

Monitoramento da situação da seca na Região Norte

26 DE ABRIL DE 2024



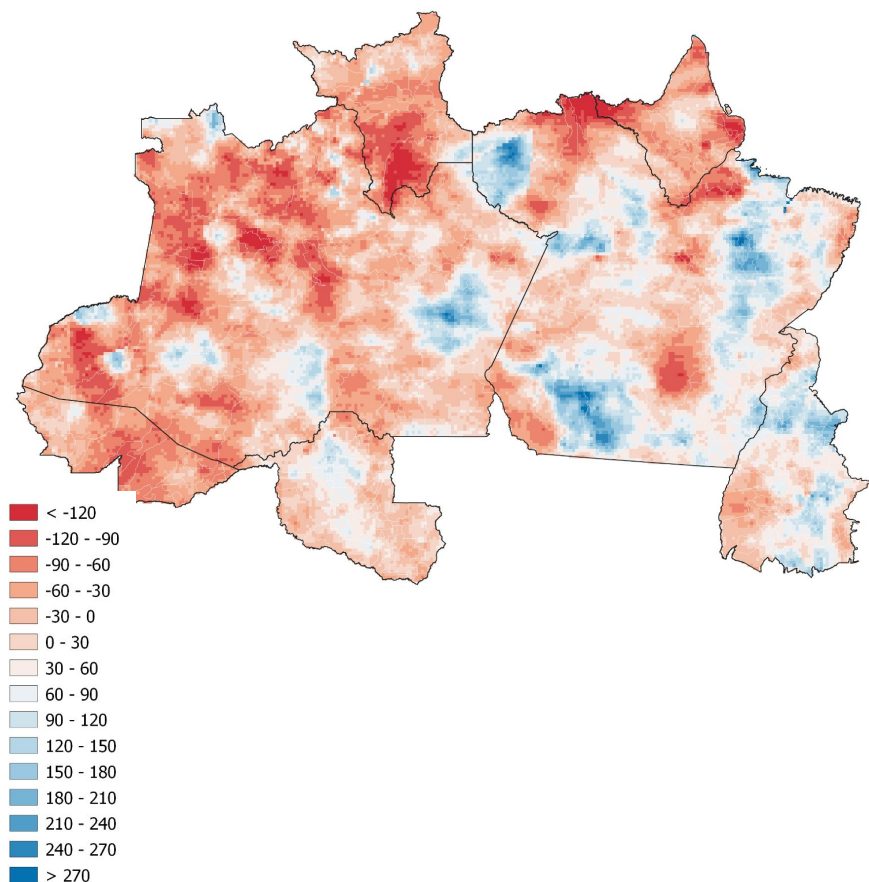
UNIDADE DE PESQUISA DO MCTI

MINISTÉRIO DA
CIÊNCIA, TECNOLOGIA
E INOVAÇÕES

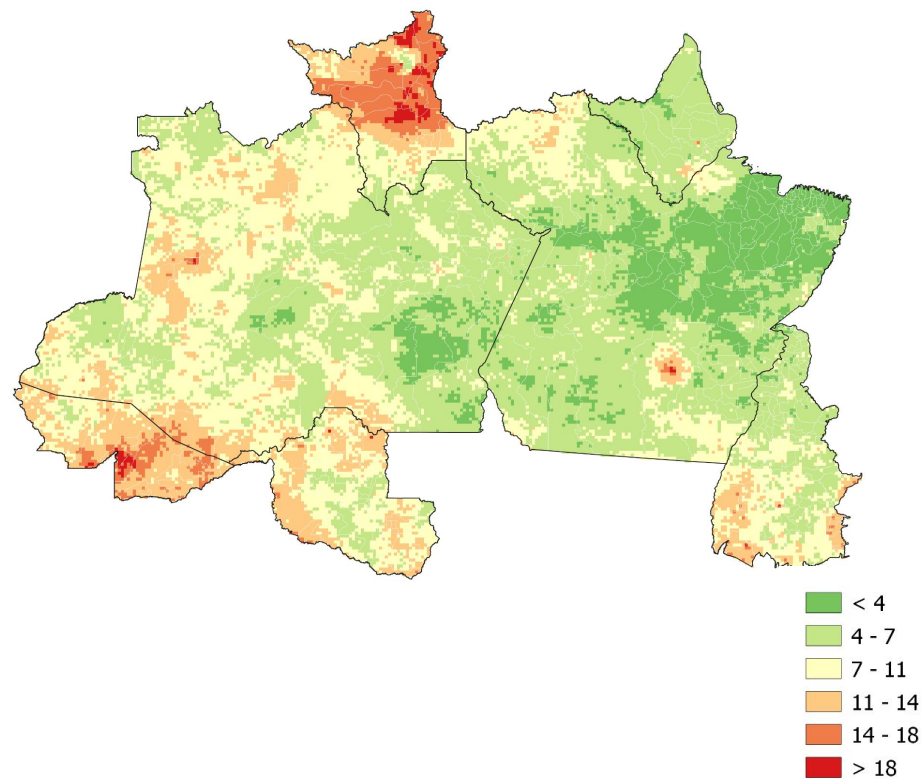


PRECIPITAÇÃO: ABRIL 2024

ANOMALIA (MM)

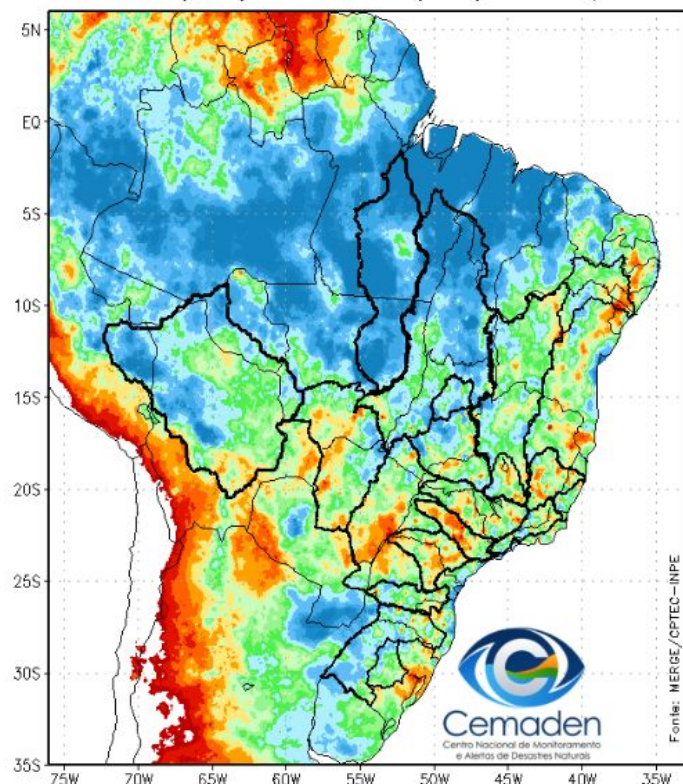


TOTAL DE DIAS SEM PRECIPITAÇÃO (MM)

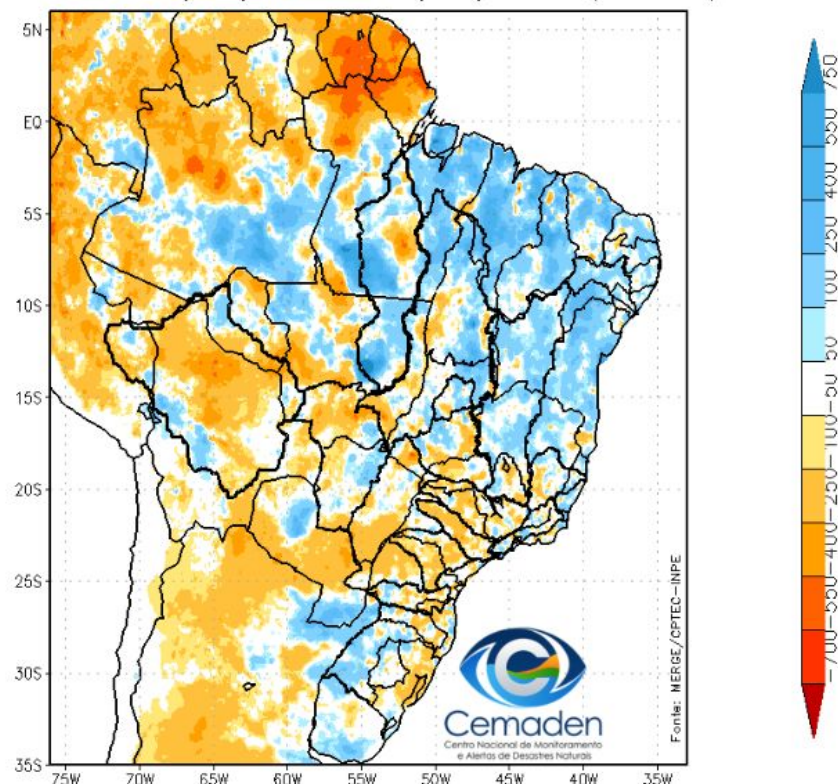


PRECIPITAÇÃO: ÚLTIMOS 90 DIAS

Precipitação Acumulada (mm) A.S.
Período: 26/01/2024 a 25/04/2024 (90 dias)



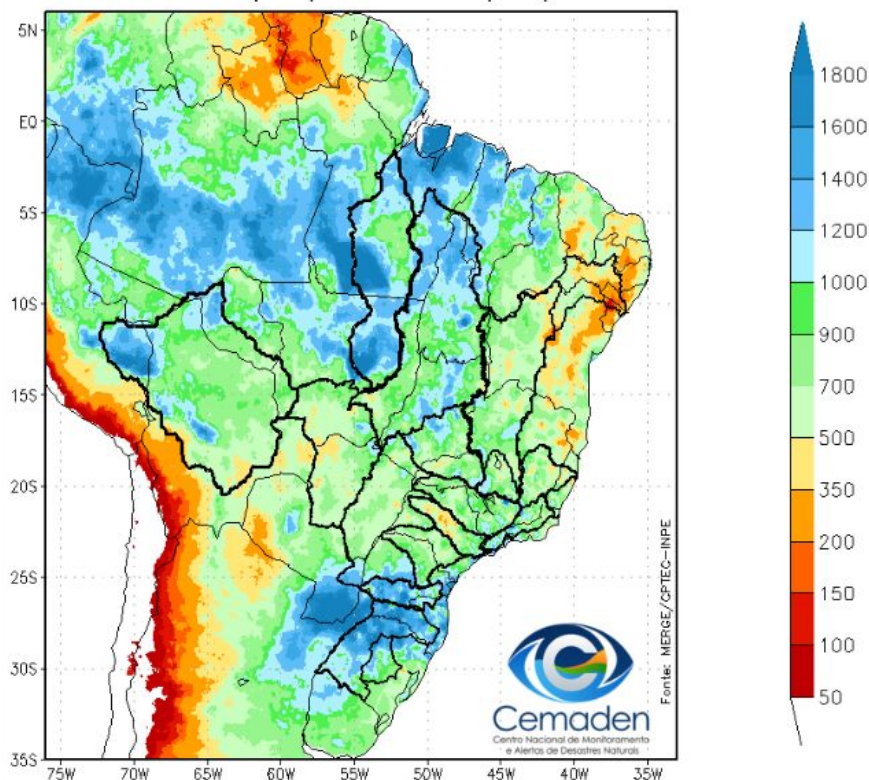
Anomalia de Precipitação (mm) A.S.
Período: 26/01/2024 a 25/04/2024 (90 dias)



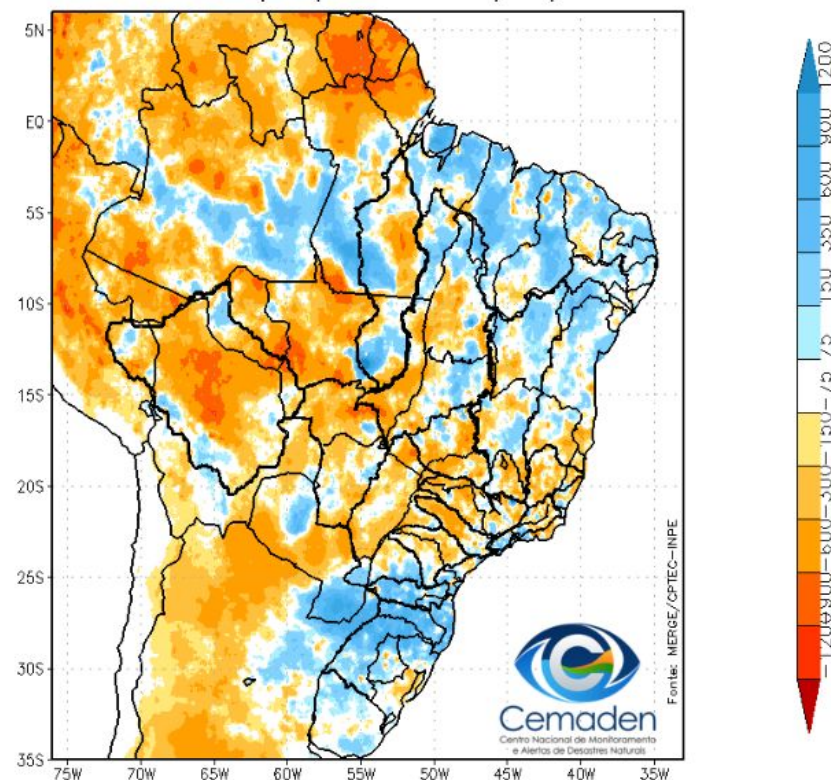
FONTE DOS DADOS: MERGE/INPE

PRECIPITAÇÃO DO ANO HIDROLÓGICO

Precipitação Acumulada (mm) Ano Hidrológico
Período: 01/10/2023 a 25/04/2024

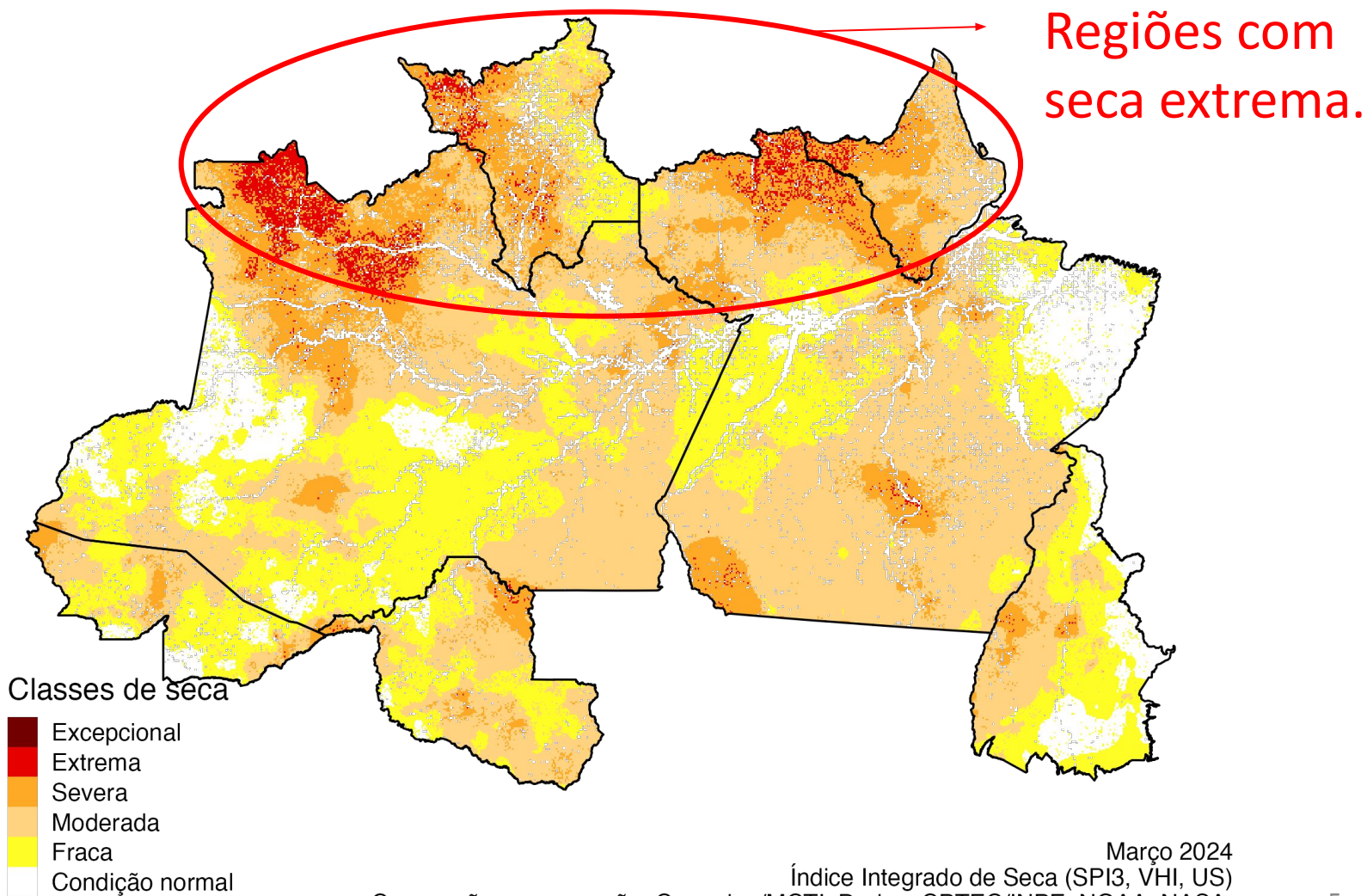


Anomalia de Precipitação (mm) Ano Hidrológico
Período: 01/10/2023 a 25/04/2024



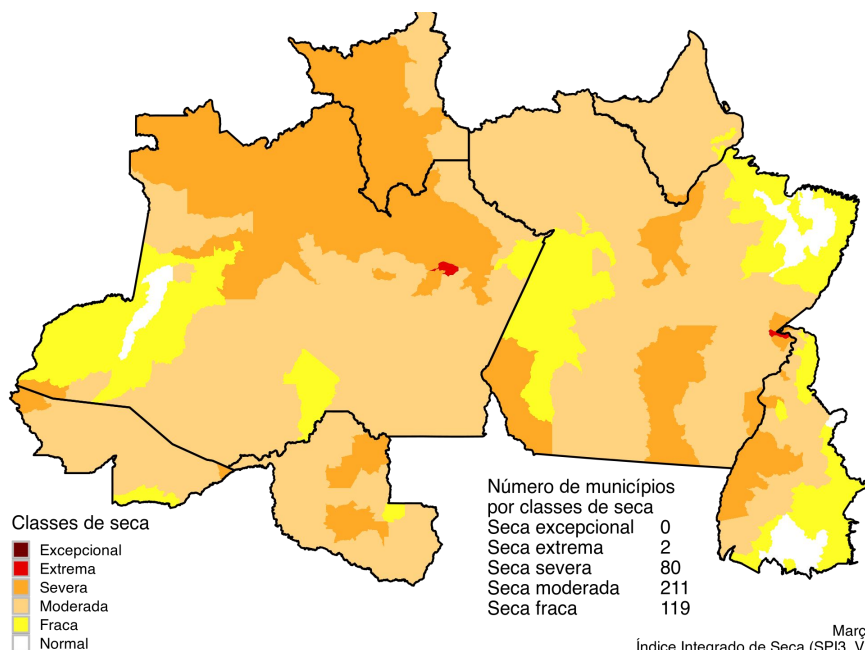
FONTE DOS DADOS: MERGE/INPE

ÍNDICE INTEGRADO DE SECA - 3 MESES

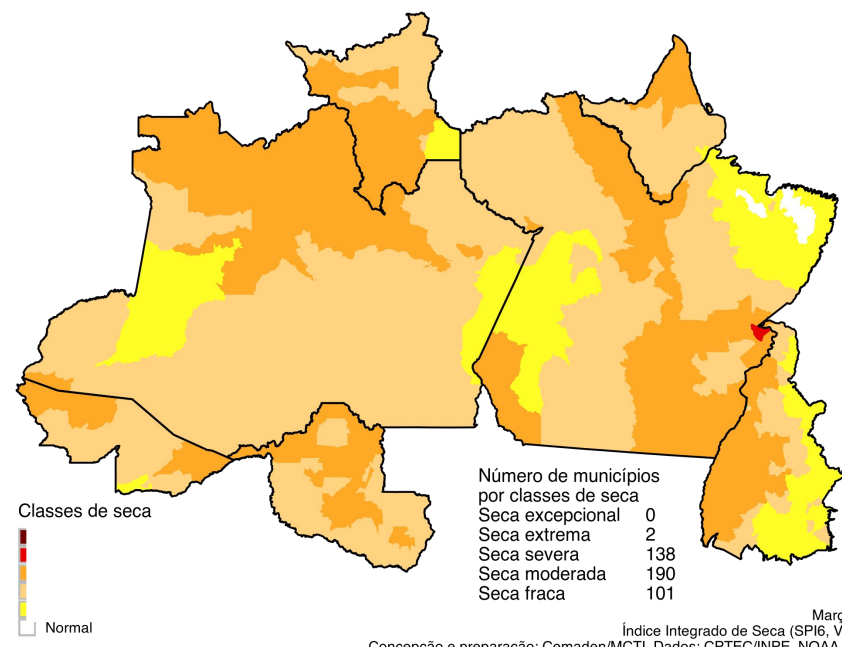


ÍNDICE INTEGRADO DE SECA (3 E 6 MESES): ANÁLISE POR **MUNICÍPIOS**

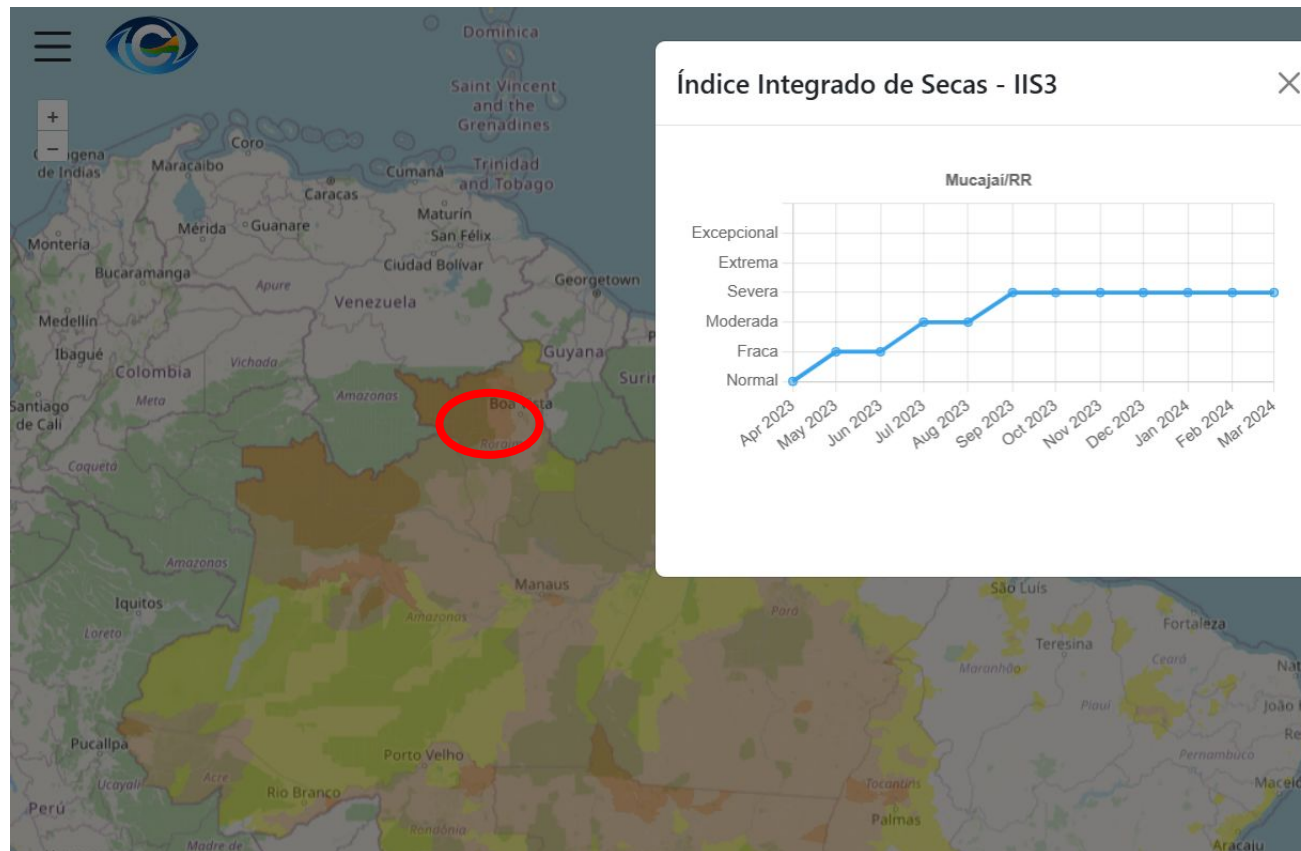
IIS-03



IIS-06



ÍNDICE INTEGRADO DE SECA: ANÁLISE TEMPORAL



Macujá e Iracema
em RR:

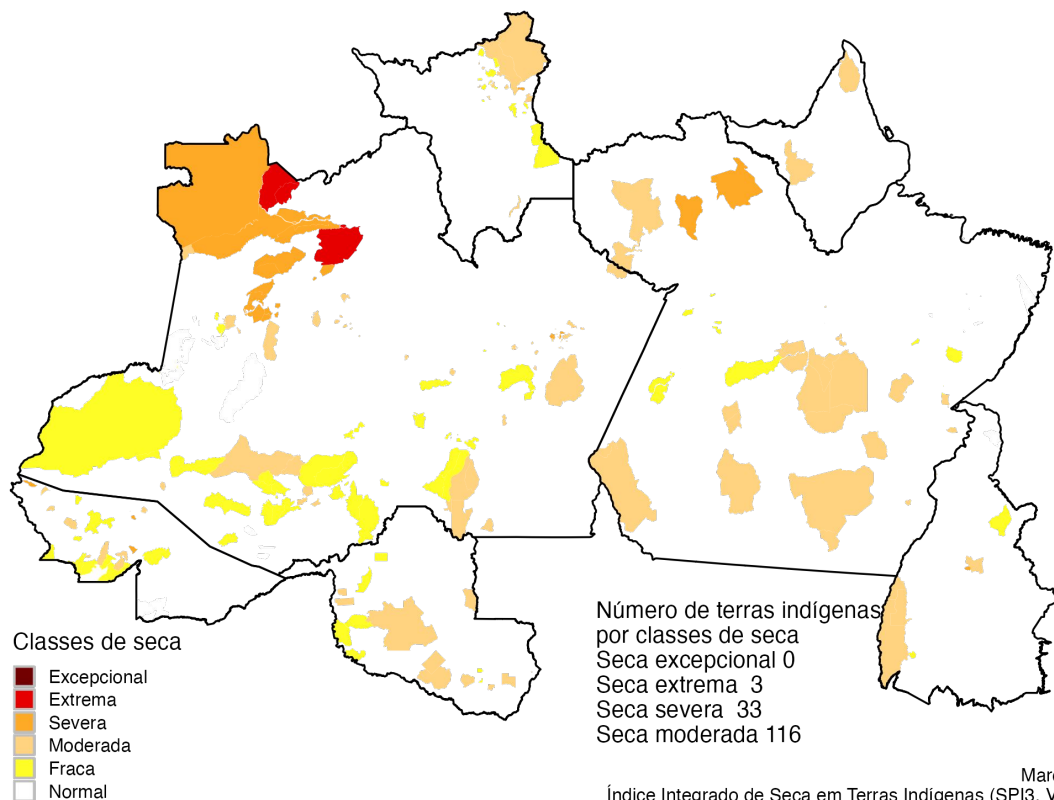
Mun. com maior
persistência de seca
severa (7 meses)



<https://mapasecas.cemaden.gov.br/>

Acesse o Mapa Interativo

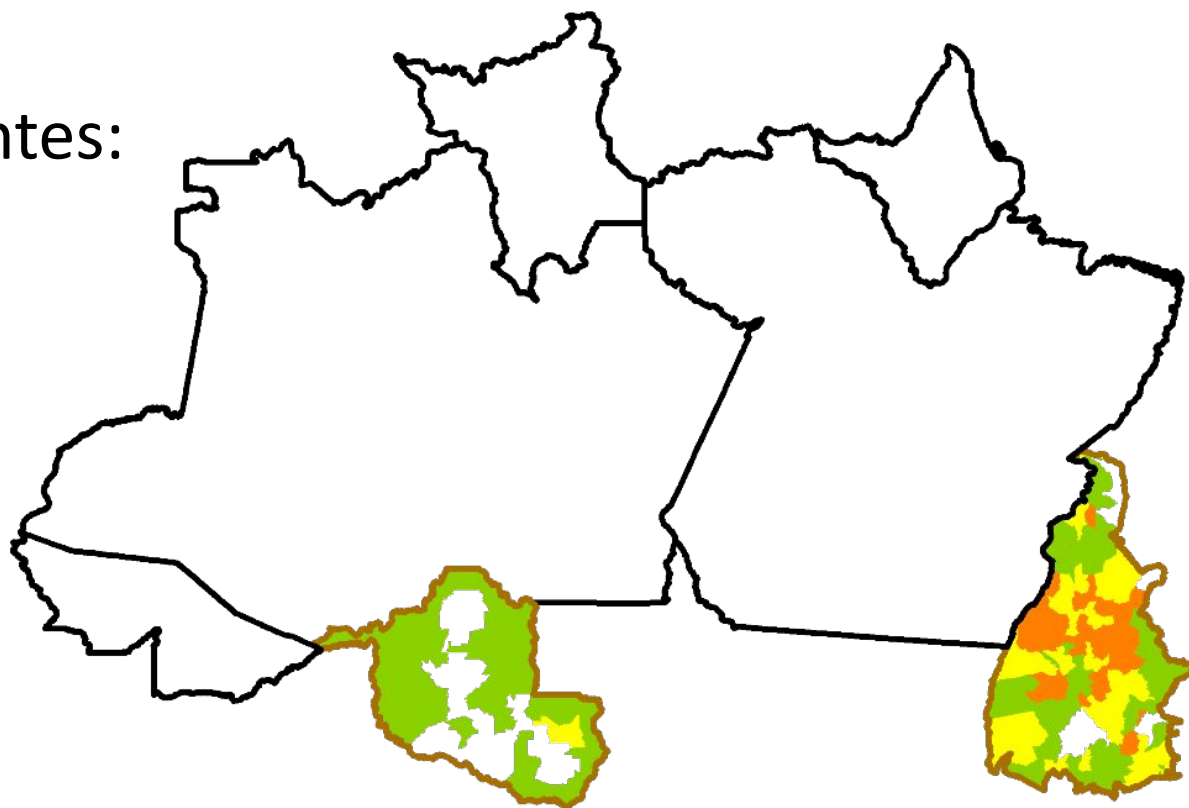
ÍNDICE INTEGRADO DE SECA (IIS-03) EM TERRAS INDÍGENAS:



Março 2024
Índice Integrado de Seca em Terras Indígenas (SPI3, VHI, US)
Concepção e preparação: Cemaden/MCTI. Dados: CPTEC/INPE, NOAA, NASA.

RISCO DA SECA NA AGRICULTURA FAMILIAR (FEIJÃO/MILHO)

Calendários vigentes:
TO e RO



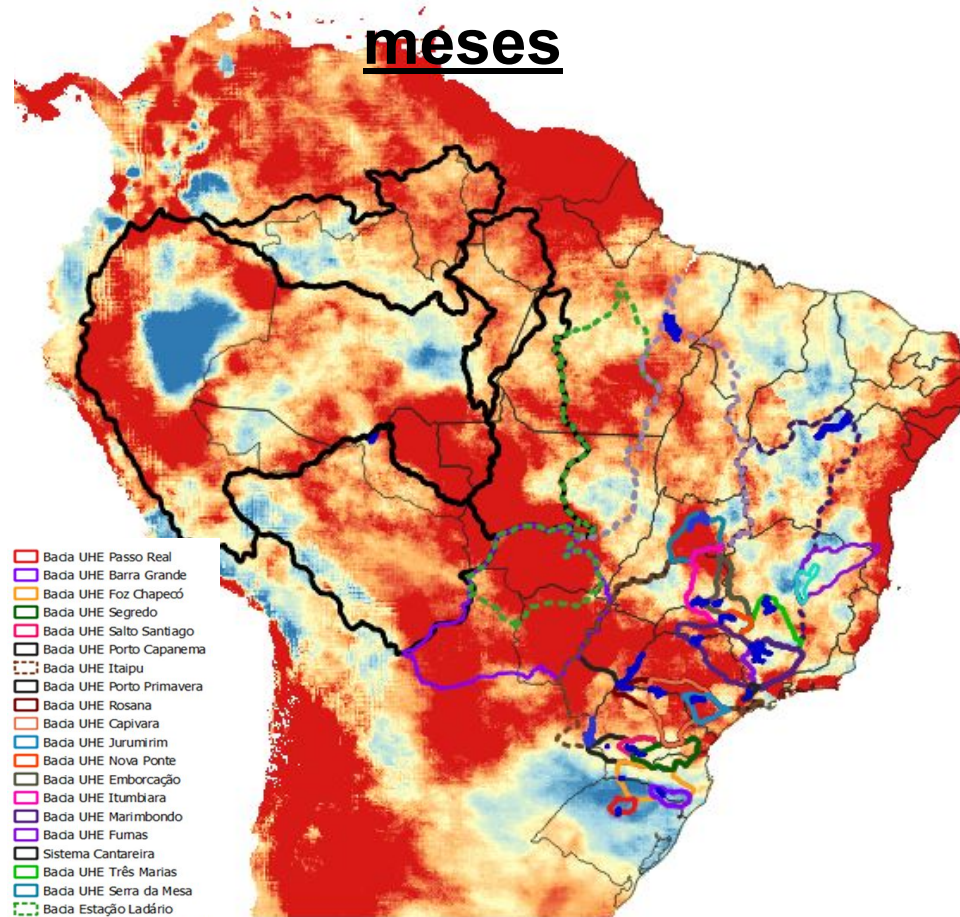
RISCO

-  Sem plantio*
-  Feijão / Milho
-  Risco Muito Baixo
-  Risco Baixo
-  Risco Moderado
-  Risco Alto
-  Risco Muito Alto

Mais municípios com risco alto de
impacto na agricultura familiar no TO

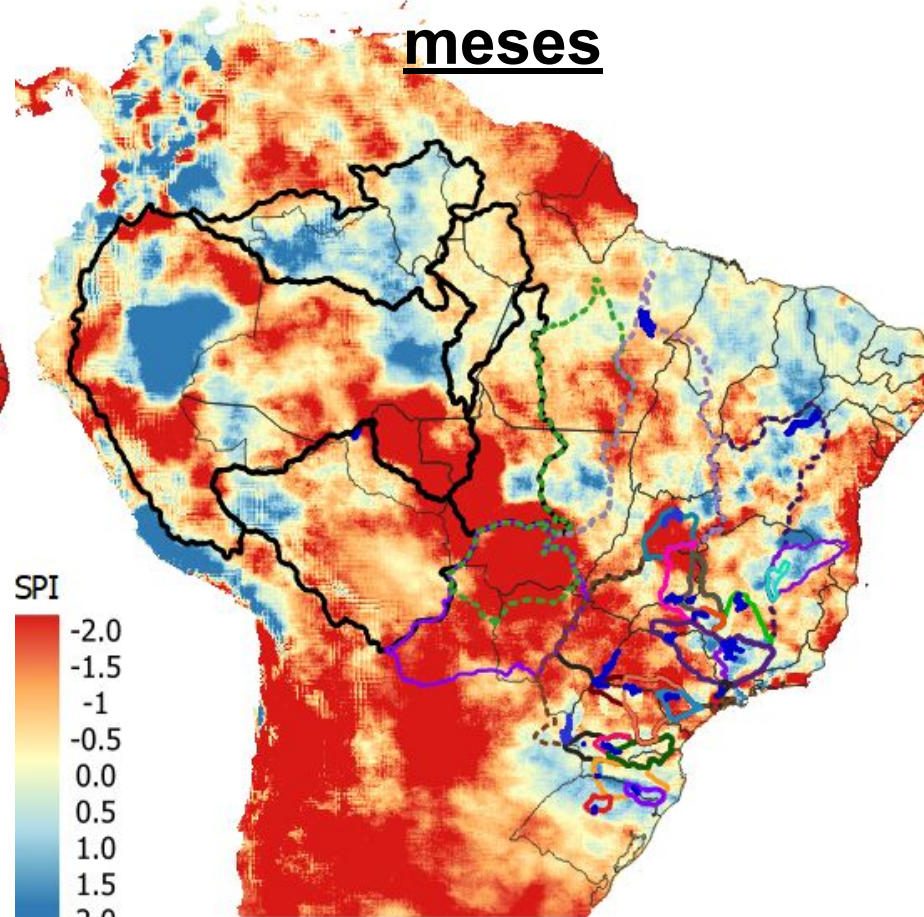
Índice Padronizado de Precipitação – SPI (Escala de 12 e 24 meses)

12
meses



- Bada UHE Passo Real
- Bada UHE Barra Grande
- Bada UHE Foz Chapecó
- Bada UHE Segredo
- Bada UHE Salto Santiago
- Bada UHE Porto Capanema
- Bada UHE Itaipu
- Bada UHE Porto Primavera
- Bada UHE Rosana
- Bada UHE Capivara
- Bada UHE Jurumirim
- Bada UHE Nova Ponte
- Bada UHE Emborcação
- Bada UHE Itumbiara
- Bada UHE Marimbondo
- Bada UHE Fumas
- Sistema Cantareira
- Bada UHE Três Marias
- Bada UHE Serra da Mesa
- Bada Estação Ladário
- Bada Estação Porto Murinho
- Bada UHE Sobradinho
- Bada Jequiti Irapê
- Bada Jequiti Itapebi
- Bada UHE Tuacurí
- Bada UHE Belo Monte
- Sub Badas Região Norte
- Reservatórios

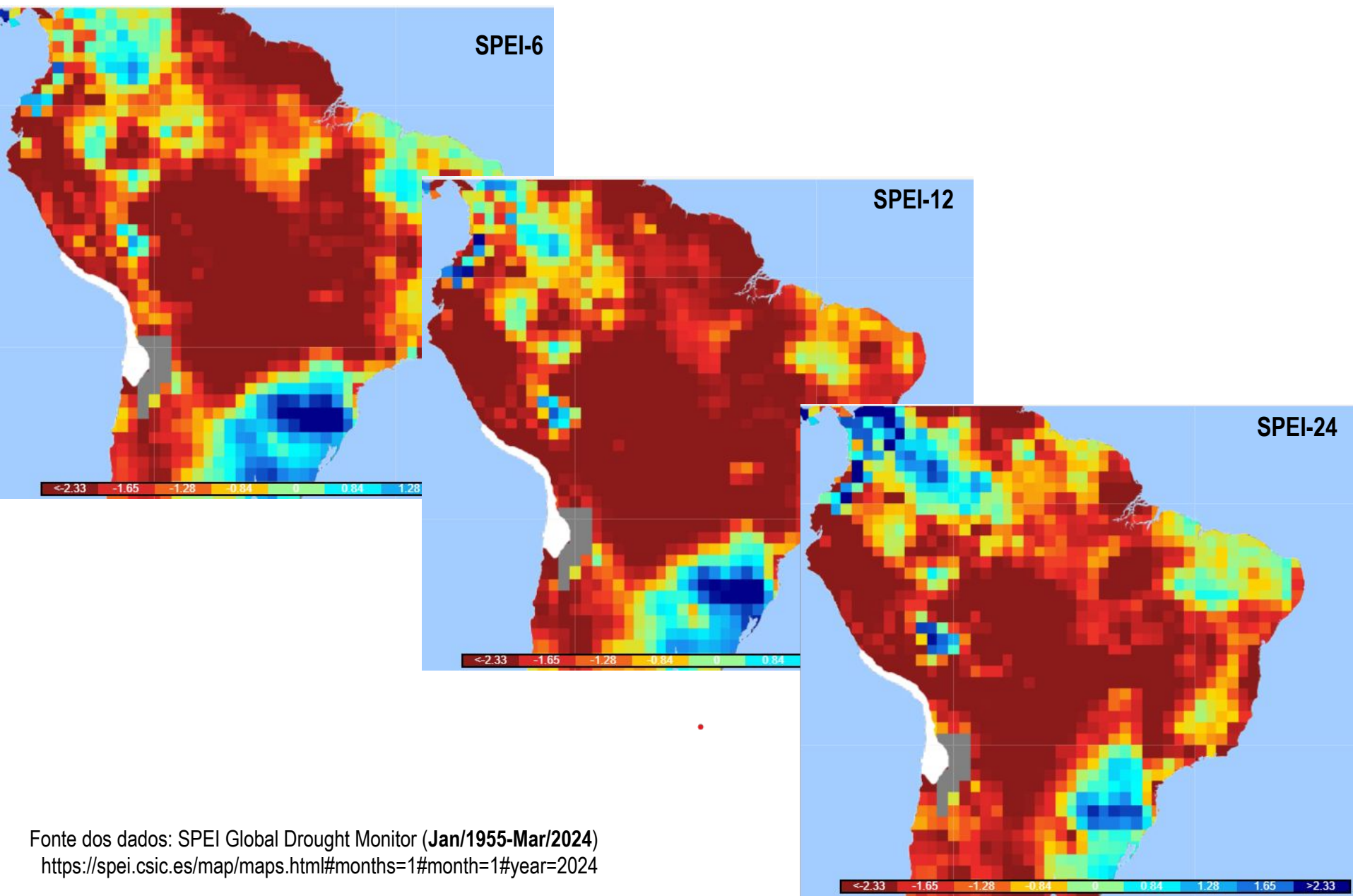
24
meses



Fonte dos dados: CHIRPS (Jan/1981-Mar/2024)

Estimativa SPI e Gráficos: CEMADEN

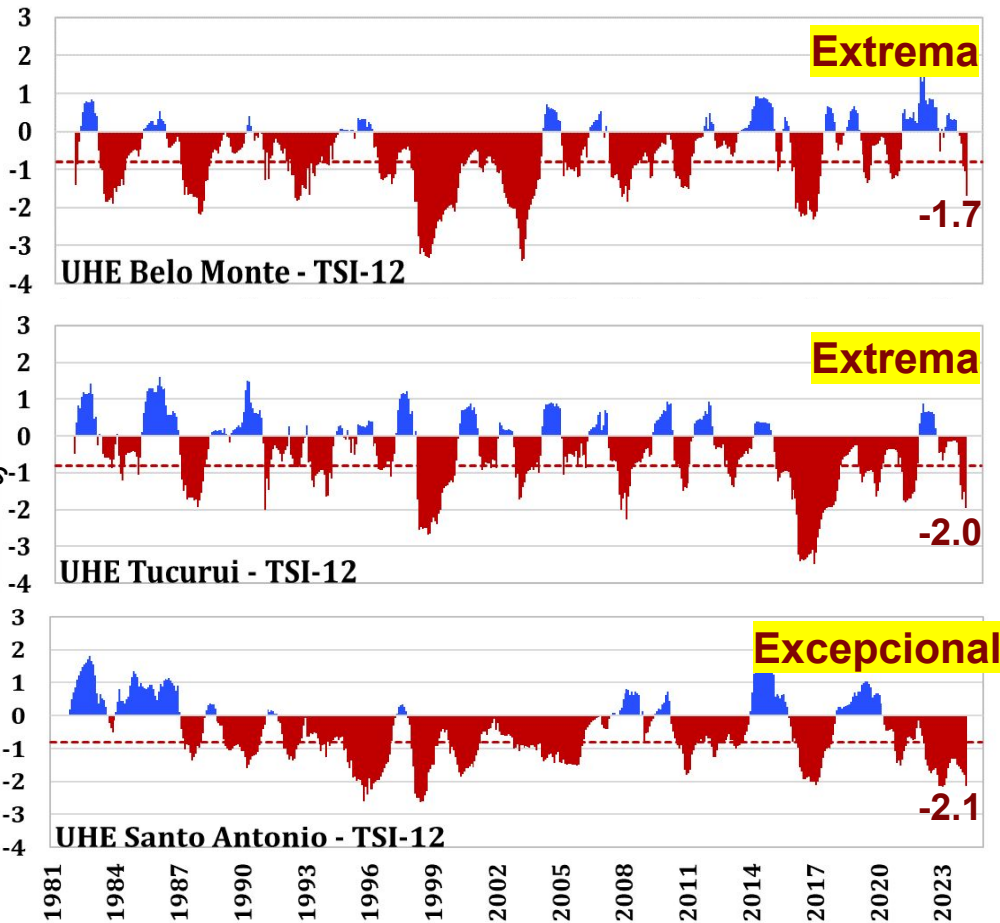
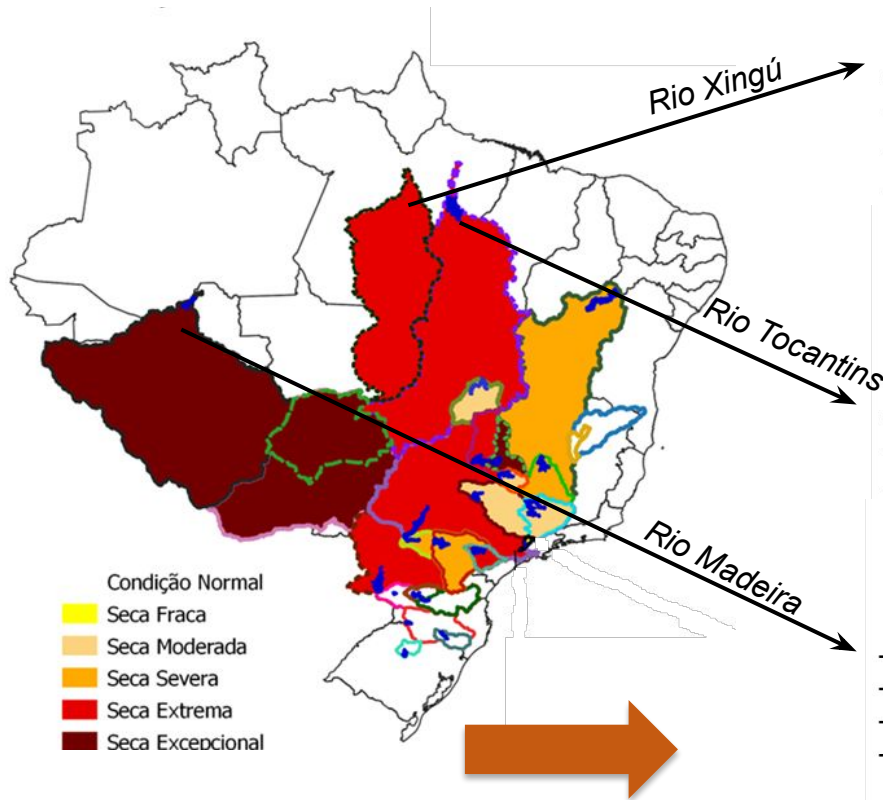
Índice Padronizado de Precipitação – Evapotranspiração Potencial – SPEI



Fonte dos dados: SPEI Global Drought Monitor (**Jan/1955-Mar/2024**)
<https://spei.csic.es/map/maps.html#months=1#month=1#year=2024>

Índice Padronizado Bivariado (Chuva-Cota) - TSI

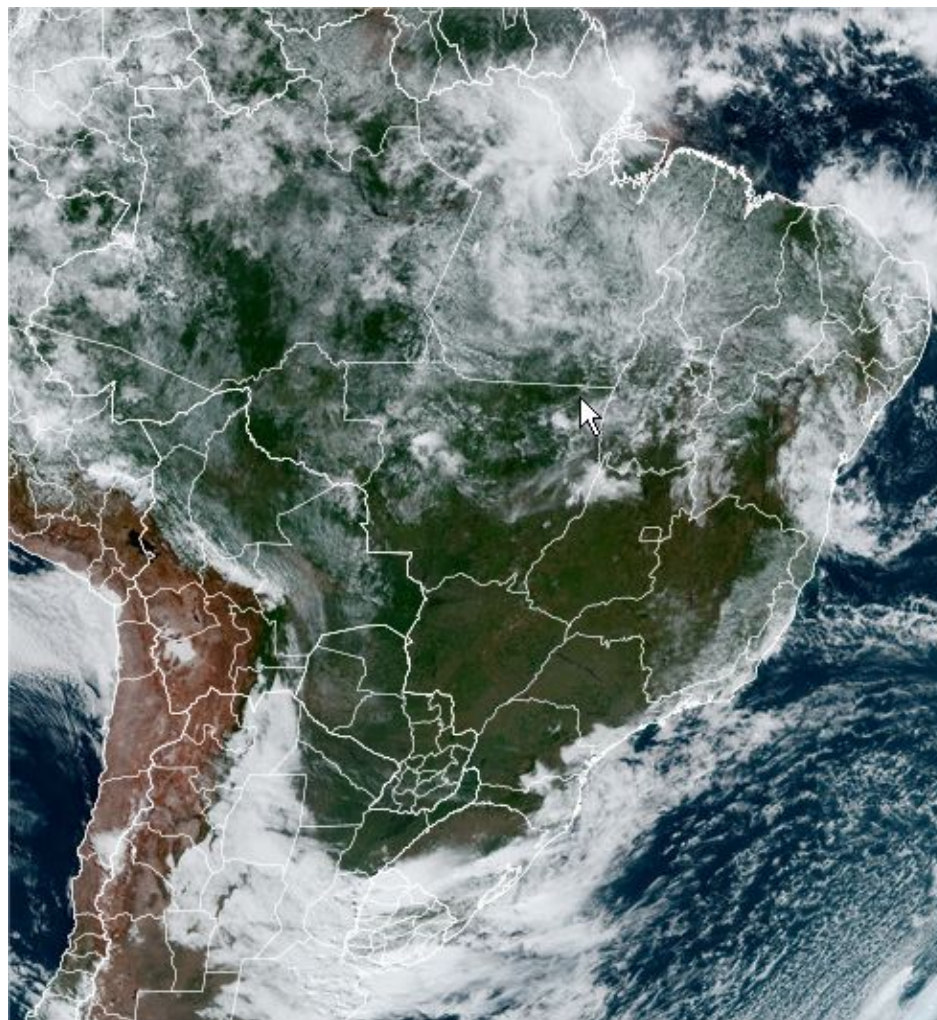
(Escala de 12 meses)



Bacia afluente à UHE:	TSI-Fev	TSI-Mar
Belo Monte	Moderada	Extrema
Tucuruí	Severa	Extrema
Santo Antônio	Extrema	Excepcional

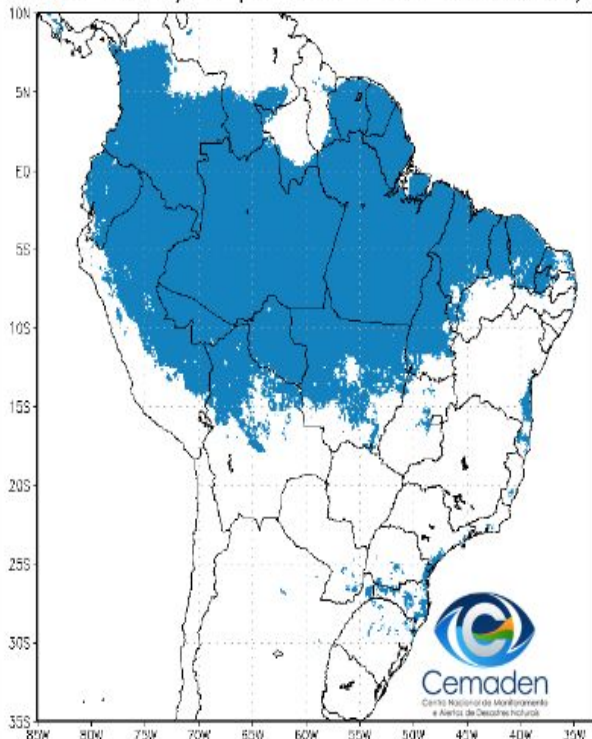
Fonte dos dados: Precipitação (CHIRPS) e Vazão (ONS/ANA) - Jan/1981-Mar/2024
Estimativa TSI e Gráficos: CEMADEN

Situação Meteorológica Atual

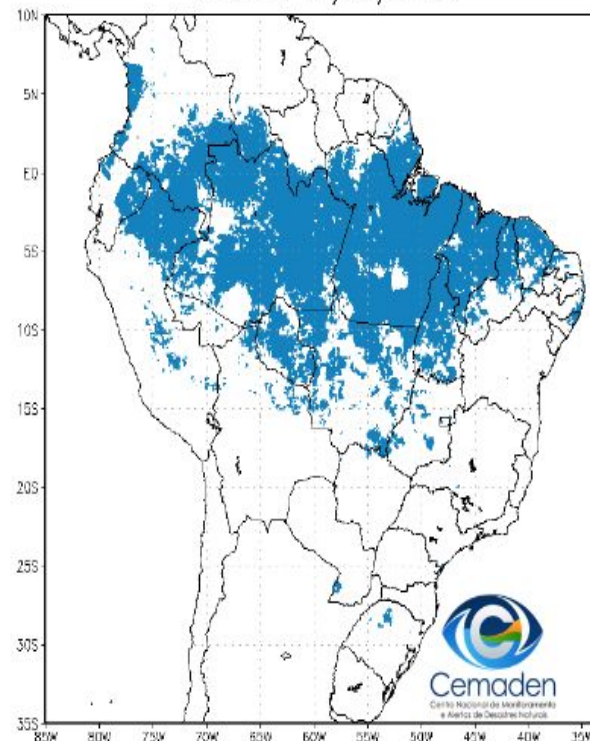


Situação da Estação Chuvosa

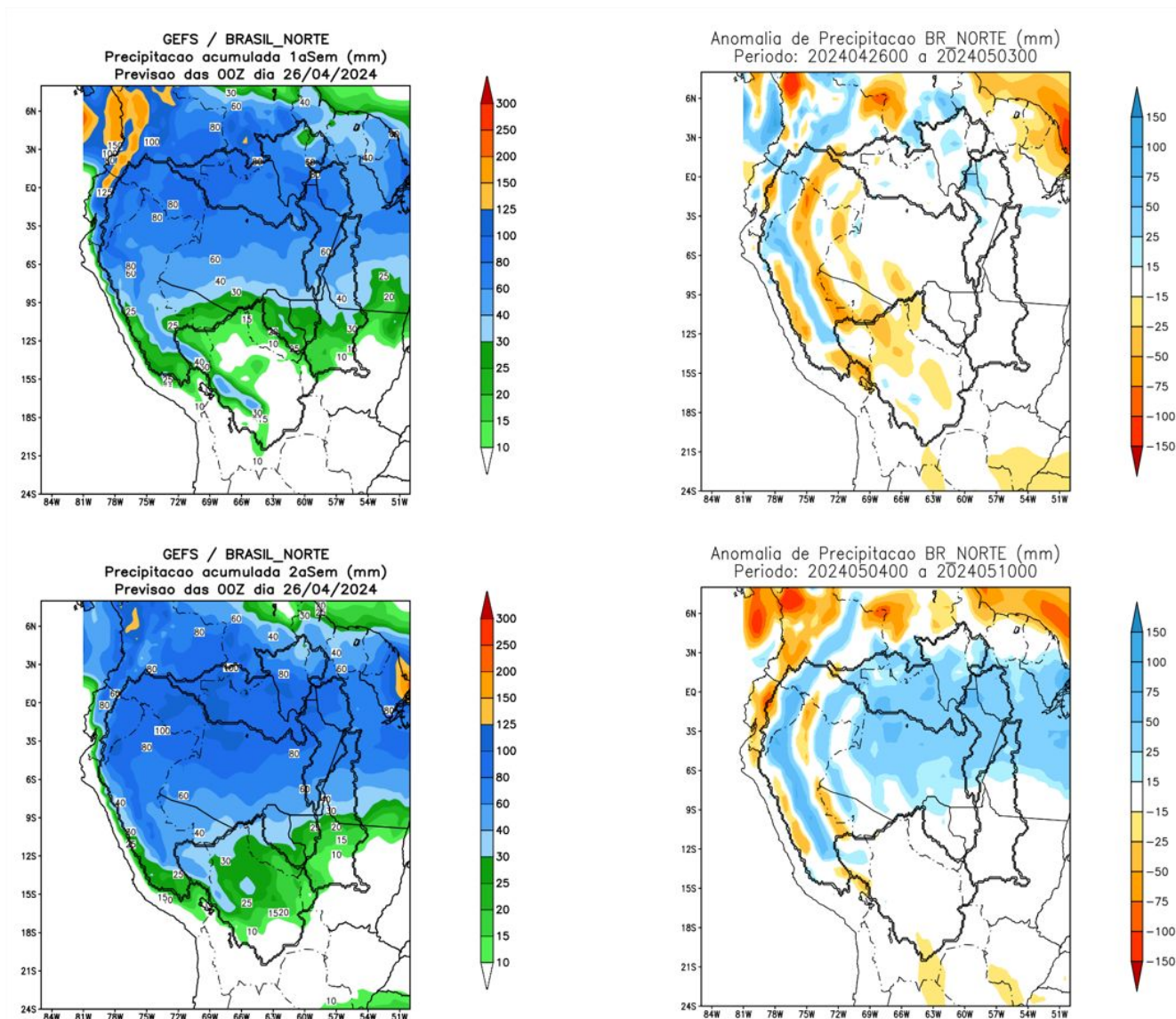
Climatologia da Precipitação (2001–2023)
Inferior 2 mm/dia por 4 de 5 dias Período: 25/04



Precipitação Inferior 2 mm/dia por 4 de 5 dias
Período: 25/04/2024



Previsão de chuva próximas duas semanas



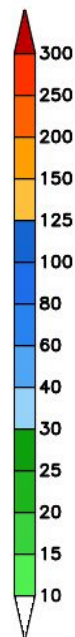
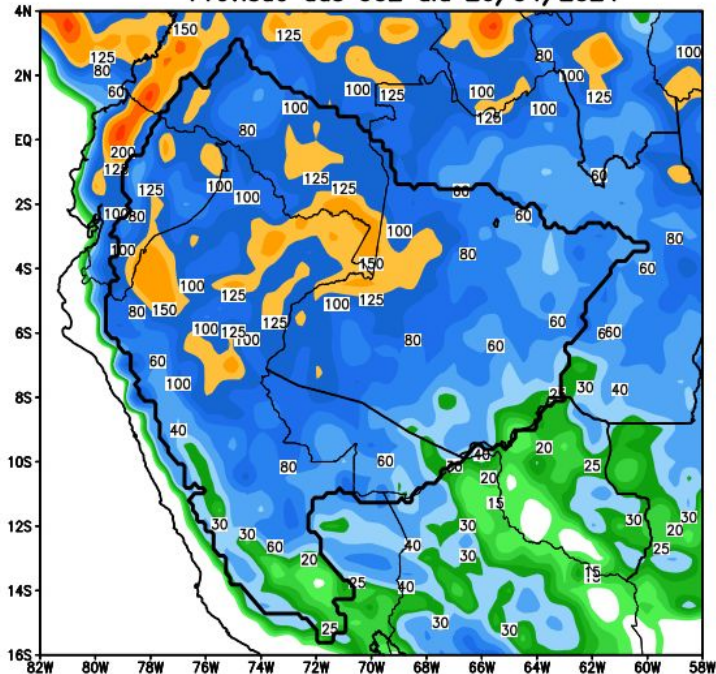
Previsão de chuva próximas duas semanas

RIO SOLIMÕES

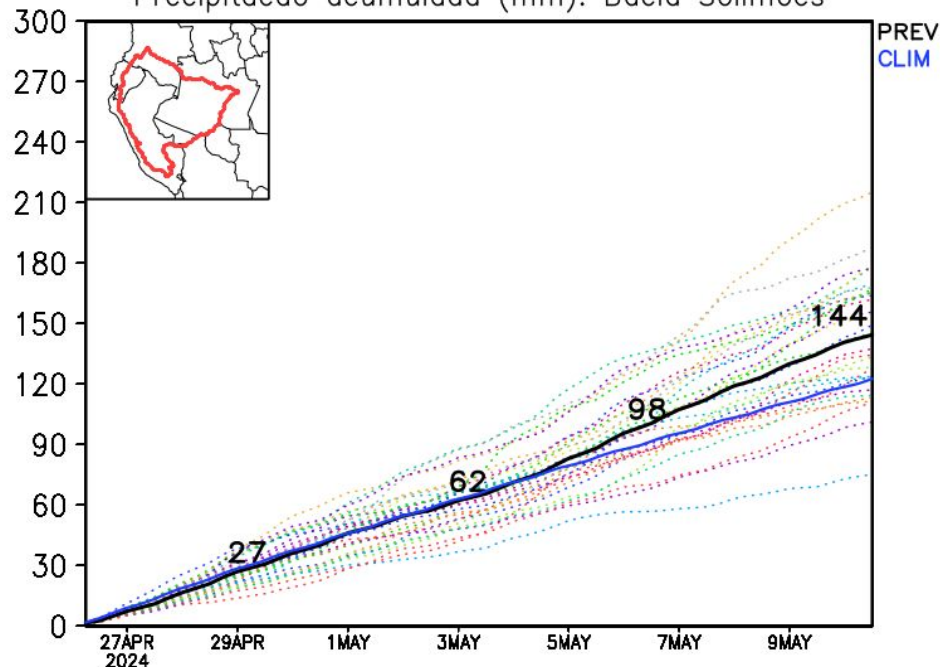
GEFS_BC / Bacia do Rio Solimões

Prec. acumulada com correção de vies em 14 dias (mm)

Previsão das 00Z dia 26/04/2024



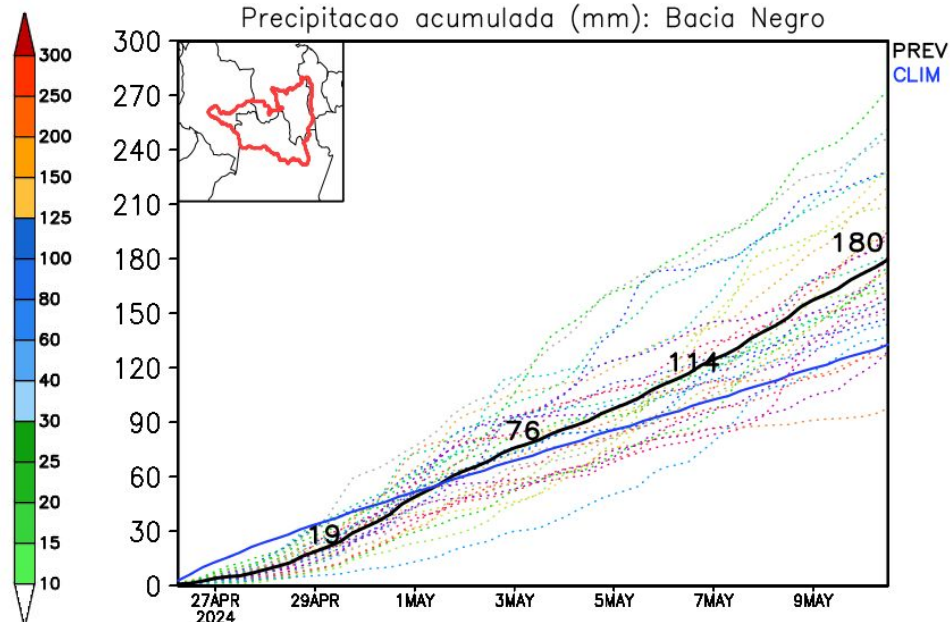
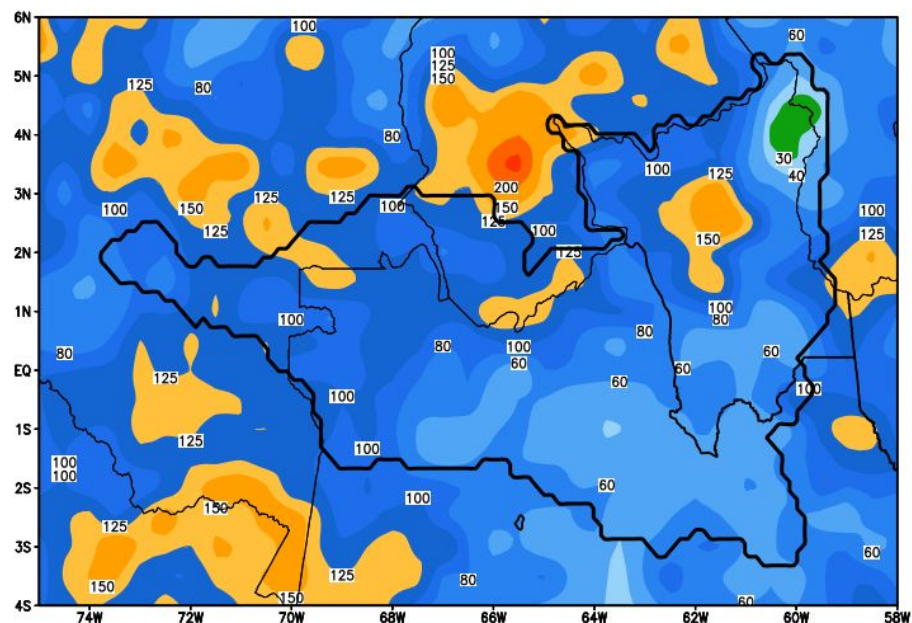
Precipitacao acumulada (mm): Bacia Solimoes



Previsão de chuva próximas duas semanas

RIO NEGRO

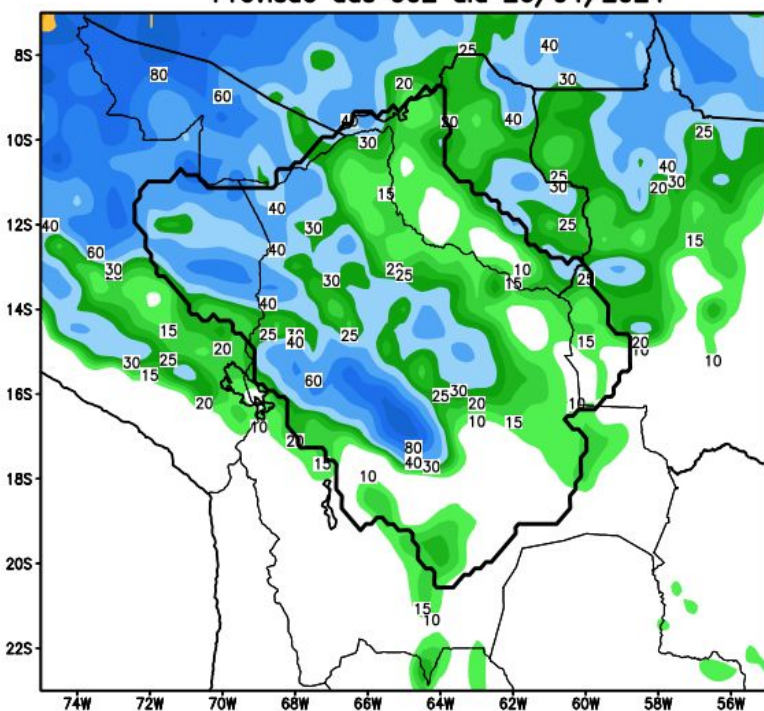
GEFS_BC / Bacia do Rio Negro
Prec. acumulada com correção de vies em 14 dias (mm)
Previsão das 00Z dia 26/04/2024



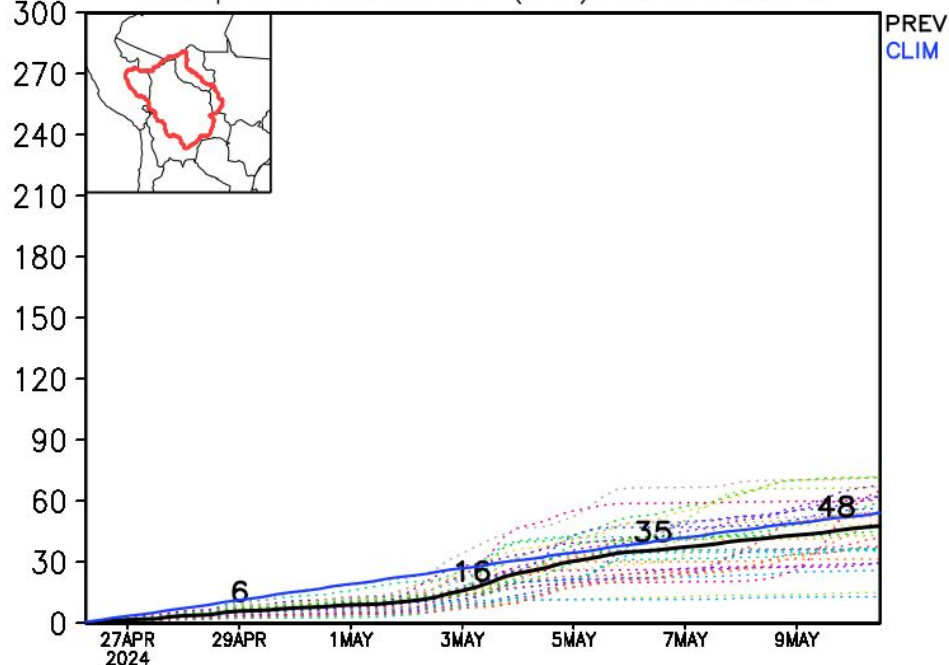
Previsão de chuva próximas duas semanas

RIO MADEIRA

GEFS_BC / Bacia do Rio Madeira
Prec. acumulada com correção de vies em 14 dias (mm)
Previsão das 00Z dia 26/04/2024

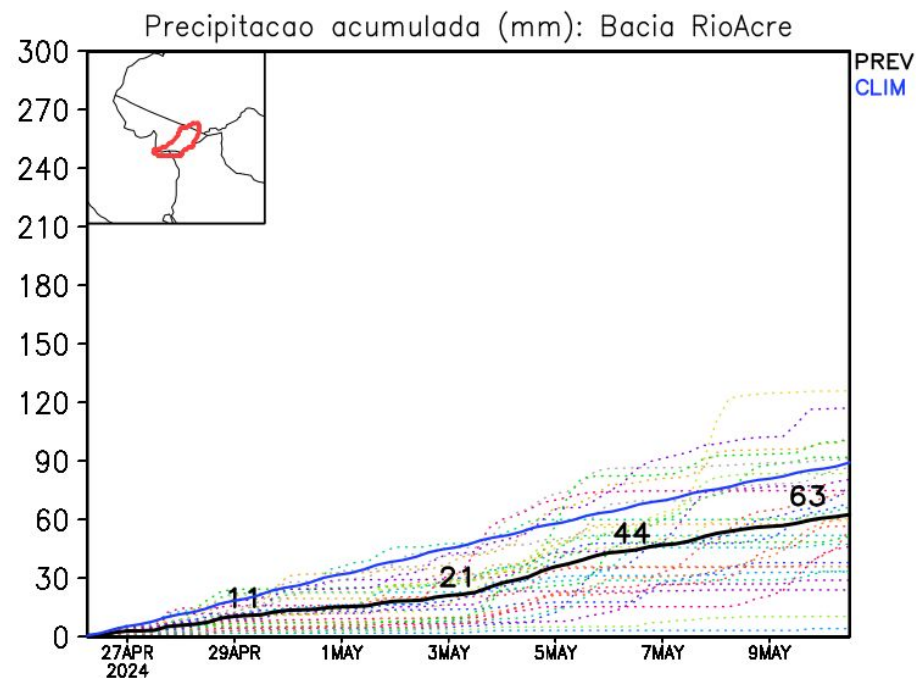
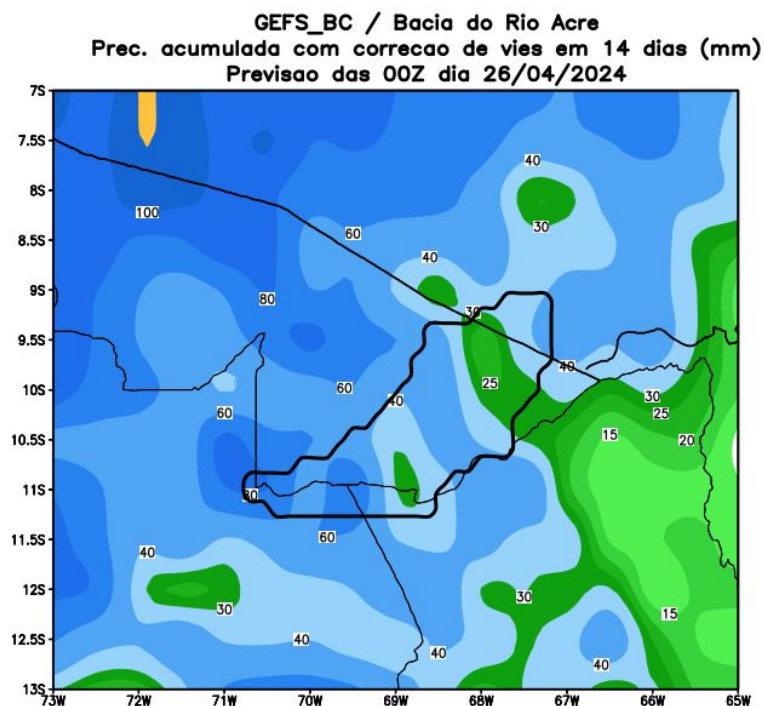


Precipitacao acumulada (mm): Bacia Madeira



Previsão de chuva próximas duas semanas

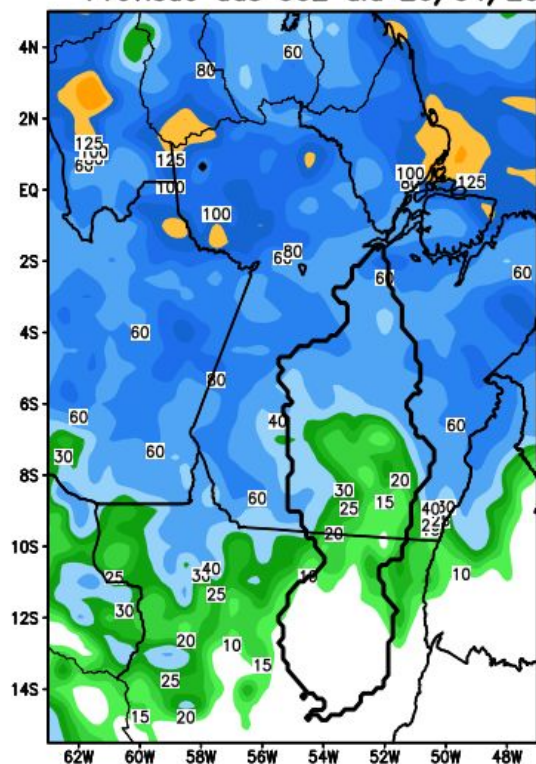
RIO ACRE



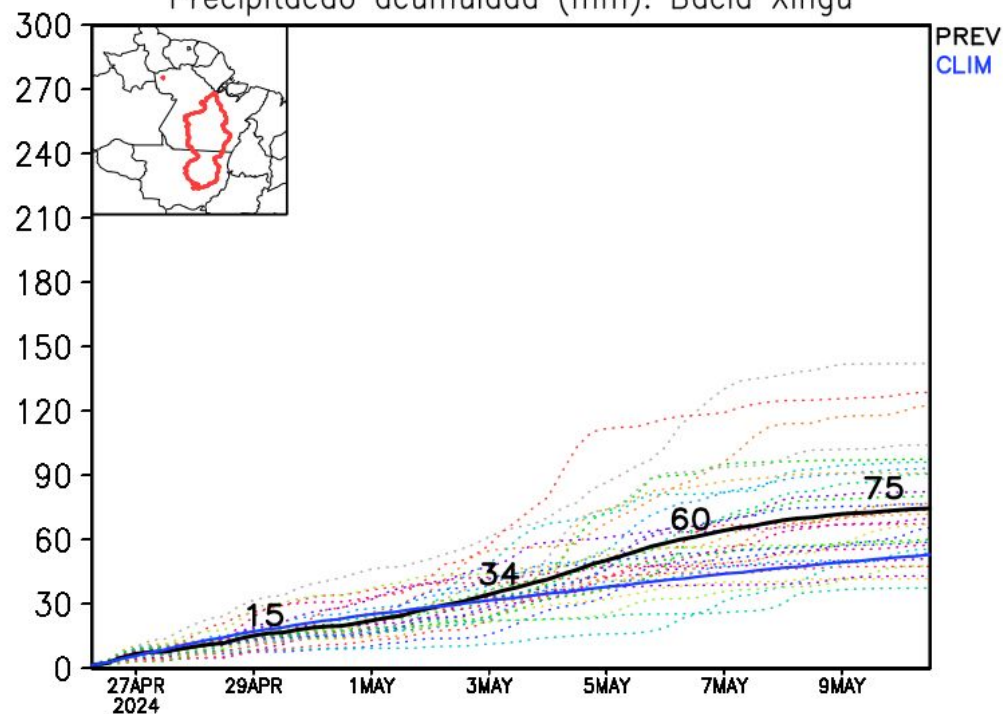
Previsão de chuva próximas duas semanas

RIO Xingu

GEFS_BC / Xingu
rec. acumulada com correcao de vies em 14 dias (mn)
Previsao das 00Z dia 26/04/2024



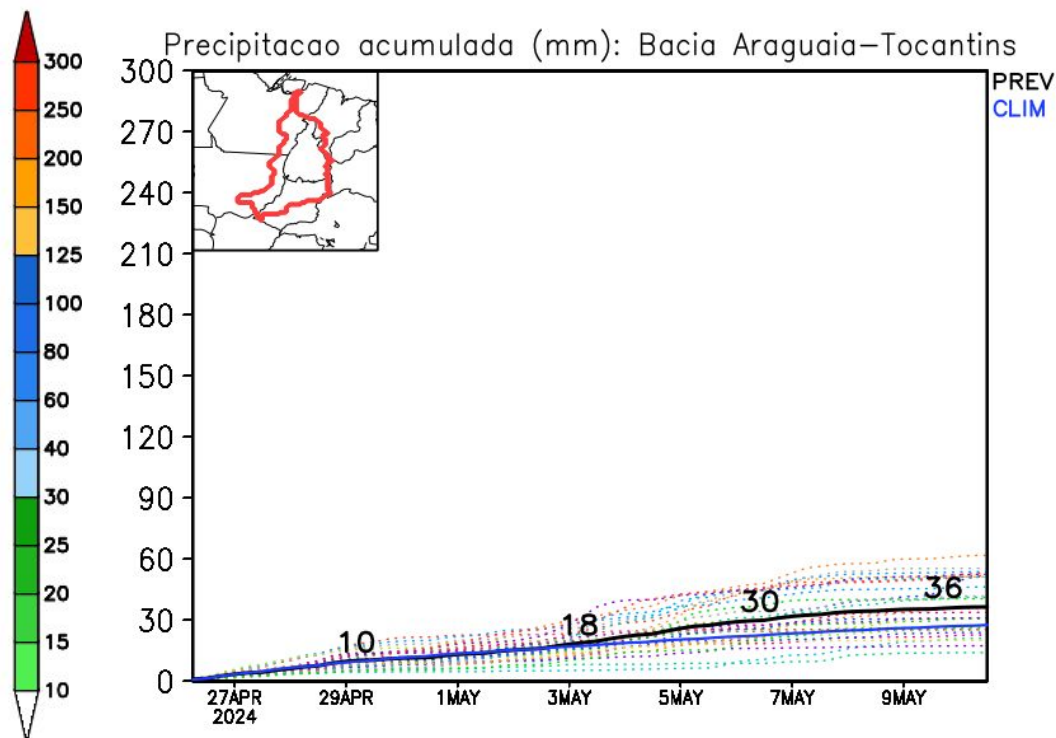
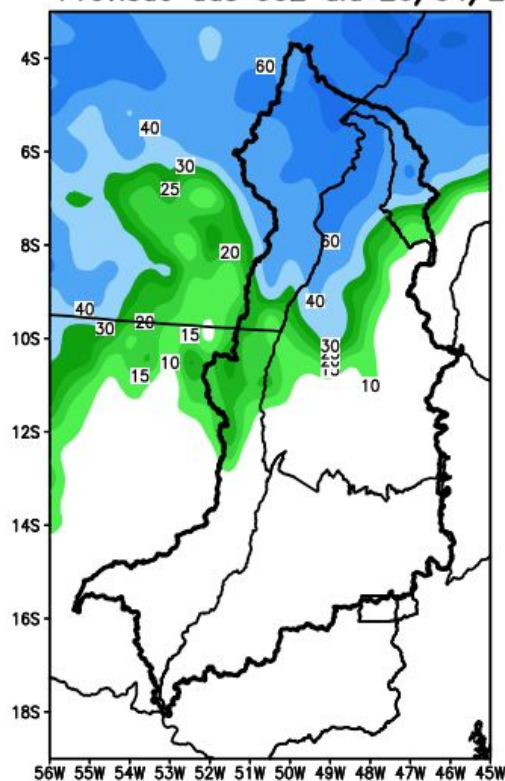
Precipitacao acumulada (mm): Bacia Xingu



Previsão de chuva próximas duas semanas

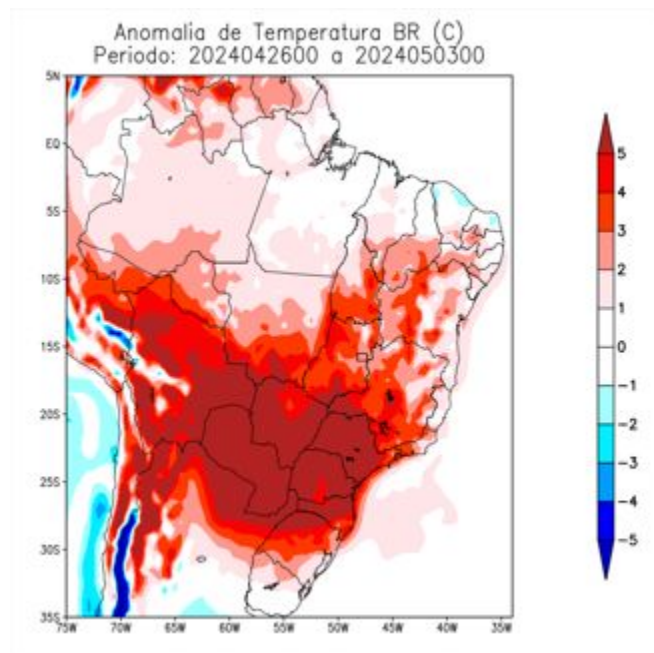
RIO Araguaia-Tocantins

GEFS_BC / Bacia Araguaia-Tocantins
Prec. acumulada com correcao de vies em 14 dias (mm)
Previsao das 00Z dia 26/04/2024

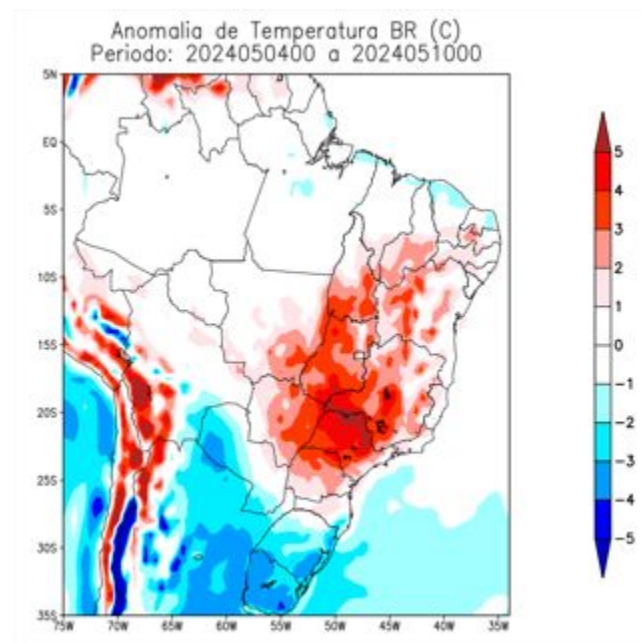


Previsão de temperatura próximas duas semanas

26 de Abril a 03 de Maio

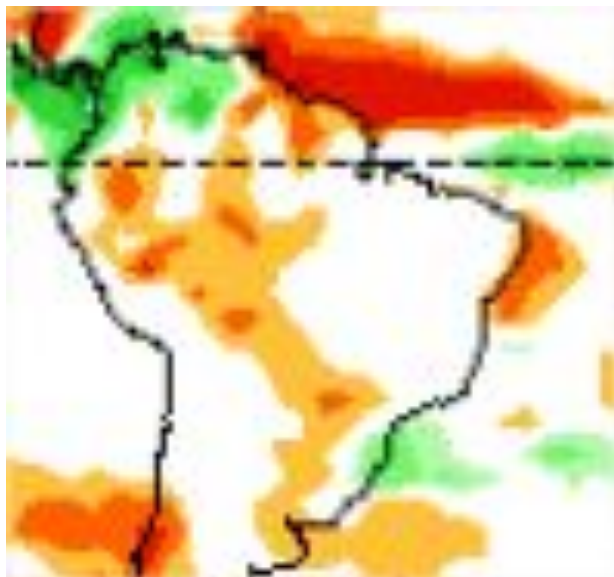


04 a 10 de Maio

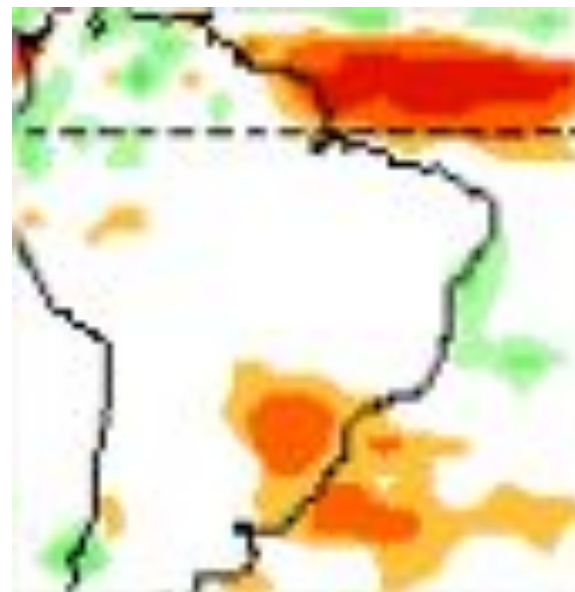


Tendência 3a e 4a semanas

10-16 Maio

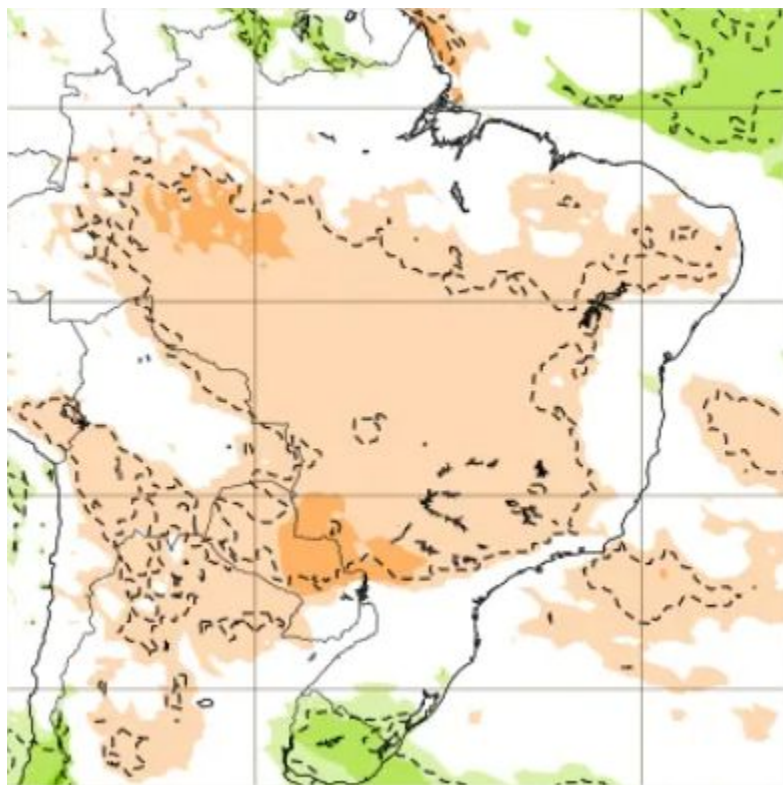


17-23 Maio

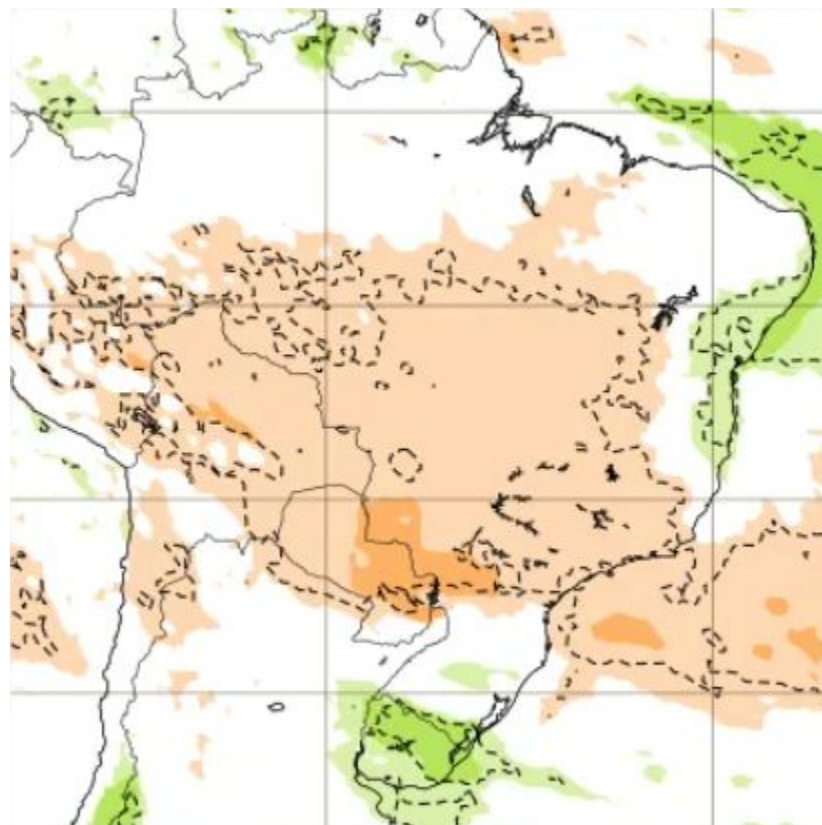


Tendência para 3^a e 4^a semanas

13-19 Maio

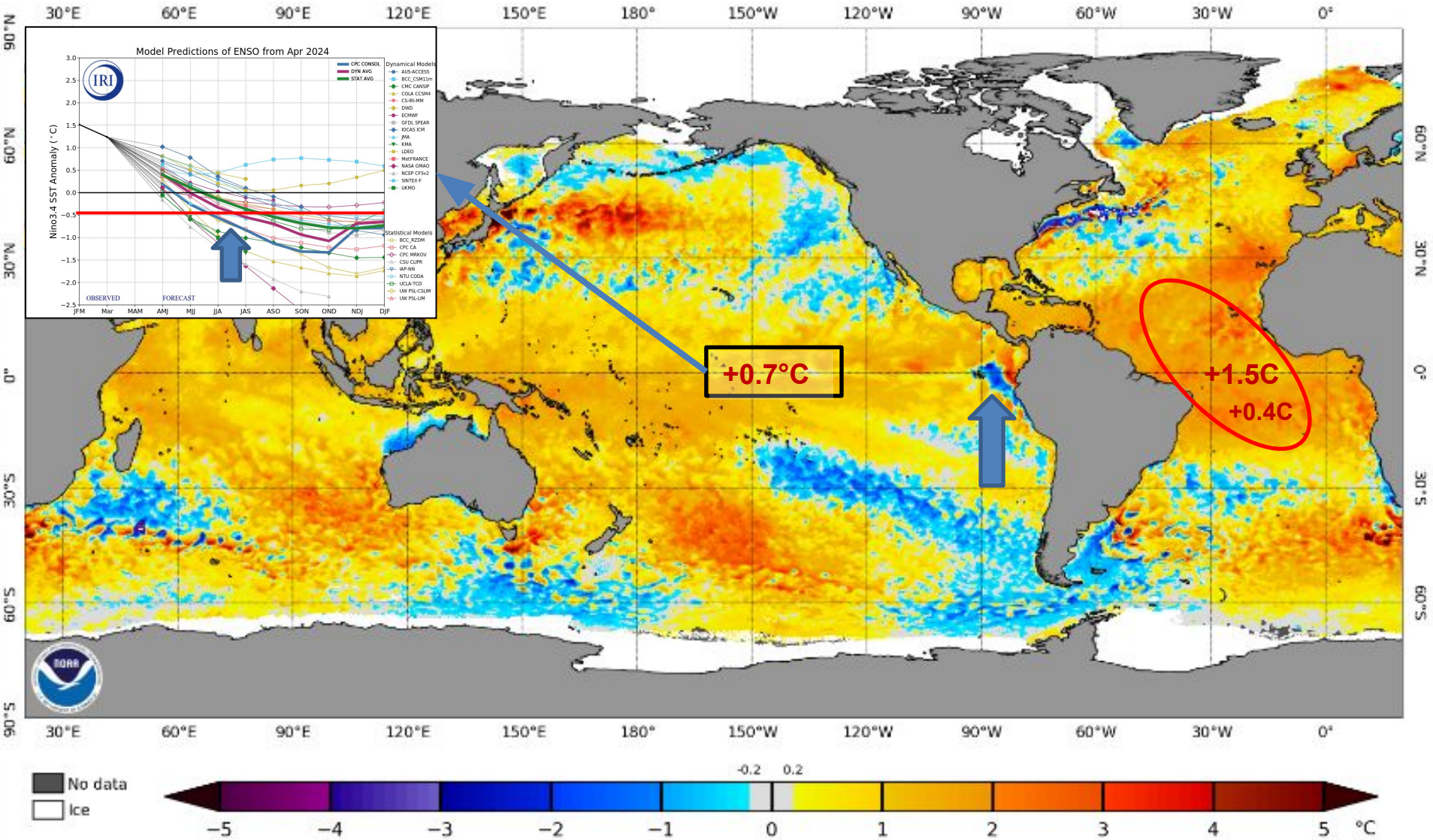


20-26 Maio



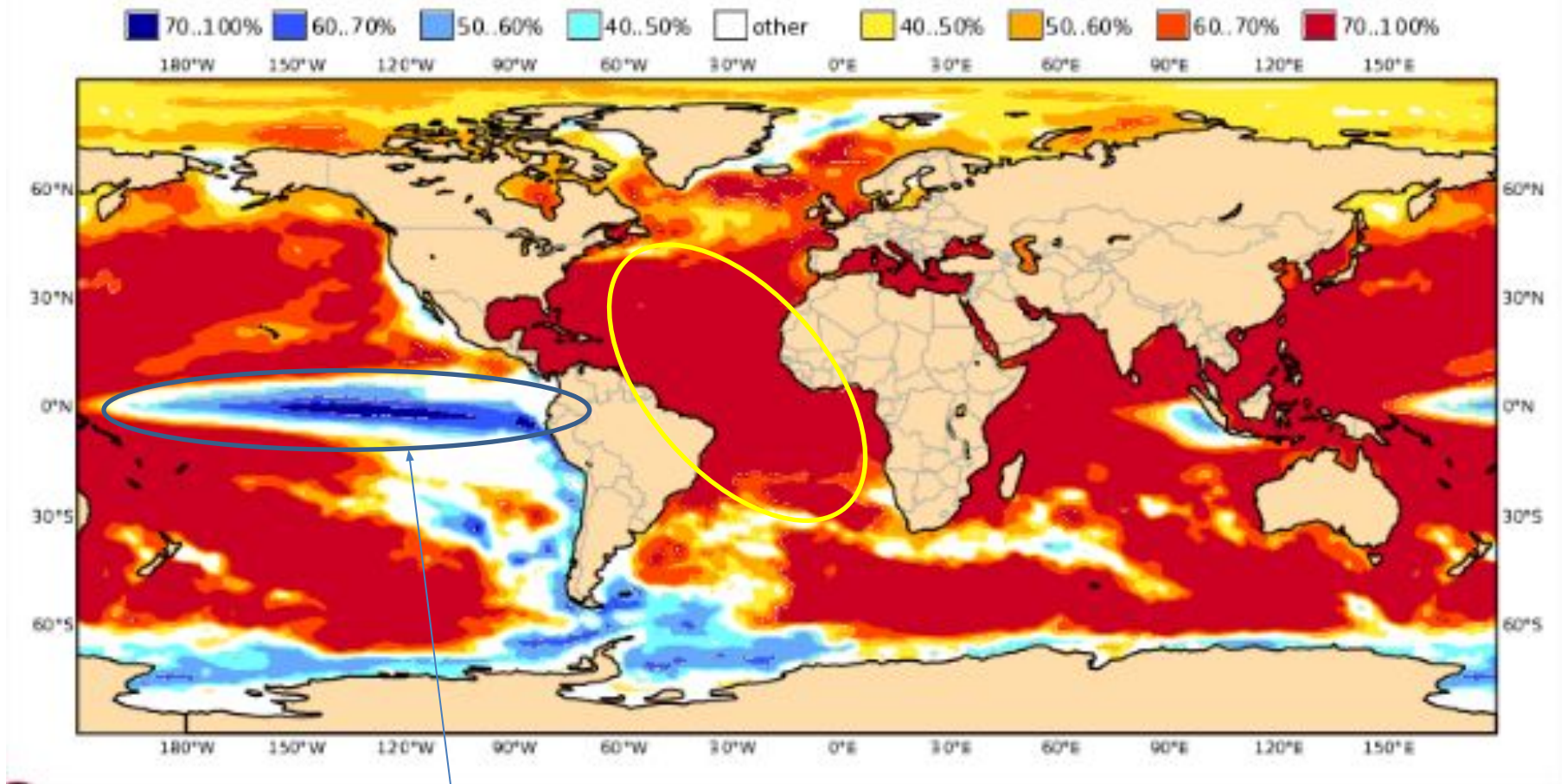
Status Atual: **El Niño/ La Niña Watch**

NOAA Coral Reef Watch Daily 5km SST Anomalies (v3.1) 21 Apr 2024



FONTE: NOAA

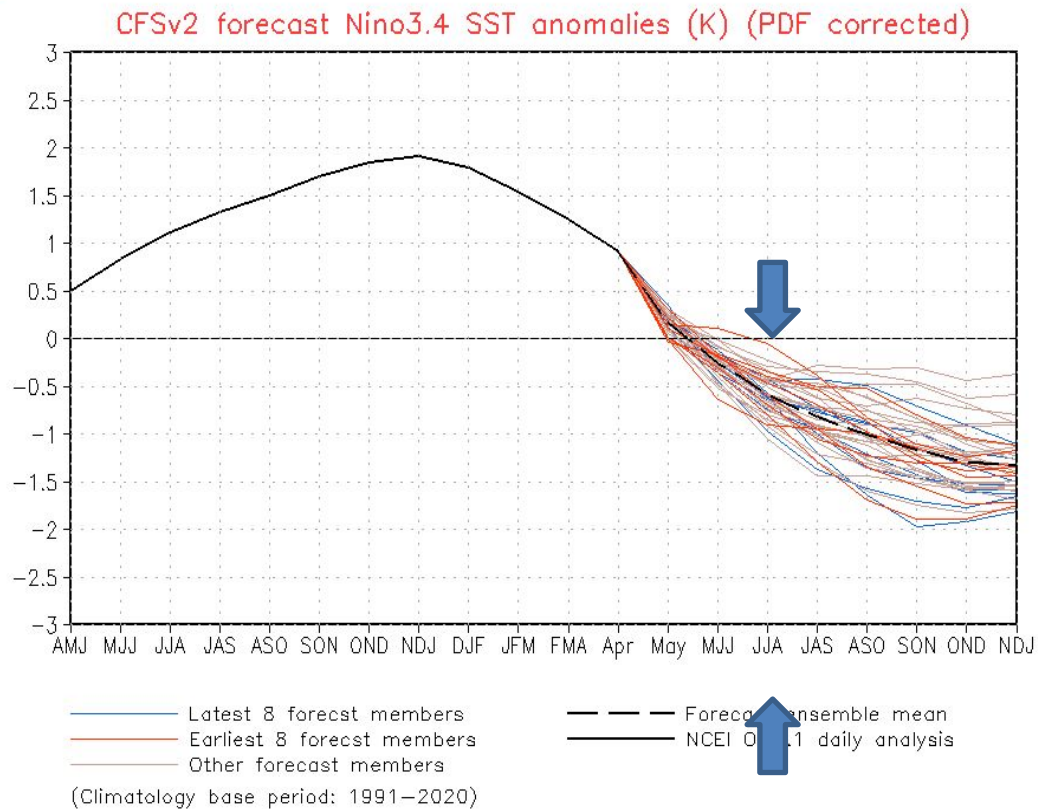
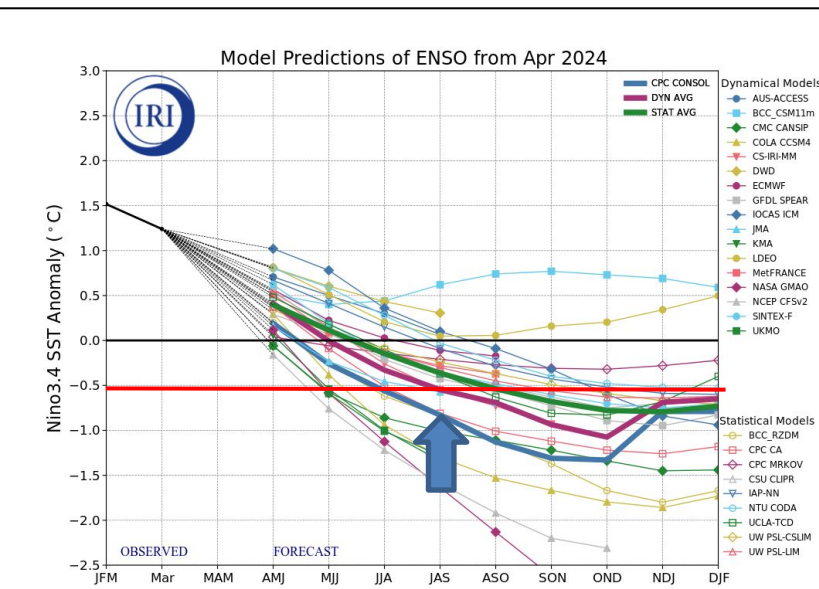
Temperatura do Mar prevista Julho-Setembro



La Niña

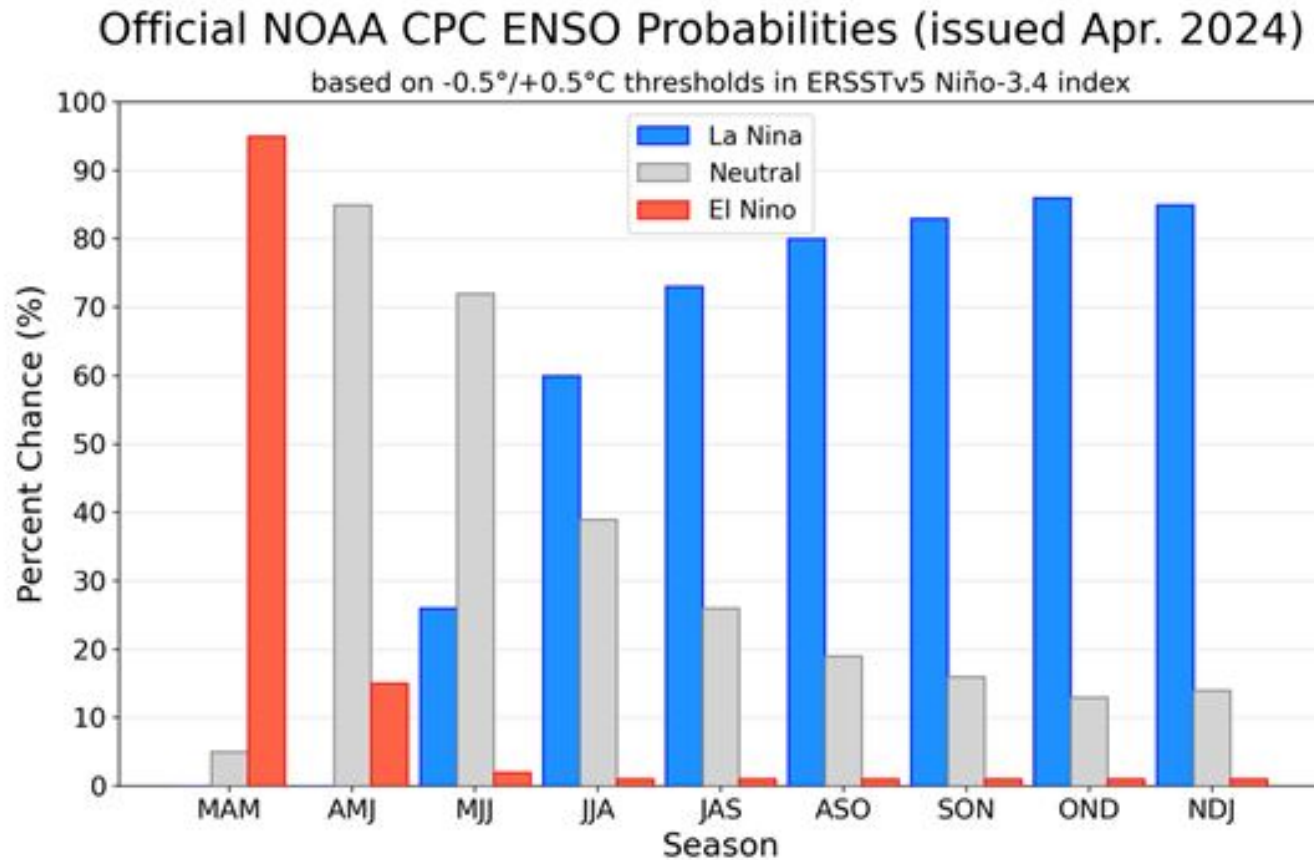
Previsão Multi-modelo União Européia

Previsão do “ENSO”

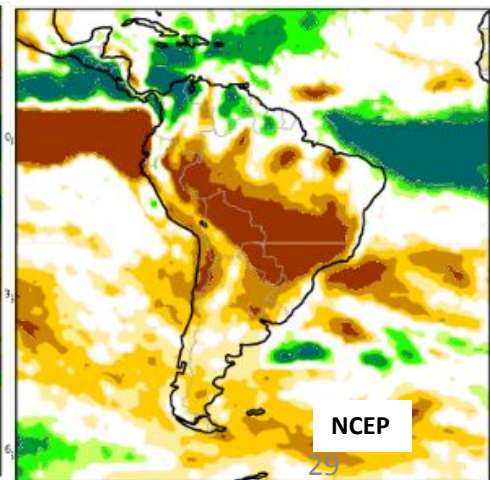
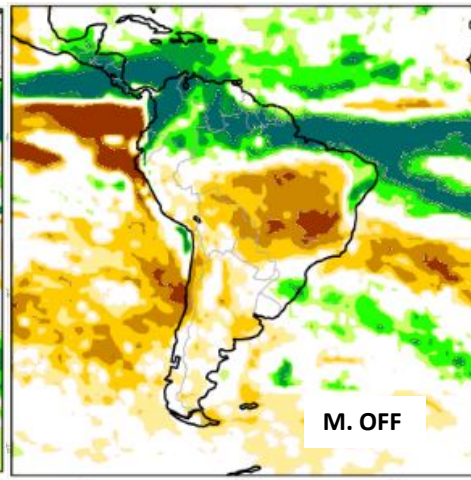
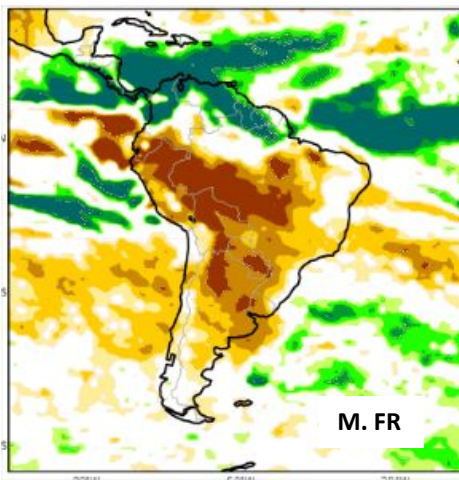
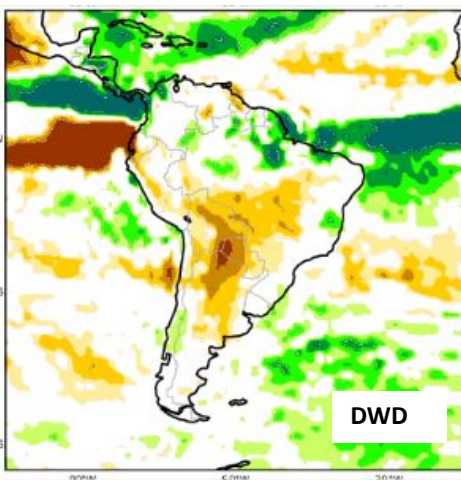
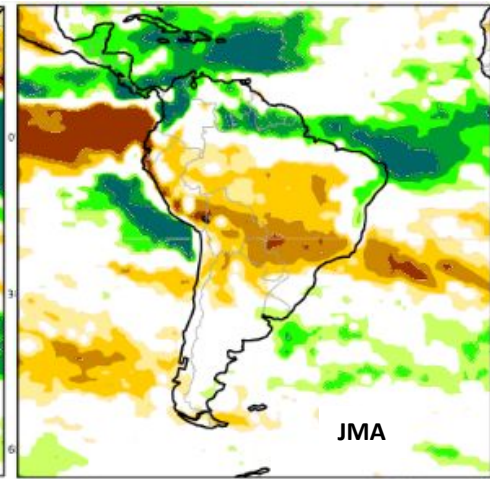
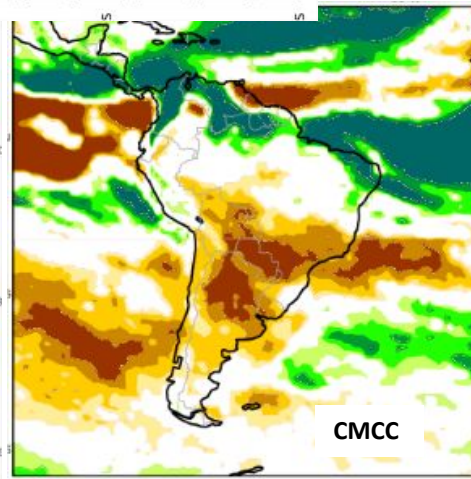
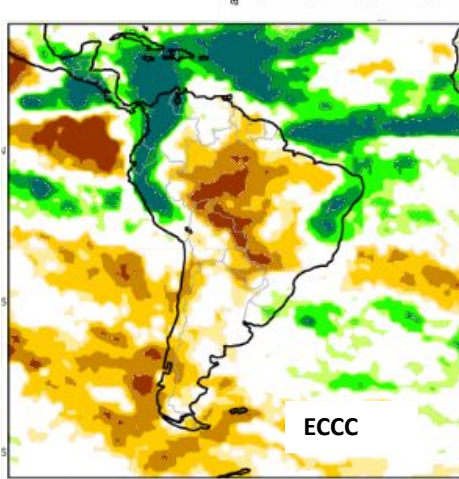
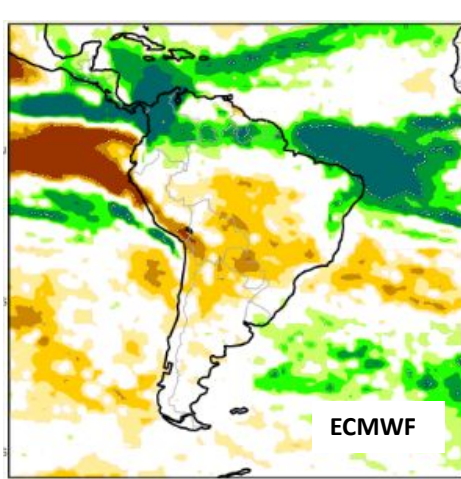
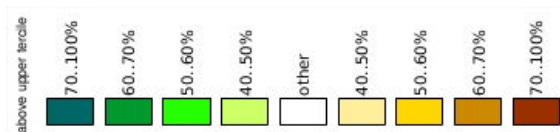


Atualizado 22 de Abril

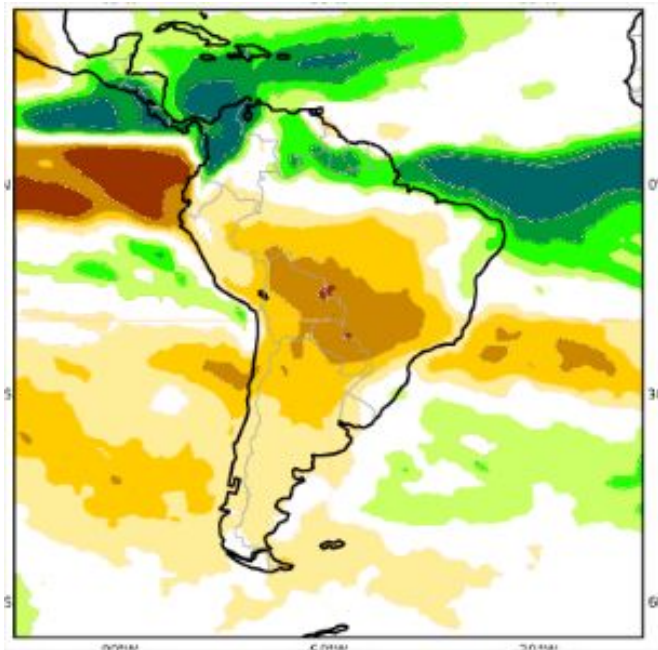
Previsão do “ENSO”



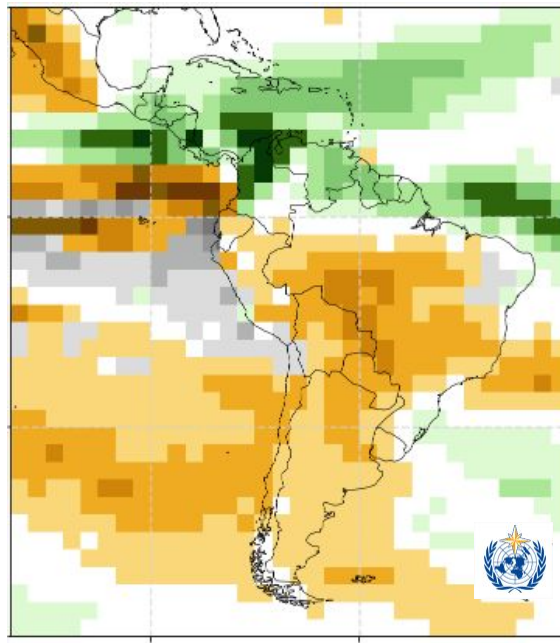
Previsão Sazonal de Chuva MJJ



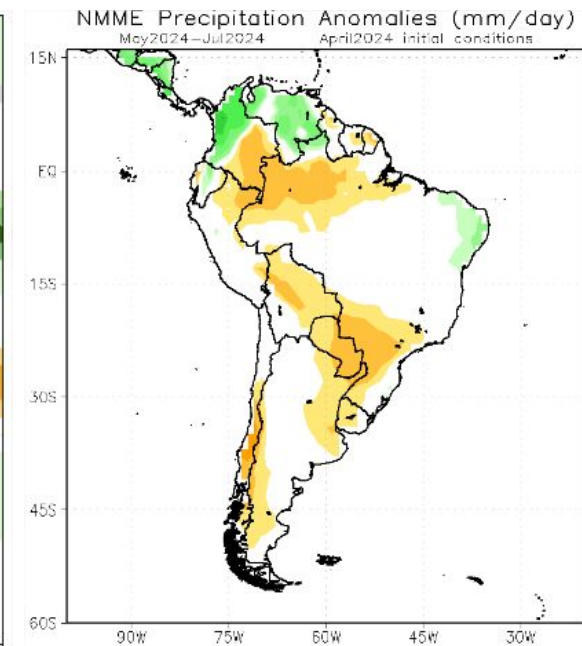
Previsão Sazonal de Chuva Multi-Modelo para MJJ



**Previsão Multi-modelo
União Europeia**



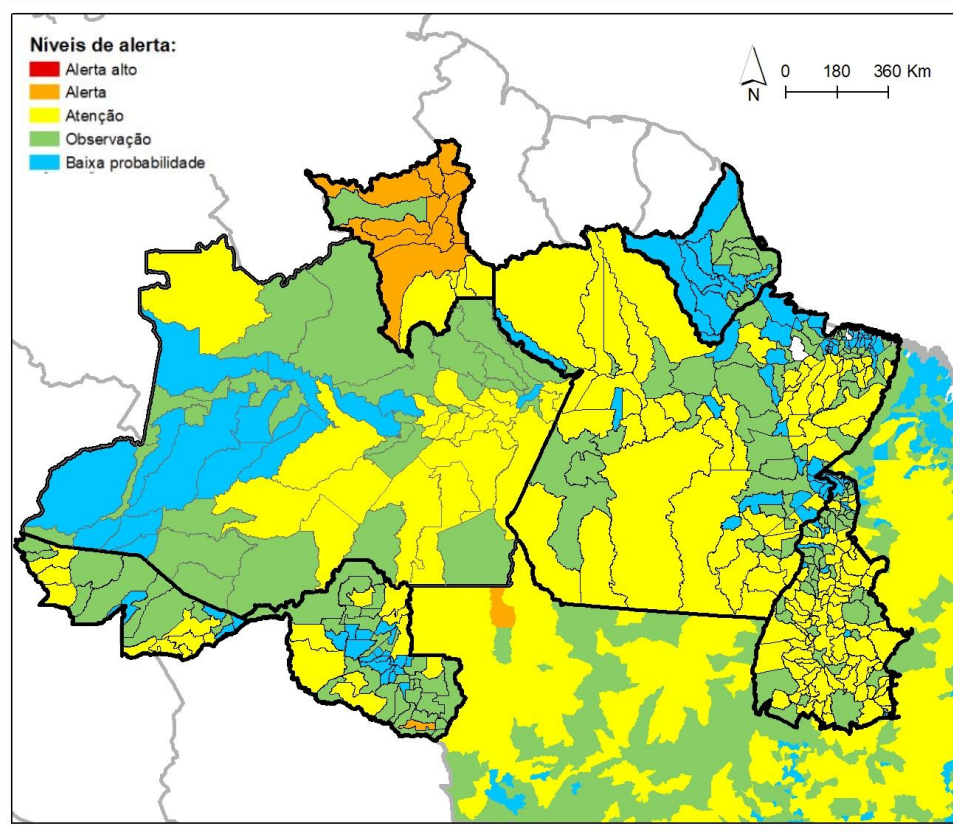
Modelos da Organização
Meteorológica Mundial



Modelos Americanos

Previsão de probabilidade de fogo - Abr-Maio-Jun 2024

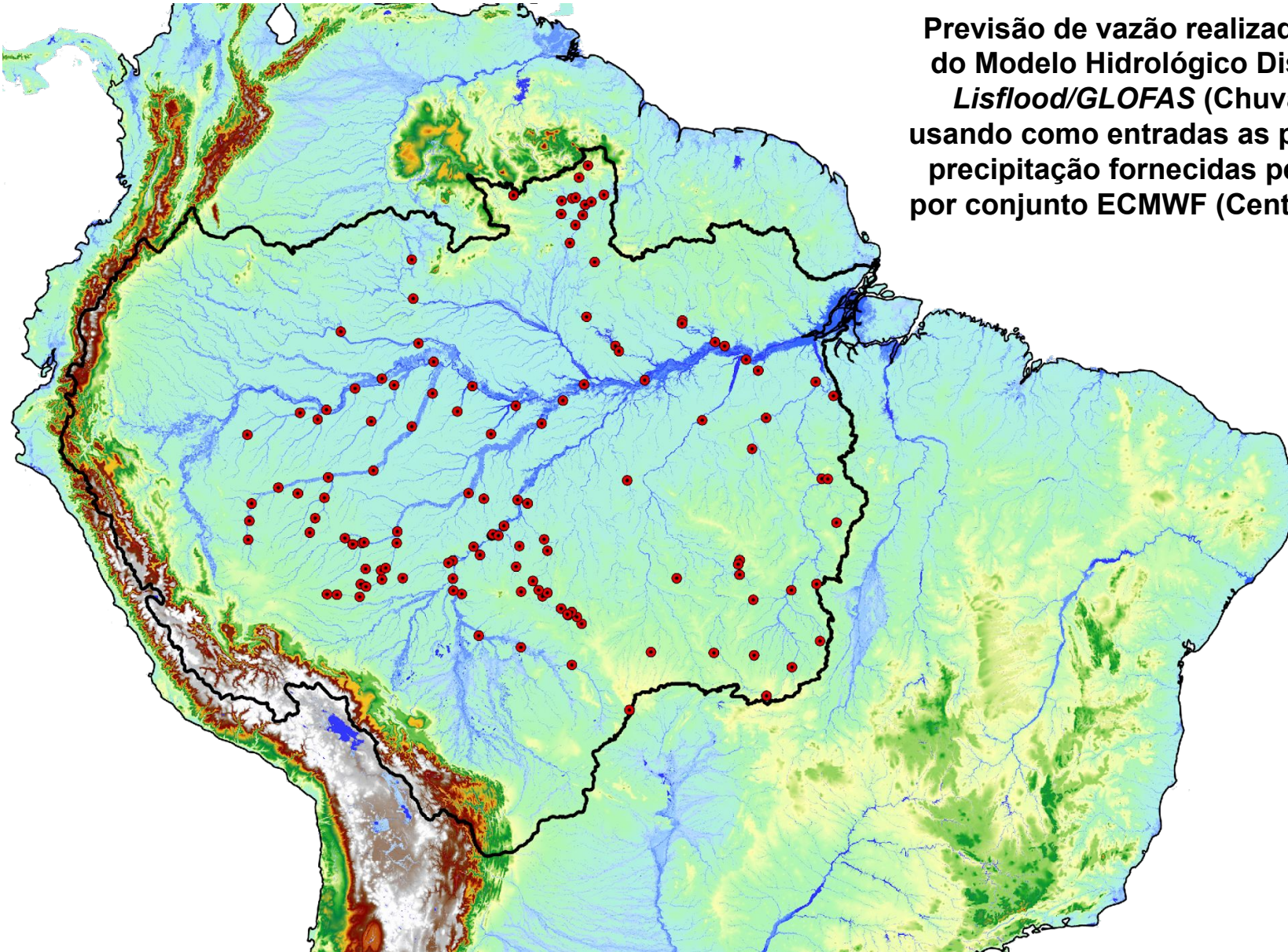
Previsão de alertas por municípios



Resultados dos níveis de alerta para
municípios brasileiros da Região Norte:

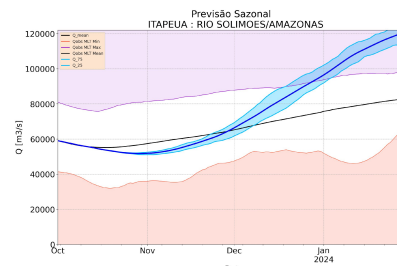
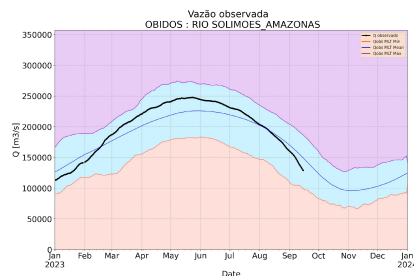
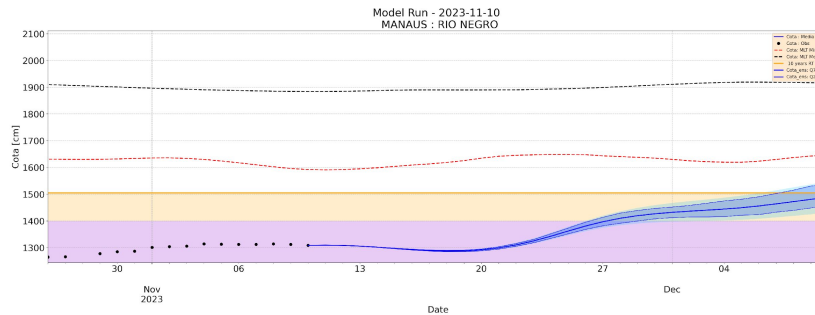
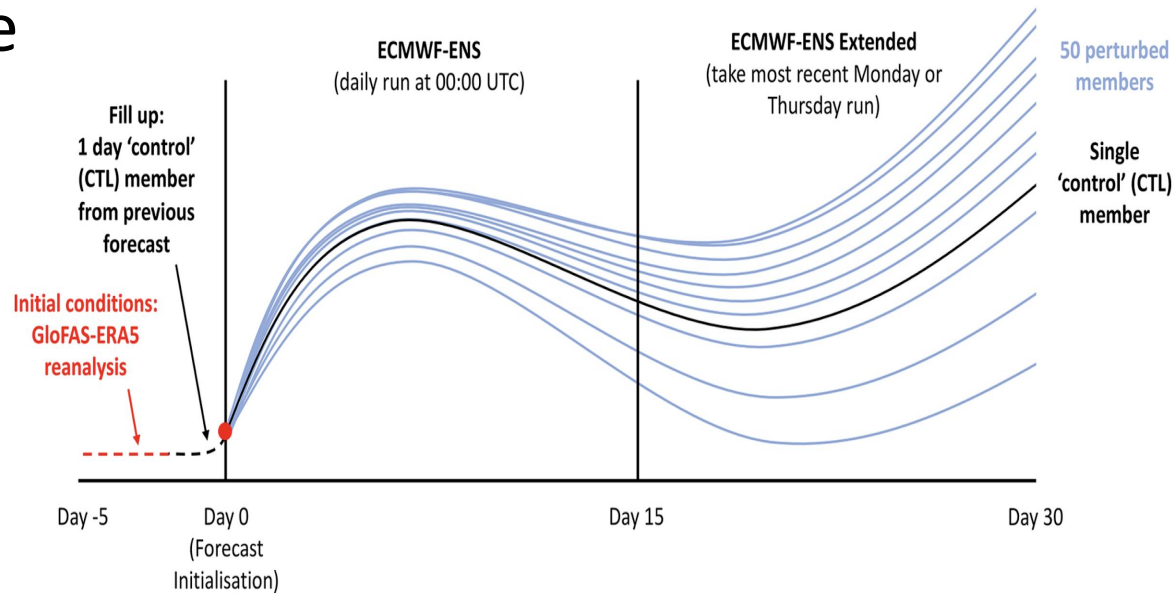
Nível de Alerta	Número de municípios	Área (km²)
Alerta alto	0	-
Alerta	11	149,516
Atenção	170	1,756,573
Observação	158	1,301,096
Baixa probabilidade	108	631,468

Previsão Hidrológica: Norte



Previsão de vazão realizada por meio do Modelo Hidrológico Distribuído – *Lisflood/GLOFAS* (Chuva-Vazão), usando como entradas as previsões de precipitação fornecidas pelo modelo por conjunto ECMWF (Centro Europeu)

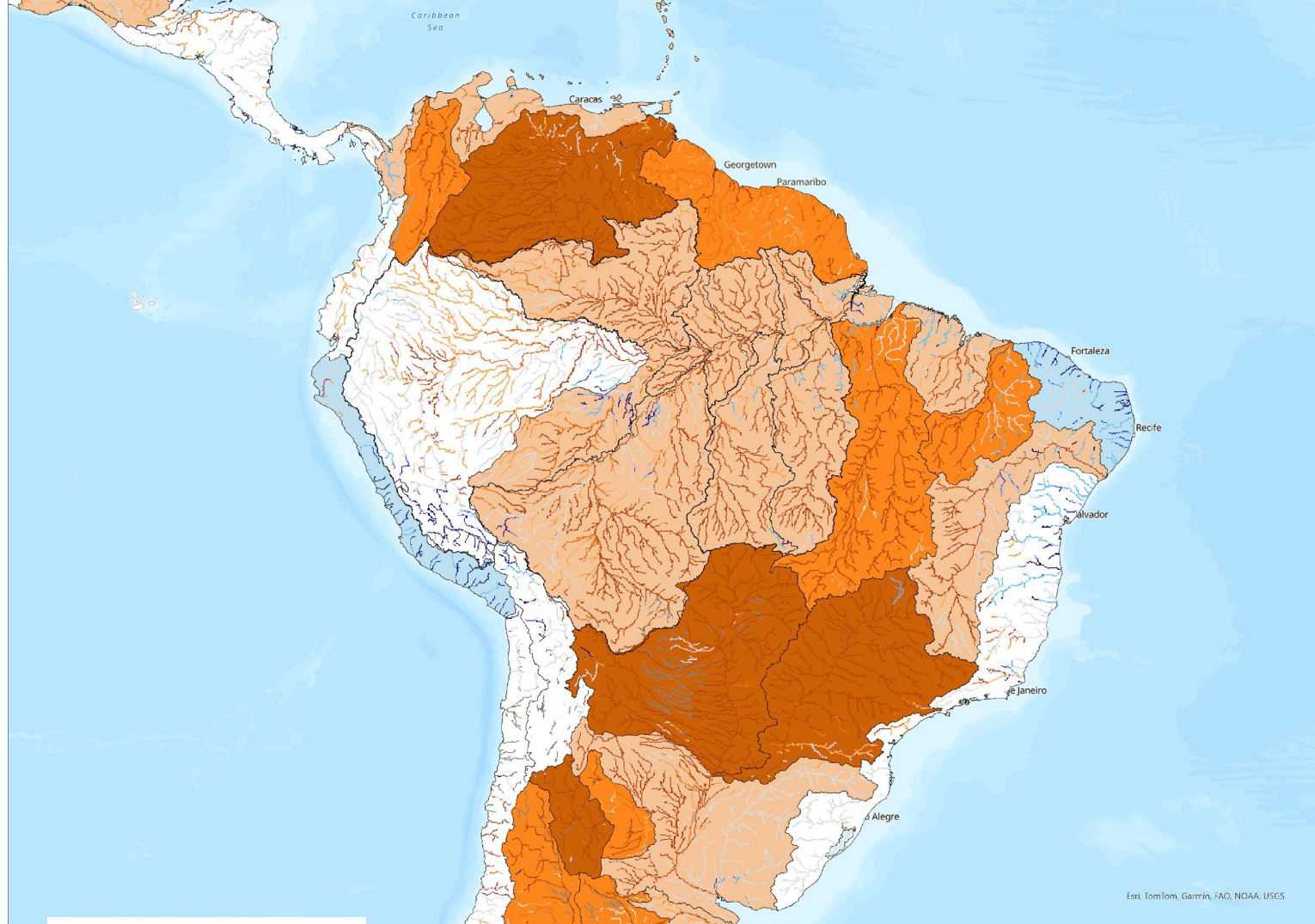
Previsão de vazão GloFAS 30-dias



Gráficos e análises: CEMADEN

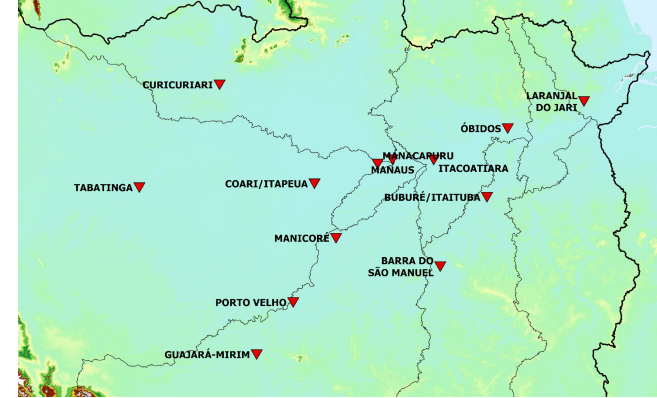
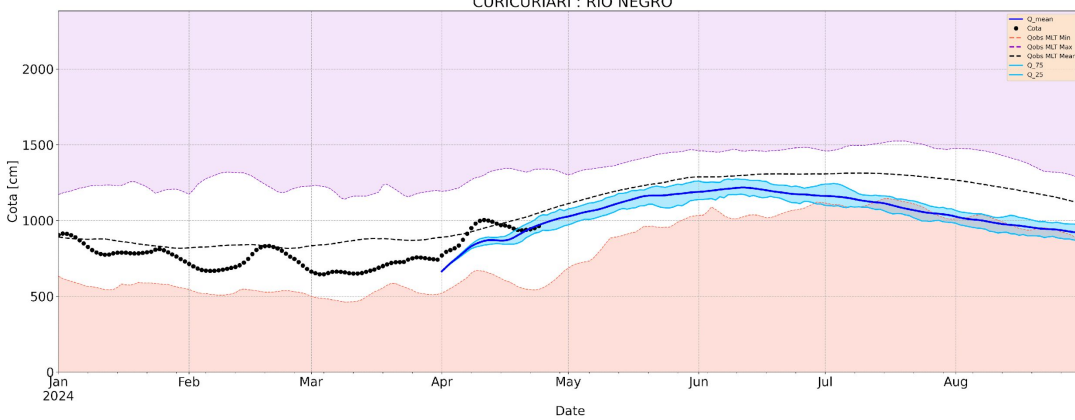


- > 90% probability of high flows
- 75-90% probability of high flows
- 50-75% probability of high flows
- 50-75% probability of low flows
- 75-90% probability of low flows
- > 90% probability of low flows
- > 50% probability (arid area)

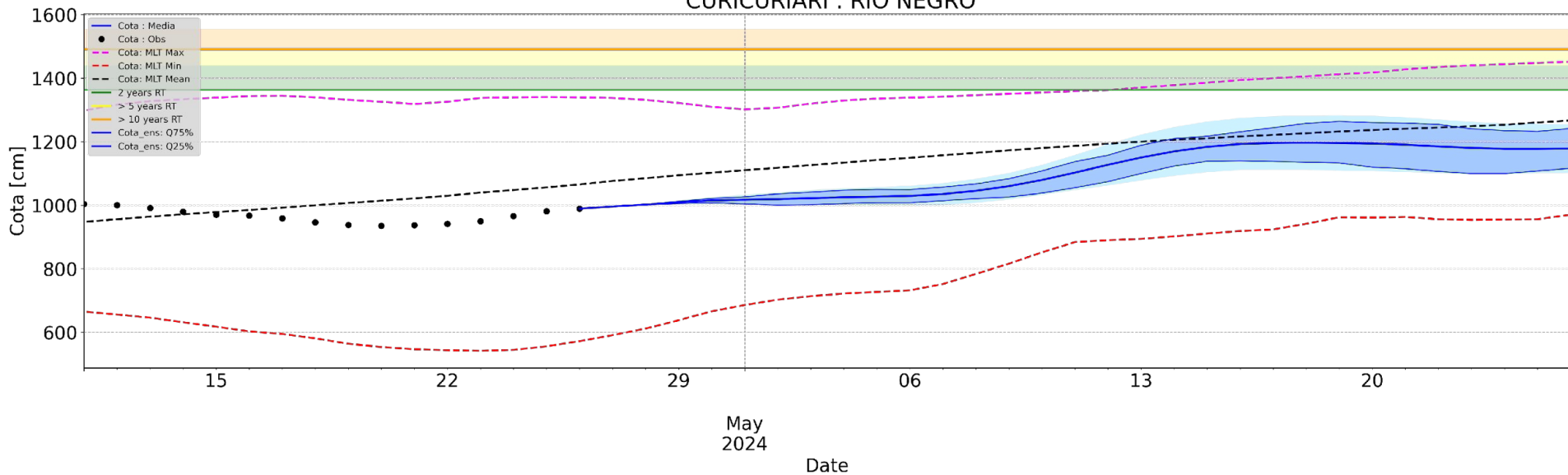


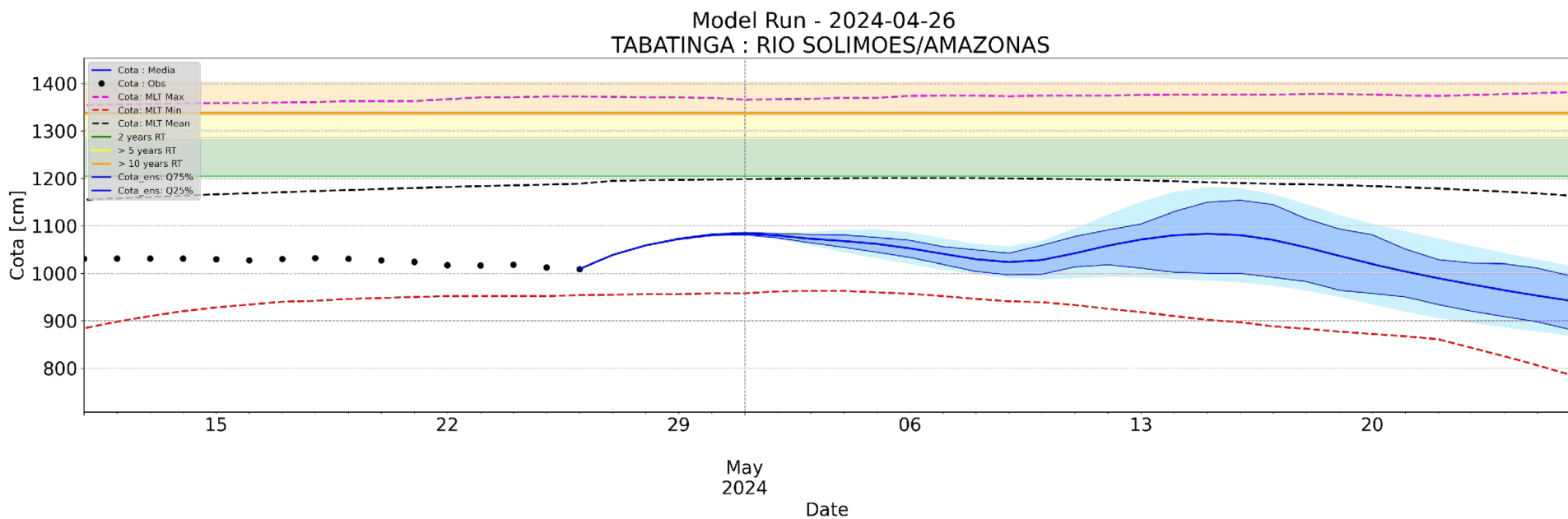
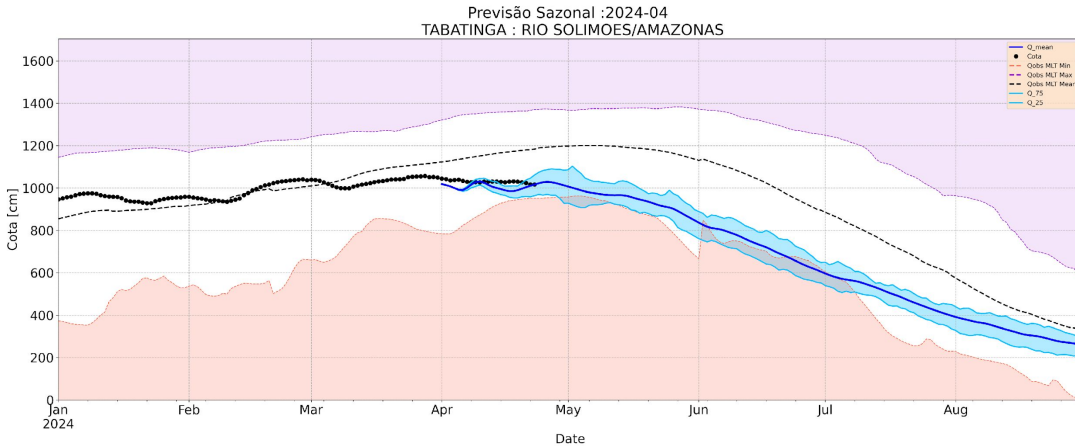
Esri, TomTom, Garmin, FAO, NOAA, USGS

Previsão Sazonal :2024-04
CURICURIARI : RIO NEGRO



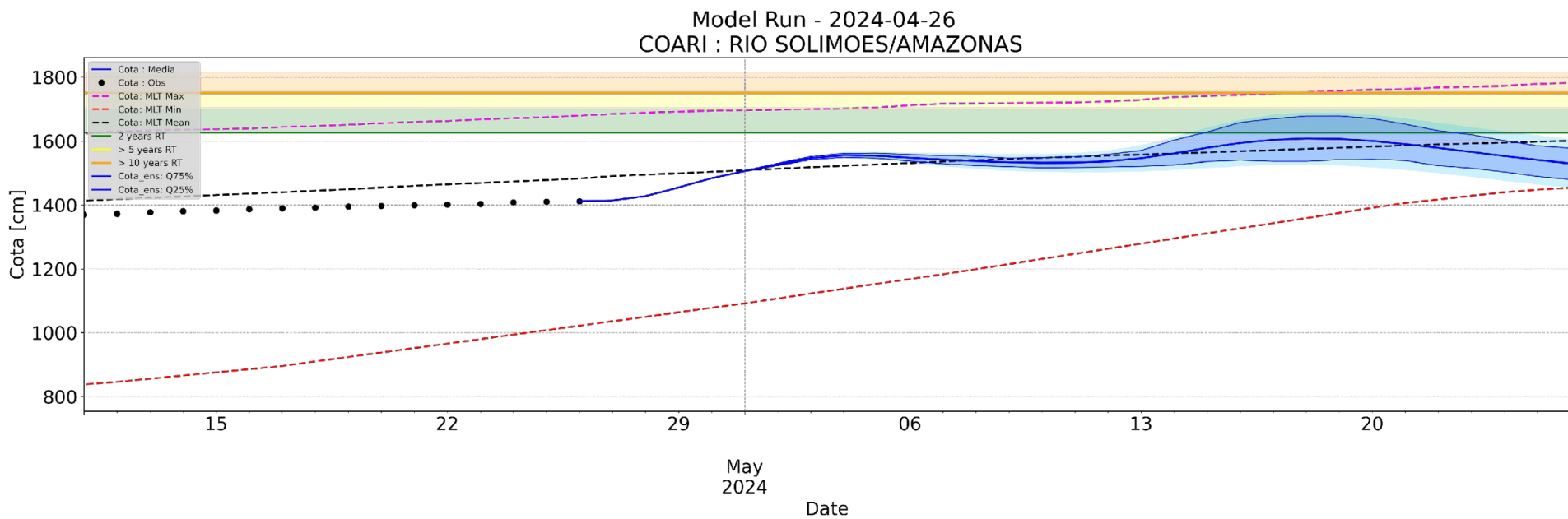
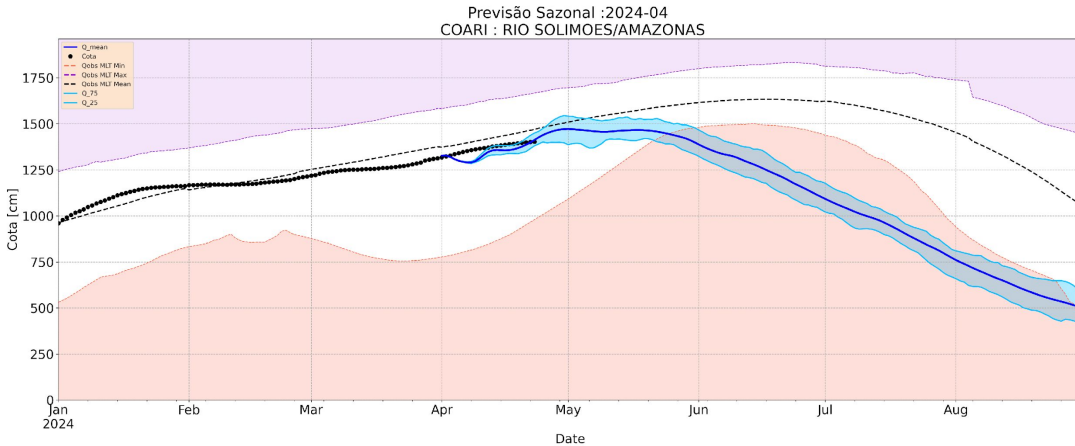
Model Run - 2024-04-26
CURICURIARI : RIO NEGRO





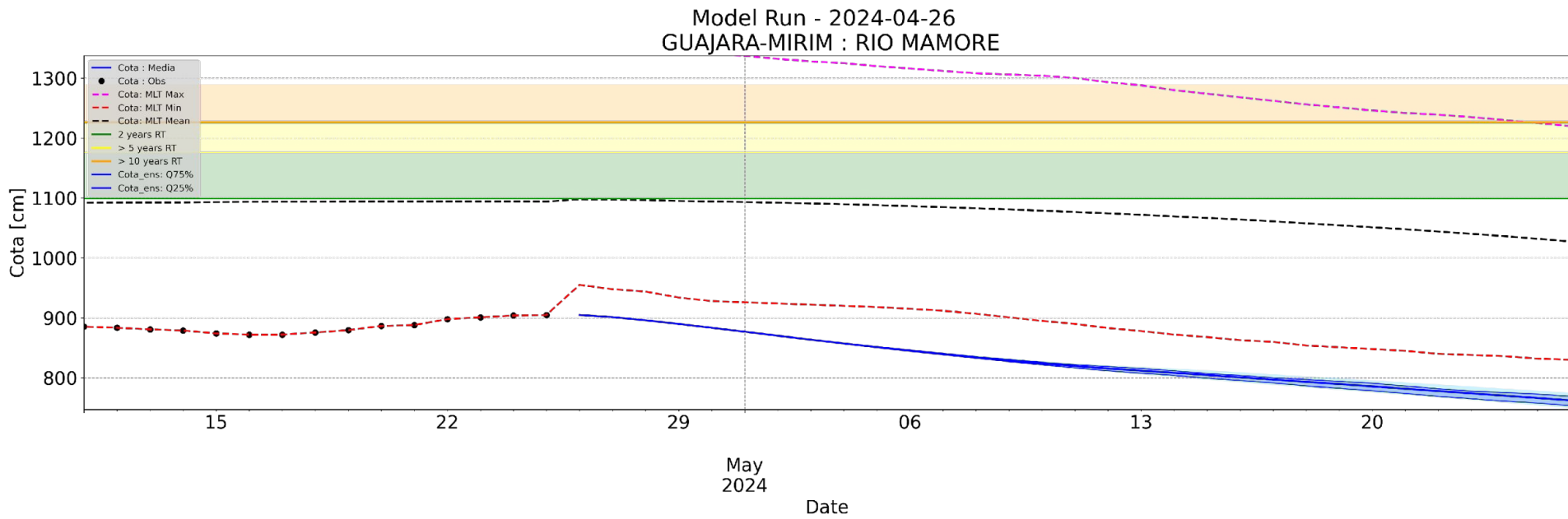
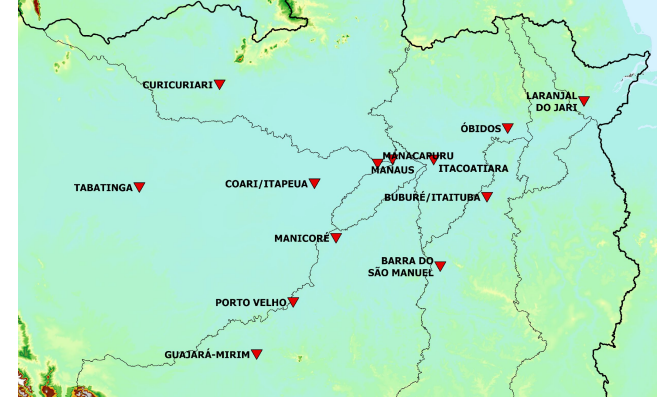
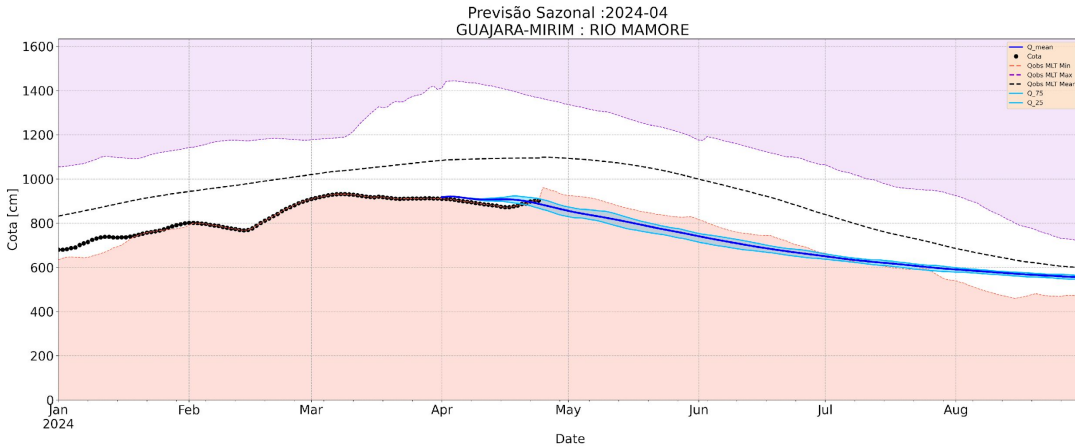
Dados

Gráficos e análises: CEMADEN



Dados

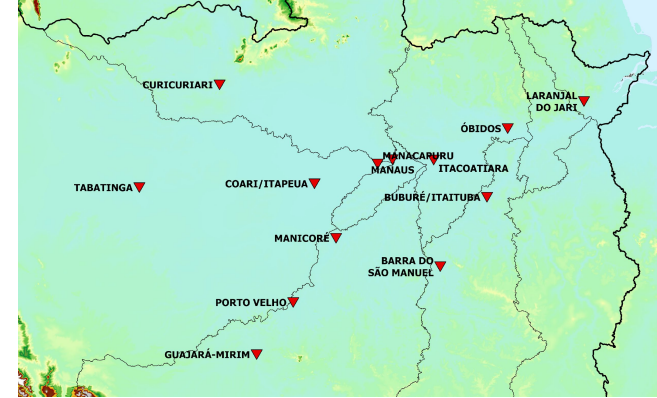
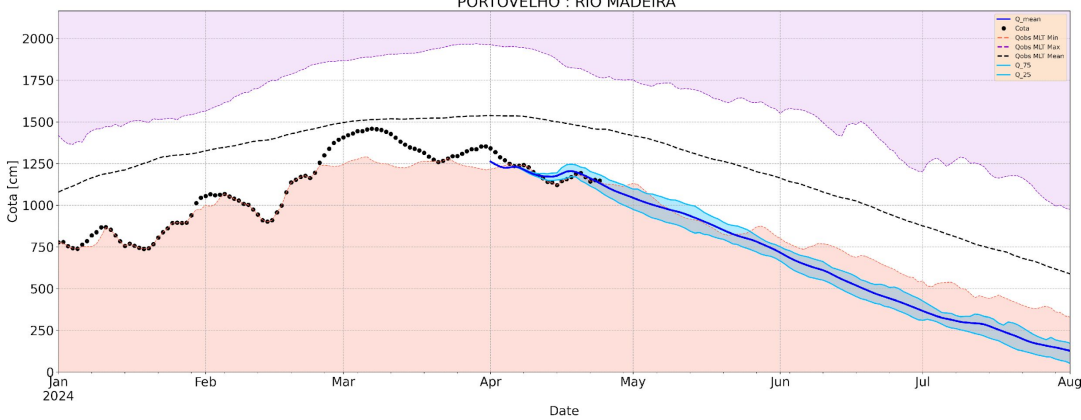
Gráficos e análises: CEMADEN



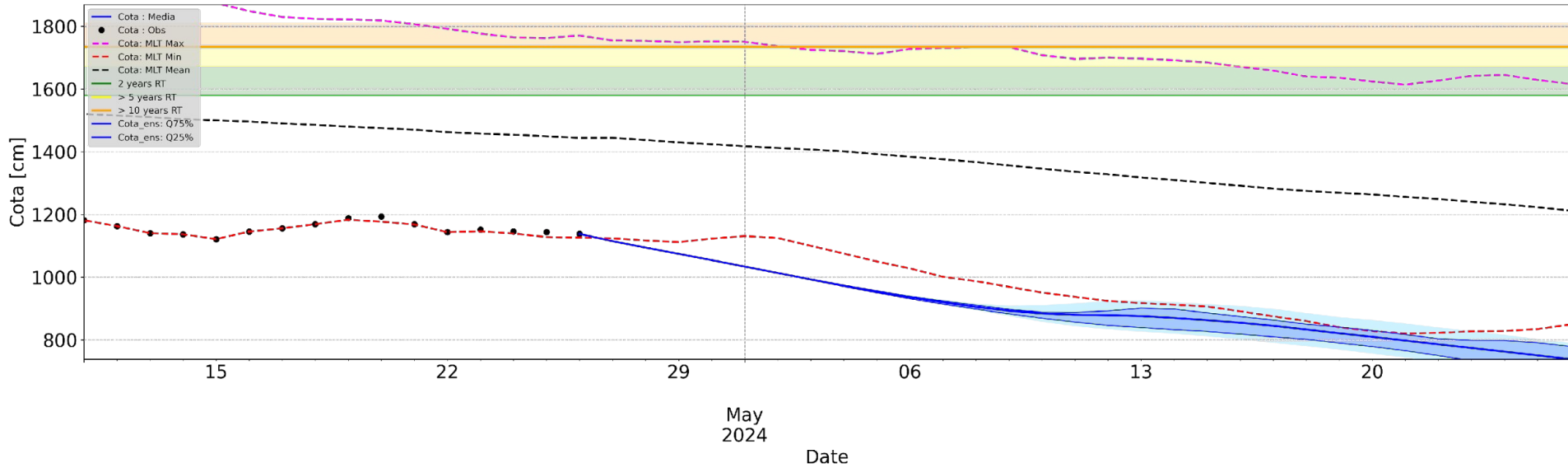
Dados

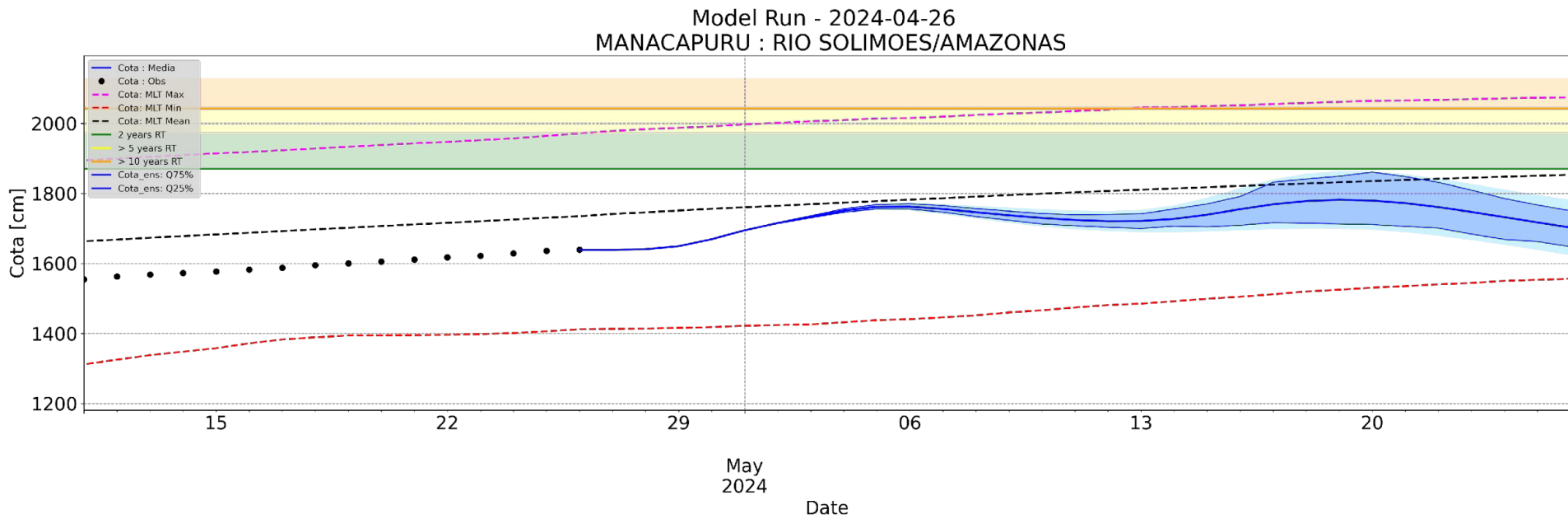
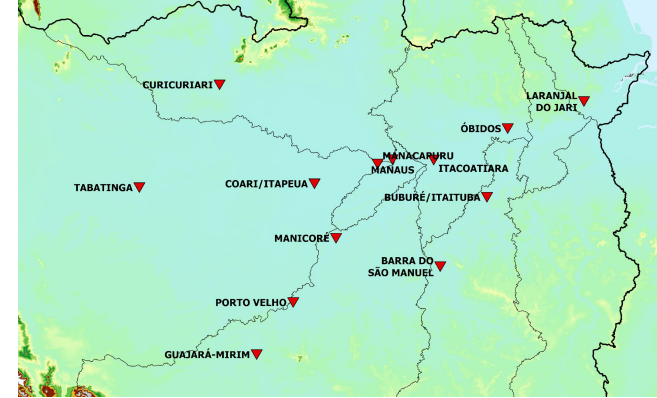
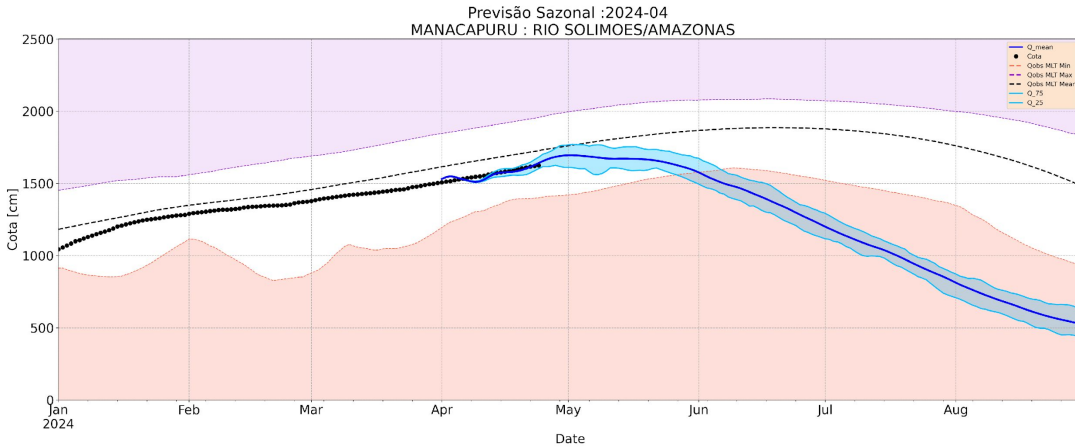
Gráficos e análises: CEMADEN -

Previsão Sazonal :2024-04
PORTOVELHO : RIO MADEIRA



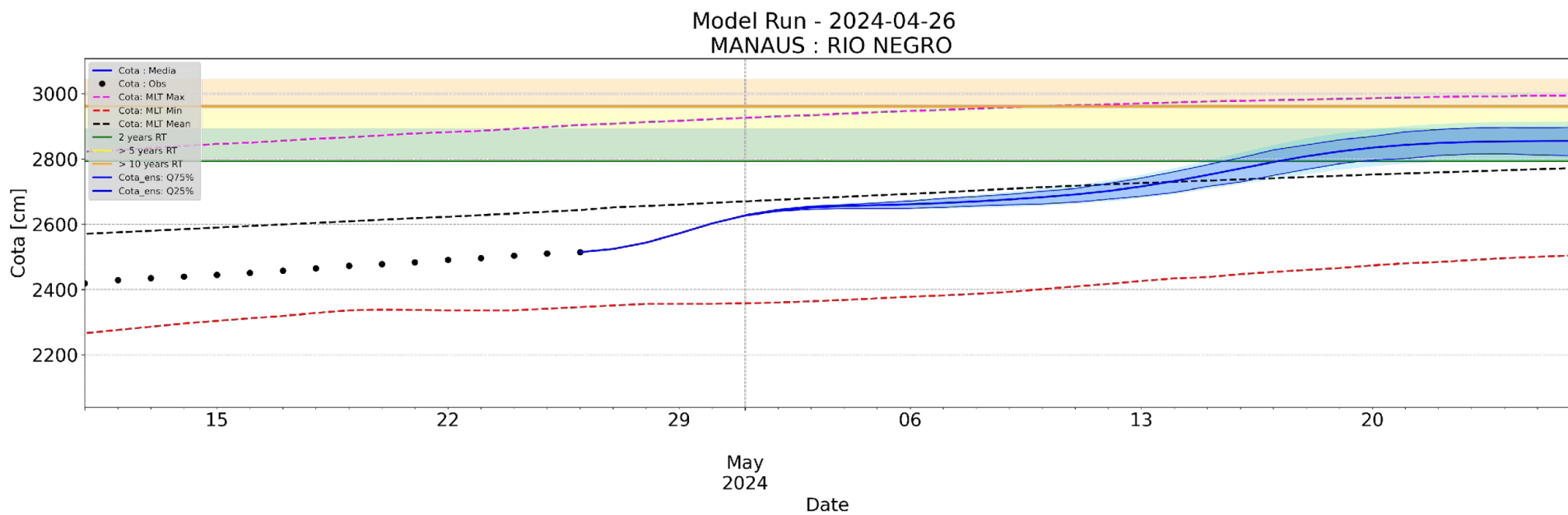
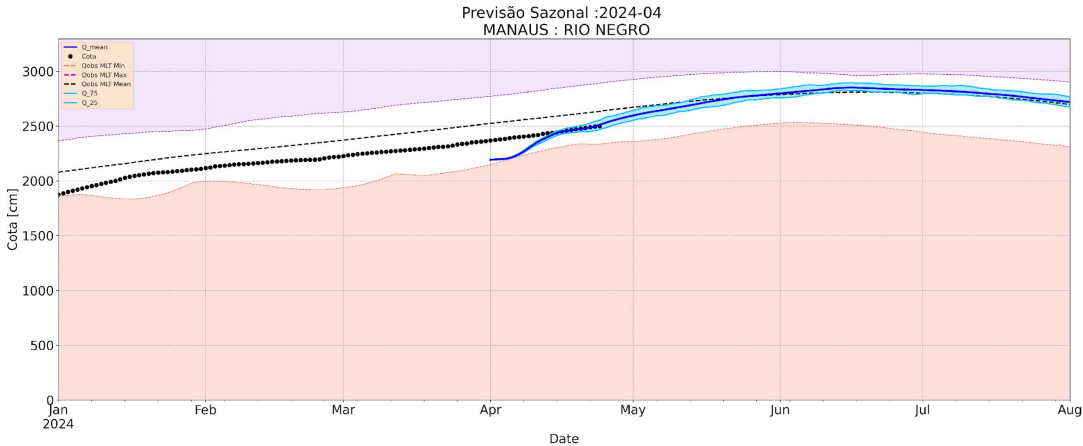
Model Run - 2024-04-26
PORTOVELHO : RIO MADEIRA





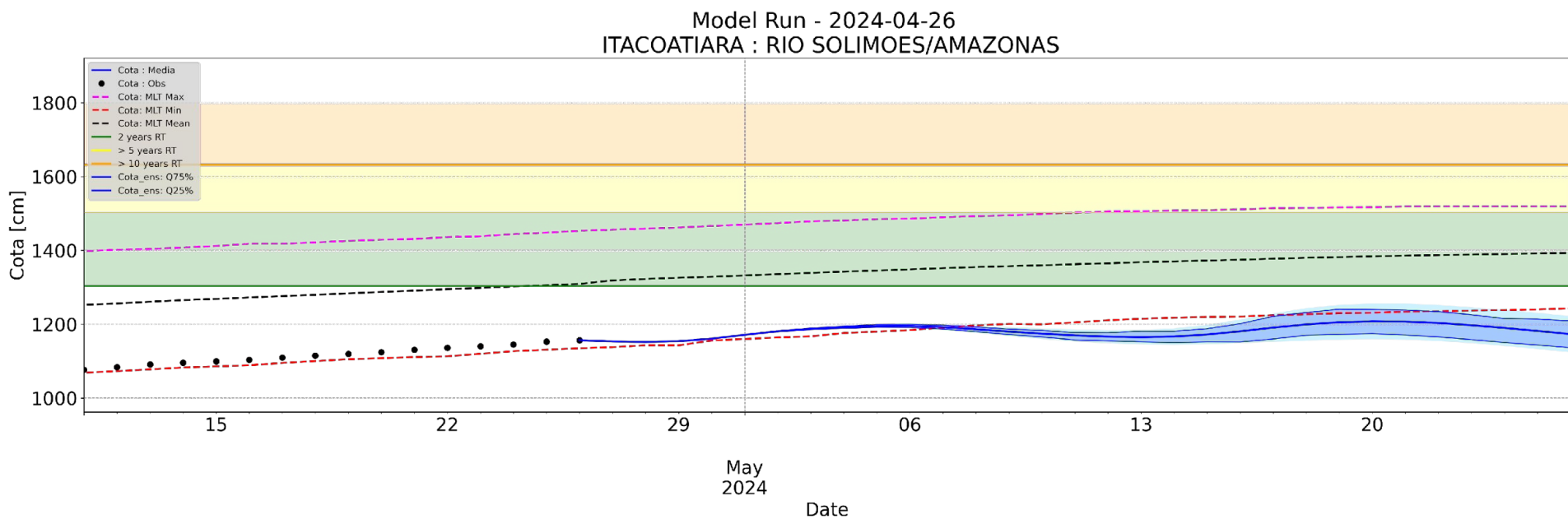
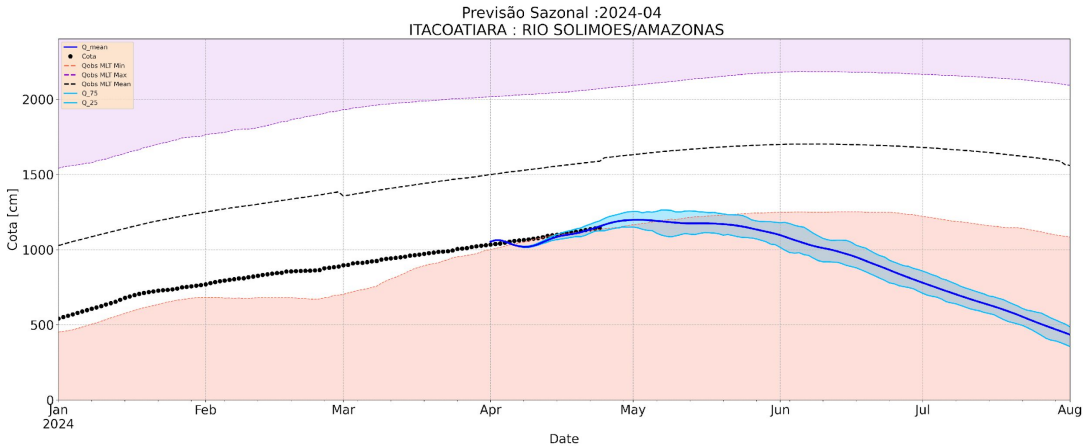
Dados

Gráficos e análises: CEMADEN -



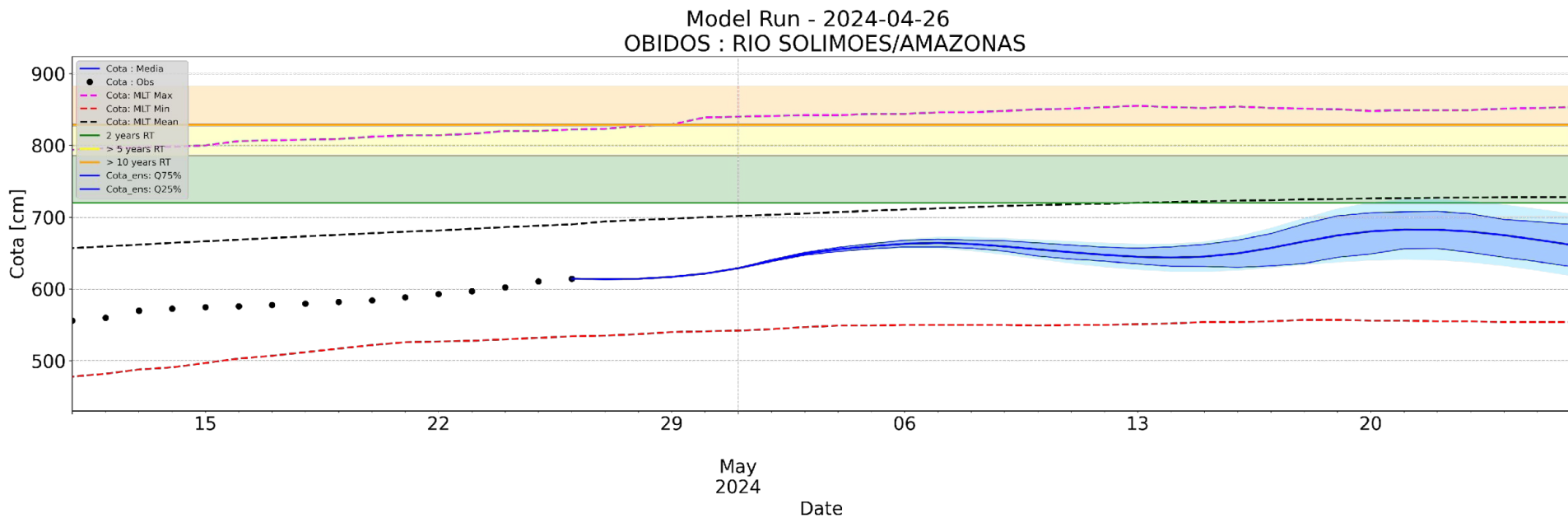
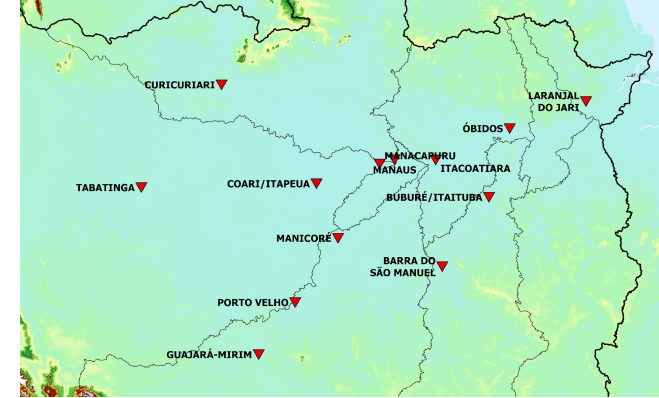
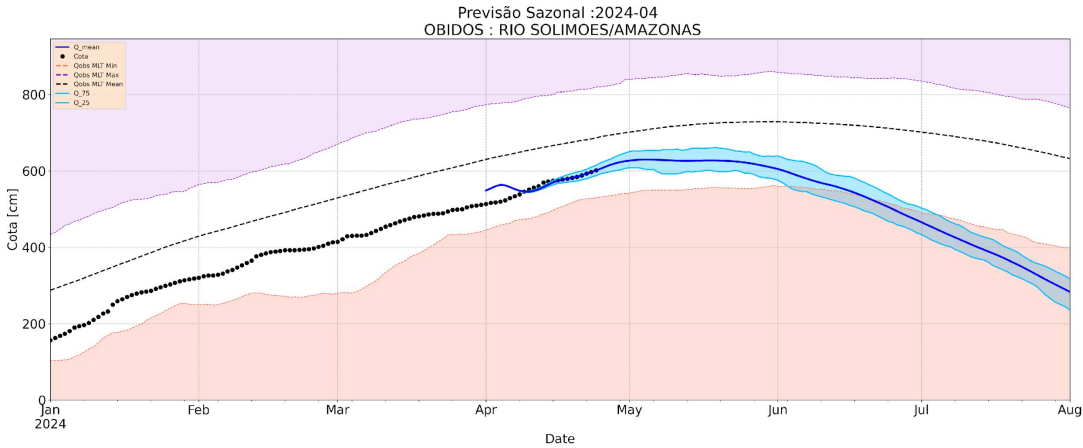
Dados

Gráficos e análises: CEMADEN -



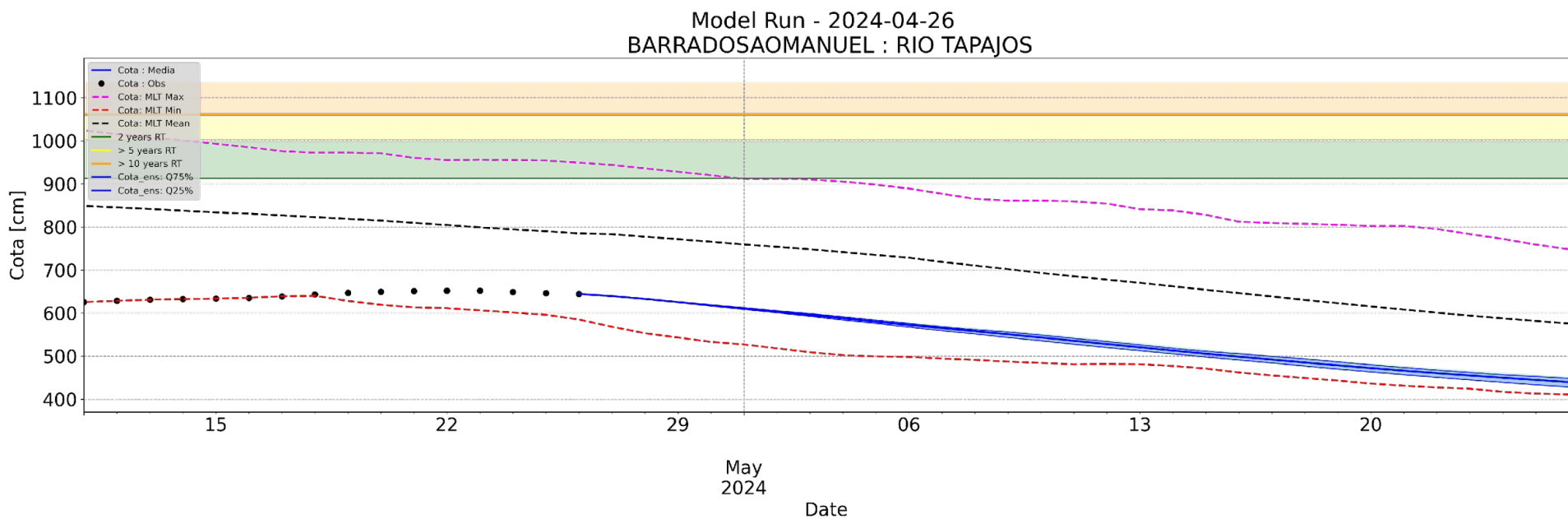
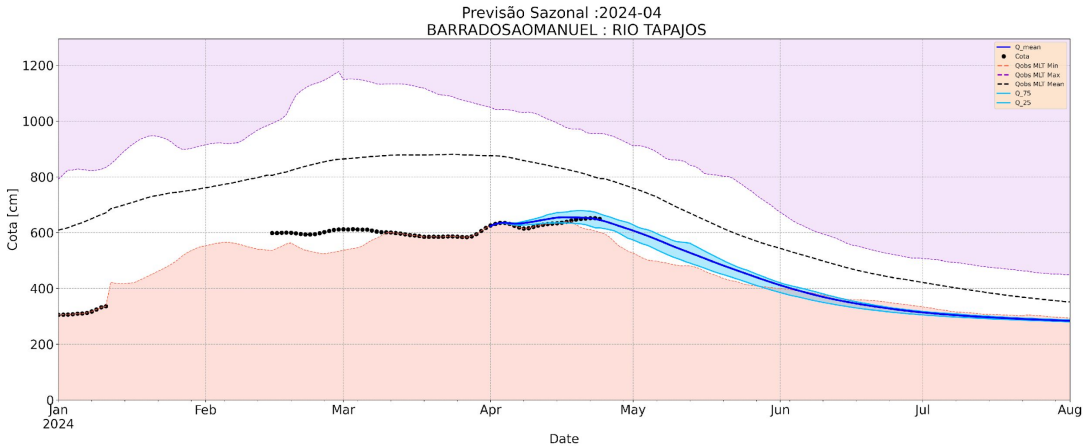
Dados

Gráficos e análises: CEMADEN -



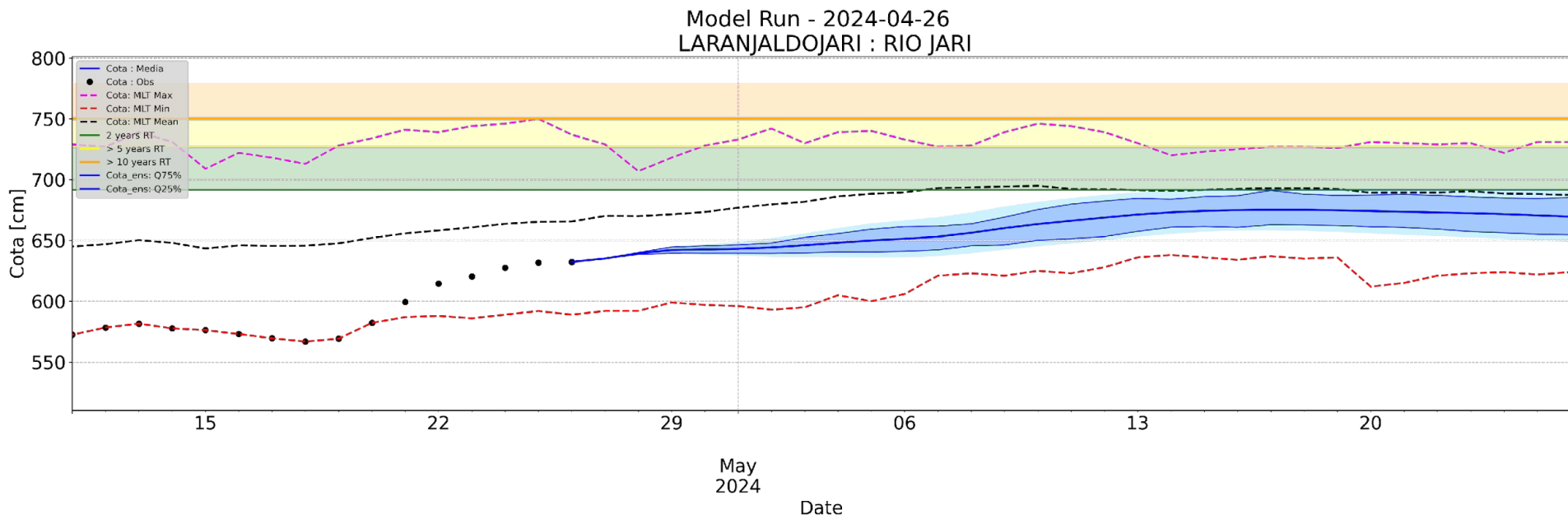
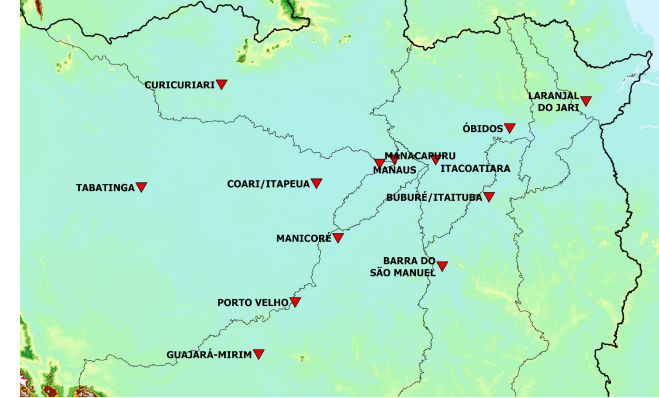
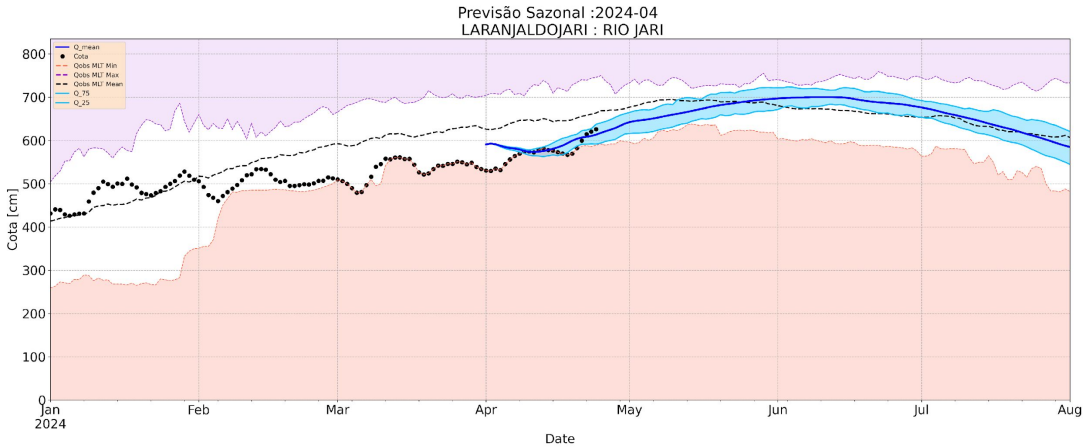
Dados

Gráficos e análises: CEMADEN -



Dados

Gráficos e análises: CEMADEN -



Dados

Gráficos e análises: CEMADEN -