



**CENSIPAM**

Centro Gestor e Operacional do  
Sistema de Proteção da Amazônia



MINISTÉRIO DA  
**DEFESA**



**SipamHidro**

# Análise e Prognóstico Hidrológico

**Julho/2025**

**Flávio Altieri**  
Analista em Ciência e Tecnologia

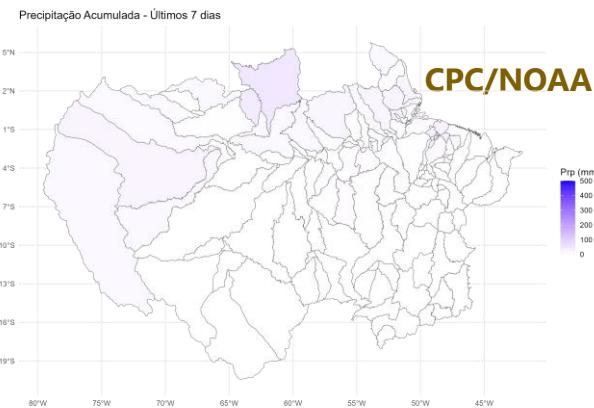
# Resumo

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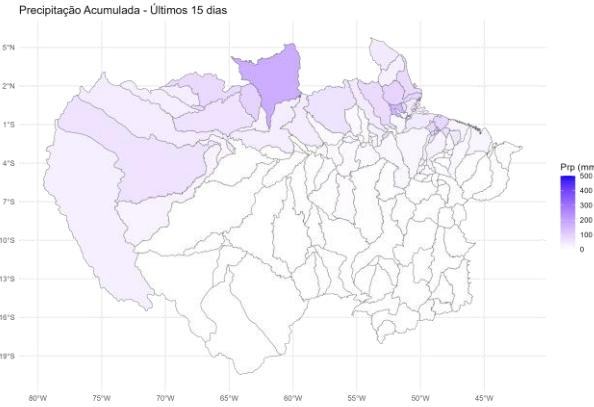
- Análise da precipitação nas bacias
- Comportamento da estiagem
- Diagnóstico das condições dos níveis dos rios
- Prognóstico hidrológico de Vazante

# Precipitação Acumulada

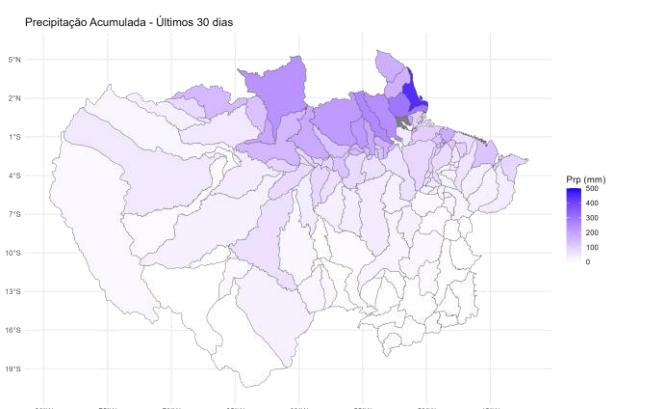
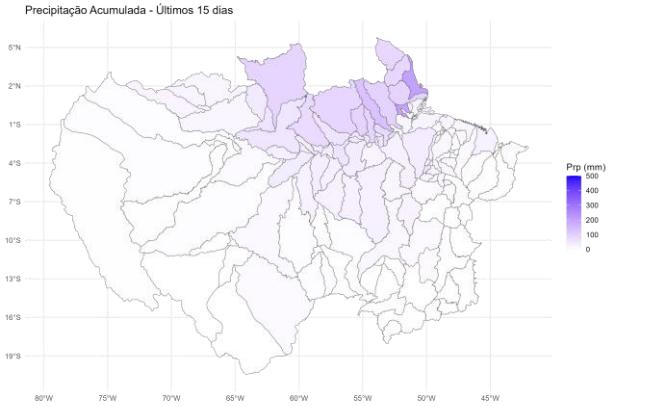
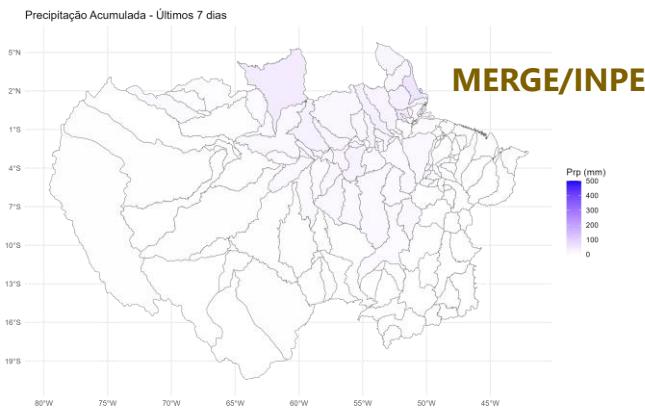
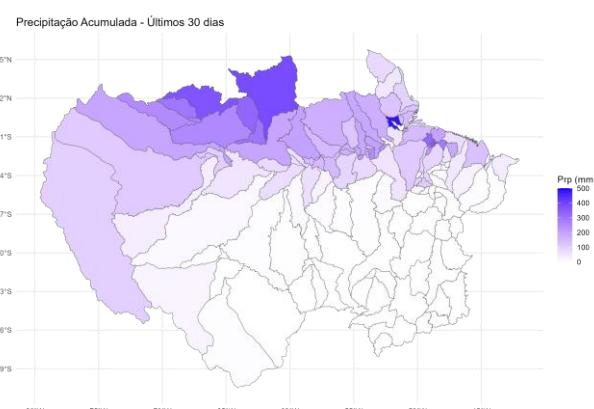
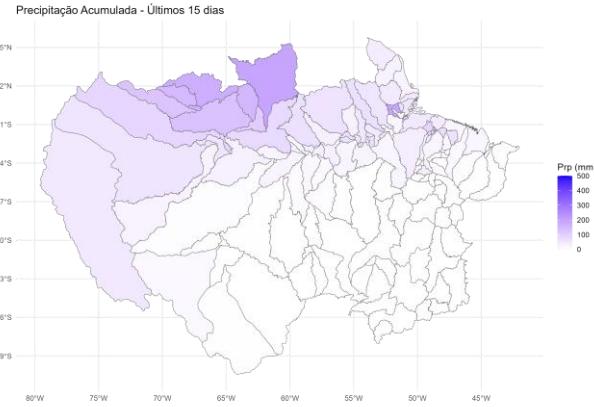
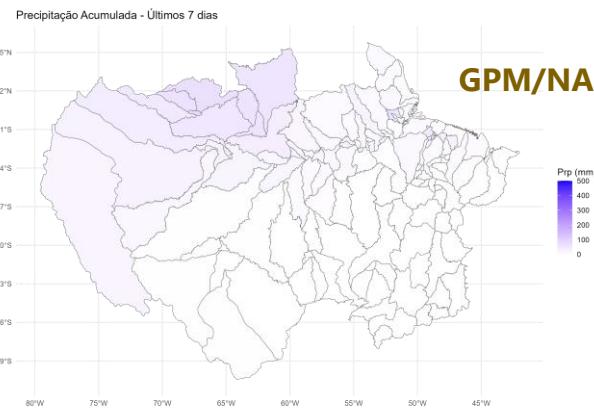
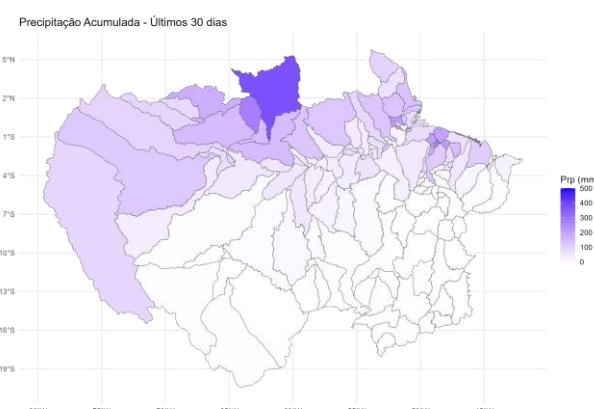
**7 dias**



**15 dias**



**30 dias**

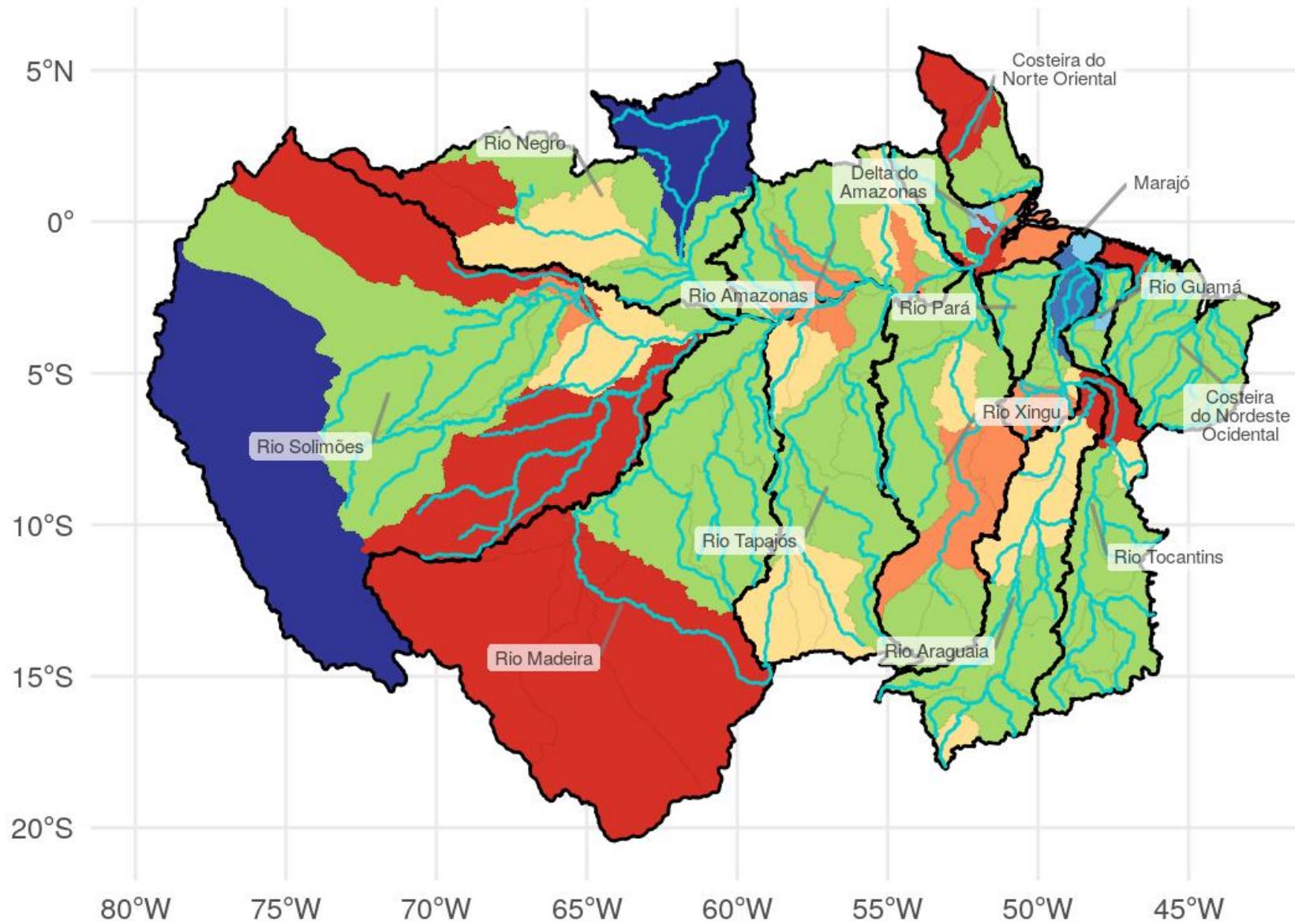


# Índice de Precipitação Padronizada (IPP)

- Uso do **Índice de Precipitação Padronizada (IPP)** para detectar anomalias por sub-bacia.
- Os dados de precipitação são fornecidos pelo **CPC/NOAA (Climate Prediction Center / National Oceanic and Atmospheric Administration)**.
- O **IPP** representa **quantos desvios padrão** a precipitação acumulada se afasta da **média climatológica**.
- A média climatológica baseia-se no período de **1979 a 2023**.
- A escala adotada é **mensal**, com aplicação de uma **janela móvel de 30 dias**, permitindo o cálculo **diário do IPP** com base na precipitação acumulada dos últimos 30 dias.

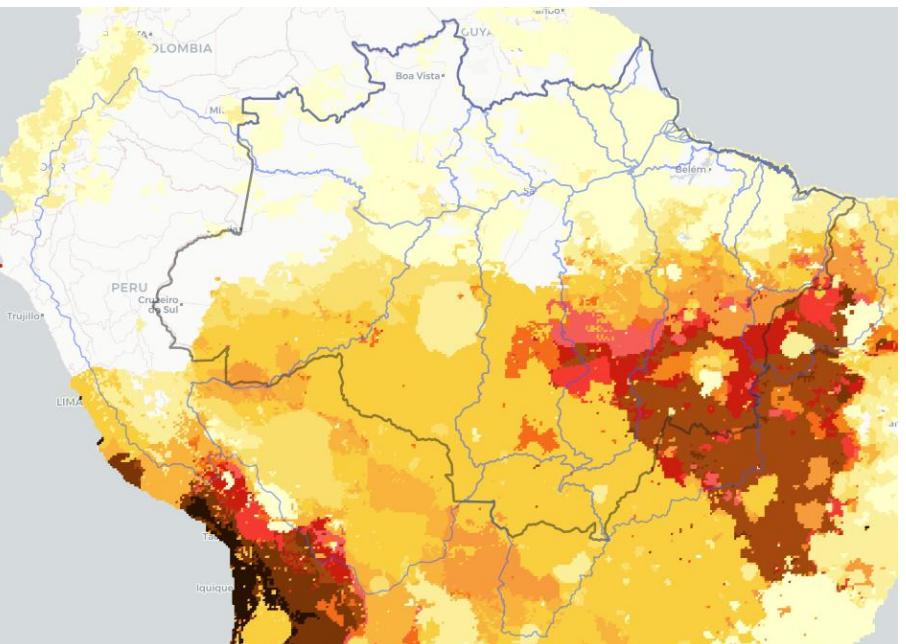
# Índice de Precipitação Padronizada (IPP) – 28/07/2025

- Anomalia negativa extrema
- Anomalia negativa severa
- Anomalia negativa moderada
- Normalidade
- Anomalia positiva moderada
- Anomalia positiva severa
- Anomalia positiva extrema

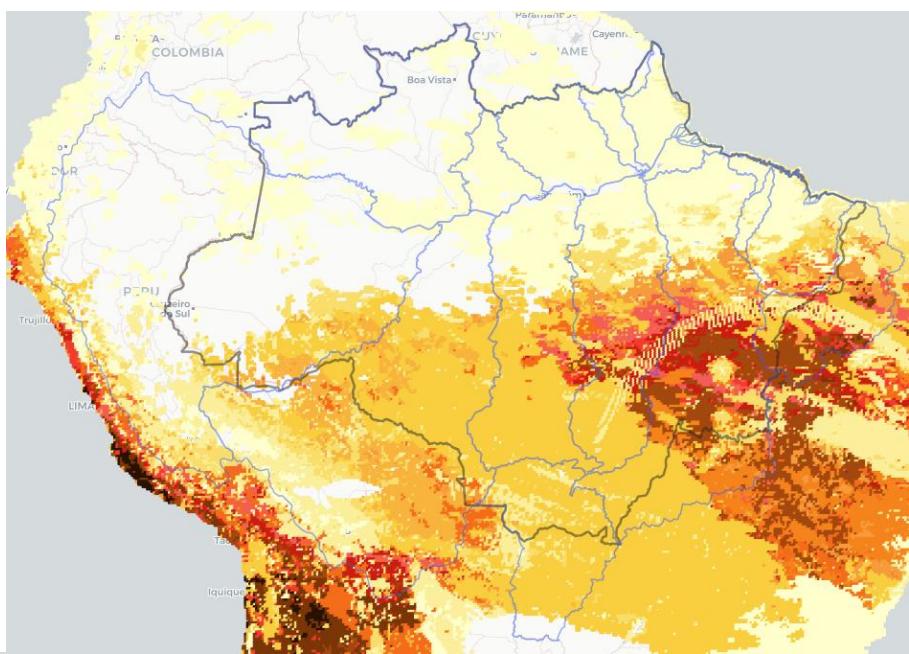


Acumulado de precipitação referente ao período de 28/06/2025 à 27/07/2025 (Fonte: CPC/NOAA)

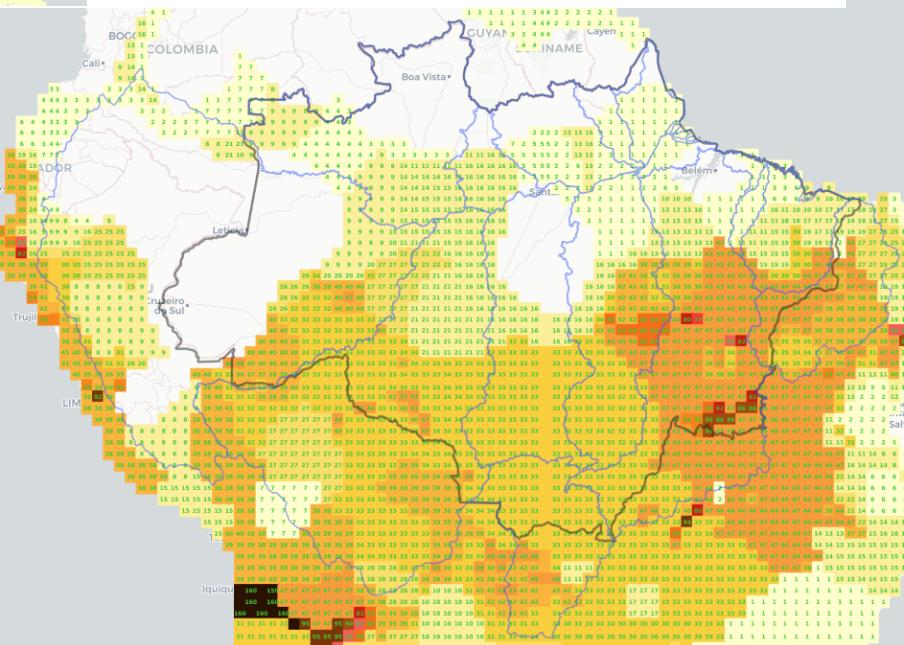
# Monitoramento da Estiagem



Estimador de precipitação MERGE/ INPE



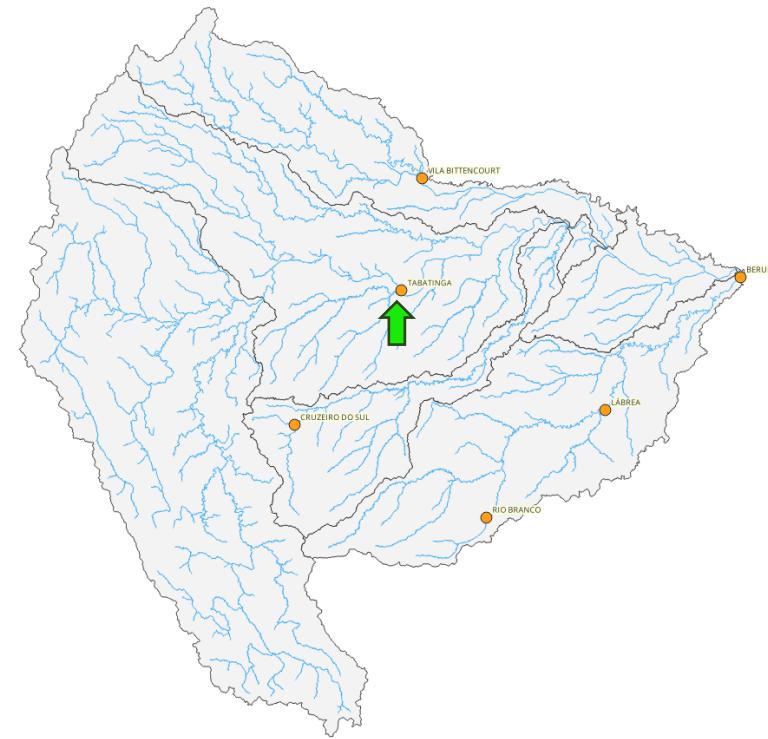
Estimador de precipitação GPM/ NASA



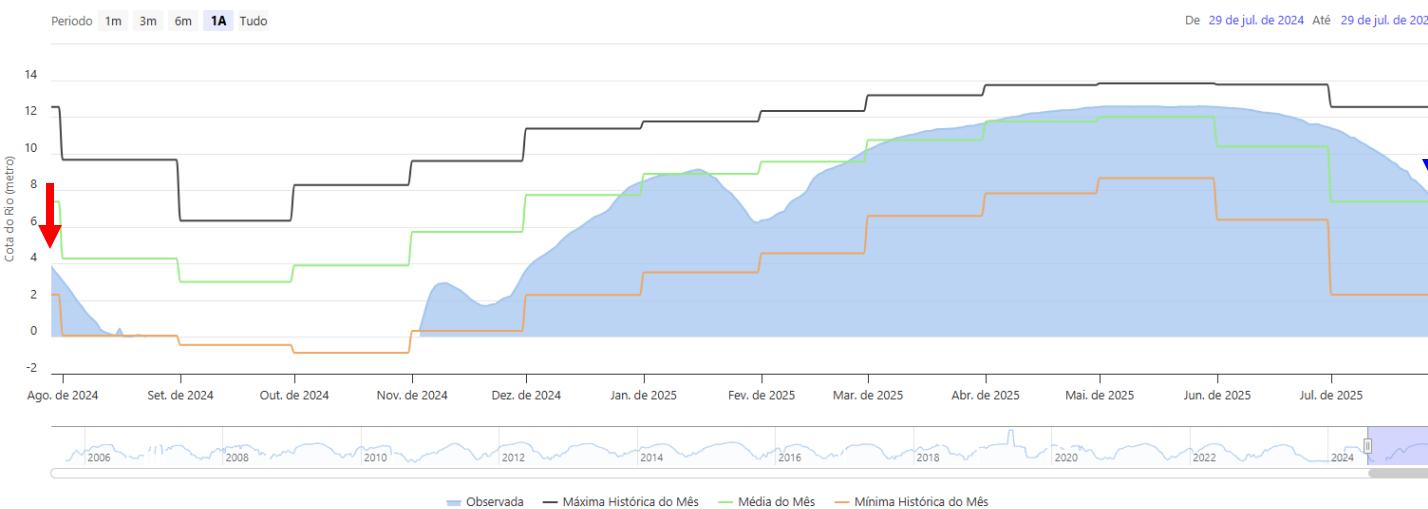
Estimador de precipitação CPC/NOAA

An aerial photograph showing a severe flooding event. In the background, a dense cluster of buildings, including several large industrial-looking structures with grey roofs, are surrounded by floodwaters. The foreground is dominated by a vast expanse of brown, muddy floodwater. Several small boats are visible on the water, and a few partially submerged houses are scattered across the scene. The overall atmosphere is one of a major natural disaster.

# Diagnóstico dos Níveis dos Rios

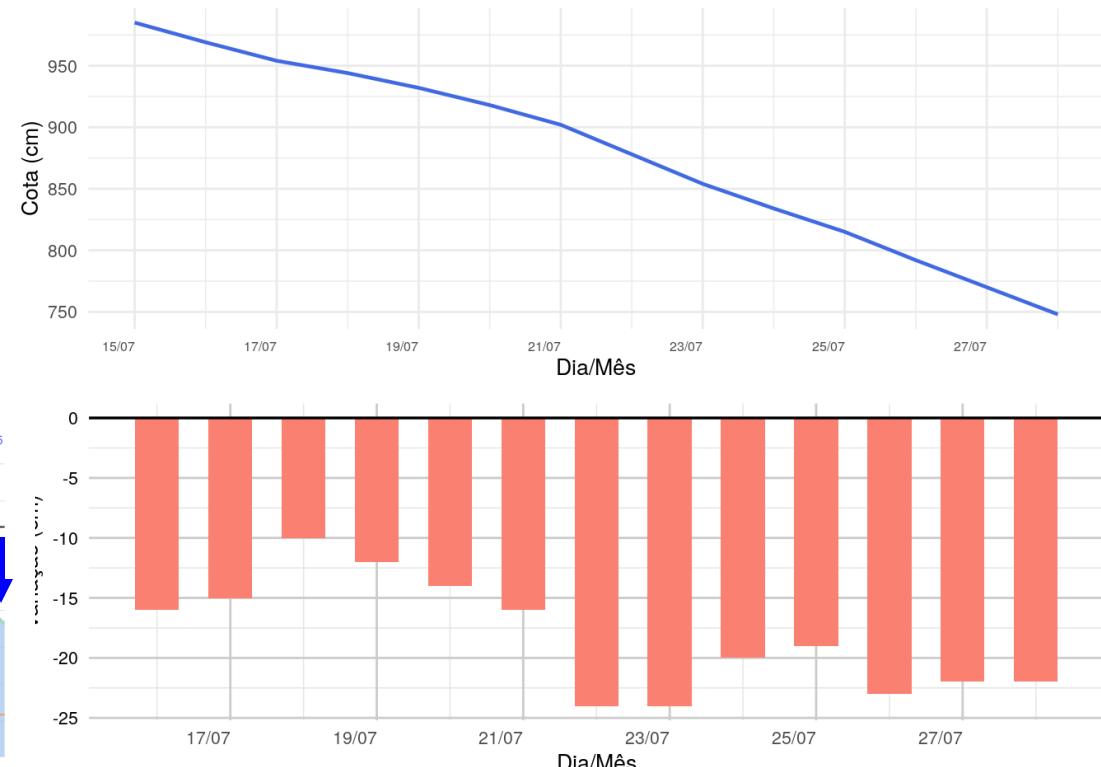


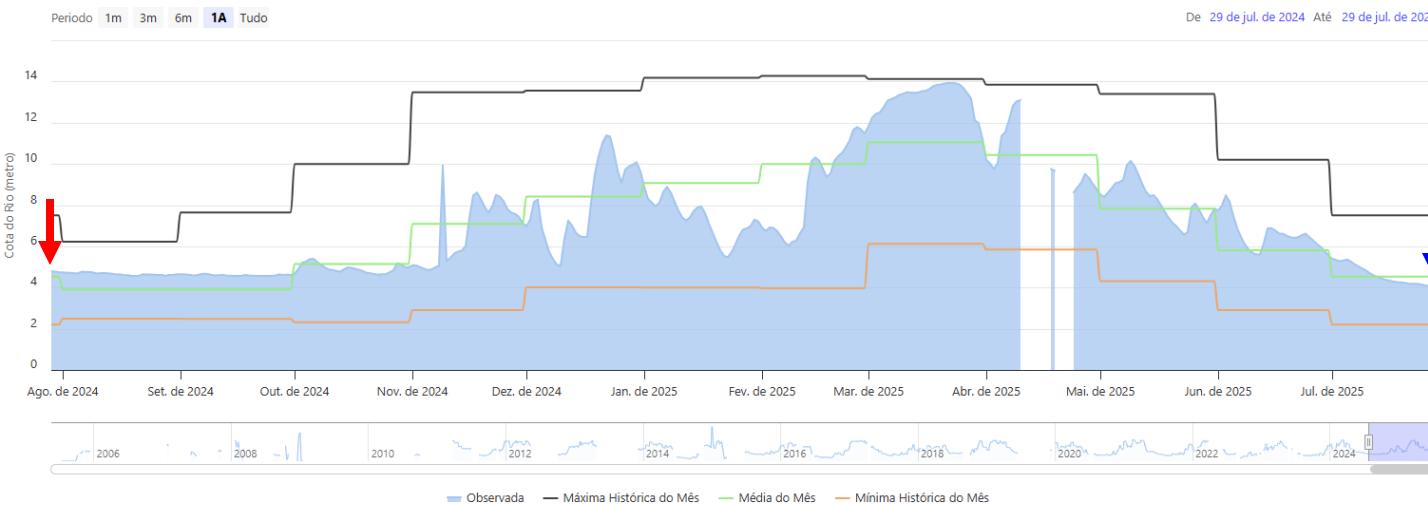
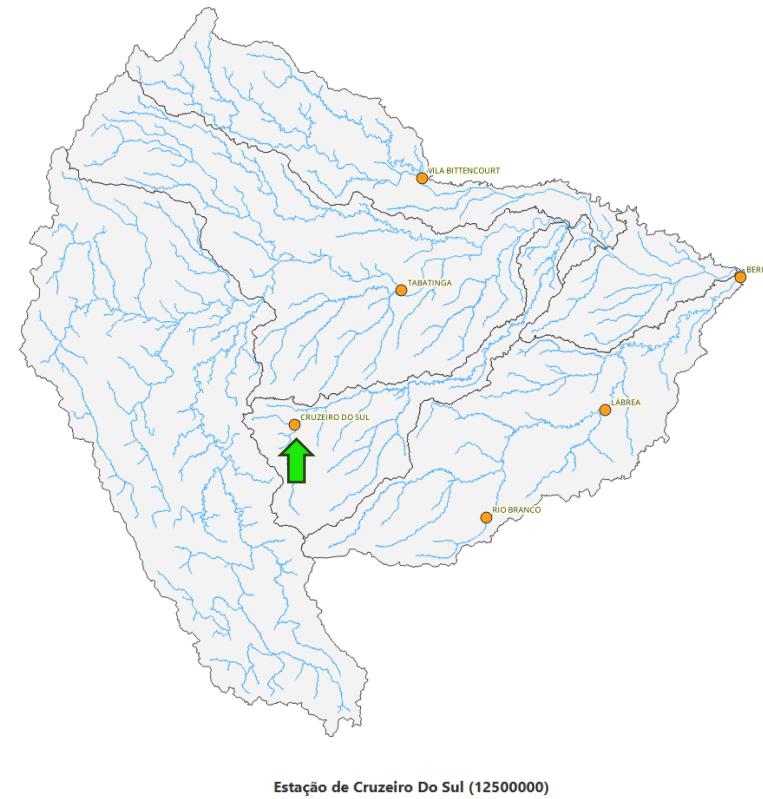
Estação de Tabatinga (10100000)



## Rio Solimões – Estação de Tabatinga (AM)

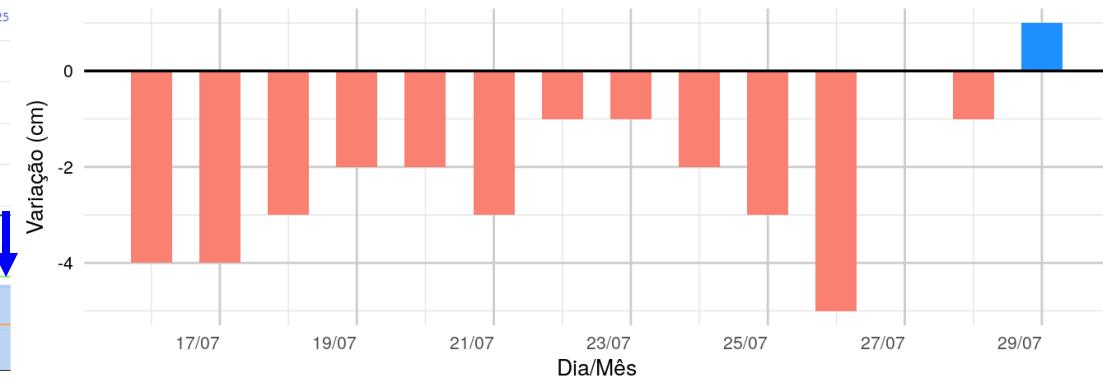
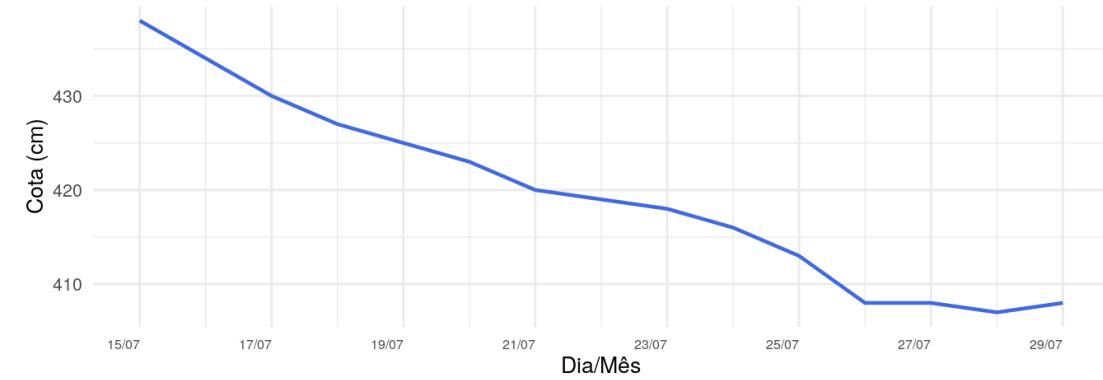
Variação das cotas nos últimos 15 dias: -237 cm, em média -15,8 cm por dia.

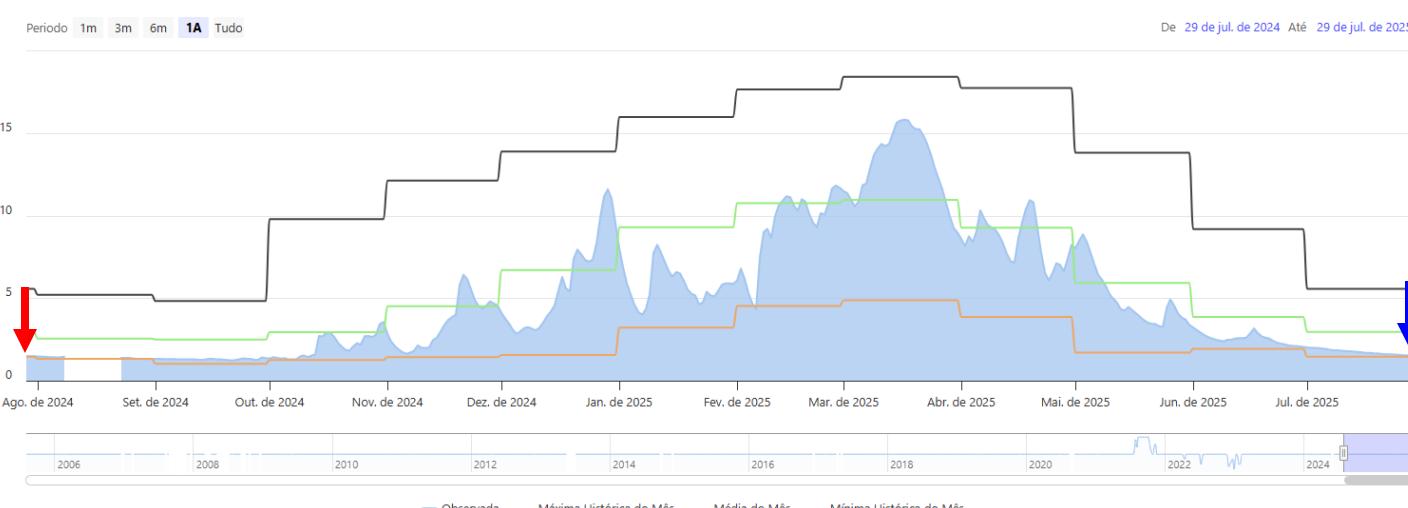
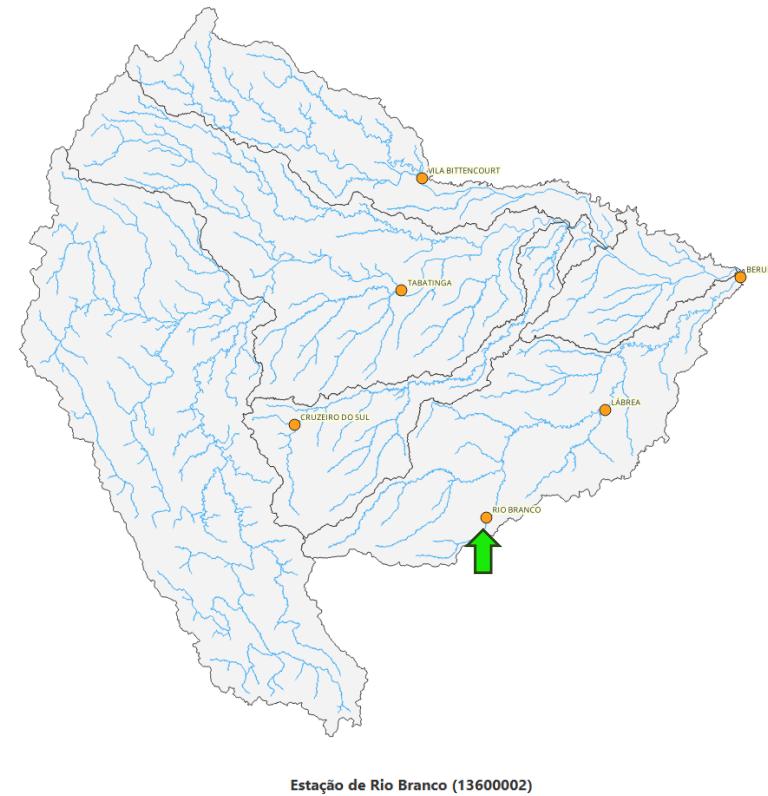




## Rio Juruá – Estação de Cruzeiro do Sul (AC)

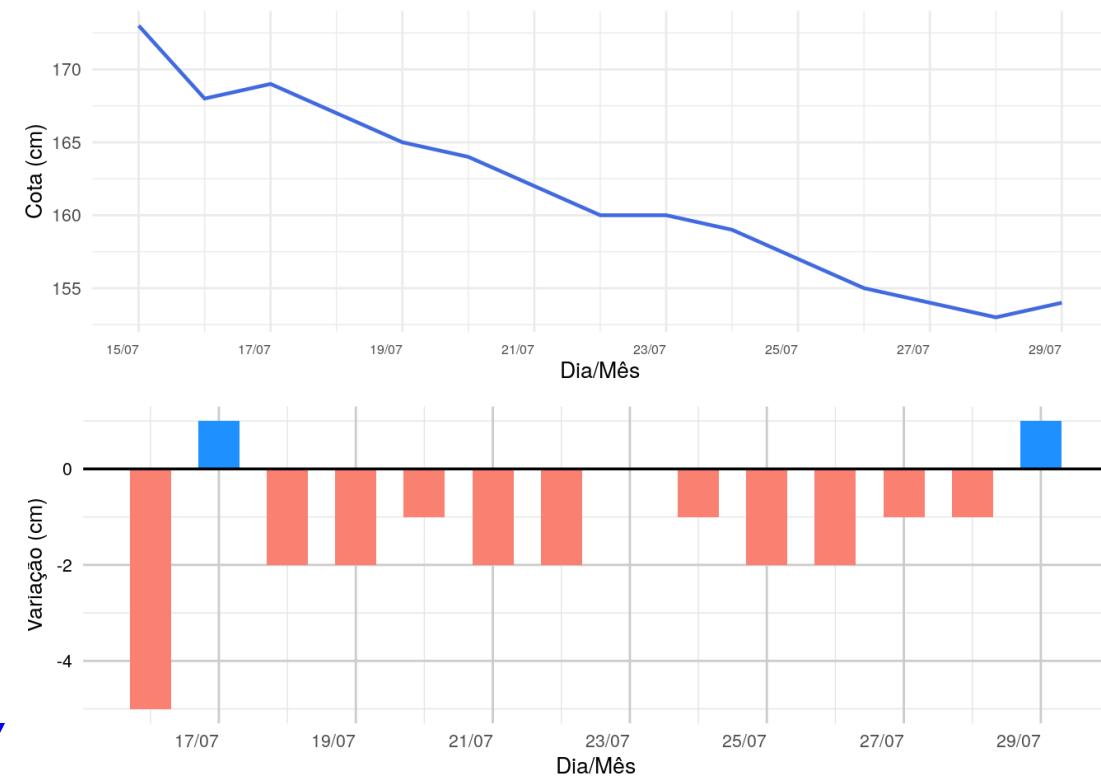
Variação das cotas nos últimos 15 dias: -30 cm, em média -2 cm por dia.

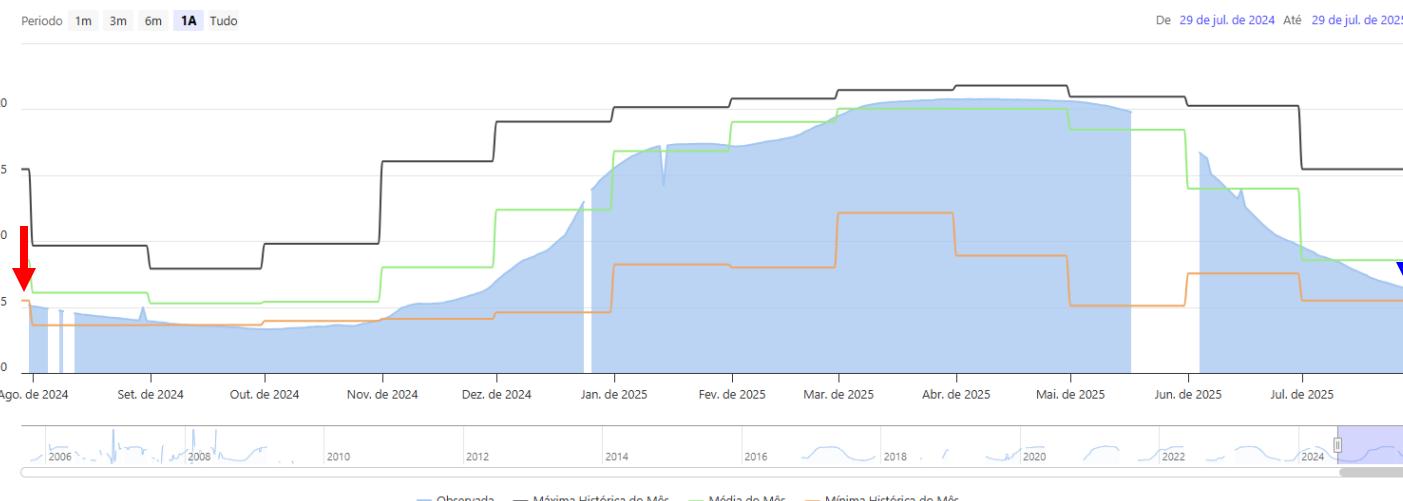
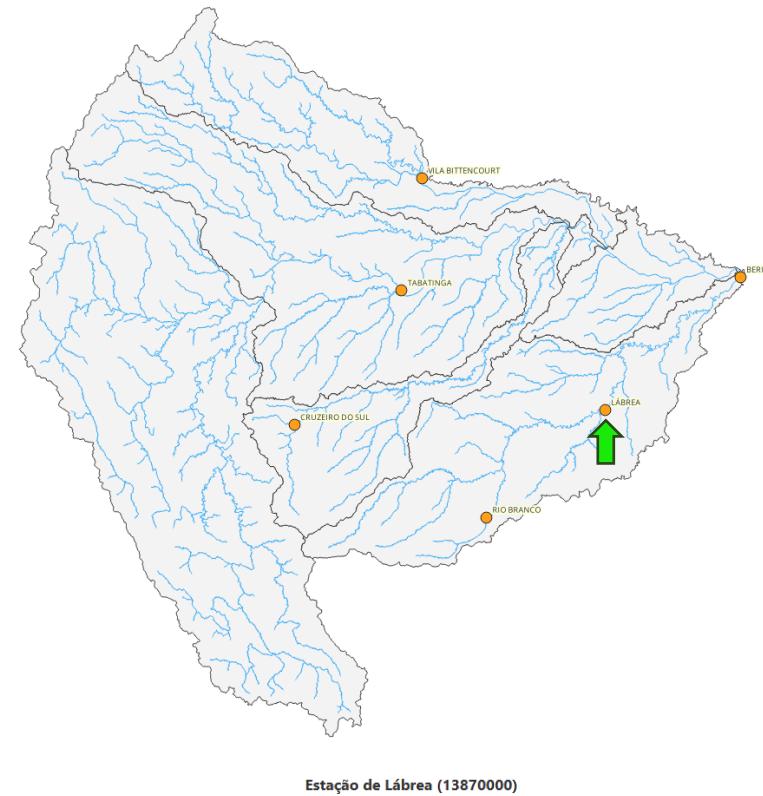




## Rio Acre – Estação de Rio Branco (AC)

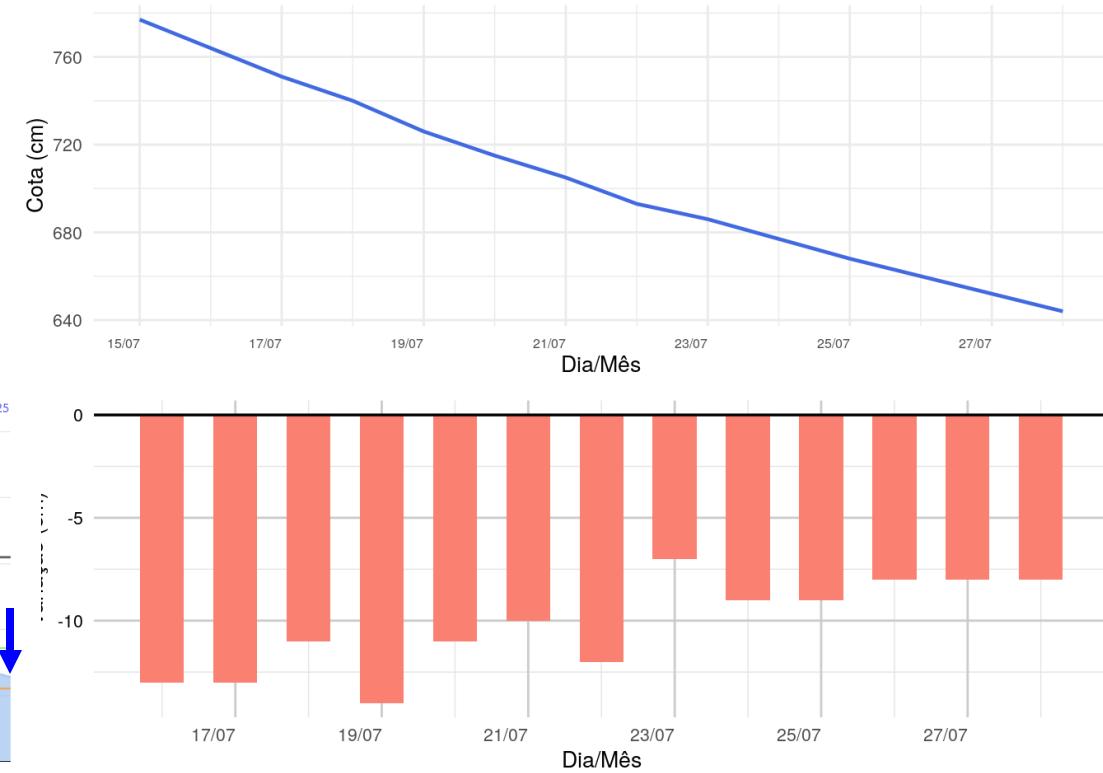
Variação das cotas nos últimos 15 dias: -19 cm, em média -1.27 cm por dia.

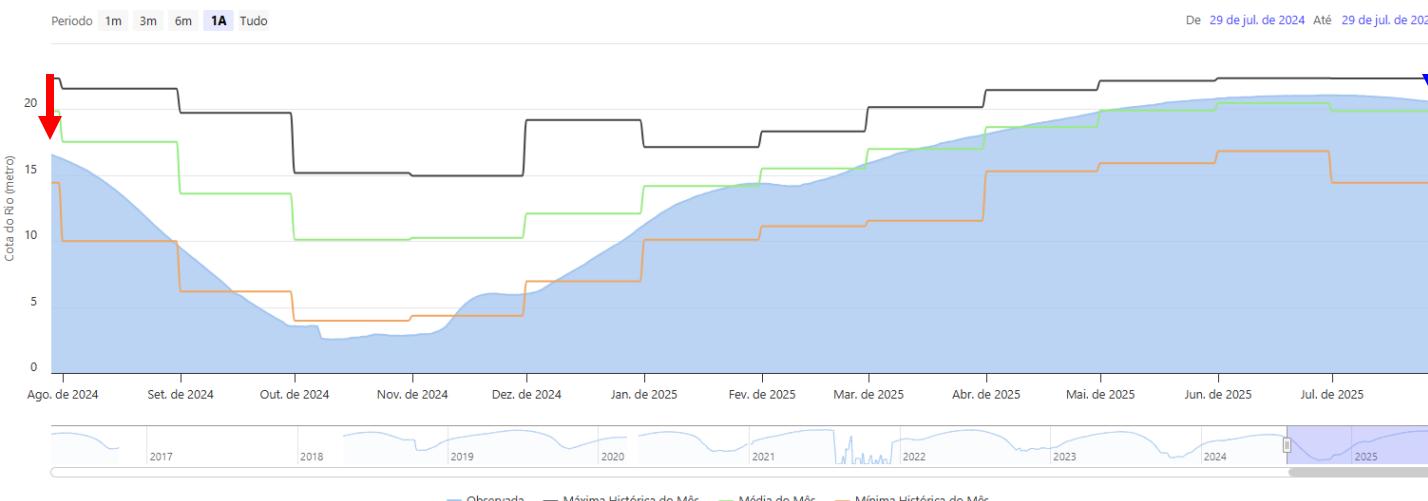
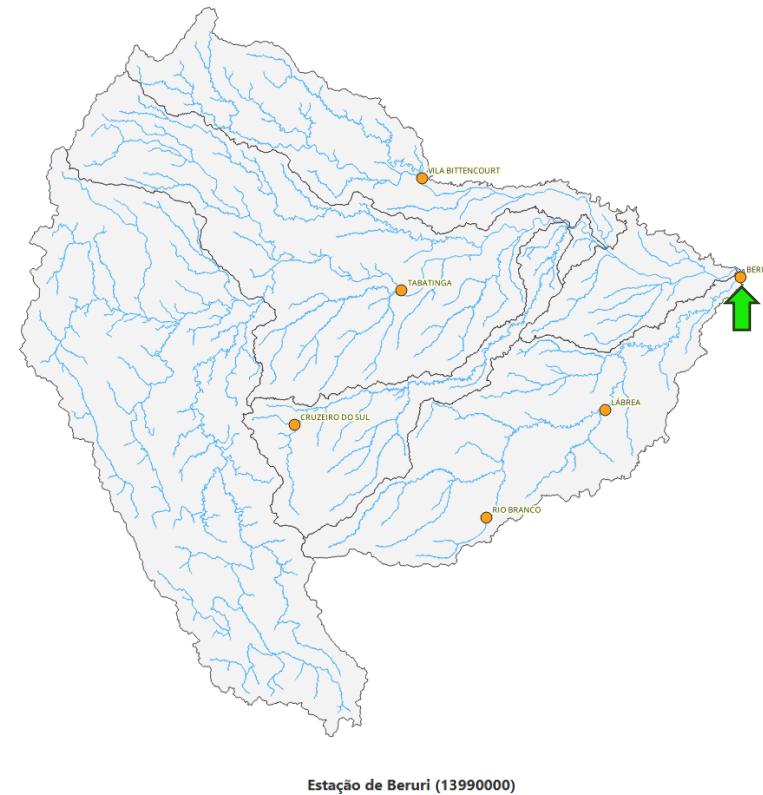




## Rio Purus – Estação de Lábrea (AM)

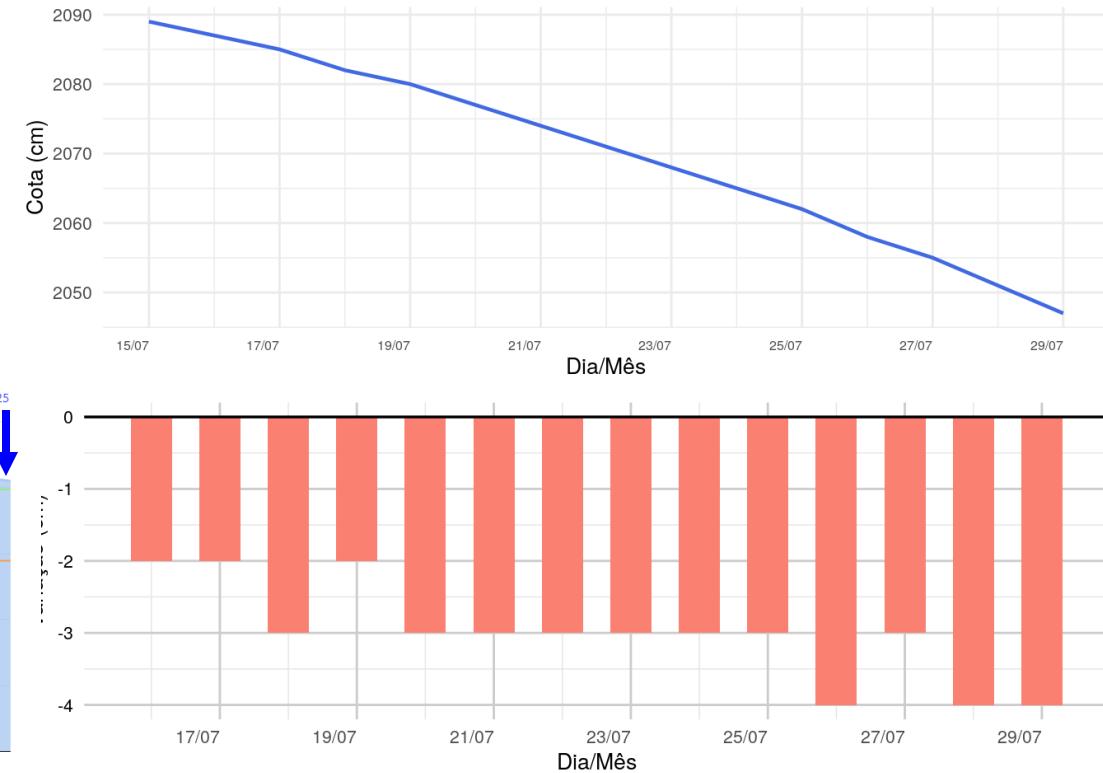
Variação das cotas nos últimos 15 dias: -133 cm, em média -8.87 cm por dia.

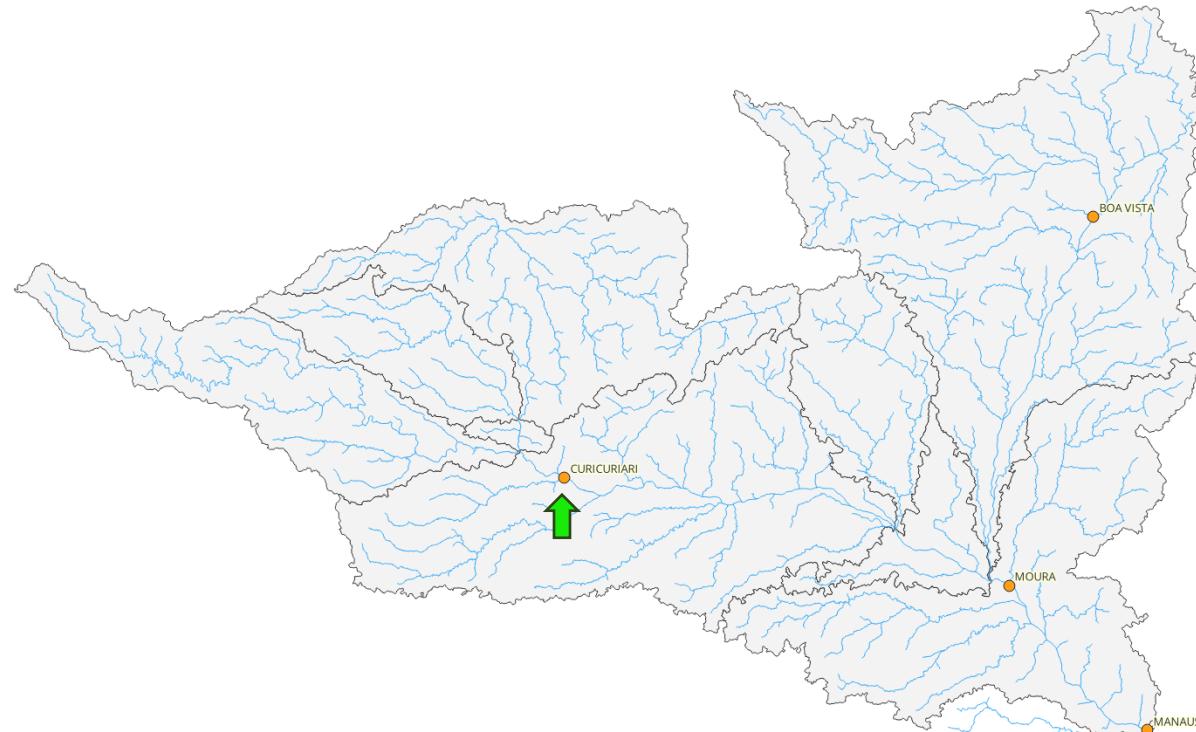




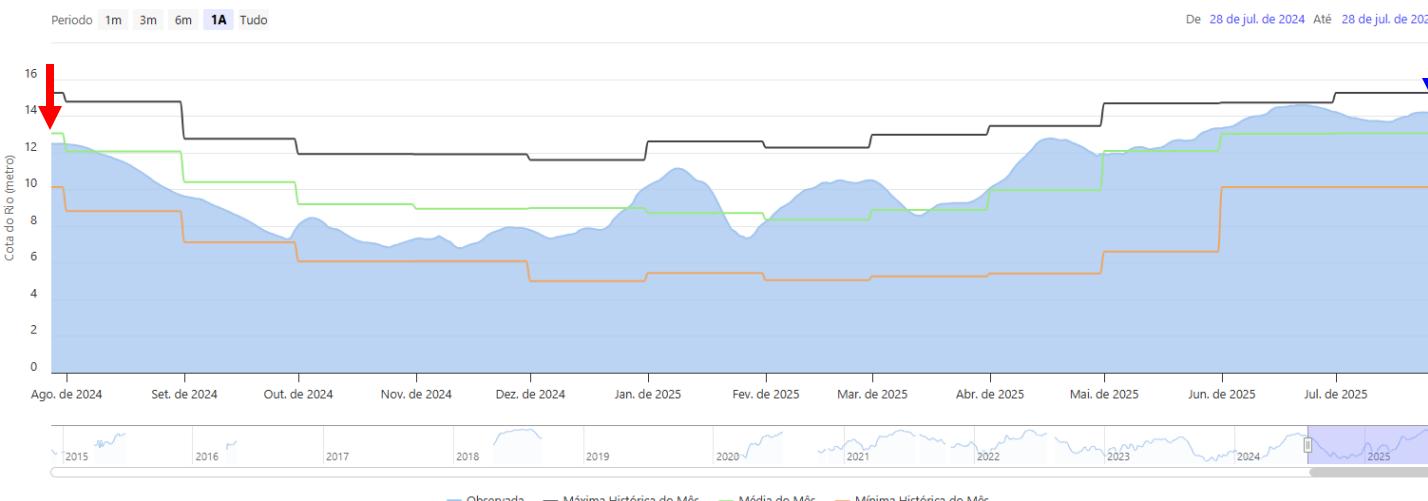
## Rio Solimões – Estação de Beruri (AM)

Variação das cotas nos últimos 15 dias: -42 cm, em média -2.8 cm por dia.



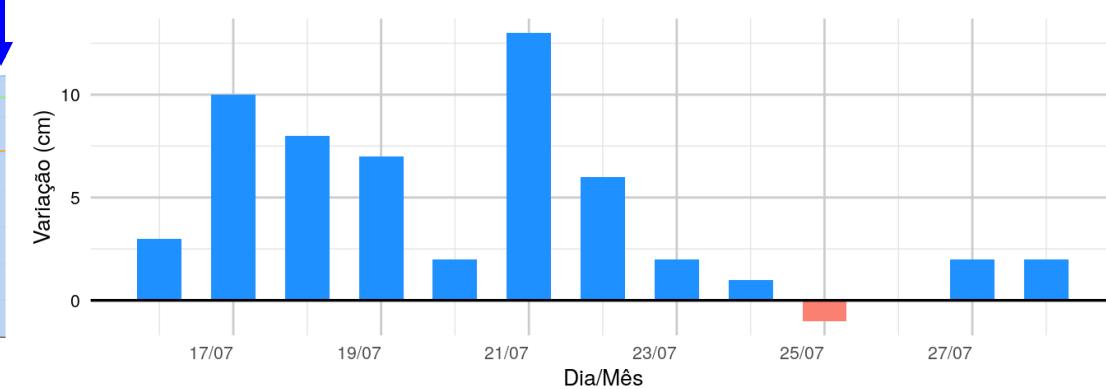
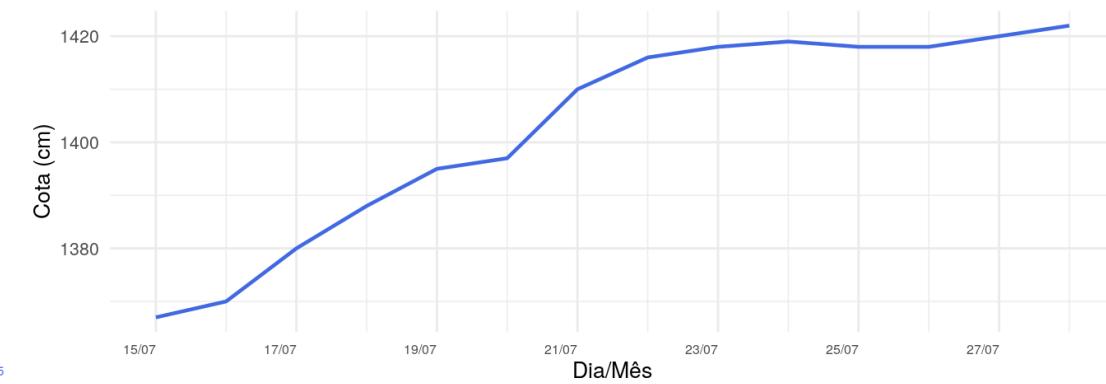


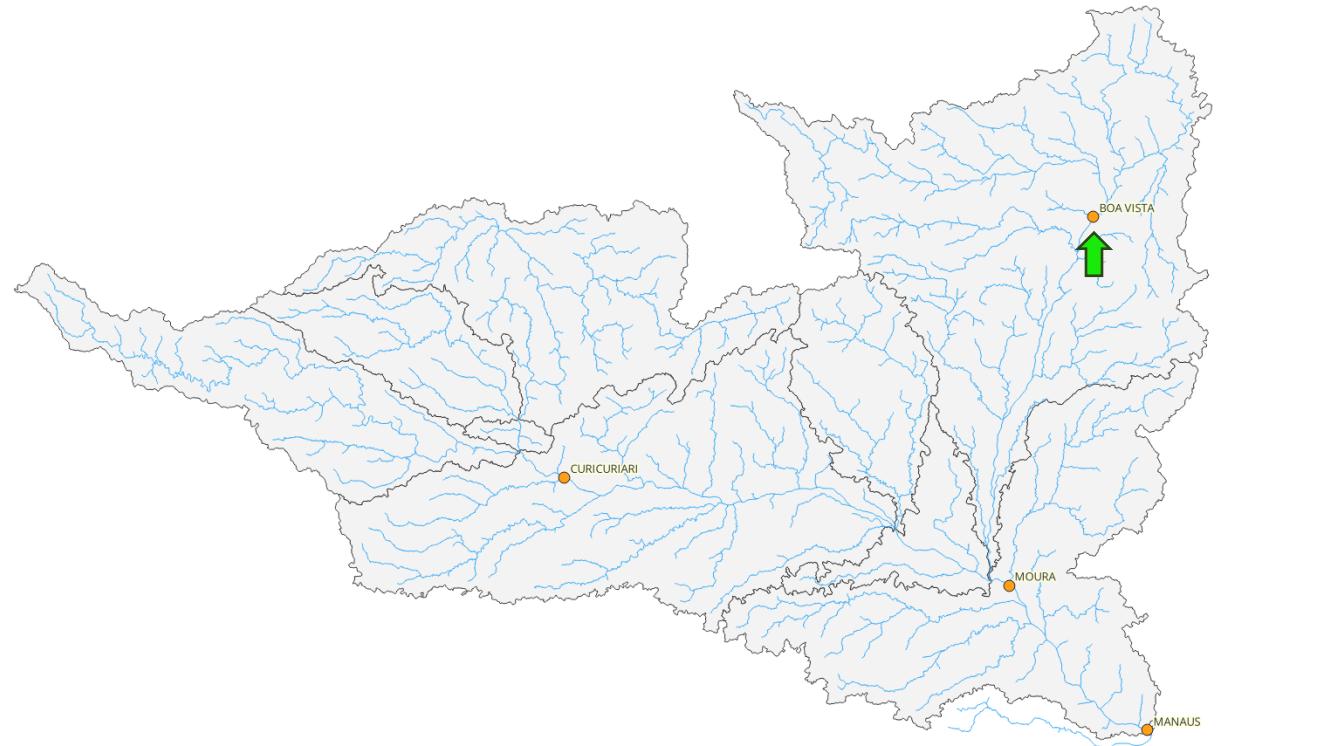
Estação de Curicuriari (14330000)



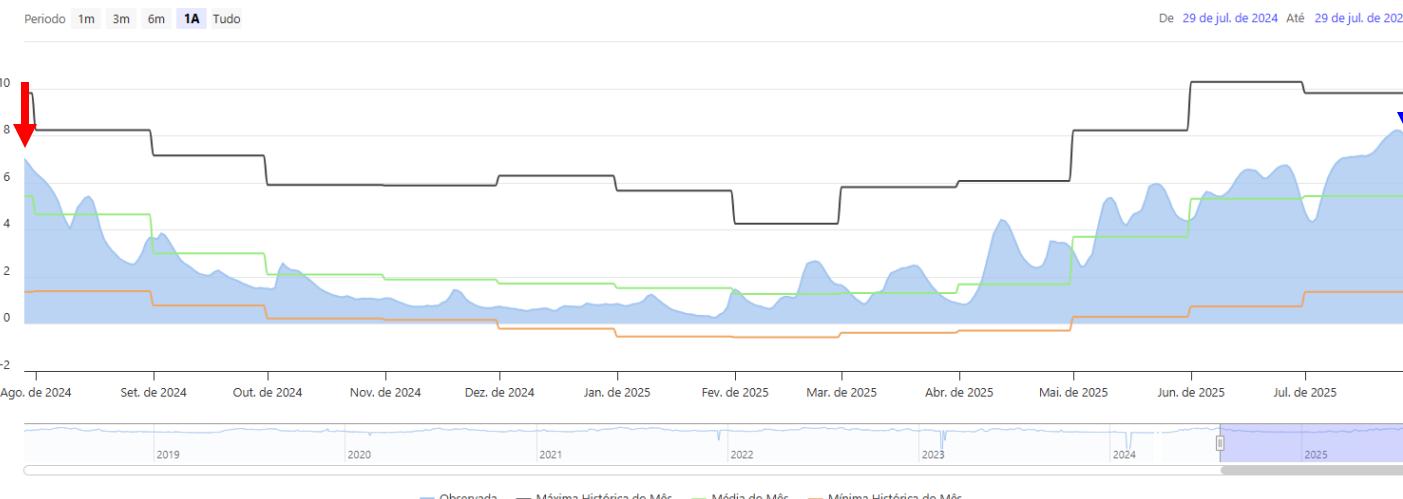
## Rio Curicuriari – Estação de Curicuriari (AM)

Variação das cotas nos últimos 15 dias: 55 cm, em média 3.67 cm por dia.



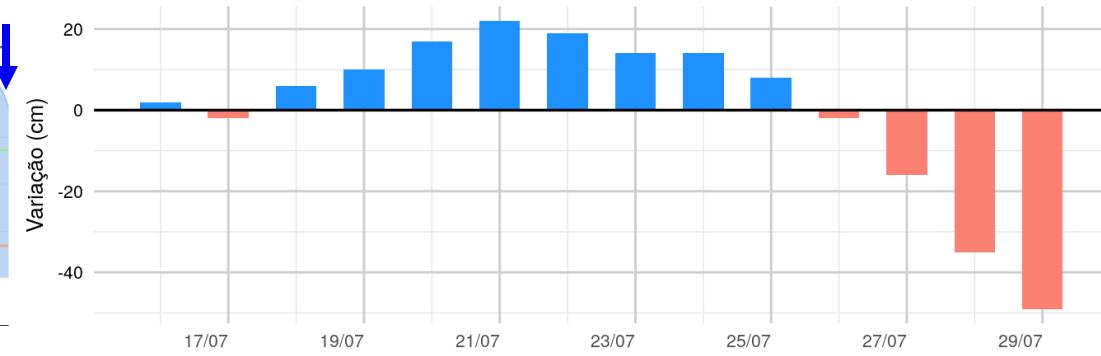
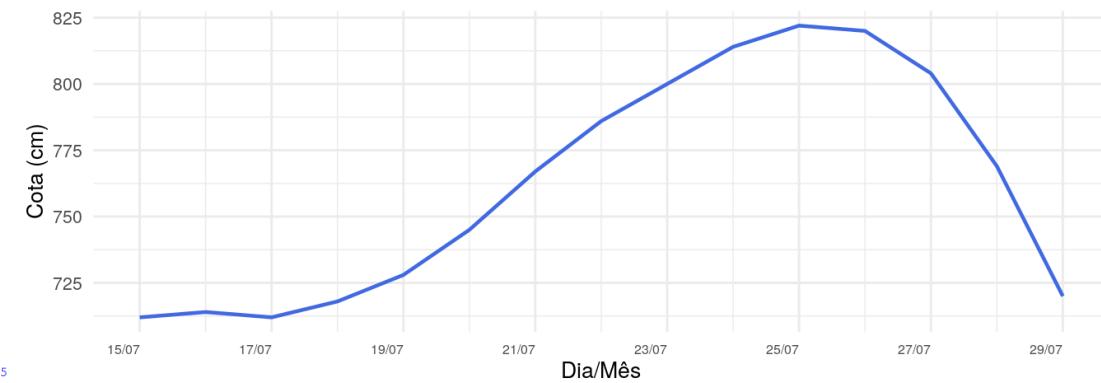


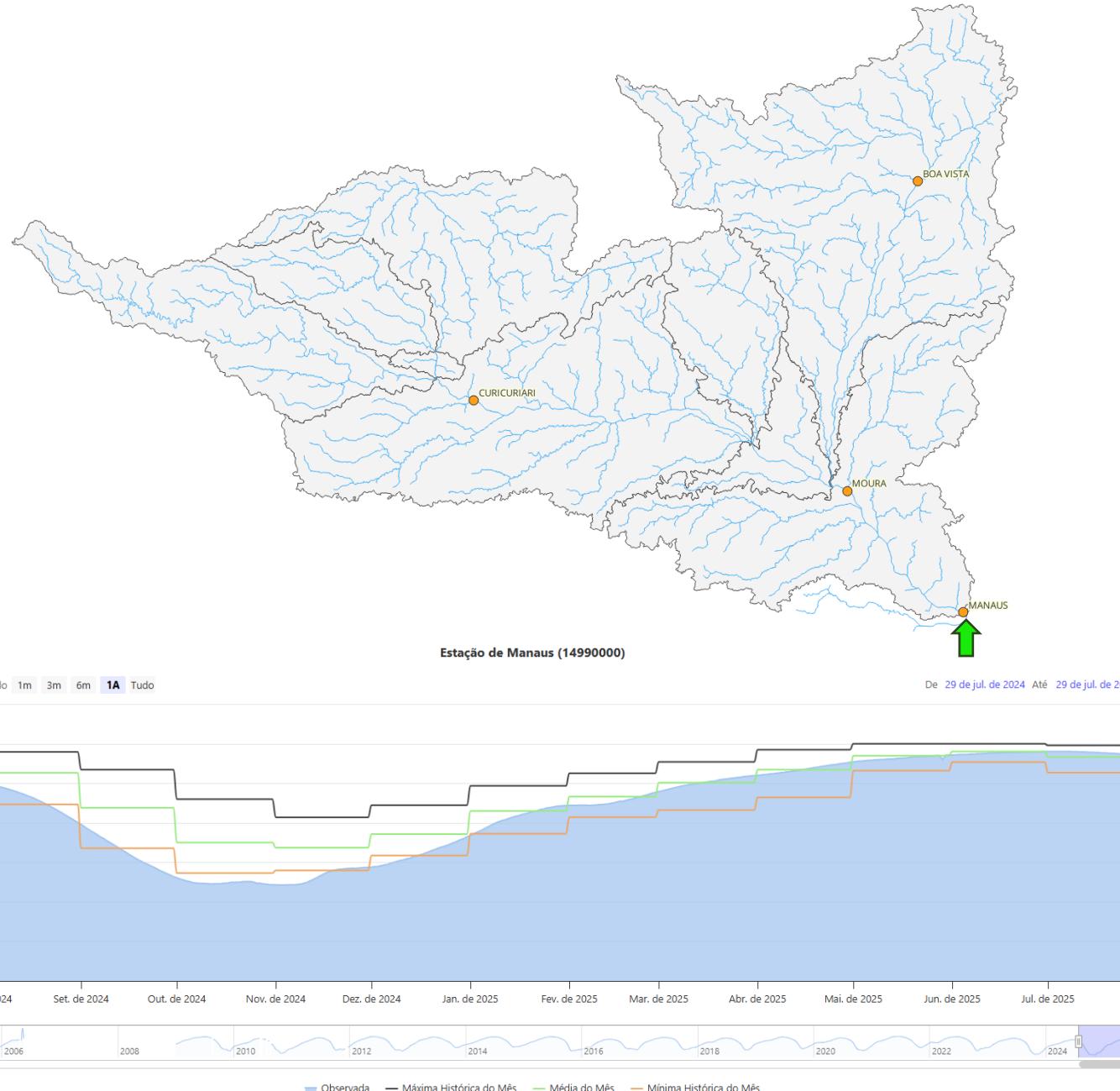
Estação de Boa Vista (14620000)



## Rio Branco – Estação de Boa Vista (RR)

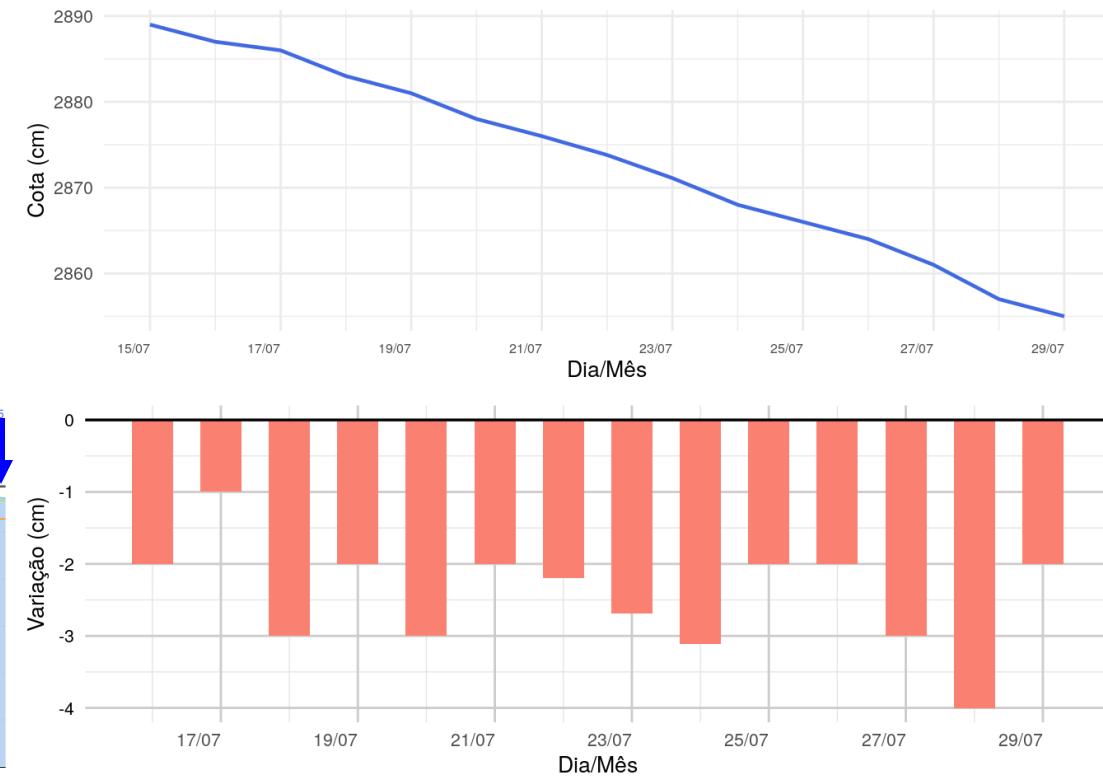
Variação das cotas nos últimos 15 dias: 8 cm, em média 0.53 cm por dia.

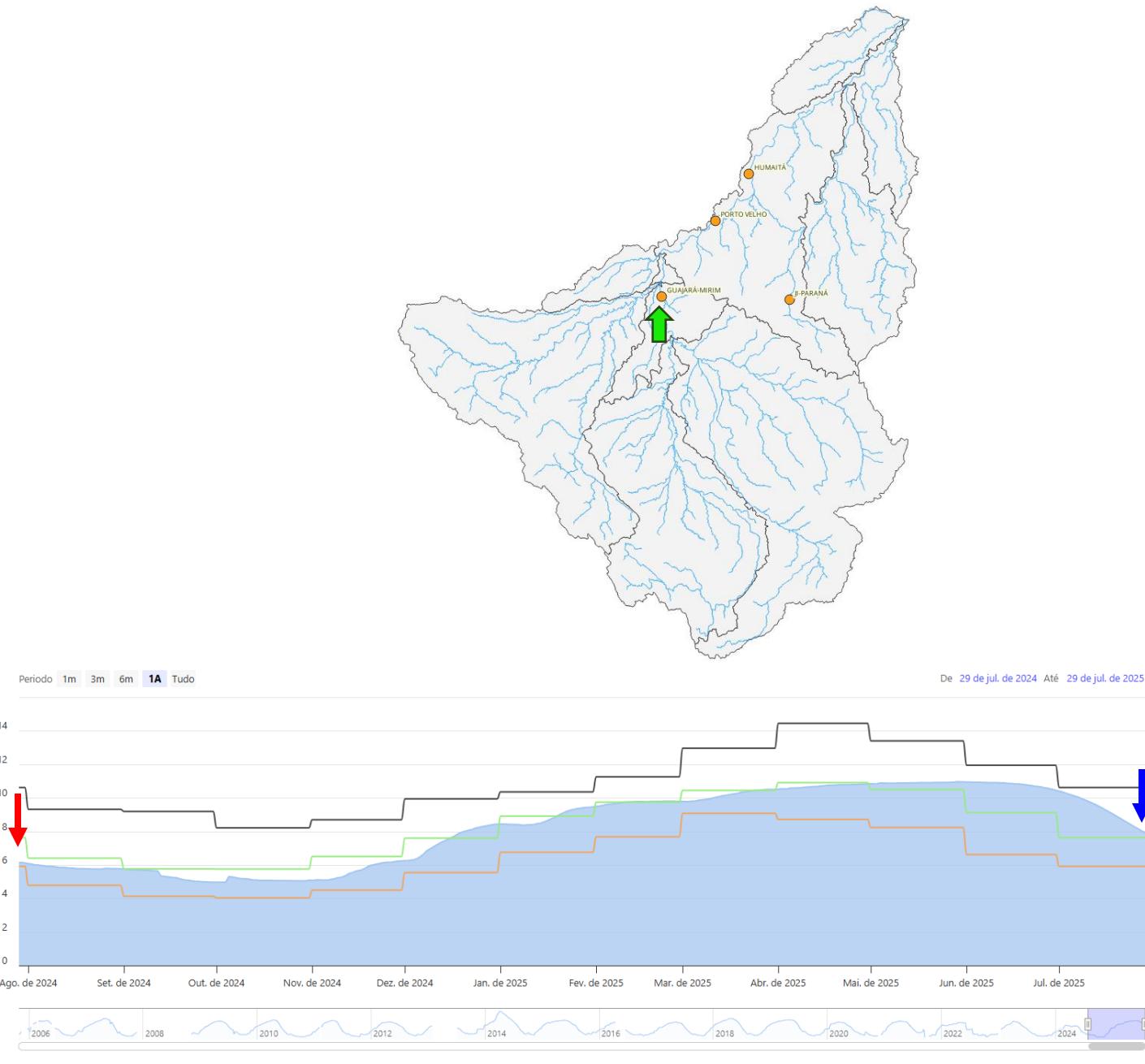




## Rio Solimões – Estação de Manaus (AM)

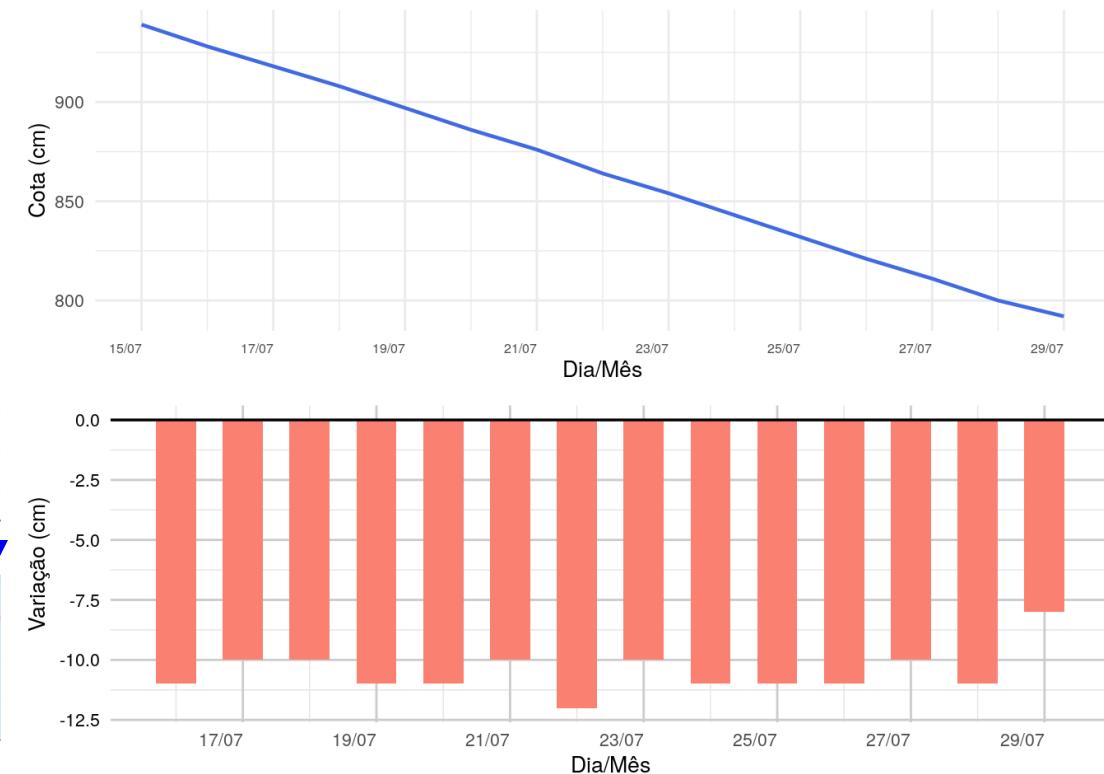
Variação das cotas nos últimos 15 dias: -34 cm, em média -2.27 cm por dia.

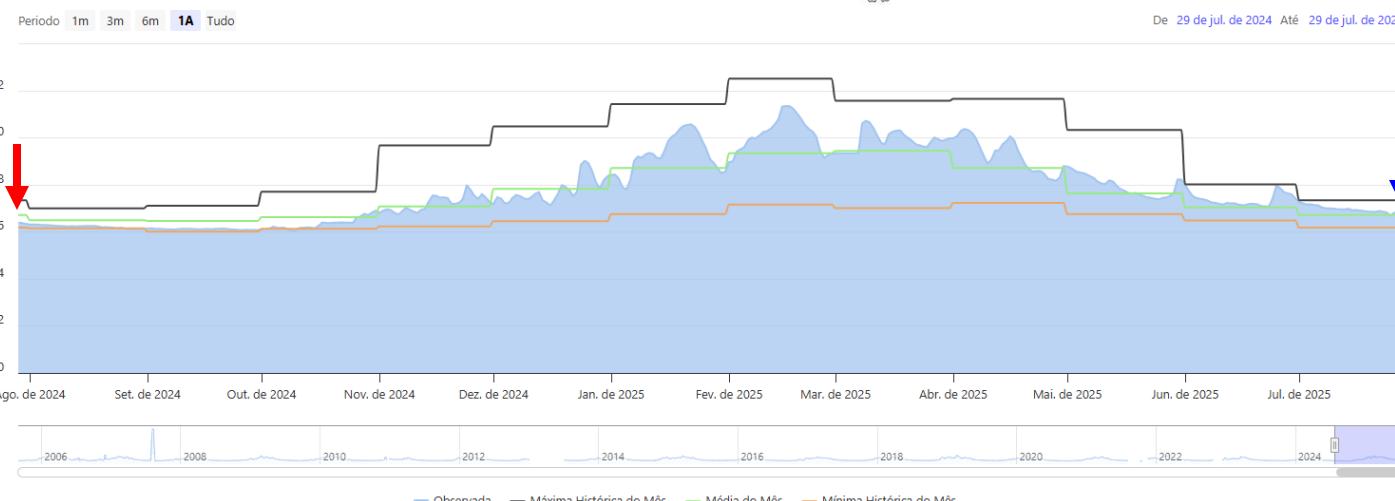
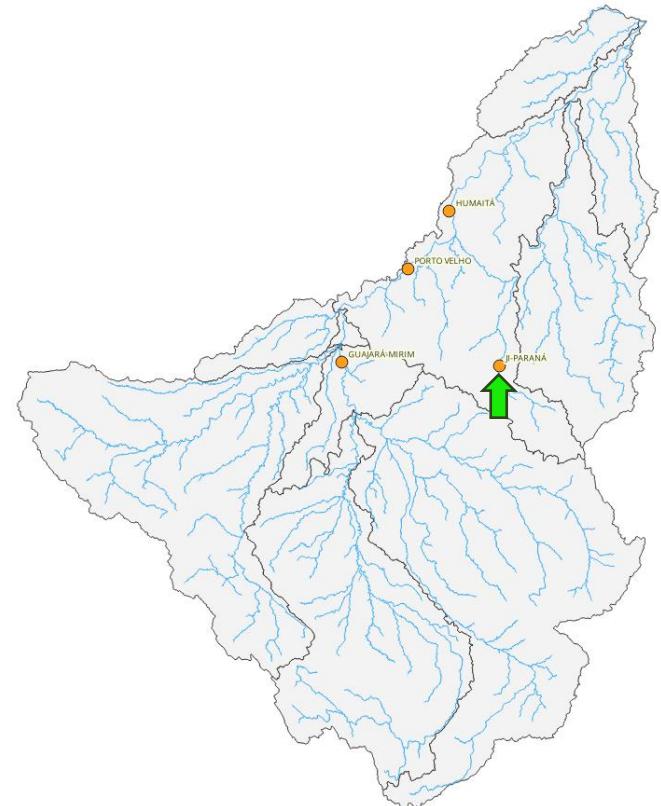




## Rio Mamoré – Estação de Guajará-Mirim (RO)

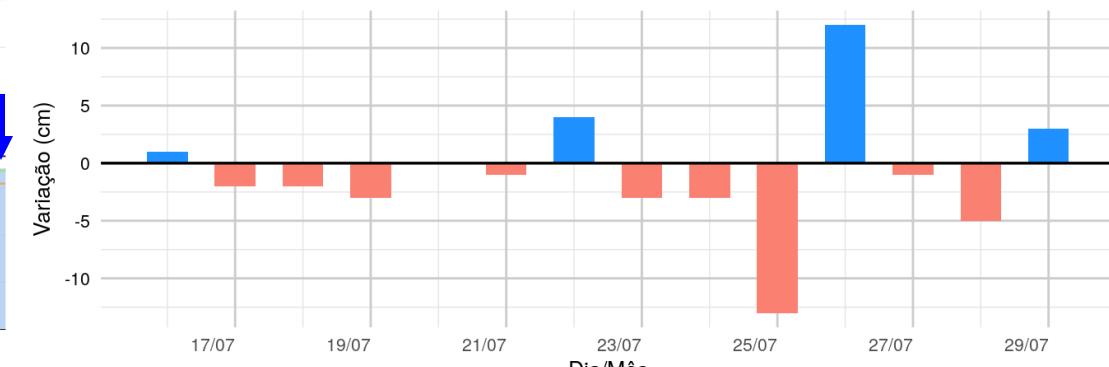
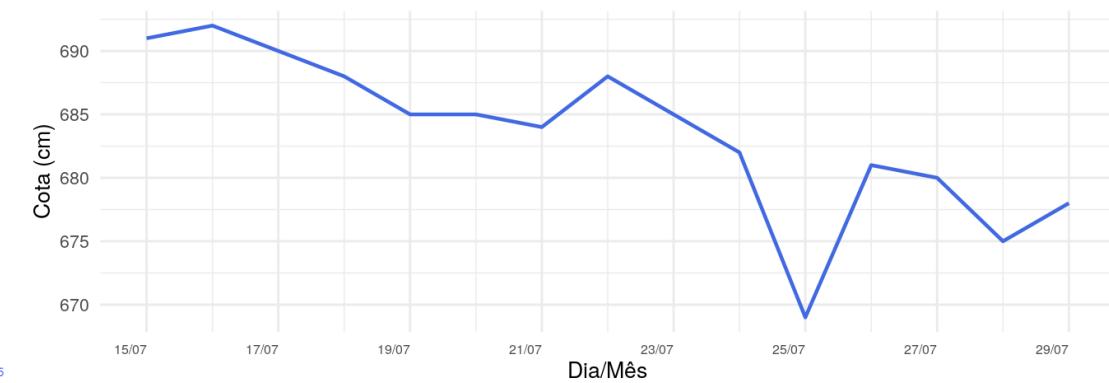
Variação das cotas nos últimos 15 dias: -147 cm, em média -9.8 cm por dia.

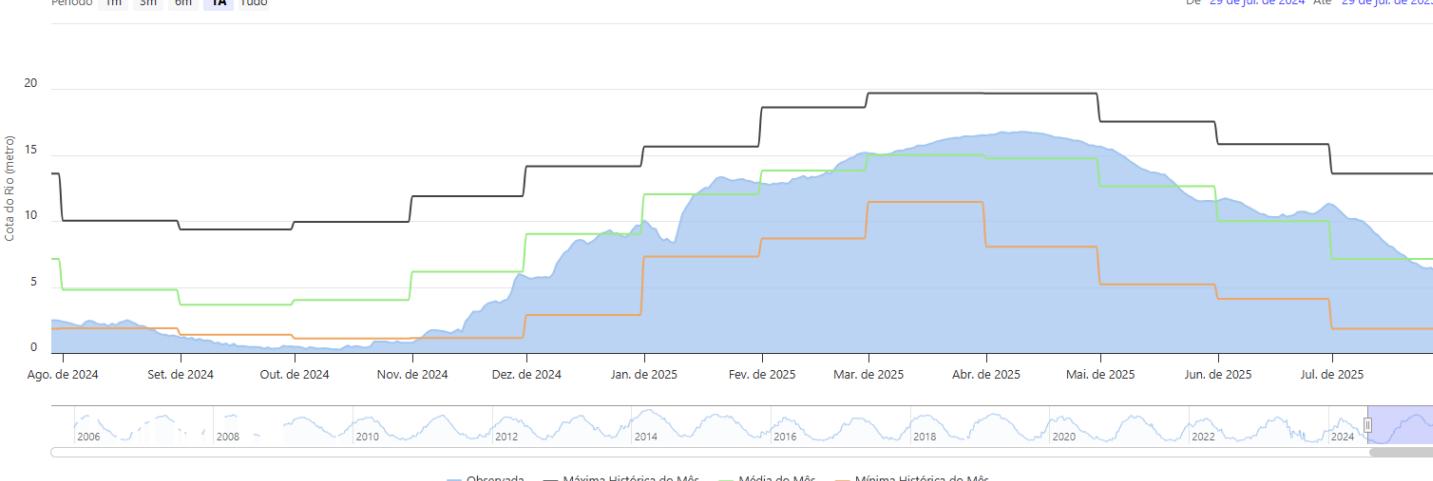
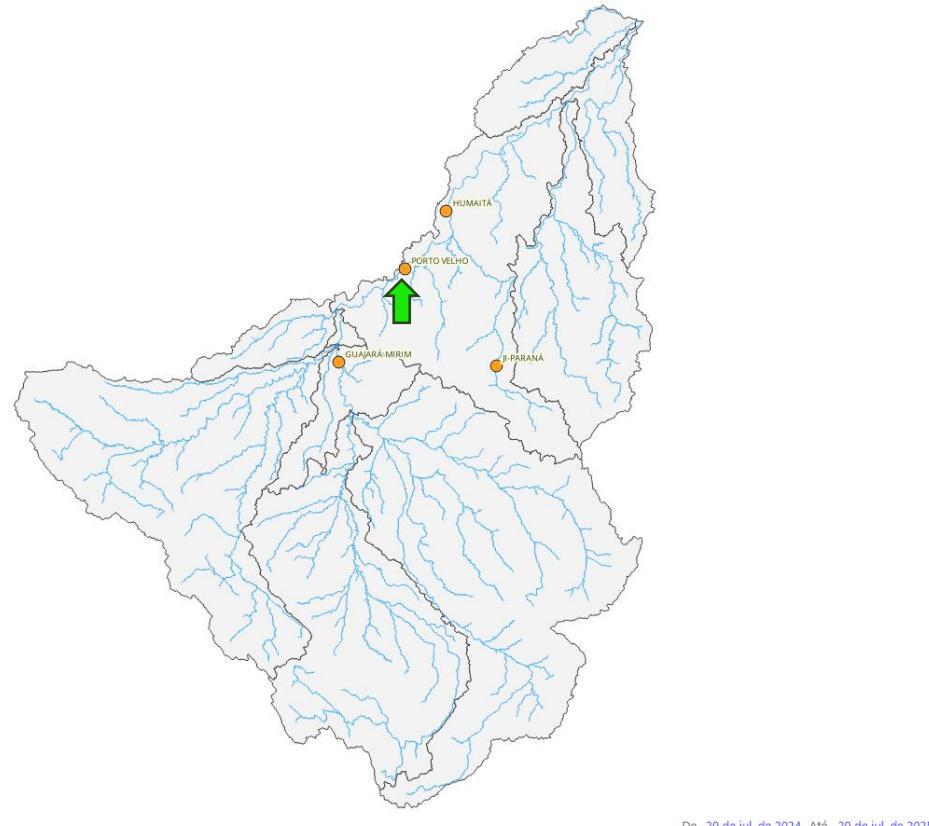




## Rio Jiparaná – Estação de Ji-Paraná (RO)

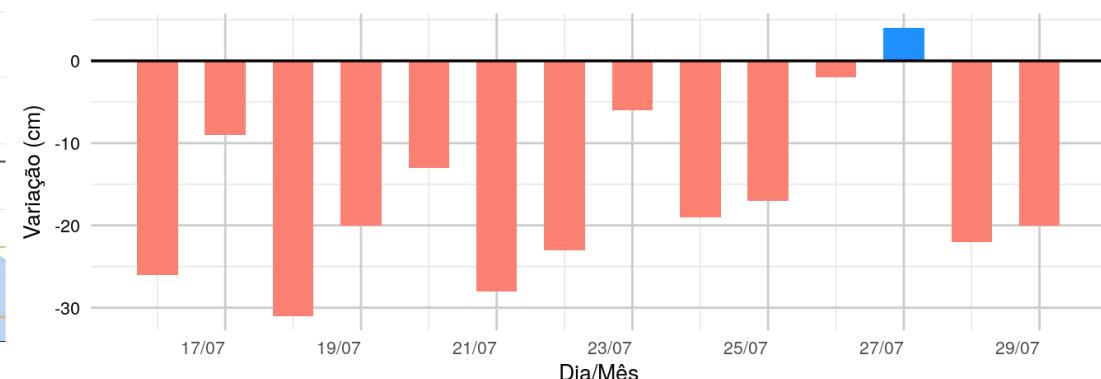
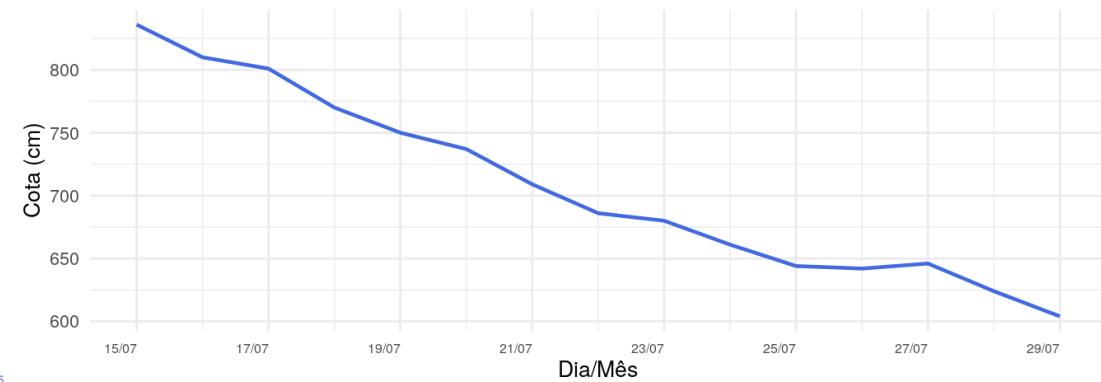
Variação das cotas nos últimos 15 dias: -13 cm, em média -0.87 cm por dia.

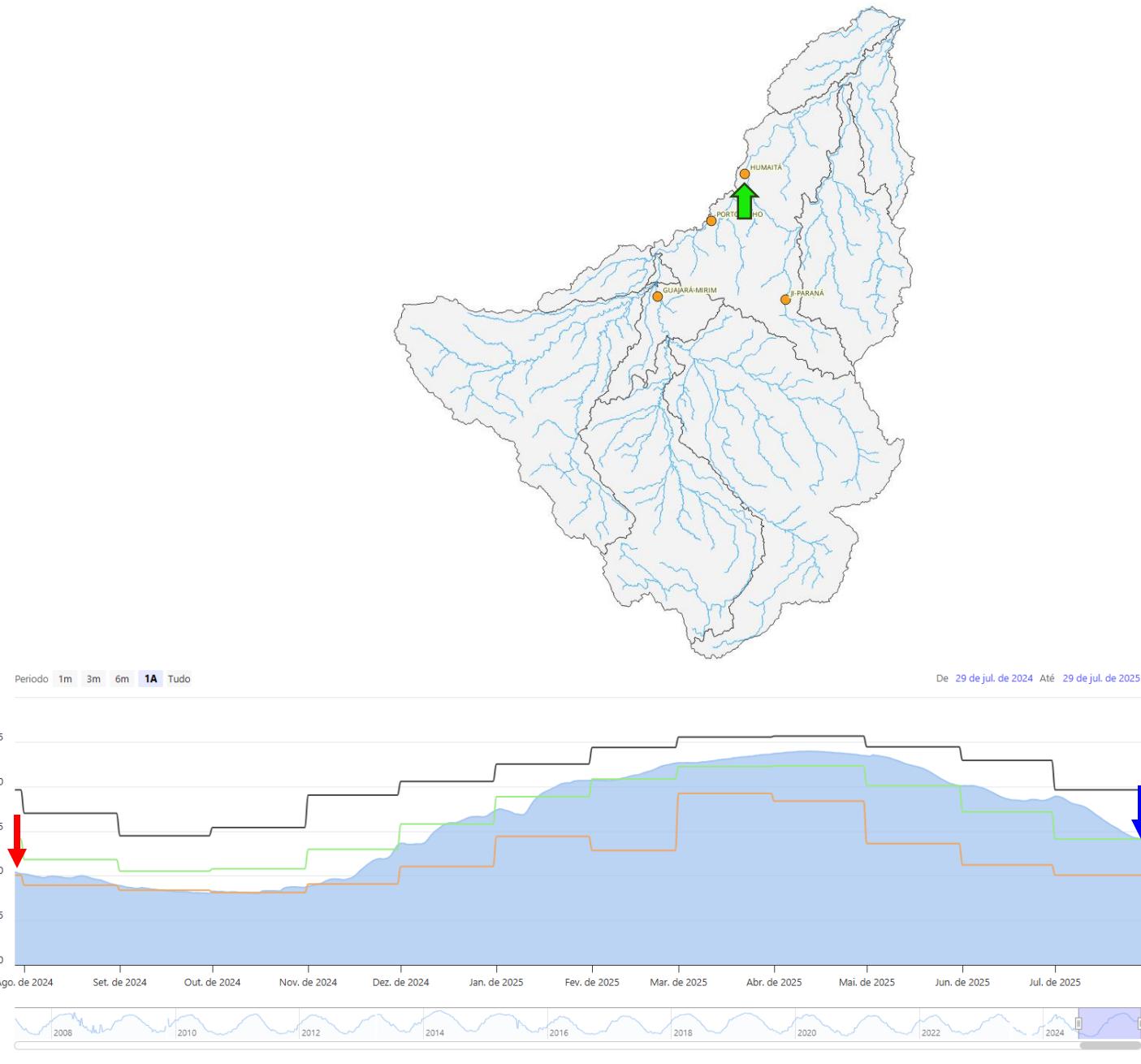




## Rio Madeira – Estação de Porto Velho (RO)

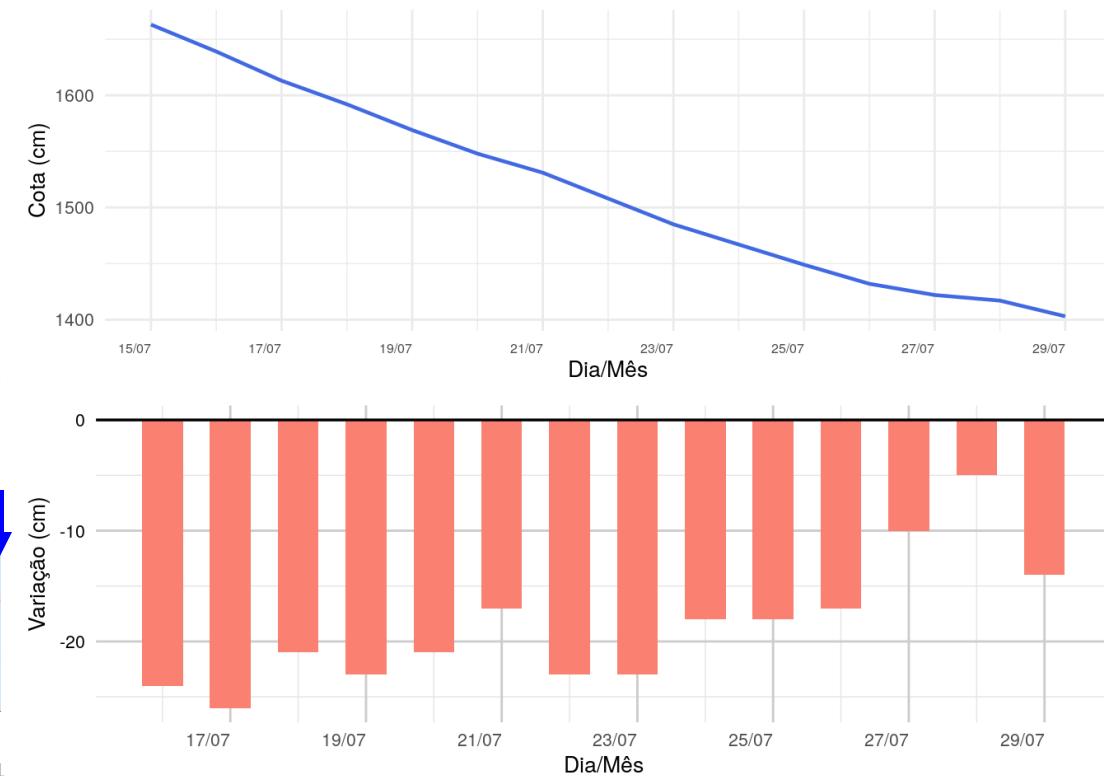
Variação das cotas nos últimos 15 dias: -232 cm, em média -15.47 cm por dia.





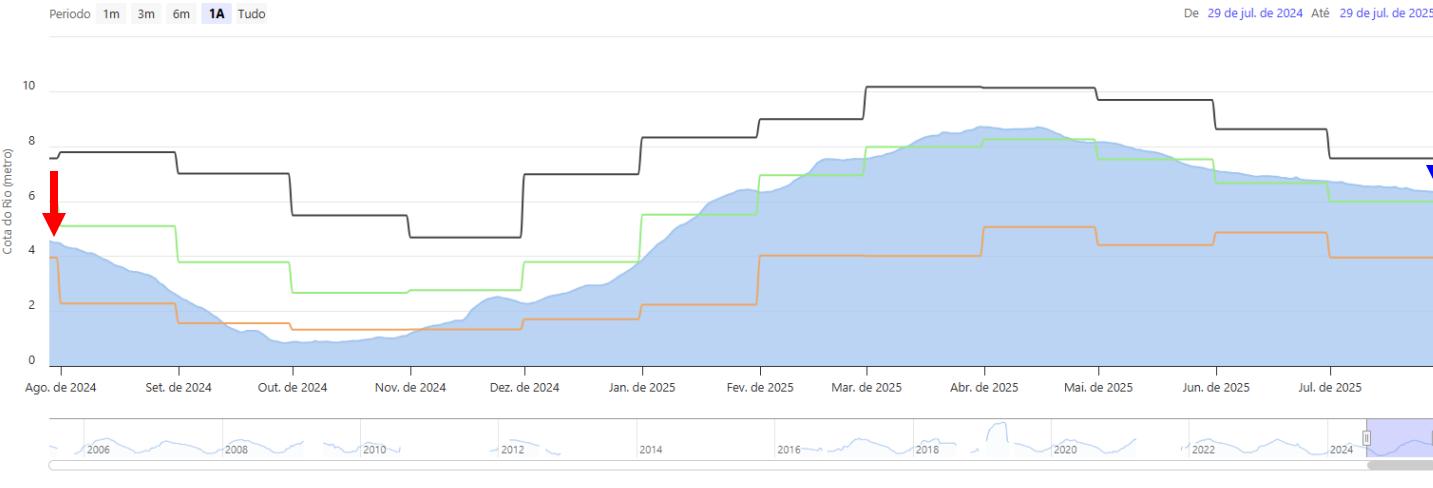
## Rio Madeira – Estação de Humaitá (AM)

Variação das cotas nos últimos 15 dias: -260 cm, em média -17.33 cm por dia.



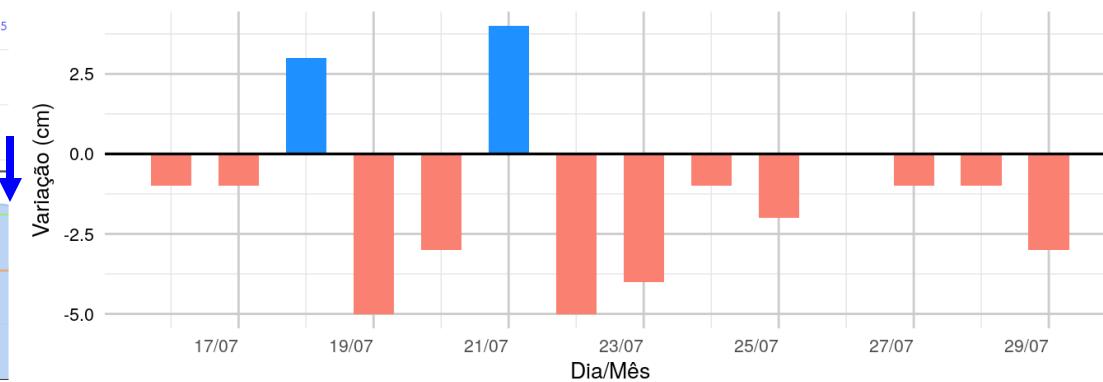
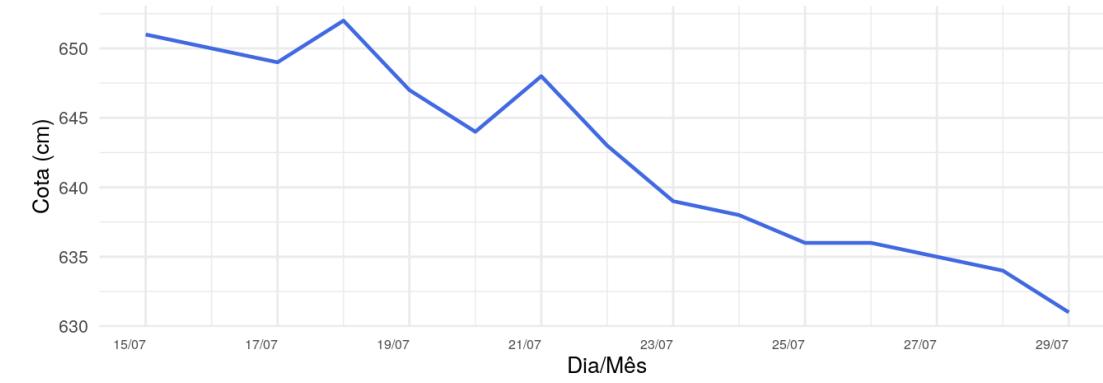


Estação de Itaituba (17730000)



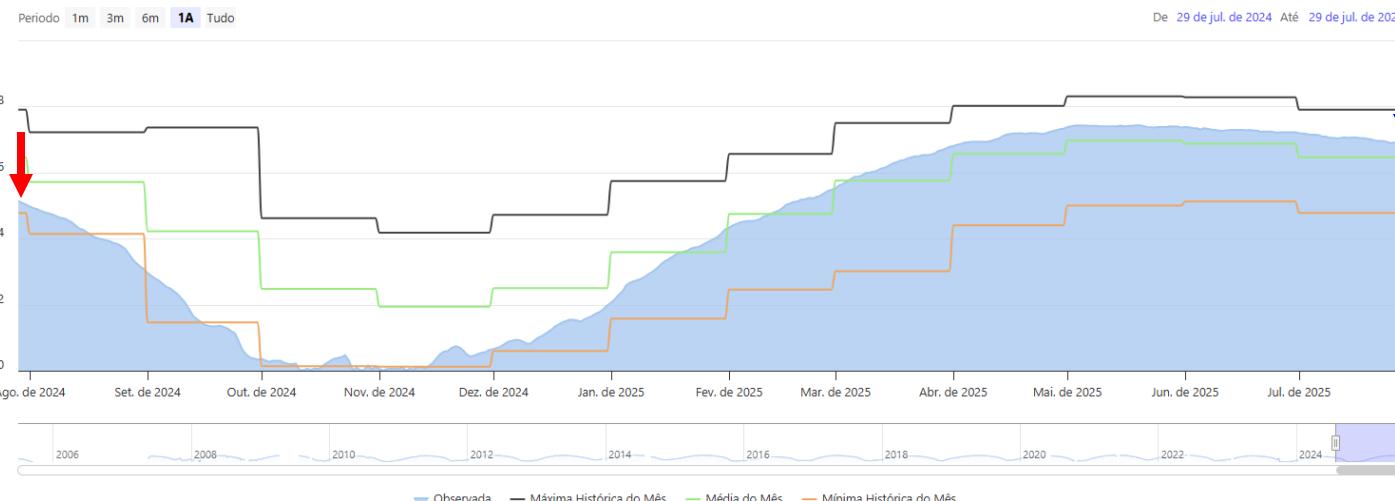
## Rio Tapajós – Estação de Itaituba (PA)

Variação das cotas nos últimos 15 dias: -20 cm, em média -1.33 cm por dia.



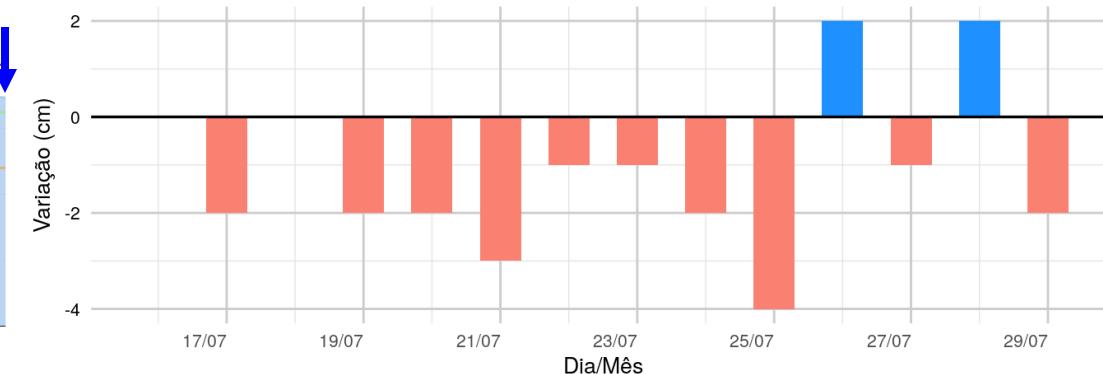
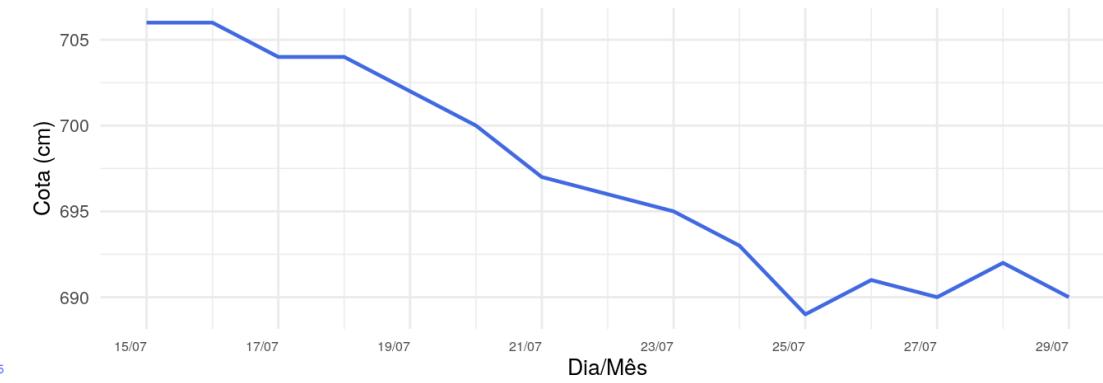


Estação de Santarém (17900000)

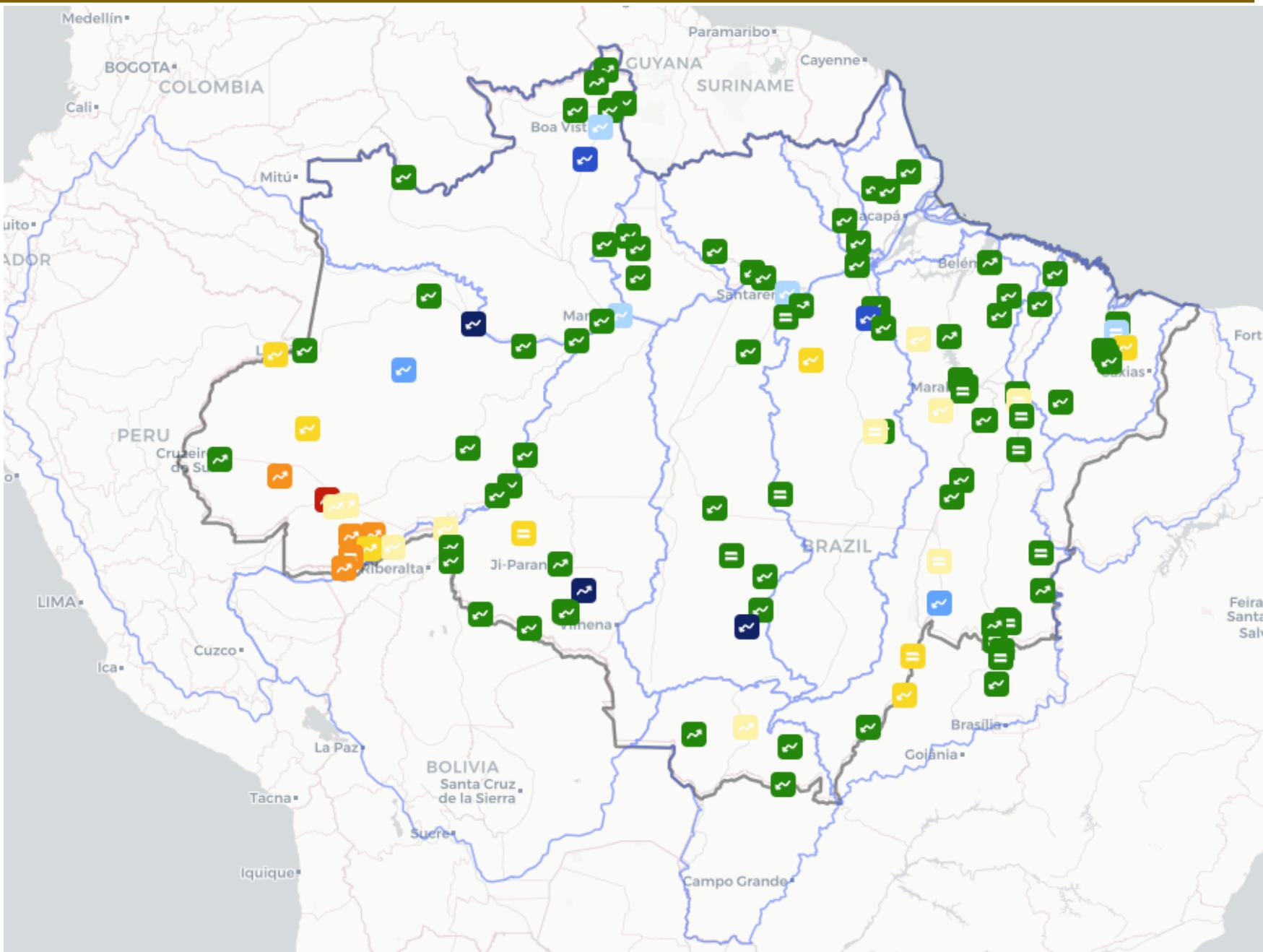


## Rio Tapajós – Estação de Santarém (PA)

Variação das cotas nos últimos 15 dias: -16 cm, em média -1.07 cm por dia.

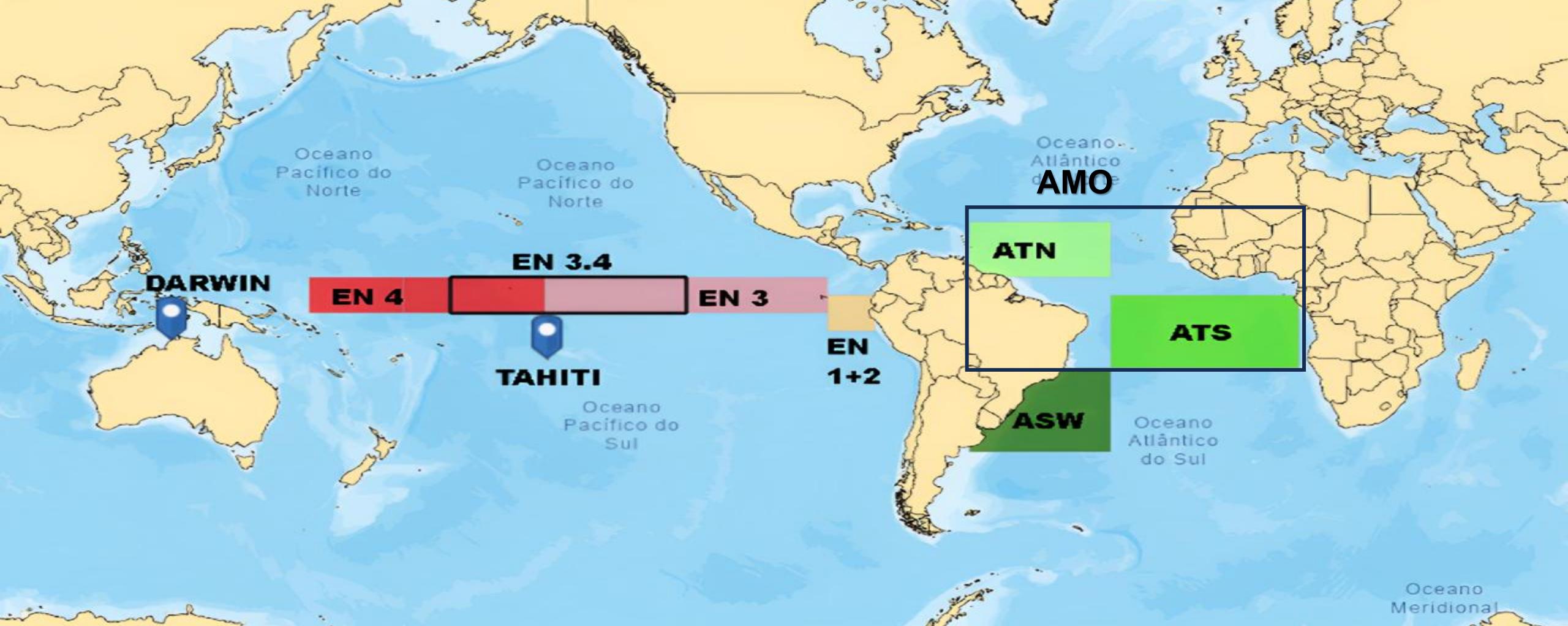


# Monitoramento de Hidrológico – 29/07/2025



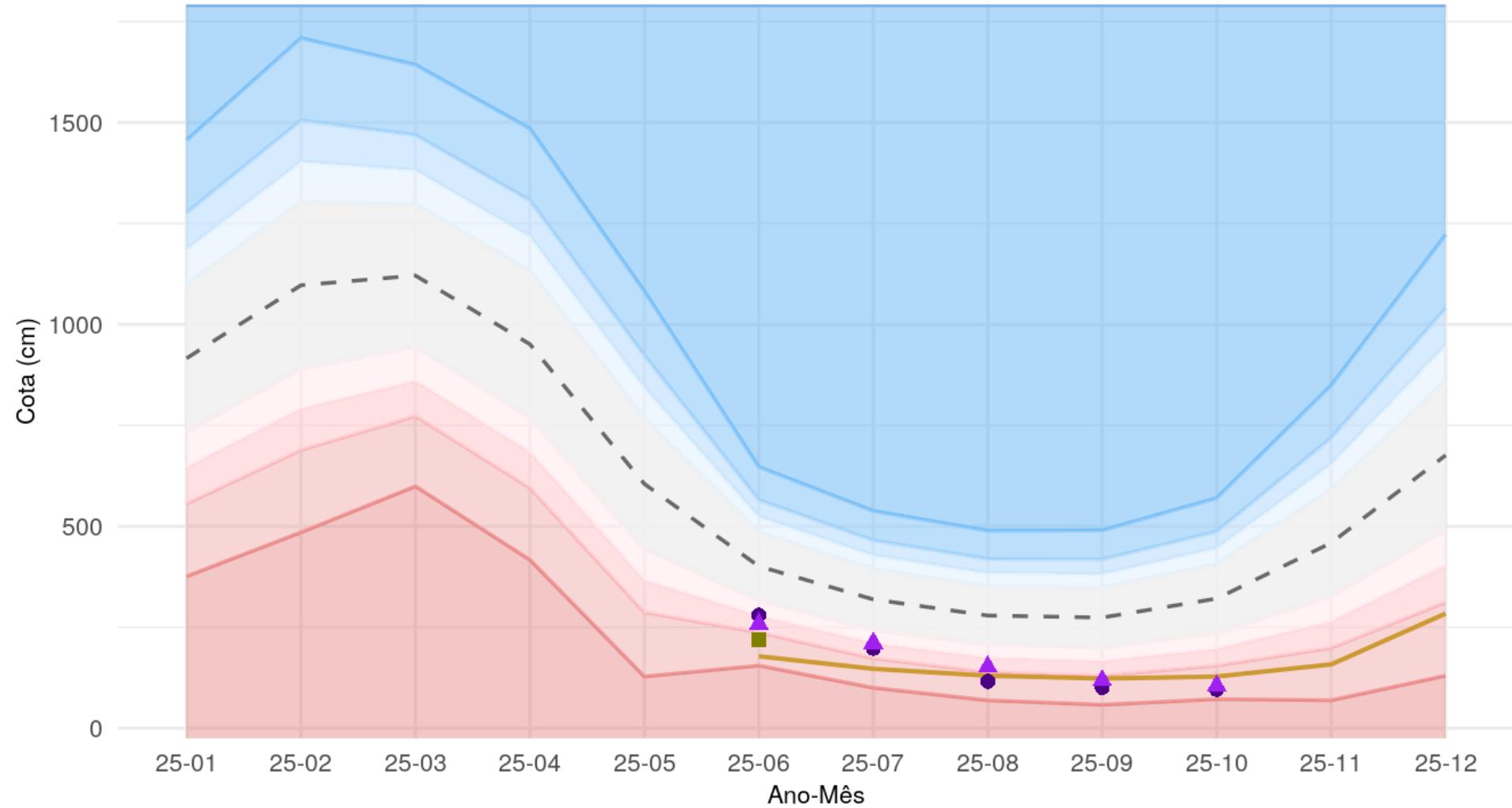
An aerial photograph showing a severe flooding event. A large body of water has inundated a residential area, completely submerging numerous houses. The water level is very high, reaching up to the upper stories of many buildings. Some houses have their roofs exposed above the water. The surrounding land is also heavily waterlogged, creating a vast expanse of brown floodwater.

# Prognóstico Hidrológico de Vazante



- Dados médios mensais da TSM (NCEP/NCAR): Oceano Pacífico, Oceano Atlântico Norte e Sul.
- Pressão atmosférica em Darwin e Tahiti.

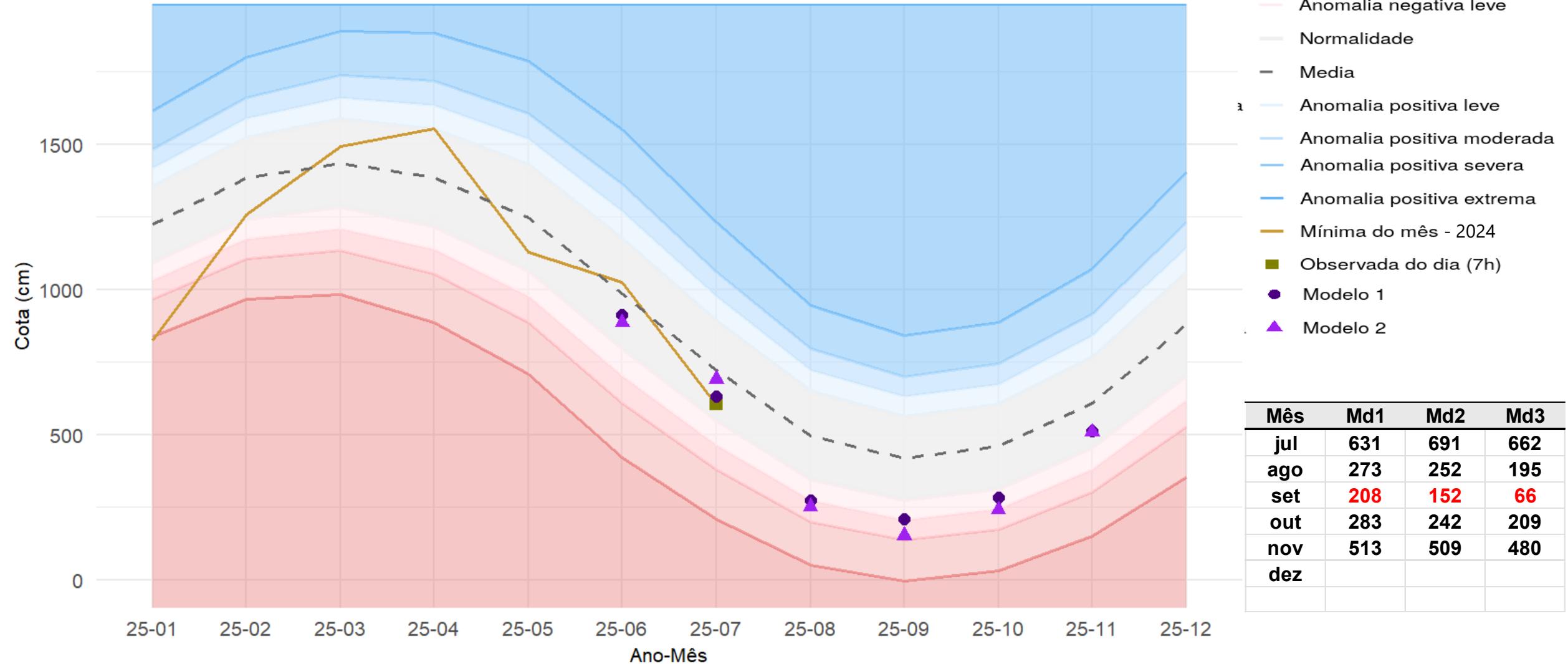
## Rio Acre – Estação de Rio Branco (AC)



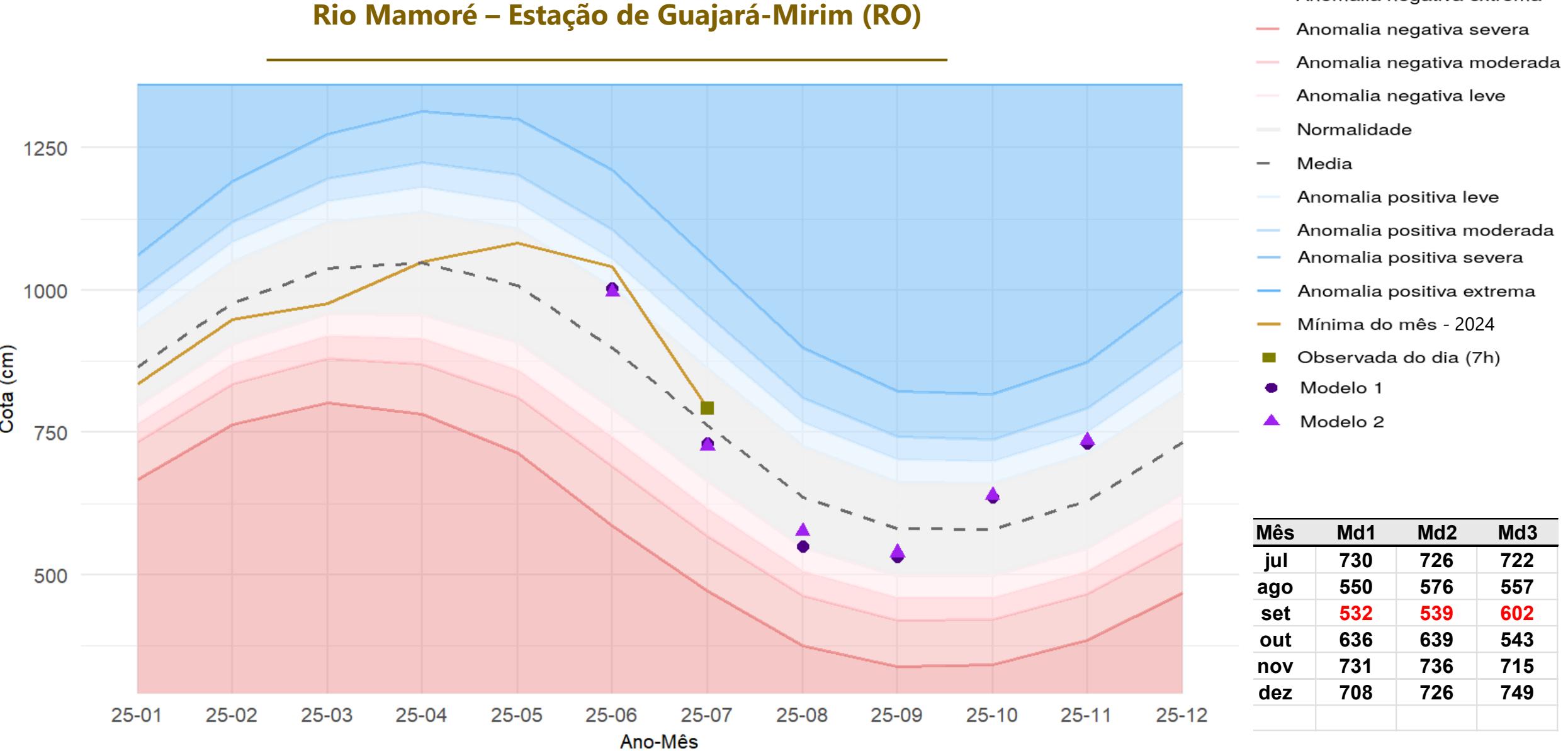
- Anomalia negativa extrema
- Anomalia negativa severa
- Anomalia negativa moderada
- Anomalia negativa leve
- Normalidade
- Media
- Anomalia positiva leve
- Anomalia positiva moderada
- Anomalia positiva severa
- Anomalia positiva extrema
- Mínima do mês - 2024
- Observada do dia (7h)
- Modelo 1
- ▲ Modelo 2

Mês	Md1	Md2	Md3
jul	140	138	158
ago	139	75	28
set	88	75	24
out	175	141	140
nov	292	304	256
dez	489	484	428

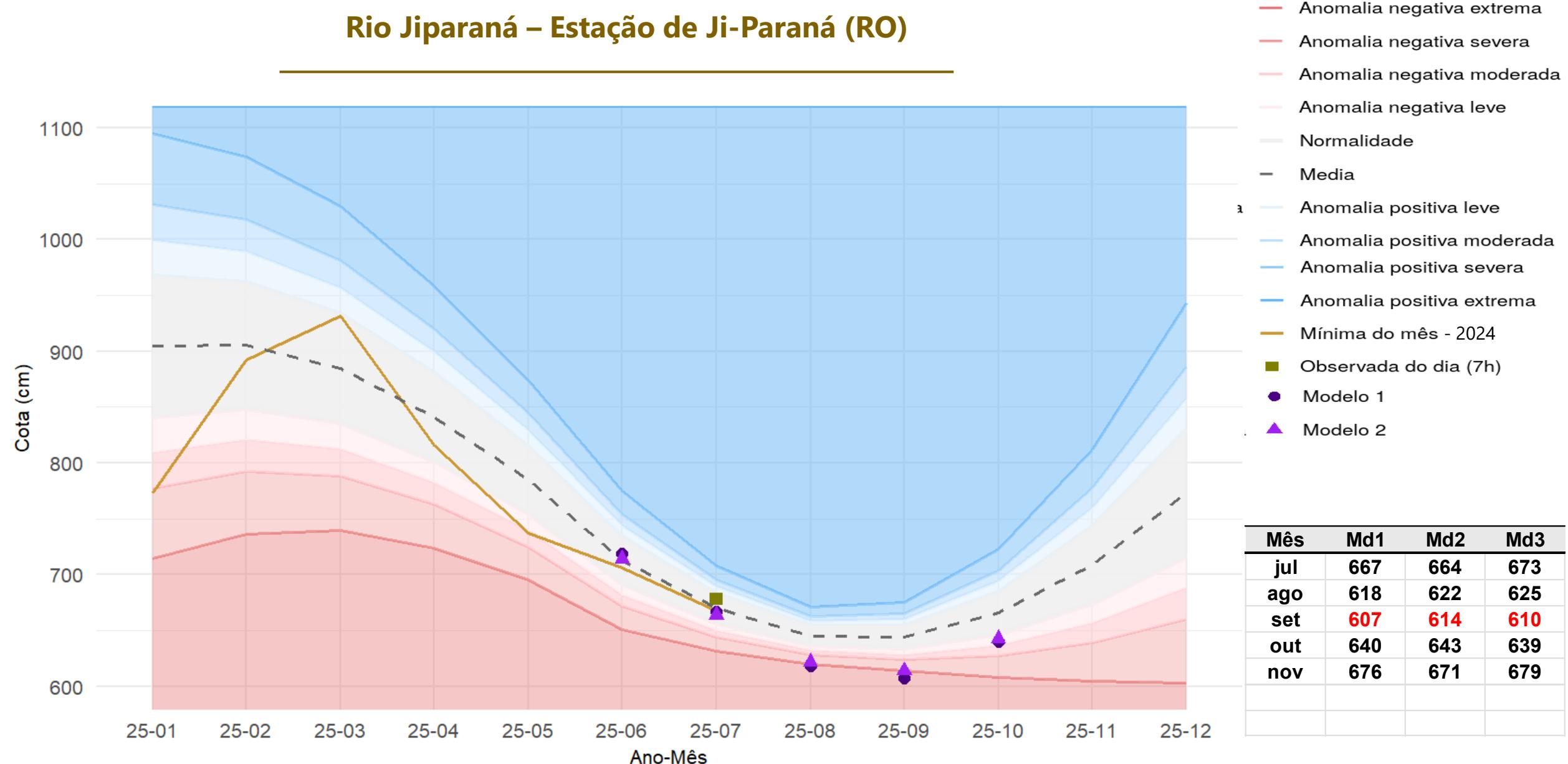
## Rio Madeira – Estação de Porto Velho (RO)



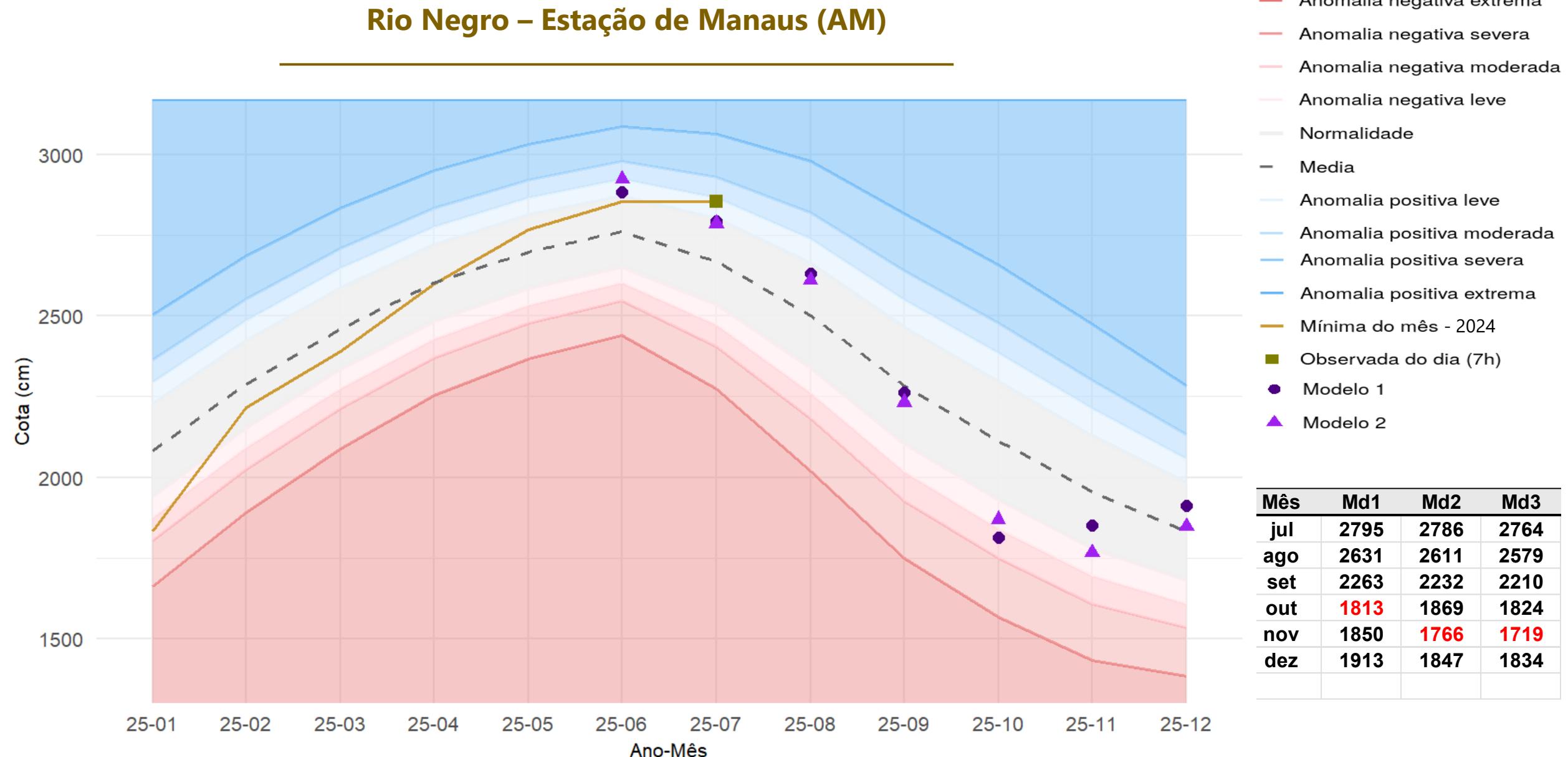
## Rio Mamoré – Estação de Guajará-Mirim (RO)



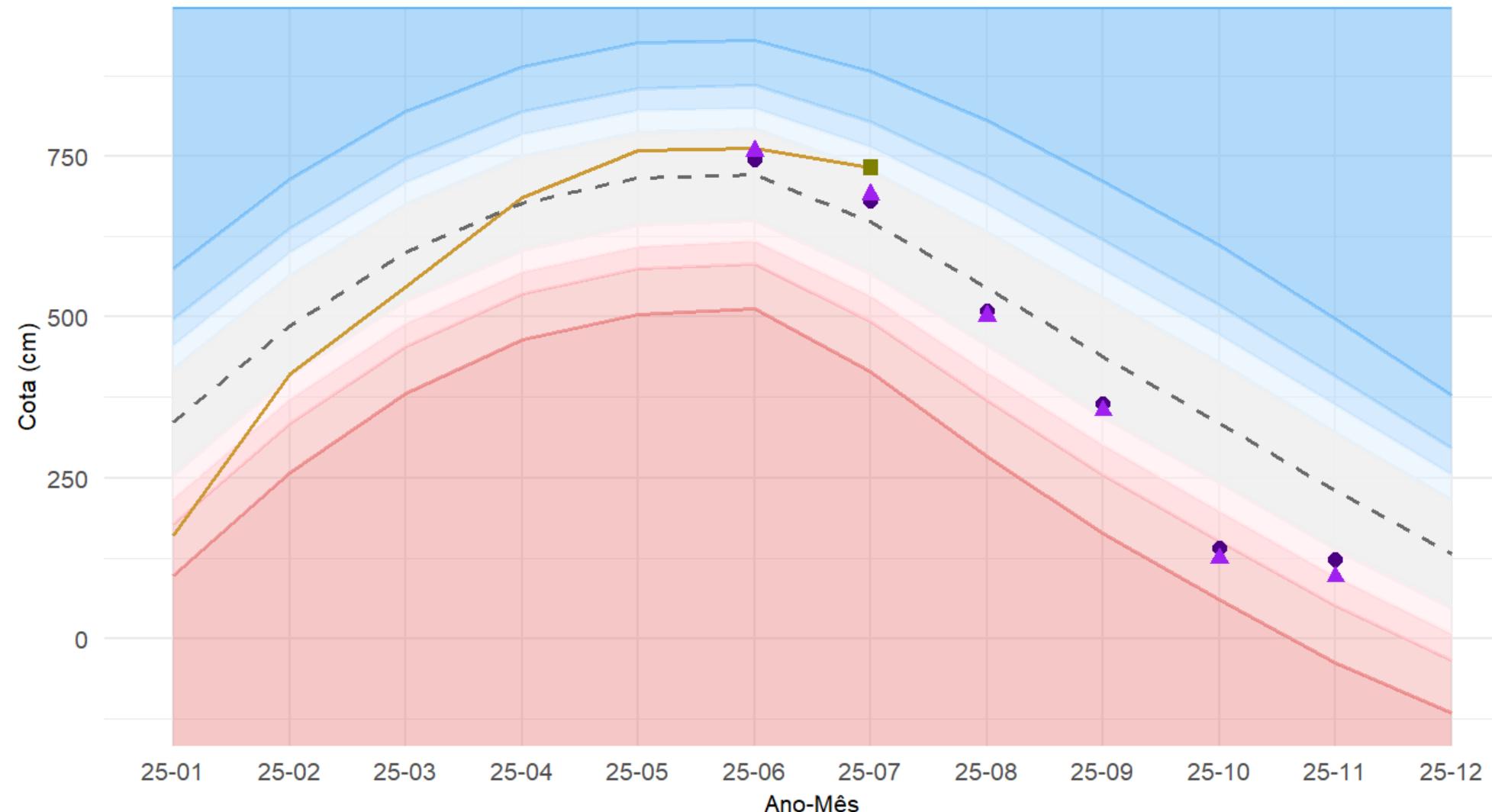
## Rio Jiparaná – Estação de Ji-Paraná (RO)



## Rio Negro – Estação de Manaus (AM)



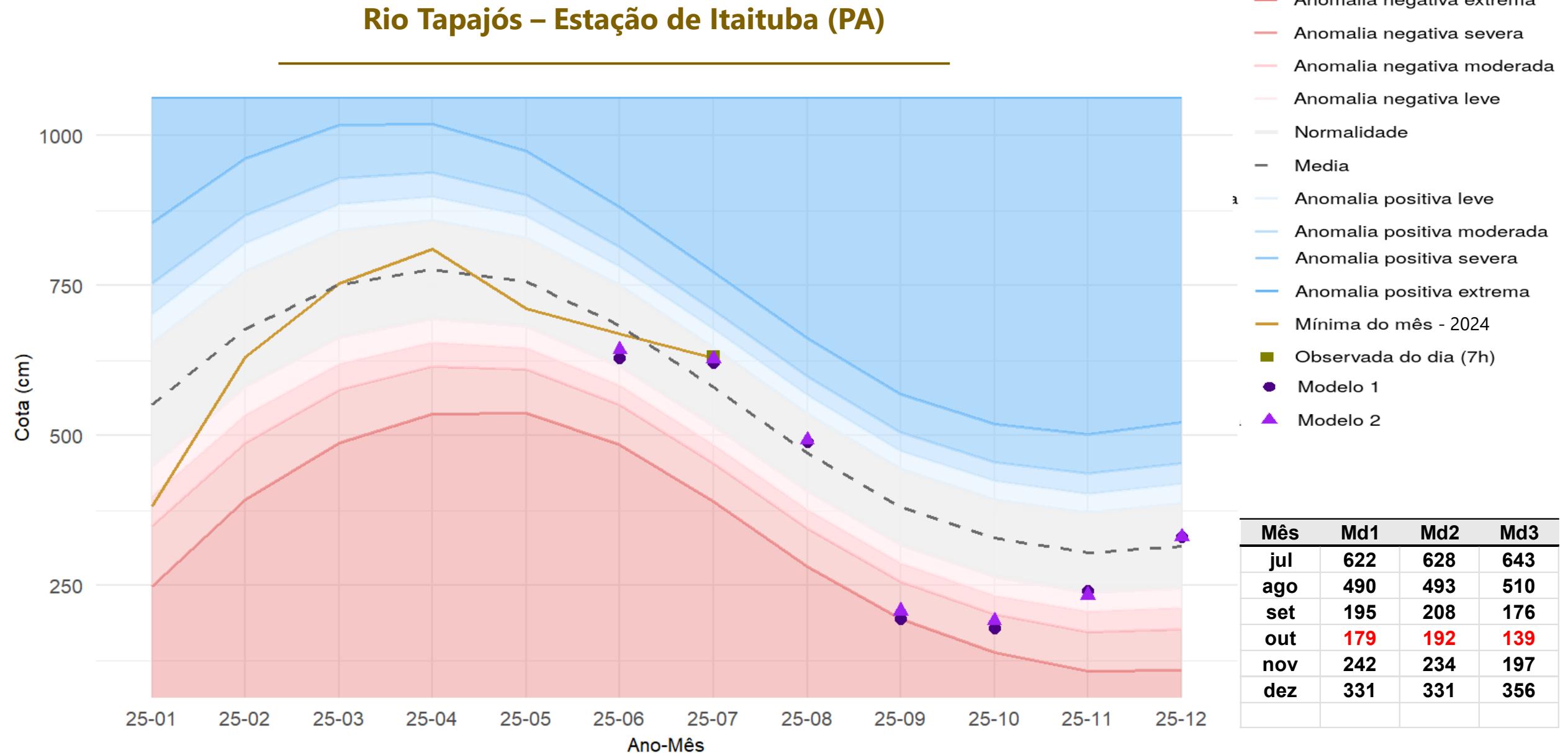
## Rio Amazonas – Estação de Óbidos (PA)



Mês	Md1	Md2	Md3
jun	745	758	
jul	719	711	
ago	509	501	
set	365	354	
out	140	124	
nov	123	96	
dez			

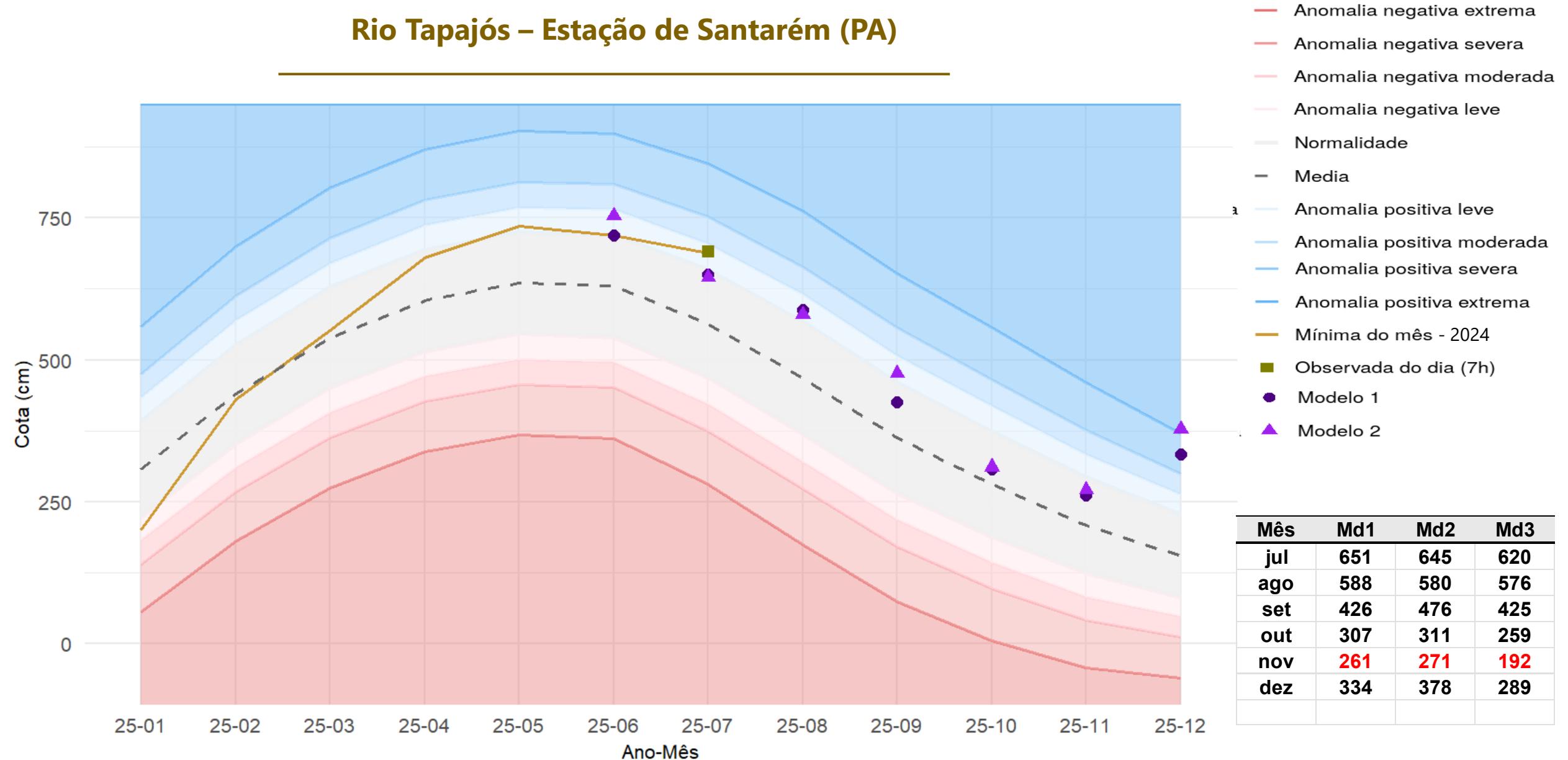
# BH Rio Tapajós

## Rio Tapajós – Estação de Itaituba (PA)

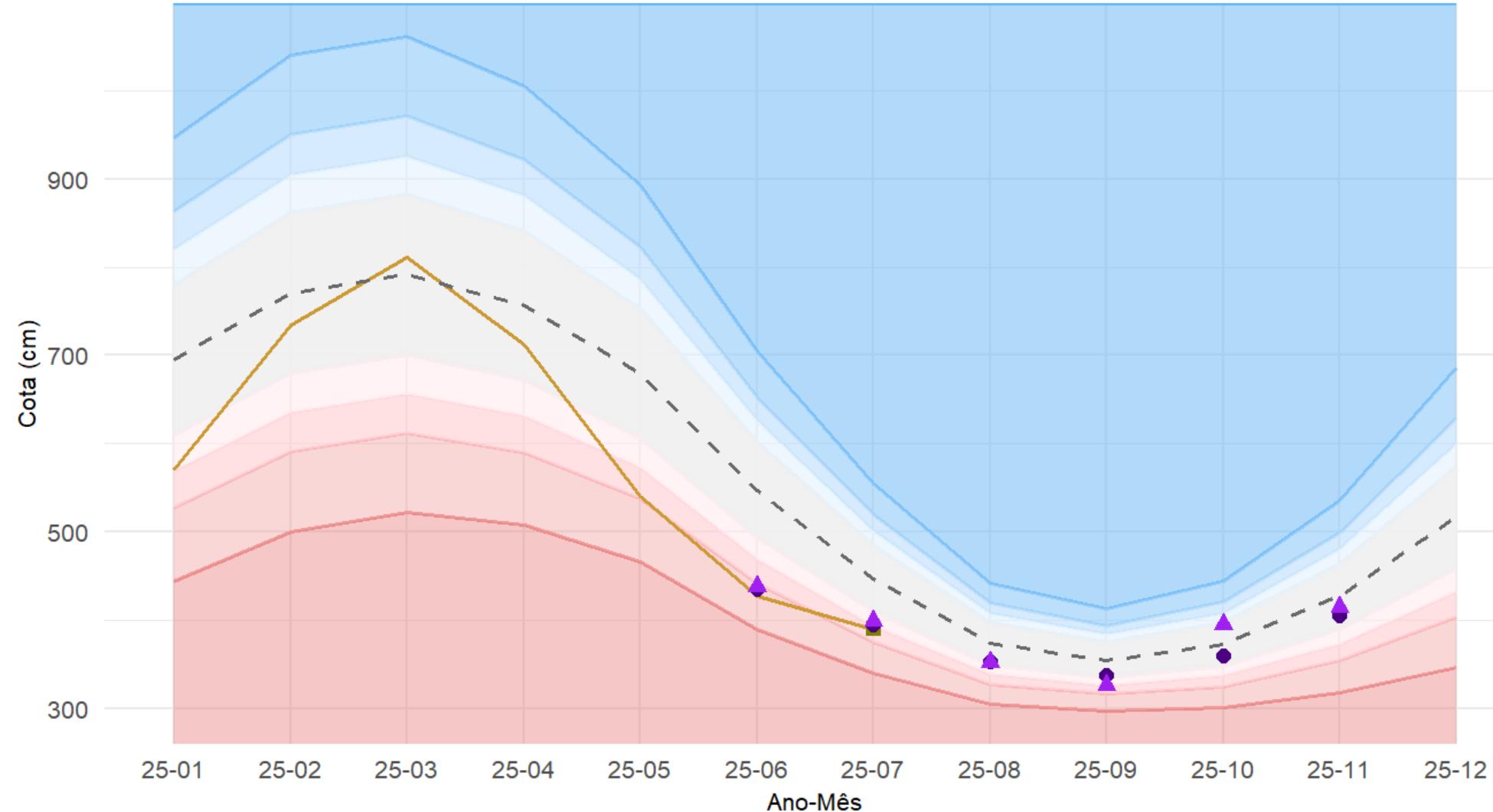


# BH Rio Tapajós

## Rio Tapajós – Estação de Santarém (PA)

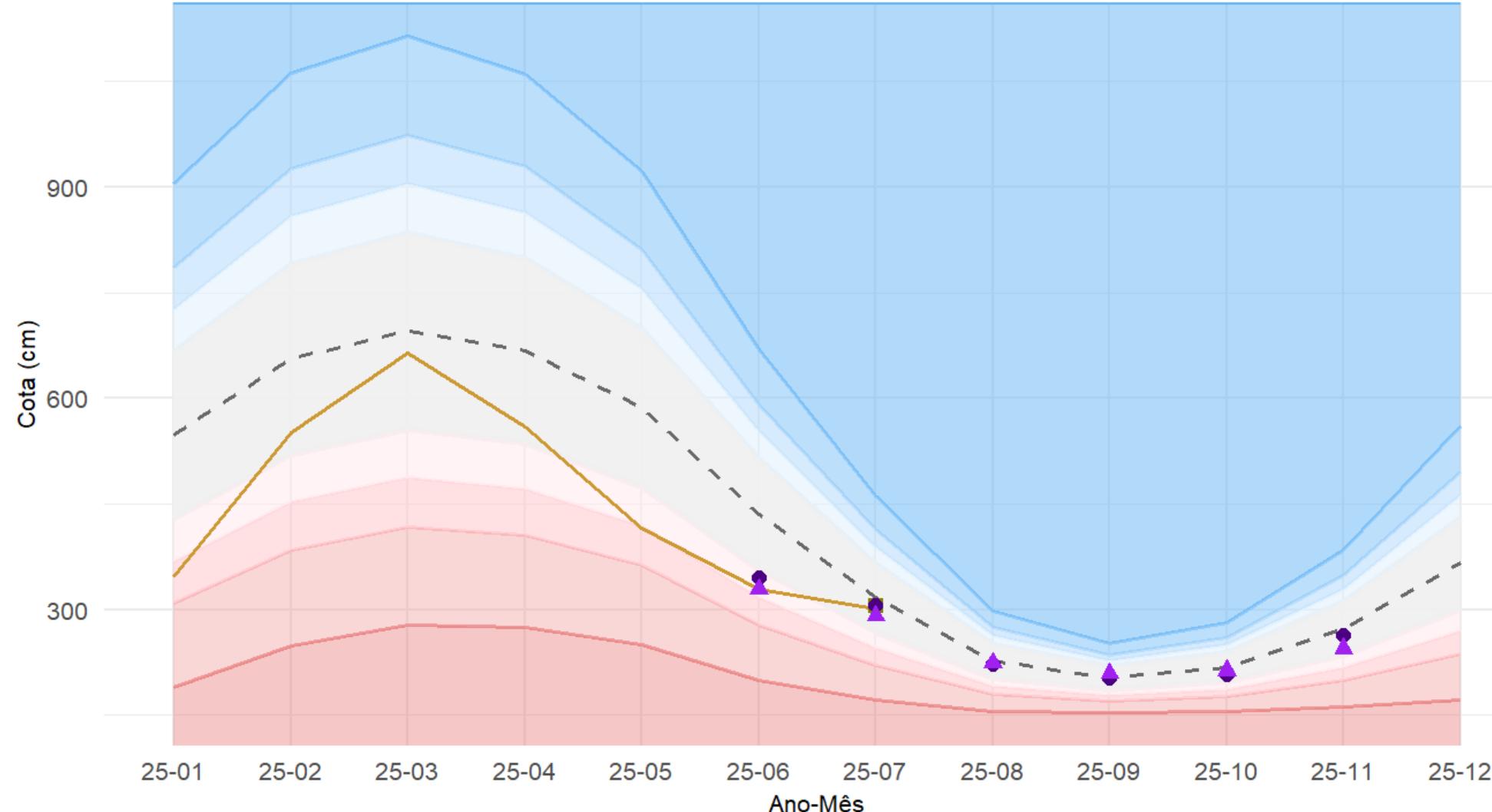


## Rio Xingu – Estação de Boa Sorte (PA)



# BH Rio Tocantins

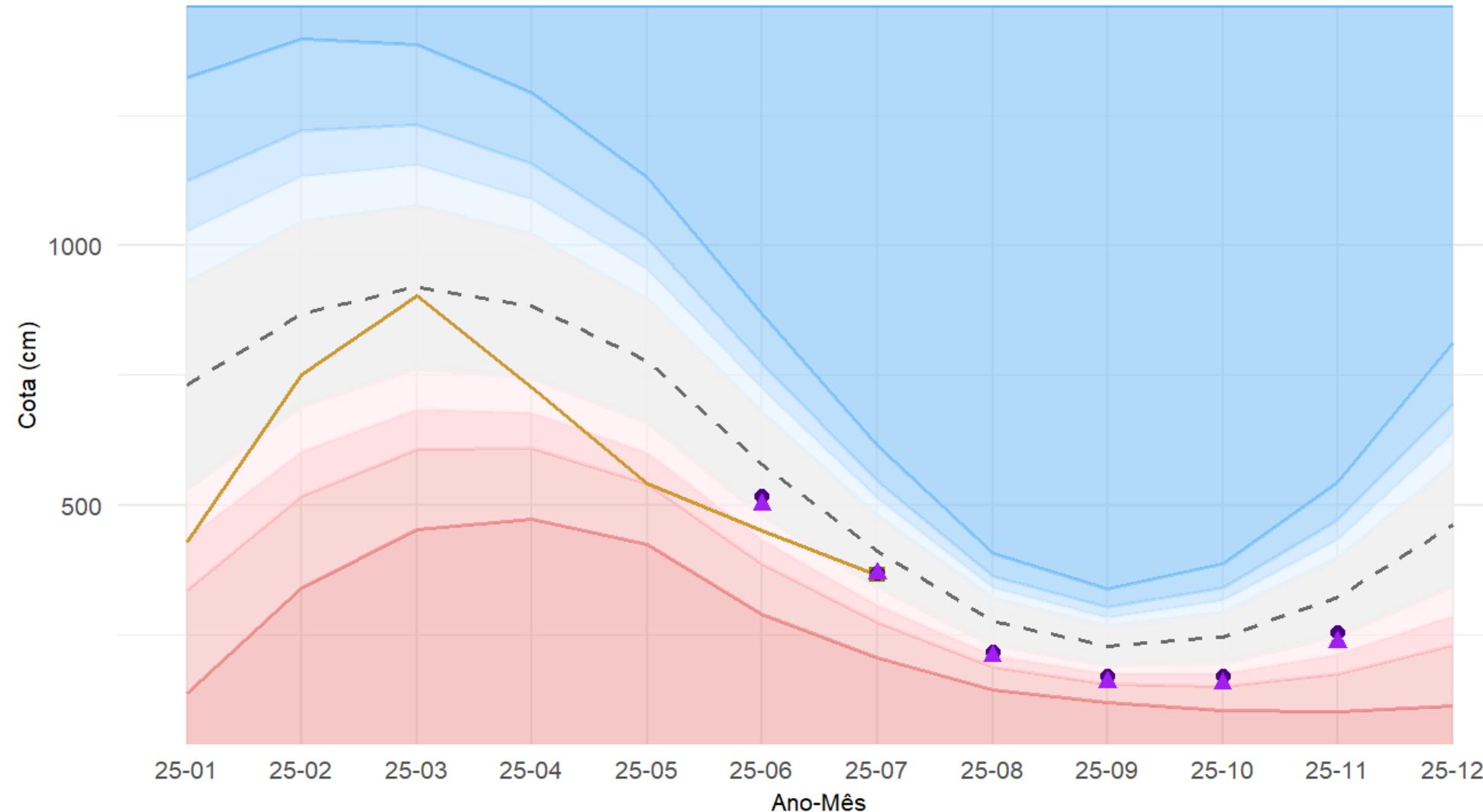
## Rio Araguaia – Estação de Conceição do Araguaia (PA)



Mês	Md1	Md2	Md3
jul	306	291	279
ago	223	224	223
set	202	209	200
out	208	213	210
nov	264	244	240

# BH Rio Tocantins

## Rio Tocantins – Estação de Marabá (PA)



Mês	Md1	Md2	Md3
jul	369	368	347
ago	217	210	189
set	172	159	128
out	171	157	221
nov	255	236	307
dez			



MINISTÉRIO DA  
**DEFESA**

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Secretaria - Geral



**CENSIPAM**  
Centro Gestor e Operacional do  
Sistema de Proteção da Amazônia

*Obrigado!*

*Acesse: [hidro.sipam.gov.br](http://hidro.sipam.gov.br)*