



# CEMADEN

Centro Nacional de Monitoramento e  
Alertas de Desastres Naturais

## Sala de Crise da Região Sul

**FOCOS DO CEMADEN/MCTI**

Conhecimento dos Riscos  
Sistemas de Monitoramento e Alerta  
Programa Cemaden Educação  
Difusão e Comunicação  
Capacidade de Resposta

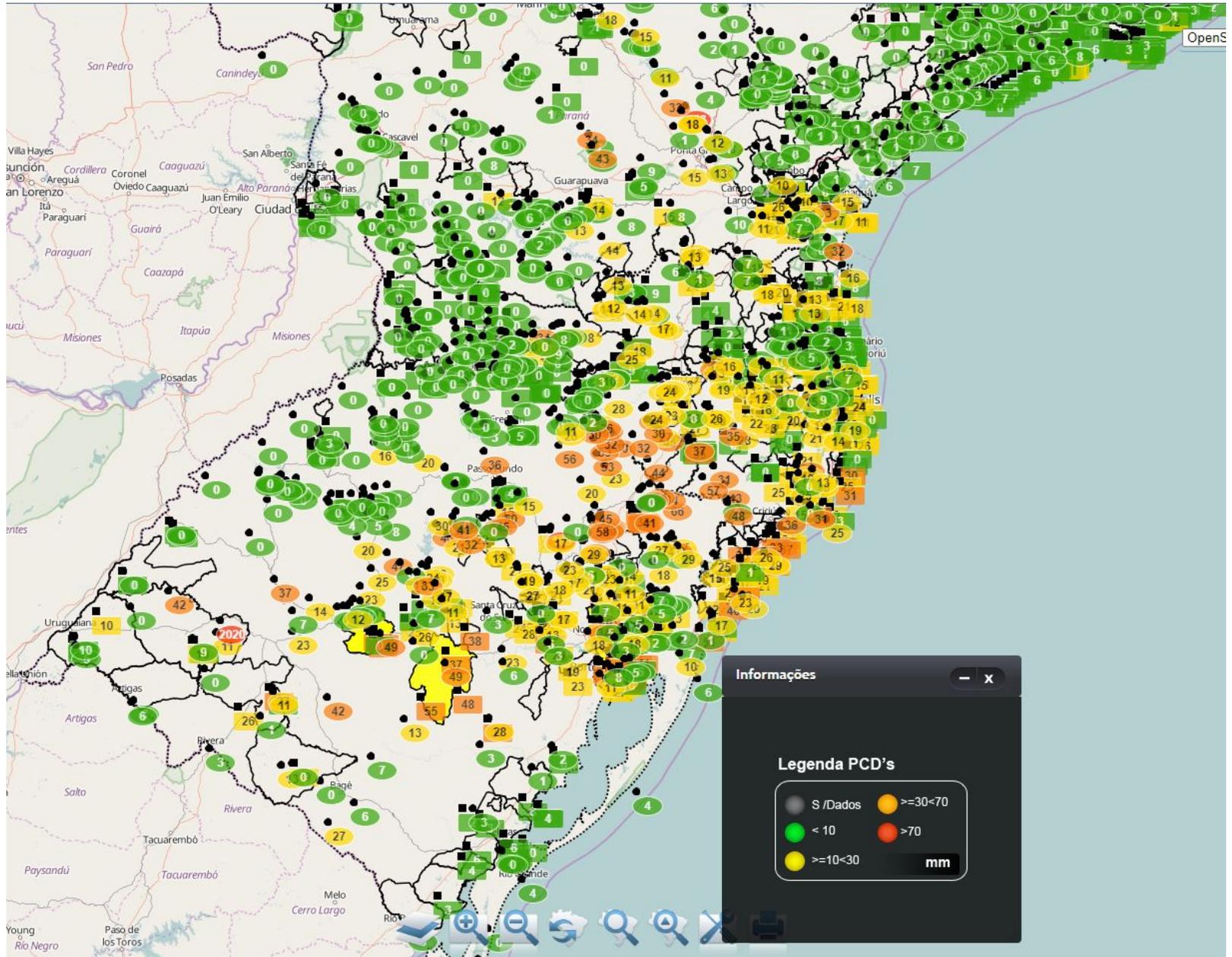


MINISTÉRIO DA  
CIÊNCIA, TECNOLOGIA  
E INOVAÇÃO

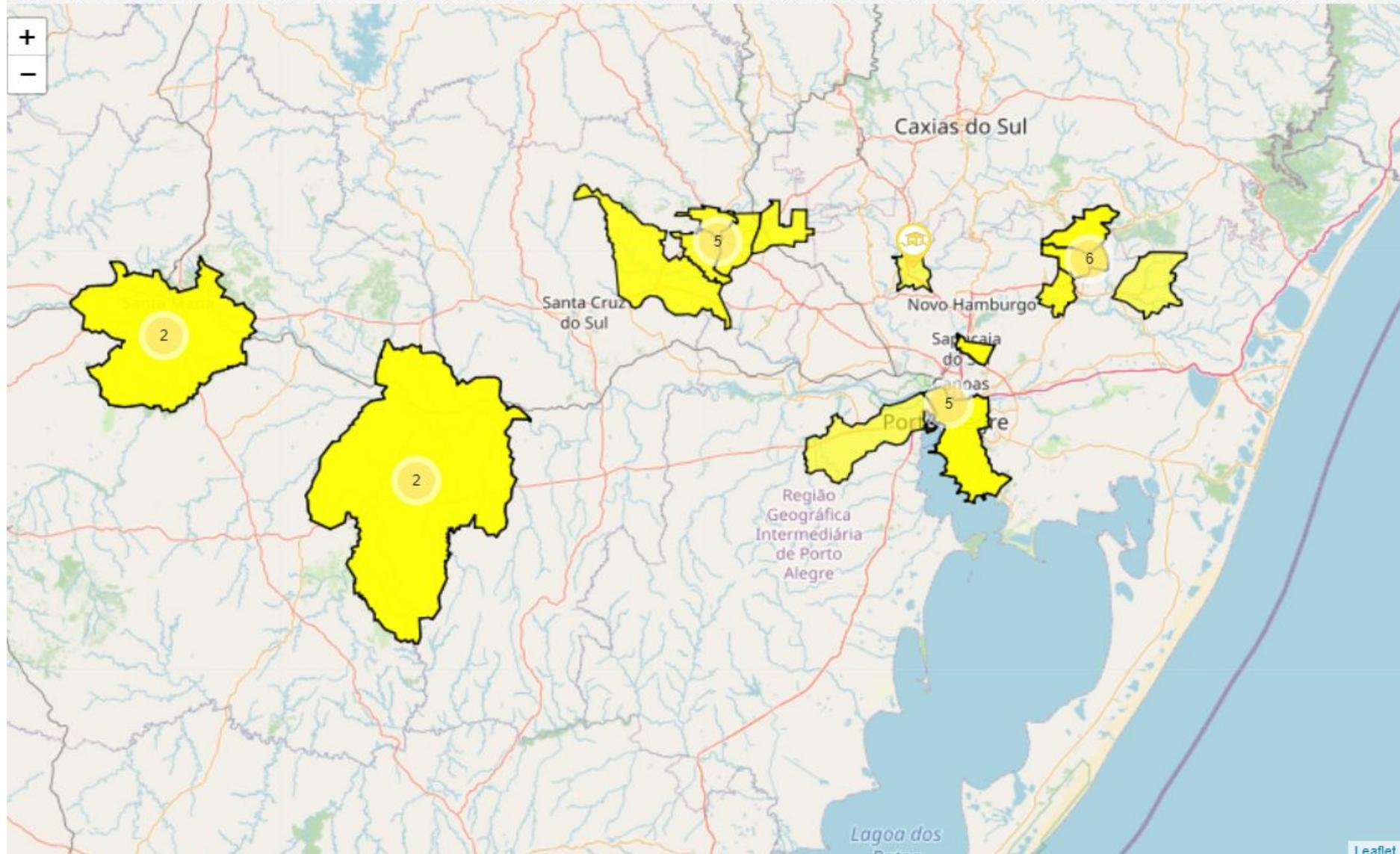


**26 de Setembro de 2023**

# Precipitação nas últimas 24 horas



# Nível de Alerta por Município



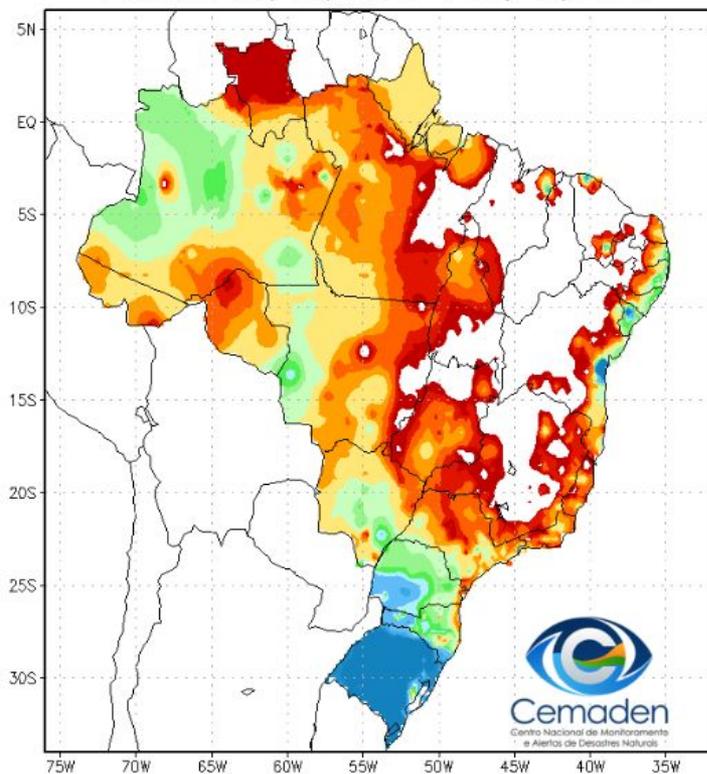
# Alertas Vigentes

HOJE - 09h44min

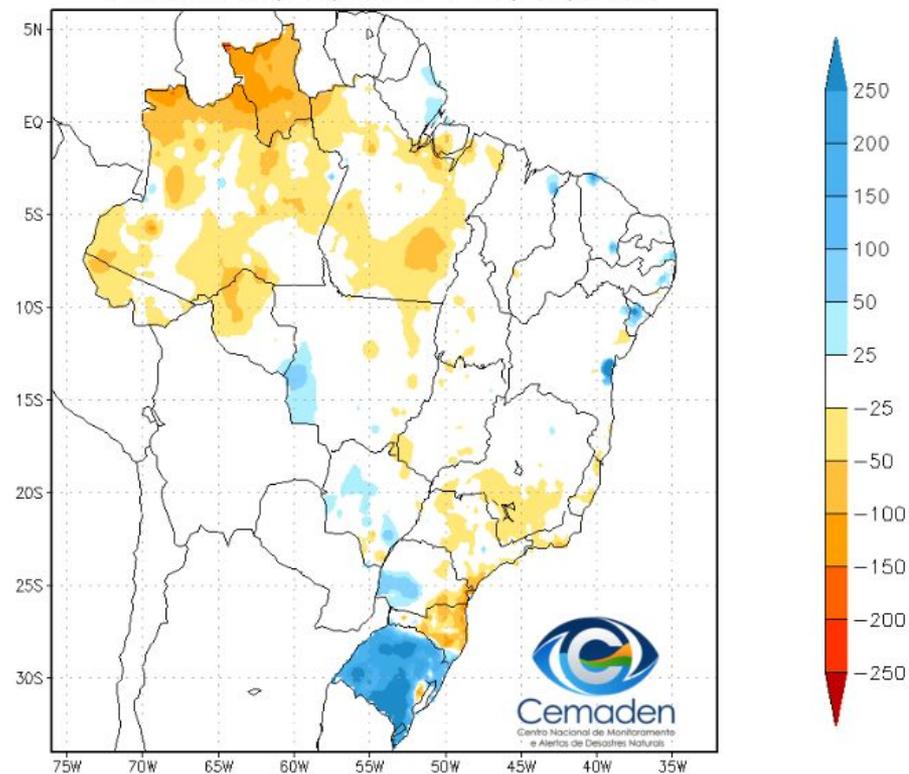
UF	↑↓ Município	↑↓ Tipo Alerta	↑↓ Nivel	↑↓ Abertura
RS	SÃO SEBASTIÃO DO CAÍ	Risco Hidrológico - Moderado	Moderado	24/09/2023 10:54
RS	TRÊS COROAS	Movimentos de Massa - Moderado	Moderado	24/09/2023 11:54
RS	IGREJINHA	Movimentos de Massa - Moderado	Moderado	24/09/2023 11:57
RS	SANTA MARIA	Movimentos de Massa - Moderado	Moderado	26/09/2023 05:18
RS	CACHOEIRA DO SUL	Movimentos de Massa - Moderado	Moderado	26/09/2023 05:23
RS	PORTO ALEGRE	Movimentos de Massa - Moderado	Moderado	26/09/2023 05:26
RS	SANTA MARIA	Risco Hidrológico - Moderado	Moderado	26/09/2023 06:04
RS	PORTO ALEGRE	Risco Hidrológico - Moderado	Moderado	26/09/2023 07:36
RS	PAROBÉ	Movimentos de Massa - Moderado	Moderado	26/09/2023 08:37
RS	ESTRELA	Movimentos de Massa - Moderado	Moderado	26/09/2023 08:45

# Precipitação em SETEMBRO

Precipitação Acumulada (mm)  
Período: 01/09/2023 a 25/09/2023

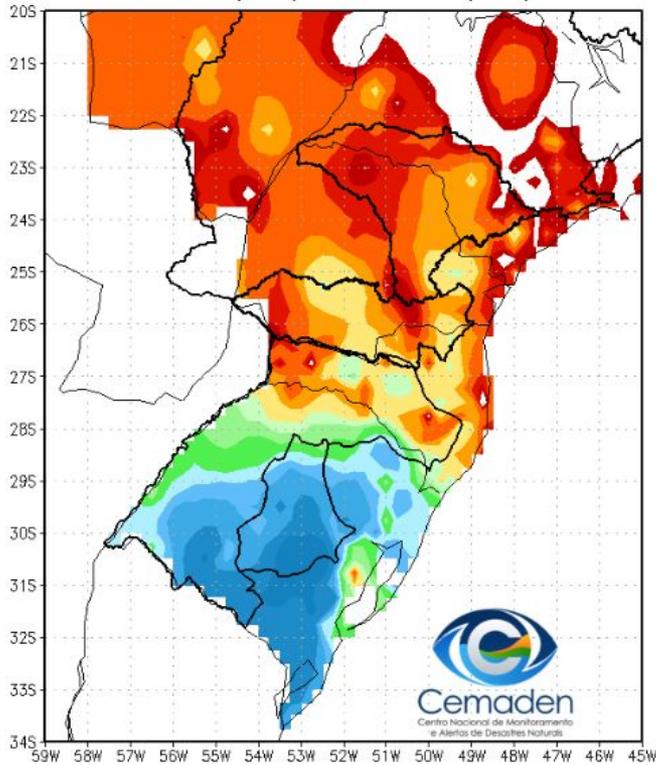


Anomalia de Precipitação (mm)  
Período: 01/09/2023 a 25/09/2023

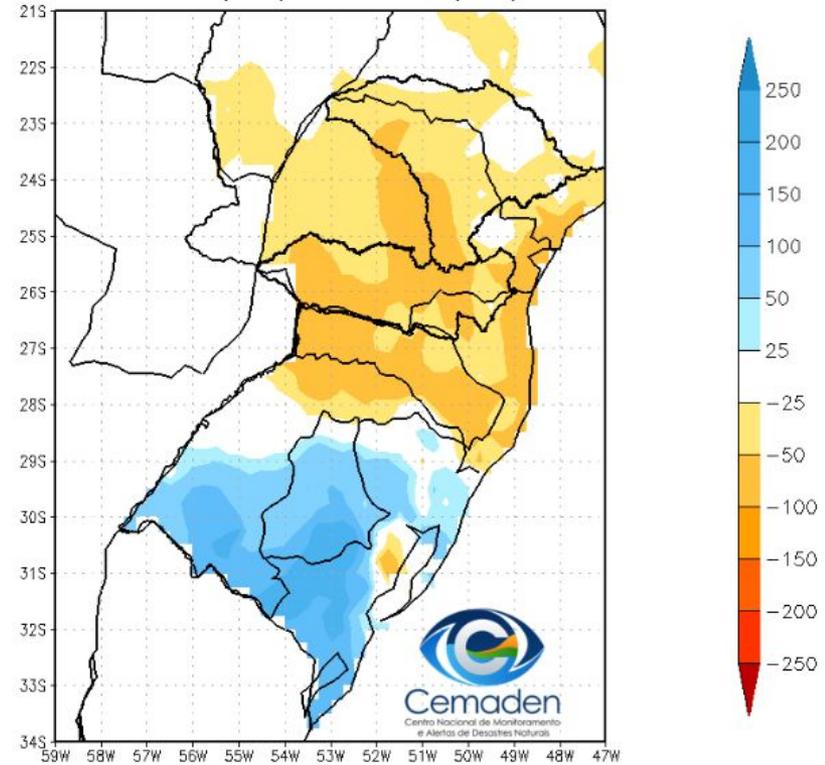


# Precipitação nos últimos 15 dias

Precipitação Acumulada (mm) A.S.  
Período: 10/09/2023 a 25/09/2023

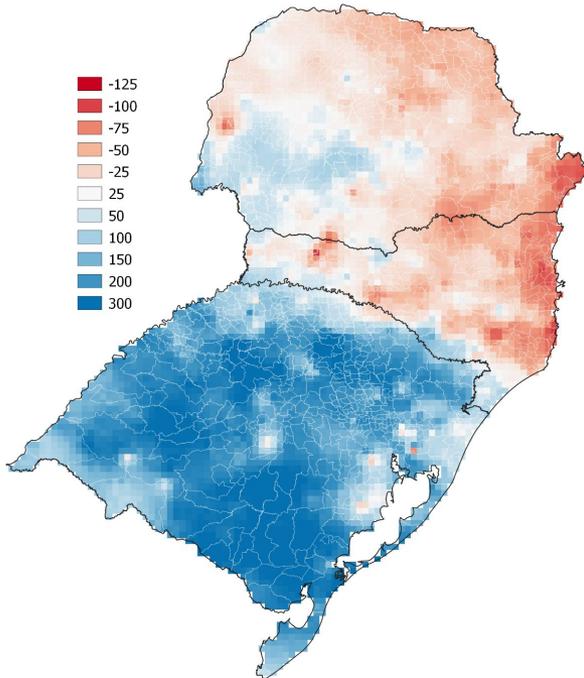


Anomalia de Precipitação (mm) A.S.  
Período: 10/09/2023 a 25/09/2023

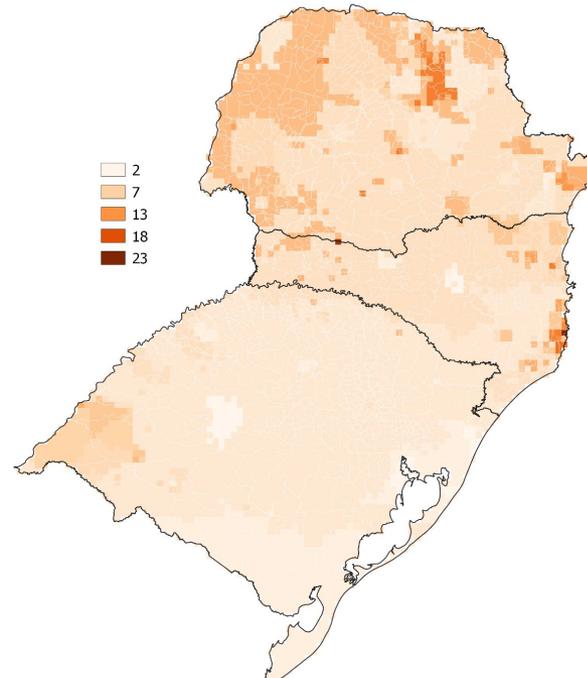


## PRECIPITAÇÃO: SETEMBRO 2023 (ATÉ 23/09)

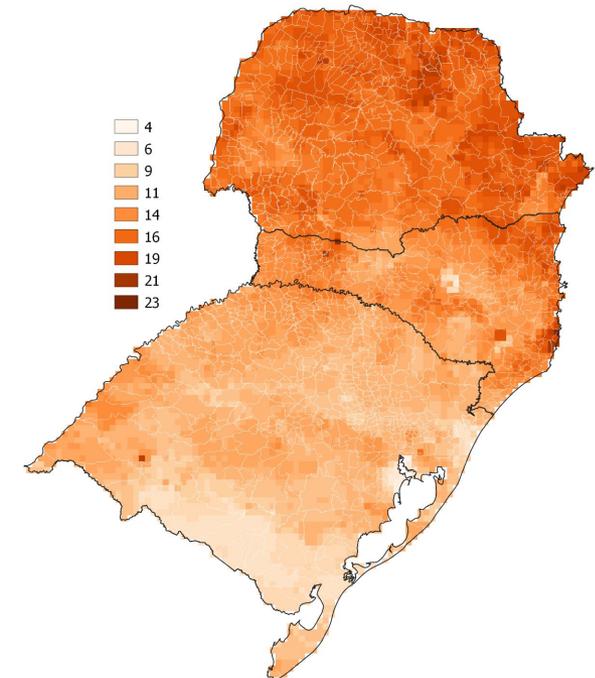
### Anomalia (mm)



### Máximo de dias consecutivos sem chuva

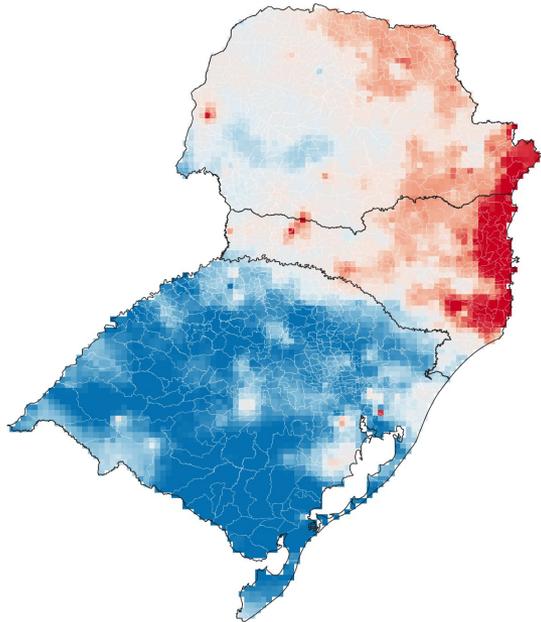


### Total de dias sem chuva

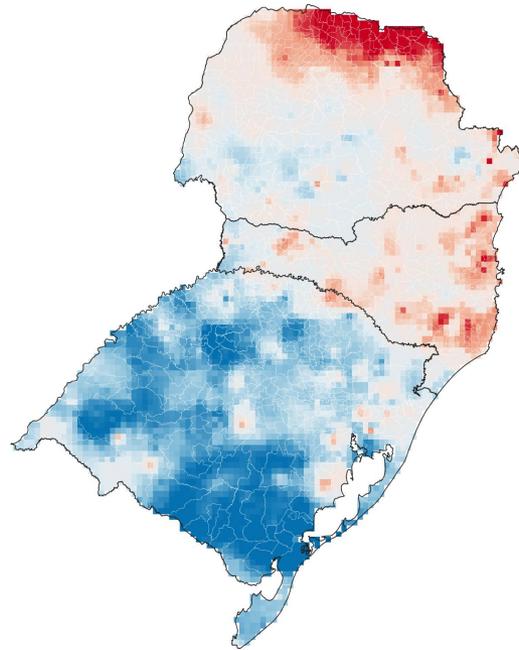


## SPI: SETEMBRO 2023

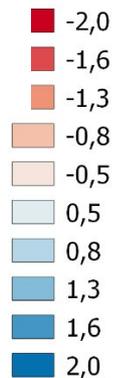
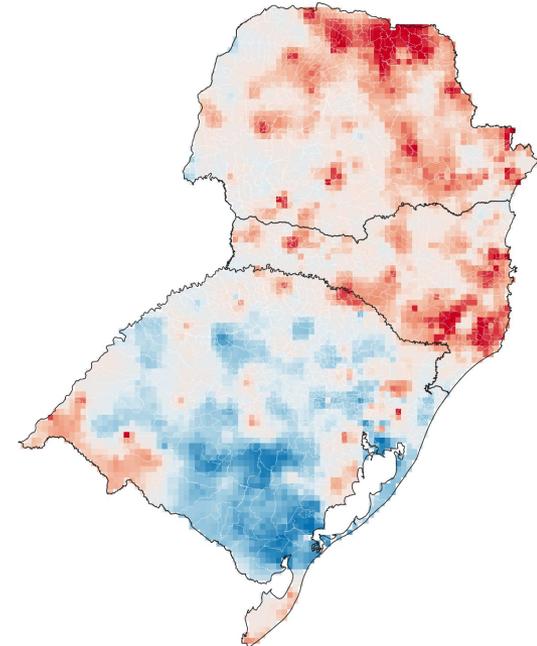
SPI01



SPI03



SPI06



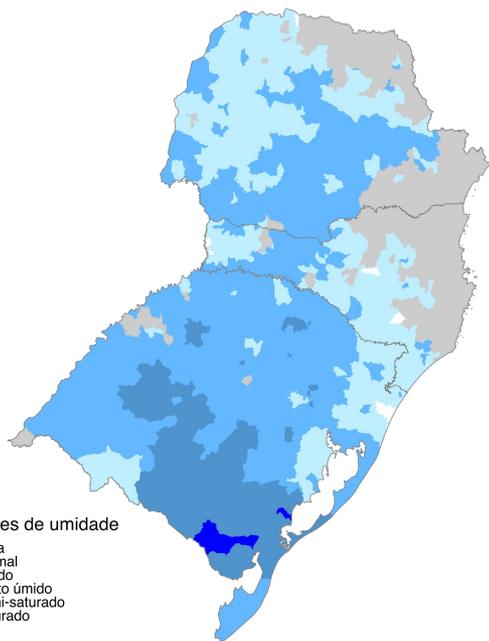
Fonte: Precipitação observada (MERGE).

## IARA (SPI, SM, VHI - SET - OUT)

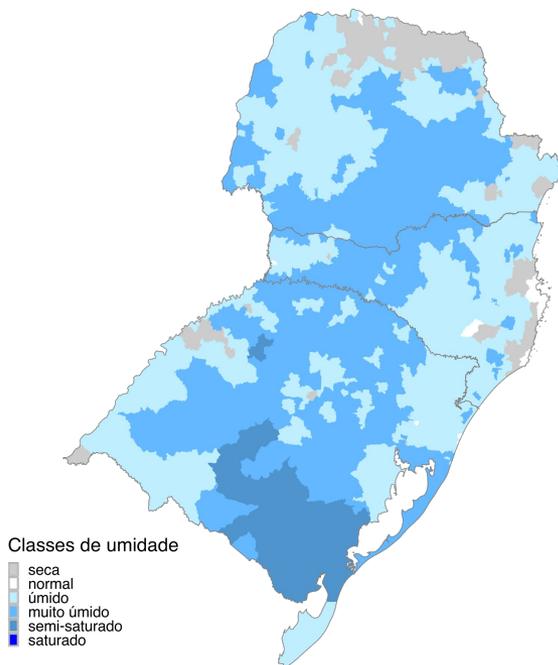
**CHUVA 50% ACIMA DA MÉDIA: Cenário El Niño**

**Observado:  
Setembro/23**

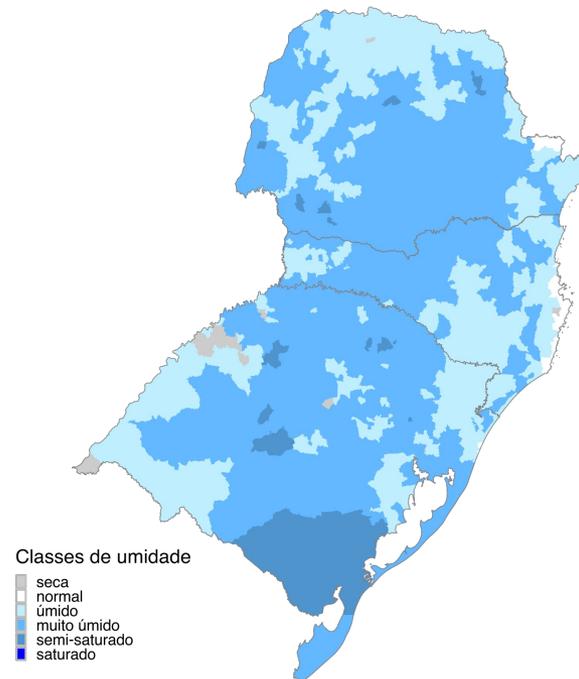
**Cenários: Outubro e Novembro/2023**



Setembro 2023  
Índice Agregado de Recursos de Água (IARA)  
Dados: CPTEC/INPE - NOAA - NASA / Preparação: Cemaden/MCTI



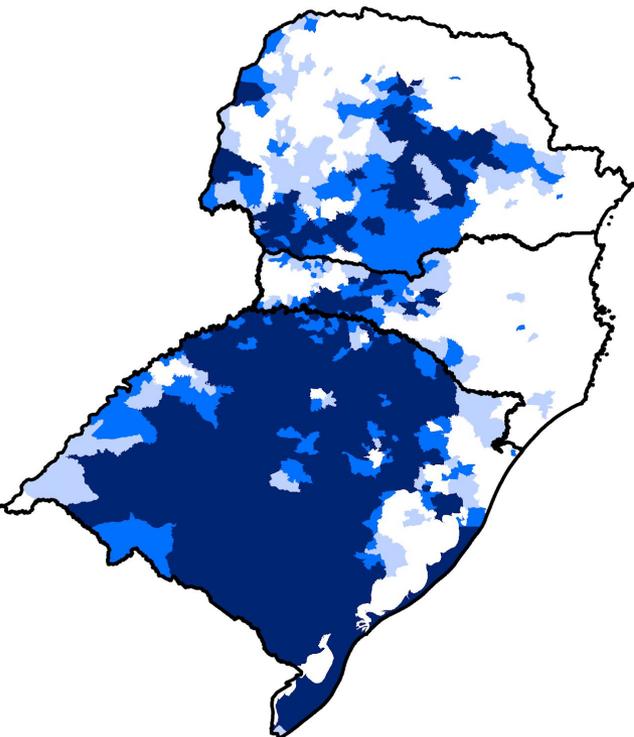
Outubro 2023  
Índice Agregado de Recursos de Água (IARA)  
Dados: CPTEC/INPE - NOAA - NASA / Preparação: Cemaden/MCTI



Novembro 2023  
Índice Agregado de Recursos de Água (IARA)  
Dados: CPTEC/INPE - NOAA - NASA / Preparação: Cemaden/MCTI

## ESTIMATIVA DE ÁREAS DE PASTAGENS E AGRÍCOLAS AFETADAS PELO EXCESSO DE CHUVA

**OBSERVADO: SET/23**



UF	40 a 60%	60 - 80%	> 80%
PR	53	67	62
SC	33	27	25
RS	28	67	343

	40 a 60%	60 - 80%	> 80%	Imóveis Rurais Impactados > 40%
<b>Paraná</b>				
Minifundio	43218 (17%)	45643 (17%)	54733 (21%)	143594 (55%)
Pequena Propriedade	21340 (17%)	23286 (18%)	22760 (18%)	67386 (53%)
Media Propriedade	4278 (16%)	5008 (19%)	3841 (14%)	13127 (49%)
<b>Santa Catarina</b>				
Minifundio	25989 (11%)	23682 (10%)	20158 (9%)	69829 (30%)
Pequena Propriedade	9792 (12%)	6472 (8%)	6472 (7%)	22159 (27%)
Media Propriedade	1151 (12%)	600 (6%)	323 (3%)	2074 (21%)
<b>Rio Grande do Sul</b>				
Minifundio	18352 (5%)	56500 (15%)	267083 (72%)	341935 (93%)
Pequena Propriedade	2136 (6%)	2918 (13%)	103151 (75%)	128499 (93%)
Media Propriedade	2136 (9%)	2918 (12%)	17895 (72%)	22949 (93%)

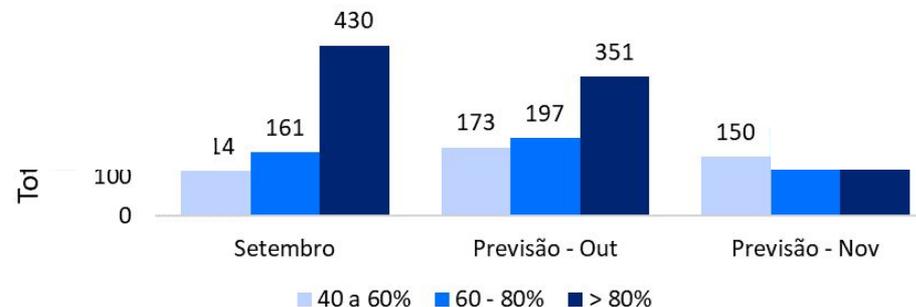
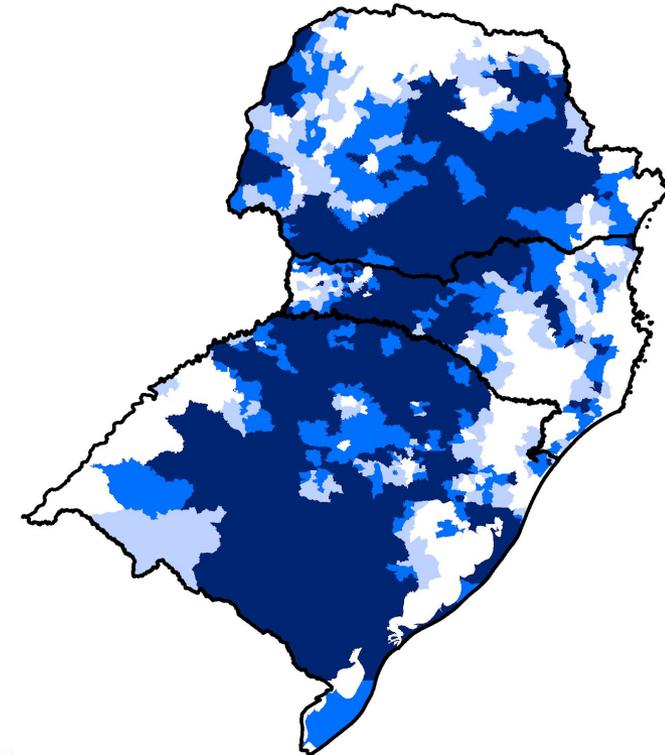
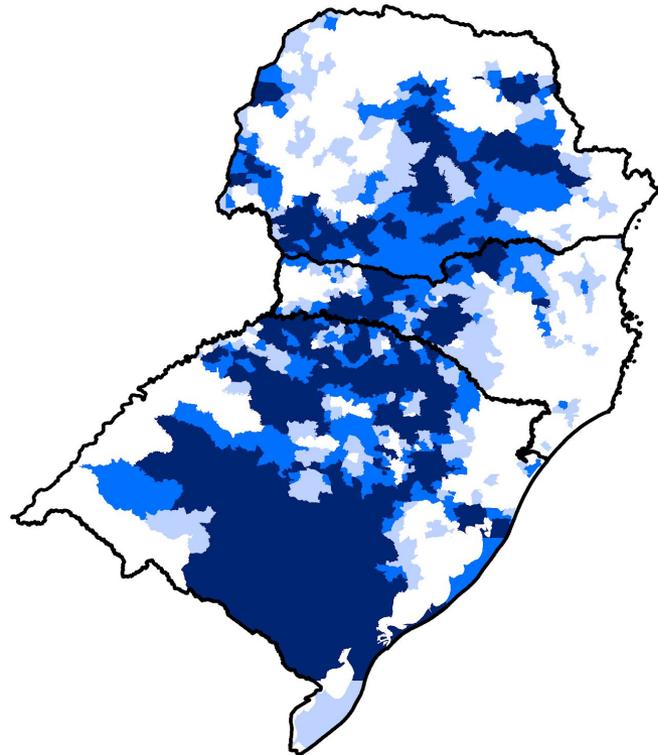
Impacto: Muito úmido à saturado.

## ESTIMATIVA DE ÁREAS DE PASTAGENS E AGRÍCOLAS AFETADAS PELO EXCESSO DE CHUVA

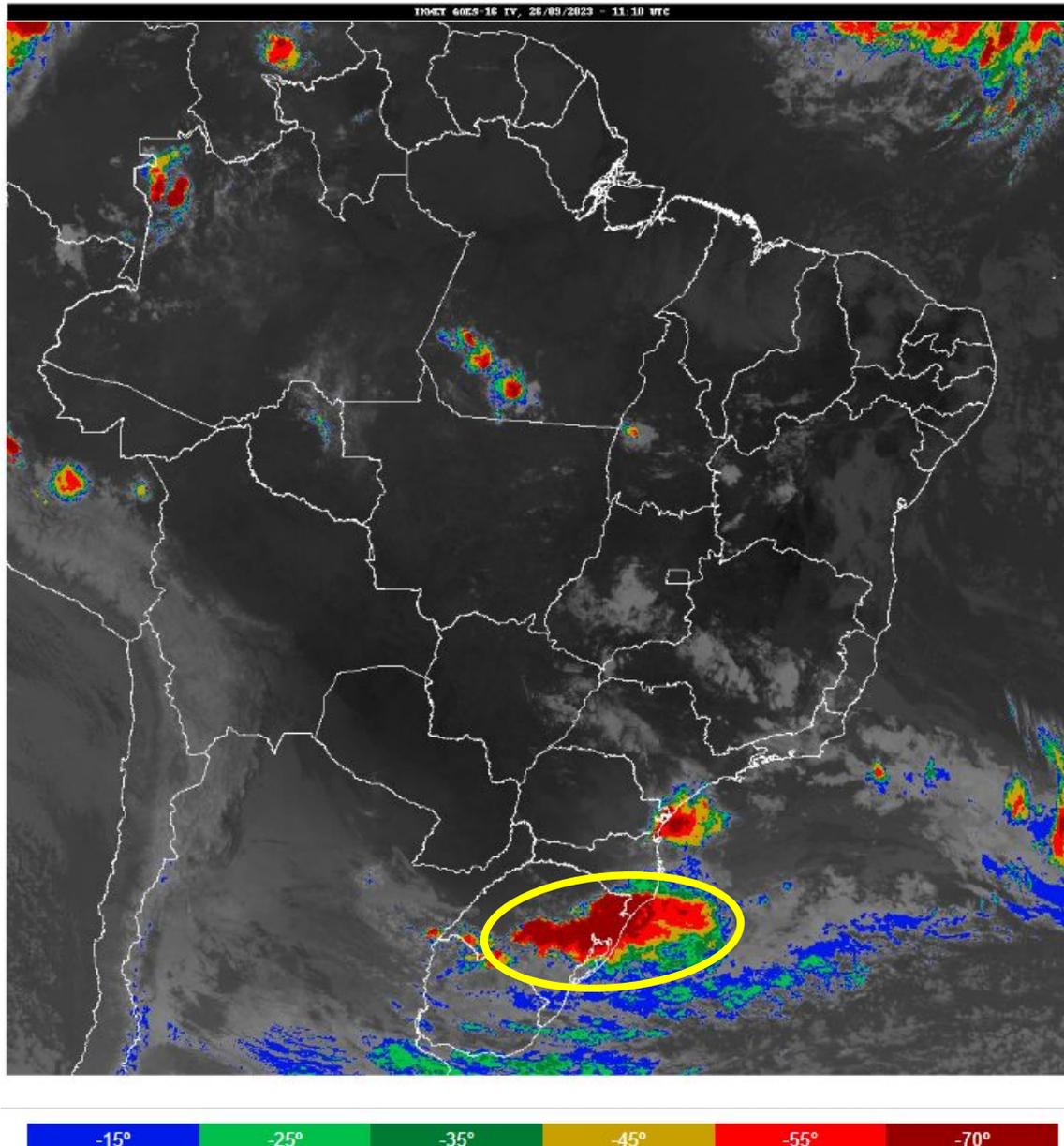
## PREVISÃO DE IMPACTO IARA PARA OUTUBRO

**CENÁRIO: OUT/23**

**CENÁRIO: Nov/23**



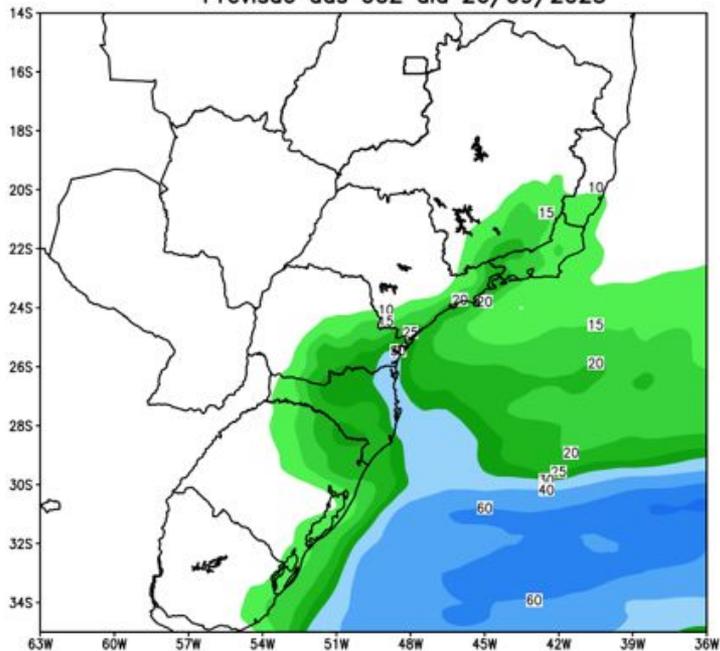
# Situação meteorológica atual



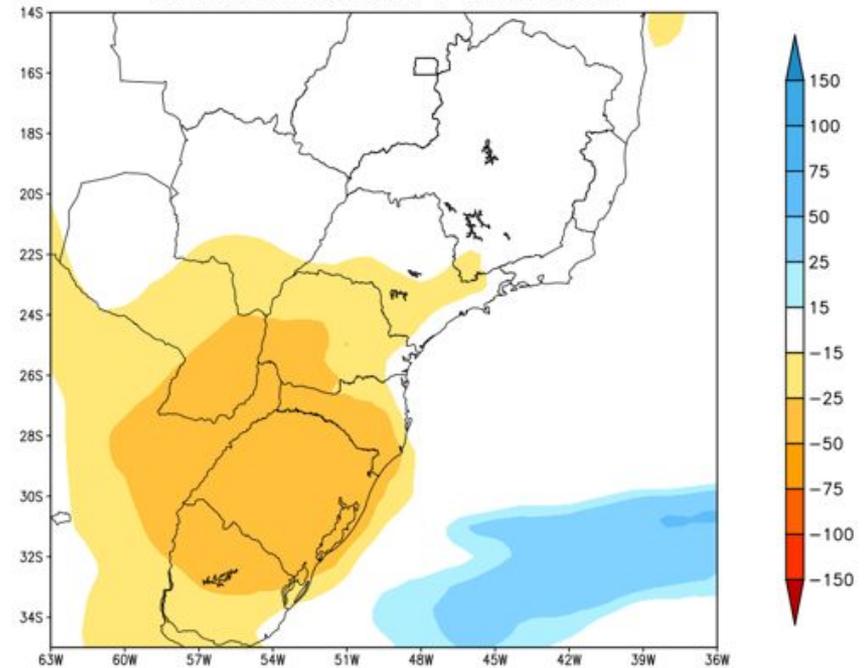
Fonte: INMET

# Previsão de chuva próximos 7 dias

GEFS / BRASIL\_SUL  
Precipitação acumulada 1aSem (mm)  
Previsão das 00Z dia 26/09/2023



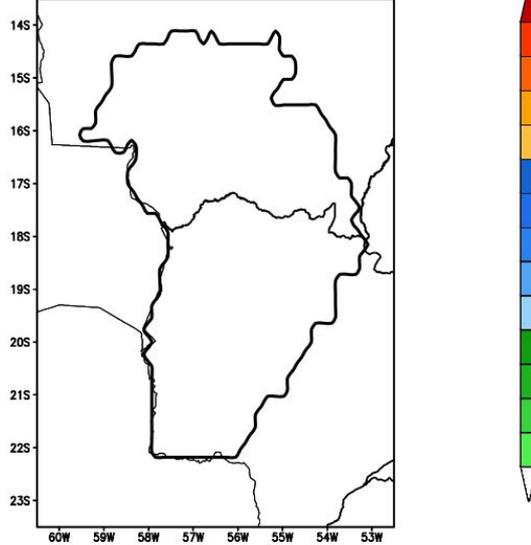
Anomalia de Precipitação BR SUL (mm)  
Período: 2023092600 a 2023100300



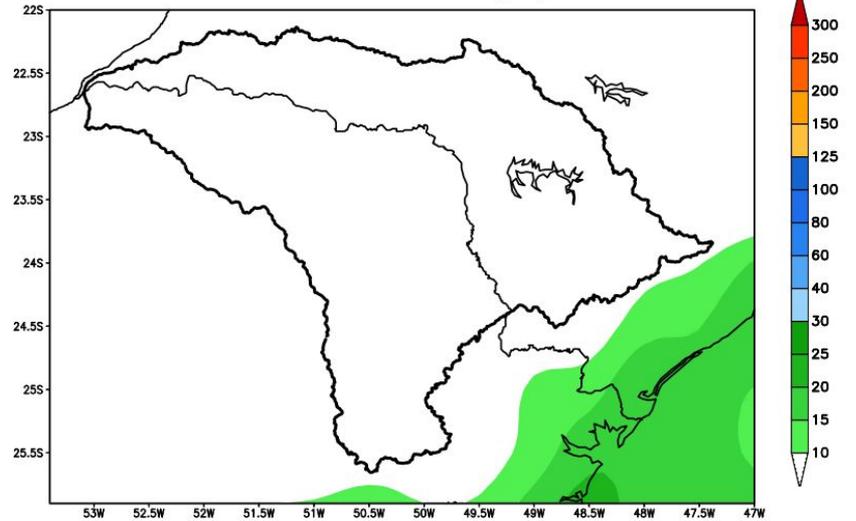
MODELO GFS

# Previsão para as principais bacias

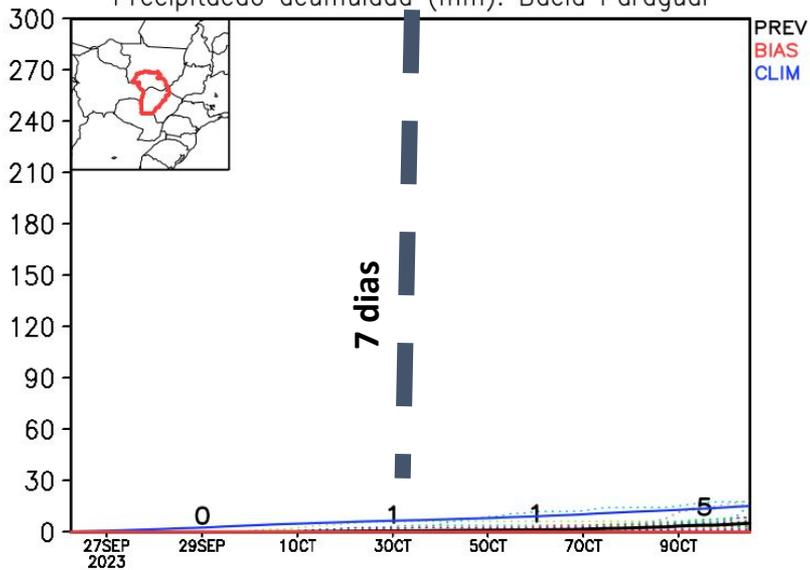
GEFS / Bacia do Rio Paraguai  
Precipitação acumulada em 7 dias (mm)  
Previsão das 00Z dia 26/09/2023



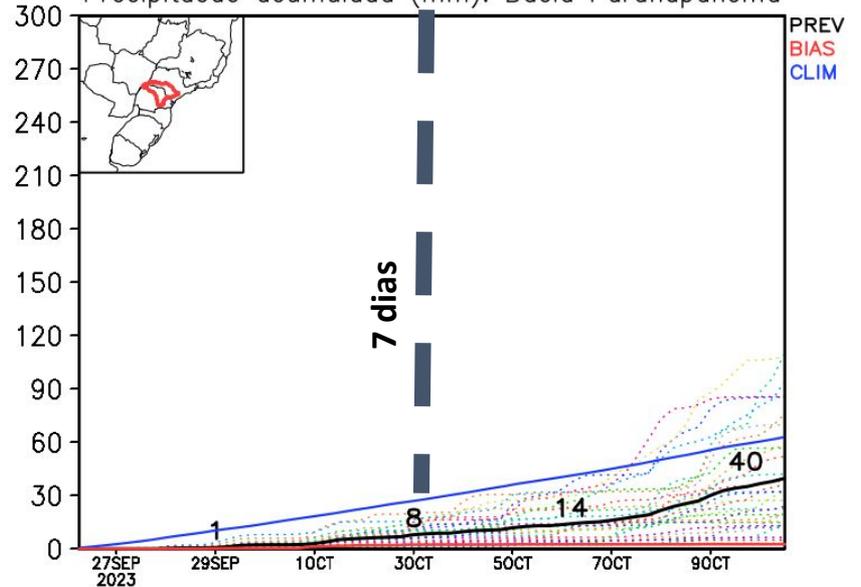
GEFS\_BC / Bacia do Rio Paranapanema  
Prec. acumulada com correção de vies em 7 dias (mm)  
Previsão das 00Z dia 26/09/2023



Precipitação acumulada (mm): Bacia Paraguai

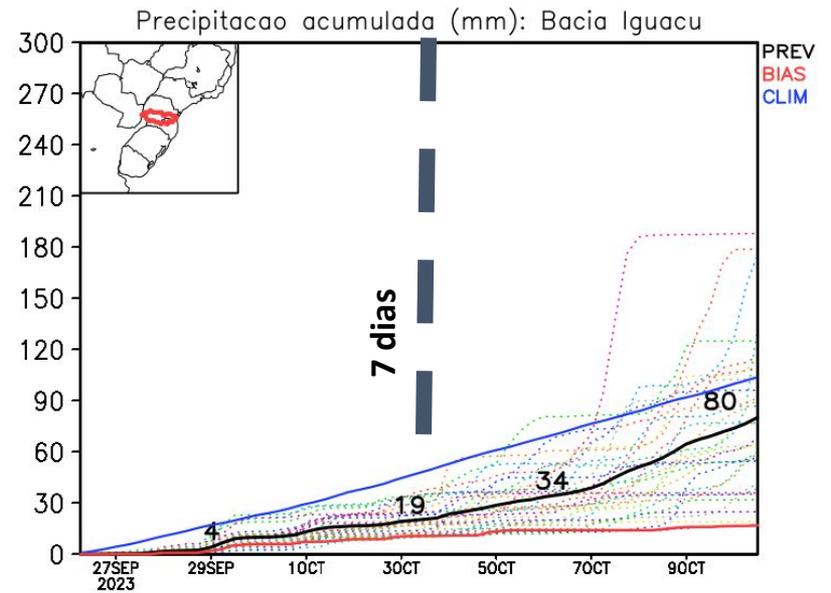
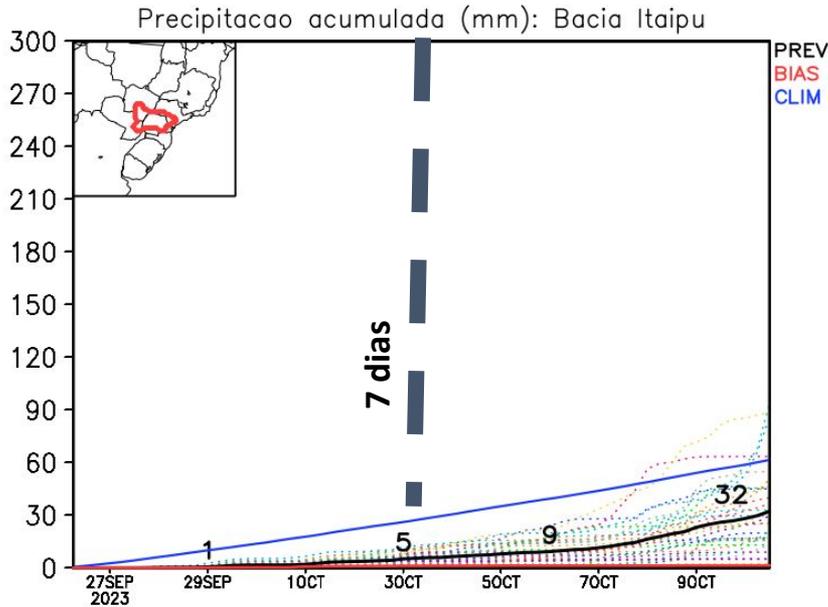
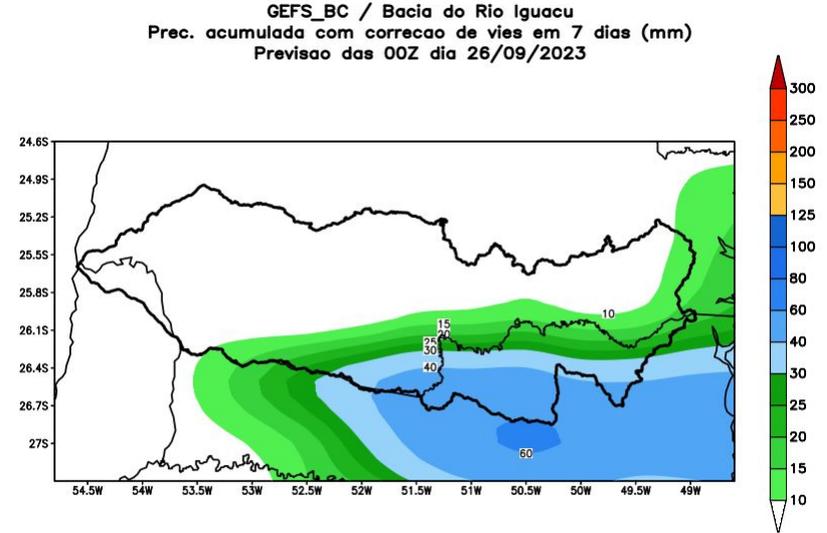
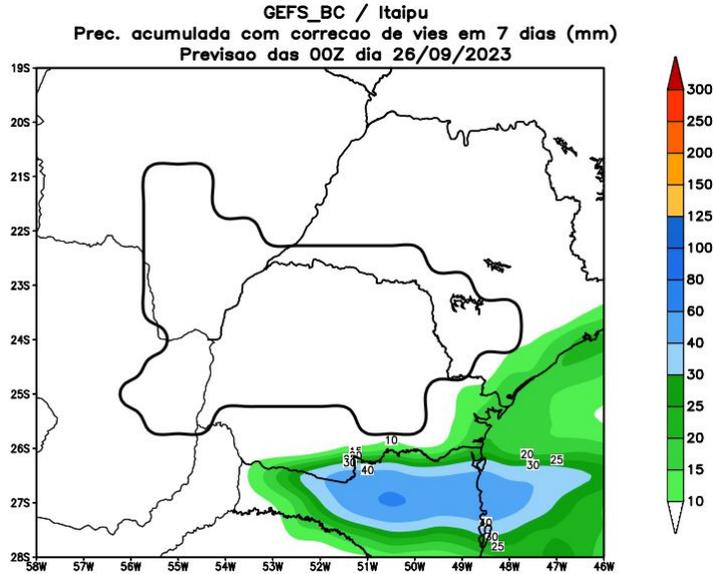


Precipitação acumulada (mm): Bacia Paranapanema



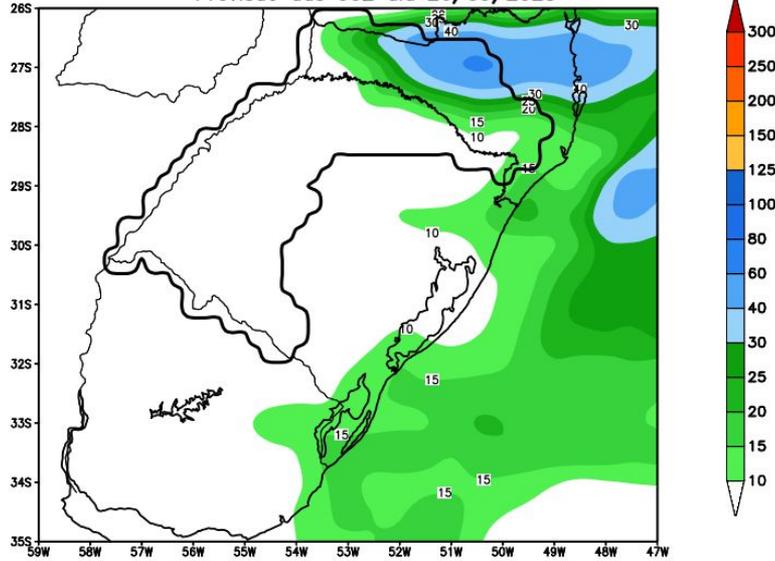
MODELO GFS

# Previsão para as principais bacias

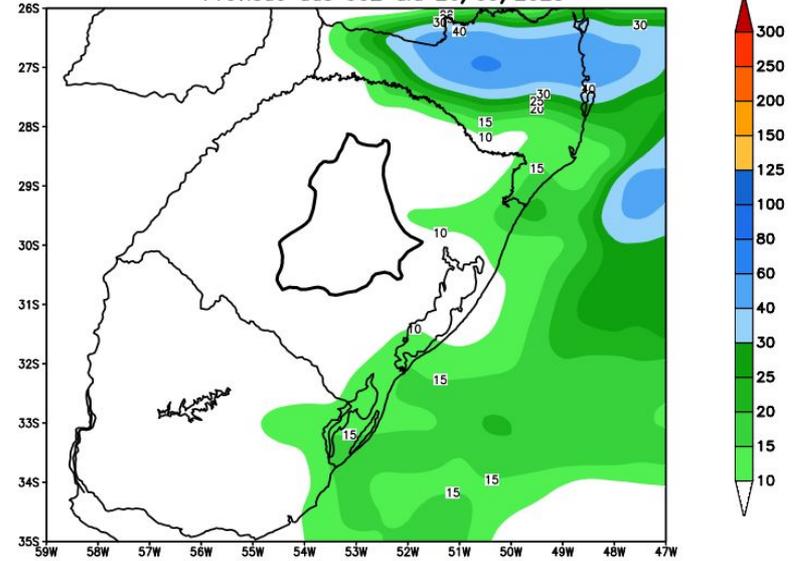


# Previsão para as principais bacias

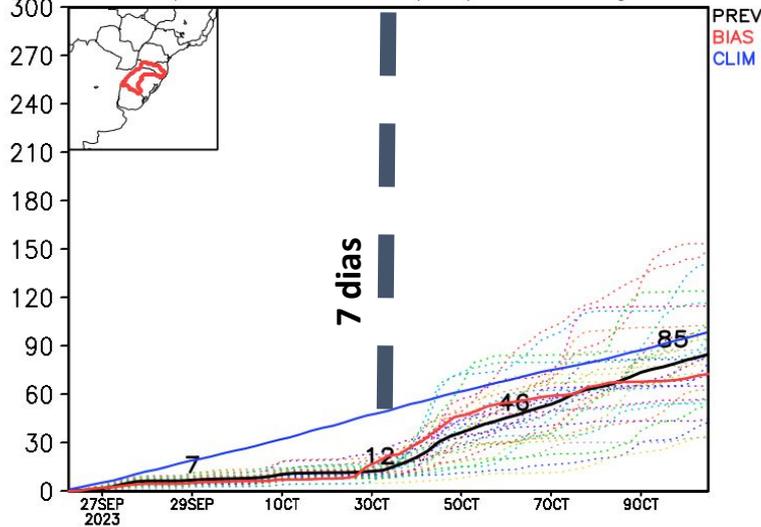
GEFS\_BC / Bacia do Rio Uruguai  
Prec. acumulada com correcao de vies em 7 dias (mm)  
Previsao das 00Z dia 26/09/2023



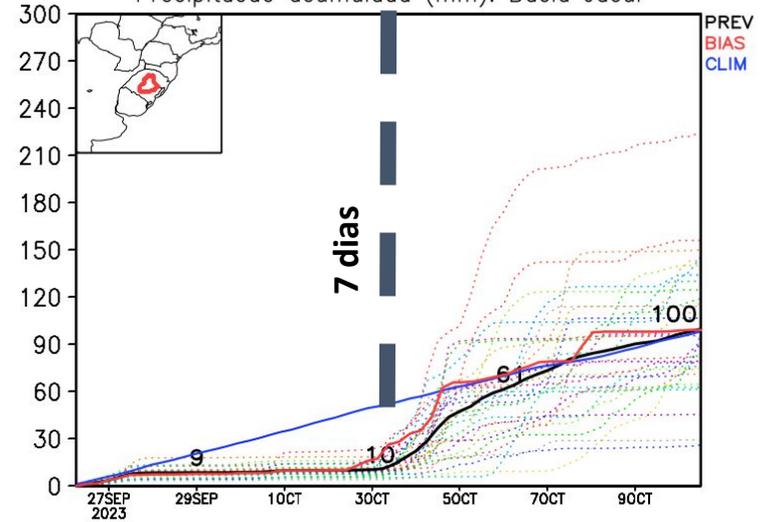
GEFS\_BC / Bacia do Rio Jacui  
Prec. acumulada com correcao de vies em 7 dias (mm)  
Previsao das 00Z dia 26/09/2023



Precipitacao acumulada (mm): Bacia Uruguai

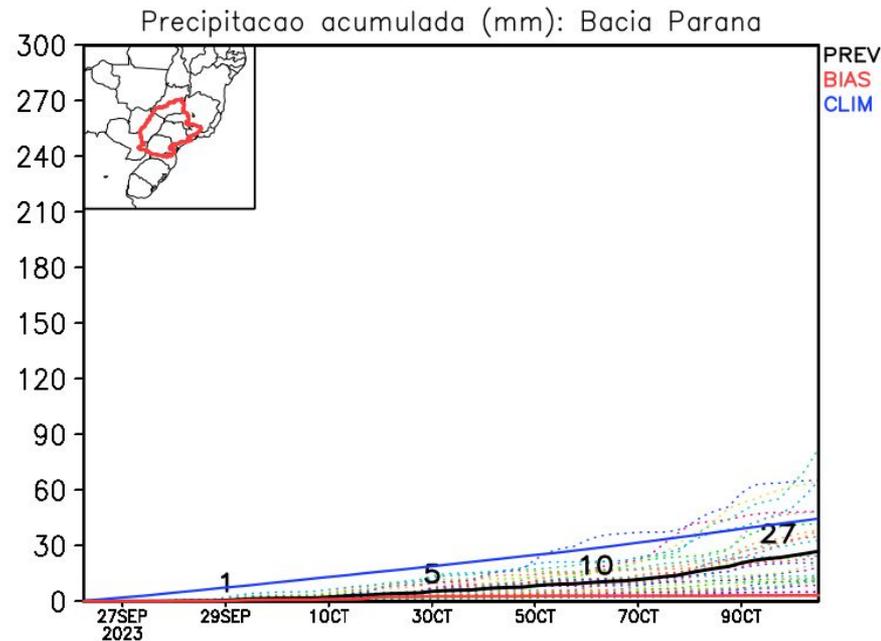
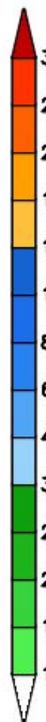
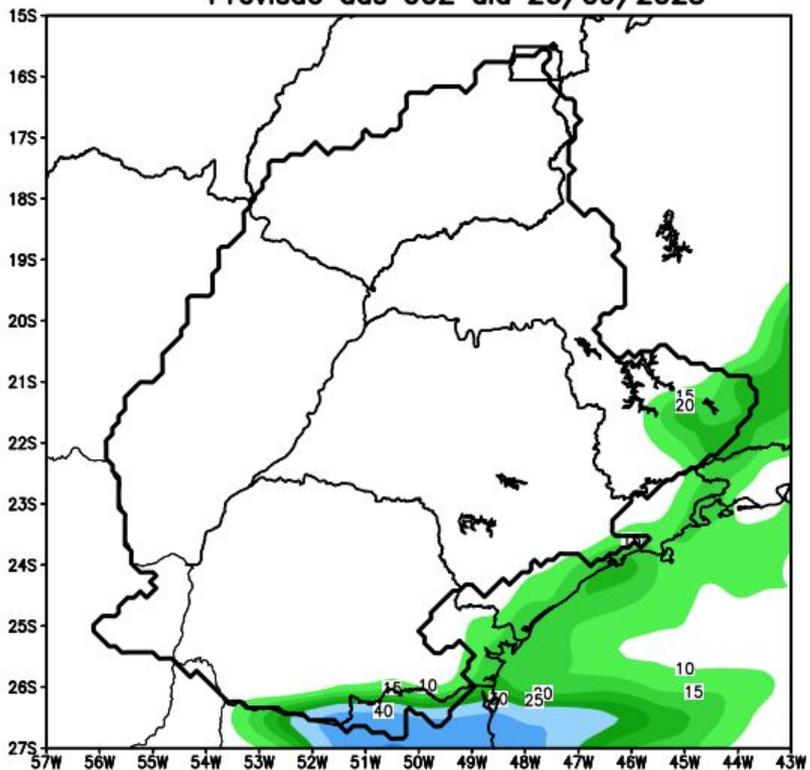


Precipitacao acumulada (mm): Bacia Jacui



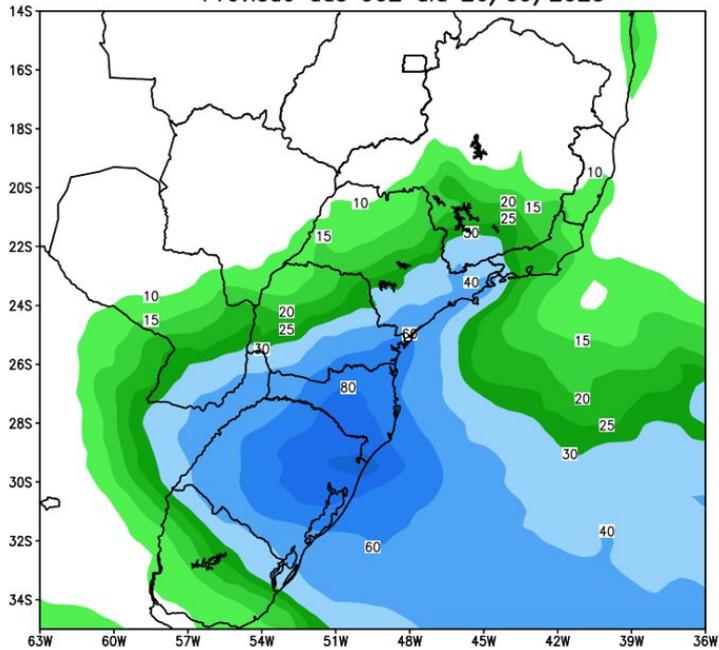
# Previsão para as principais bacias

GEFS\_BC / Bacia do Parana  
Prec. acumulada com correcao de vies em 7 dias (mm)  
Previsao das 00Z dia 26/09/2023

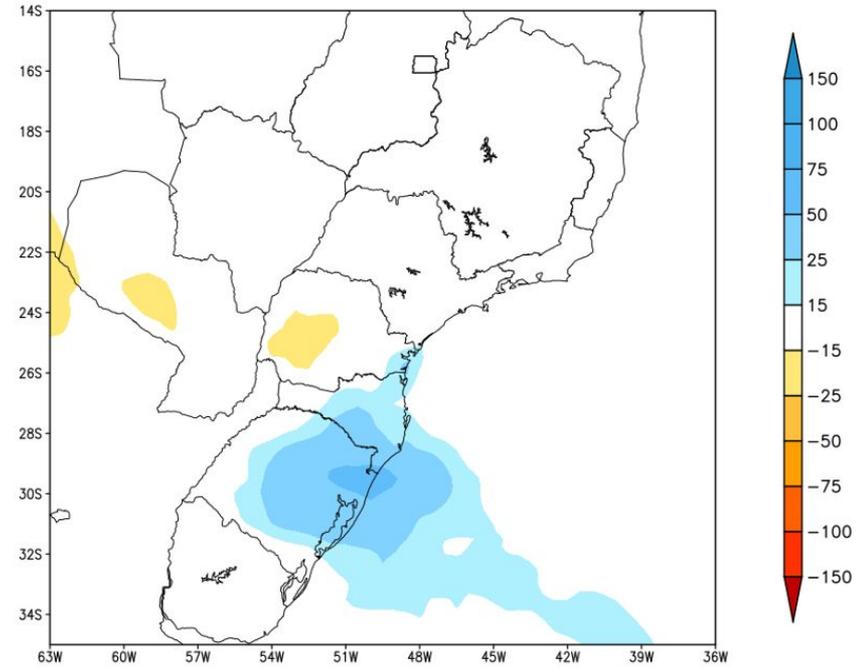


# Tendência para a segunda semana

GEFS / BRASIL\_SUL  
Precipitacao acumulada 2aSem (mm)  
Previsao das 00Z dia 26/09/2023



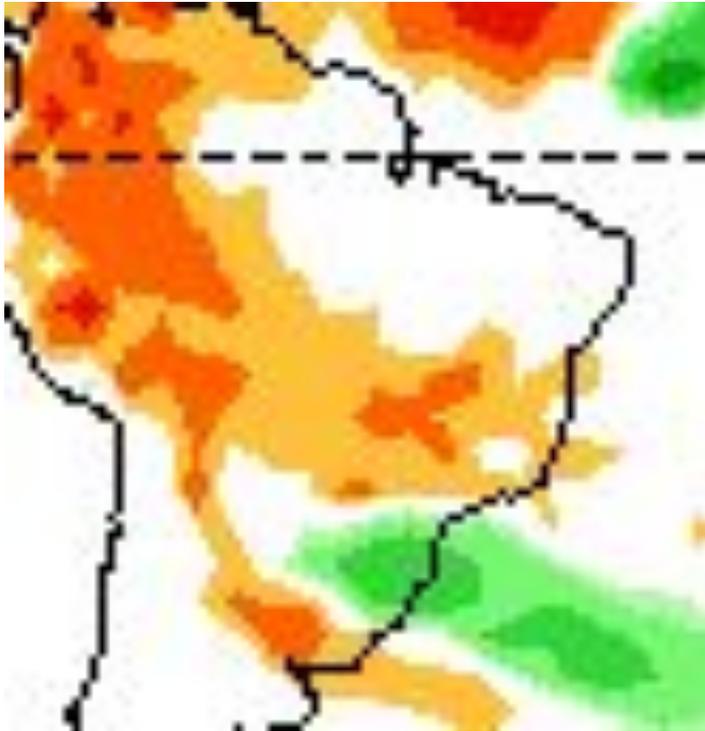
Anomalia de Precipitacao BR\_SUL (mm)  
Periodo: 2023100400 a 2023101000



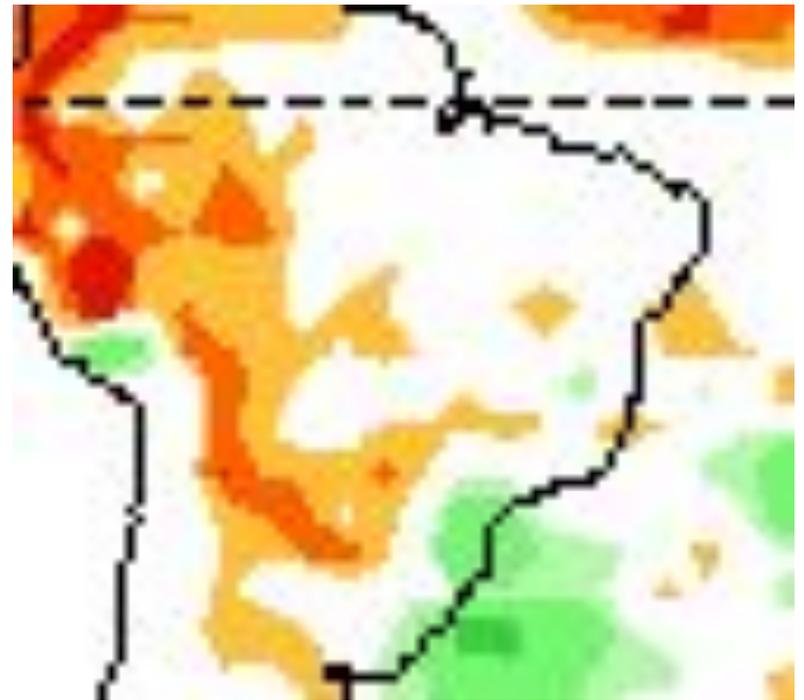
MODELO GFS

# Tendência 3a e 4a semanas

10-16/10

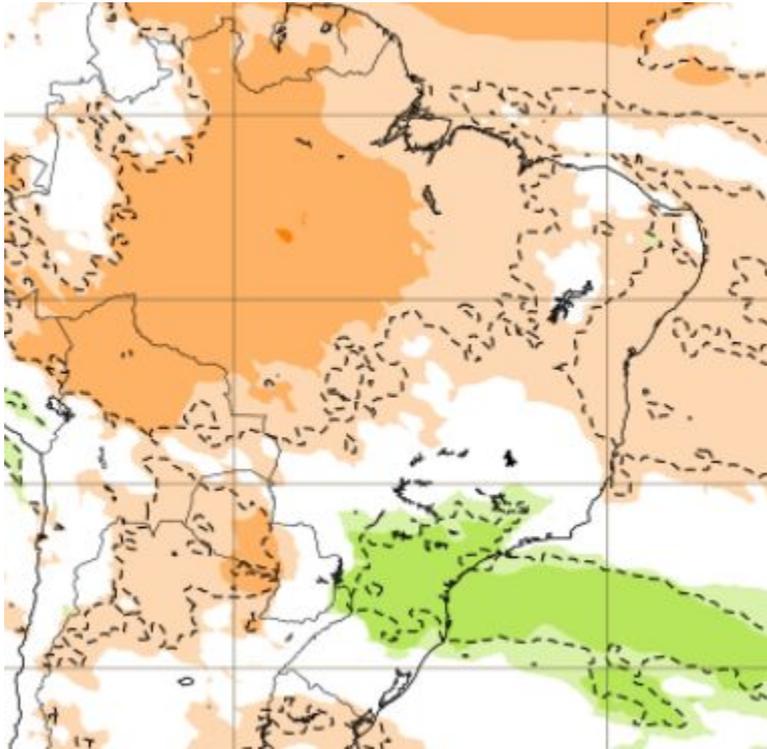


17-23/10

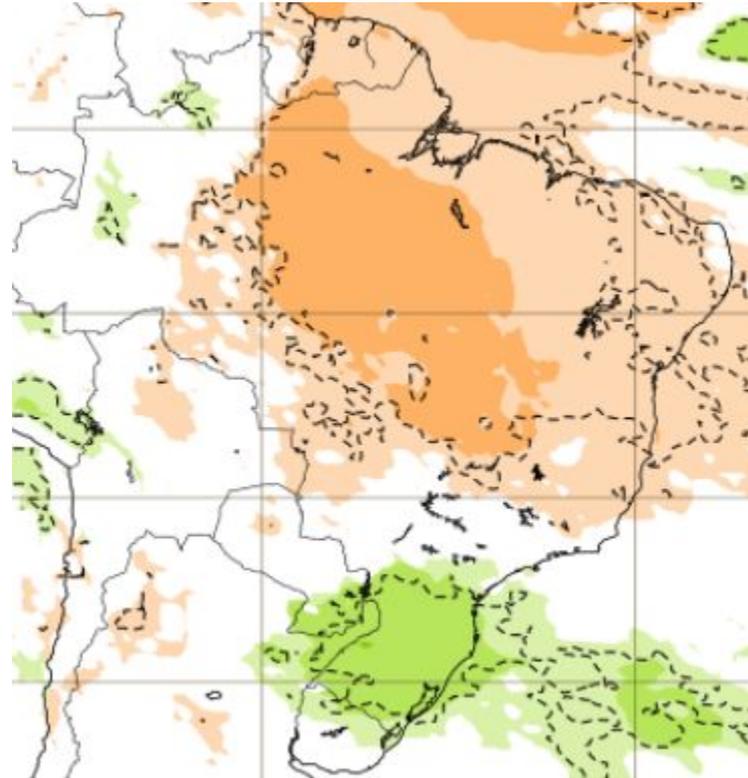


# Tendência para 3ª e 4ª semanas

09-15/10

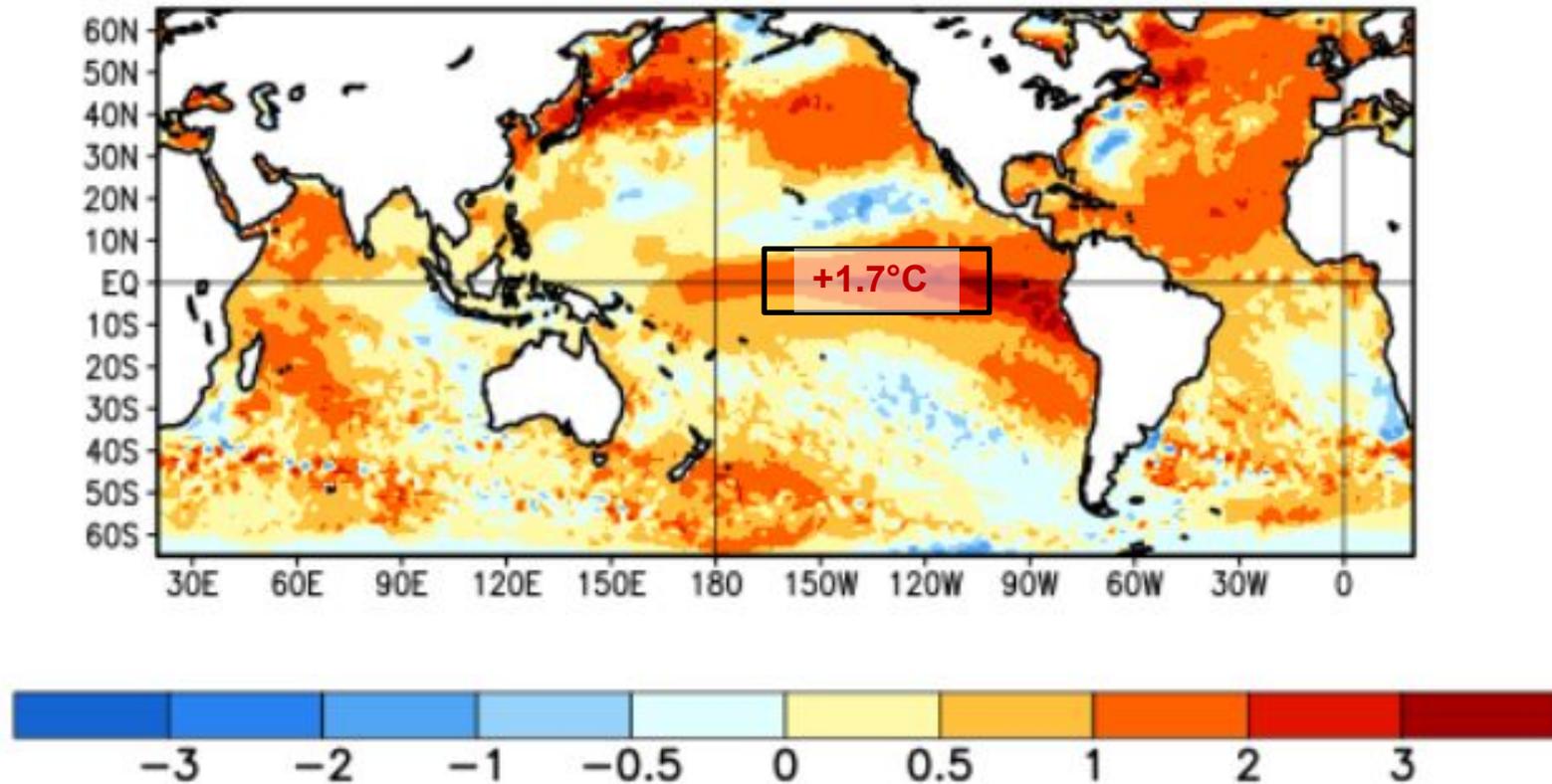


16-22/10



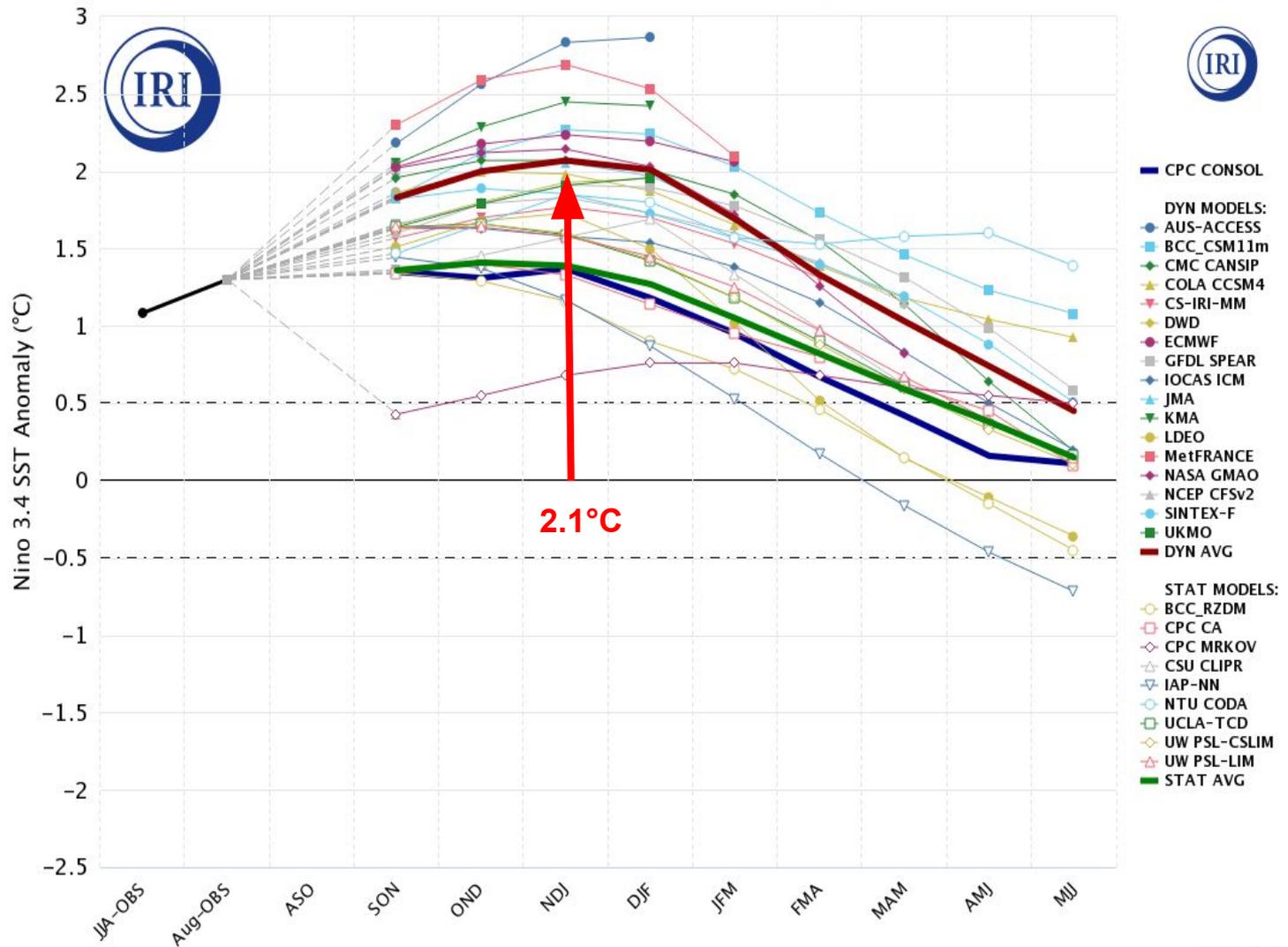
Status Atual: **El Niño**

Average SST Anomalies  
27 AUG 2023 – 23 SEP 2023



# Previsão do “ENSO”

## Model Predictions of ENSO from Sep 2023

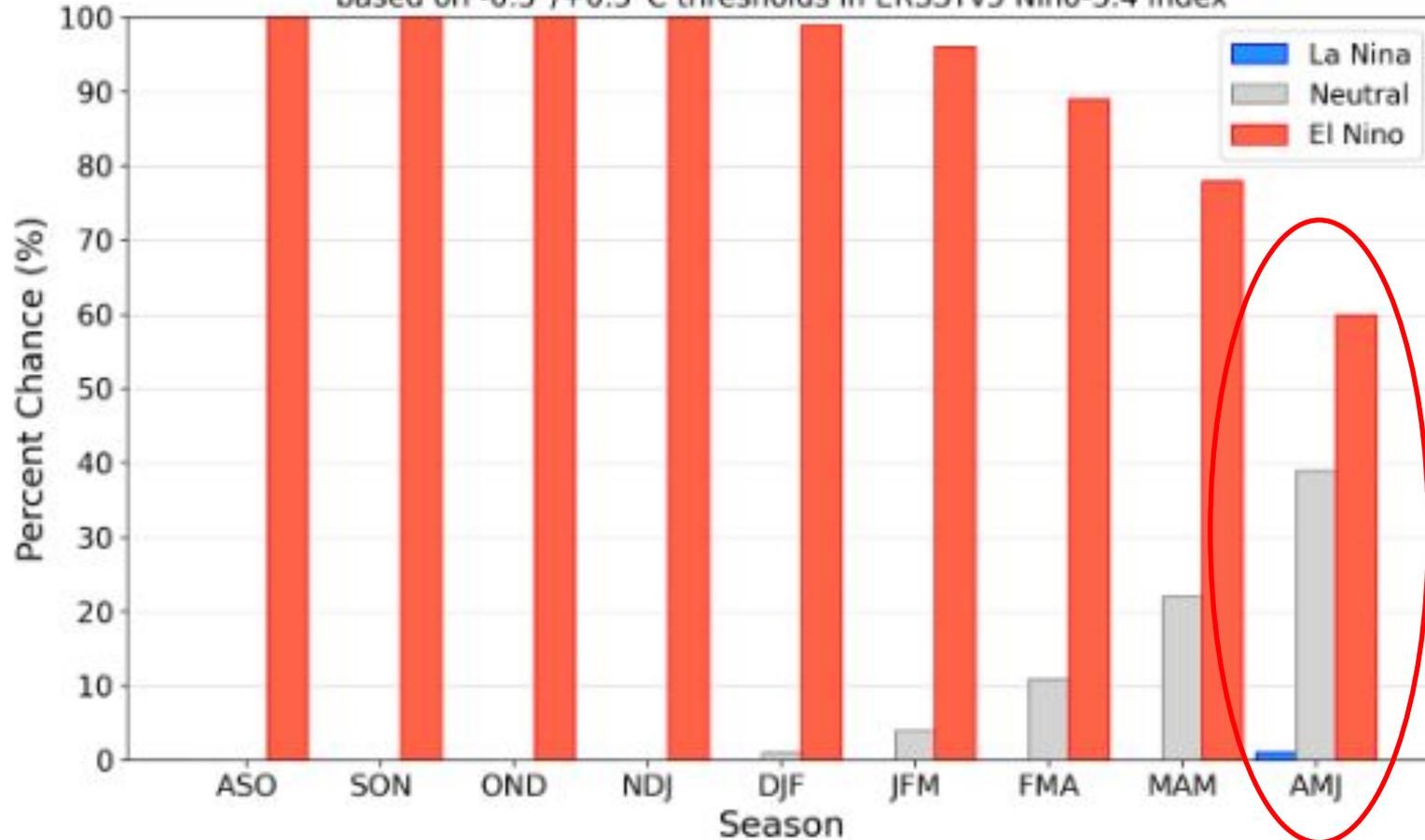


Atualizado 25 de setembro

# Previsão do “ENSO”

## Official NOAA CPC ENSO Probabilities (issued Sep. 2023)

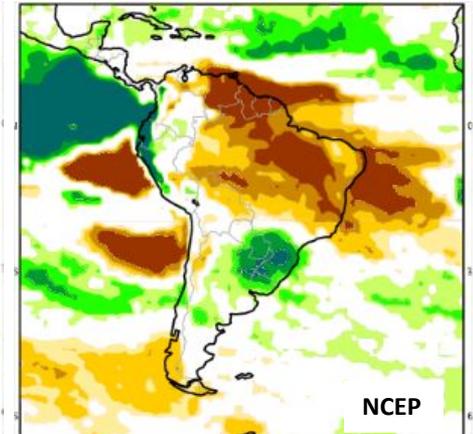
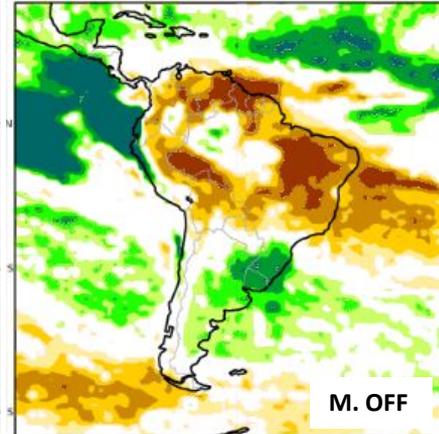
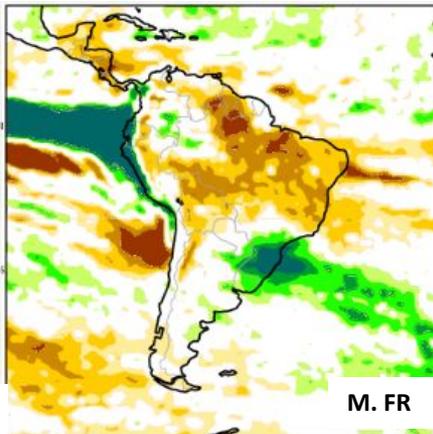
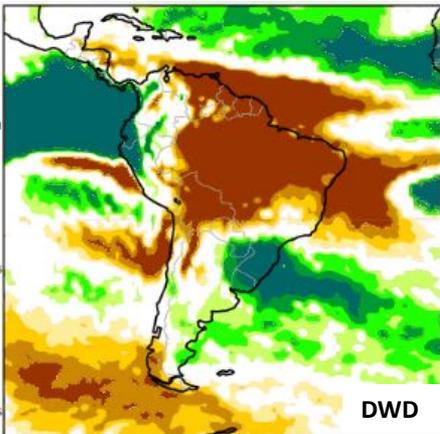
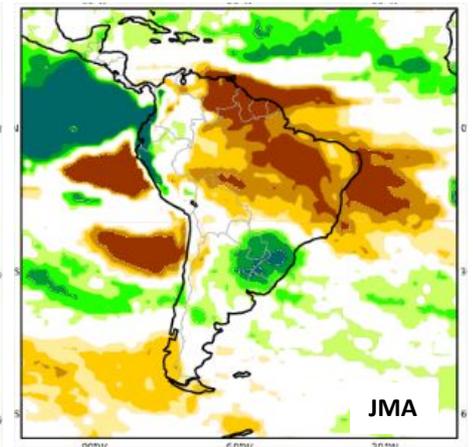
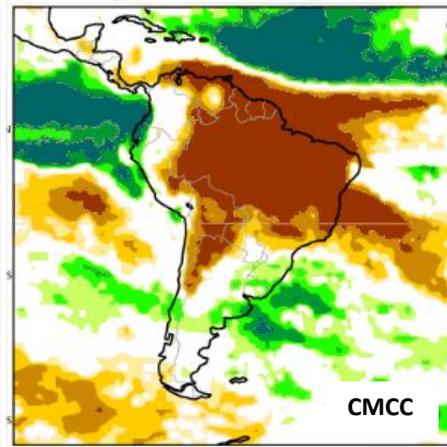
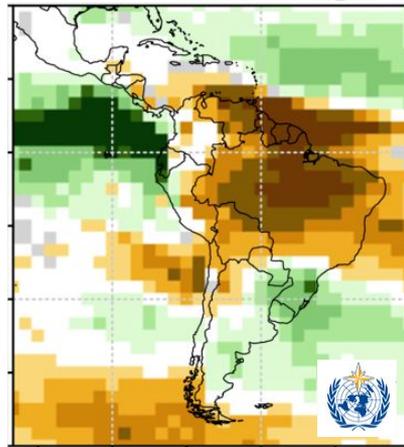
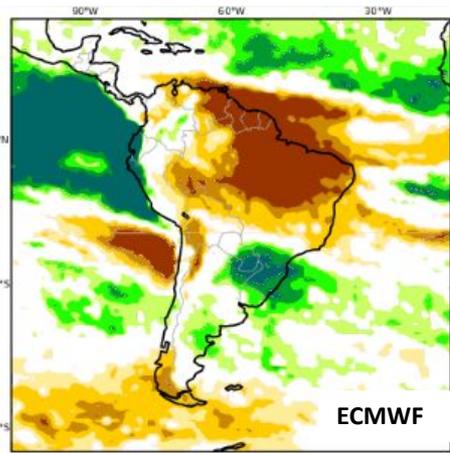
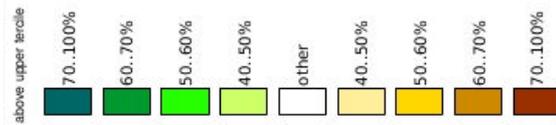
based on  $-0.5^{\circ}/+0.5^{\circ}\text{C}$  thresholds in ERSSTv5 Niño-3.4 index



Status Atual: **El Niño**

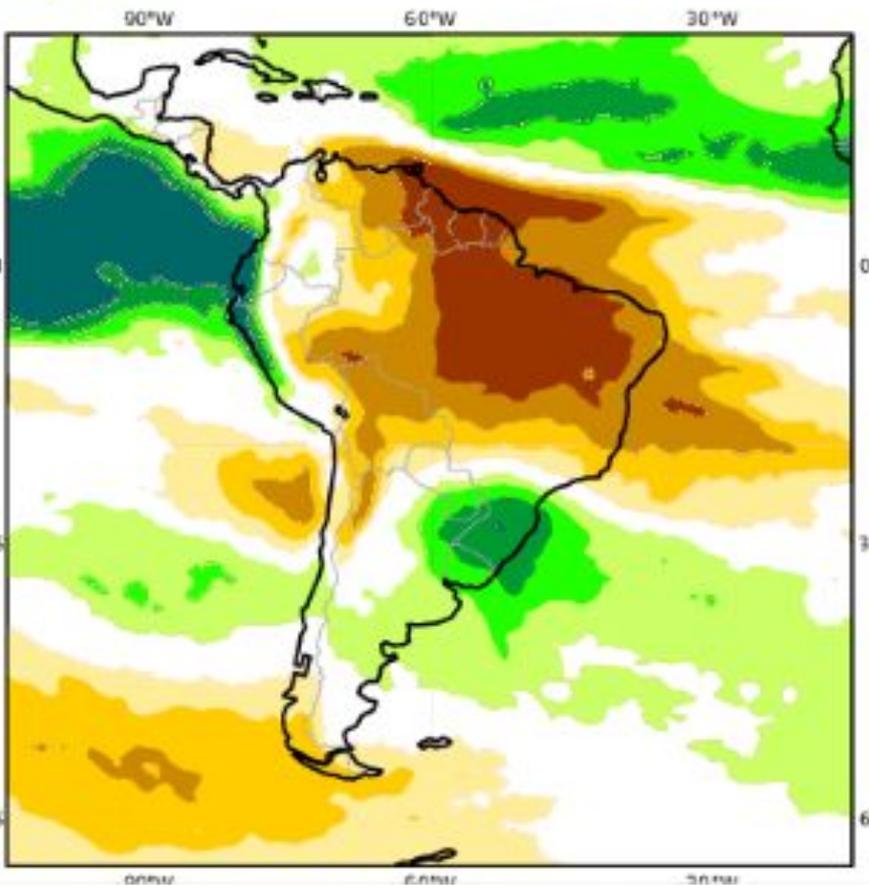
FONTE: NOAA

# Previsão Sazonal de Chuva OND



# Previsão Multi Modelo SON

C3S multi-system seasonal forecast  
Prob(most likely category of precipitation)  
Nominal forecast start: 01/09/23  
Unweighted mean



NMME Precipitation Anomalies (mm/day)  
Oct2023–Dec2023    September2023 initial conditions

