



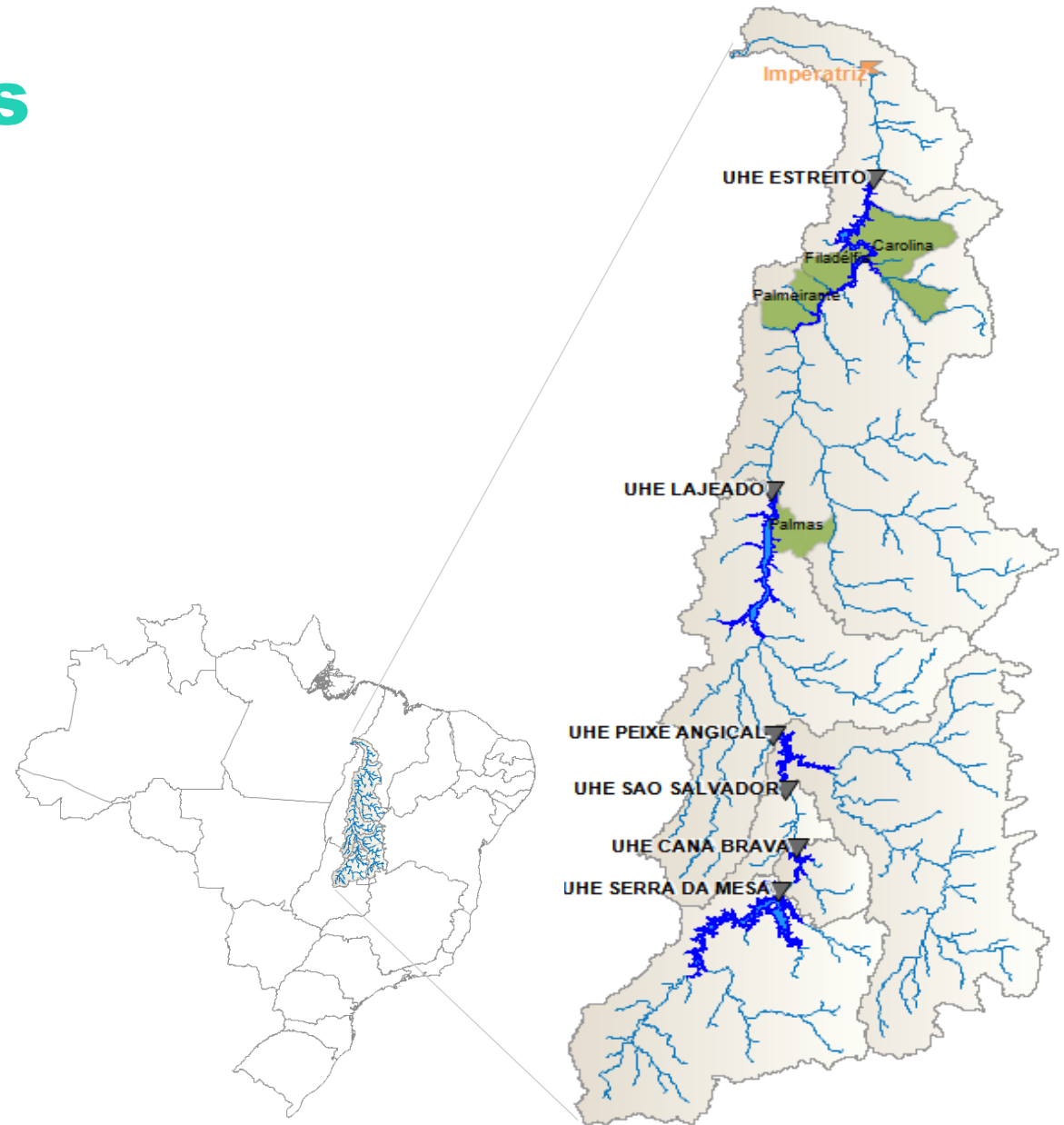
Sala de Crise de Cheias na Bacia do Rio Tocantins
26 de janeiro de 2022

Acompanhamento da Operação da Bacia do Rio Tocantins na cheia de 2021/2022

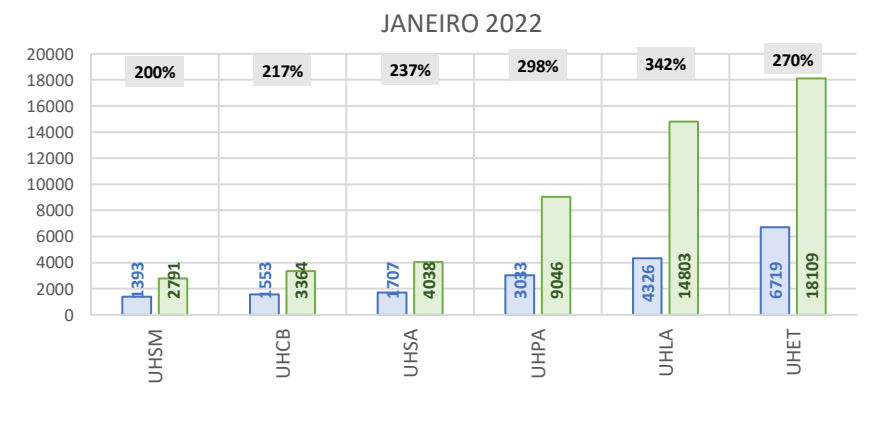
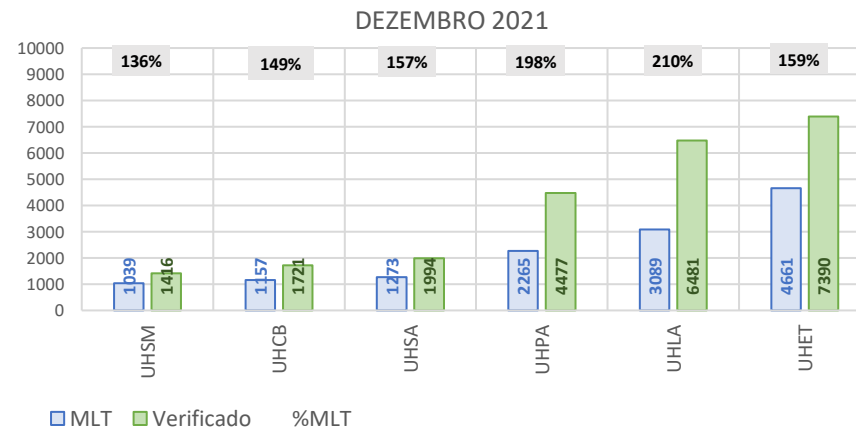
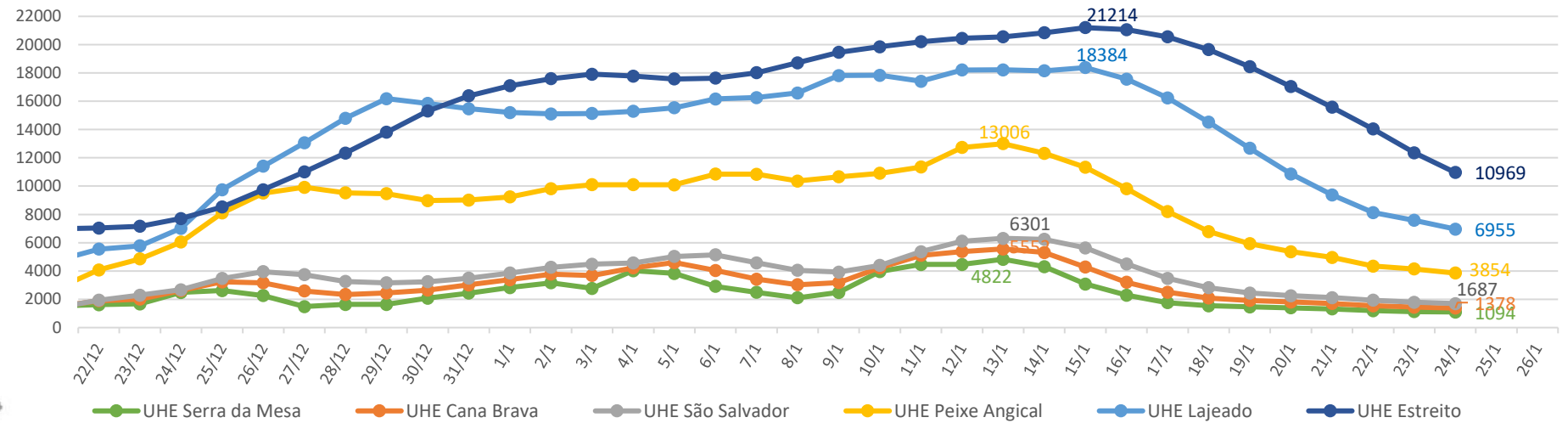
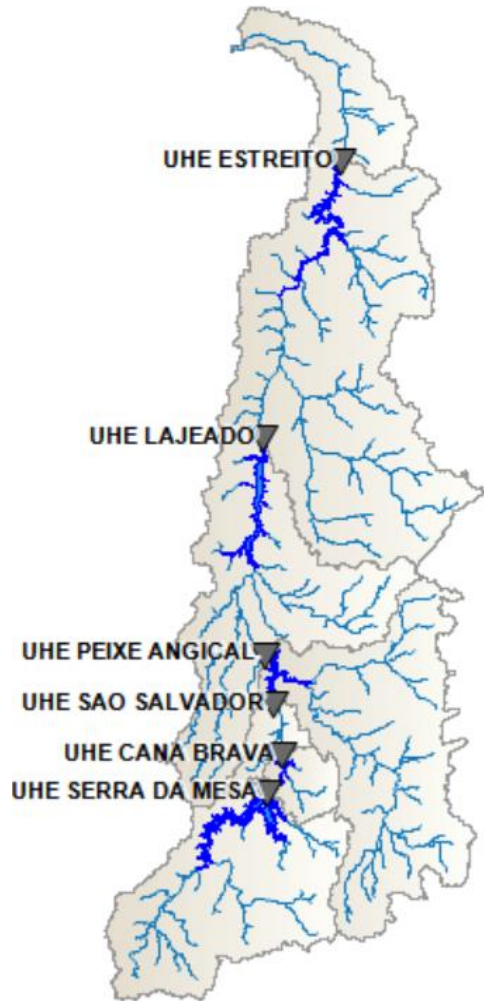
Coordenação de Pré-Operação – U.O. Operação

Bacia do Rio Tocantins

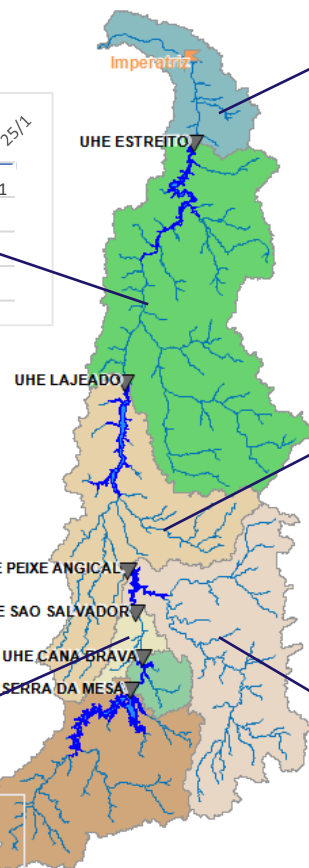
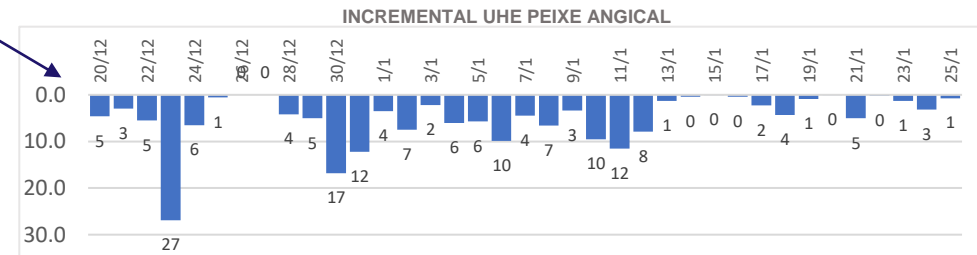
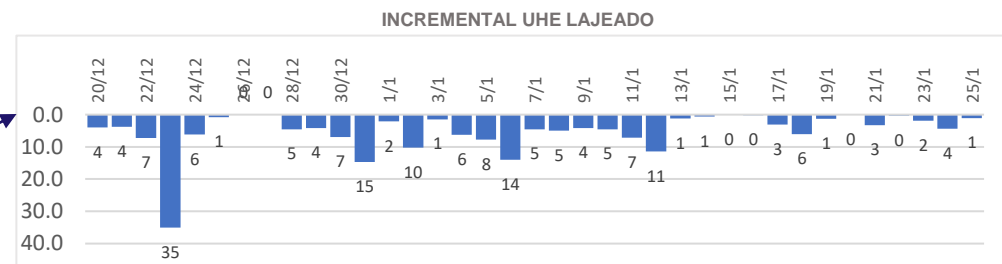
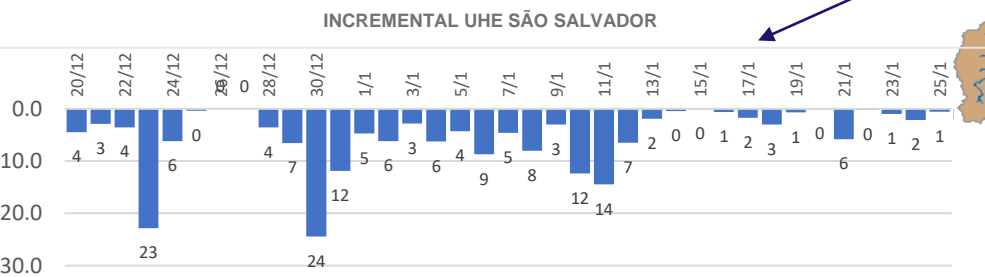
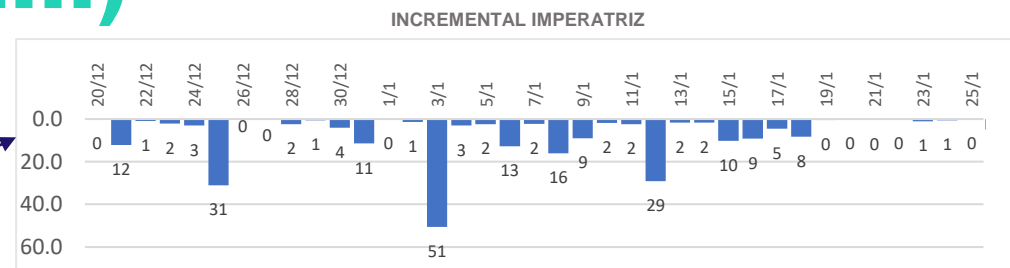
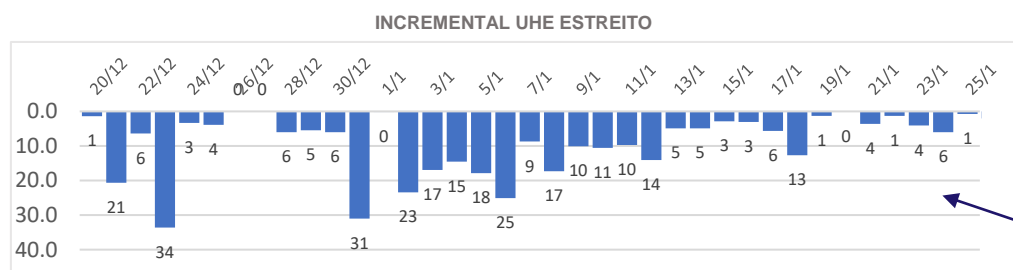
USINA	Área de Drenagem (km ²)	% Área UHET	Capacidade Máxima de Descarga (m ³ /s)
UHE Serra da Mesa	51.233	18%	14.435
UHE Cana Brava	58.022	20%	17.500
UHE São Salvador	63.704	22%	19.300
UHE Peixe Angical	125.884	44%	32.913
UHE Lajeado	183.718	64%	49.870
UHE Estreito	285.491	100%	62.719



Bacia Rio Tocantins - Vazões Naturais (m³/s)



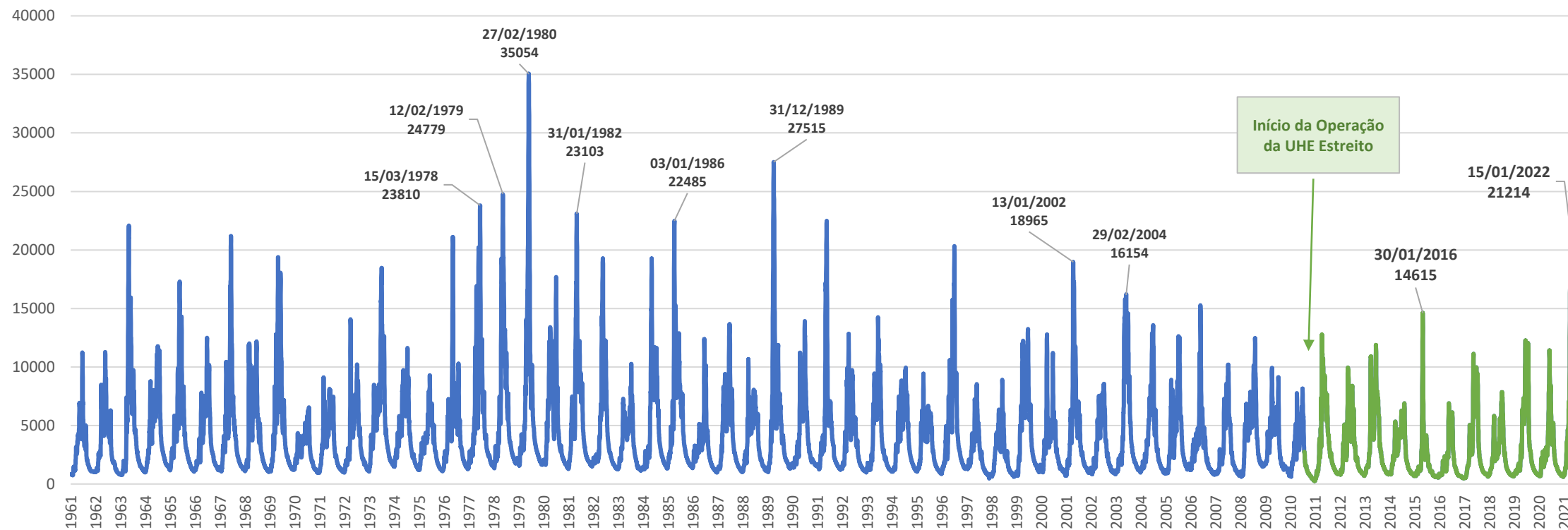
Precipitação Observada (mm)



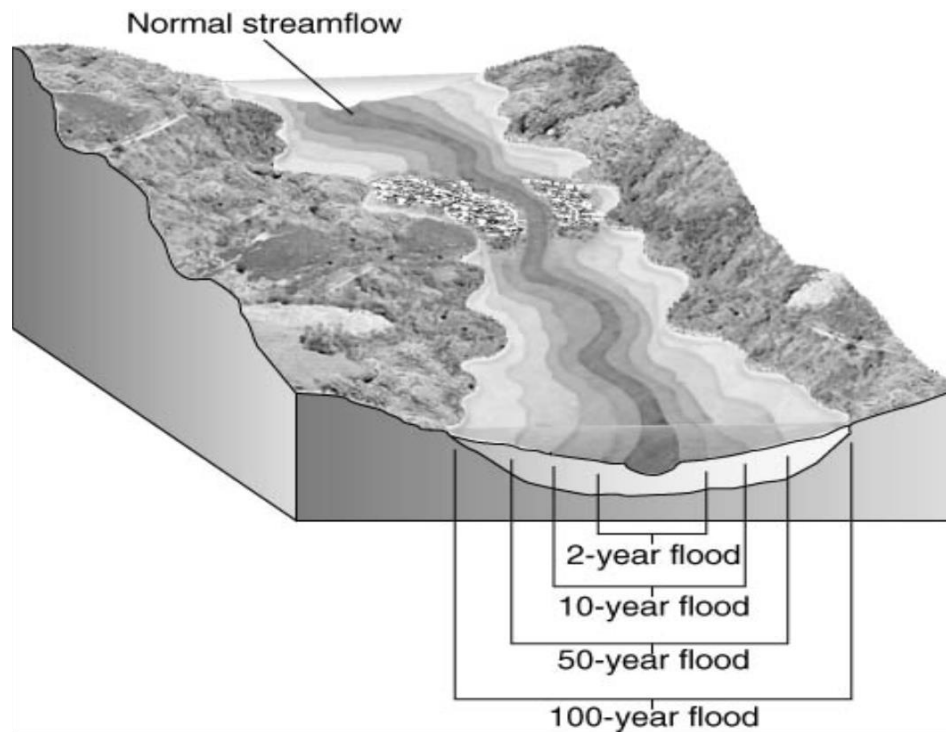
Histórico de Vazões Naturais

1961 - 2022

UHE Estreito - Série de Vazões Naturais
Histórico em Base Média Diária - 1961 a 2022



Vazões Máximas e Tempo de Recorrência



A **Probabilidade** anual de excedência de um determinado evento é a probabilidade que este venha a ser igualado ou superado num ano qualquer.

O **Tempo de Retorno** de um evento é o intervalo médio de tempo, em anos, que decorre entre duas ocorrências subsequentes de uma maior ou igual magnitude.

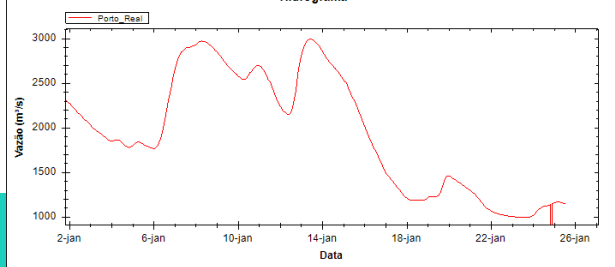
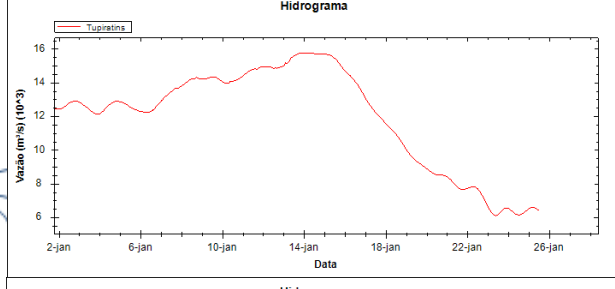
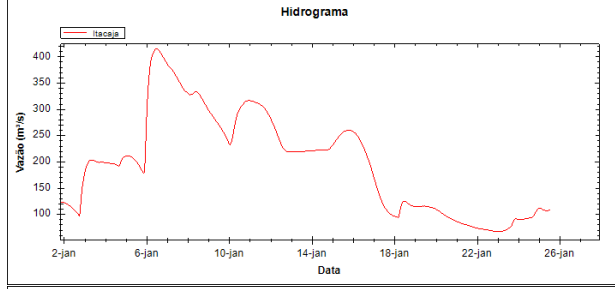
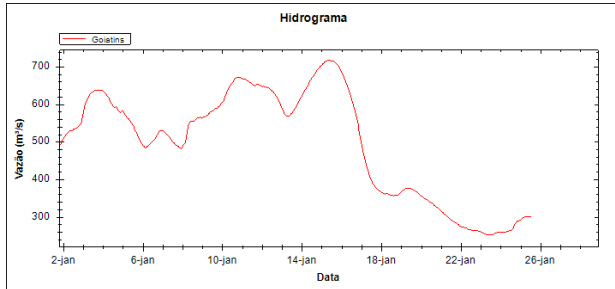
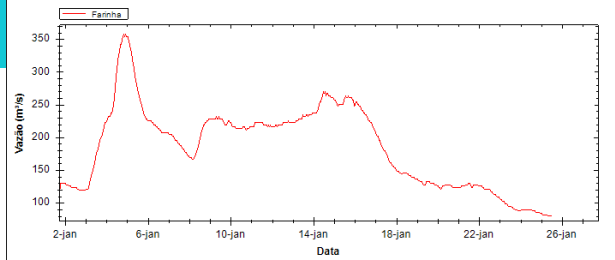
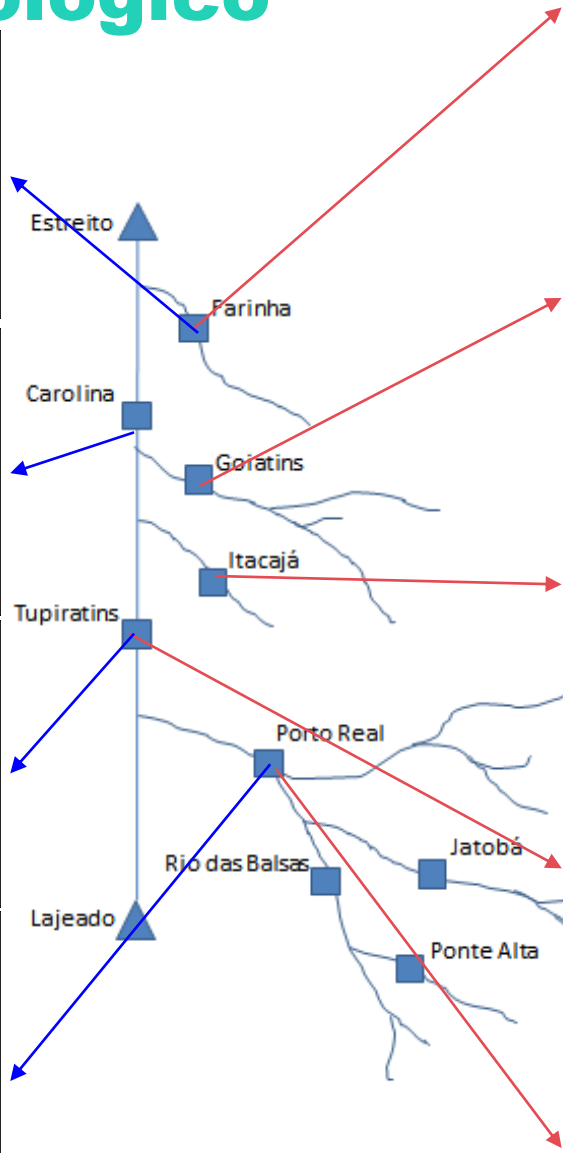
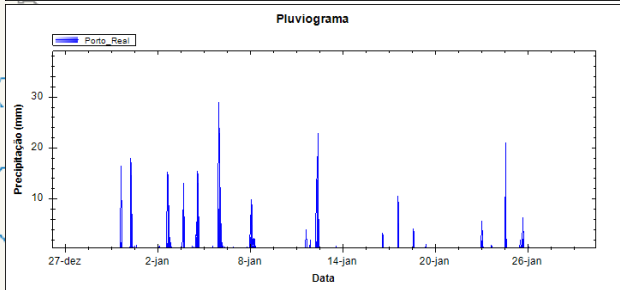
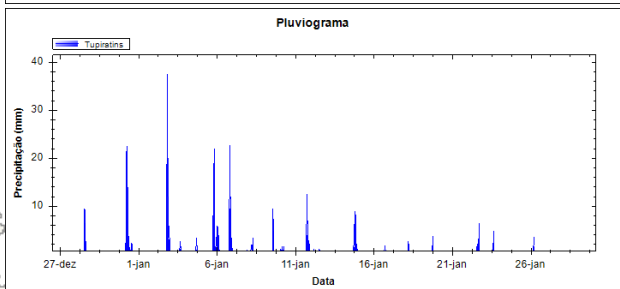
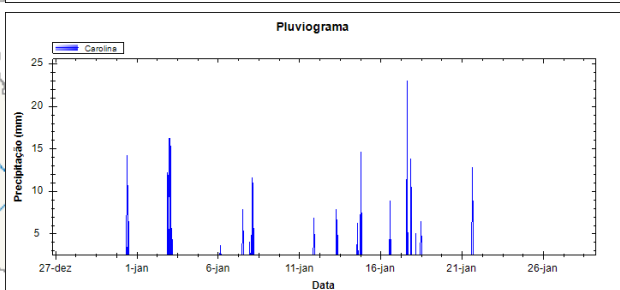
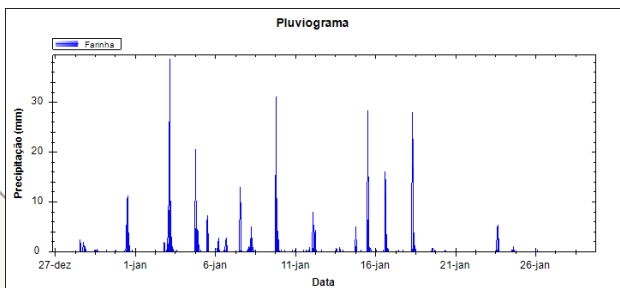
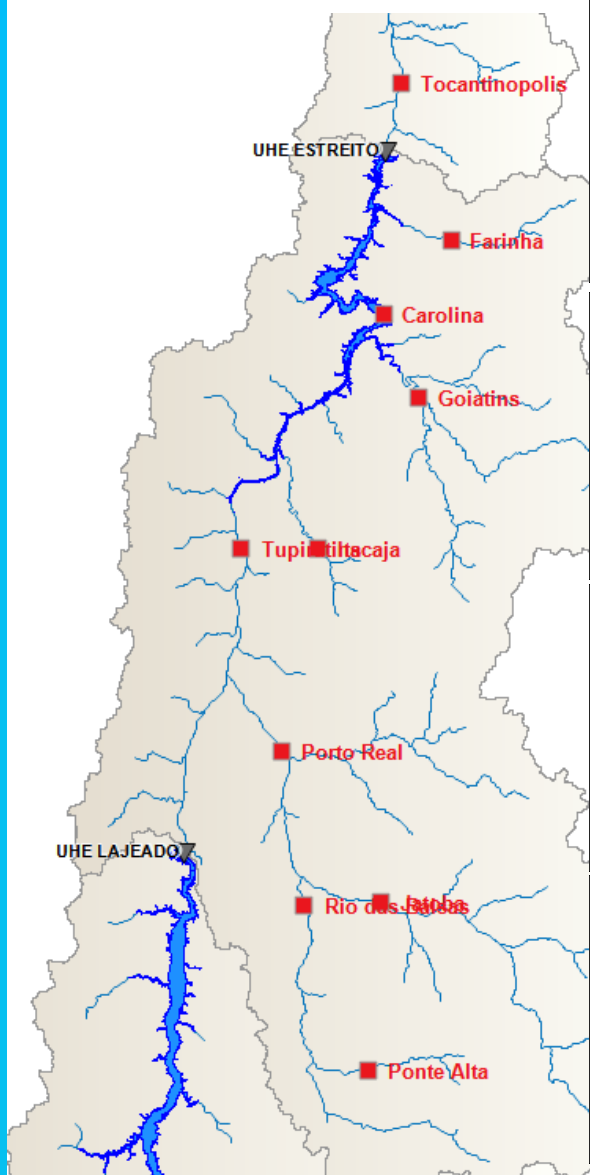
O Tempo de Retorno é o inverso da probabilidade de excedência:

$$TR = \frac{1}{P}$$

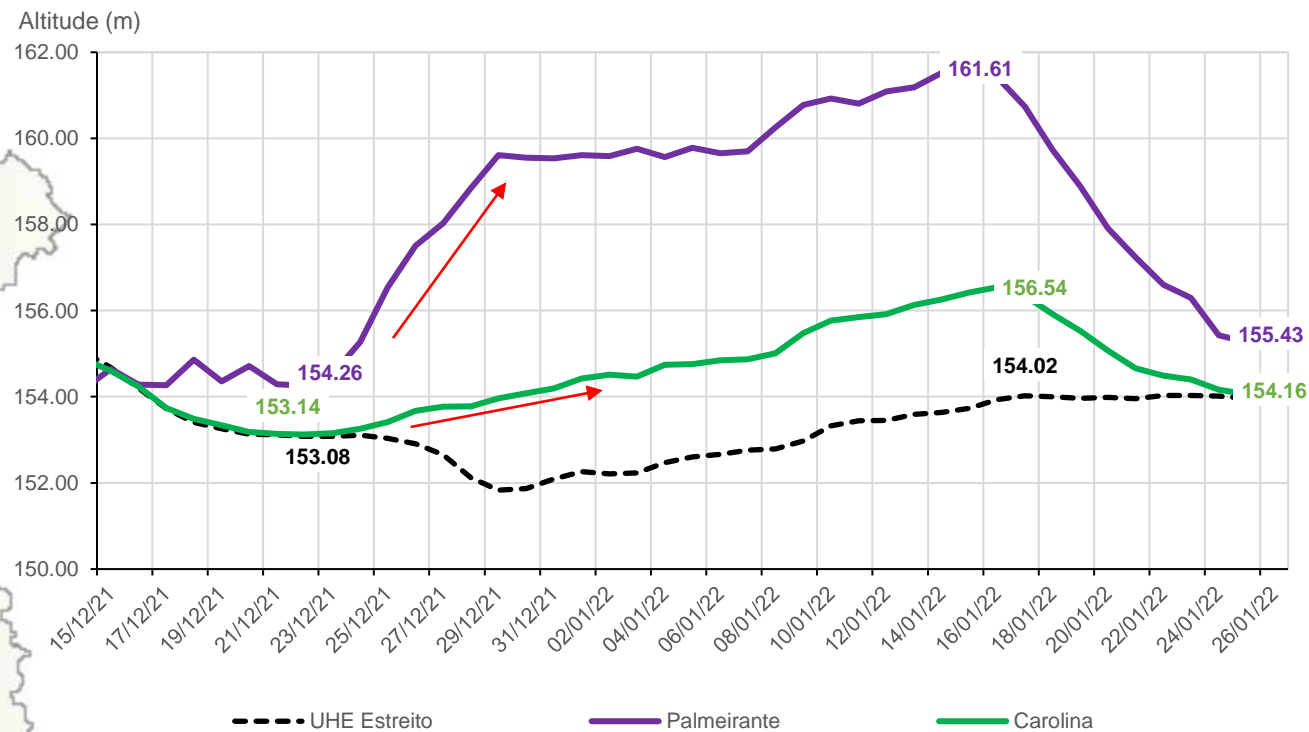
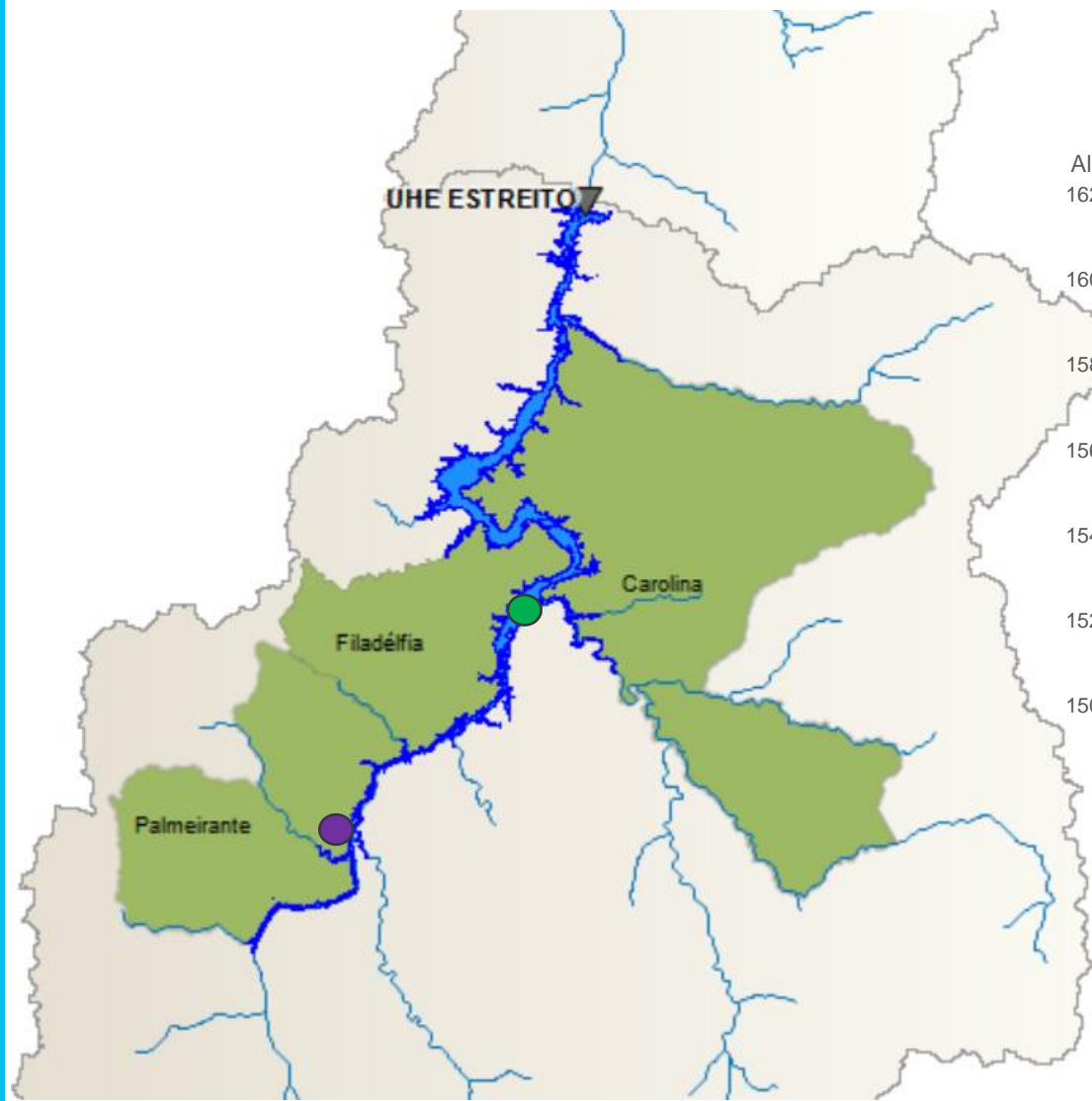
UHET - Vazões Máximas

TR (anos)	Vazões (m ³ /s)
2	14.368
5	19.016
10	23.002
25	28.270
50	32.256
100	36.240
1000	49.480
10.000	62.719

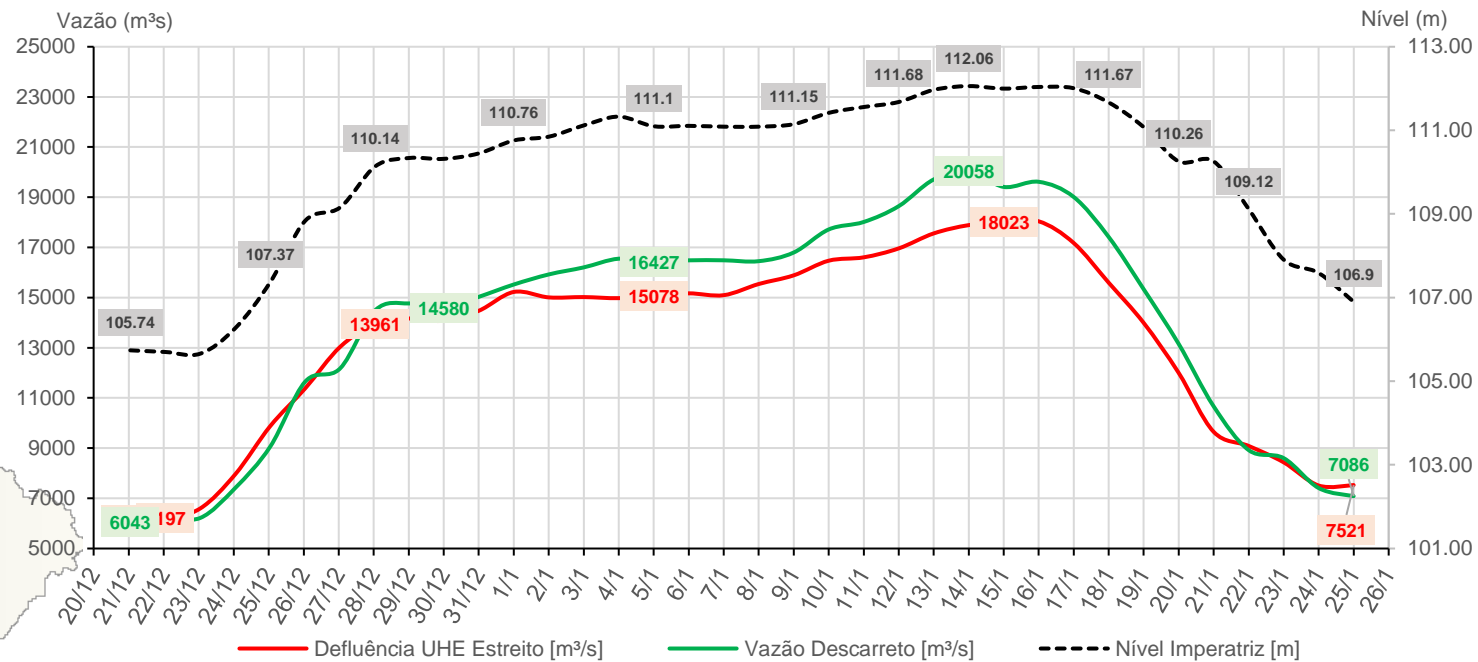
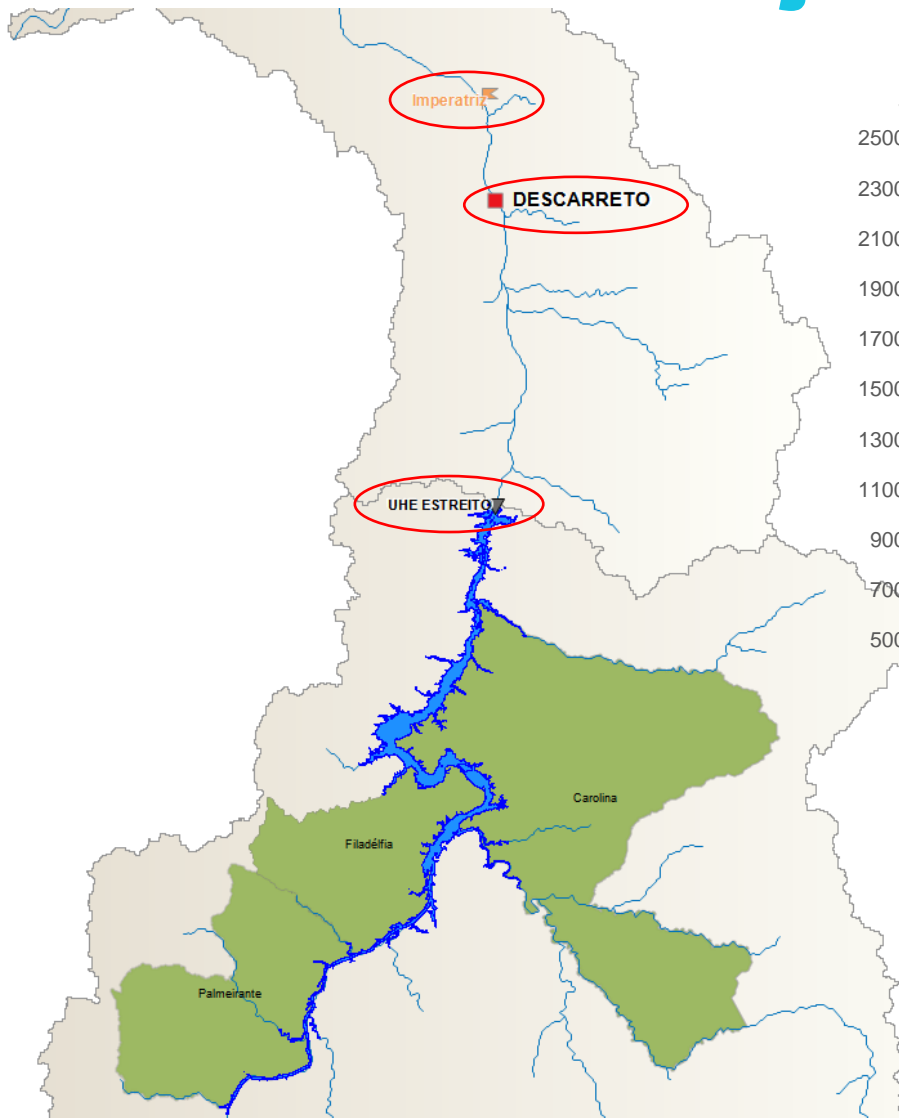
Monitoramento Hidrometeorológico



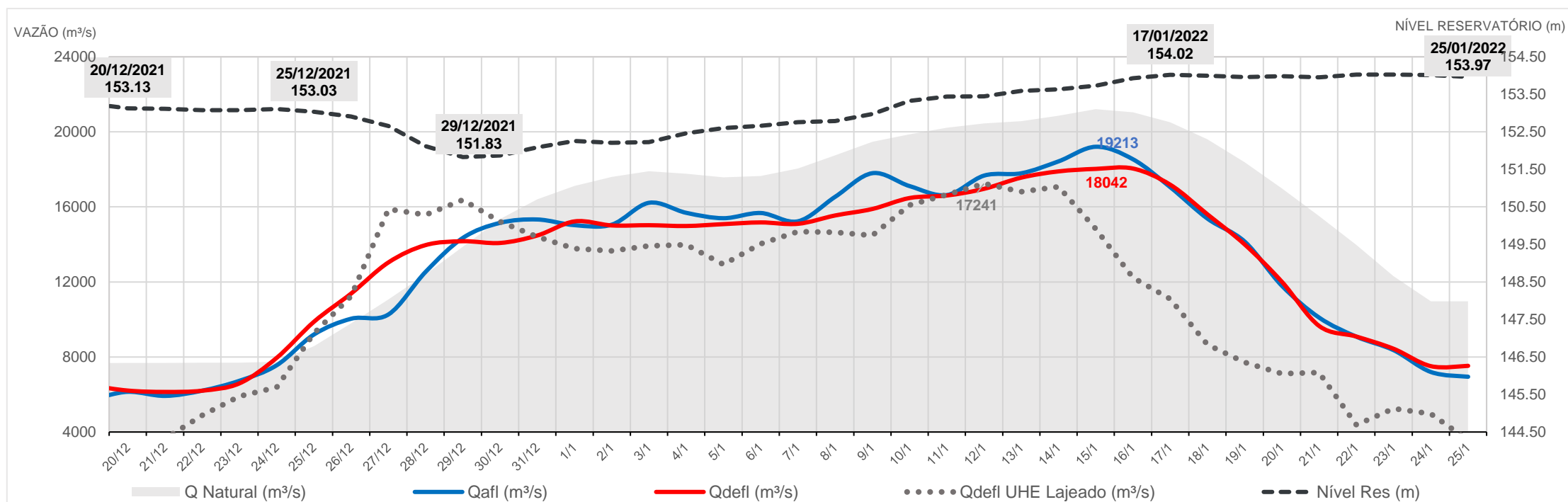
Monitoramento - montante da UHE Estreito



Monitoramento - jusante da UHE Estreito



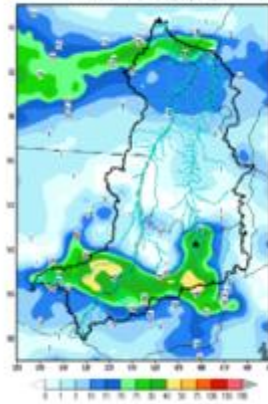
Operação verificada da UHE Estreito



Previsões Operação UHE Estreito

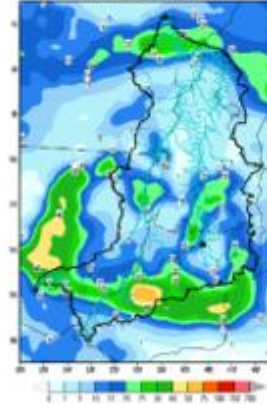


Modelo Regional / Bacia do rio Tocantins
Precipitação (mm) acumulada entre 12Z 25/01 e 12Z 26/01
Previsão da 02Z de 25/01/2022



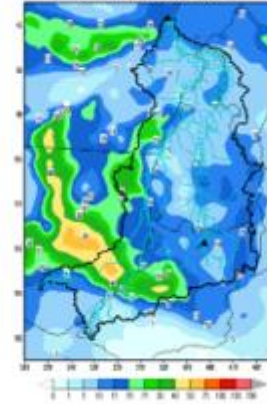
27/01/2022

Modelo Regional / Bacia do rio Tocantins
Precipitação (mm) acumulada entre 12Z 26/01 e 12Z 27/01
Previsão da 02Z de 25/01/2022



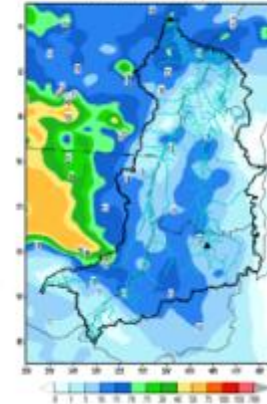
28/01/2022

Modelo Regional / Bacia do rio Tocantins
Precipitação (mm) acumulada entre 12Z 27/01 e 12Z 28/01
Previsão da 02Z de 25/01/2022



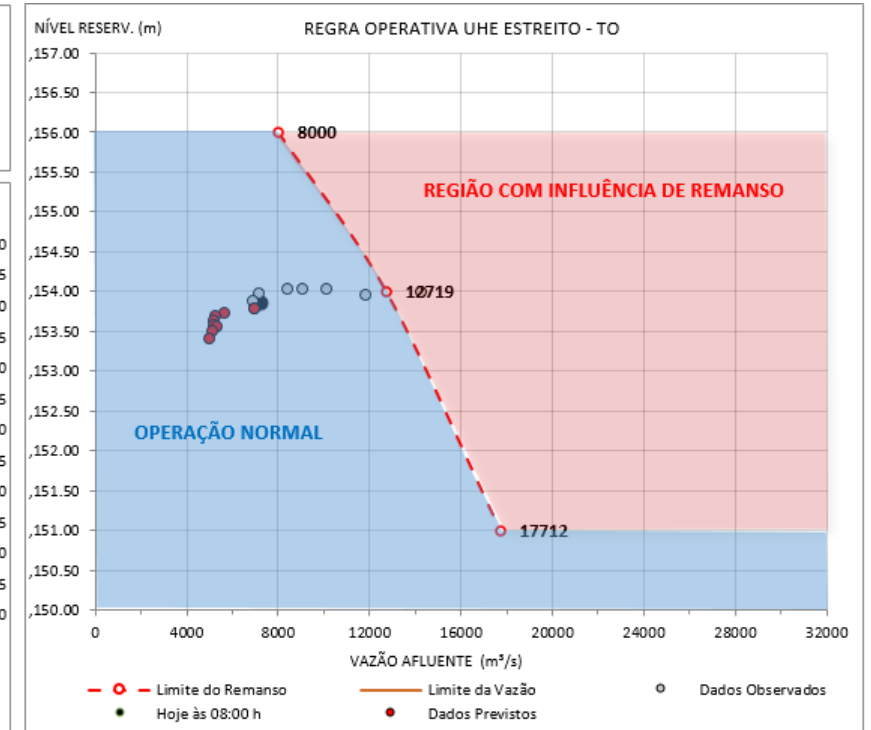
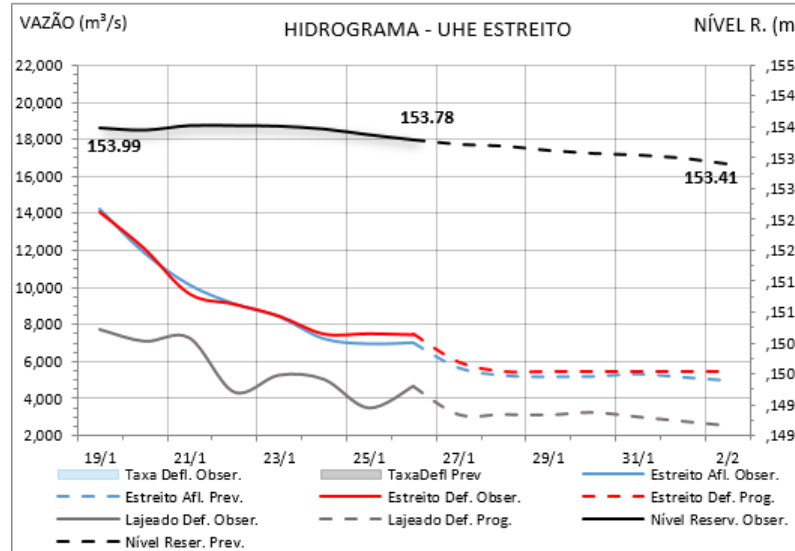
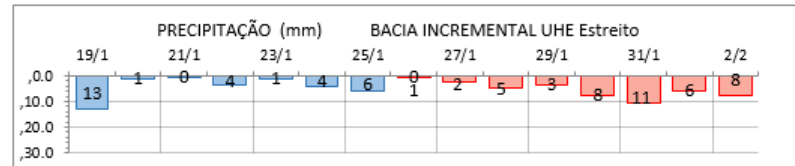
29/01/2022

Modelo Regional / Bacia do rio Tocantins
Precipitação (mm) acumulada entre 12Z 28/01 e 12Z 29/01
Previsão da 02Z de 25/01/2022



30/01/2022

Previsão de Precipitação





Obrigado!