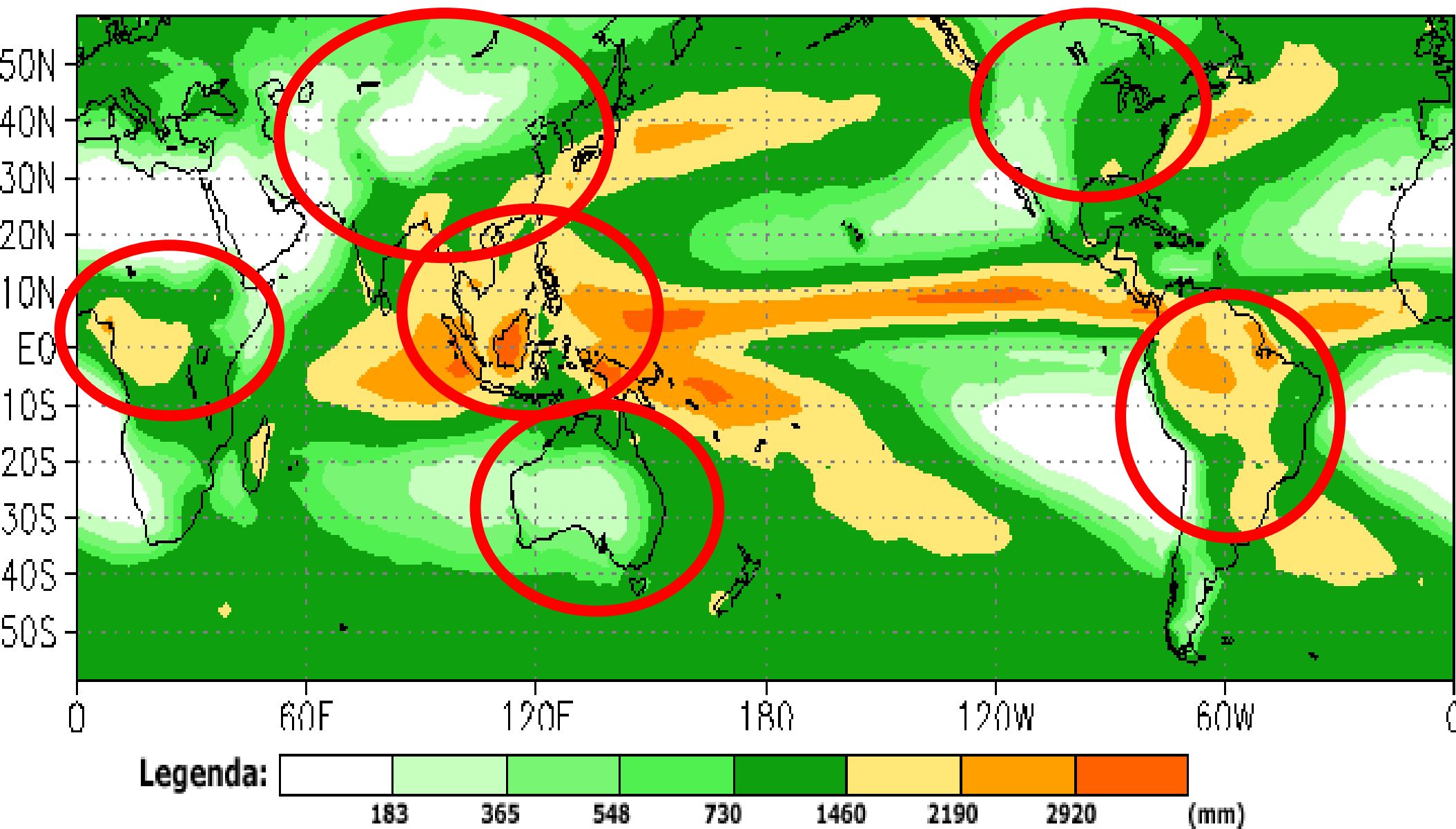


# CLIMA: RELATÓRIO DE TENDÊNCIAS PARA 2019/2020

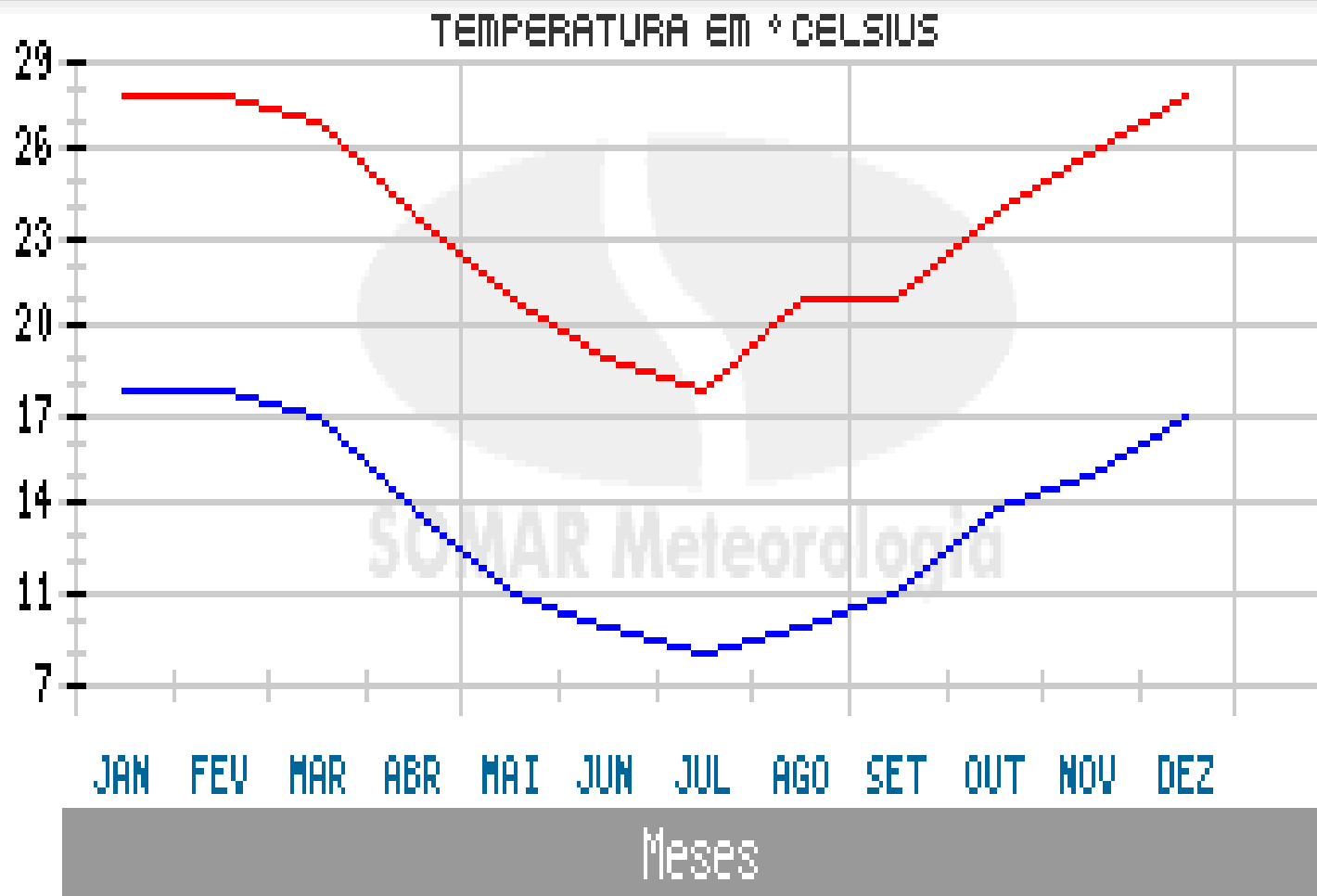
**Abril/2019**

# CHUVA ANUAL NO GLOBO

Total anual de precipitação

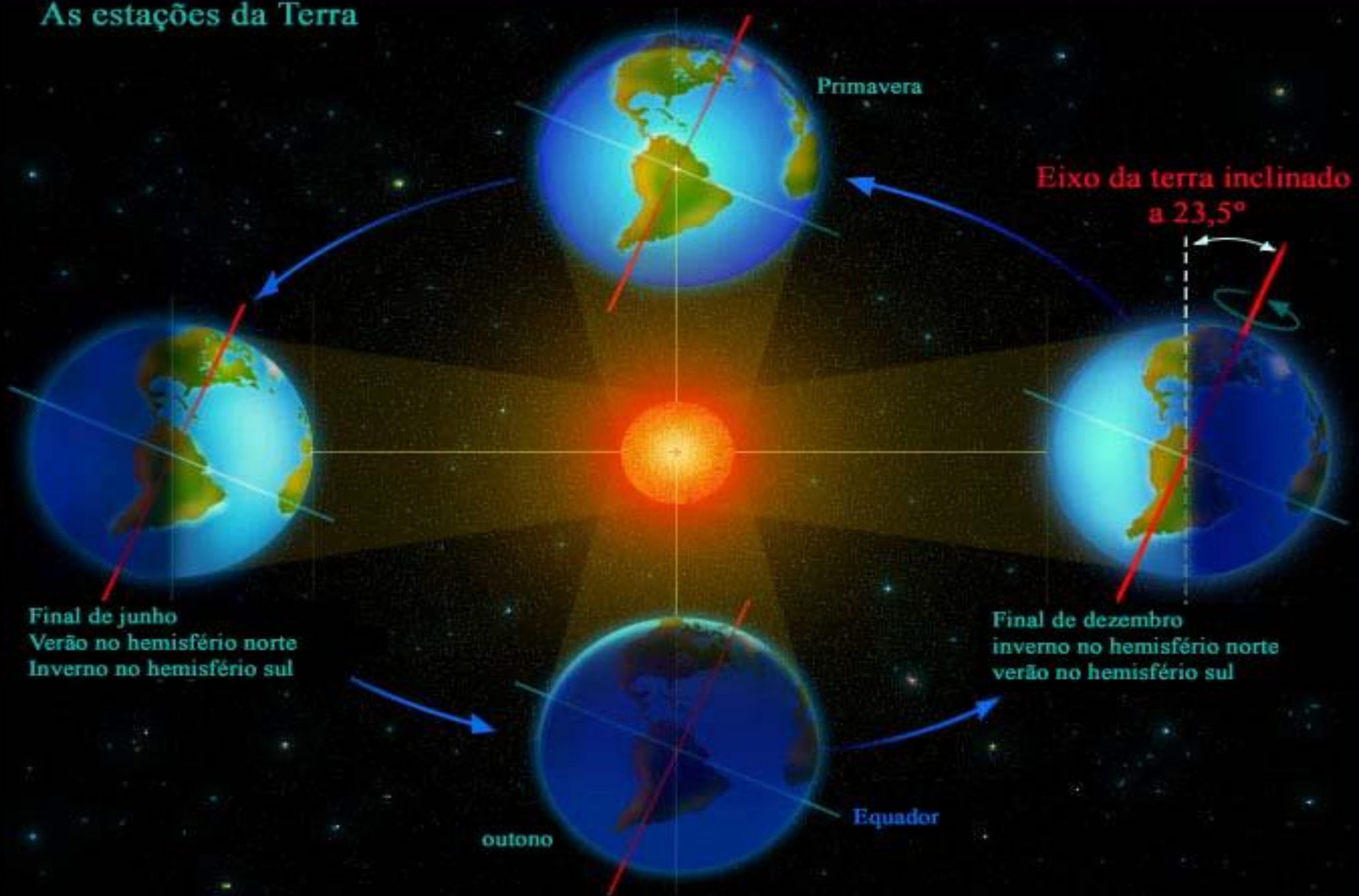


## Temperaturas médias, mínima e máxima, em Getulio Vargas-RS



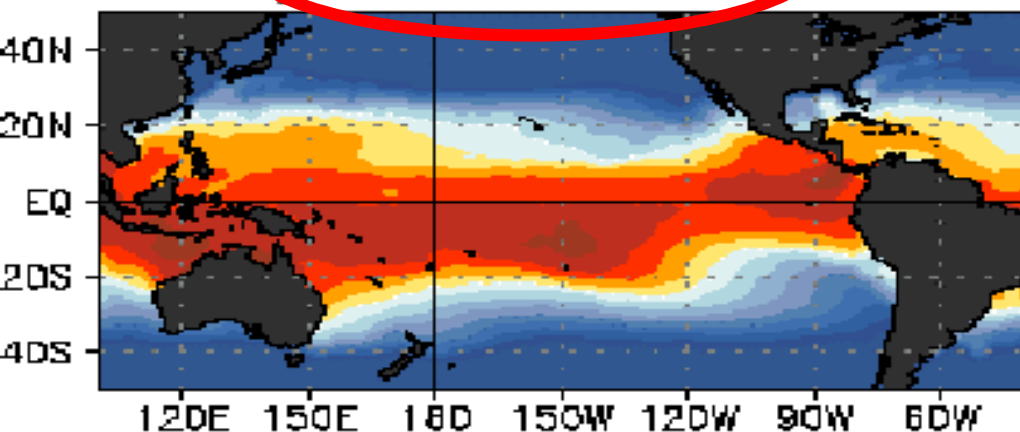
# Ciclos do CLIMA: SAZONALIDADE

## As estações da Terra

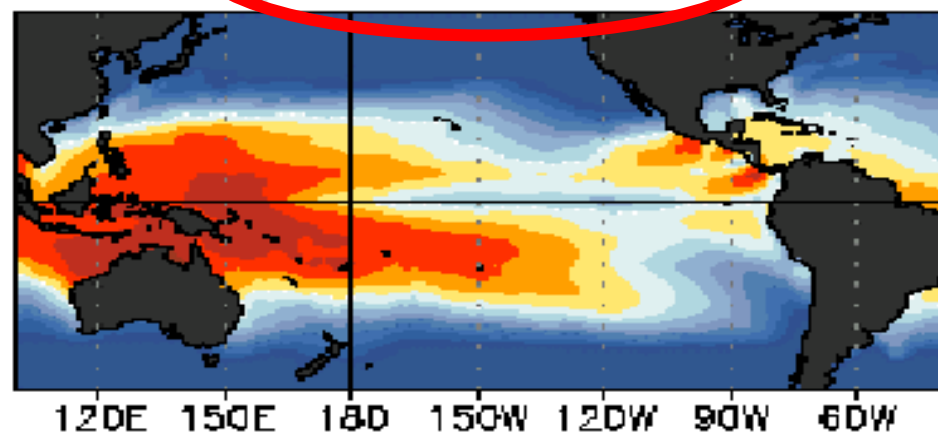


## TEMPERATURAS OCEÂNICAS (°C)

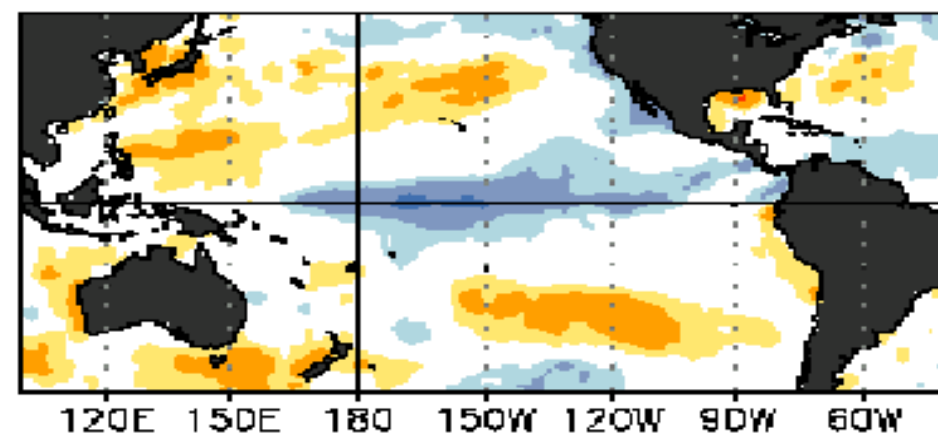
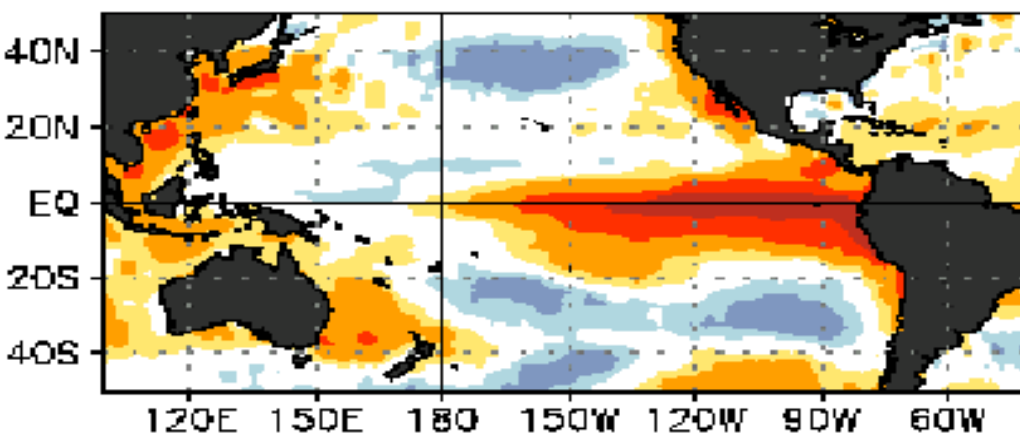
**EL NIÑO**  
Jan-Mar 1998



**LA NIÑA**  
Jan-Mar 1989



## ANOMALIAS DE TEMPERATURA (°C)

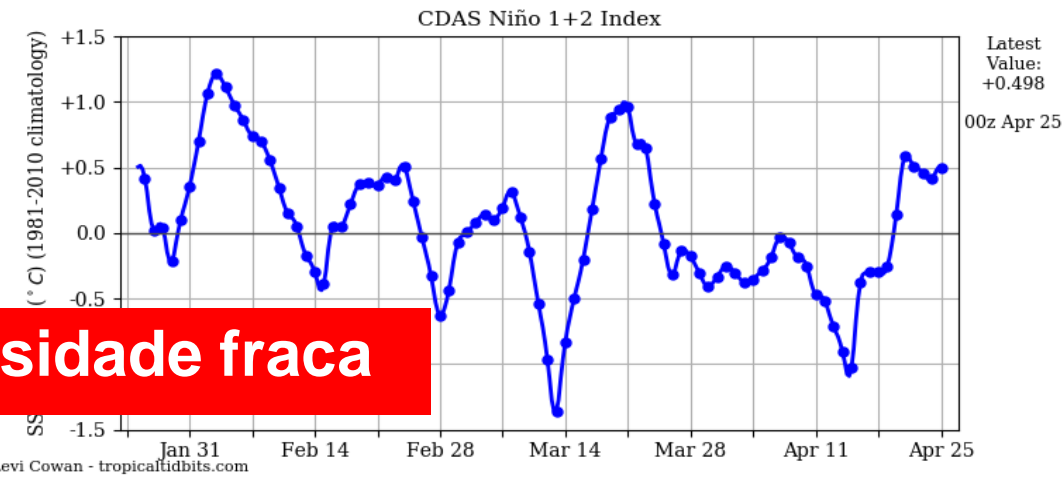
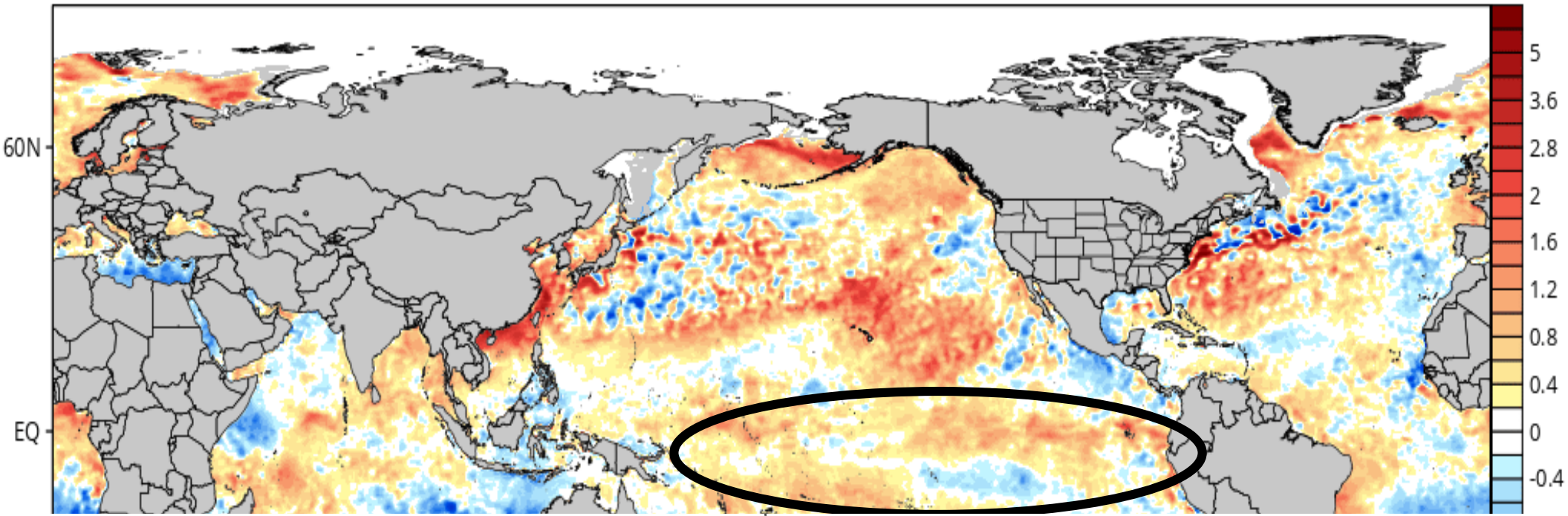


# 2019 segue com condições de EL NIÑO

CDAS Sea Surface Temperature Anomaly (°C) (based on CFSR 1981-2010 Climatology)

Analysis Time: 00z Apr 25 2019

TROPICALTIDBITS.COM

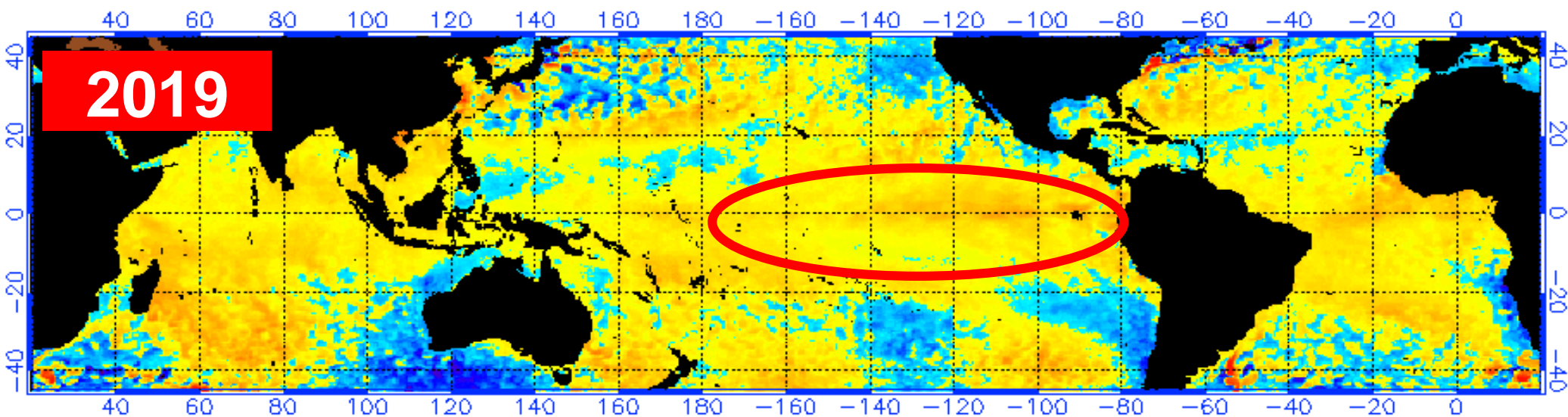


**EL NIÑO de intensidade fraca**

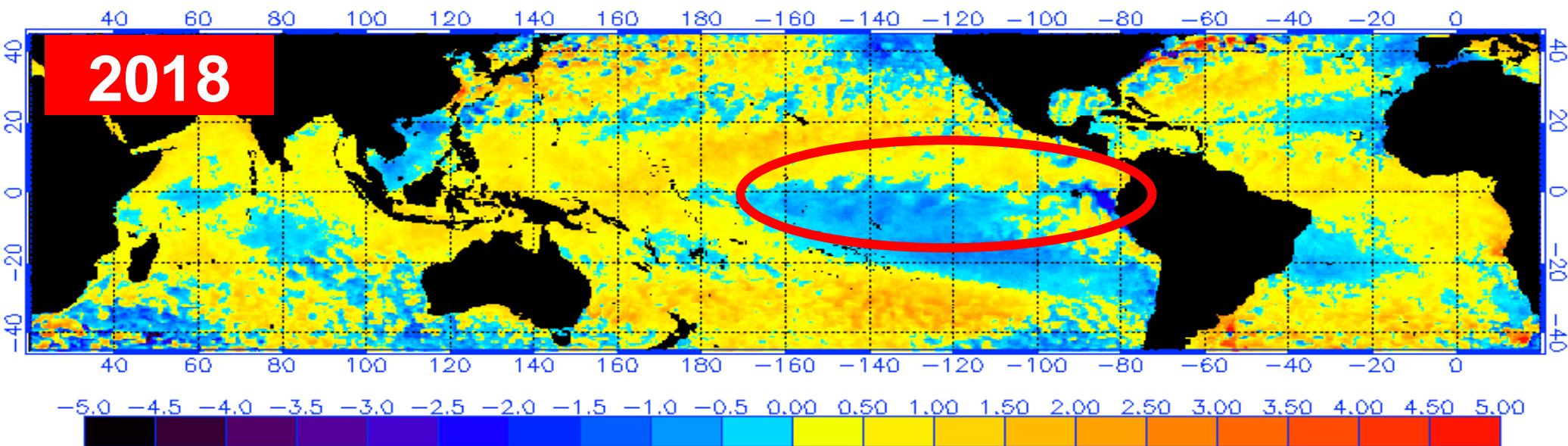


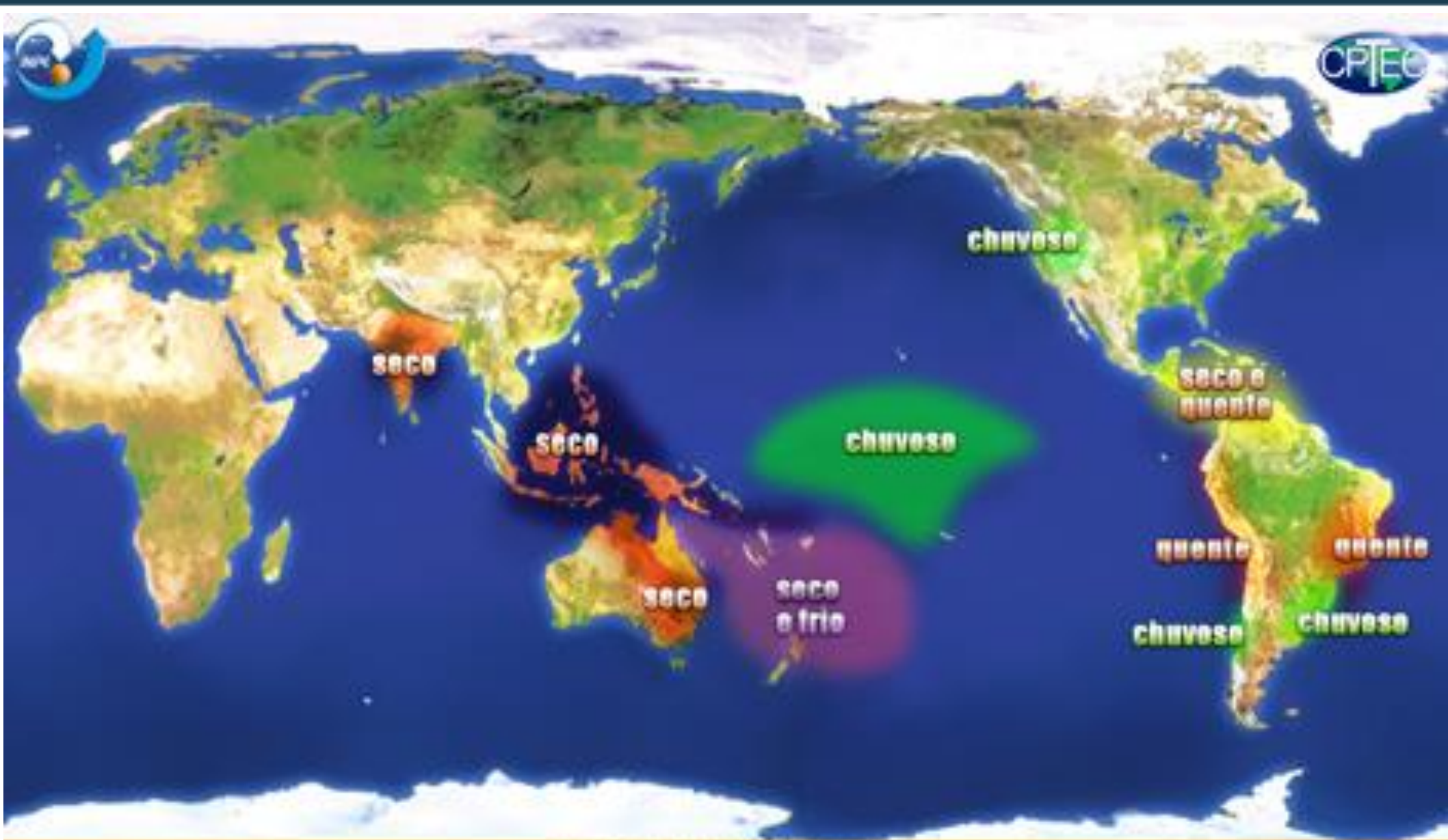
# CENÁRIO CLIMÁTICO DE 2019 MUDA EM RELAÇÃO A 2018

NOAA/NESDIS SST Anomaly (degrees C), 4/22/2019



NOAA/NESDIS SST Anomaly (degrees C), 4/23/2018





**Junho, Julho e Agosto**

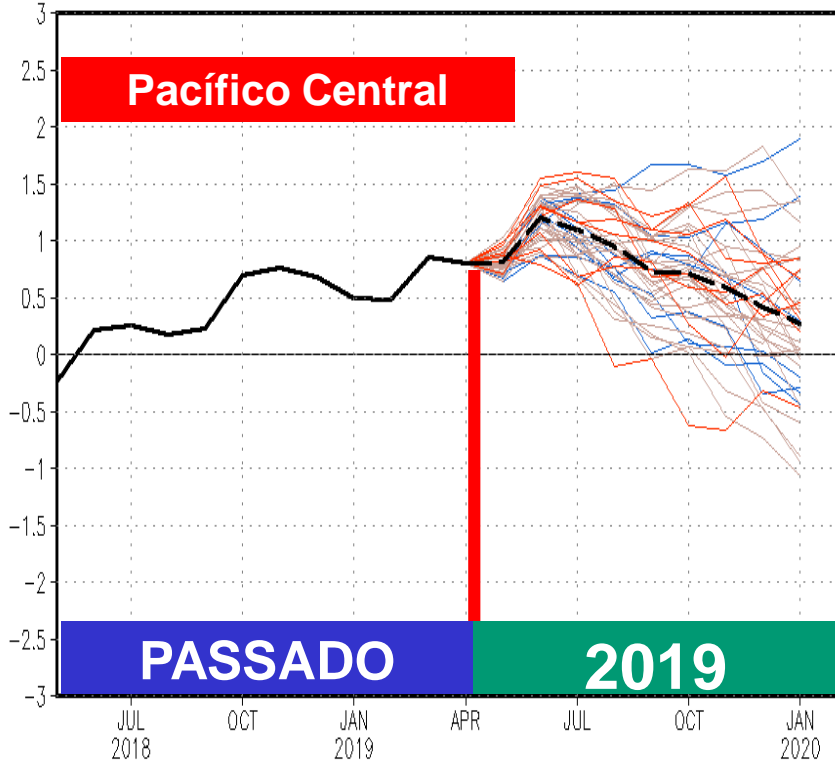




NWS/NCEP/CPC

Last update: Wed Apr 24 2019  
Initial conditions: 13Apr2019–22Apr2019

CFSv2 forecast Nino3.4 SST anomalies (K)



— Latest 8 forecast members      - - - Forecast ensemble mean  
— Earliest 8 forecast members      — NCDC daily analysis  
— Other forecast members

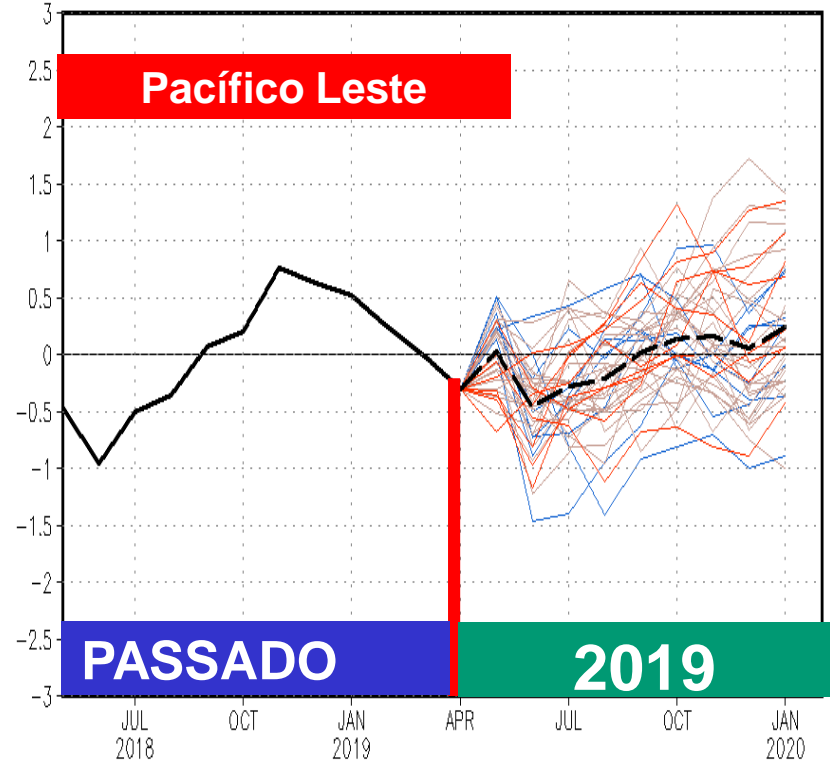
(Model bias correct base period: 1999–2010; Climatology base period: 1982–2010)



NWS/NCEP/CPC

Last update: Wed Apr 24 2019  
Initial conditions: 13Apr2019–22Apr2019

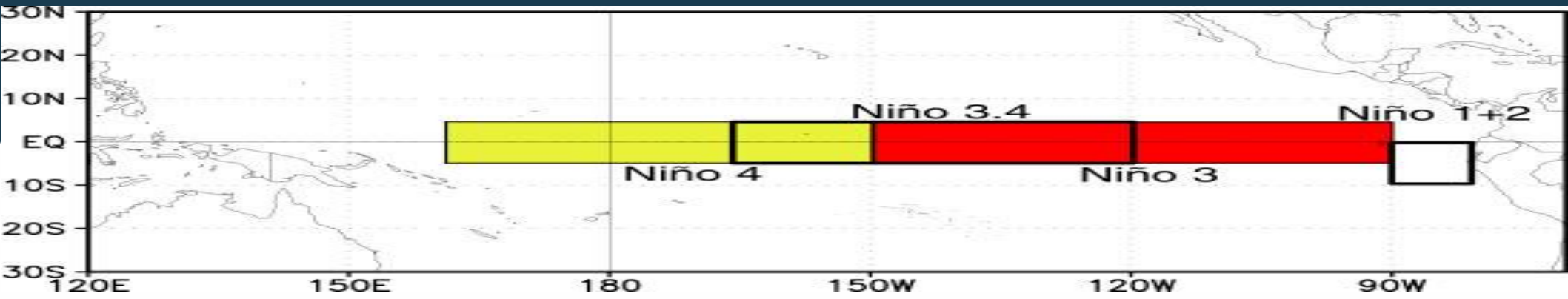
CFSv2 forecast Nino1+2 SST anomalies (K)



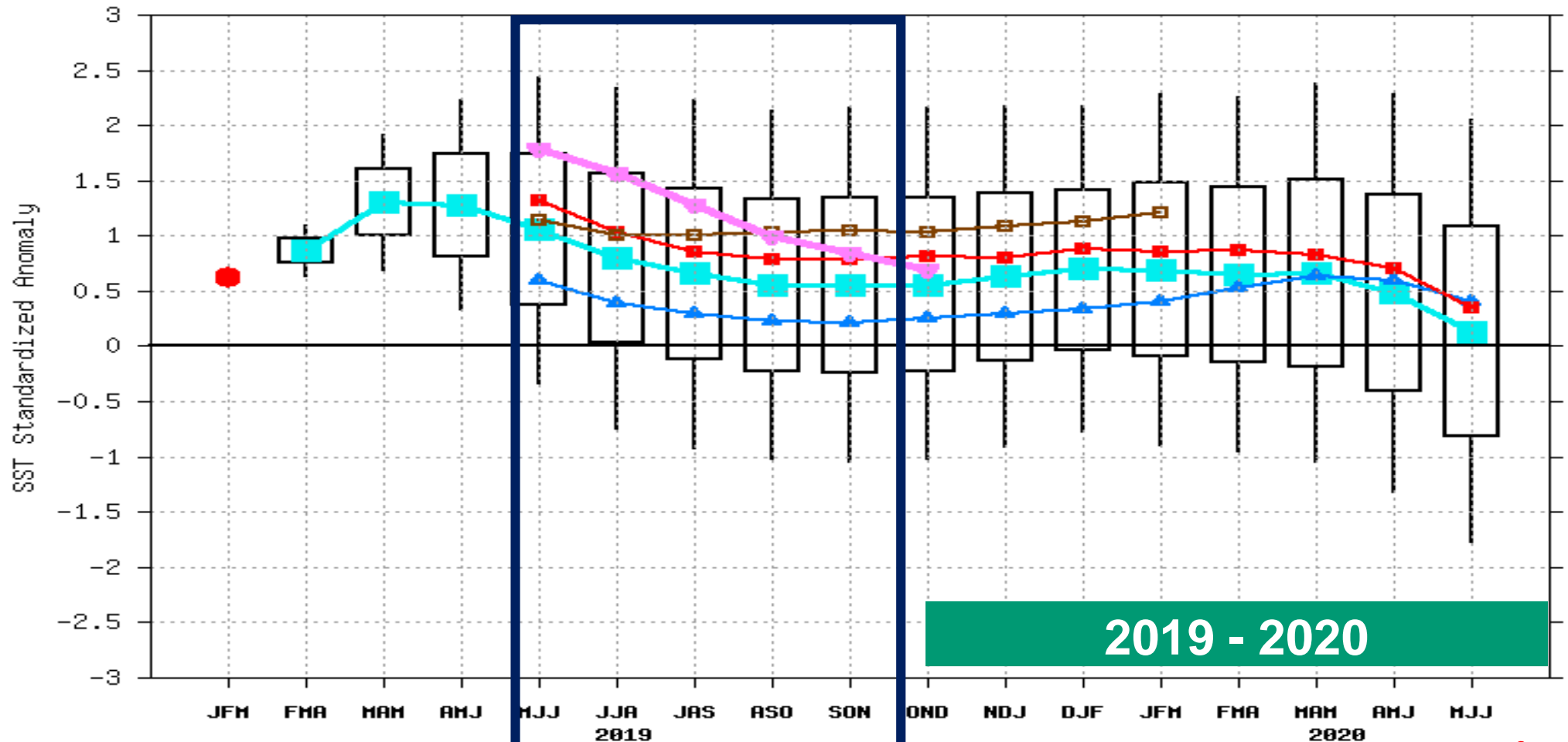
— Latest 8 forecast members      - - - Forecast ensemble mean  
— Earliest 8 forecast members      — NCDC daily analysis  
— Other forecast members

(Model bias correct base period: 1999–2010; Climatology base period: 1982–2010)





SST CONSOLIDATION NINO 3.4



2019 - 2020

- CON
- CA
- CCA
- MKV
- CFS
- CFSv2
- OBS

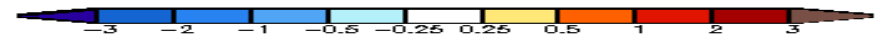
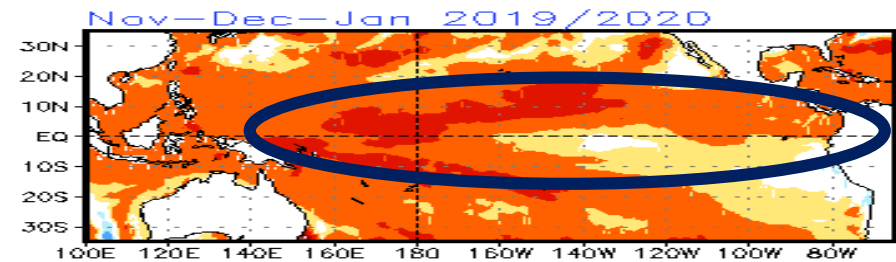
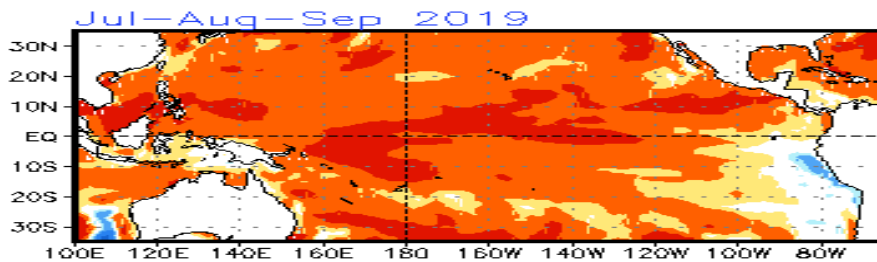
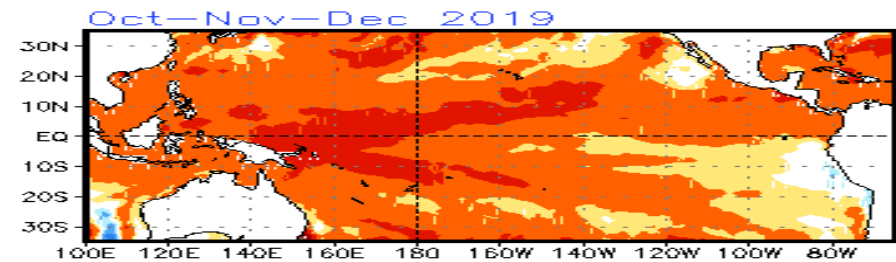
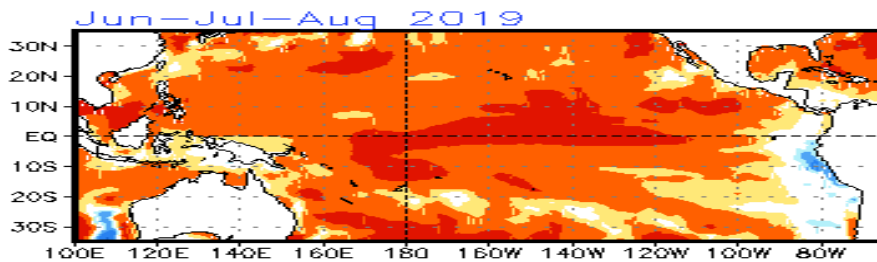
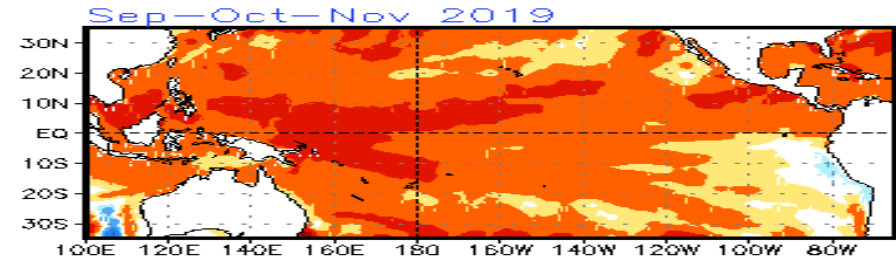
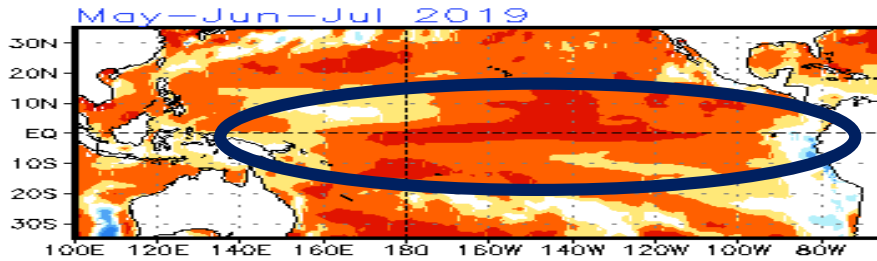


NWS/NCEP/CPC

Initial conditions: 12Apr2019–21Apr2019

Last update: Tue Apr 23 2019

CFSv2 seasonal SST (K)

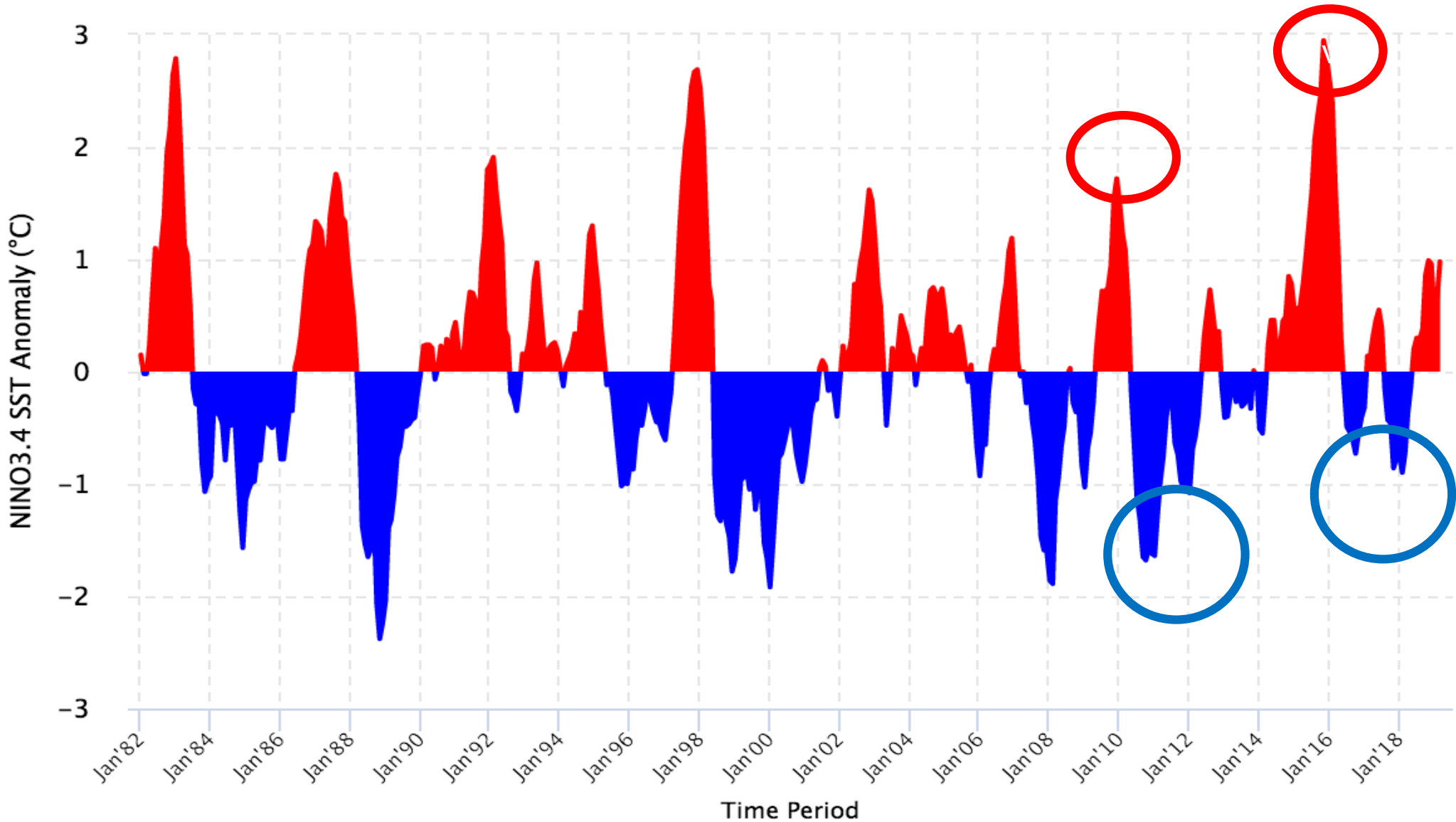


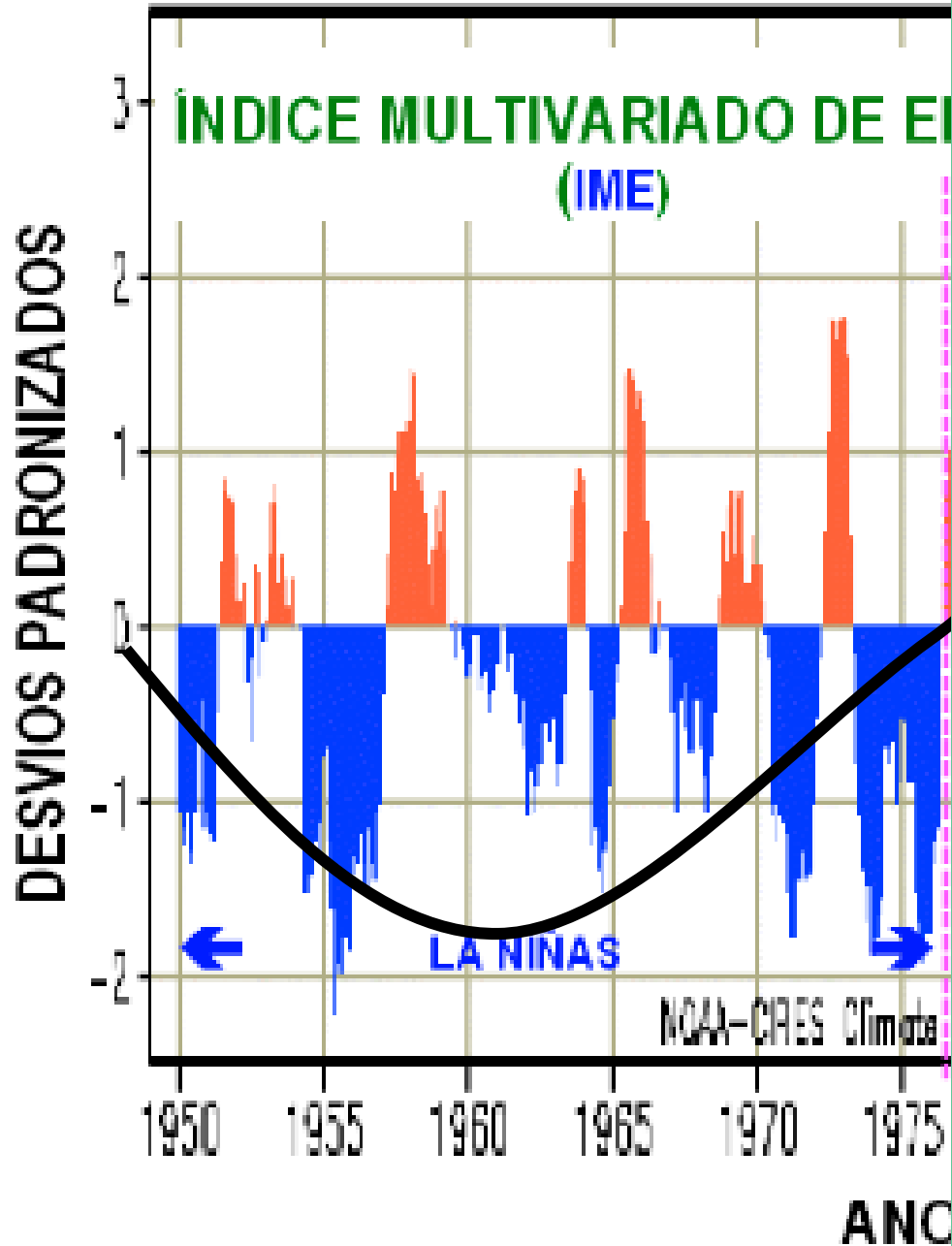
**Cenário climático para o INVERNO e PRIMAVERA de 2019 pode ser comparado com o observado em 2005**



# CICLOS DE EL NIÑOS E LA NIÑAS

Historical Nino 3.4 Sea Surface Temperature Anomaly





## PRINCIPAIS IMPACTOS

- Redução do volume de chuvas no Sudeste e Centro-Oeste do Brasil.
- Melhora no regime de chuvas no verão do Sul do Brasil.
- Risco para o Setor Elétrico do Brasil.

# Ciclo Solar 24 surpreende: É o mais fraco em 100 anos...

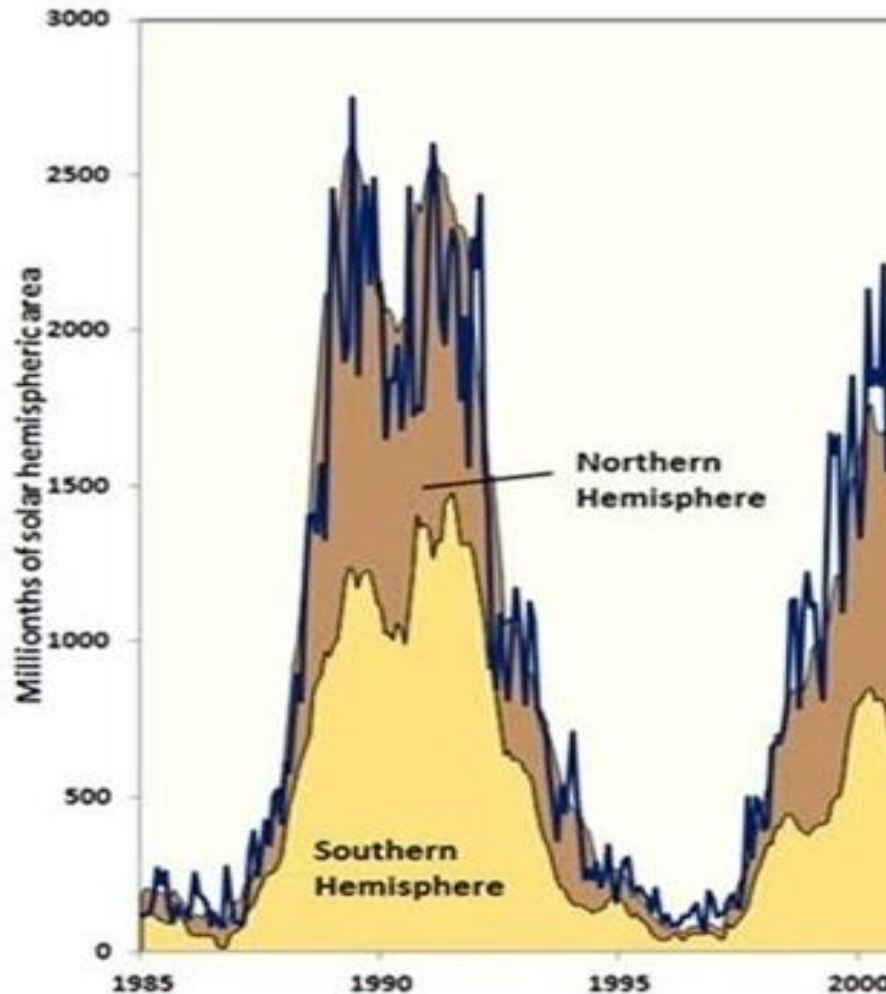
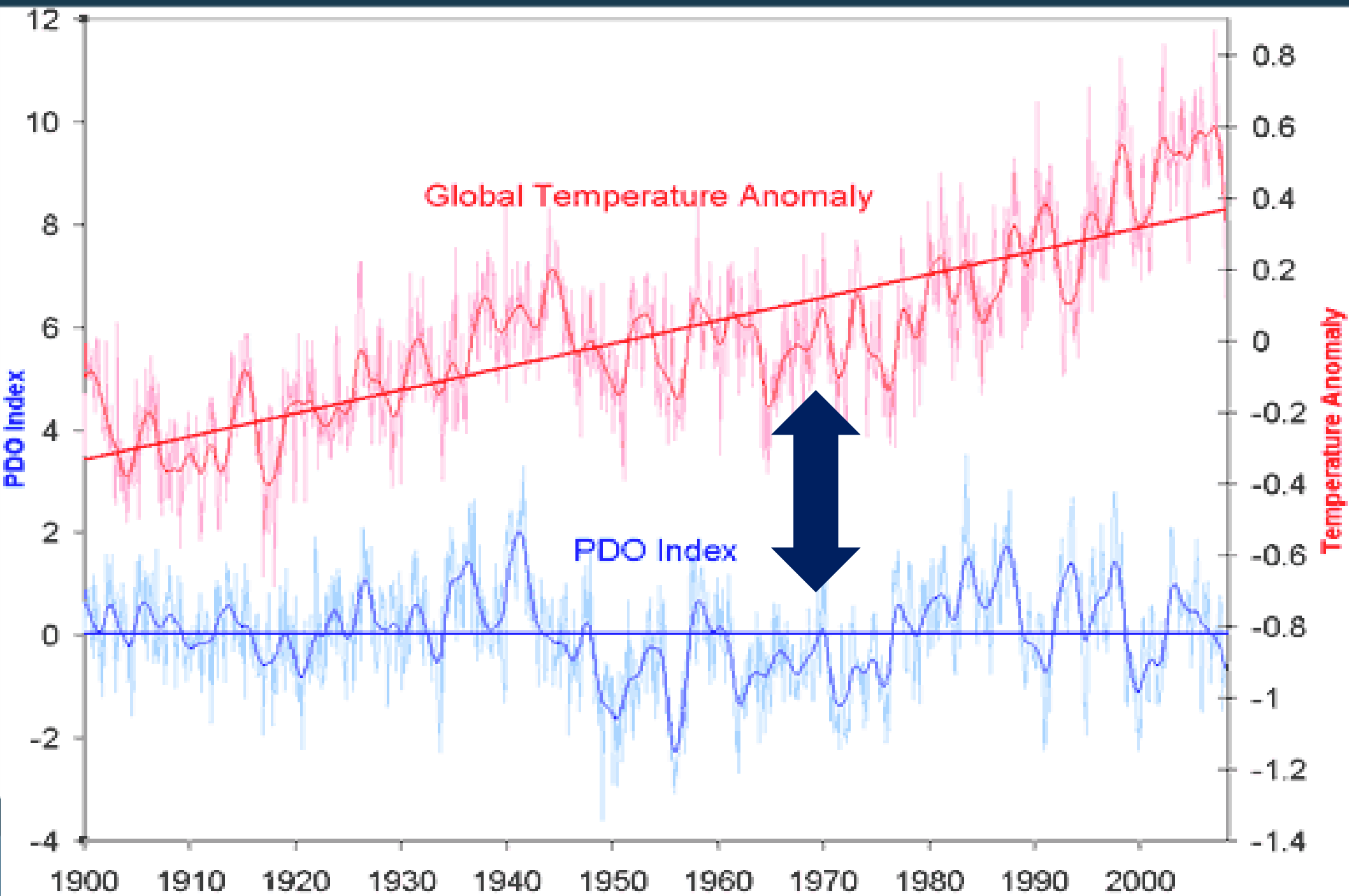


Figura 10: Área de Sunspot dos hemisférios e

Como mostrado na Figura 10, a área total de ma

## PRINCIPAIS IMPACTOS

- Invernos mais rigorosos (frios) nas regiões de latitudes altas, incluindo Canadá, Estados Unidos e Europa.
- Risco para a Política de Segurança Alimentar do Mundo.
- Para o Brasil redução das chuvas.





Simples
  Comparativo
  Temporal

- Selecione
- EAR (MWmês)
  - EAR (GWh)
  - EAR (%)
  - EAR Máximo (MWmês)

Escala de Tempo

Dia

Subistema  
 Sudeste/Centro-Oeste

Período

Início  
10/01/2010

Fim  
19/03/2019

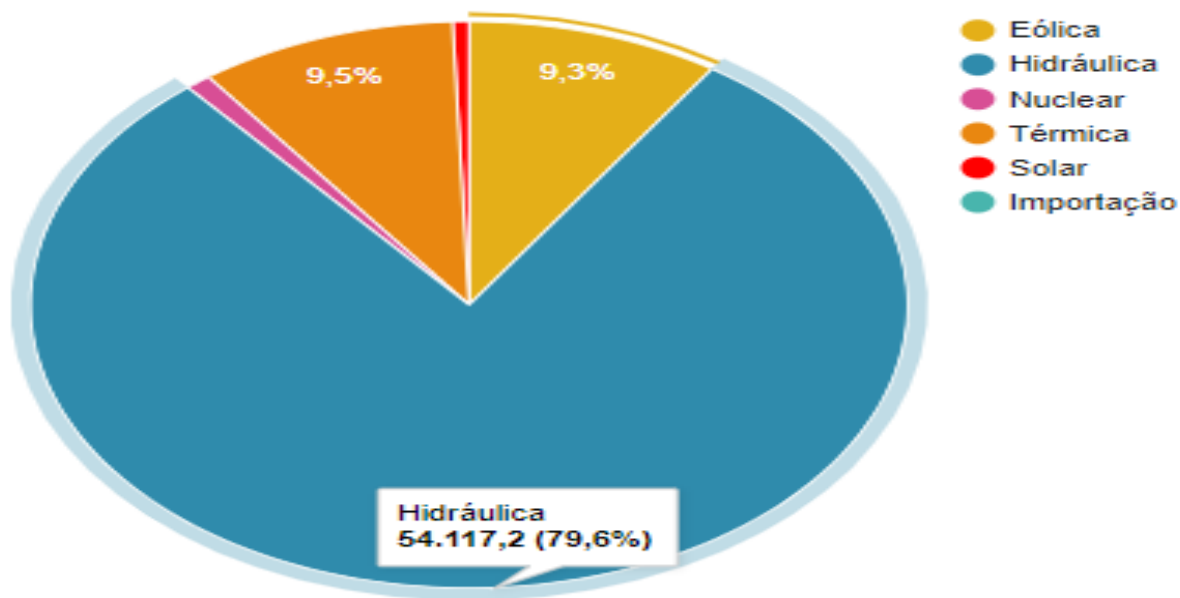
3356 dia(s) selecionado(s)





25/04/2019 18:51

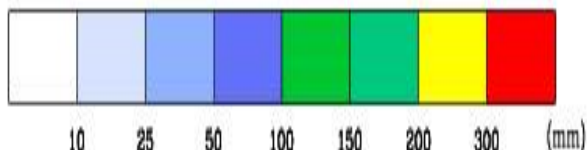
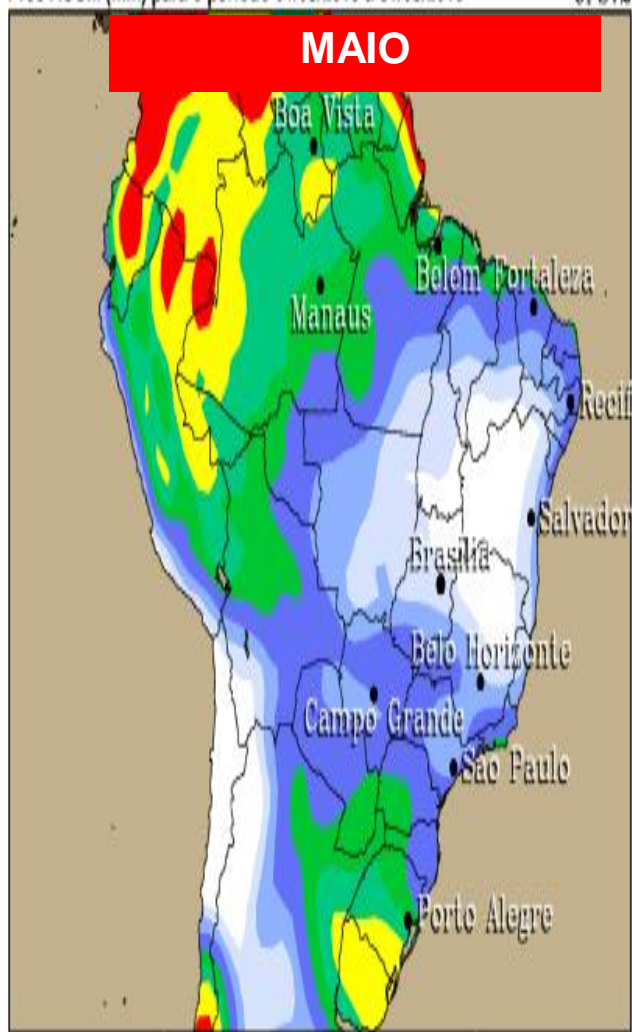
<b>Carga:</b>	<b>76152,0 MW</b>
<b>Exportação:</b>	<b>0,2 MW</b>
<b>Ger. Eólica:</b>	<b>5307,2 MW</b>
<b>Ger. Hidráulica:</b>	<b>63677,2 MW</b>
<b>Ger. Térmica:</b>	<b>6487,8 MW</b>
<b>Ger. Nuclear:</b>	<b>646,2 MW</b>
<b>Ger. Solar:</b>	<b>33,7 MW</b>
<b>Importação:</b>	<b>0,0 MW</b>



# Previsão de Chuva: Maio, Junho e Julho/2019

Prec ACUM (mm) para o período 01/05/2019 a 31/05/2019

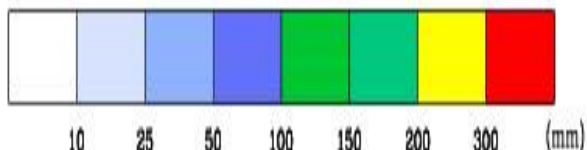
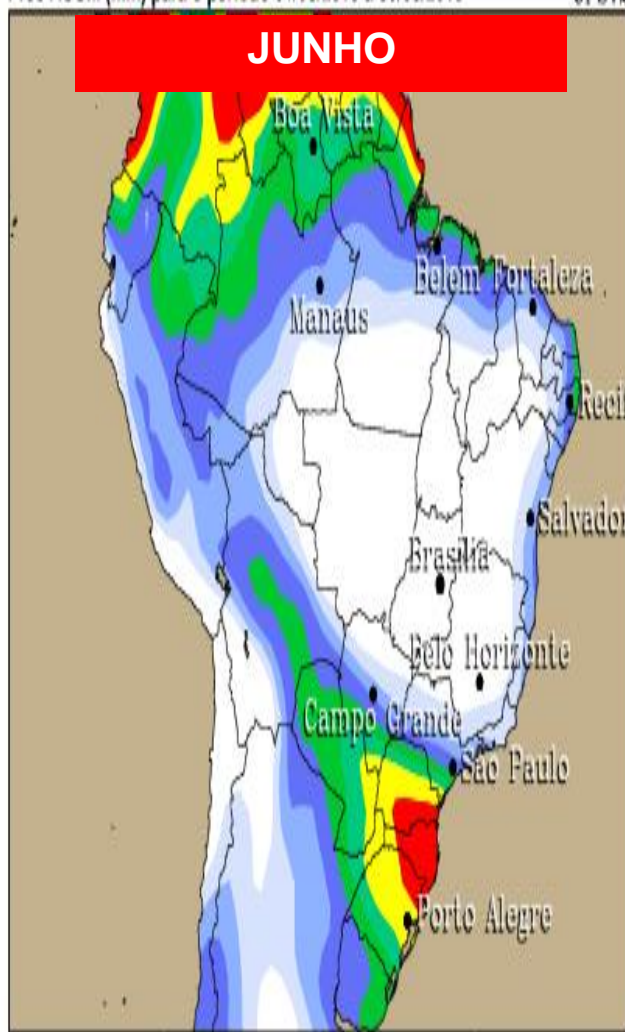
CFSv2



Fonte CFSv2/NOAA - Simulação do dia 24/04/2019

Prec ACUM (mm) para o período 01/06/2019 a 30/06/2019

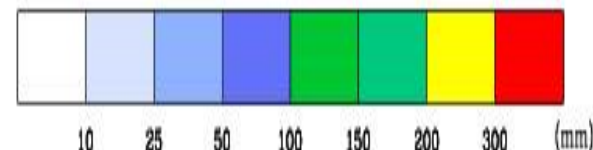
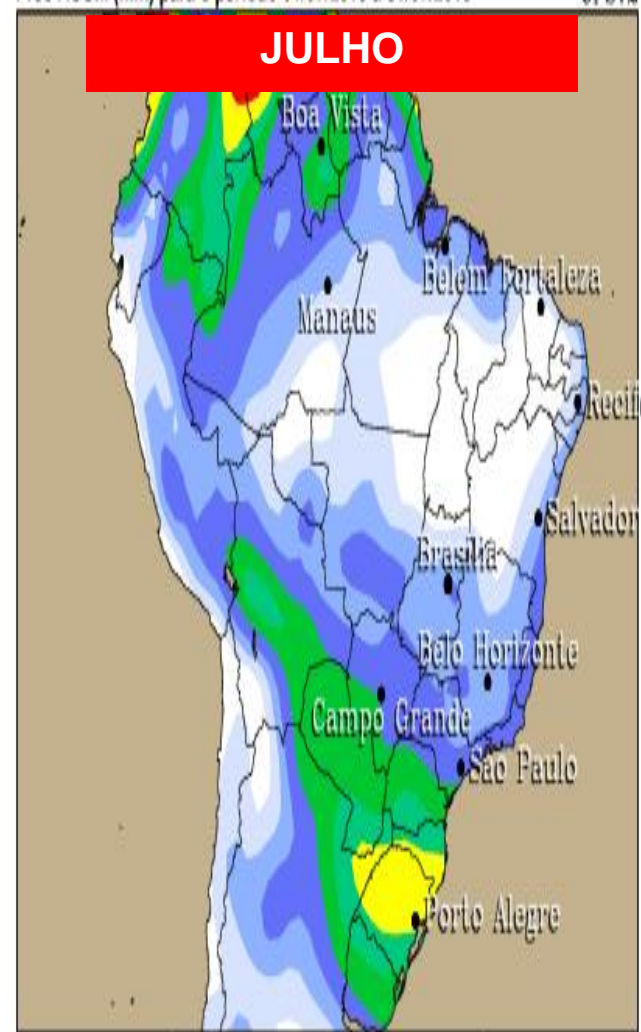
CFSv2



Fonte CFSv2/NOAA - Simulação do dia 24/04/2019

Prec ACUM (mm) para o período 01/07/2019 a 31/07/2019

CFSv2

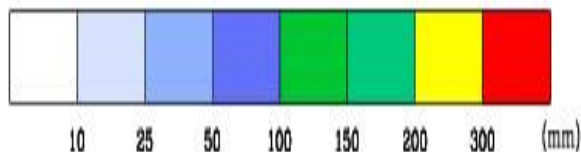
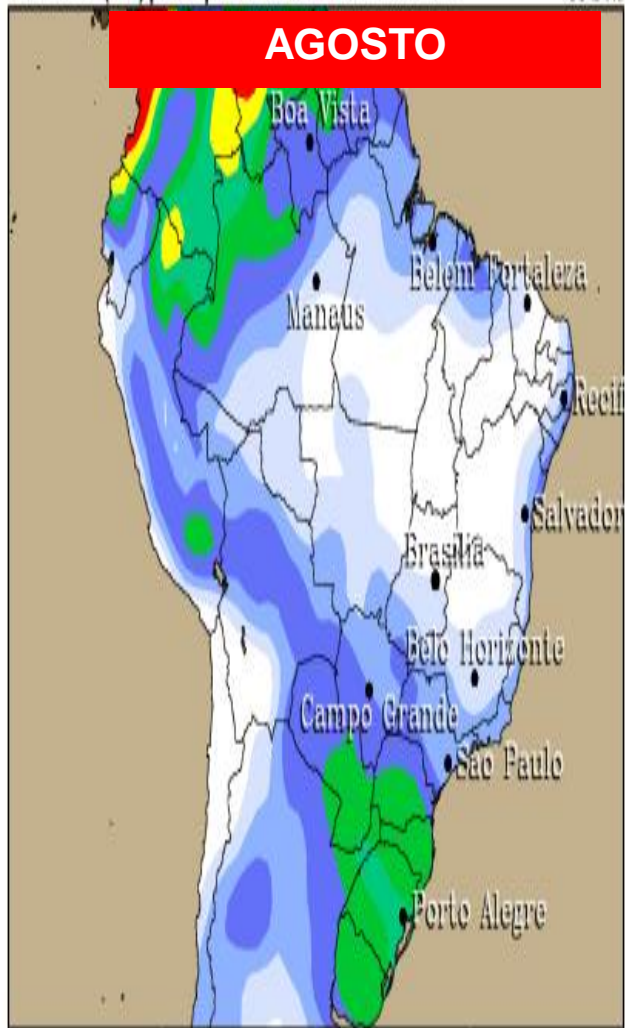


Fonte CFSv2/NOAA - Simulação do dia 24/04/2019



Prec ACUM (mm) para o período 01/08/2019 a 31/08/2019

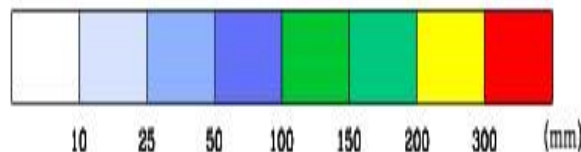
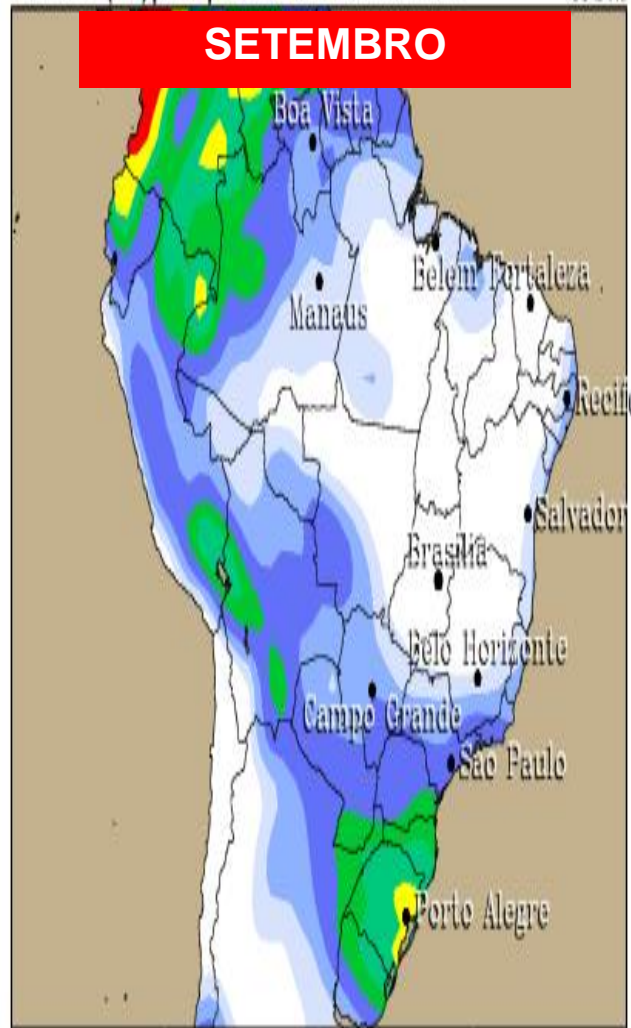
CFSv2



Fonte CFSv2/NOAA - Simulação do dia 24/04/2019

Prec ACUM (mm) para o período 01/09/2019 a 30/09/2019

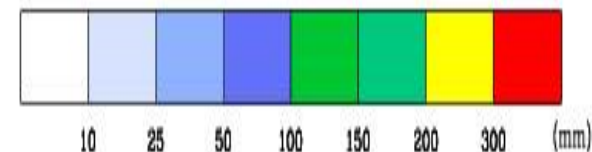
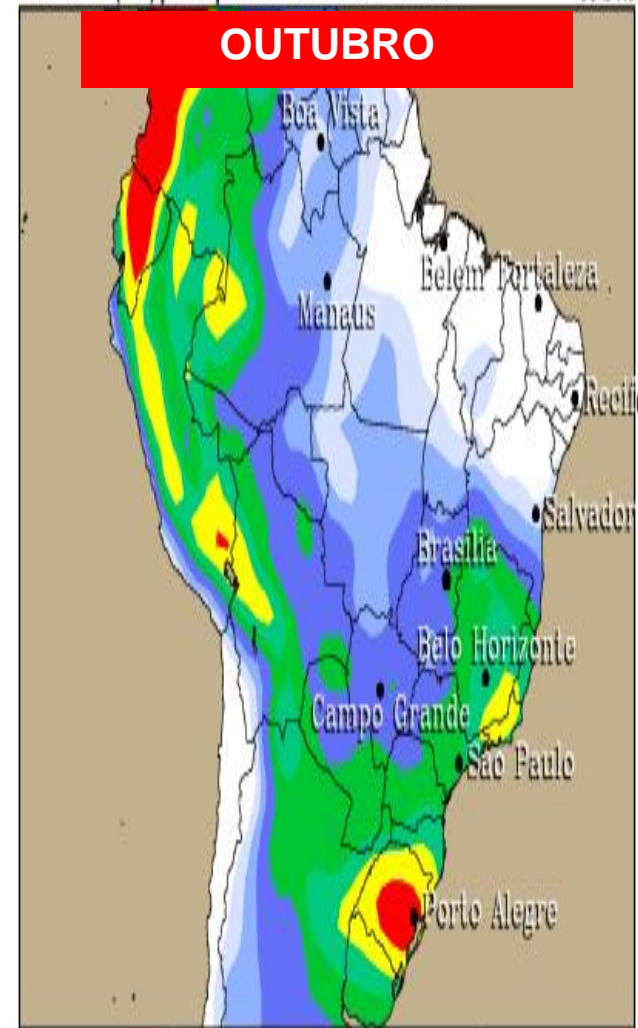
CFSv2



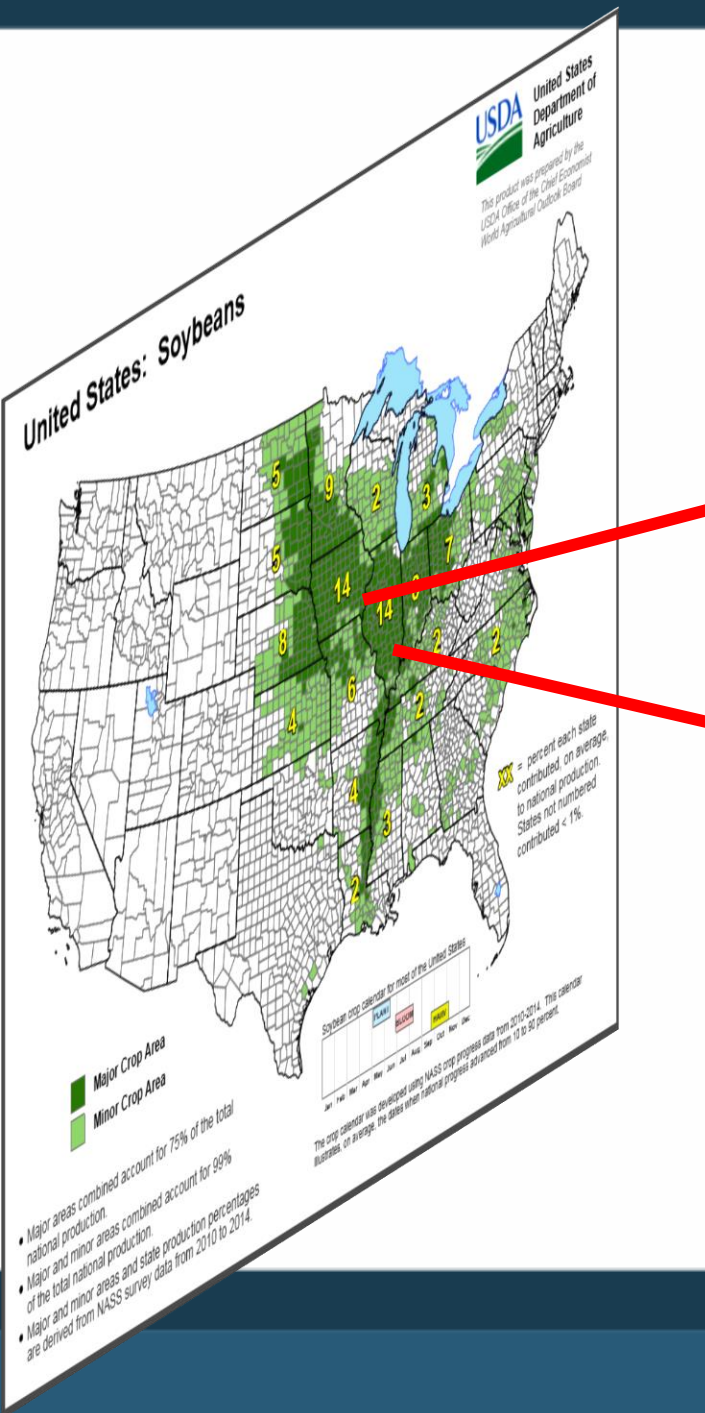
Fonte CFSv2/NOAA - Simulação do dia 24/04/2019

Prec ACUM (mm) para o período 01/10/2019 a 31/10/2019

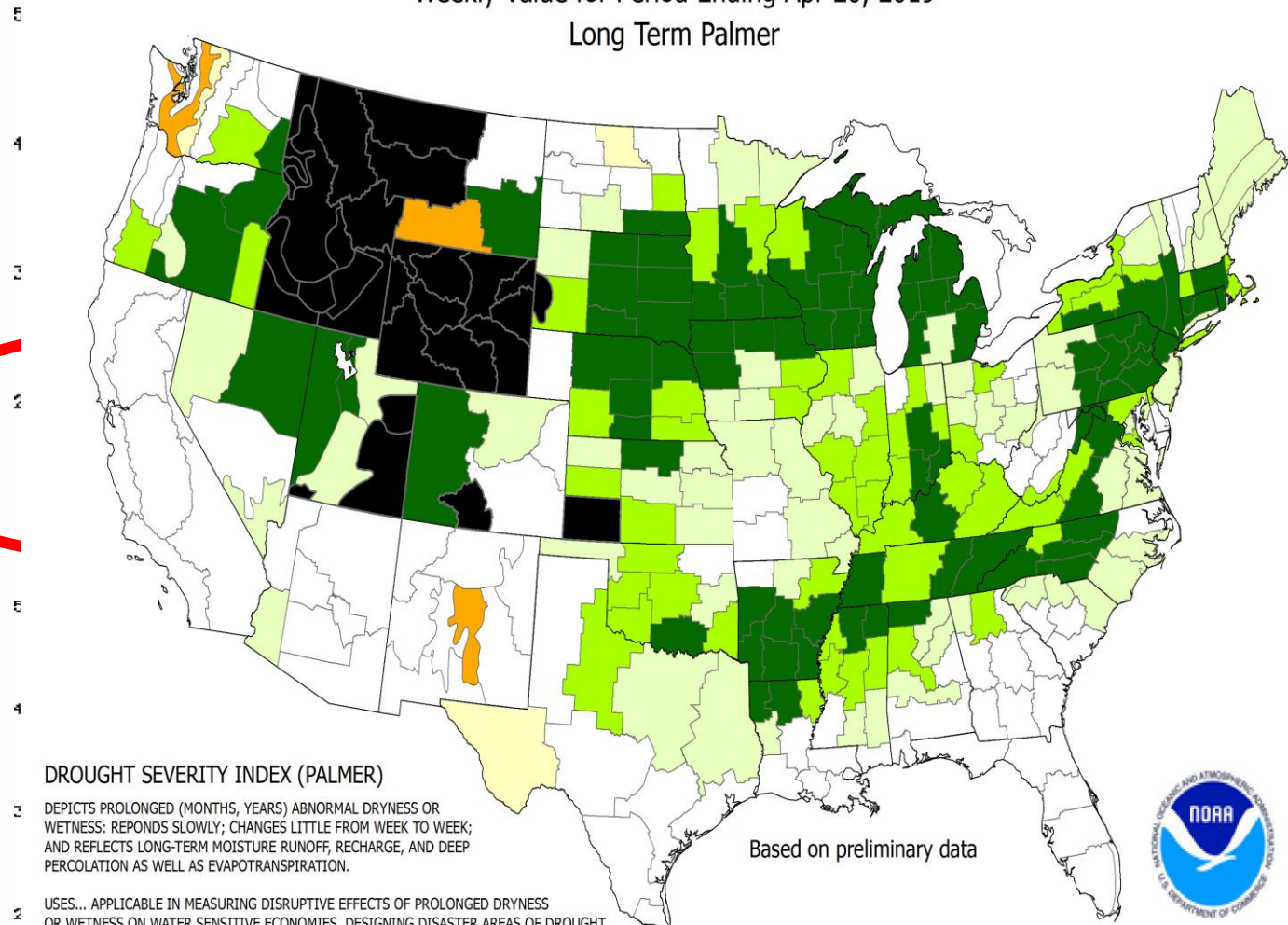
CFSv2



Fonte CFSv2/NOAA - Simulação do dia 24/04/2019



Drought Severity Index by Division  
Weekly Value for Period Ending Apr 20, 2019  
Long Term Palmer



### DROUGHT SEVERITY INDEX (PALMER)

DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.

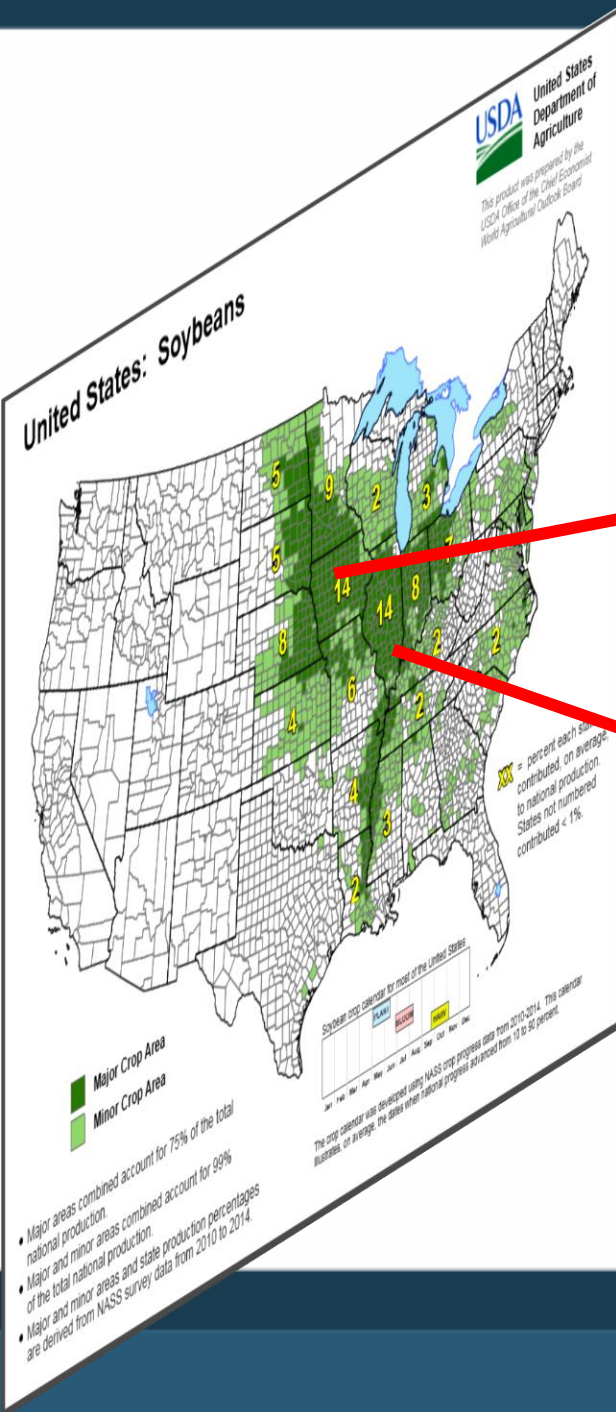
USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.

LIMITATIONS... IS NOT GENERALLY INDICATIVE OFFSHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

- Orange: -4.0 or less (Extreme Drought)
- Dark Orange: -3.0 to -3.9 (Severe Drought)
- Light Orange: -2.0 to -2.9 (Moderate Drought)
- White: -1.9 to +1.9 (Near Normal)
- Light Green: +2.0 to +2.9 (Unusual Moist Spell)
- Medium Green: +3.0 to +3.9 (Very Moist Spell)
- Dark Green: +4.0 and above (Extremely Moist)
- Black: Missing/Incomplete

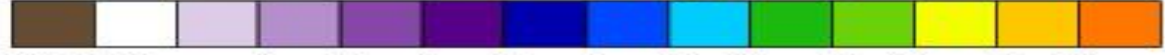
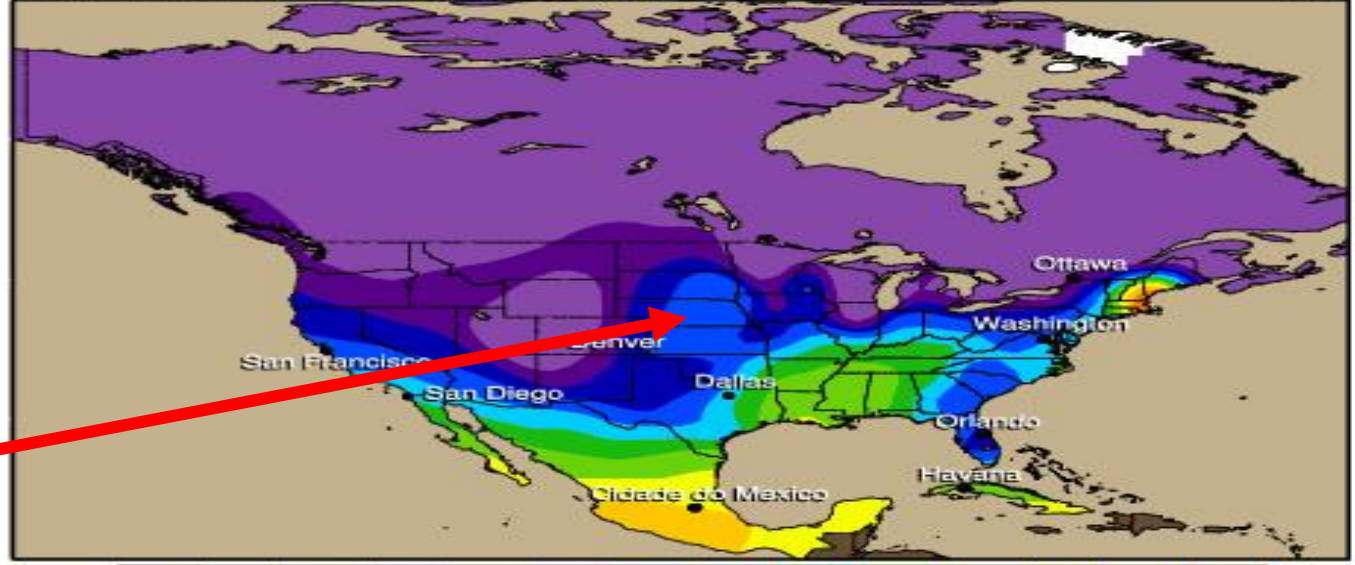


# LAVOURA AMERICANA: Plantio atrasado



Temperatura Mínima Observada (°C)

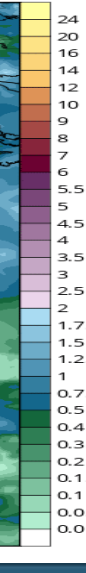
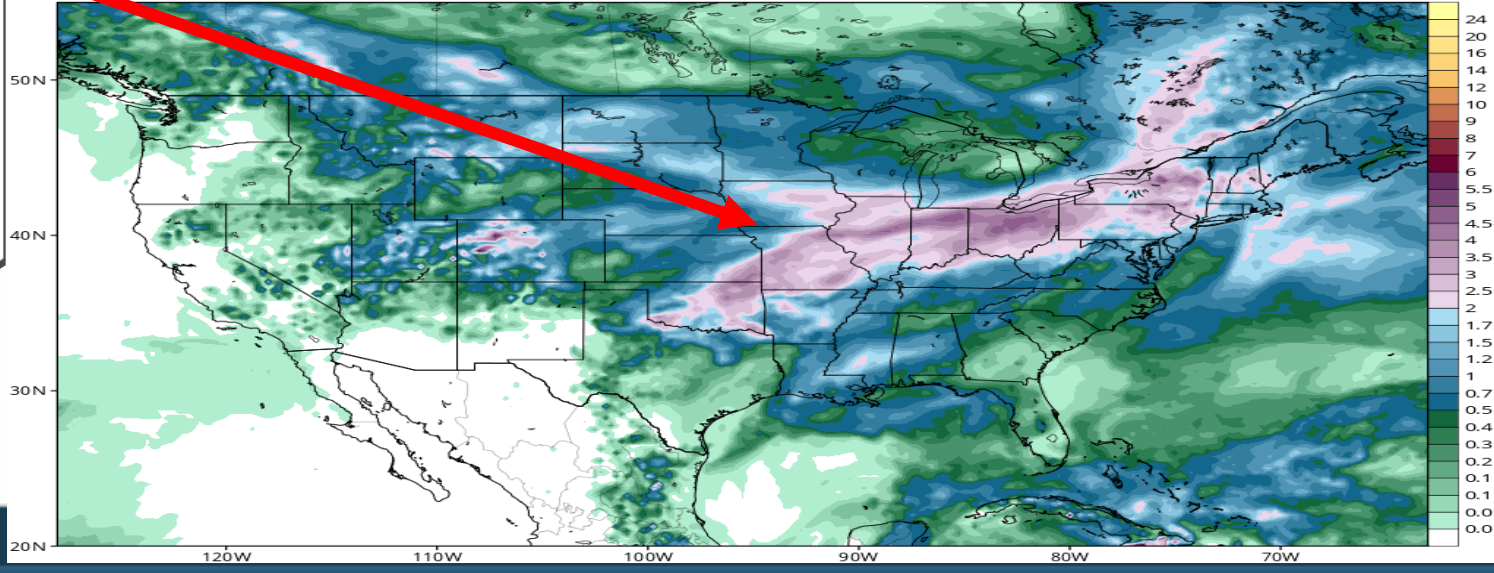
25/04



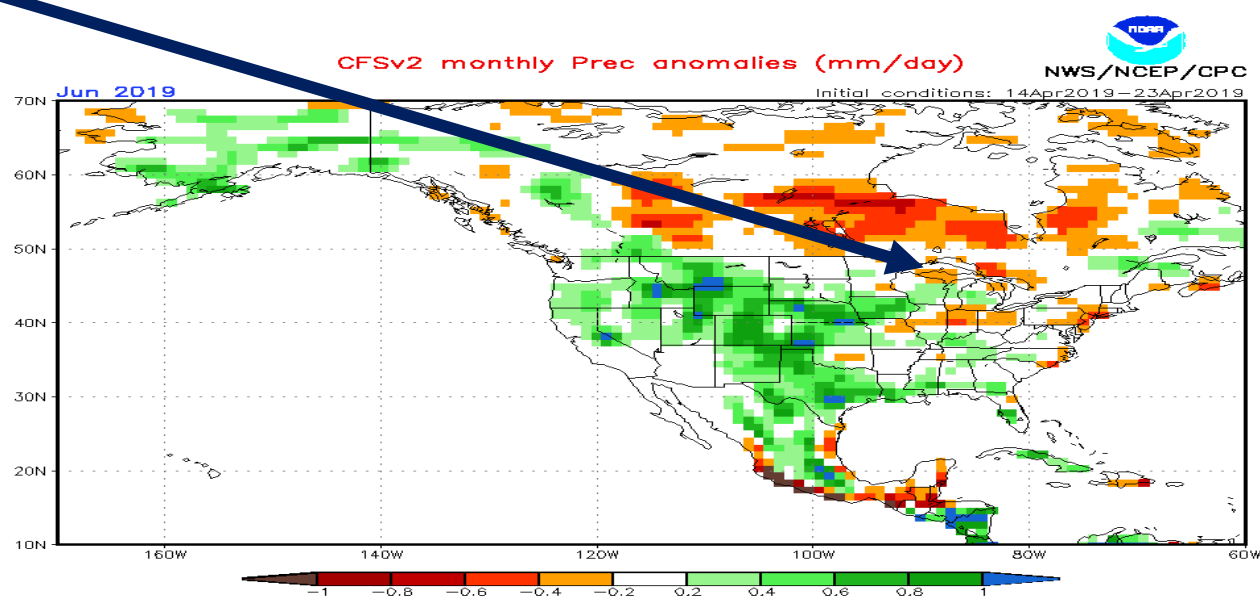
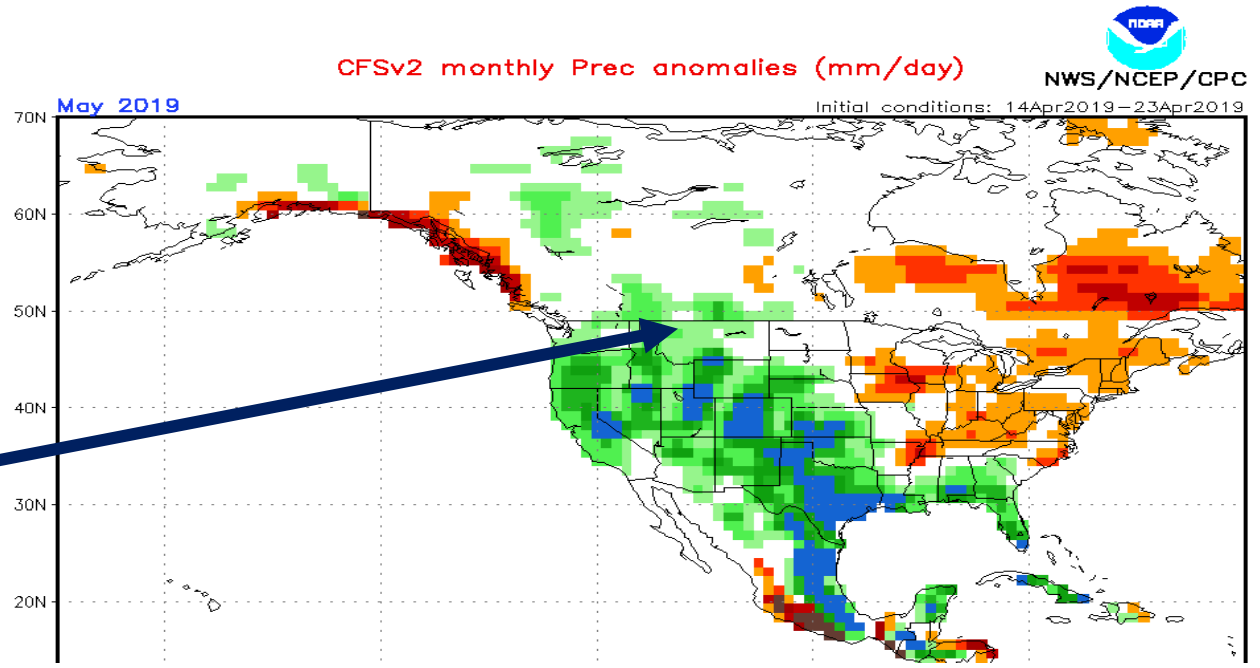
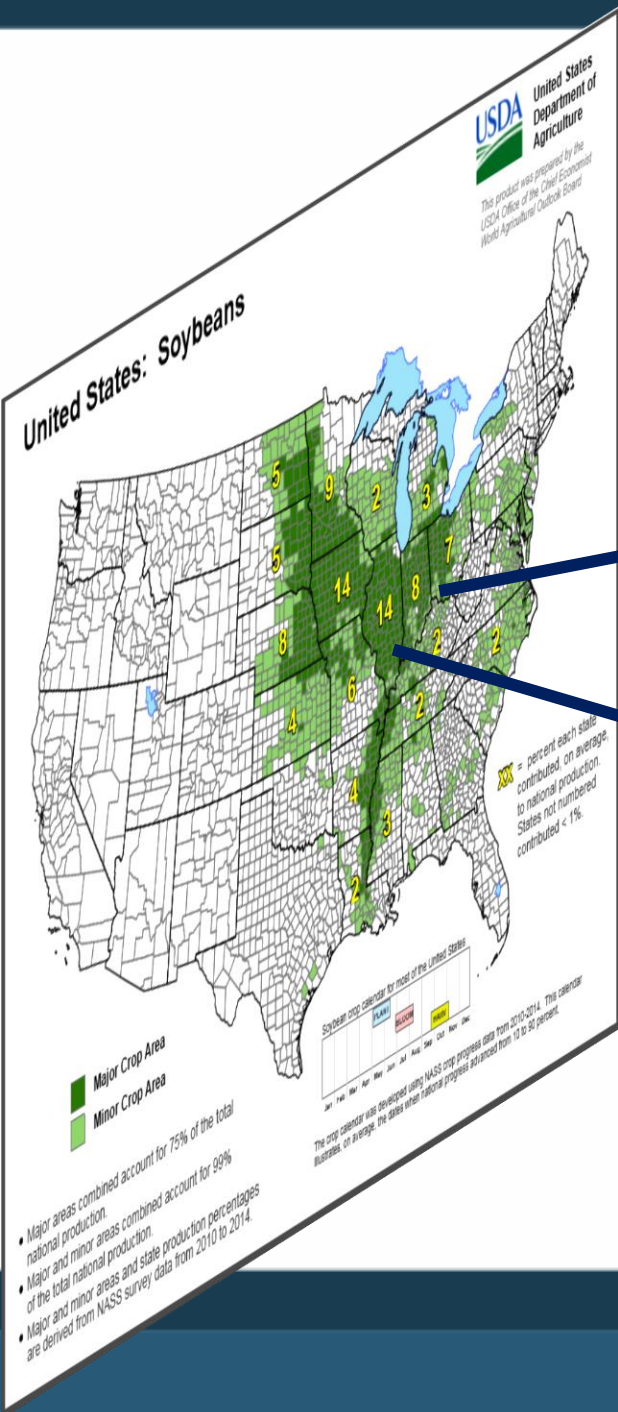
ND = Não há dados disponíveis

GFS Total Accumulated Precipitation (inches) from 06z25Apr2019 to 06z02May2019

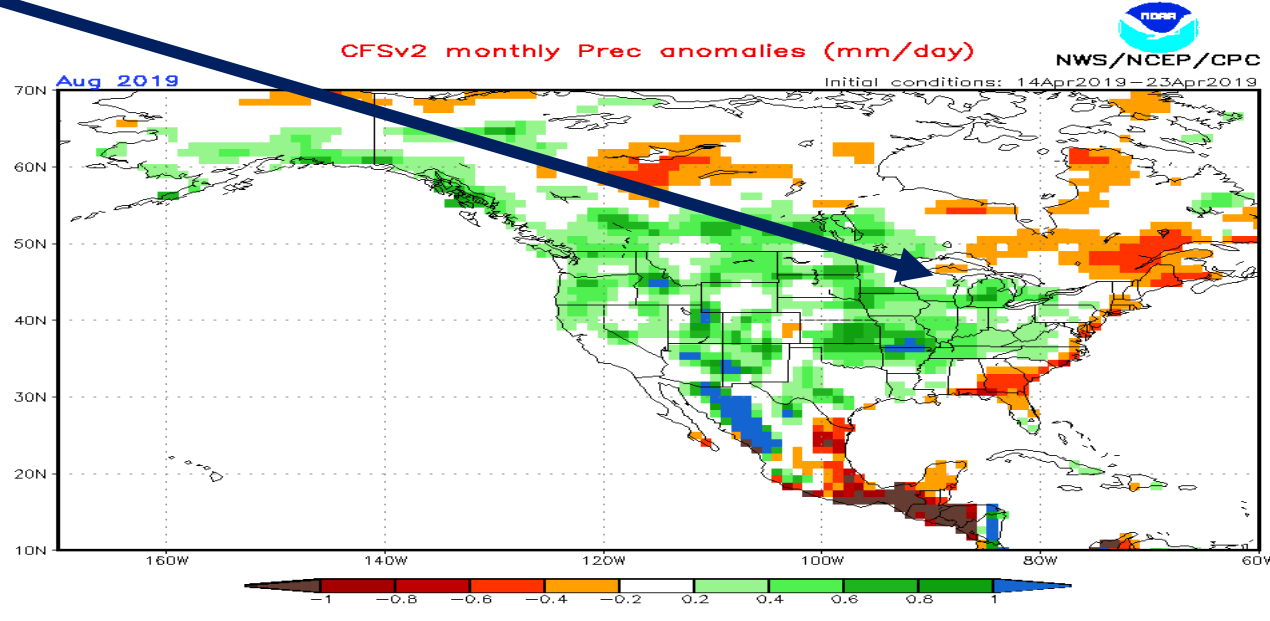
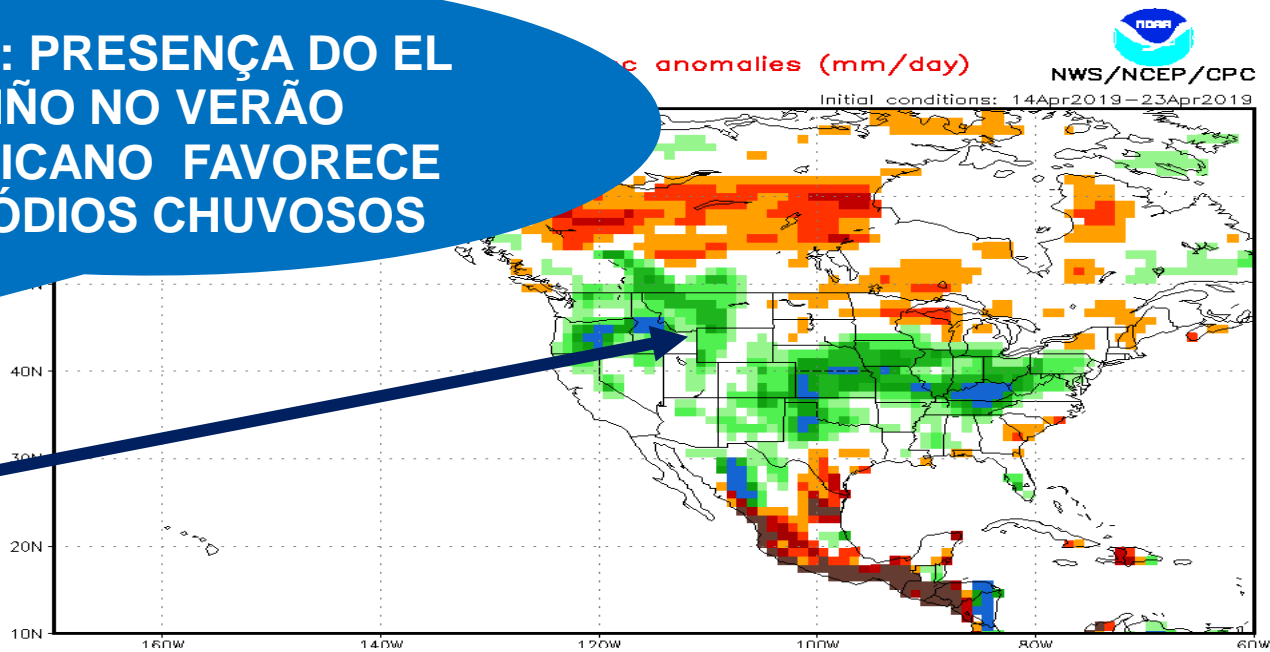
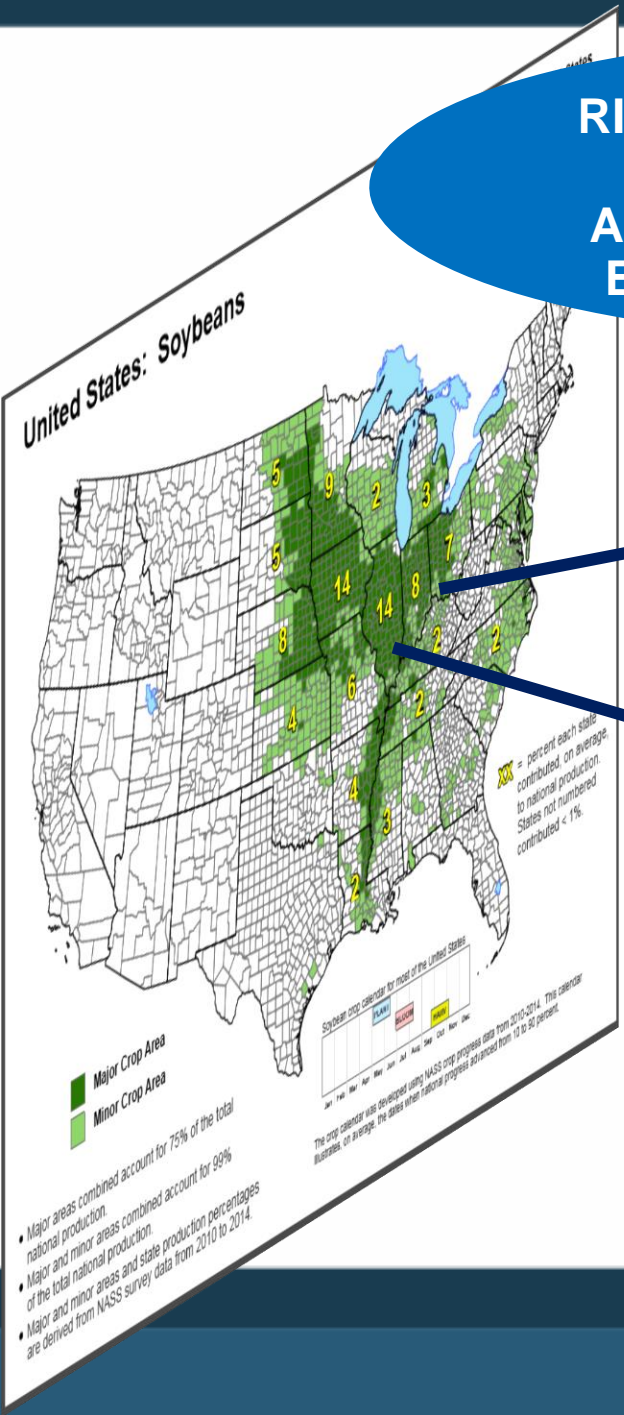
TROPICALTIDBITS.COM



# CHUVAS diminuem em MAIO E JUNHO



**RISCO: PRESENÇA DO EL NIÑO NO VERÃO AMERICANO FAVORECE EPISÓDIOS CHUVOSOS**



**PAULO ETCHICHURY**  
**Sócio Diretor**

**Fone: (11) 3030-0799**

**Celular: (11) 99653-5566**

**[paulo@somarmeteorologia.com.br](mailto:paulo@somarmeteorologia.com.br)**

**[WWW.SOMARMETEOROLOGIA.COM.BR](http://WWW.SOMARMETEOROLOGIA.COM.BR)**



**É BEM MELHOR SABER!**