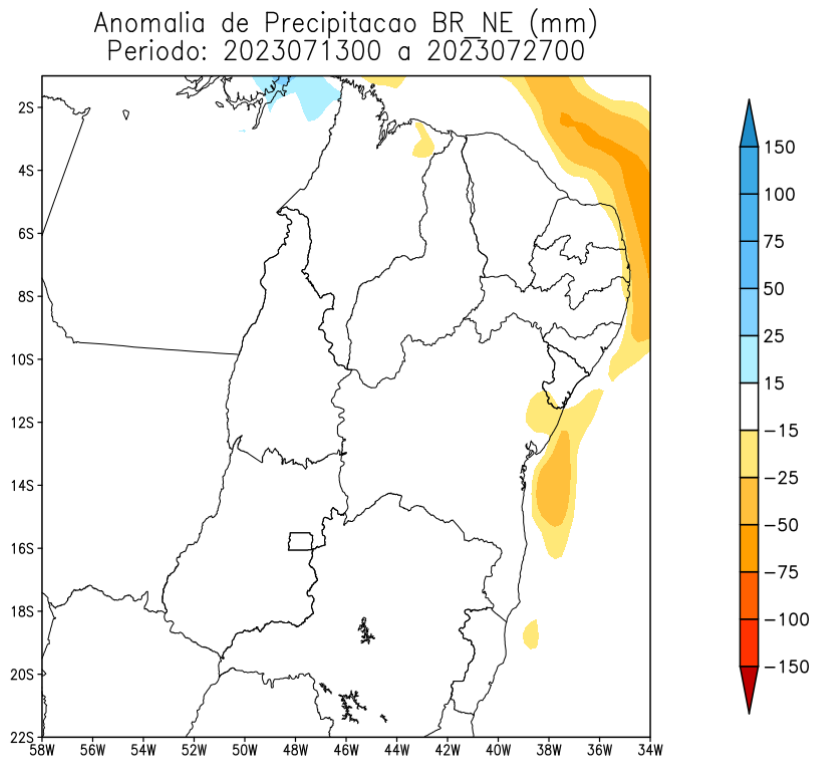
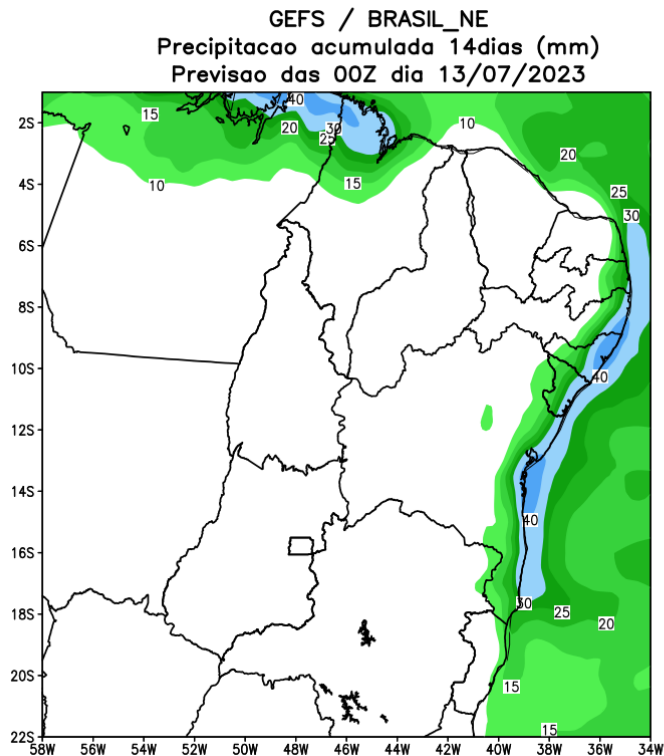
JUN/23



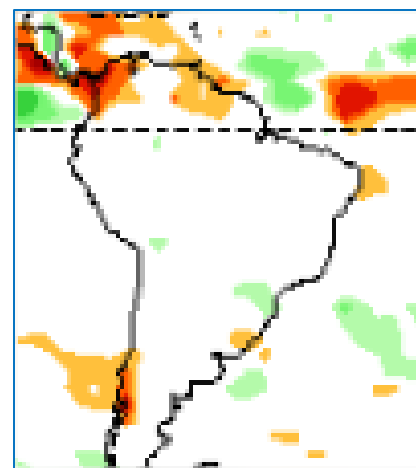
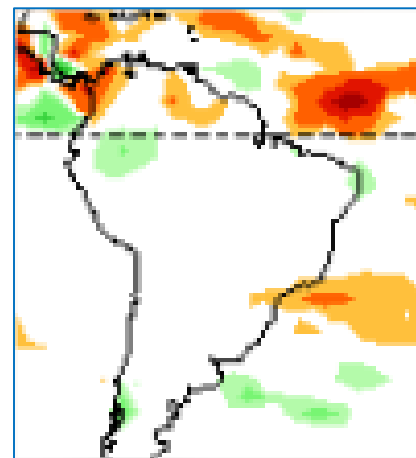
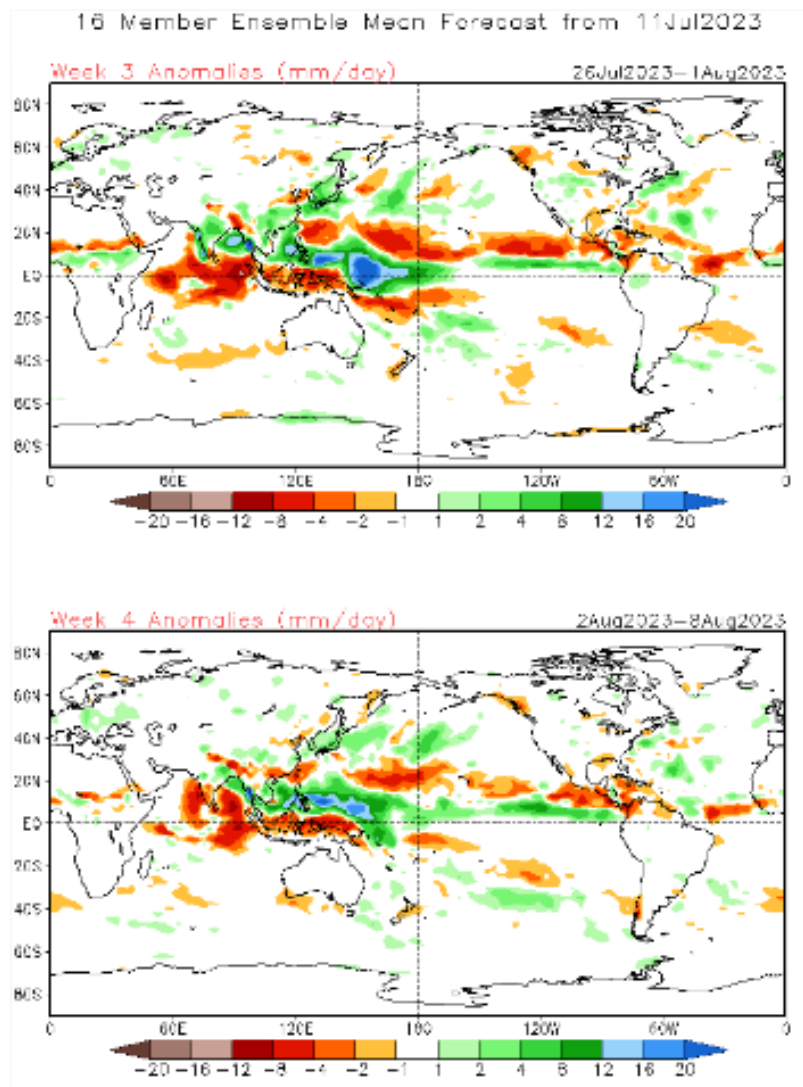
| UF | 40 a 60% | 60 - 80% | > 80% |
|----|----------|----------|-------|
| AL | 1 | 1 | |
| BA | 37 | 28 | 92 |
| CE | 3 | 6 | 2 |
| MA | 15 | 7 | 4 |
| PB | 4 | 6 | 35 |
| PE | 3 | 3 | 2 |
| PI | 3 | 5 | 8 |
| RN | 3 | 9 | 44 |
| SE | | | 4 |



Tendência de Chuva para as próximas duas semanas

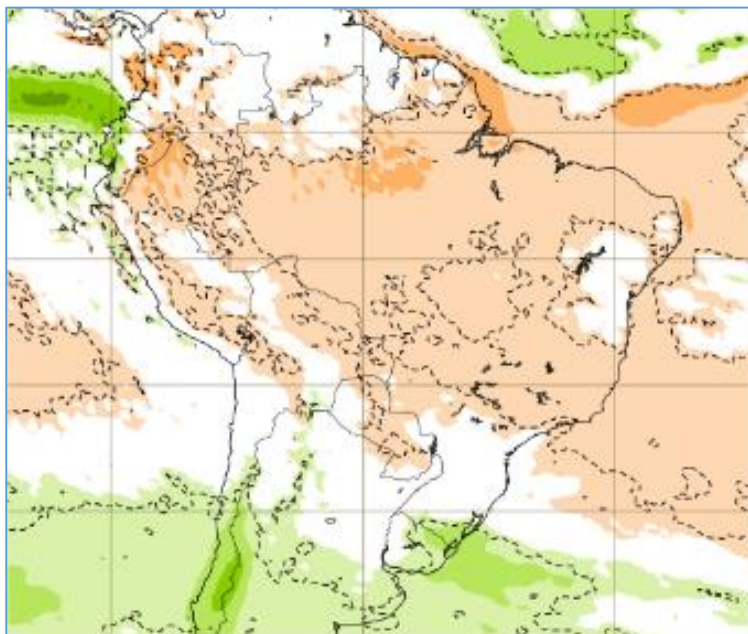


Tendência 3a e 4a semanas

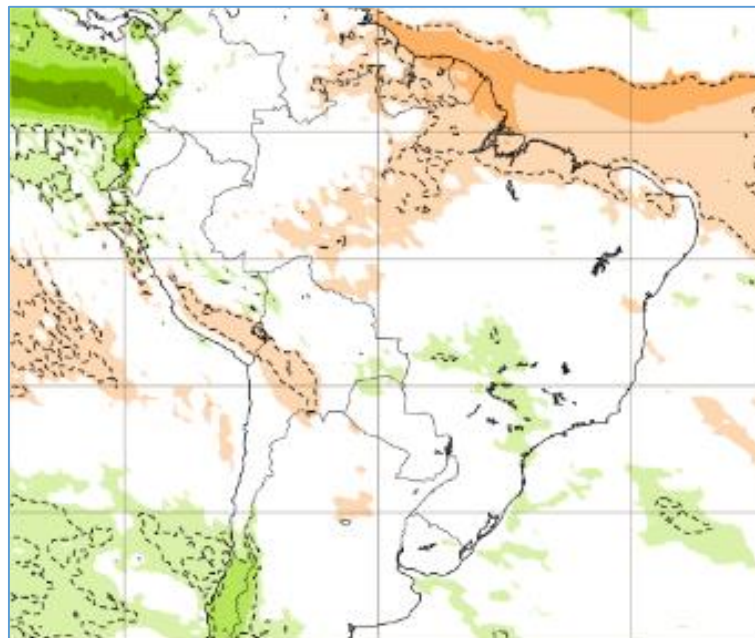


Tendência para 3ª e 4ª semanas

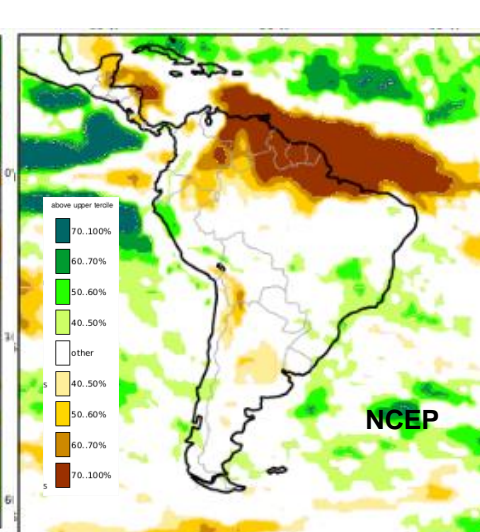
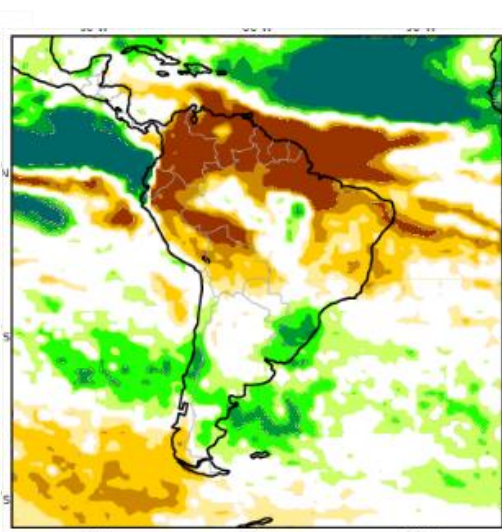
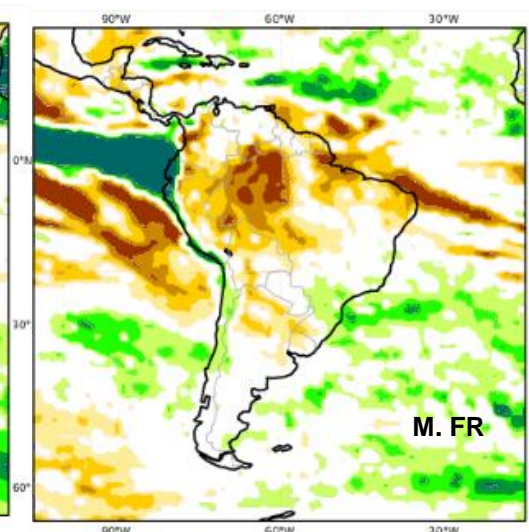
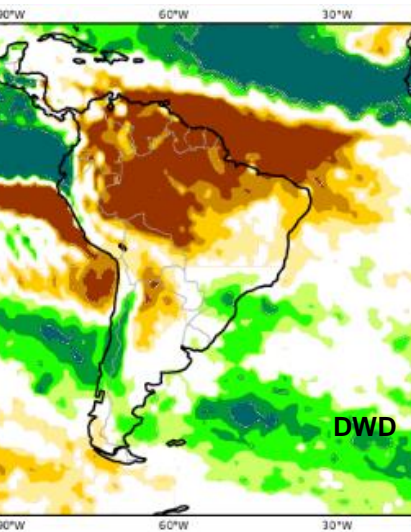
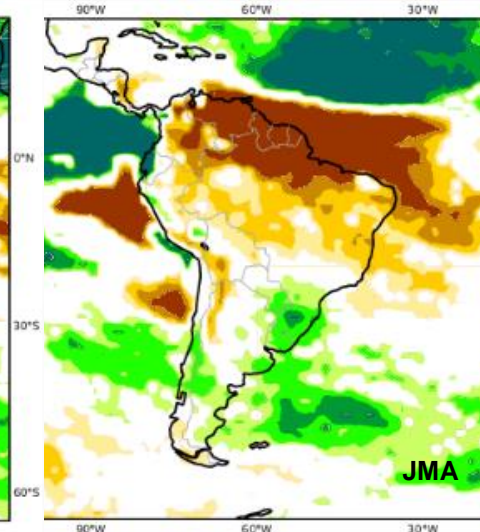
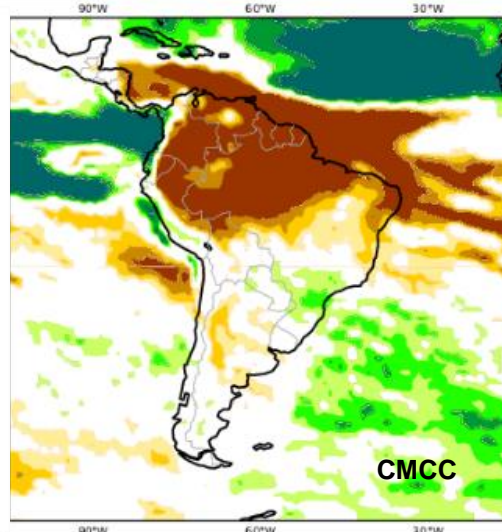
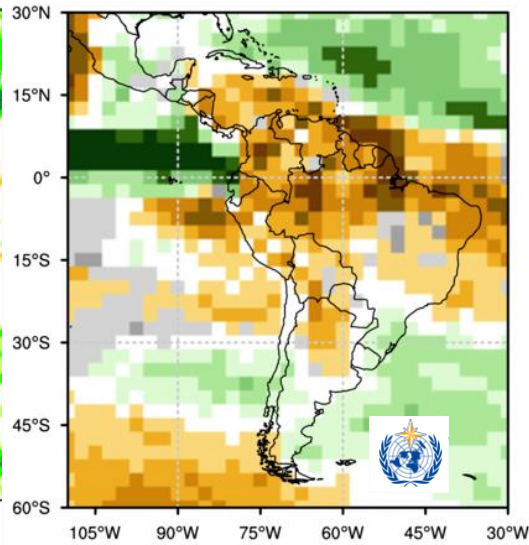
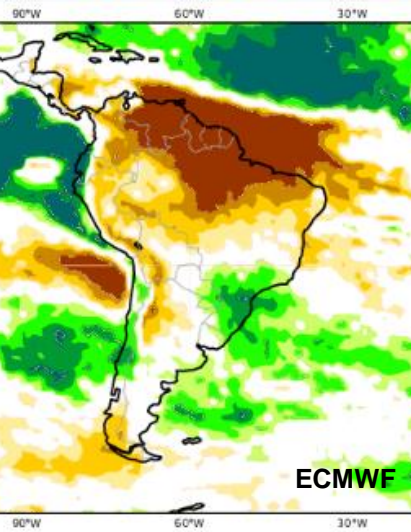
24-31/07



31/07-06/08



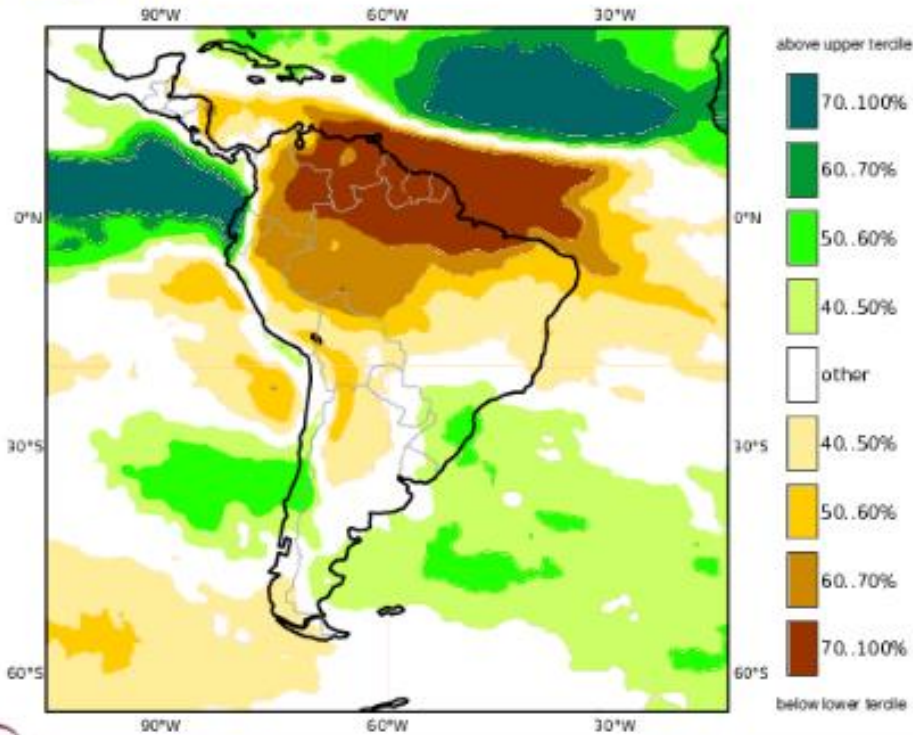
Previsão sazonal de Chuva ASO



Previsão Multi Modelo ASO

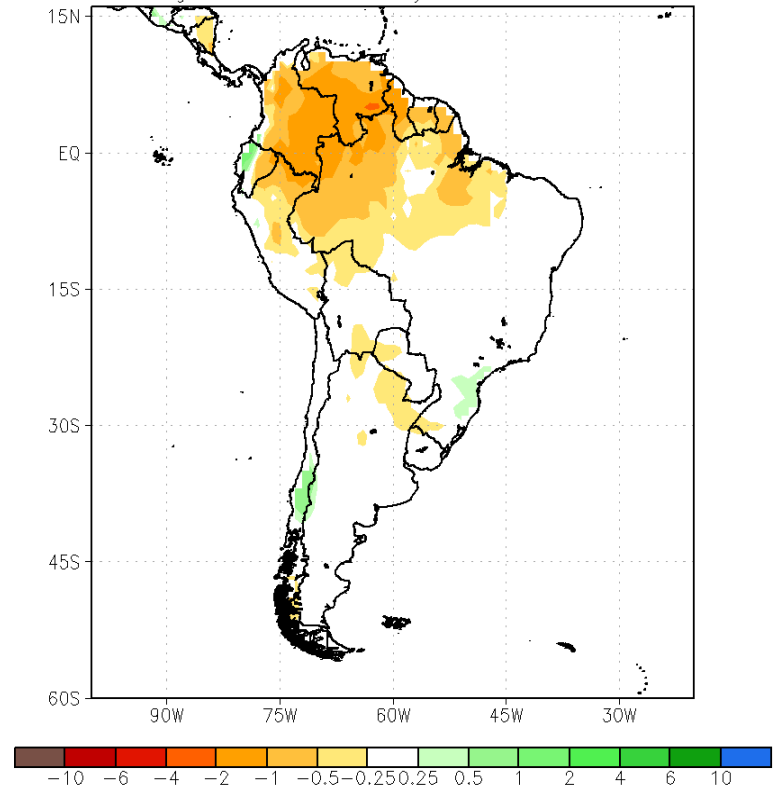
C3S multi-system seasonal forecast
Prob(most likely category of precipitation)
Nominal forecast start: 01/07/23
Unweighted mean

ASO 2023



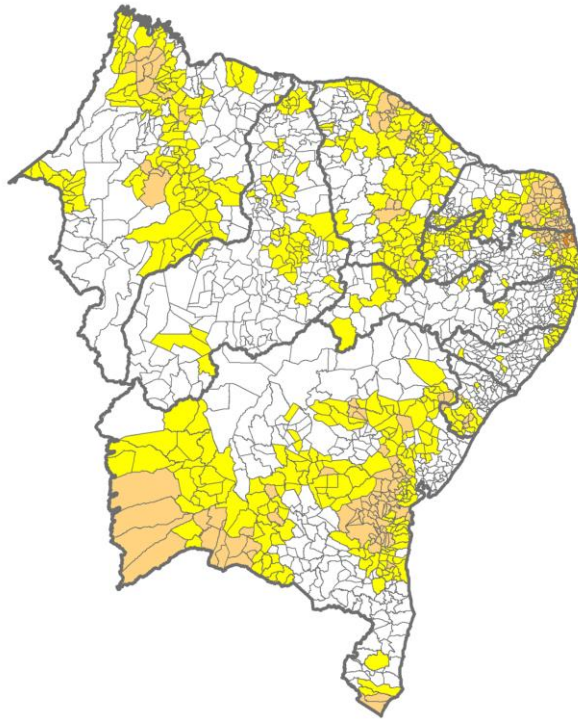
NMME Precipitation Anomalies (mm/day)

Aug2023–Oct2023 July2023 initial conditions

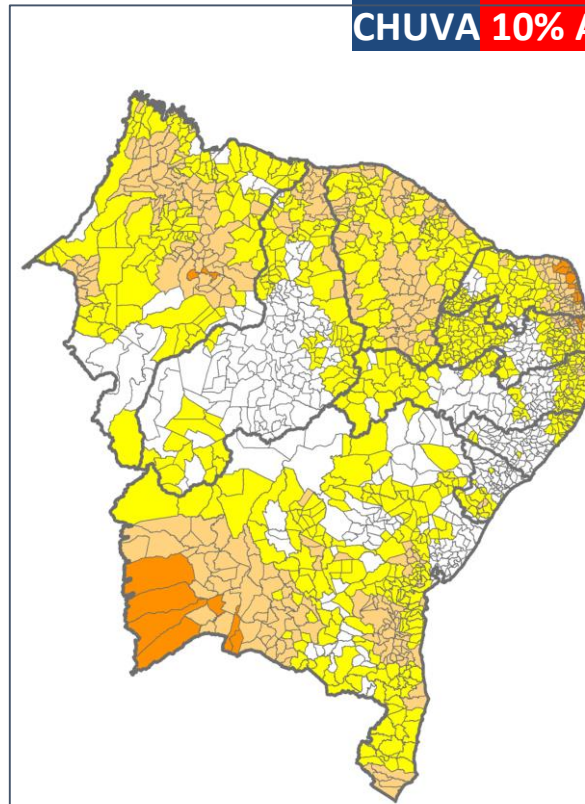


CENÁRIOS ÍNDICE INTEGRADO DE SECA - JULHO E AGOSTO/2023

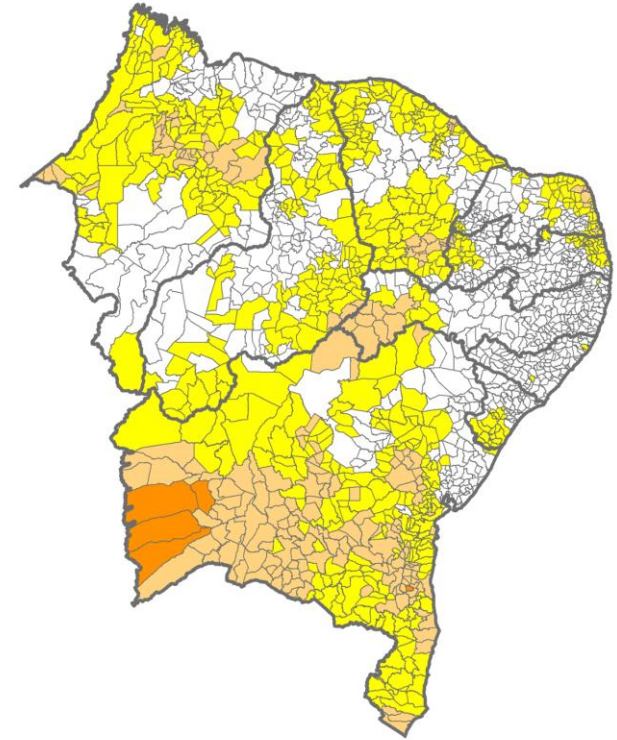
IIS3 - junho



IIS3 - julho



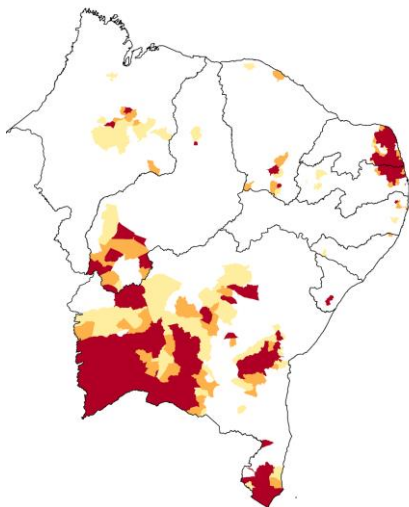
IIS3- agosto



- Seca Excepcional
- Seca Extrema
- Seca Severa
- Seca Moderada
- Seca Fraca
- Normal

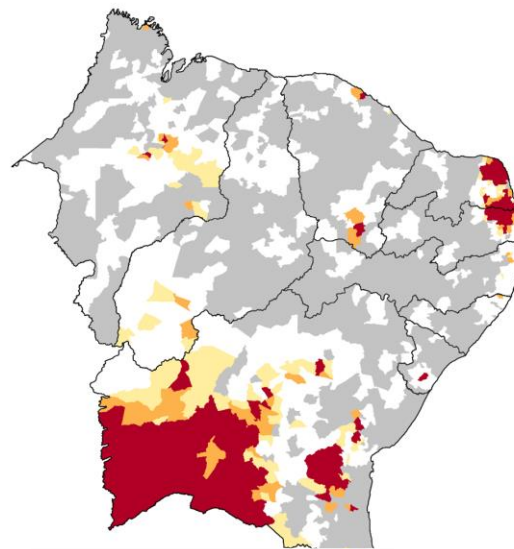
ÁREAS DE PASTAGENS E AGRÍCOLAS AFETADAS PELA SECA

OBSERVADO - JUN/23



| | 40 a 60% | 60 - 80% | > 80% |
|----------------|----------|----------|-------|
| Junho | 69 | 65 | 191 |
| Previsão - Jul | 78 | 51 | 156 |
| Previsão - Ago | 60 | 56 | 110 |

PREVISÃO – JUL-AGO/23



Atenção

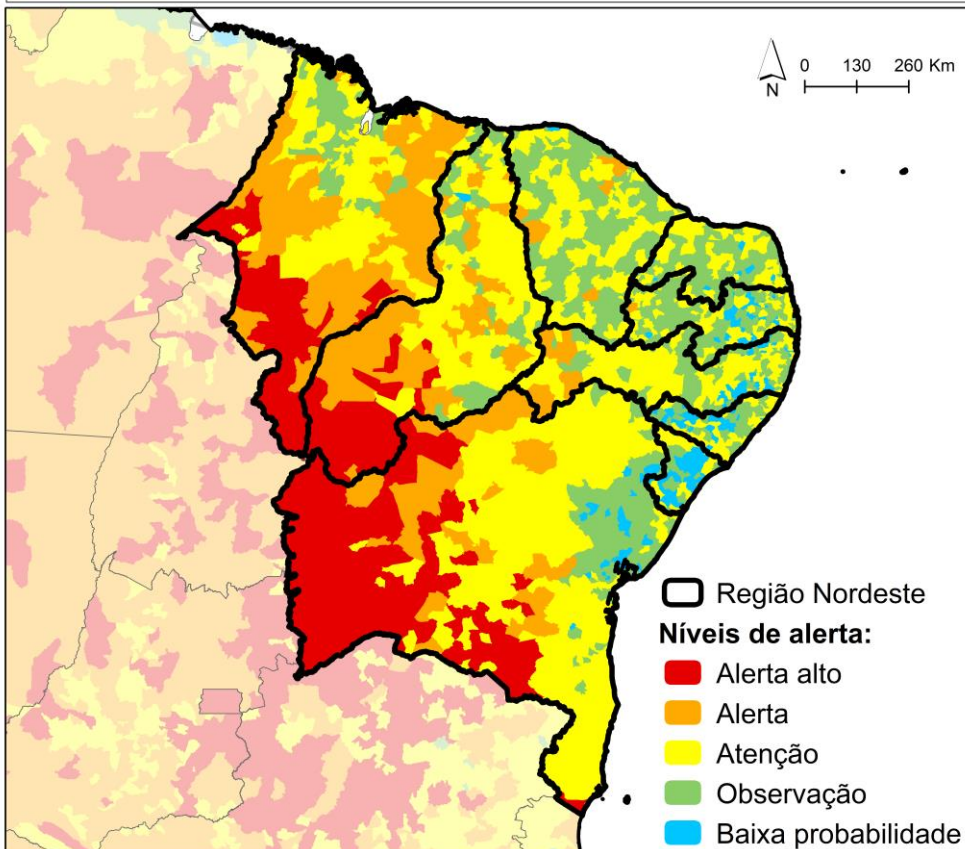
**1.050 MUNICÍPIOS EM
ESTADO DE ATENÇÃO**

ATENÇÃO: MUNICÍPIOS COM MENOS DE 40% DAS ÁREAS AGROPRODUTIVAS AFETADAS PELA SECA, MAS QUE TIVERAM UM AUMENTO DESTA ÁREA EM RELAÇÃO AO MÊS ANTERIOR.

Previsão de probabilidade de fogo - Jul-Ago-Set 2023

Previsão de alertas por municípios

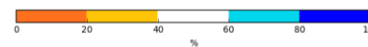
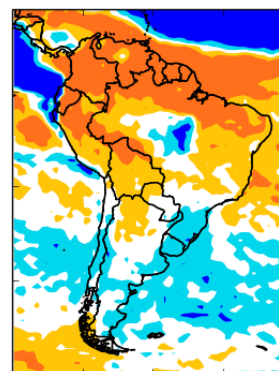
Previsão da Probabilidade de Fogo para a região Nordeste brasileira para o período de Julho, Agosto e Setembro de 2023



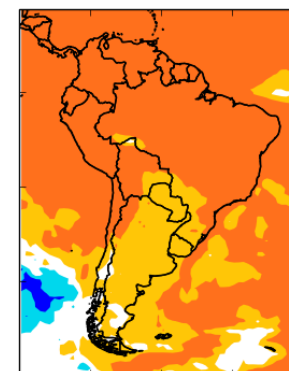
Resultados dos níveis de alerta para municípios brasileiros:

| Nível de Alerta | Número de municípios | Área (km ²) |
|---------------------|----------------------|-------------------------|
| Alerta alto | 355 | 1,318,169 |
| Alerta | 610 | 3,215,210 |
| Atenção | 2217 | 2,699,309 |
| Observação | 768 | 253,615 |
| Baixa probabilidade | 1620 | 1,010,974 |

Probabilidade de Chuva JAS

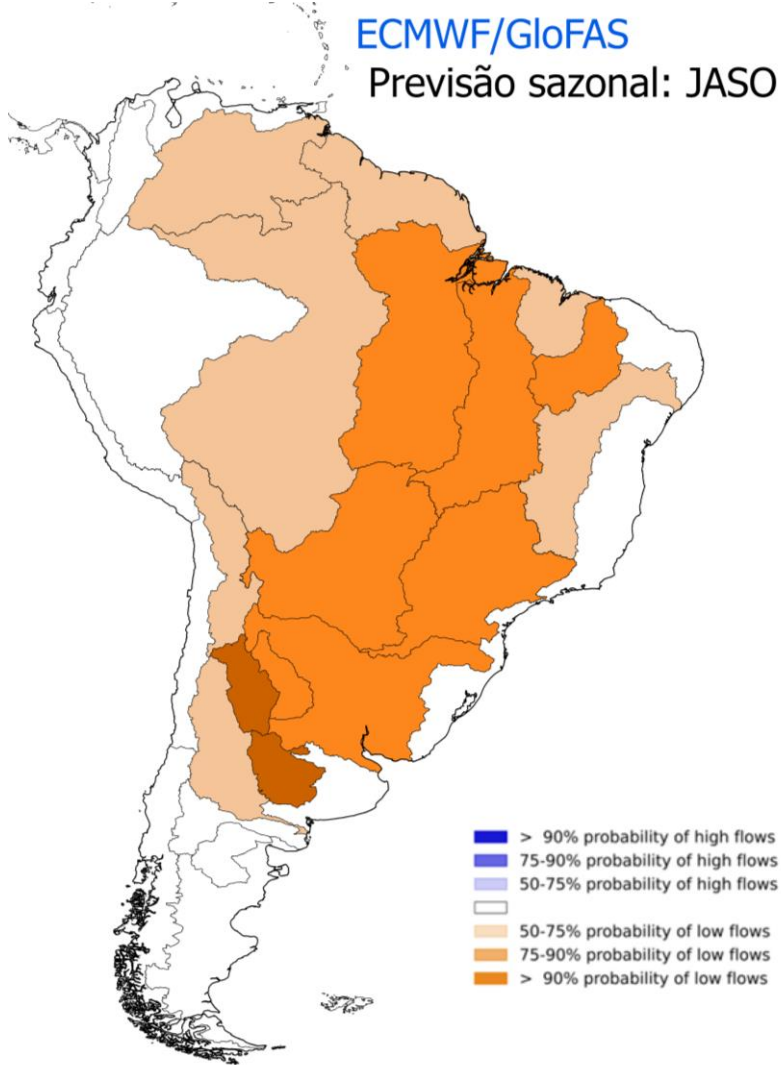


Probabilidade de Temperatura JAS



Previsão Sazonal de vazão

ECMWF/GloFAS
Previsão sazonal: JASO



ECMWF/GloFAS
Previsão sazonal: JASO

