



CENSIPAM
Centro Gestor e Operacional do
Sistema de Proteção da Amazônia



MINISTÉRIO DA
DEFESA



Sipam**Hidro**

Análise e Prognóstico Hidrológico

Julho/2025

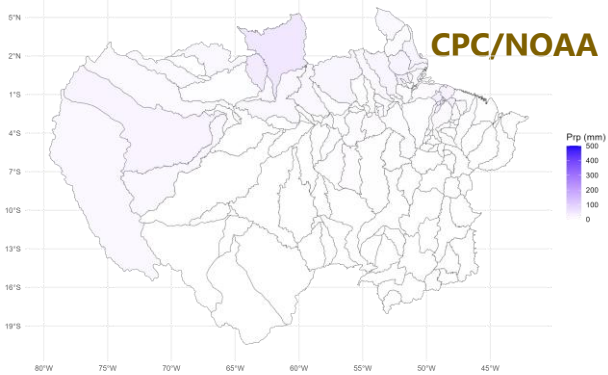
Flávio Altieri
Analista em Ciência e Tecnologia

Resumo

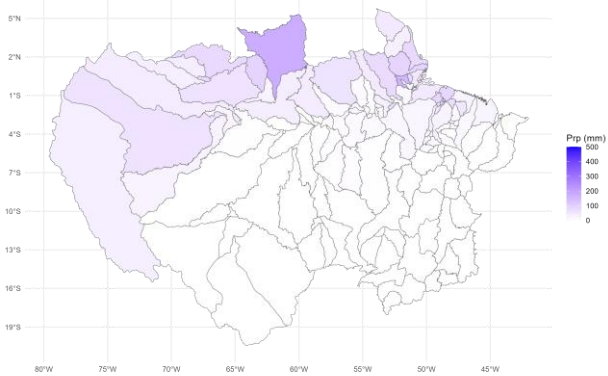
- Análise da precipitação nas bacias
- Comportamento da estiagem
- Diagnóstico das condições dos níveis dos rios
- Prognóstico hidrológico de Vazante

Precipitação Acumulada

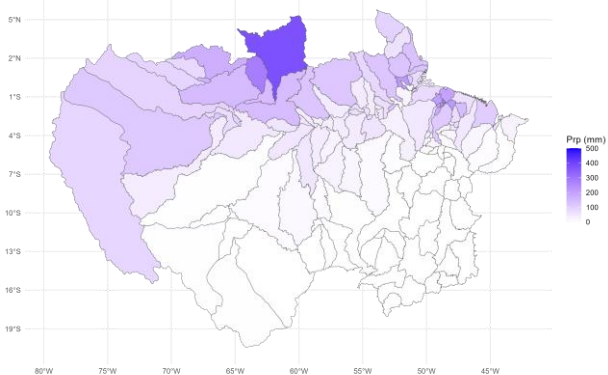
Precipitação Acumulada - Últimos 7 dias



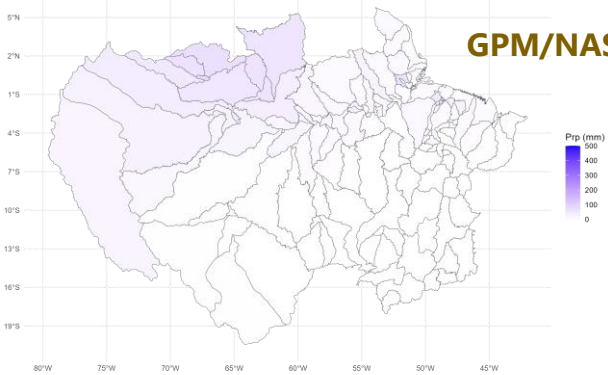
Precipitação Acumulada - Últimos 15 dias



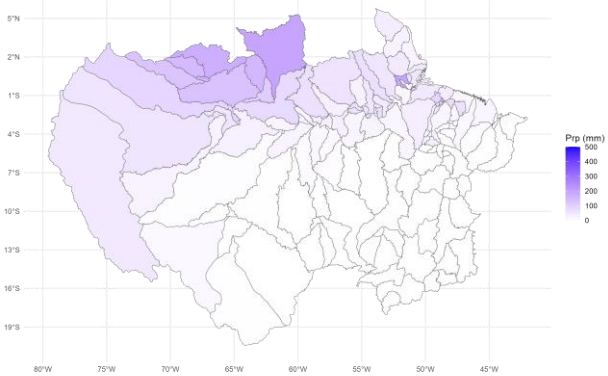
Precipitação Acumulada - Últimos 30 dias



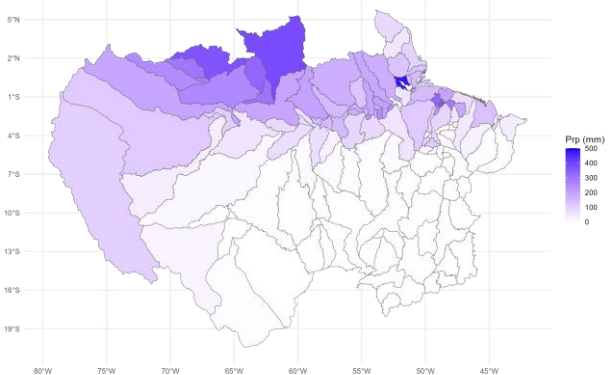
Precipitação Acumulada - Últimos 7 dias



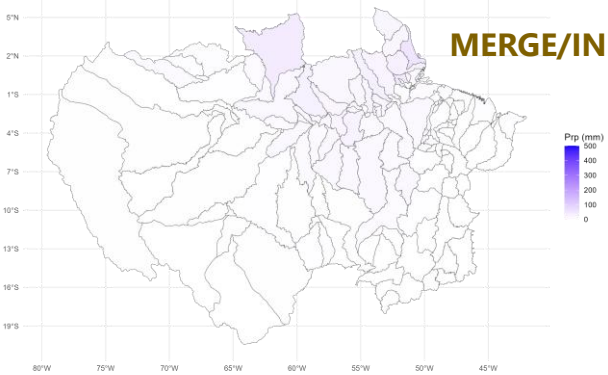
Precipitação Acumulada - Últimos 15 dias



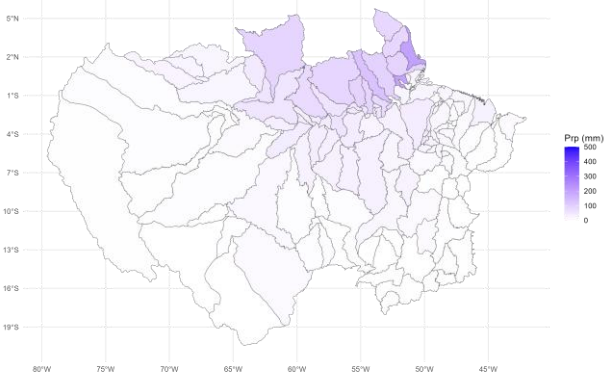
Precipitação Acumulada - Últimos 30 dias



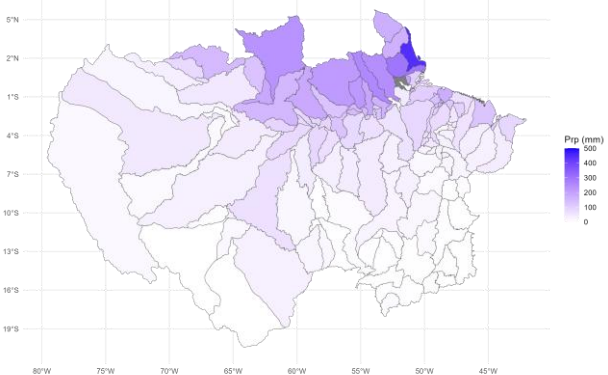
Precipitação Acumulada - Últimos 7 dias



Precipitação Acumulada - Últimos 15 dias



Precipitação Acumulada - Últimos 30 dias



7 dias

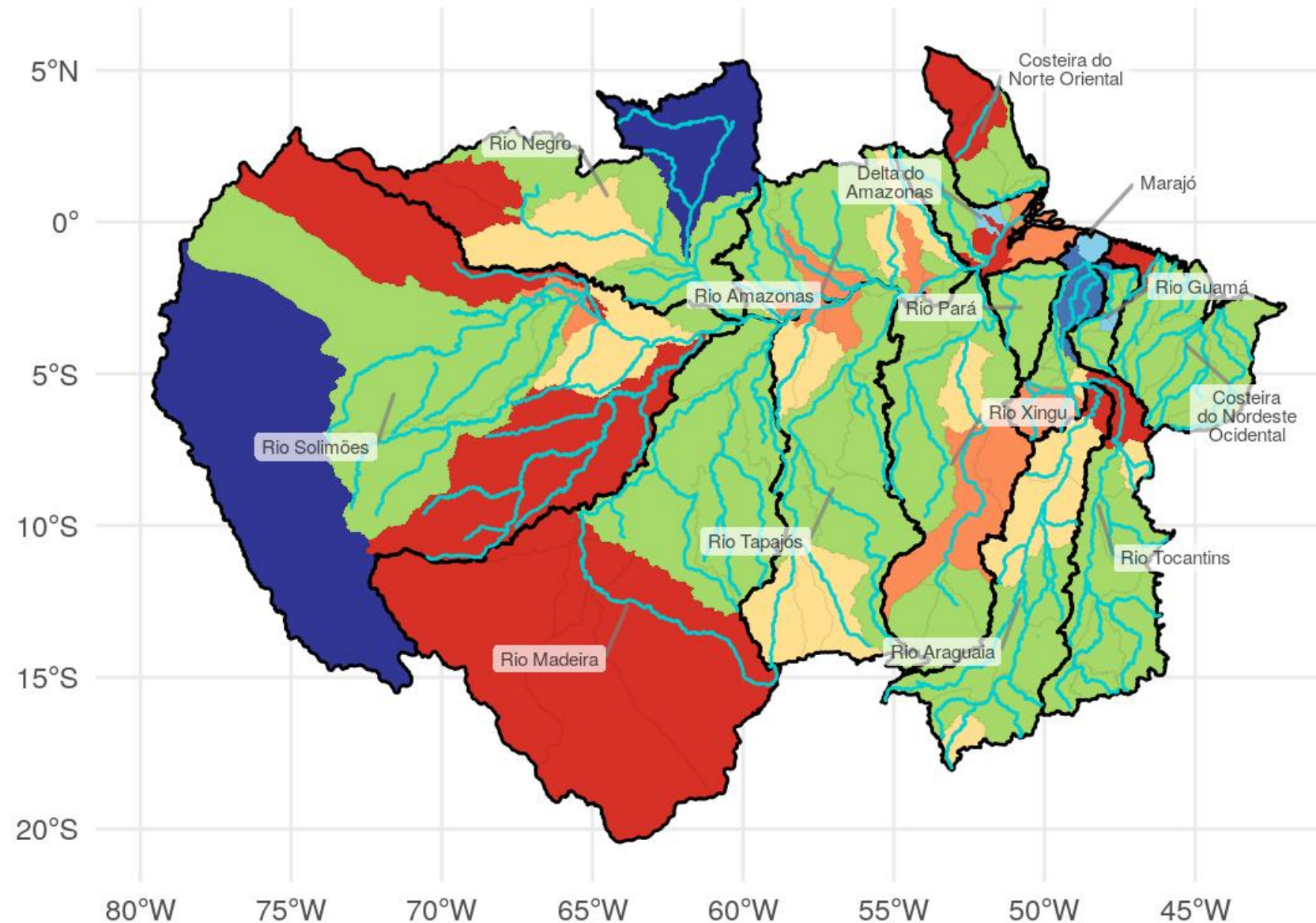
15 dias

30 dias

- 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.

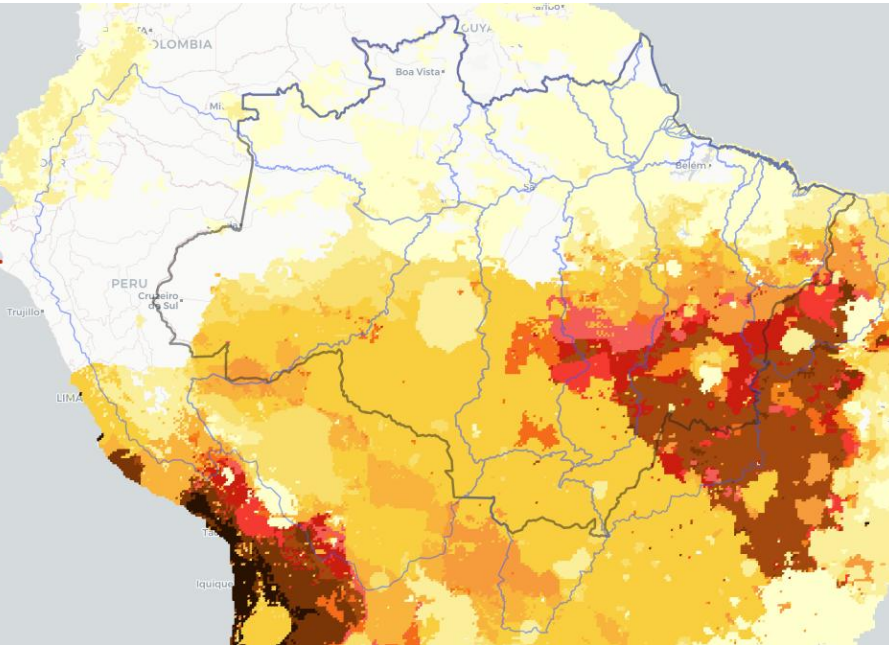
Índice de Precipitação Padronizada (IPP) – 28/07/2025

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

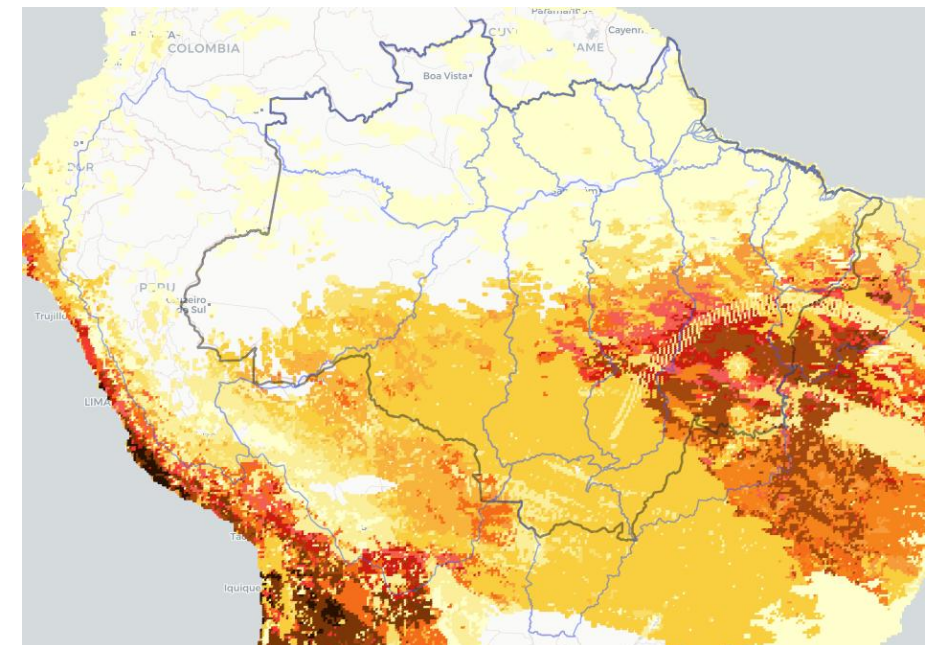


Acumulado de precipitação referente ao período de 28/06/2025 à 27/07/2025 (Fonte: CPC/NOAA)

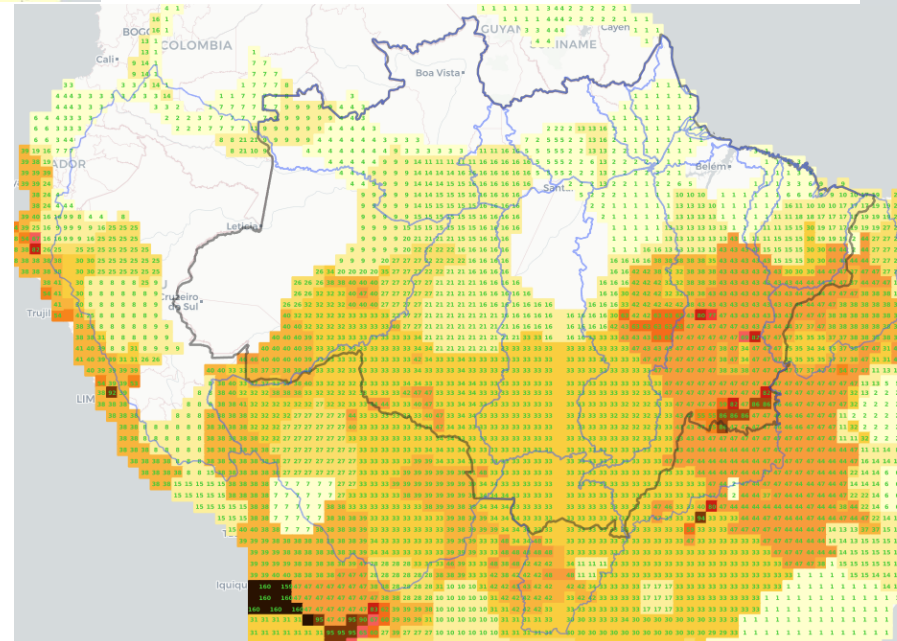
Monitoramento da Estiagem



Estimador de precipitação MERGE/ INPE



Estimador de precipitação GPM/ NASA

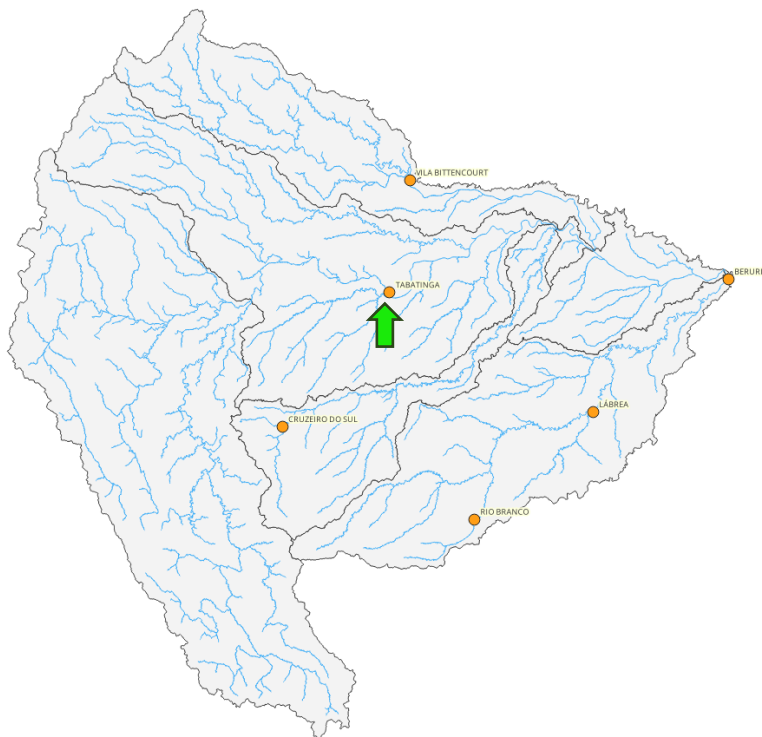


Estimador de precipitação CPC/NOAA

An aerial photograph showing a town completely inundated with floodwater. The water is a murky brown color. Numerous buildings, mostly with light-colored roofs, are partially submerged. In the foreground, a large building with a corrugated metal roof is visible. To the right, a small boat with a blue roof is floating. The background shows more buildings and a line of trees on a hill.

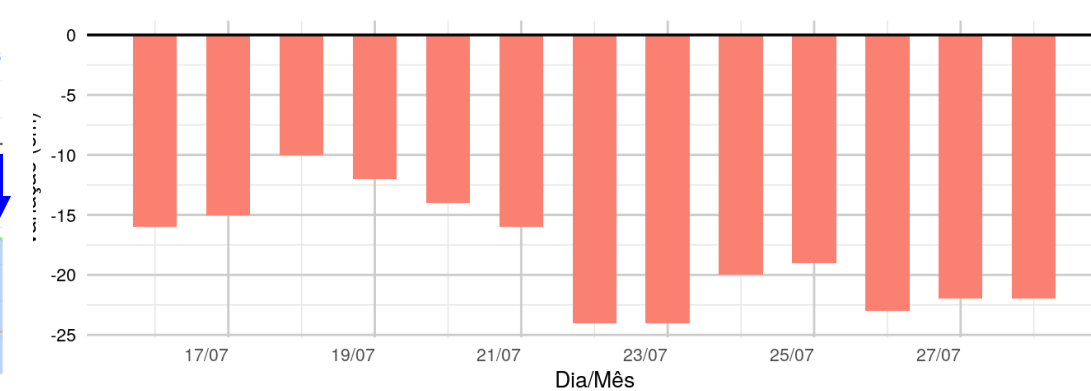
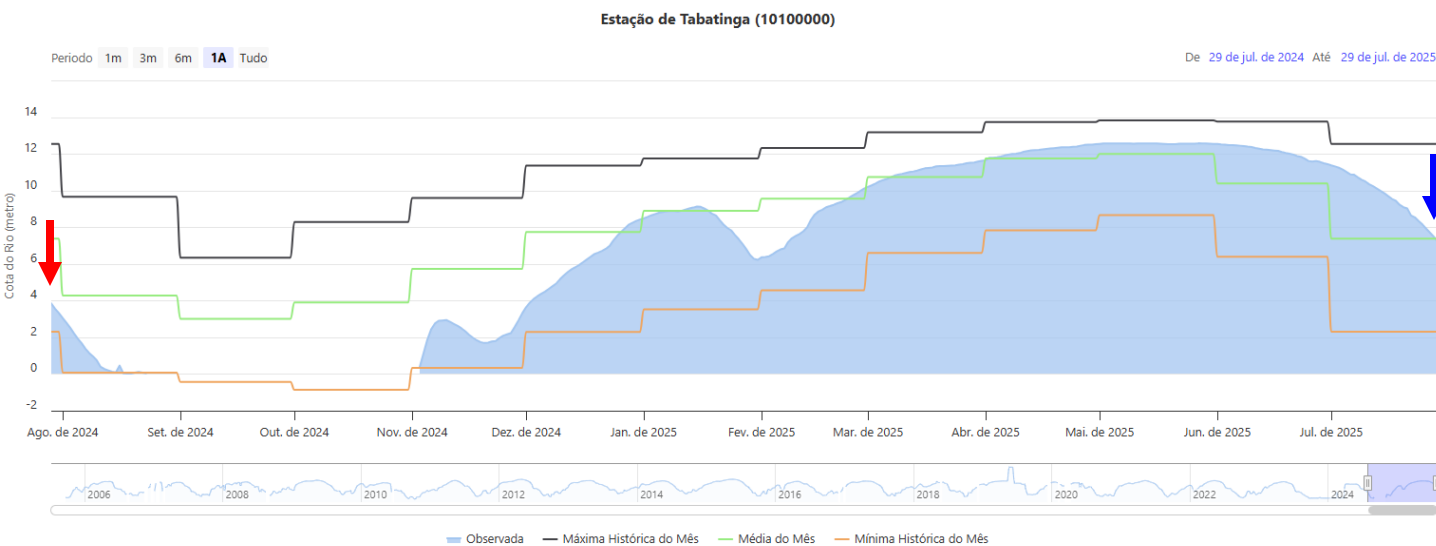
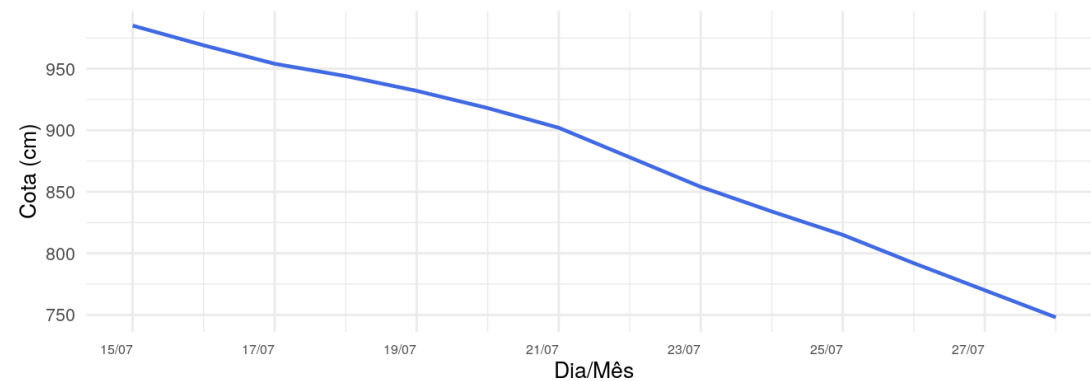
Diagnóstico dos Níveis dos Rios

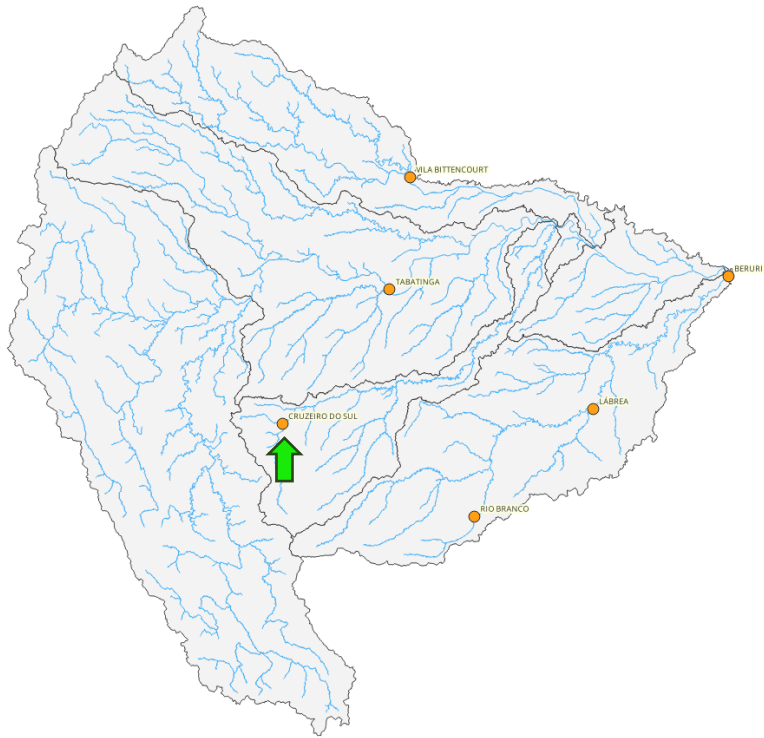
BH Rio Solimões



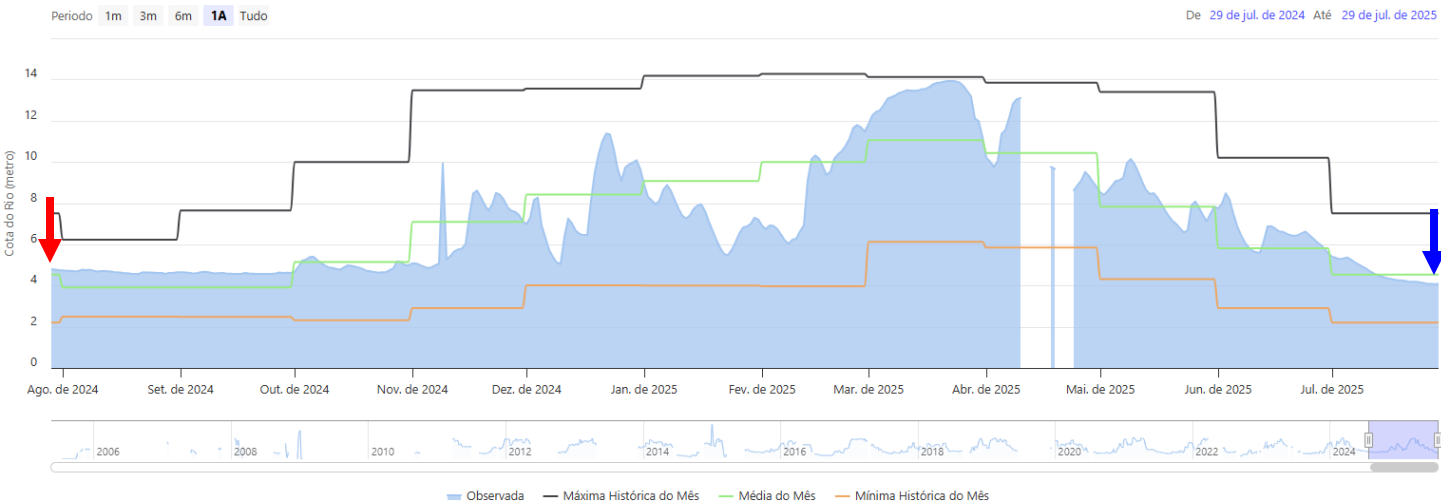
Rio Solimões – Estação de Tabatinga (AM)

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



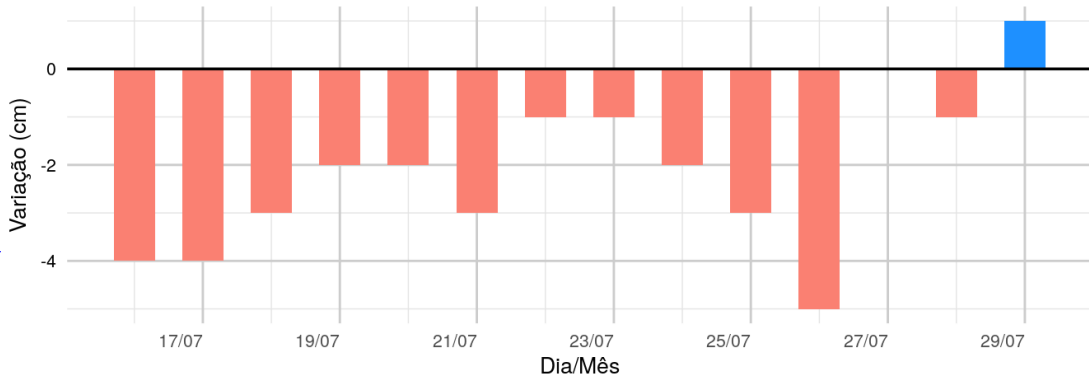
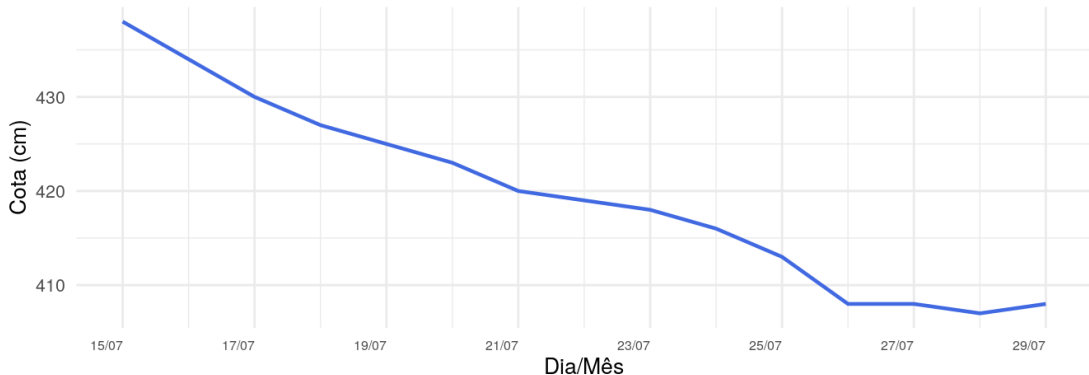


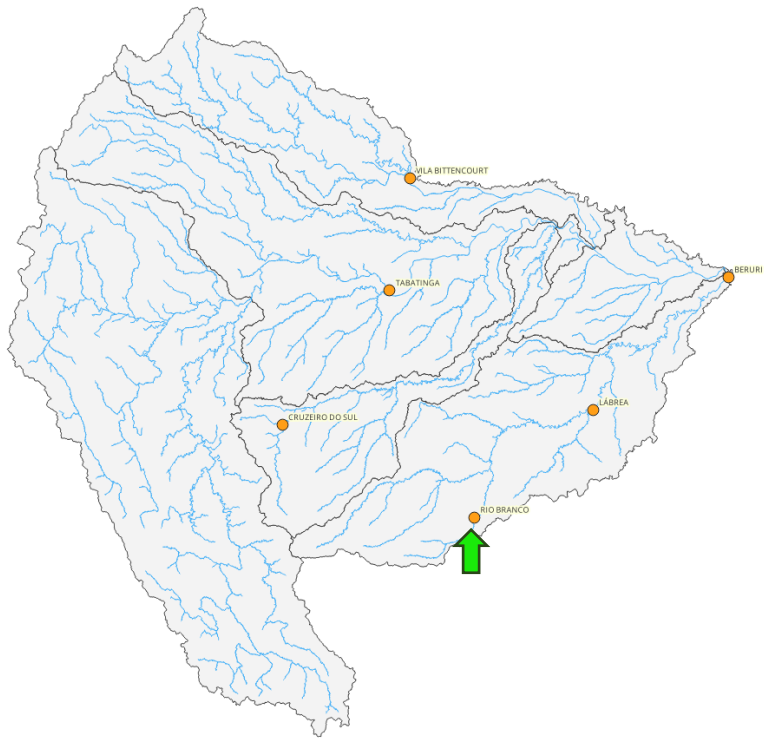
Estação de Cruzeiro Do Sul (12500000)



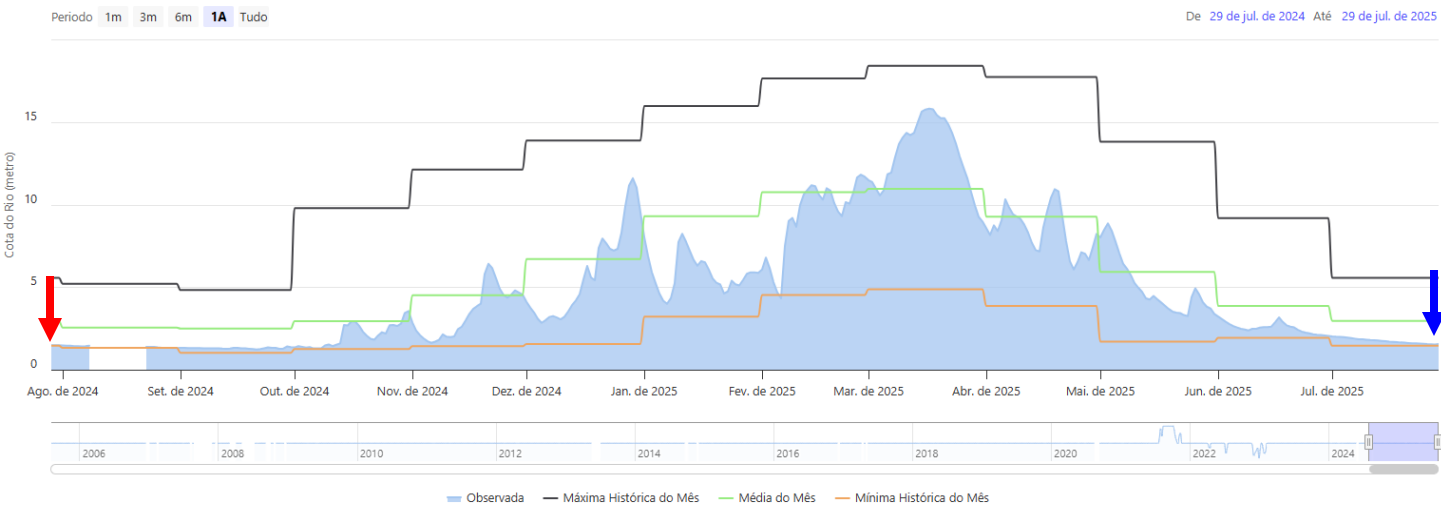
Rio Juruá – Estação de Cruzeiro do Sul (AC)

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



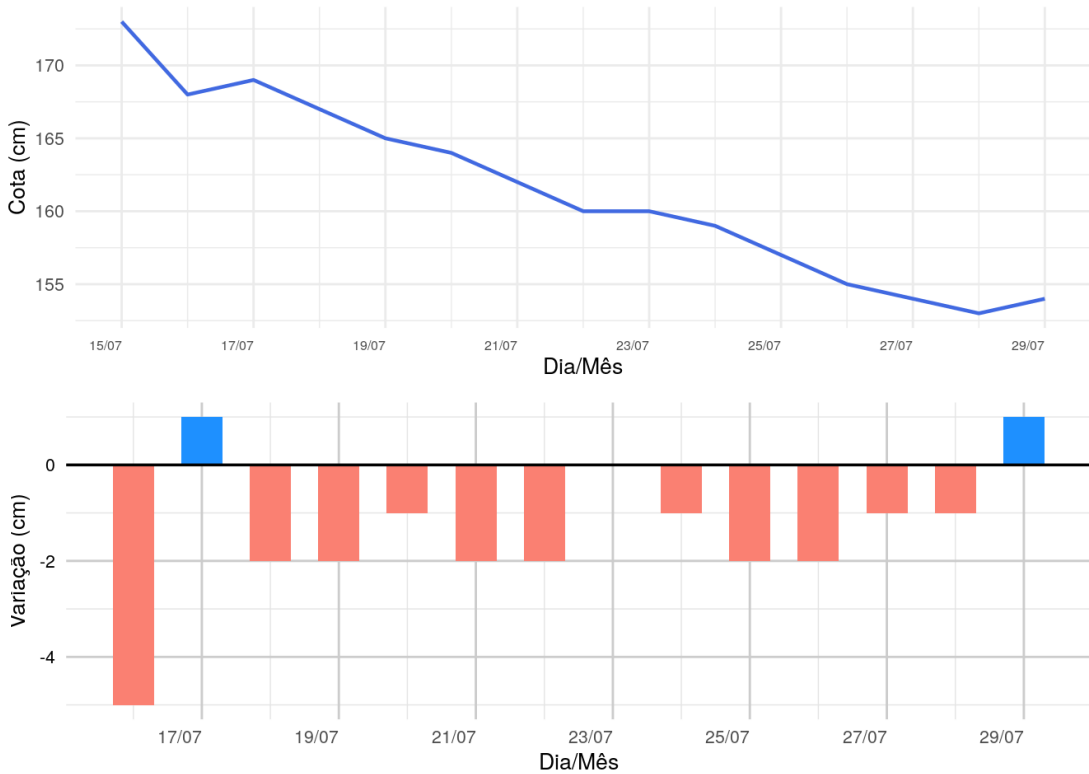


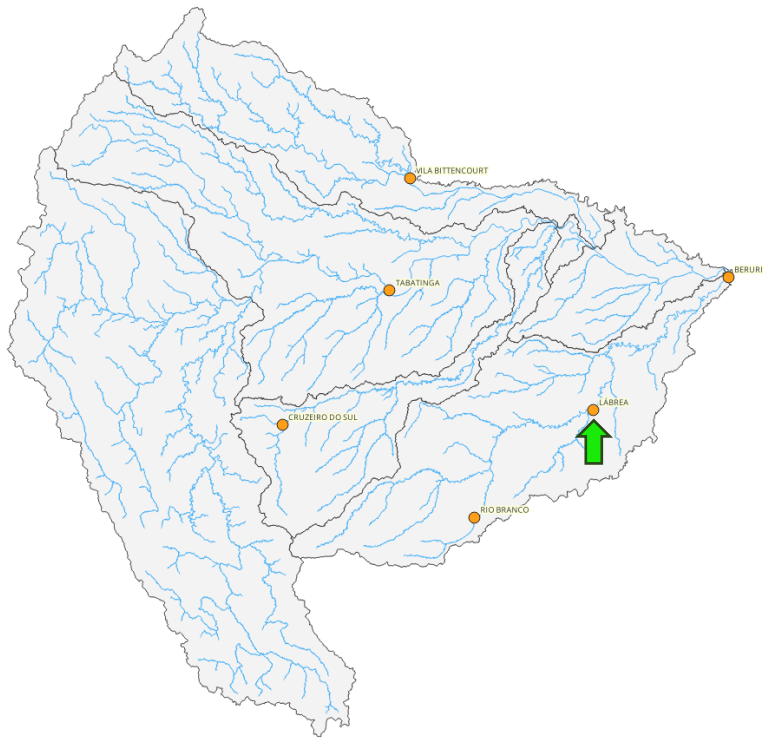
Estação de Rio Branco (13600002)



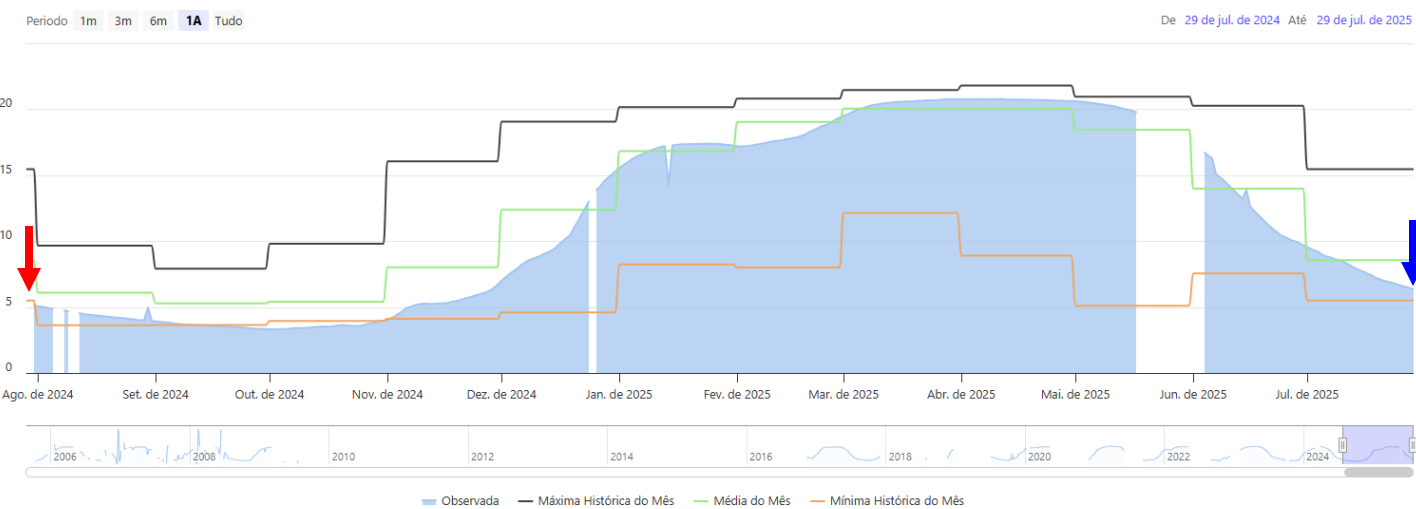
Rio Acre – Estação de Rio Branco (AC)

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



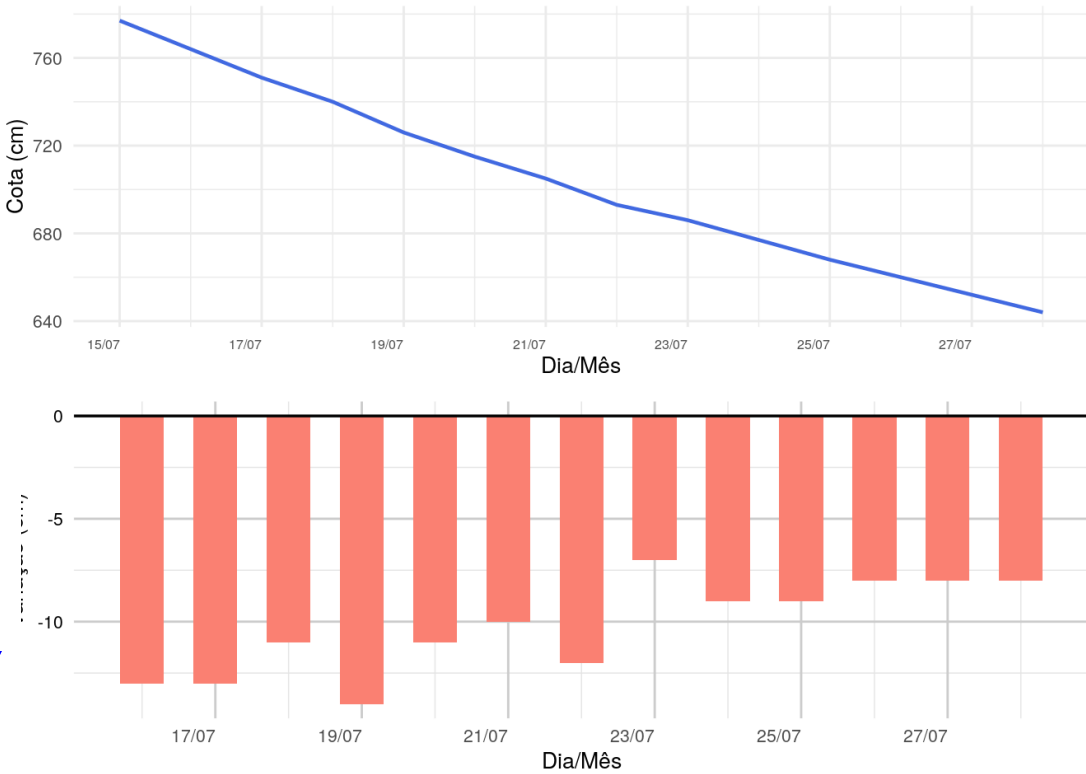


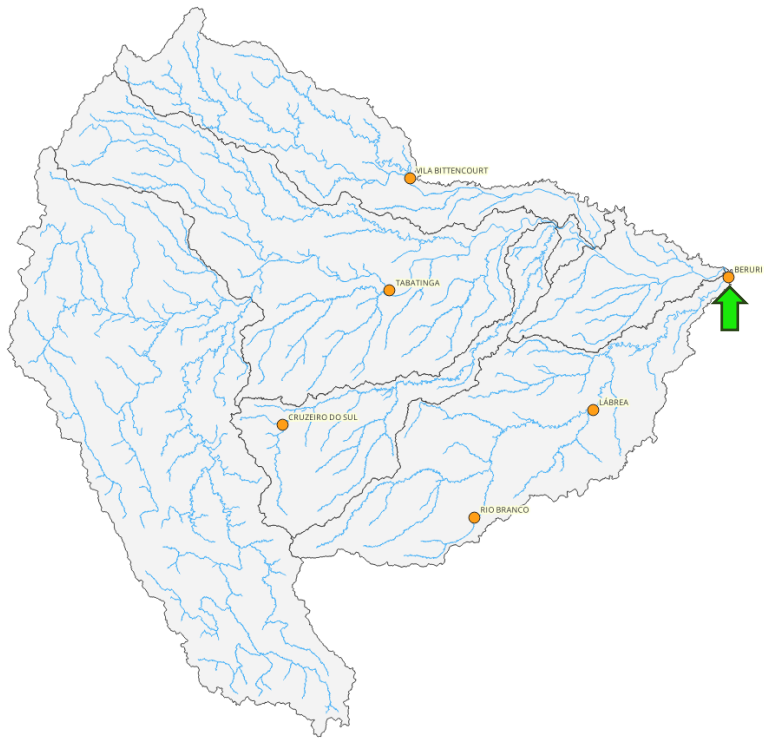
Estação de Lábrea (13870000)



Rio Purus – Estação de Lábrea (AM)

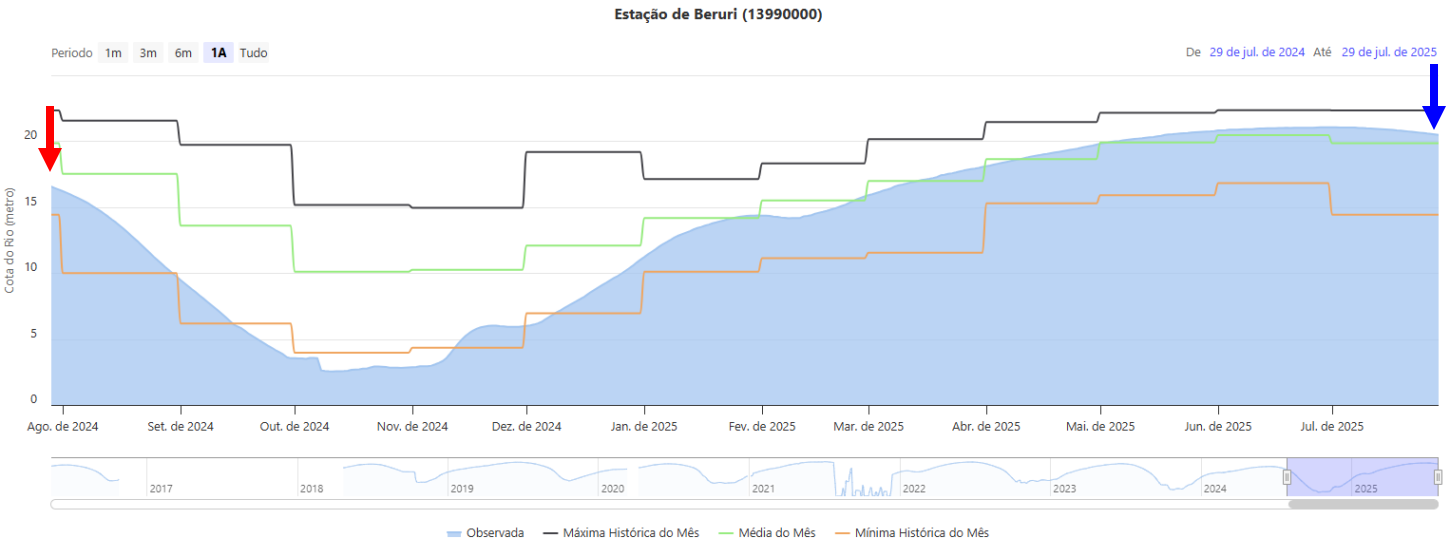
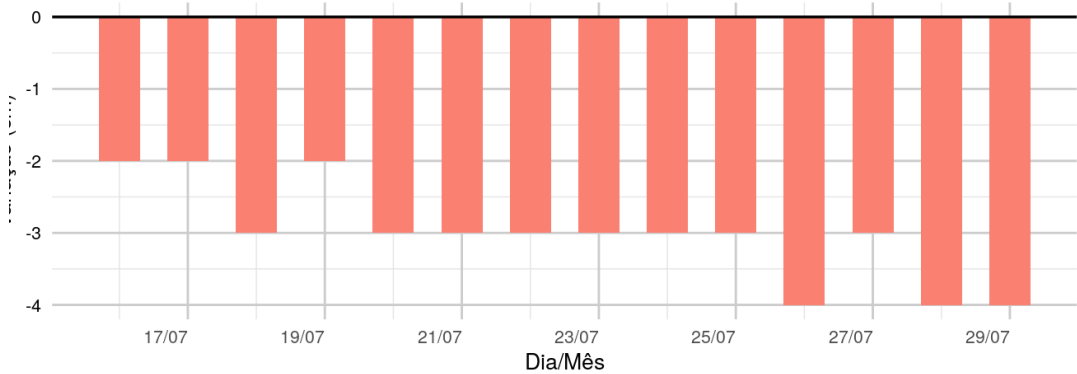
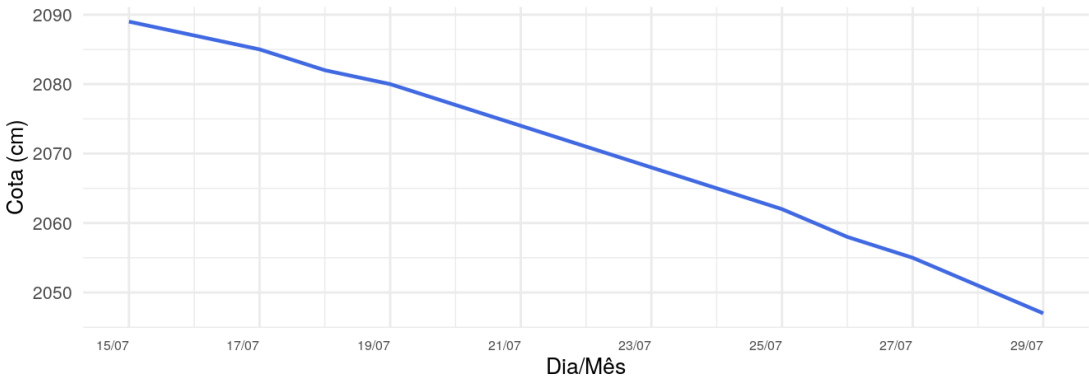
Variação das cotas nos últimos 15 dias: -133 cm, em média -8.87 cm por dia.

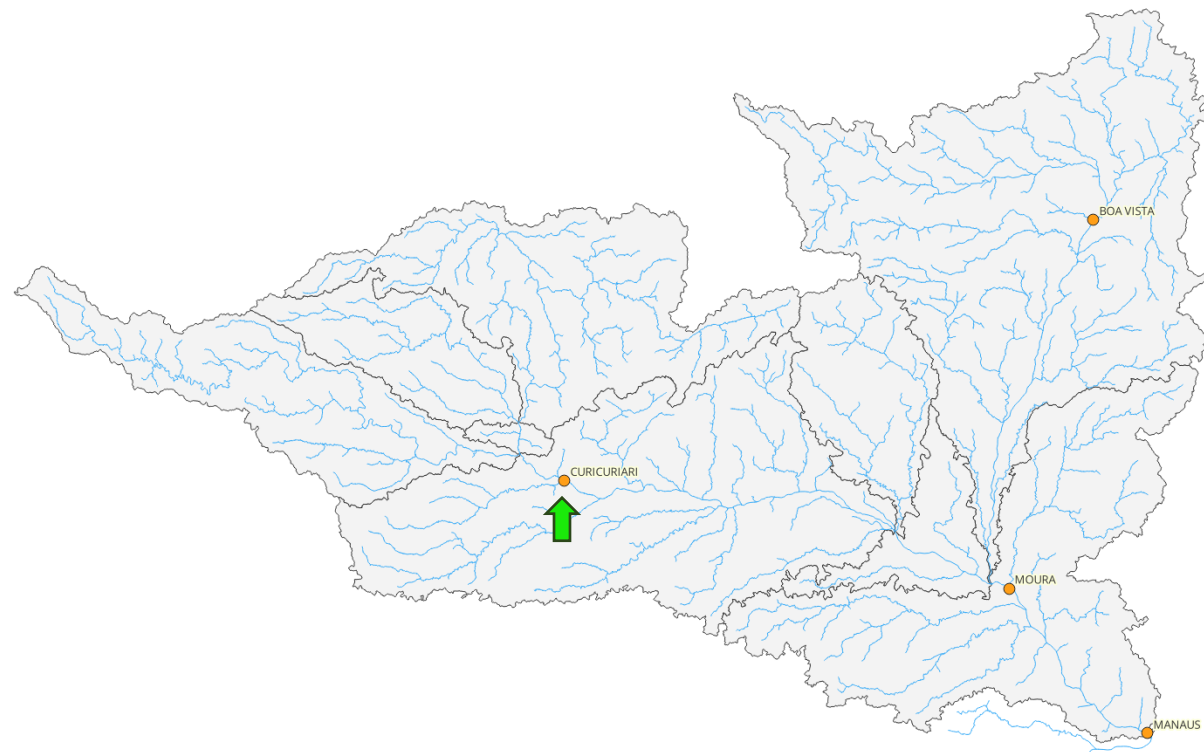




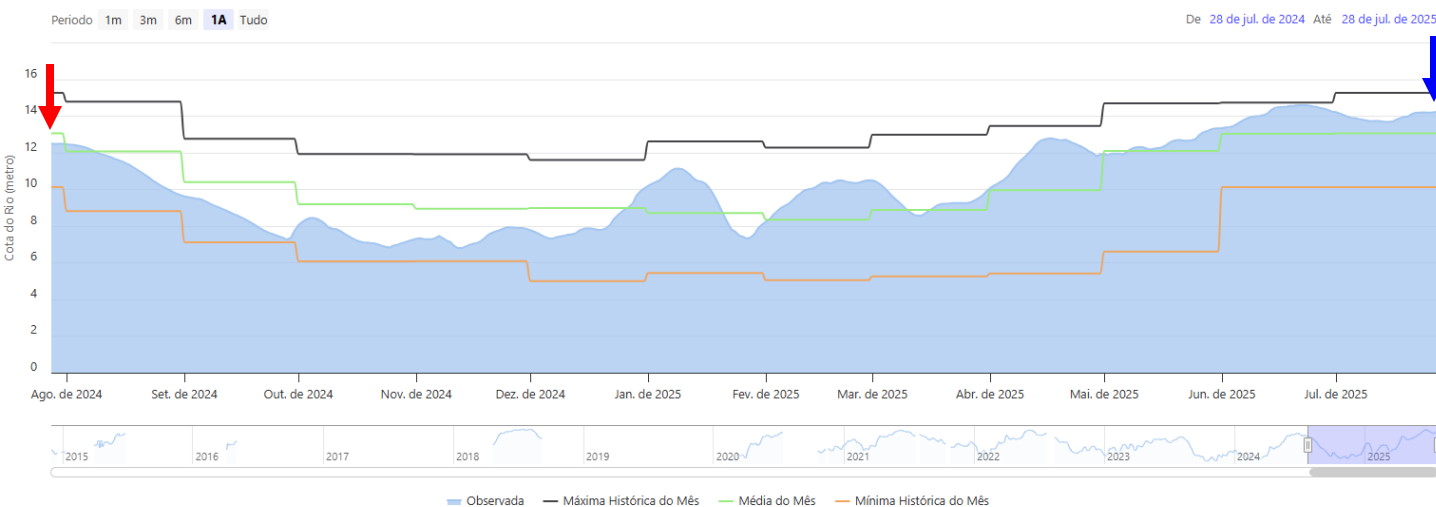
Rio Solimões – Estação de Beruri (AM)

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



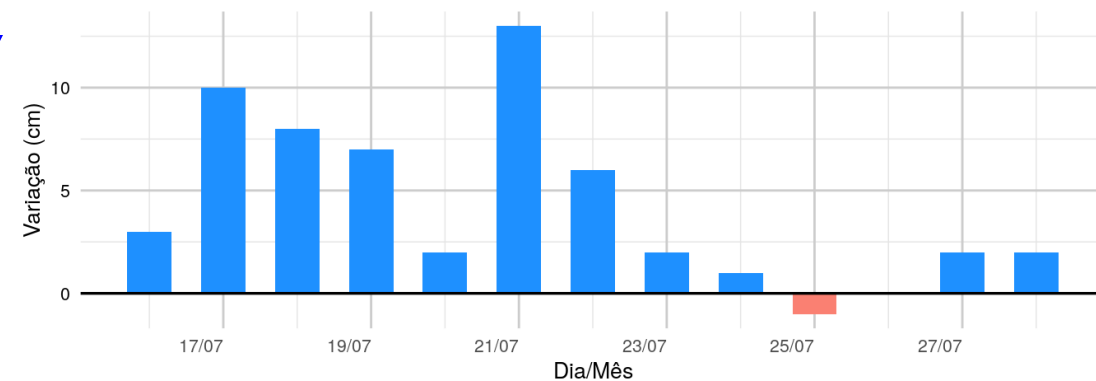
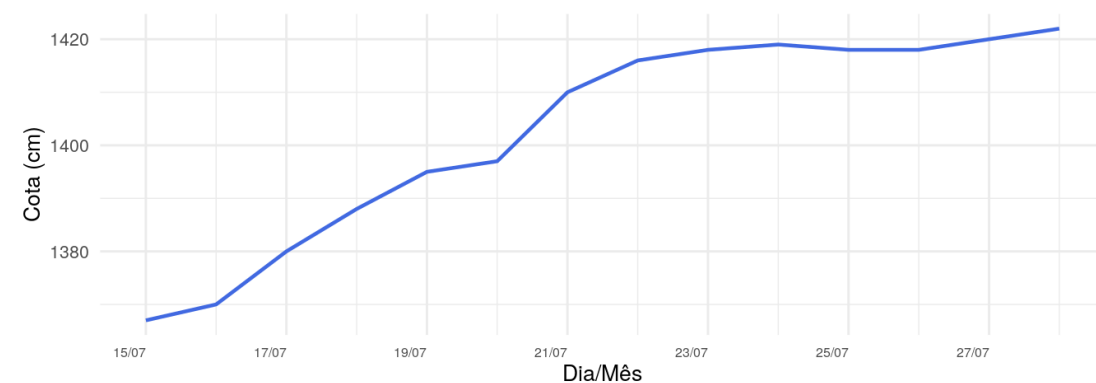


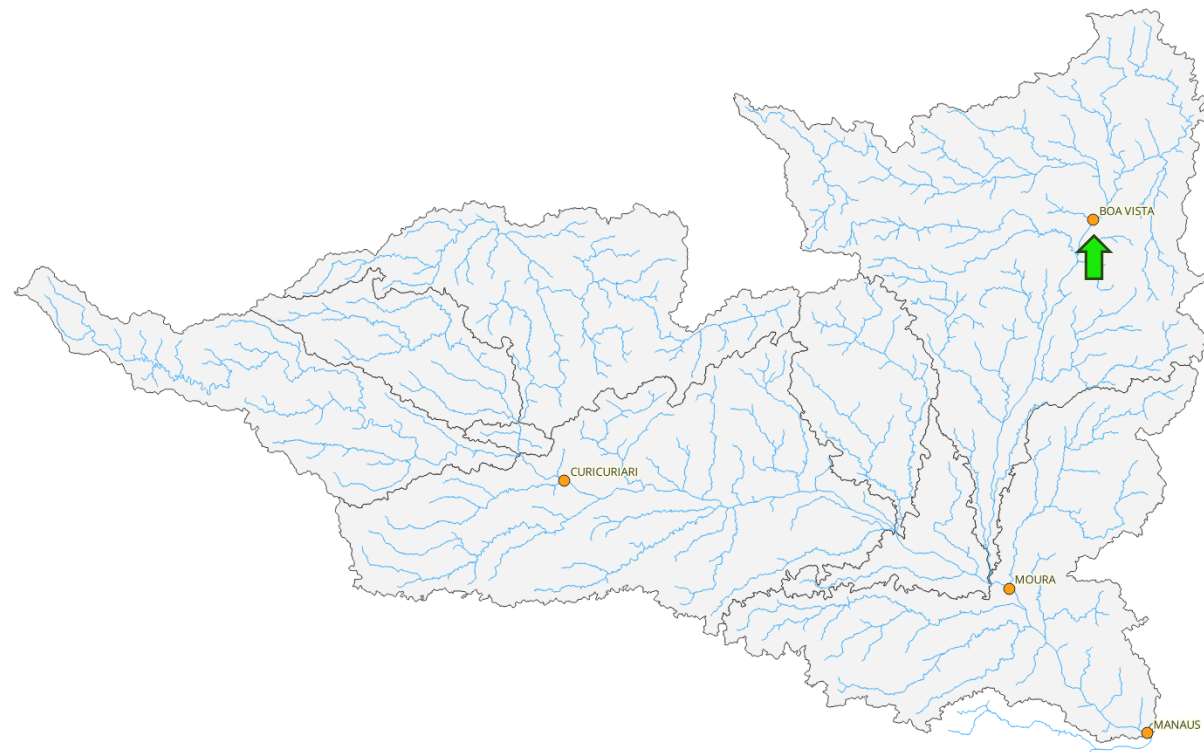
Estação de Curicuriari (14330000)



Rio Curicuriari – Estação de Curicuriari (AM)

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

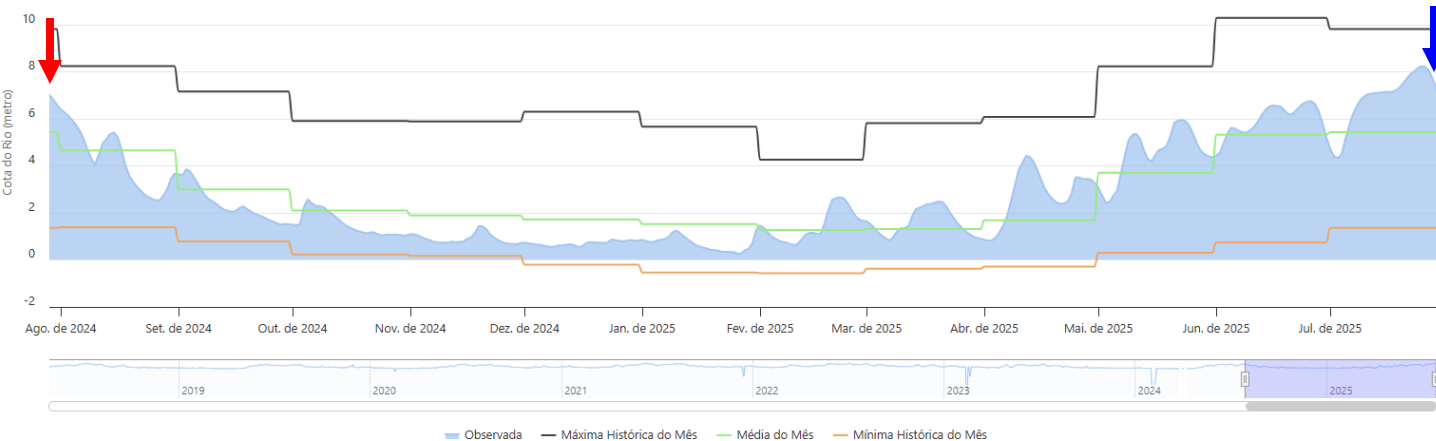




Estação de Boa Vista (14620000)

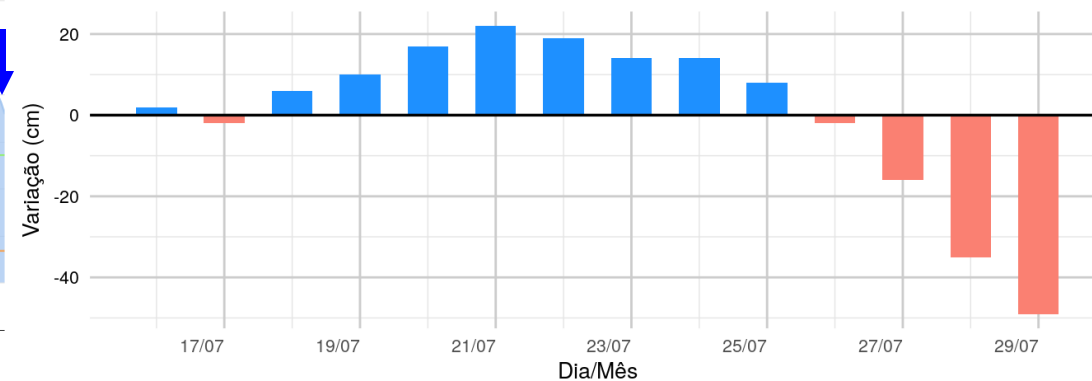
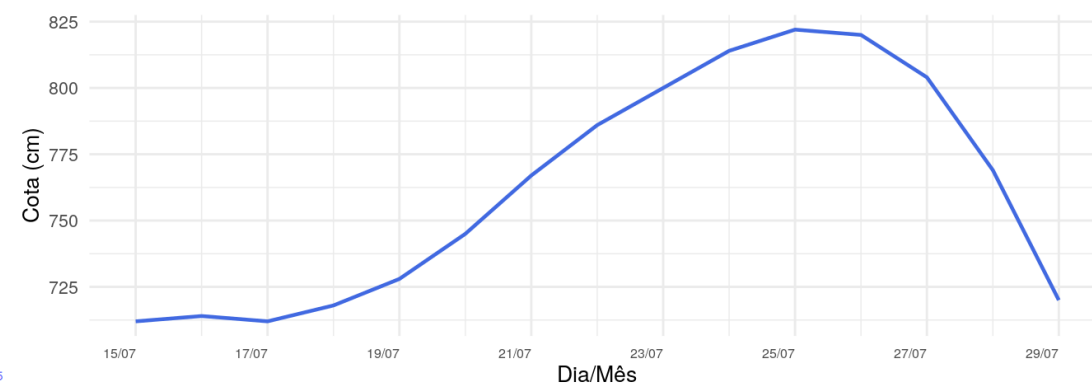
Período 1m 3m 6m 1A Tudo

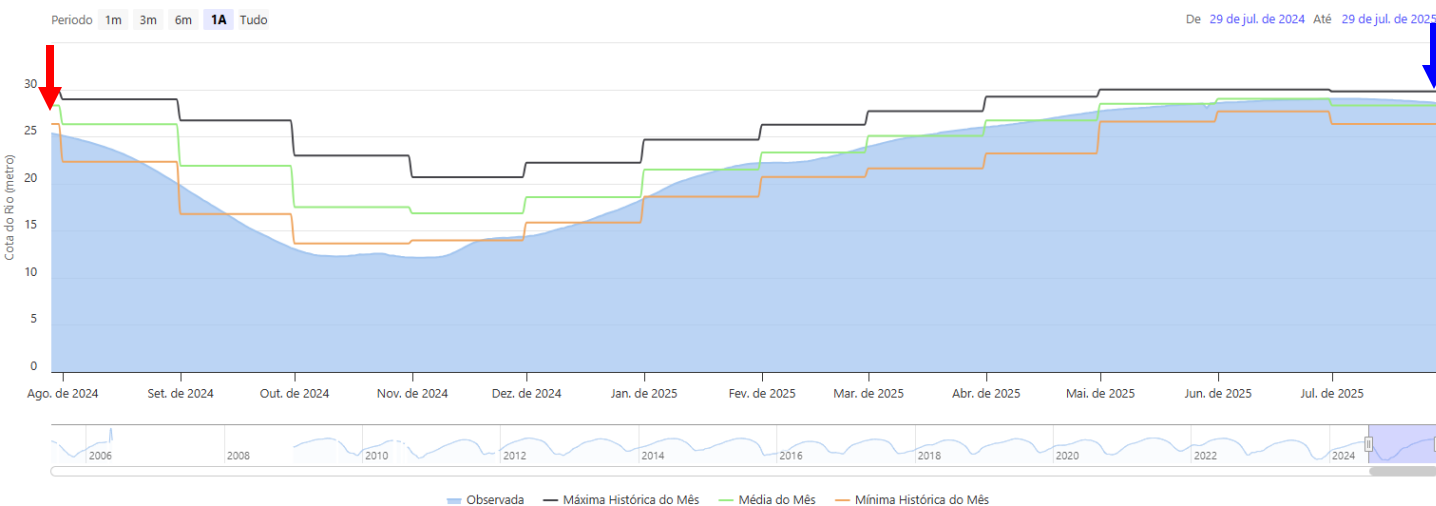
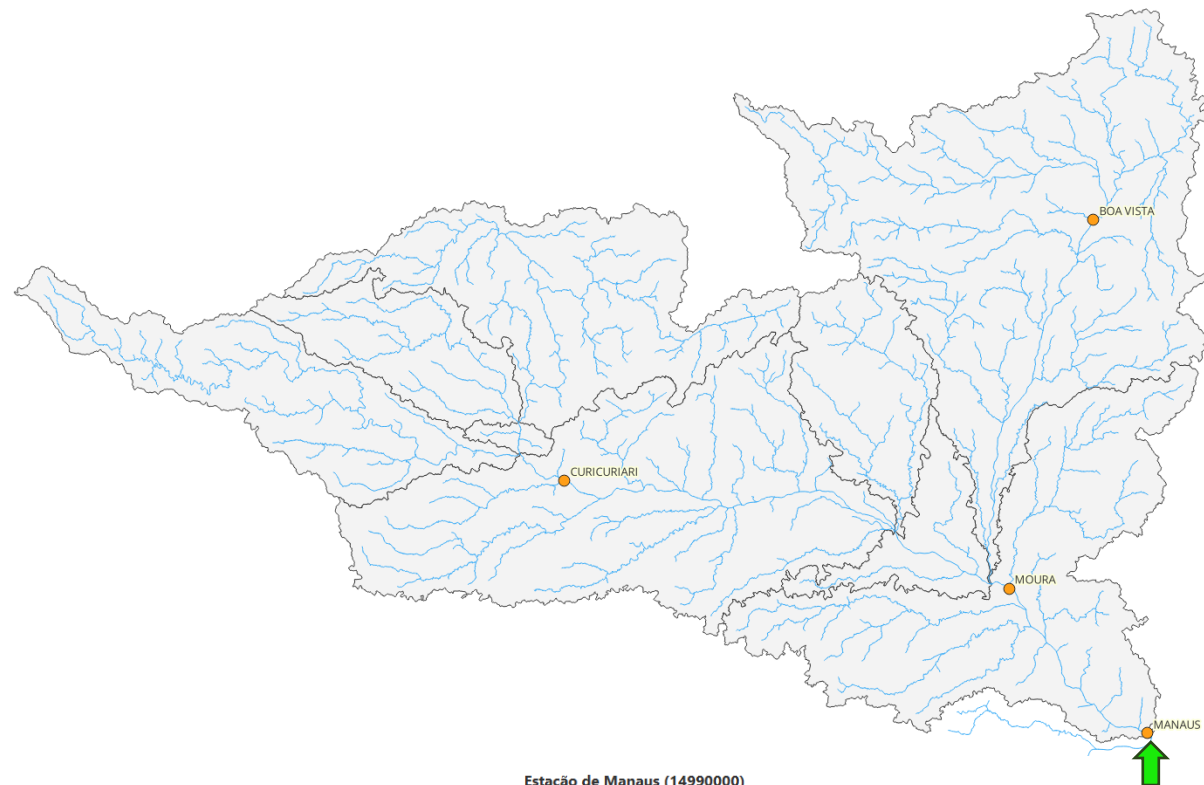
De 29 de jul. de 2024 Até 29 de jul. de 2025



Rio Branco – Estação de Boa Vista (RR)

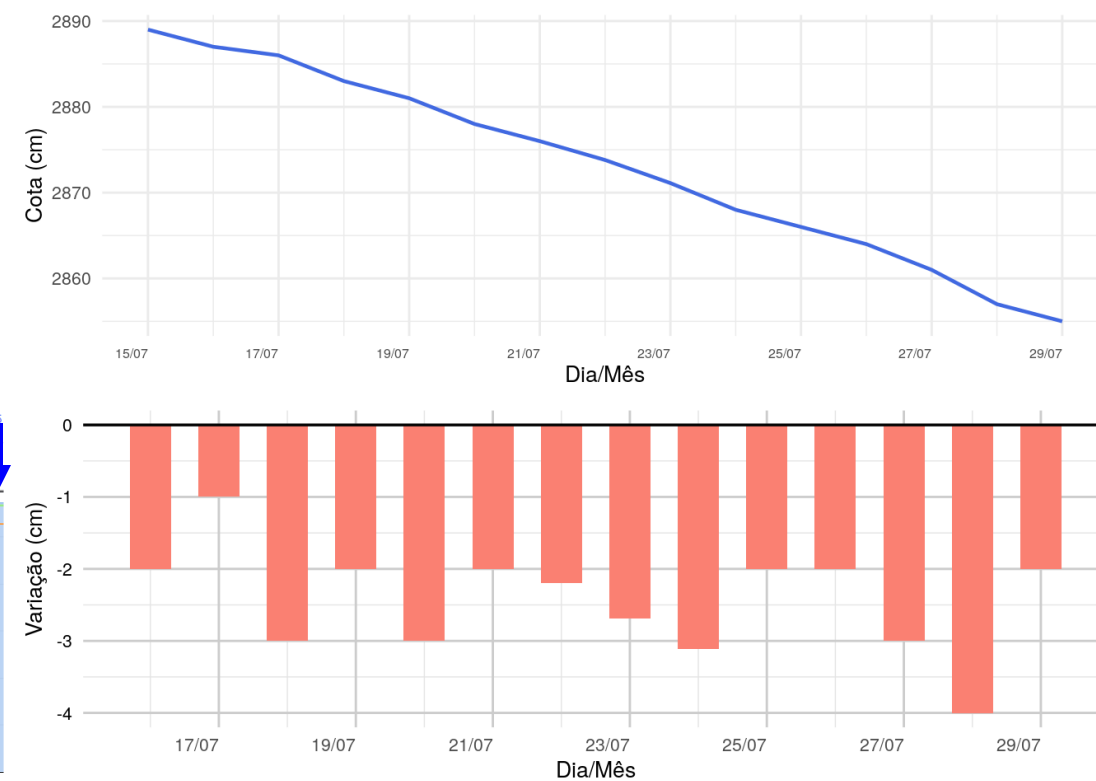
Variação das cotas nos últimos 15 dias: 8 cm, em média 0.53 cm por dia.

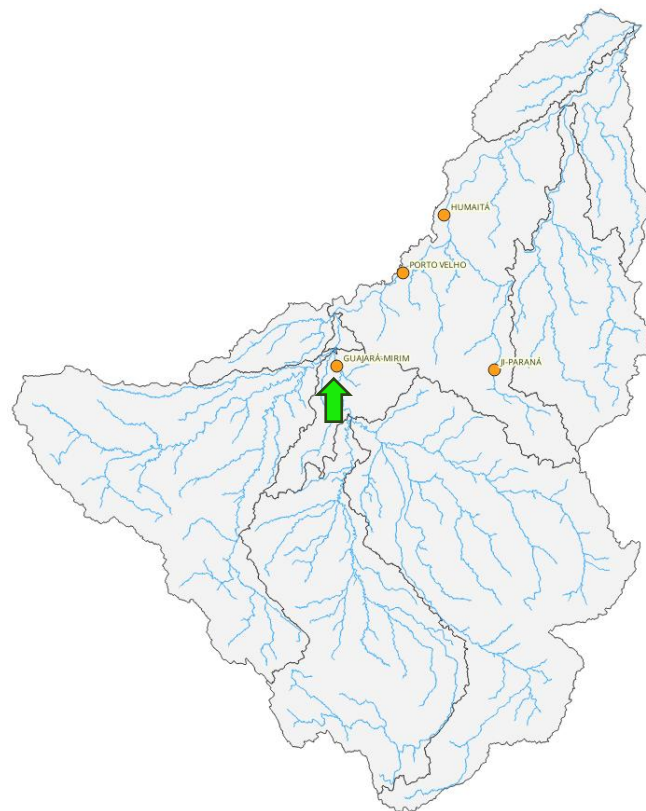




Rio Solimões – Estação de Manaus (AM)

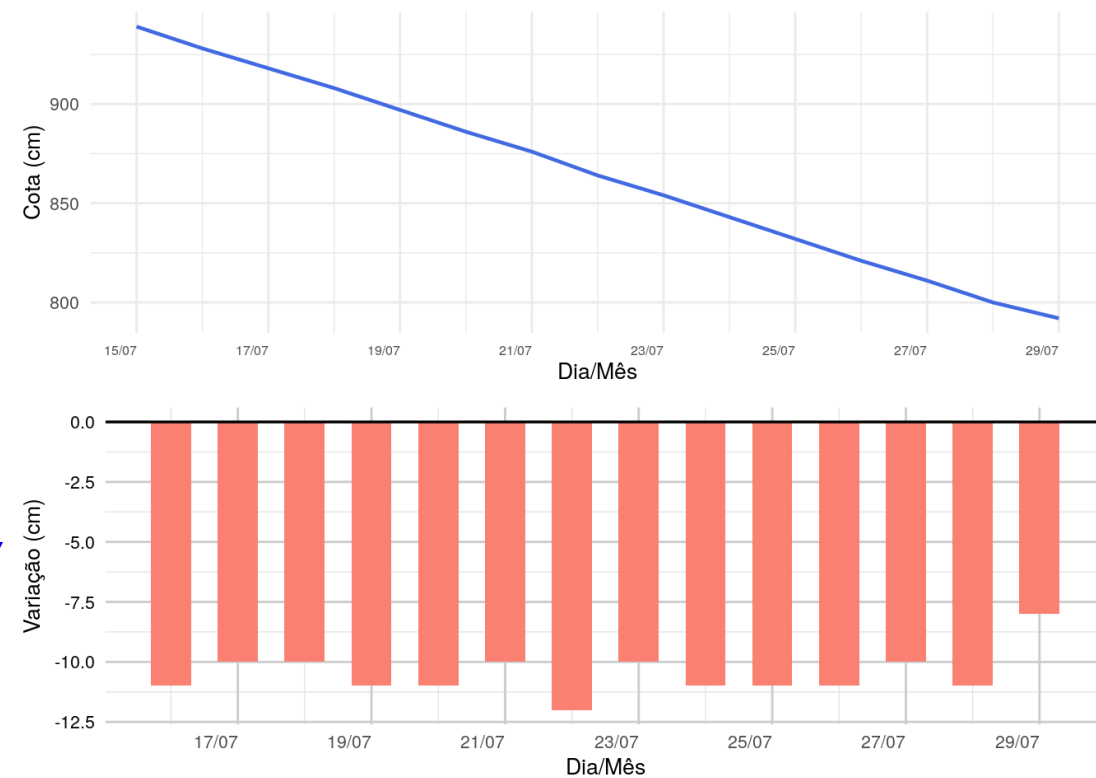
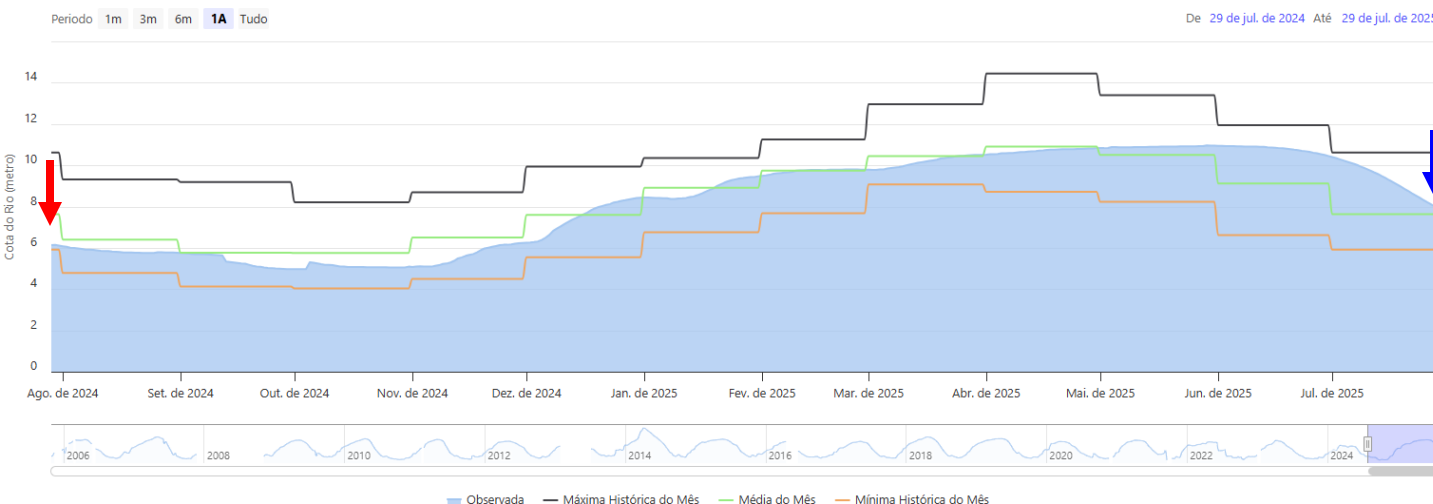
Variação das cotas nos últimos 15 dias: -34 cm, em média -2.27 cm por dia.

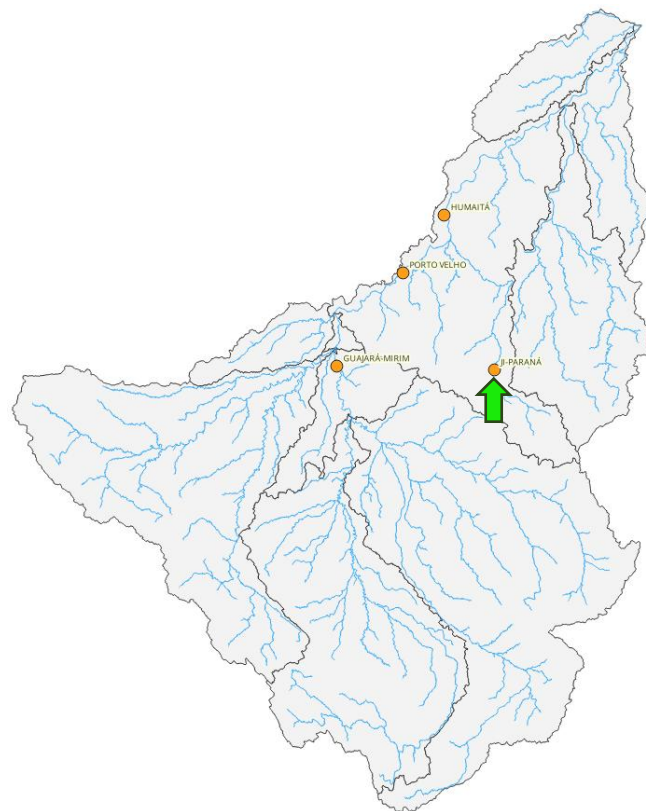




Rio Mamoré – Estação de Guajará-Mirim (RO)

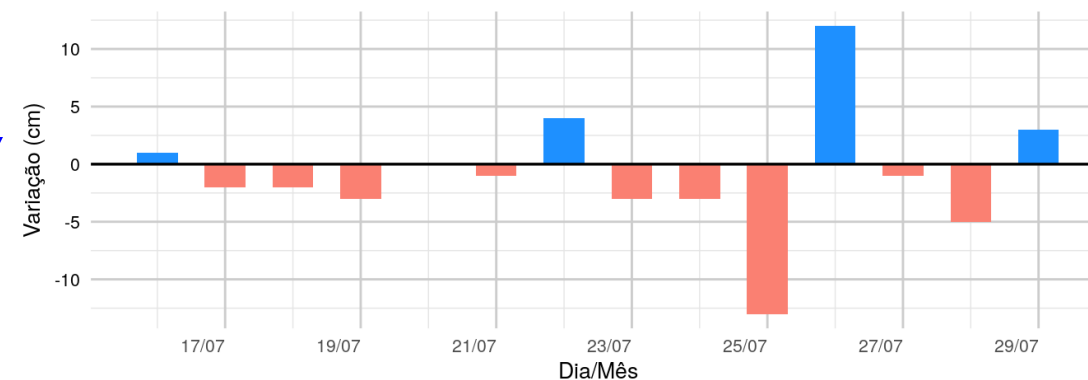
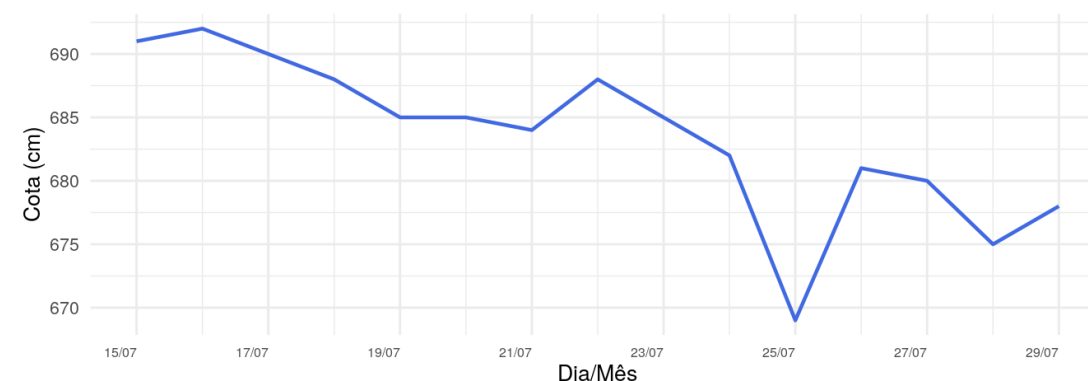
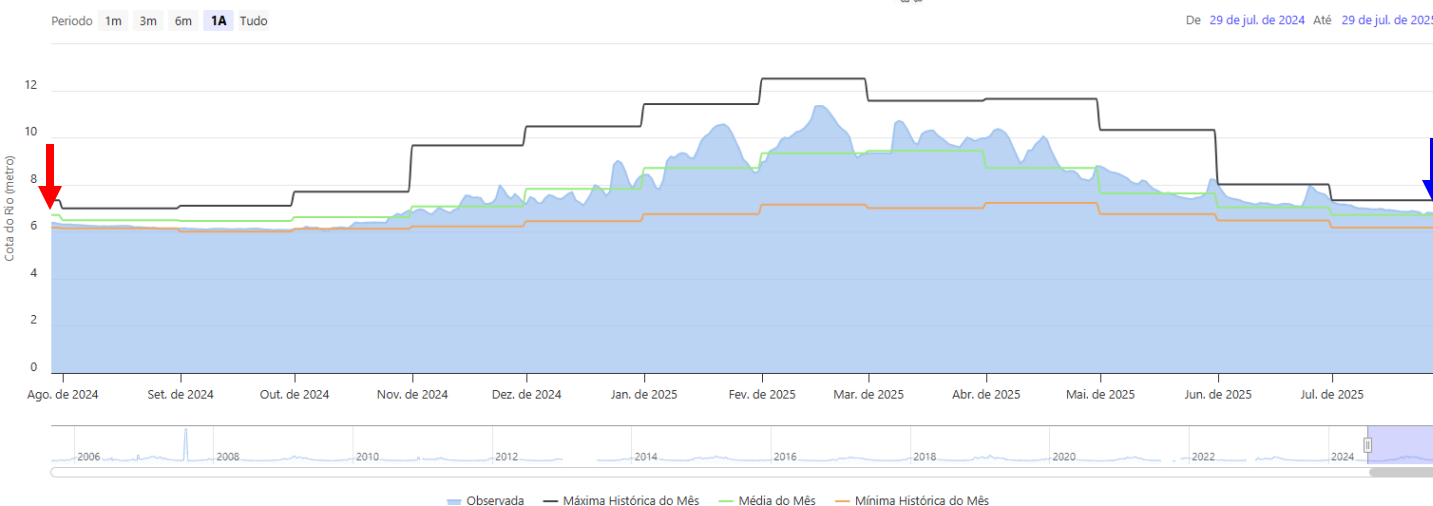
Variação das cotas nos últimos 15 dias: -147 cm, em média -9.8 cm por dia.

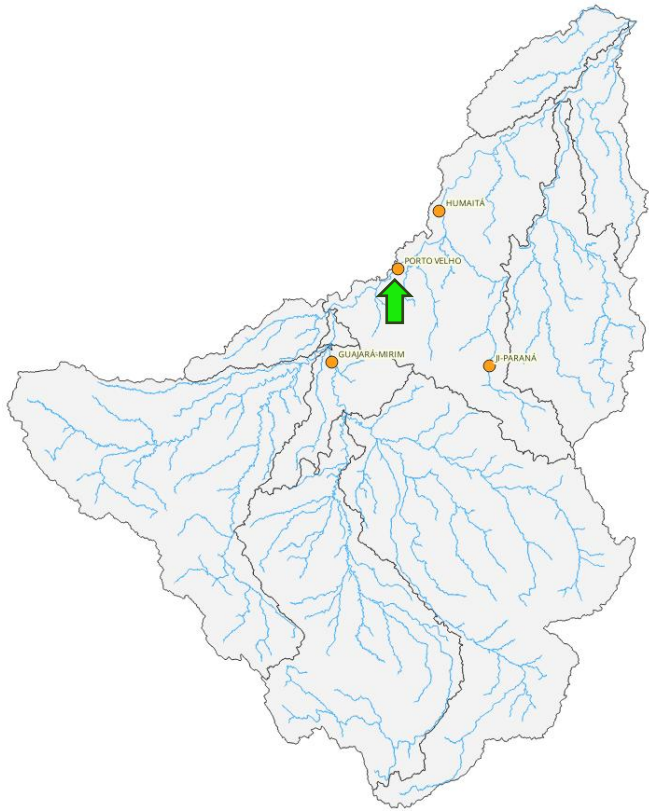




Rio Jiparaná – Estação de Ji-Paraná (RO)

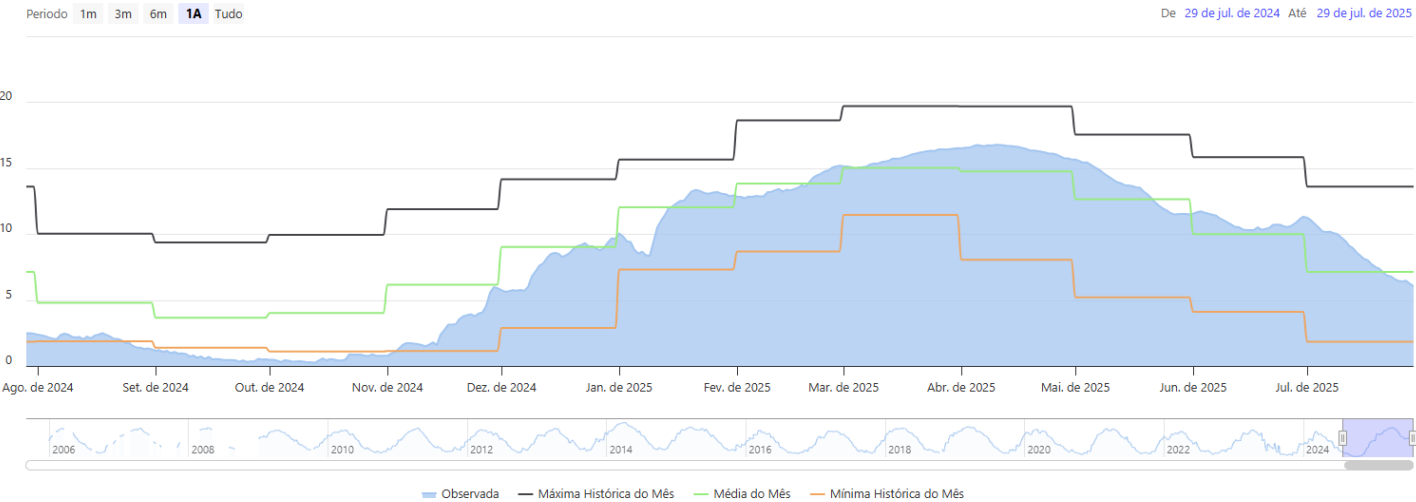
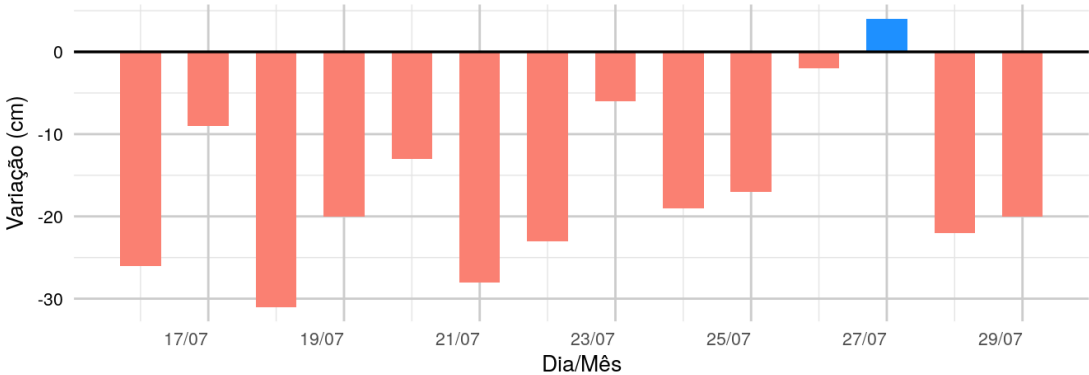
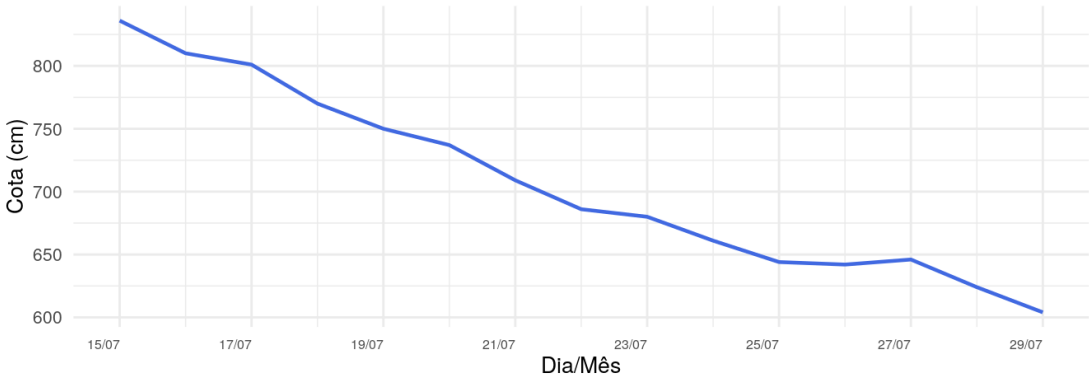
Variação das cotas nos últimos 15 dias: -13 cm, em média -0.87 cm por dia.

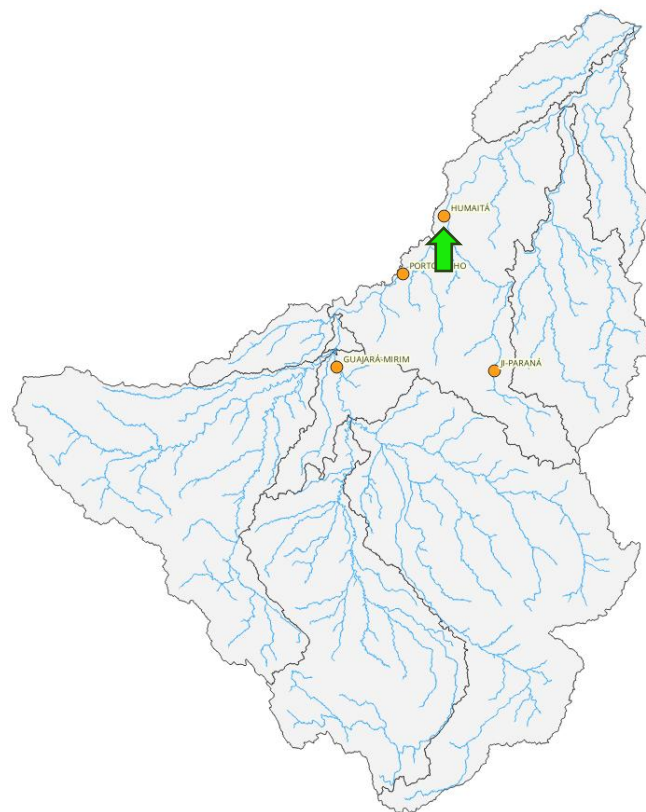




Rio Madeira – Estação de Porto Velho (RO)

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



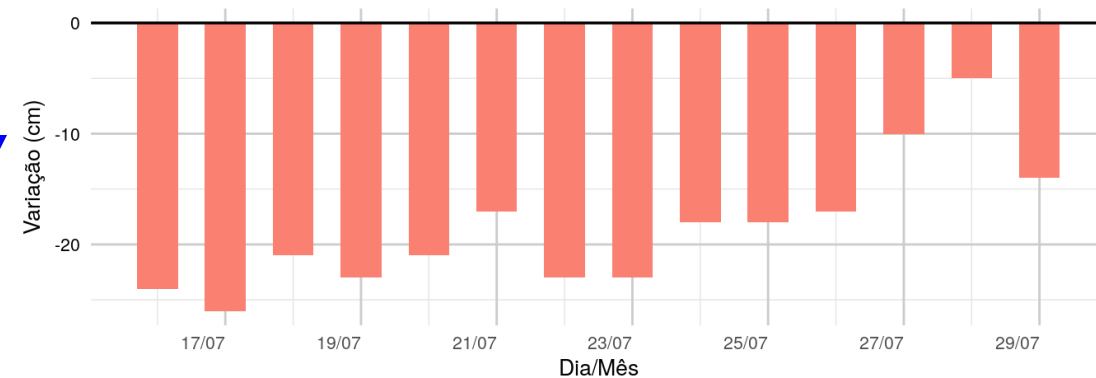
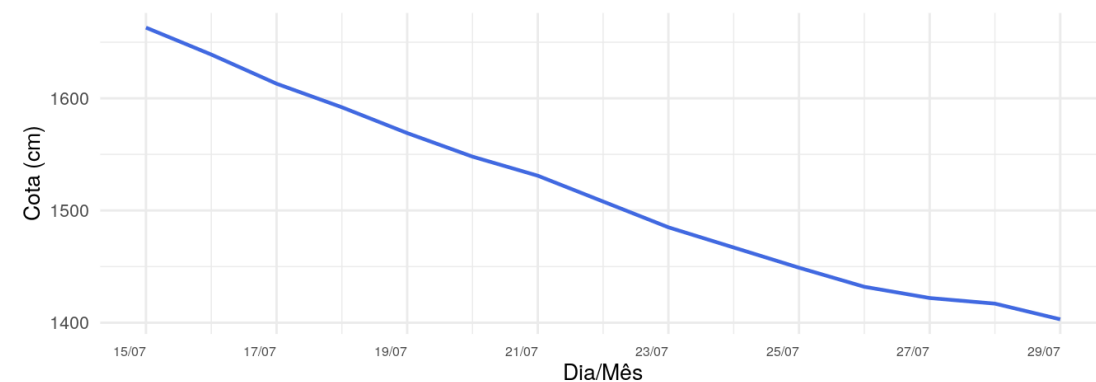
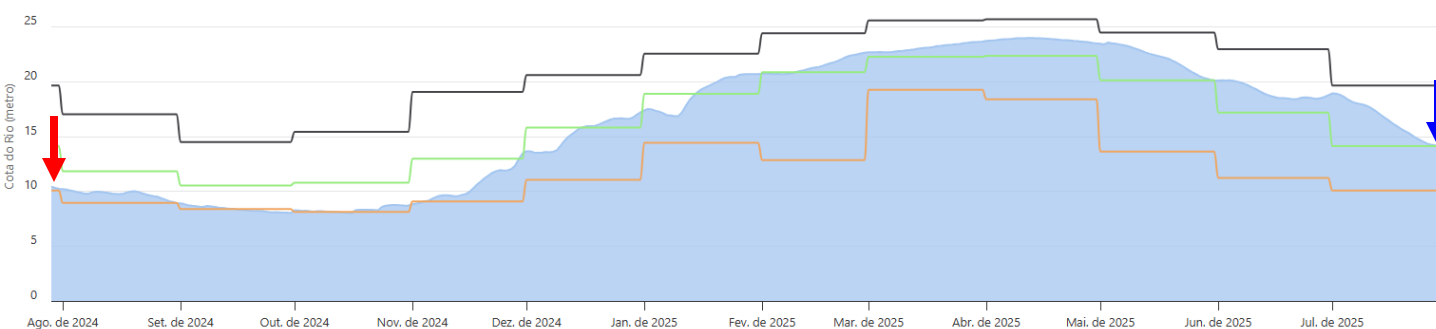


Rio Madeira – Estação de Humaita (AM)

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

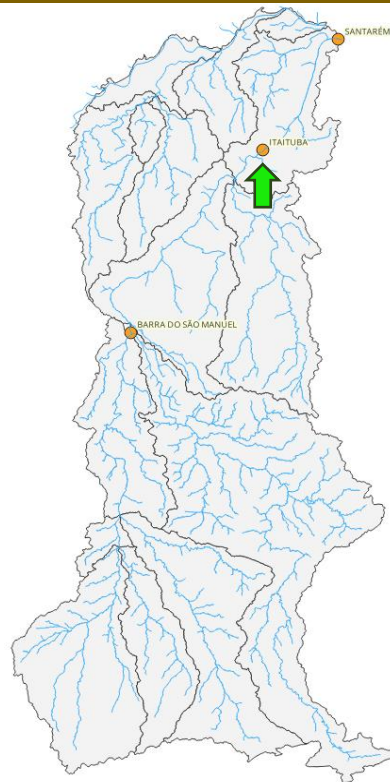
Período 1m 3m 6m **1A** Tudo

De 29 de jul. de 2024 Até 29 de jul. de 2025



Observada Máxima Histórica do Mês Média do Mês Mínima Histórica do Mês

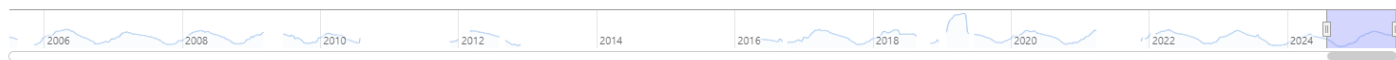
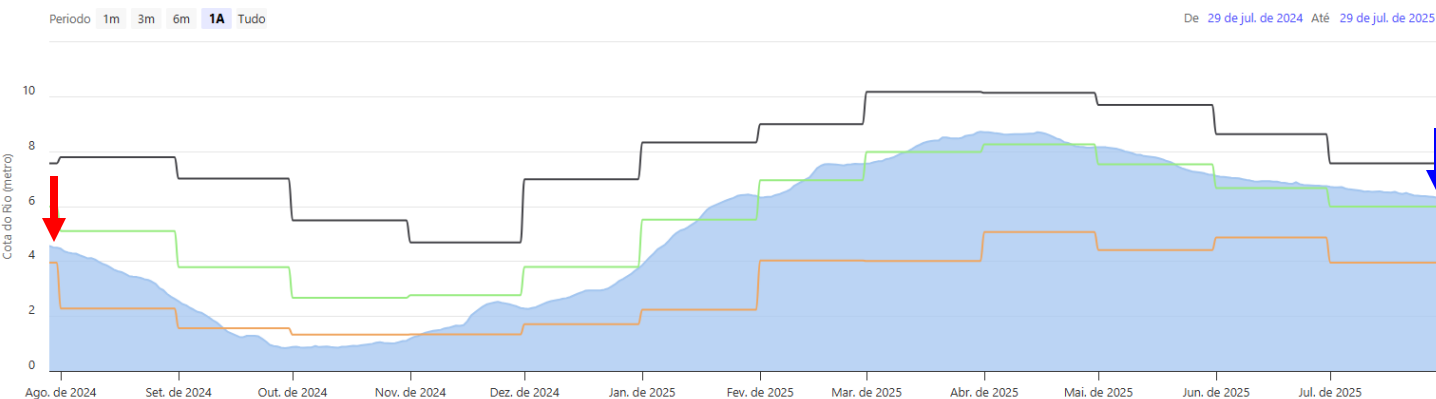
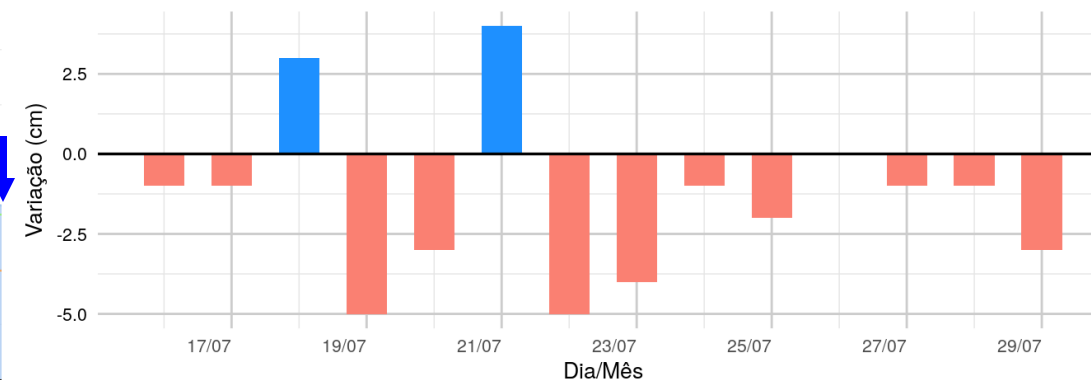
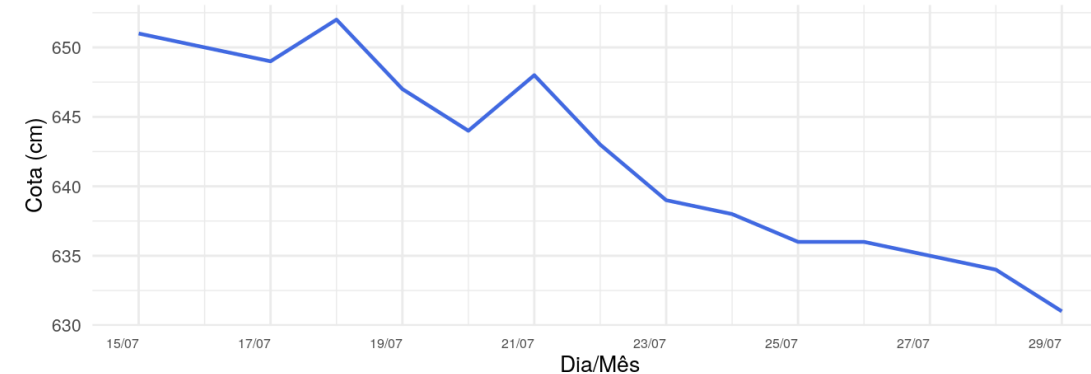
BH Rio Tapajós



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.



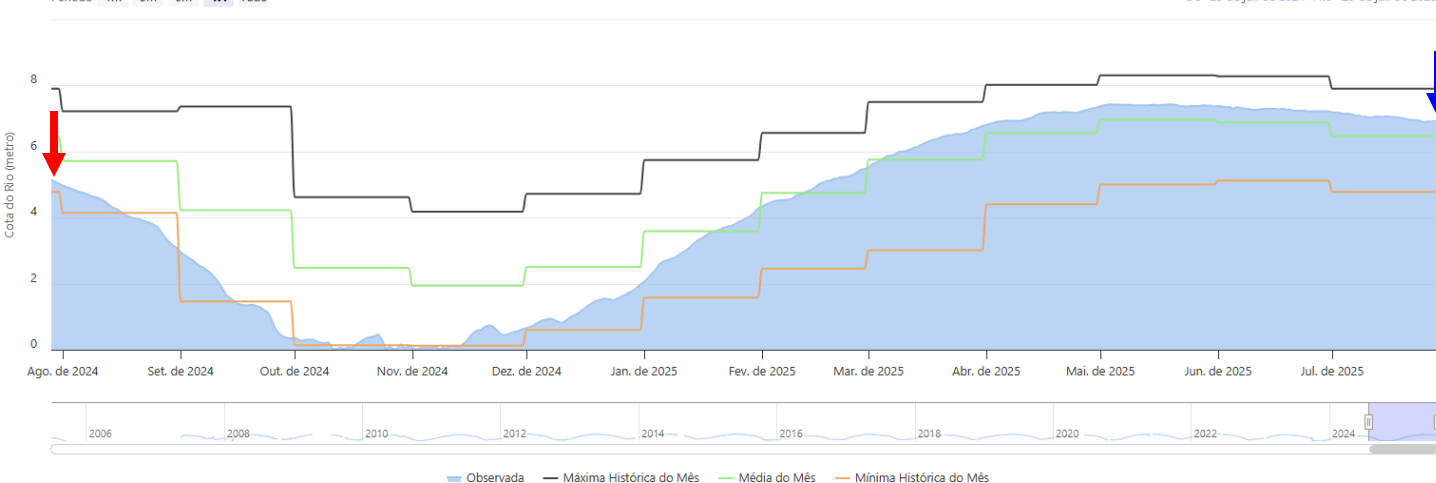
BH Rio Tapajós



Estação de Santarém (17900000)

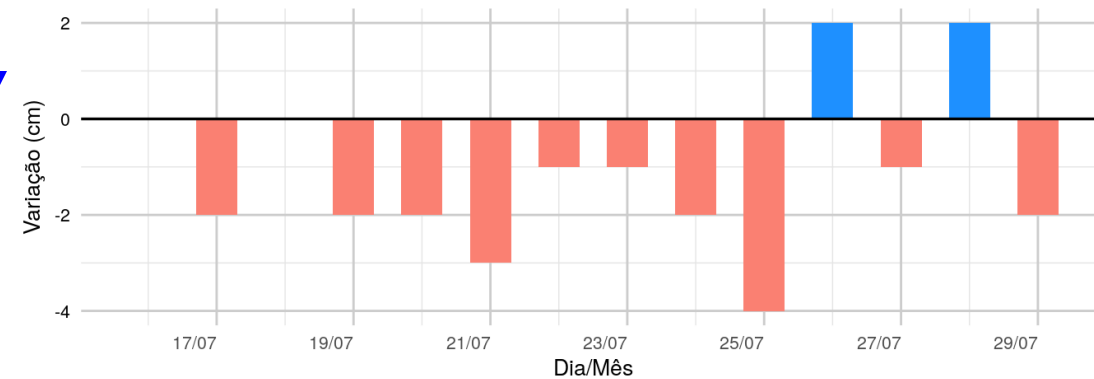
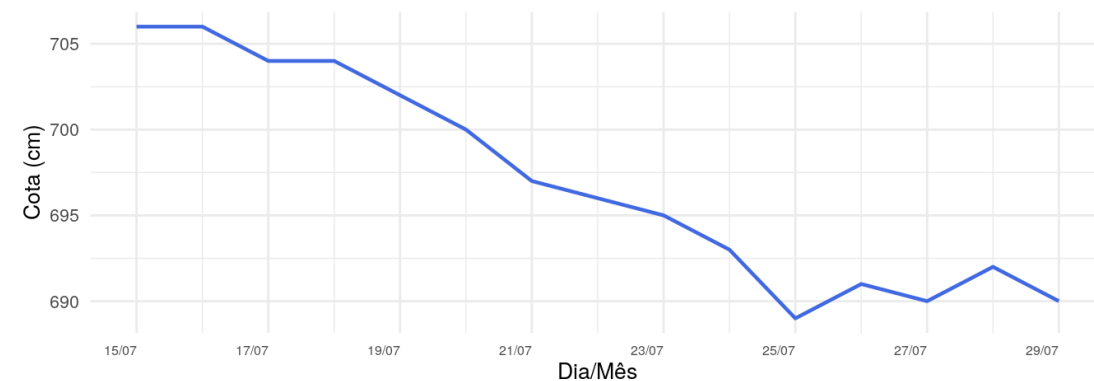
Período 1m 3m 6m 1A Tudo

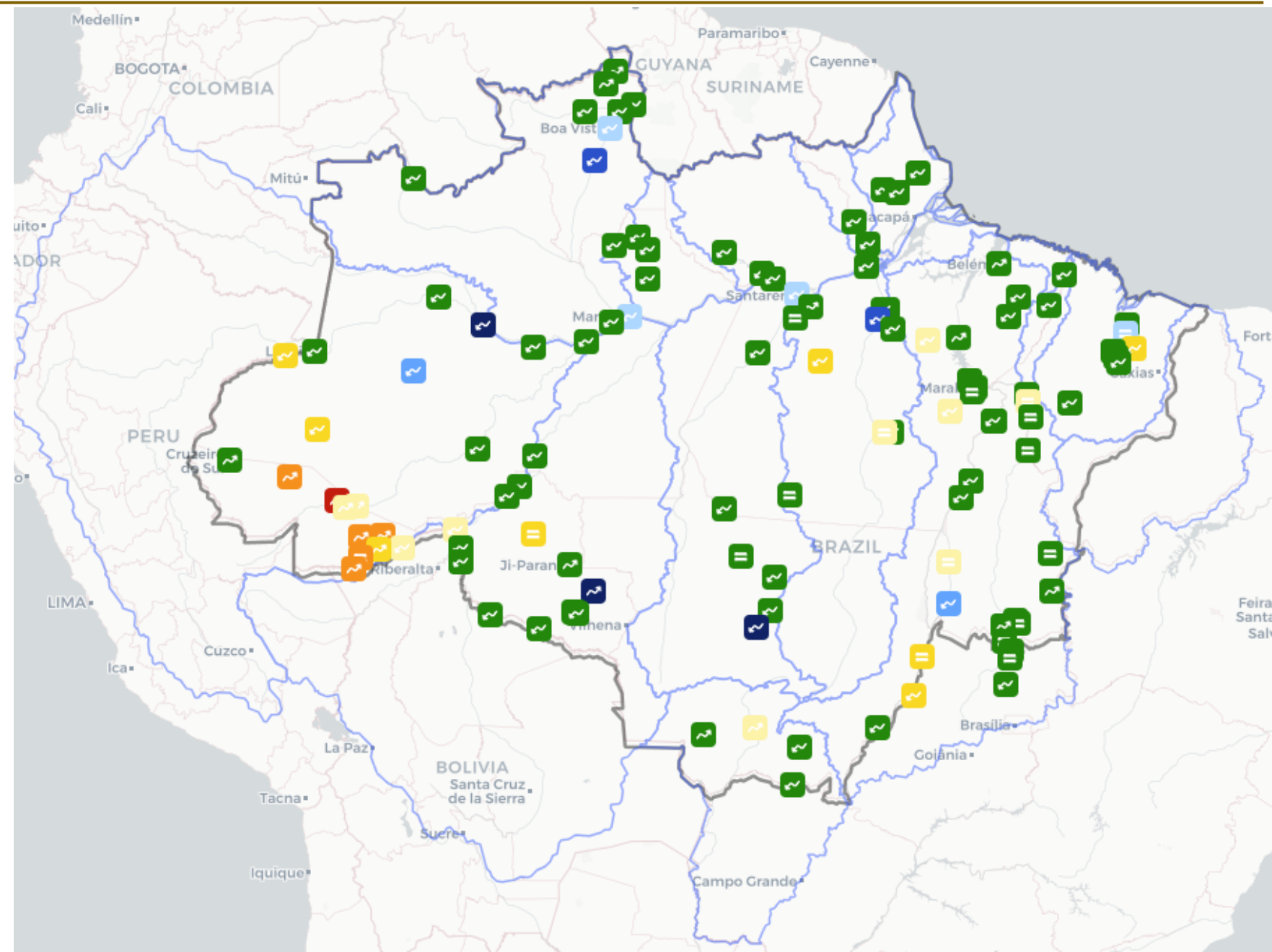
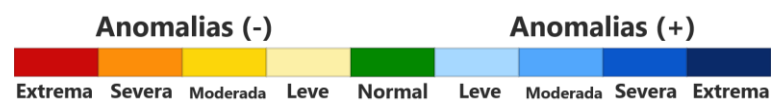
De 29 de jul. de 2024 Até 29 de jul. de 2025



Rio Tapajós – Estação de Santarém (PA)

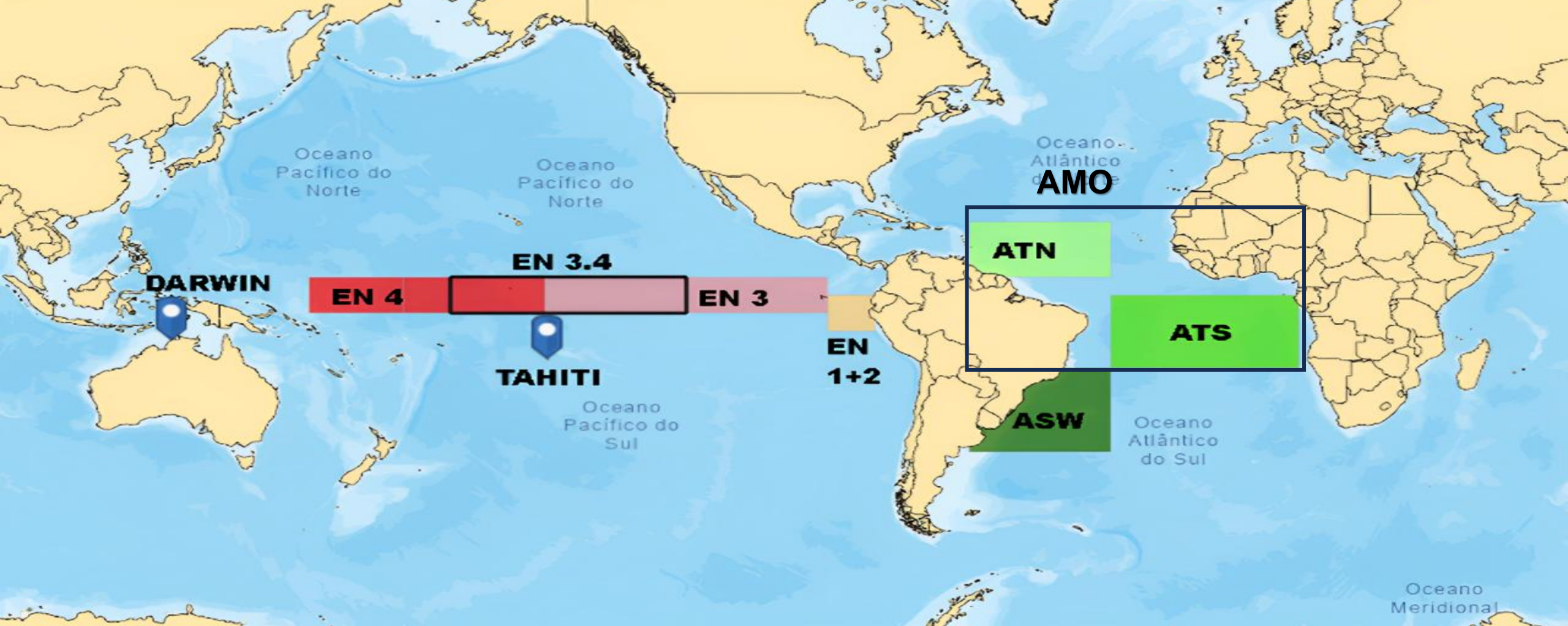
Variação das cotas nos últimos 15 dias: -16 cm, em média -1.07 cm por dia.





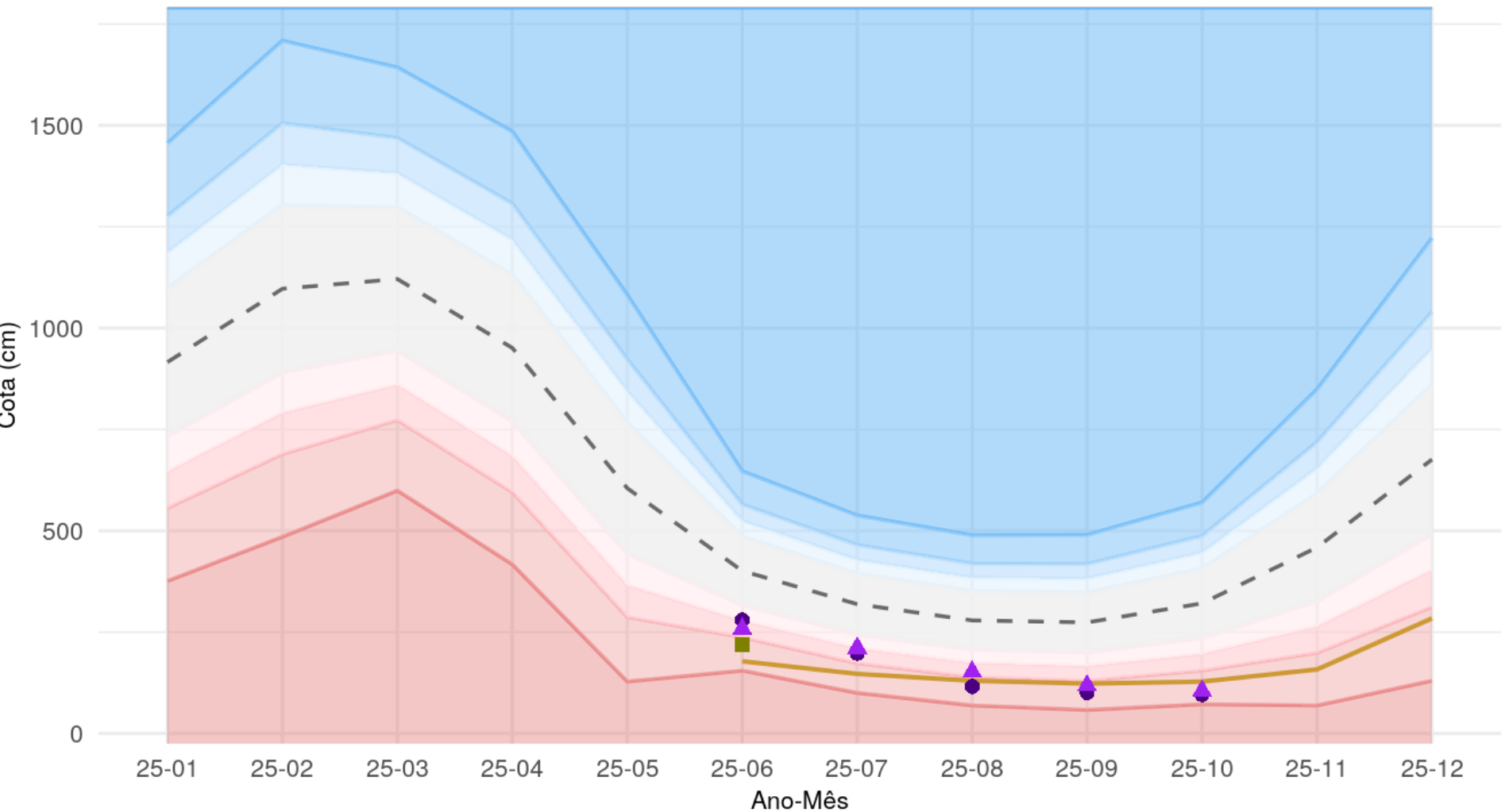
An aerial photograph showing a flooded industrial or residential area. In the foreground, a large, rusted metal structure, possibly a ship's hull or a large building, is partially submerged in muddy water. To its right, a blue and white bus is stranded on a patch of dry ground. In the background, several industrial buildings and a cluster of smaller, multi-story buildings are visible, some surrounded by floodwater. The overall scene depicts the aftermath of a significant flood event.

Prognóstico Hidrológico de Vazante



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

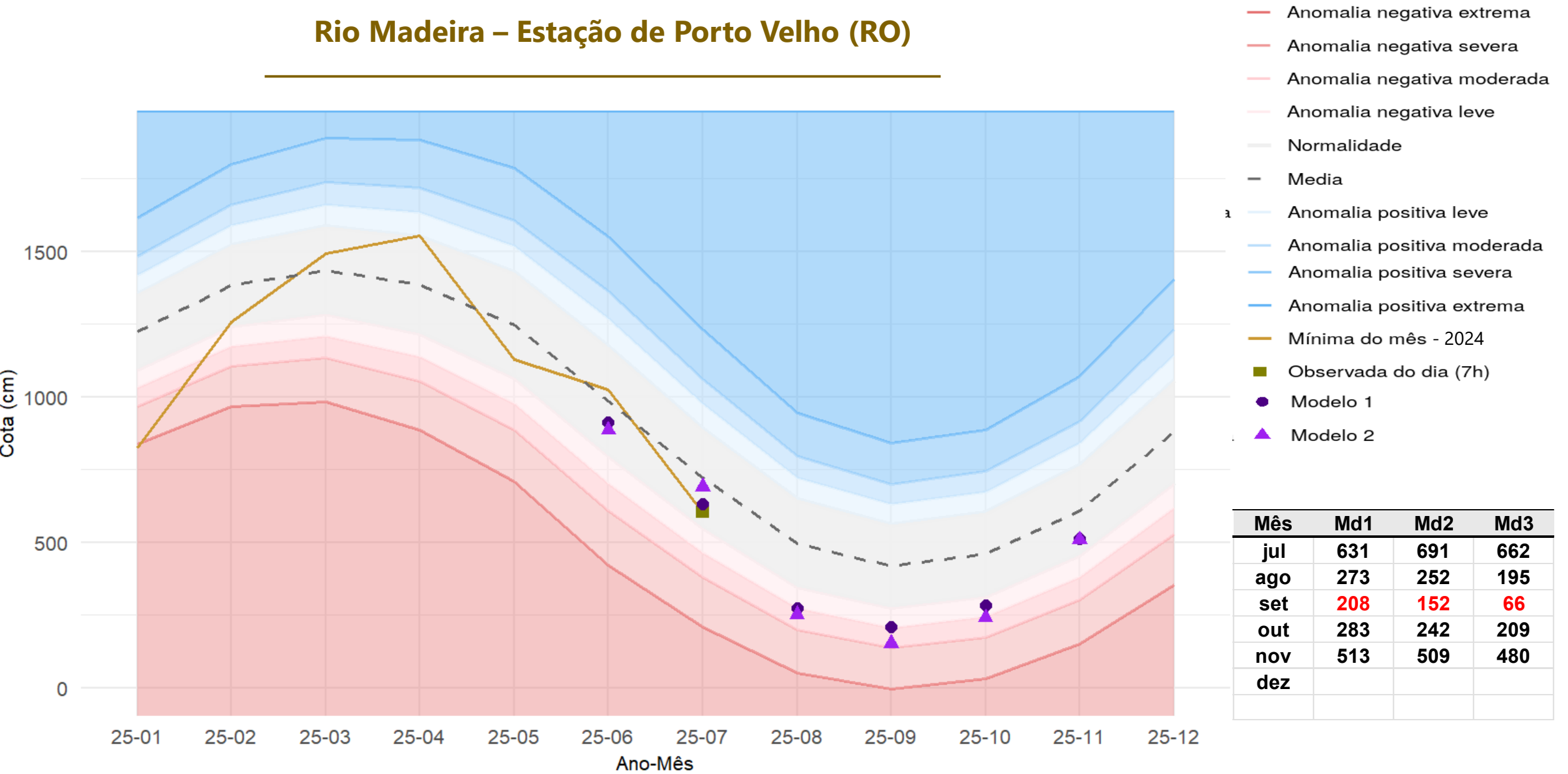
Rio Acre – Estação de Rio Branco (AC)



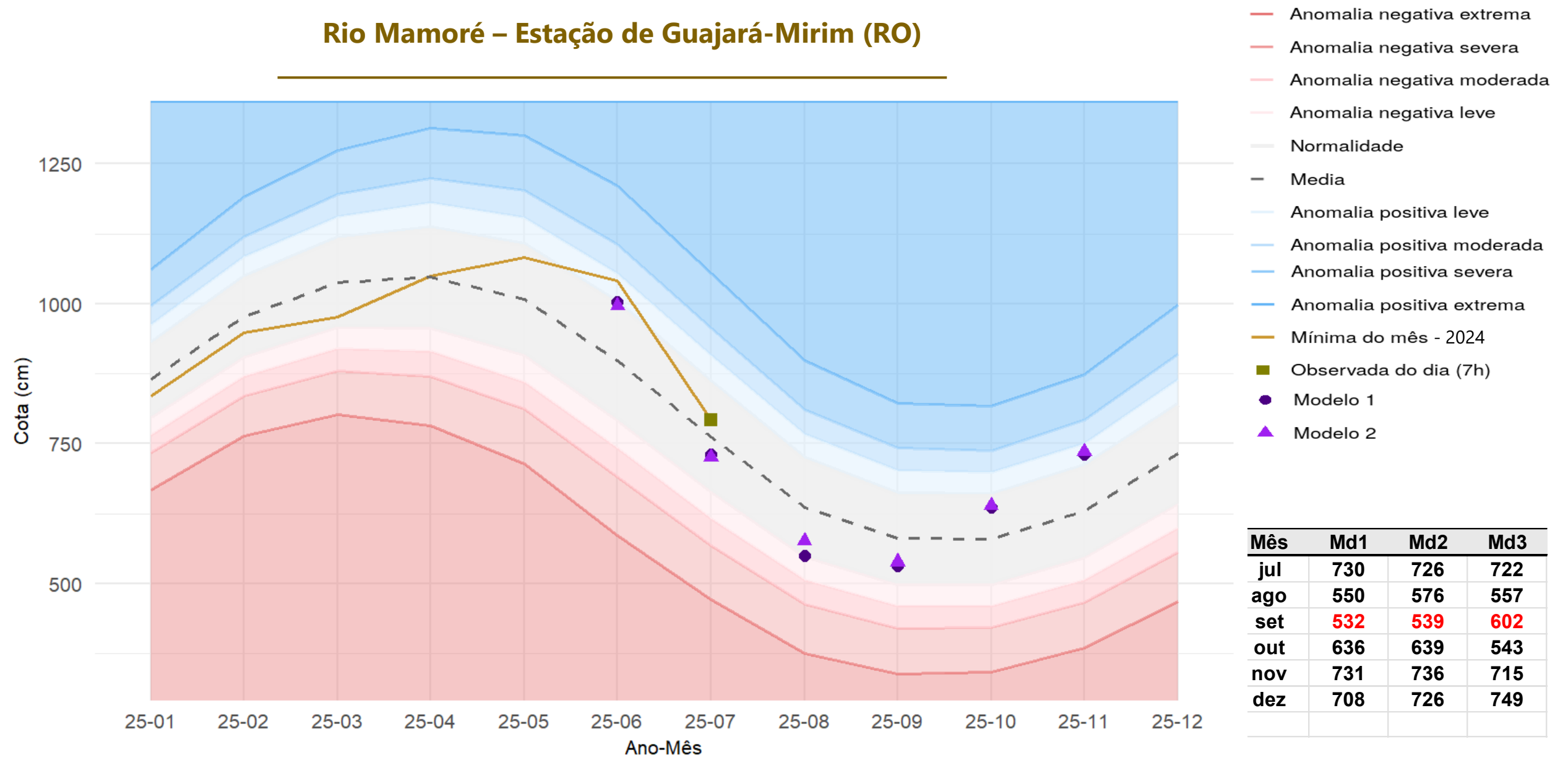
- Anomalia negativa extrema
- Anomalia negativa severa
- Anomalia negativa moderada
- Anomalia negativa leve
- Normalidade
- Media
- Anomalia positiva leve
- Anomalia positiva moderada
- Anomalia positiva severa
- Anomalia positiva extrema
- Mínima do mês - 2024
- Observada do dia (7h)
- Modelo 1
- ▲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

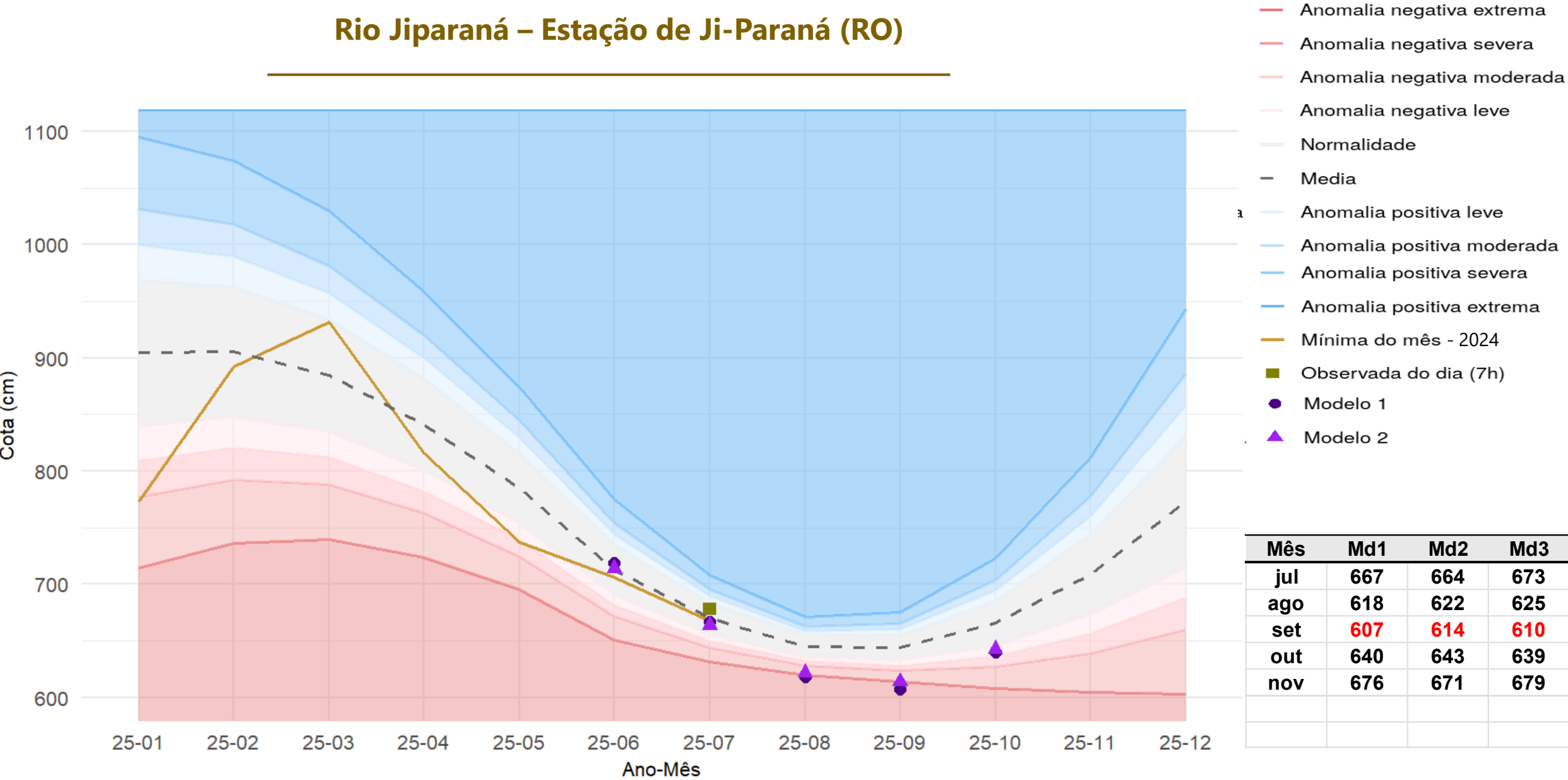
Rio Madeira – Estação de Porto Velho (RO)



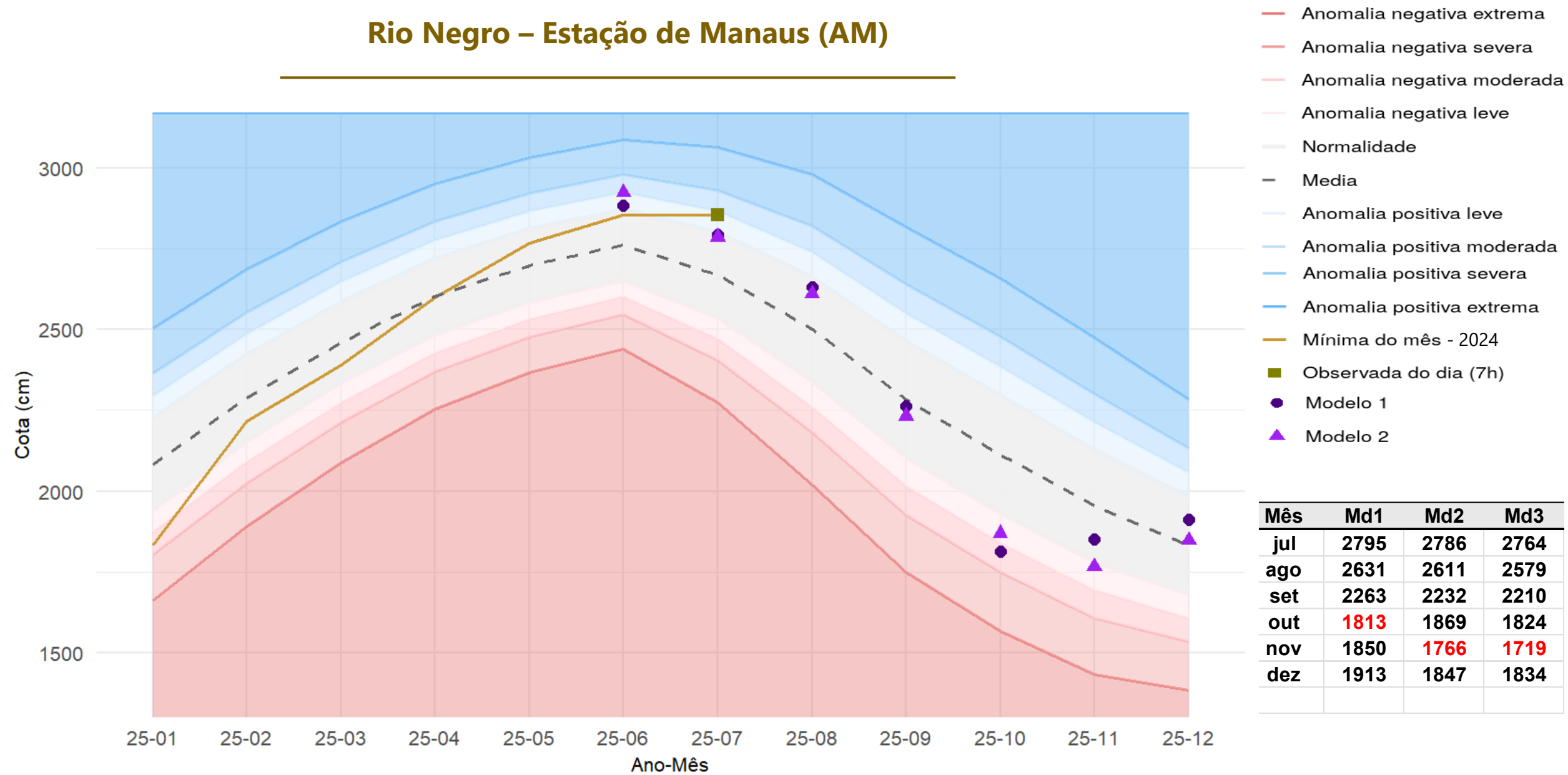
Rio Mamoré – Estação de Guajará-Mirim (RO)



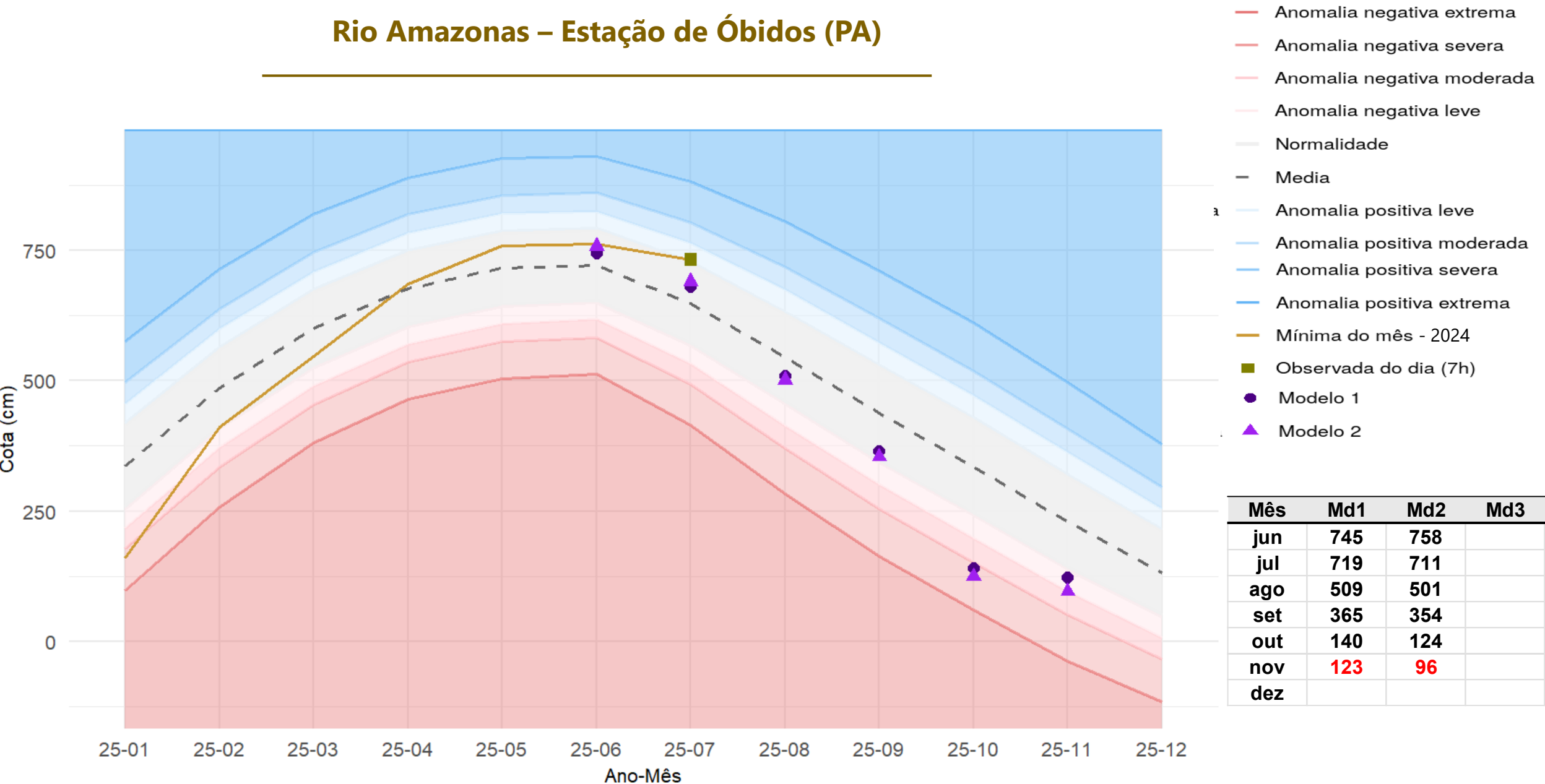
Rio Jiparaná – Estação de Ji-Paraná (RO)



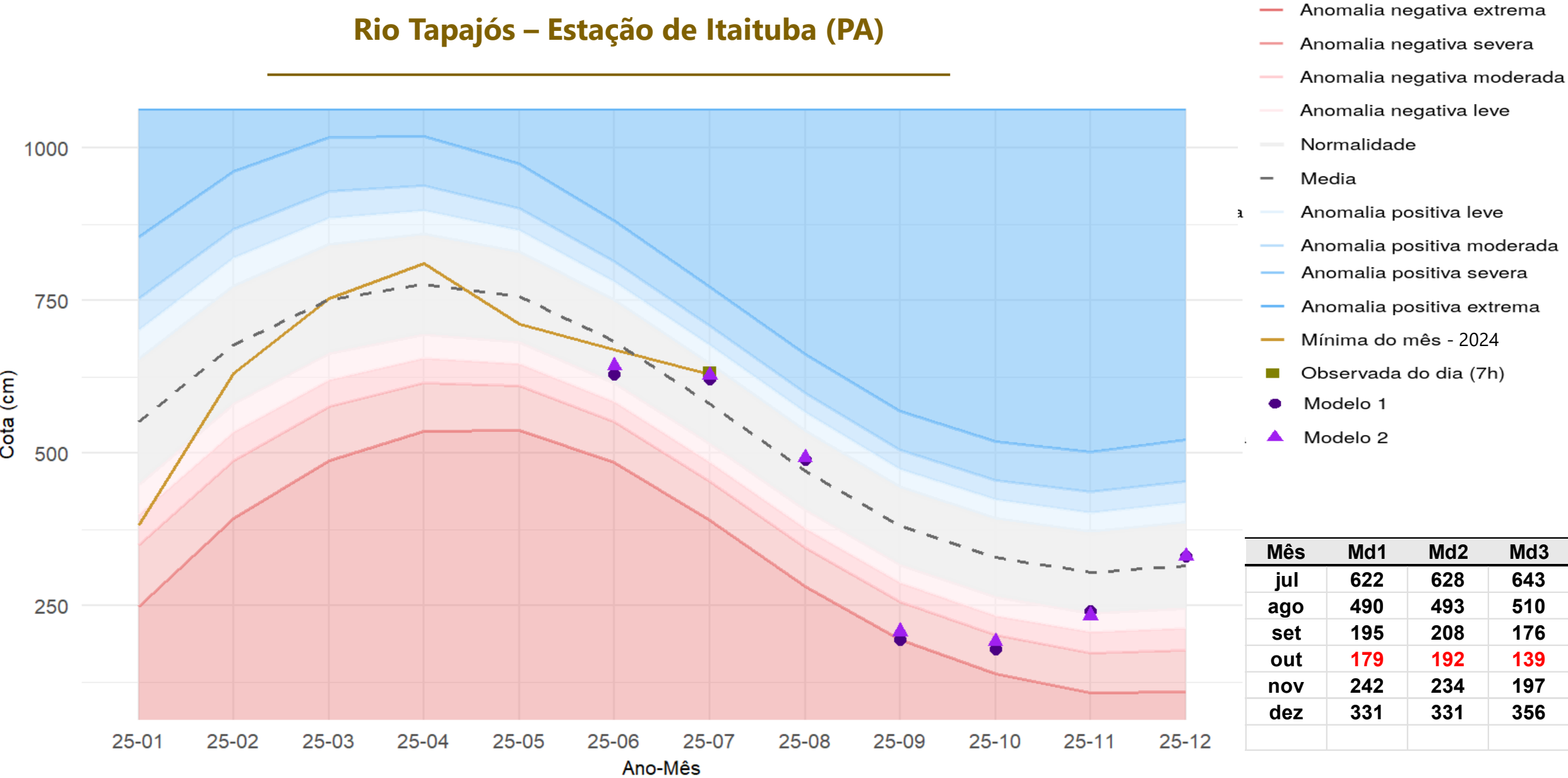
Rio Negro – Estação de Manaus (AM)



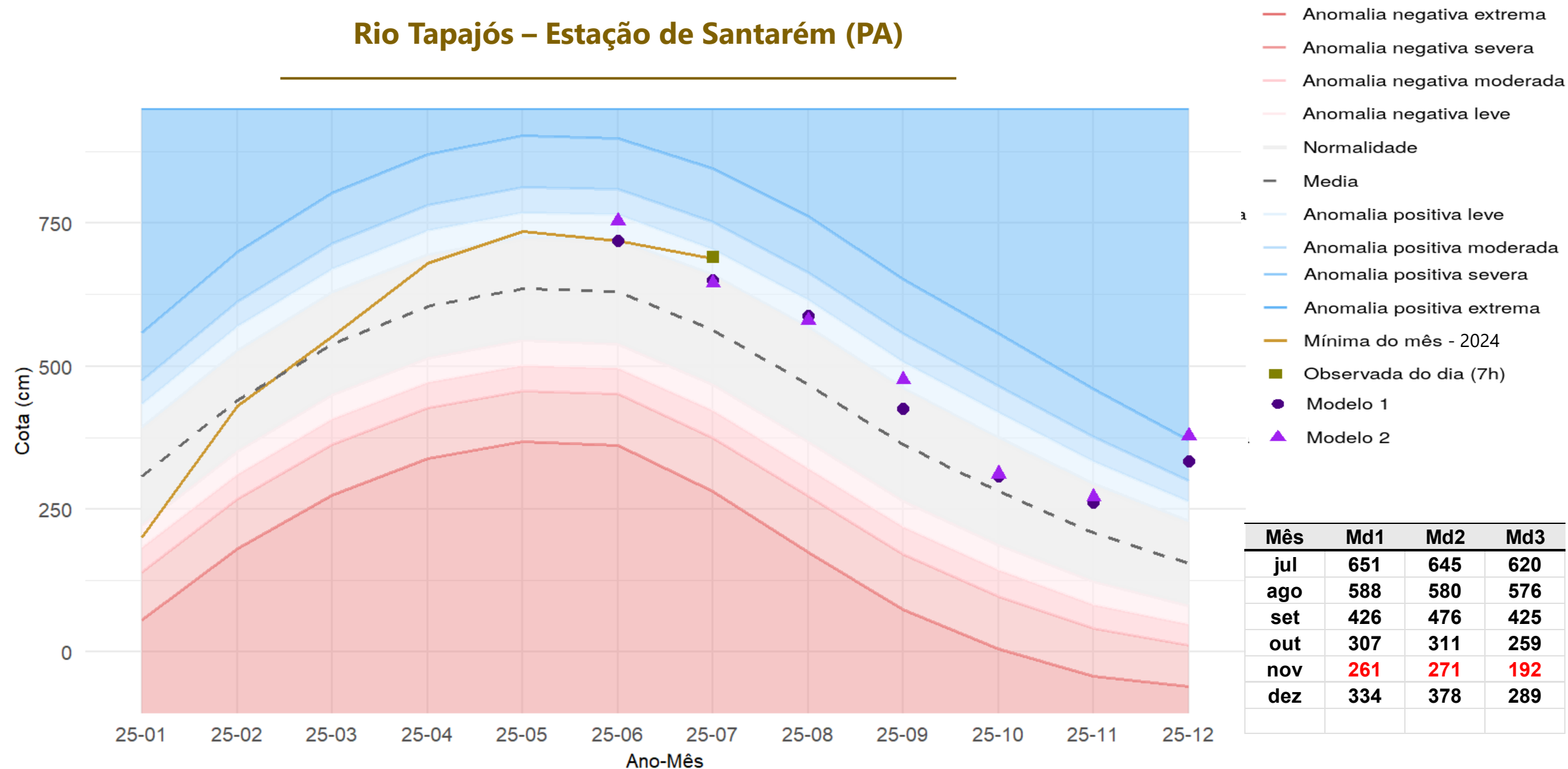
Rio Amazonas – Estação de Óbidos (PA)



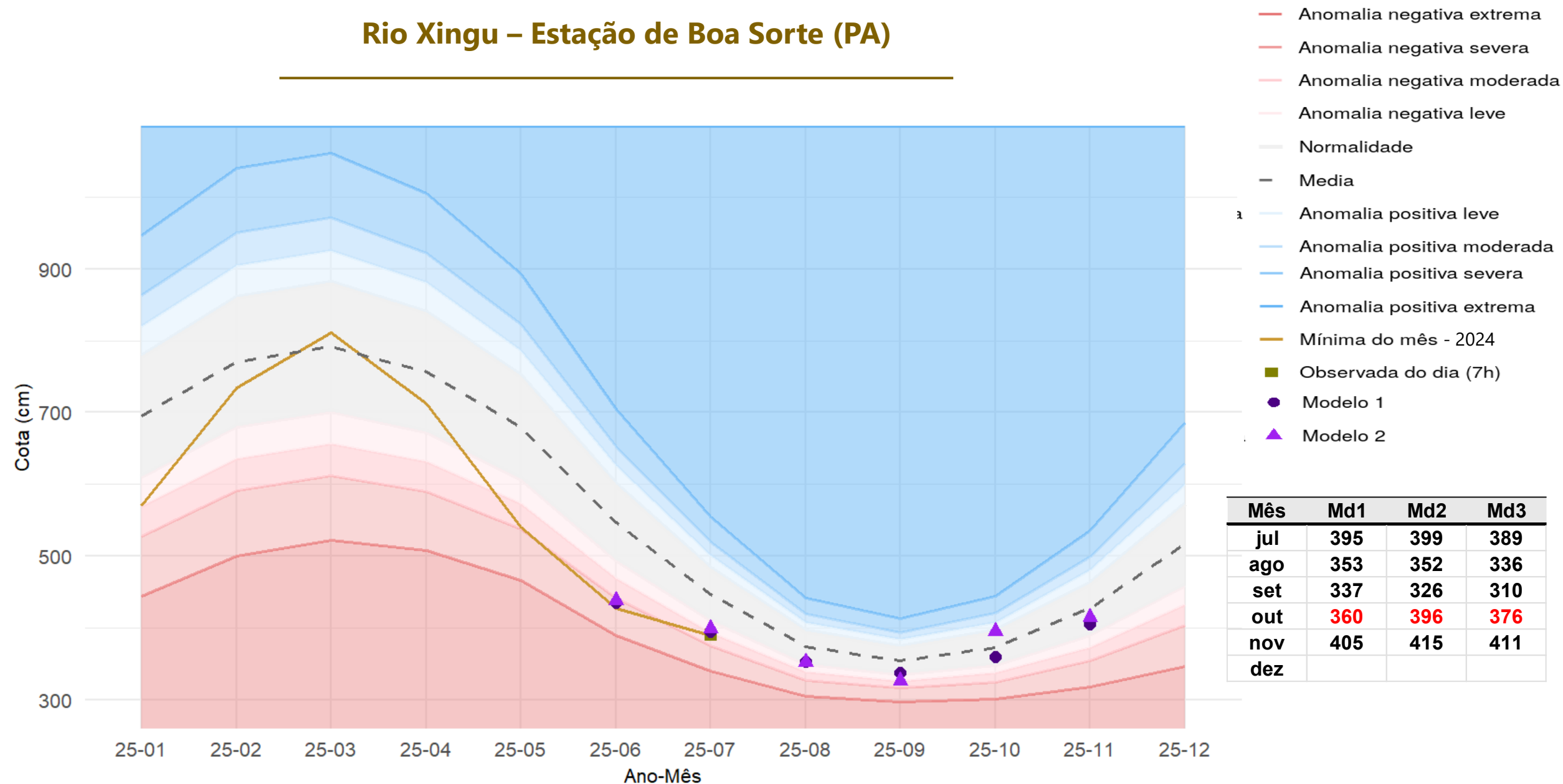
Rio Tapajós – Estação de Itaituba (PA)



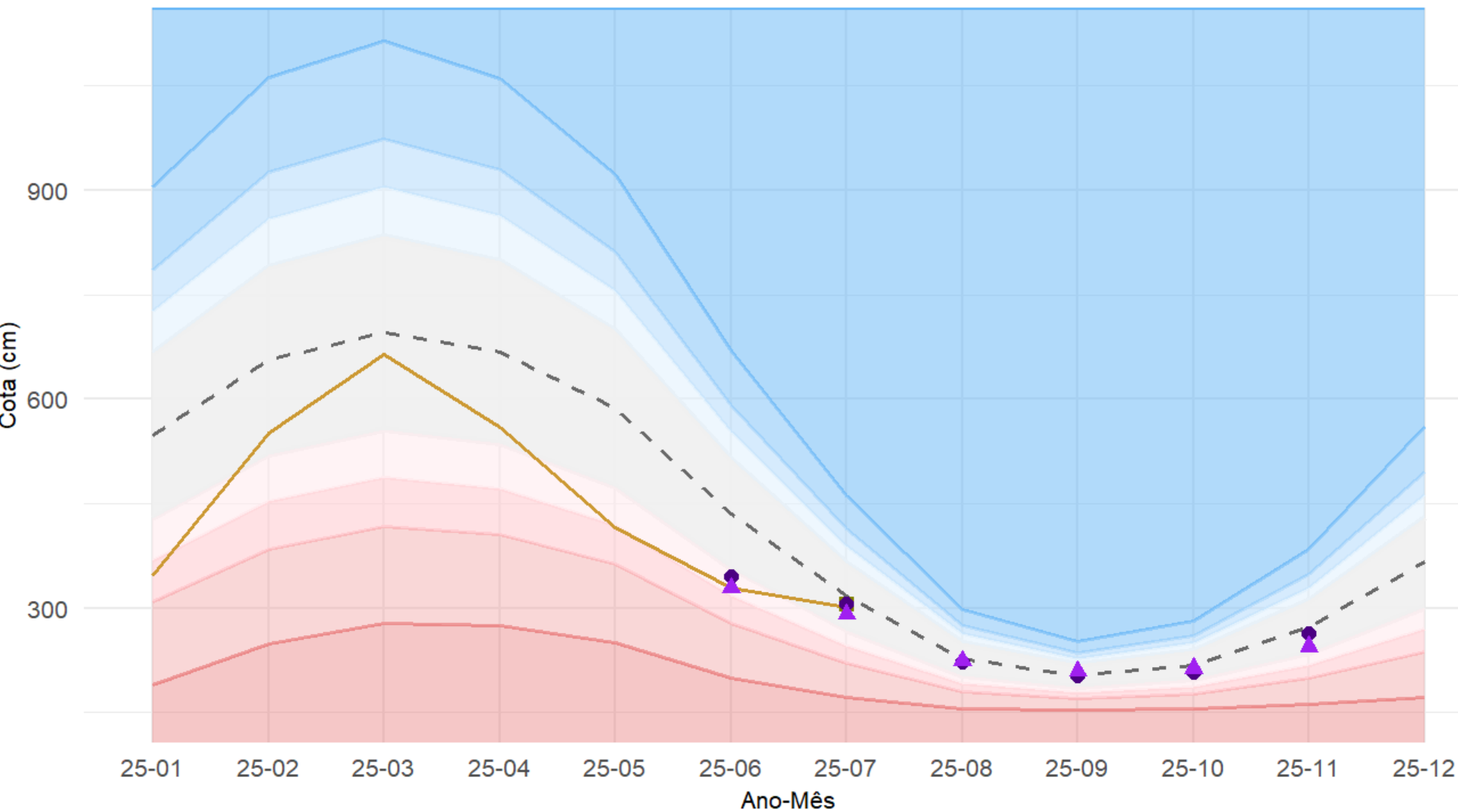
Rio Tapajós – Estação de Santarém (PA)



Rio Xingu – Estação de Boa Sorte (PA)



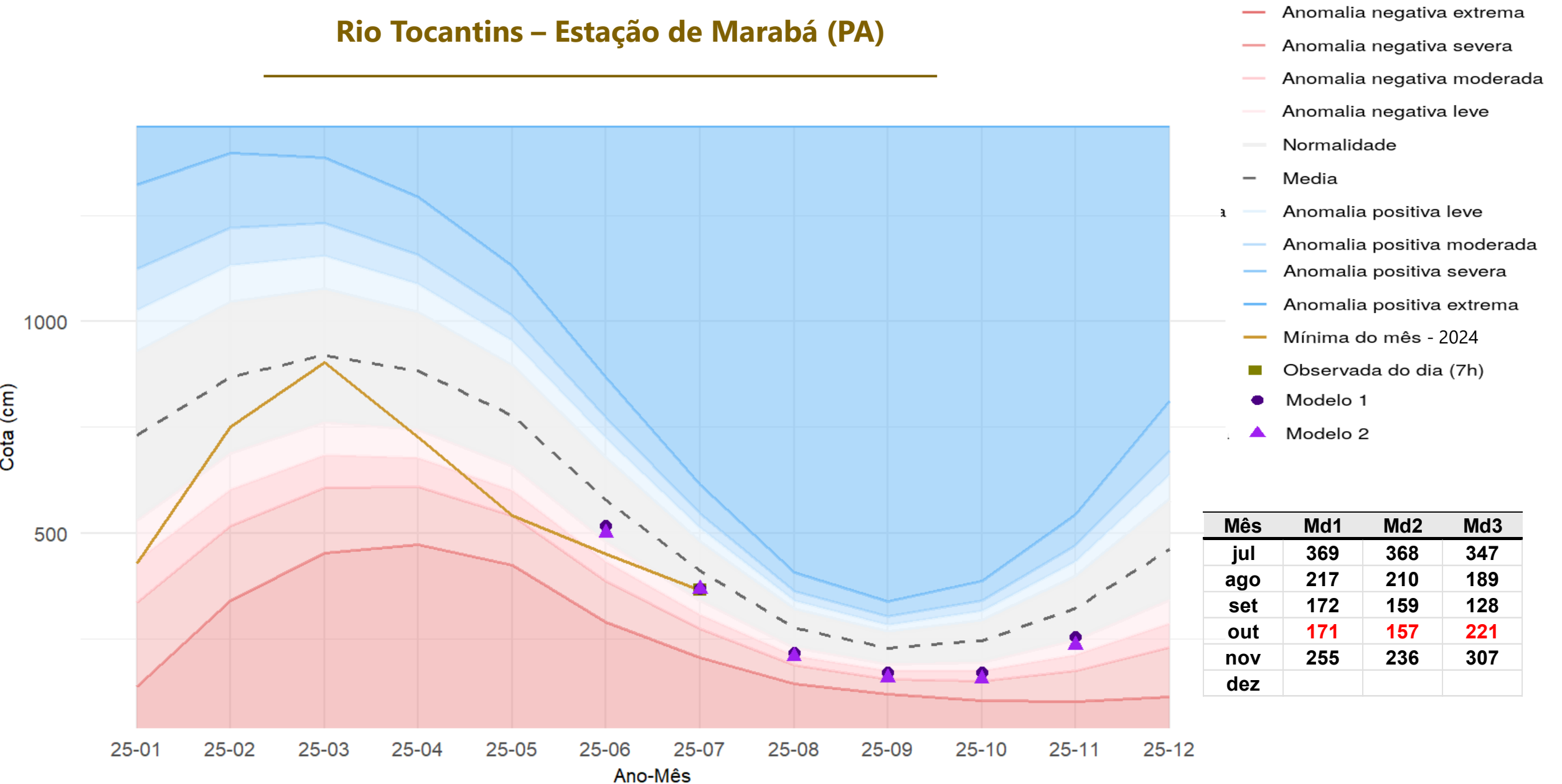
Rio Araguaia – Estação de Conceição do Araguaia (PA)



- 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	306	291	279
ago	223	224	223
set	202	209	200
out	208	213	210
nov	264	244	240

Rio Tocantins – Estação de Marabá (PA)





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Sistema de Proteção da Amazônia



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Secretaria - Geral

Obrigado!

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