



Sistema Integrado de Monitoramento e Alerta

Hidrometeorológico - SipamHidro

Prognóstico Hidrológico Hidrológico para a Amazônia – Cota Mínima Mínima Mensal

Flávio ALTIERI

Coordenação de Hidrologia

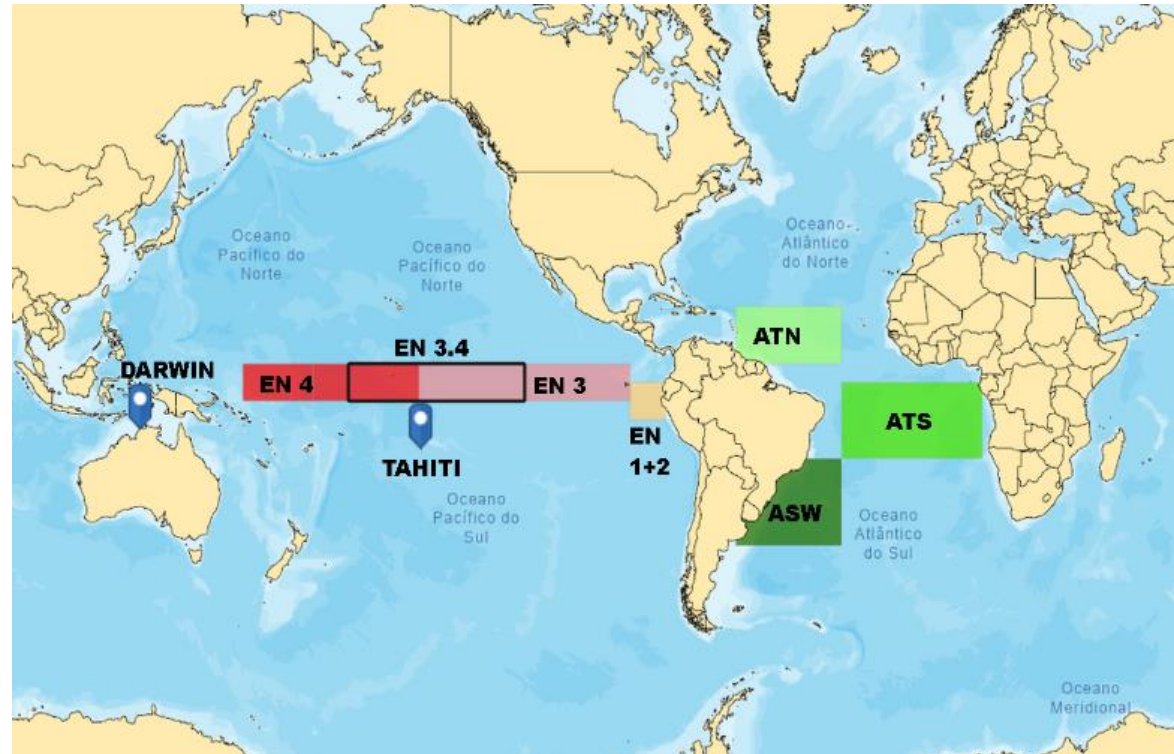


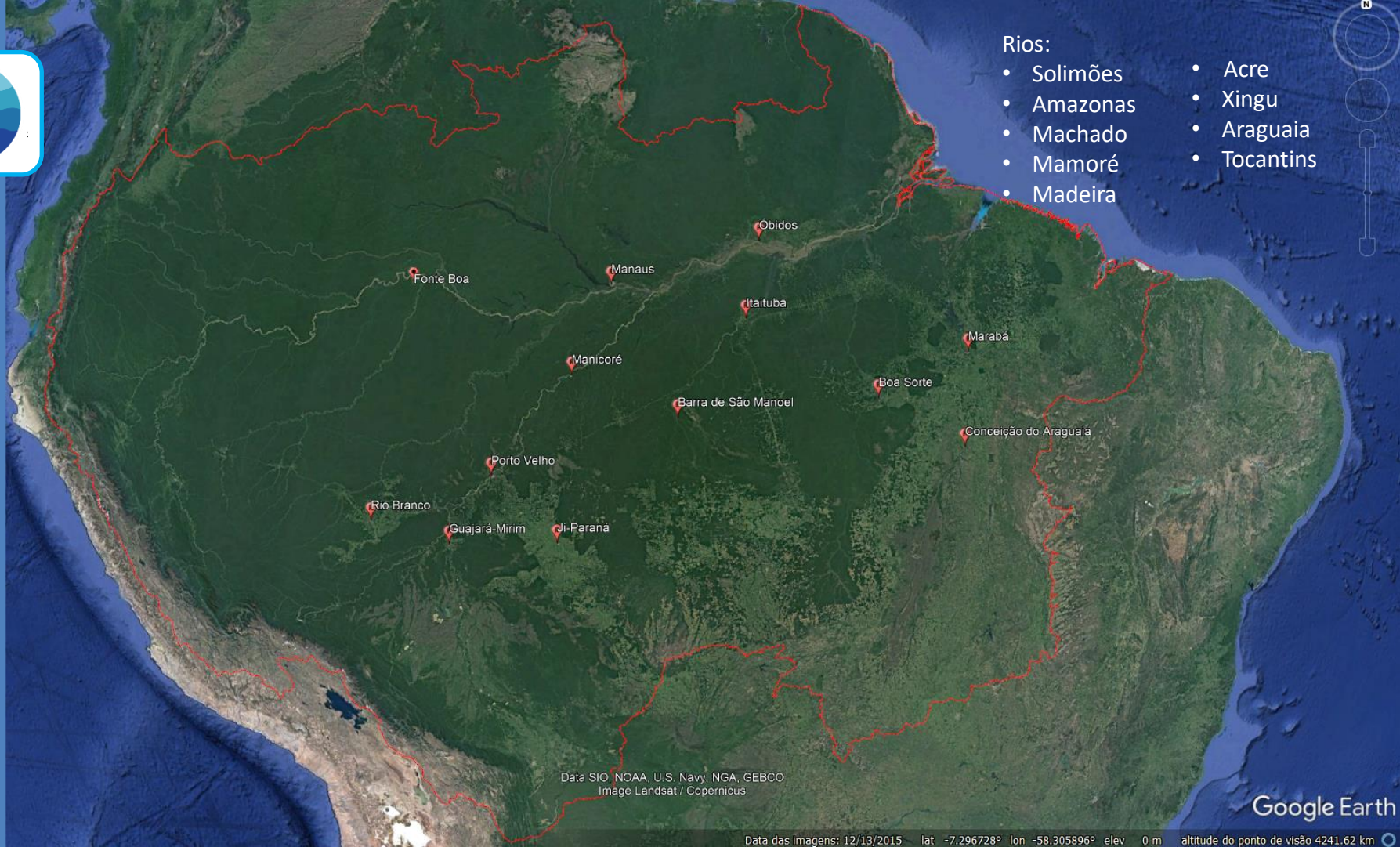
Dados médios mensais da TSM (NCEP/NCAR):

- Oceano Pacífico, Oceano Atlântico Norte, Sul e Sudoeste
- Pressão atmosférica em Darwin e Tahiti

Análise de anomalia com base na série histórica dos níveis dos rios

- Anomalia Negativa
 - Fraca
 - Moderada
 - Severa



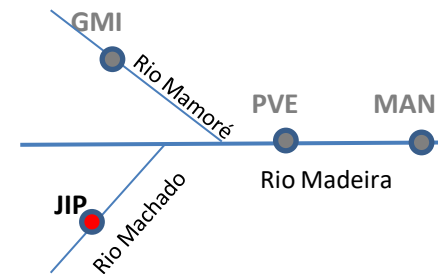
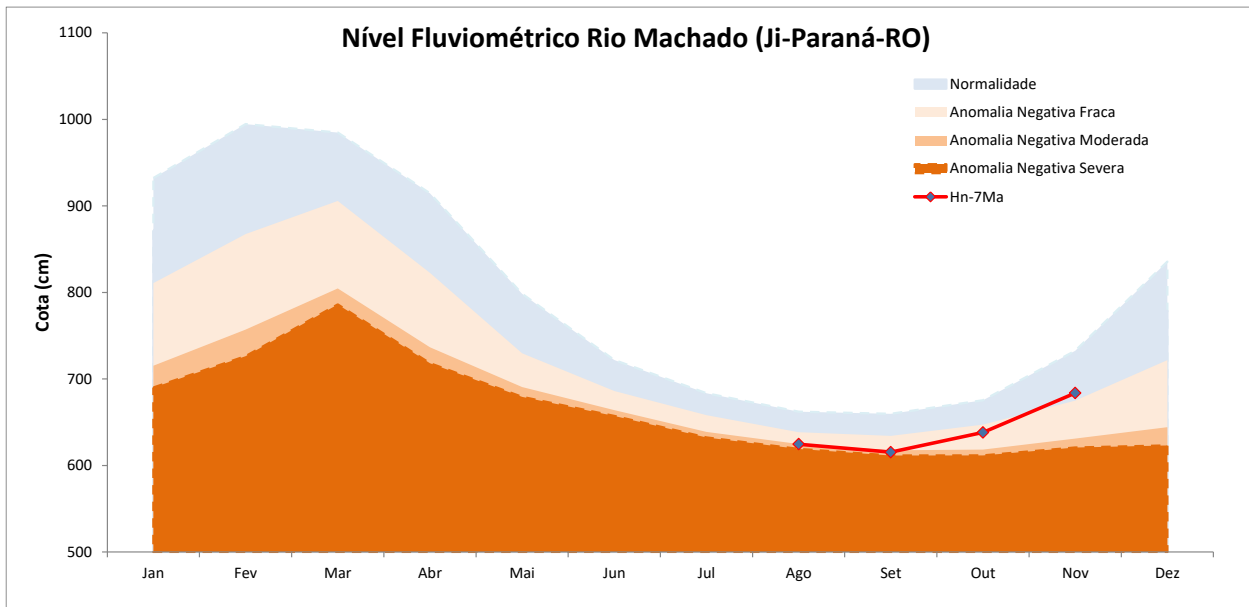


Rios:

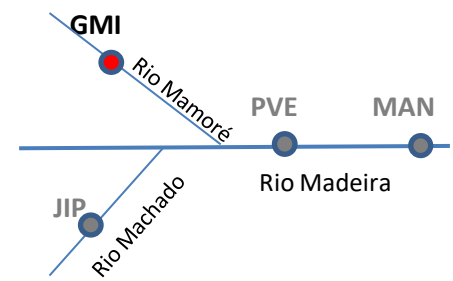
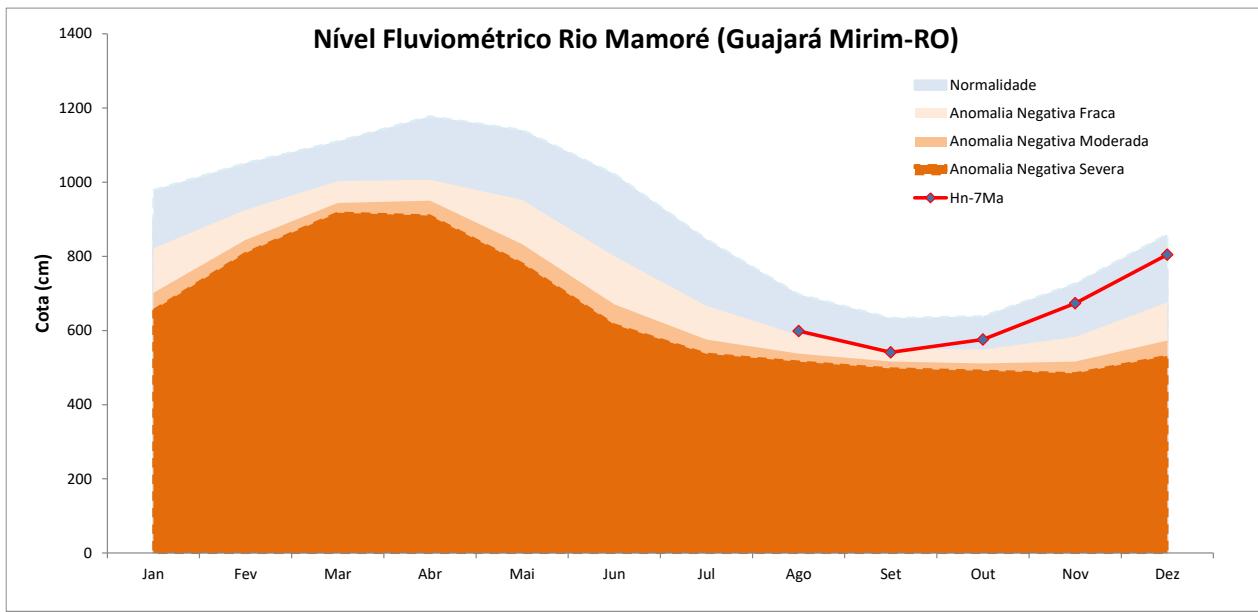
- Solimões
- Amazonas
- Machado
- Mamoré
- Madeira
- Acre
- Xingu
- Araguaia
- Tocantins

Óbidos
Manaus
Itaituba
Manicoré
Barra de São Manoel
Boa Sorte
Marabá
Conceição do Araguaia
Porto Velho
Rio Branco
Guajará-Mirim
Ji-Paraná

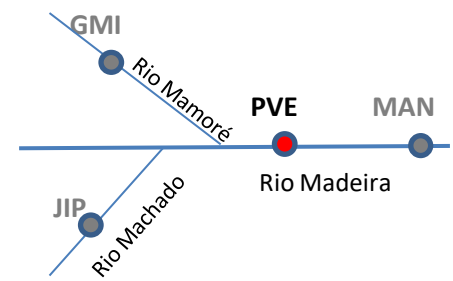
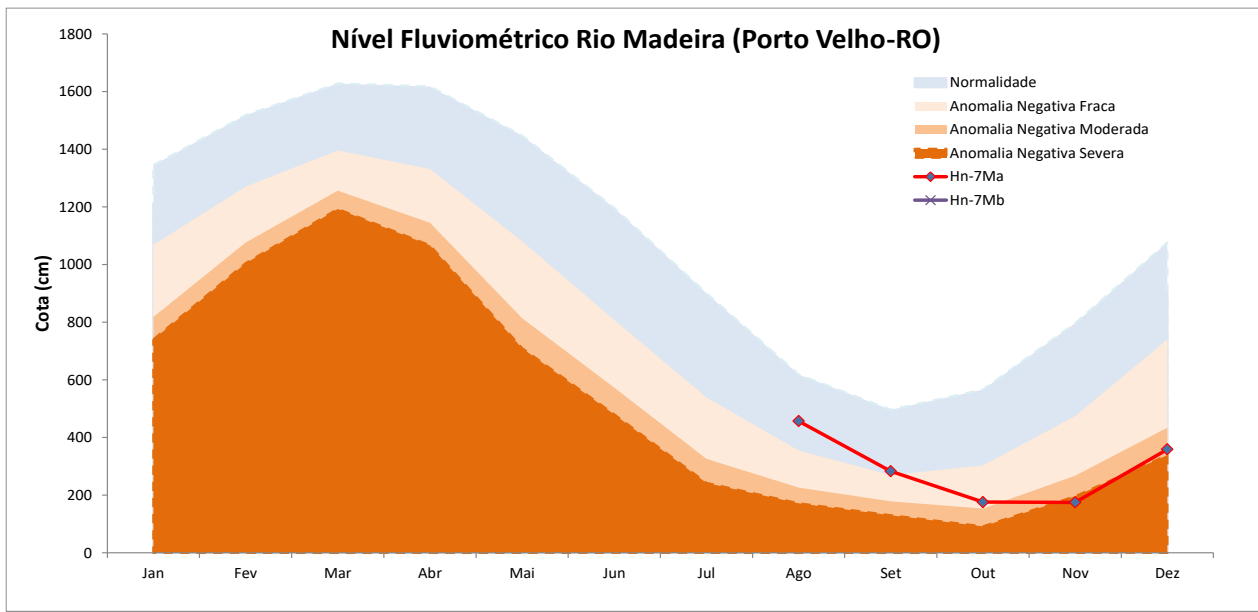
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus



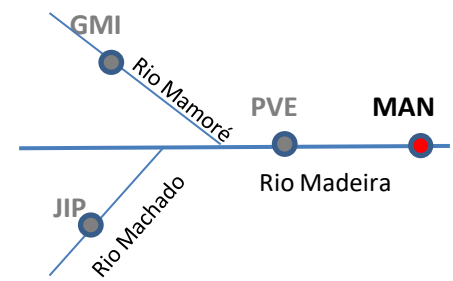
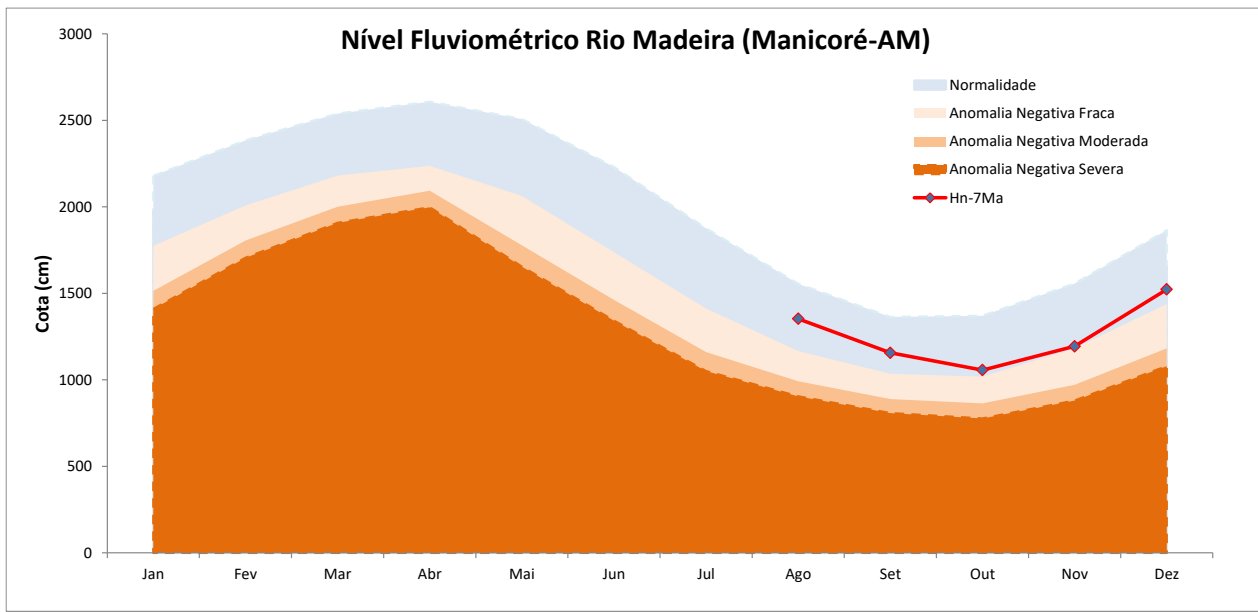
Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	625	615	638	684	



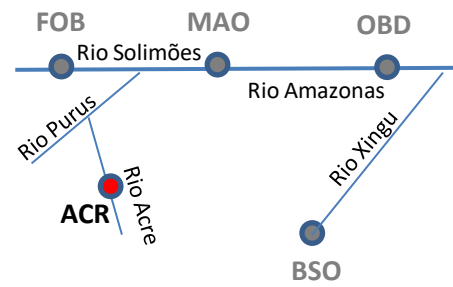
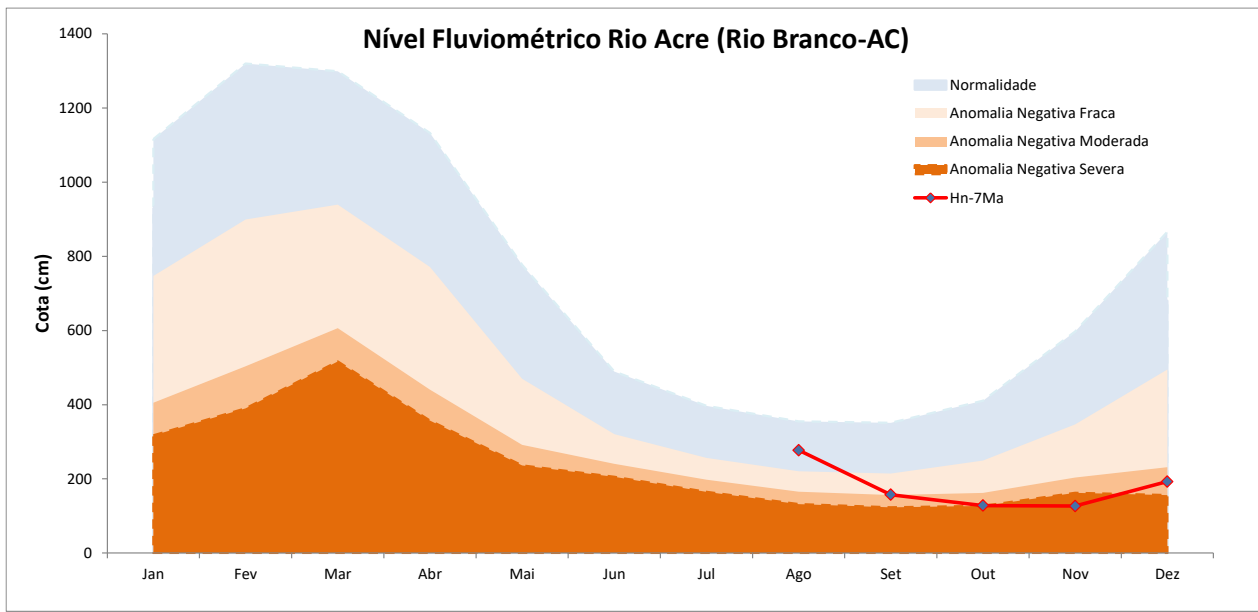
Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	599	541	576	673	805



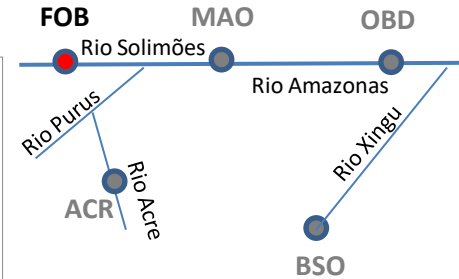
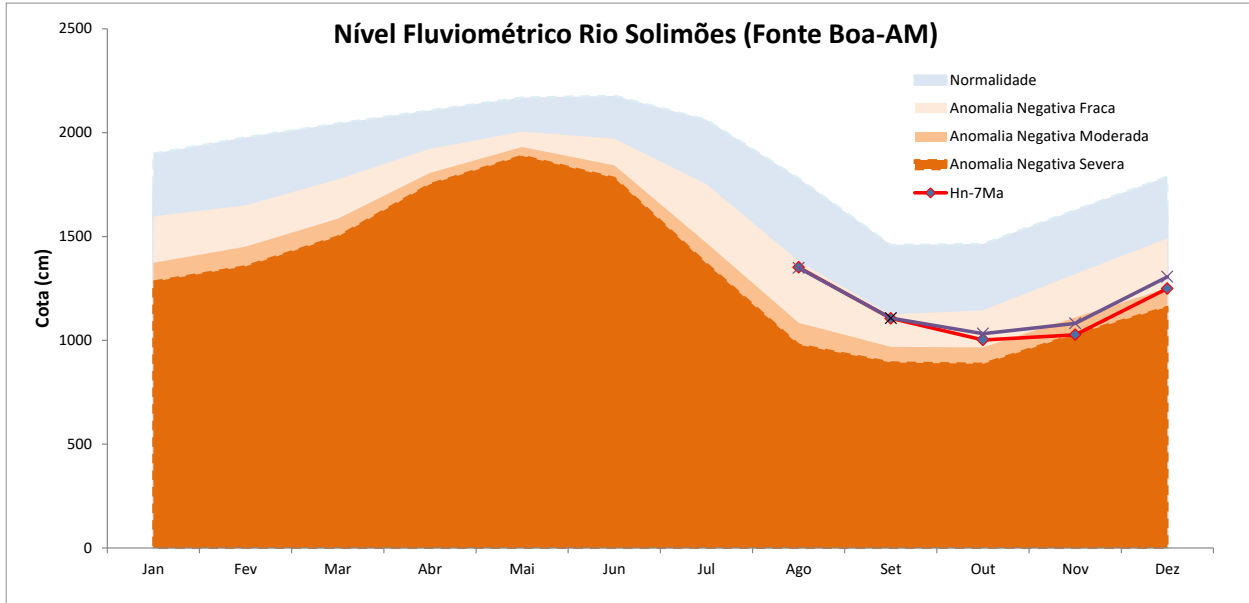
Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	283	176	175	359	688



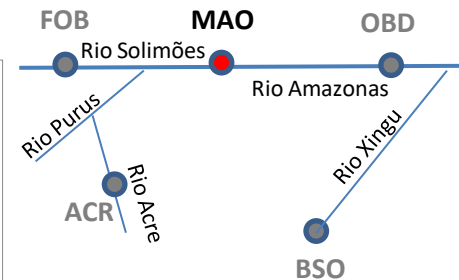
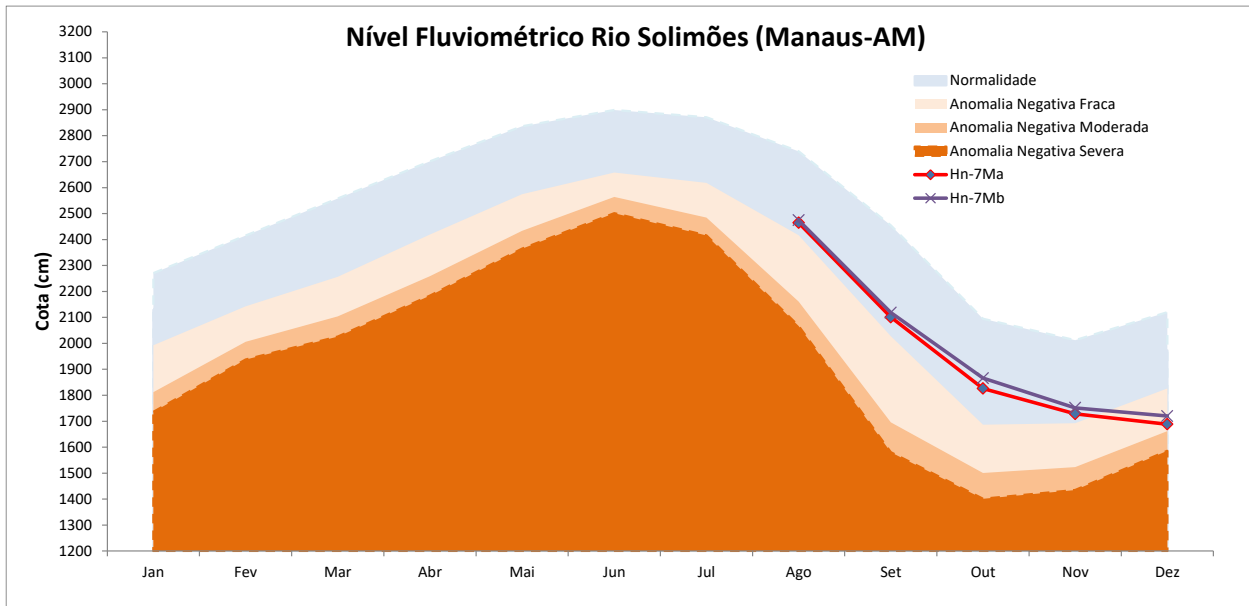
Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	1353	1156	1057	1194	1523



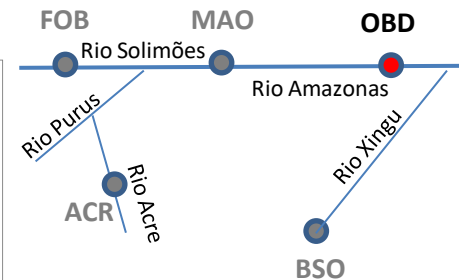
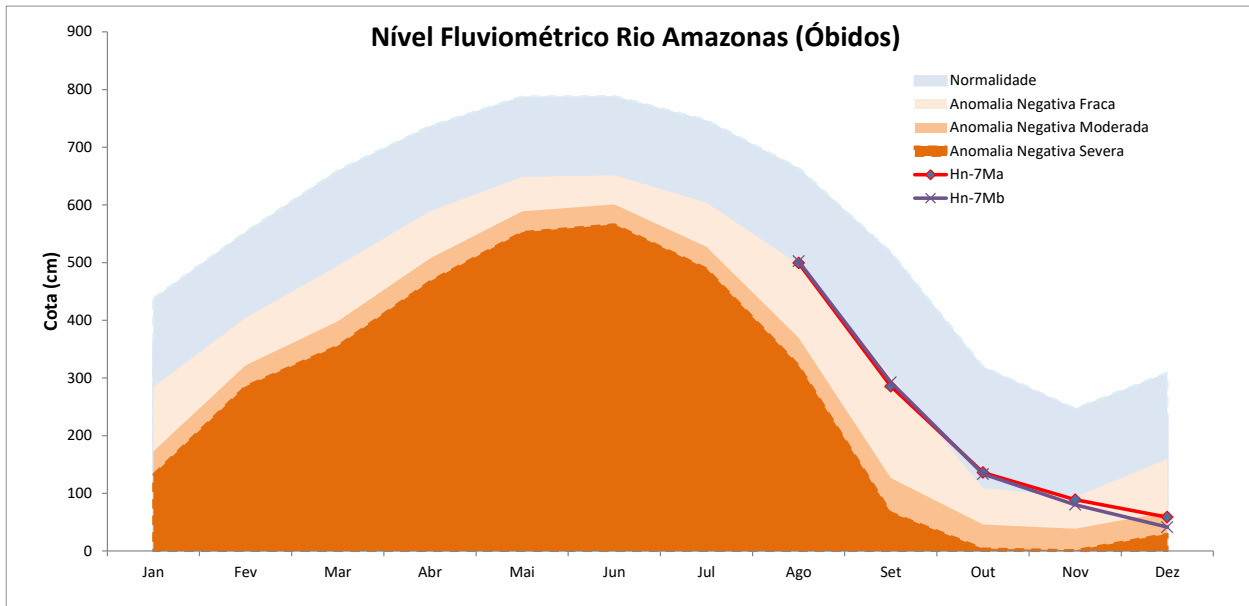
Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	277	157	128	127	193



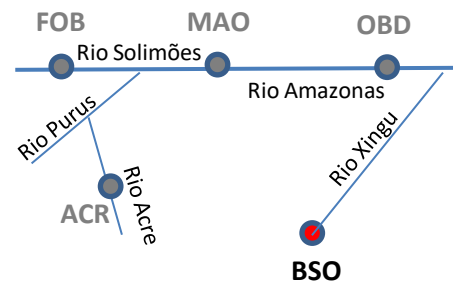
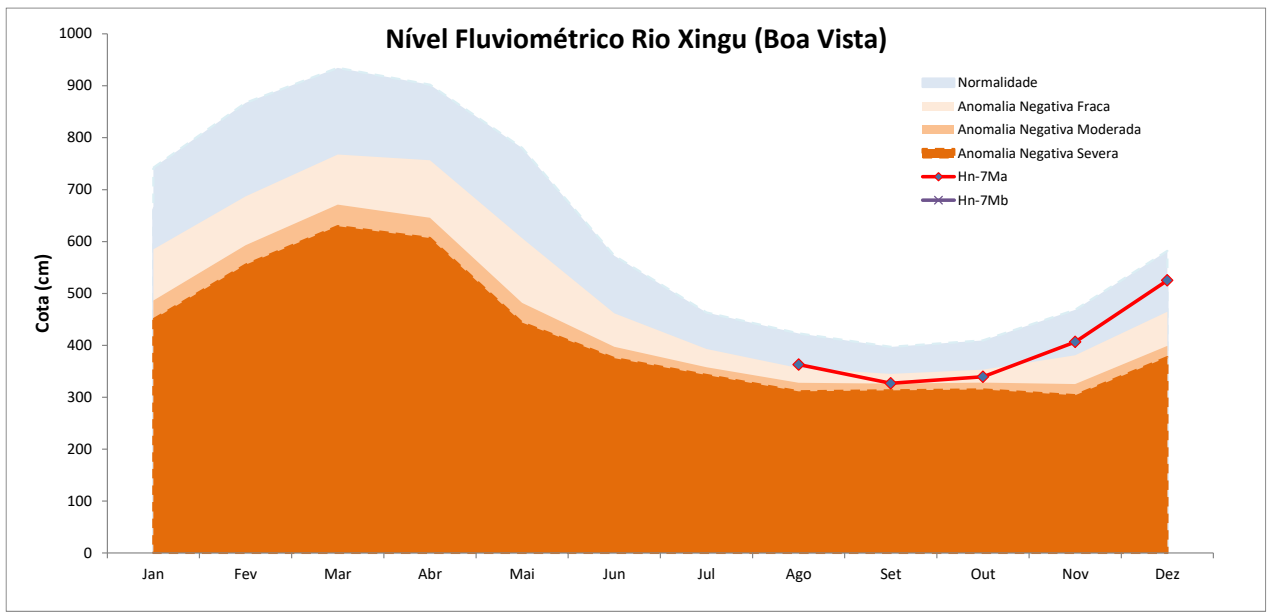
Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	1352	1106	1002	1027	1250
Hn-7Mb	1349	1107	1032	1082	1306



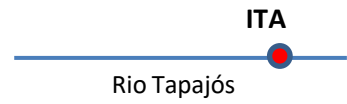
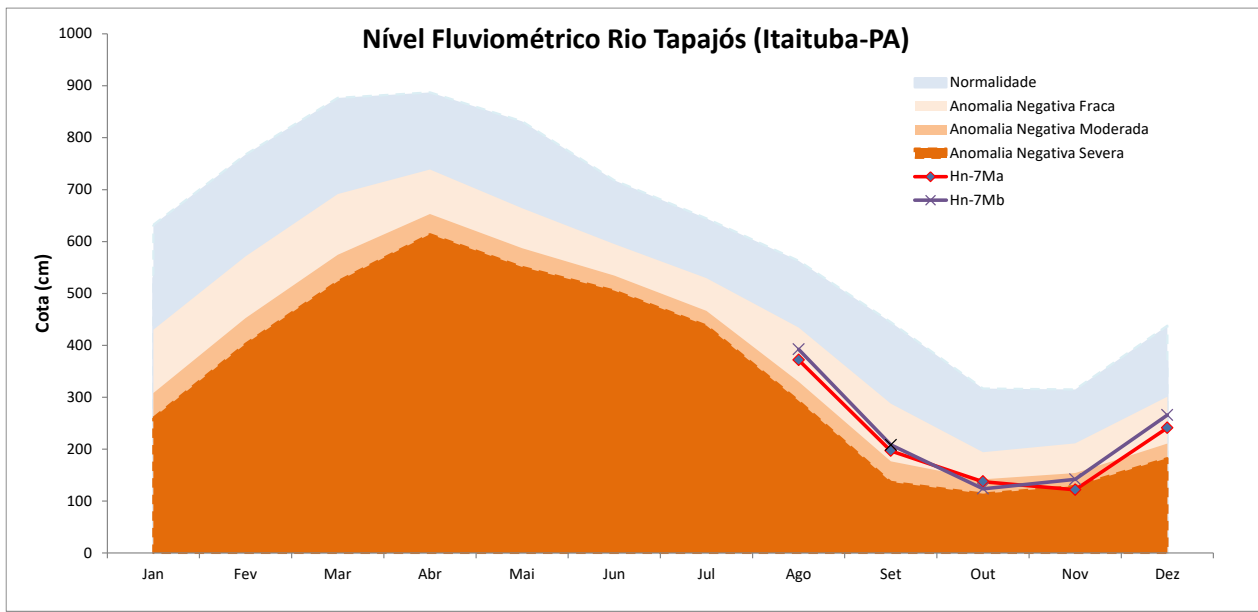
Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	2465	2101	1826	1728	1689
Hn-7Mb	2474	2118	1866	1752	1720



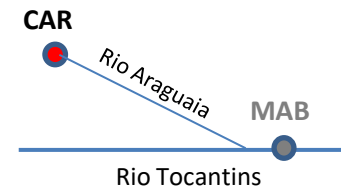
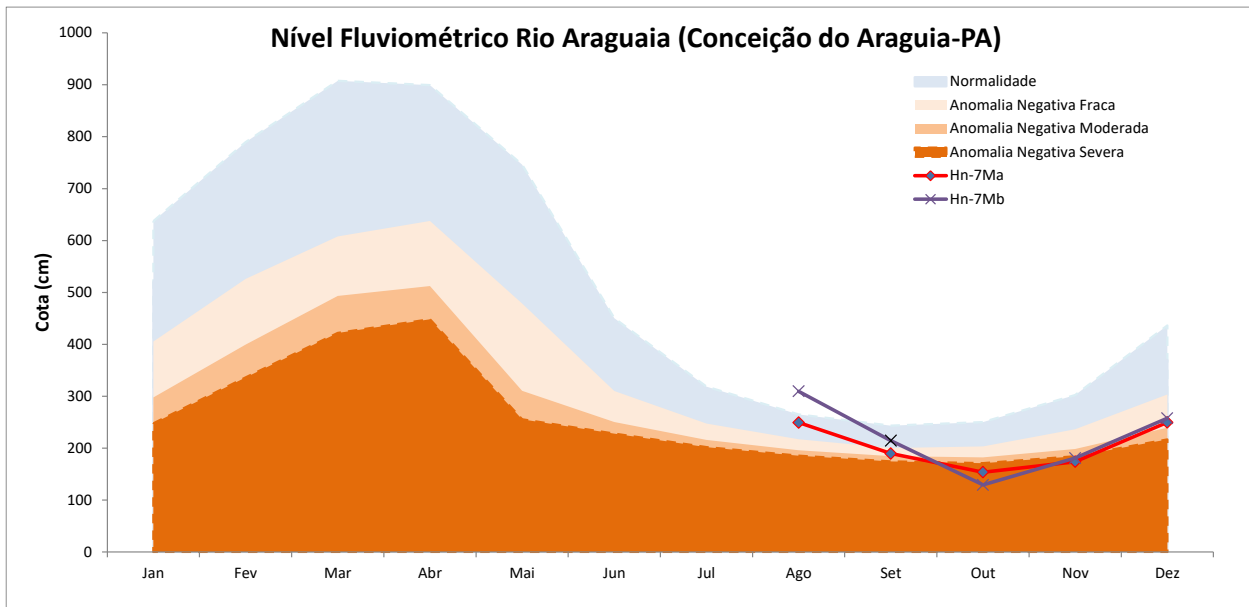
Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	499	286	136	89	59
Hn-7Mb	502	293	133	80	41



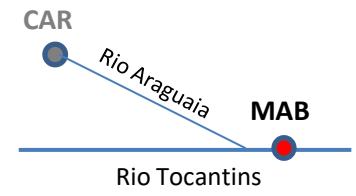
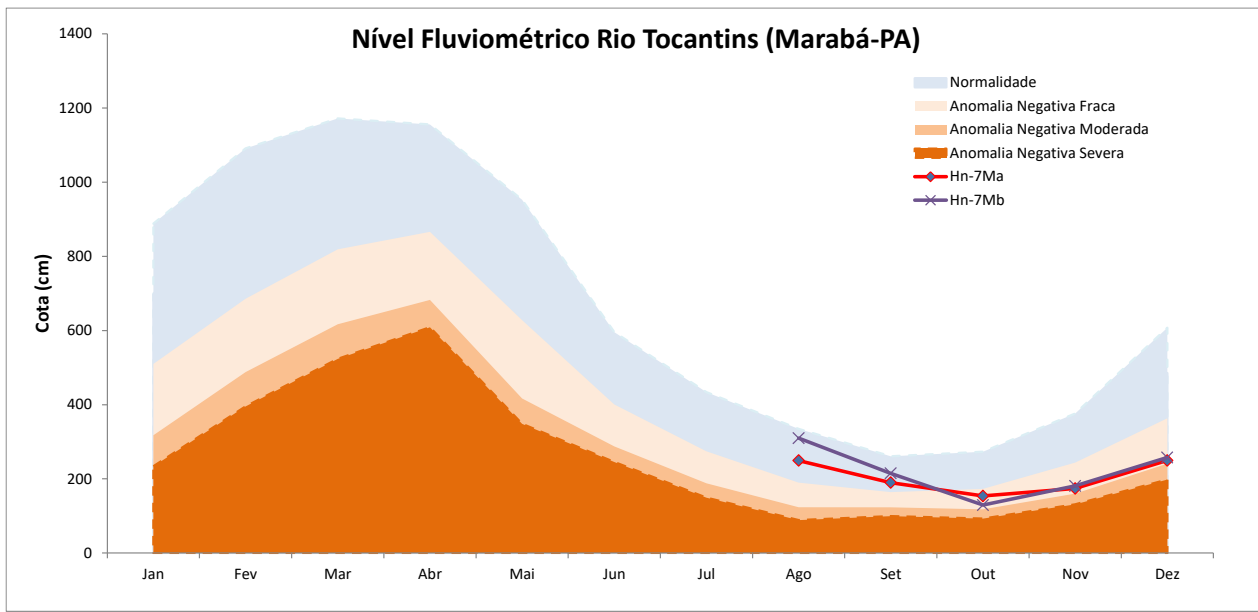
Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	363	327	340	406	525



Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	372	197	137	122	241
Hn-7Mb	392	208	124	142	266



Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	249	190	154	174	250
Hn-7Mb	310	215	129	181	258



Modelo	Meses				
	Ago	Set	Out	Nov	Dez
Hn-7Ma	249	190	154	174	250
Hn-7Mb	310	215	129	181	258



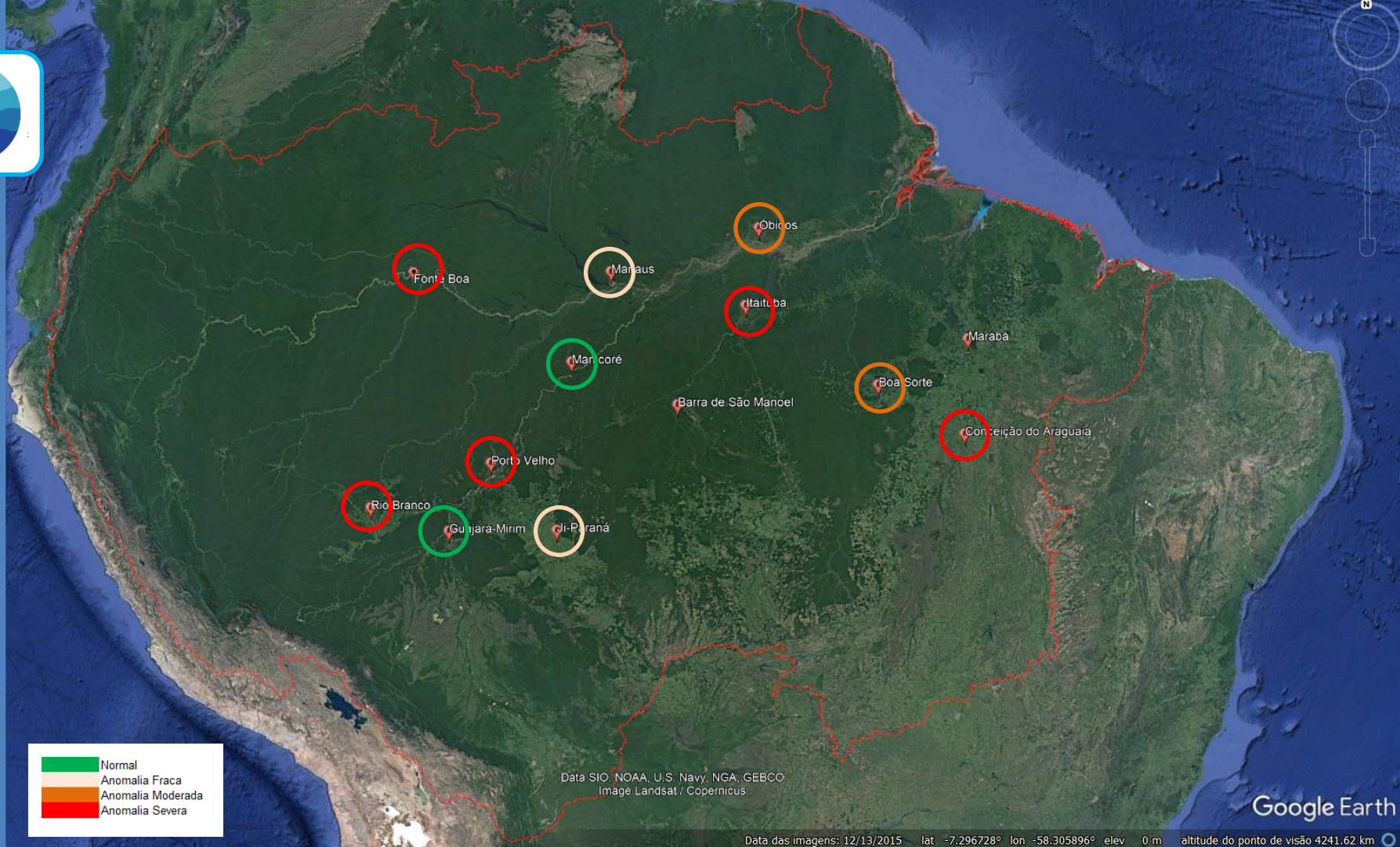
A eficiência dos modelos foram avaliadas através dos Coeficiente de Correlação de PEARSON (r – muito forte: 0,85 a 0,95) e de NASH-Sutcliffe (C_{NS} – muito forte: 0,77 a 0,90).

	Rio Madeira			
Teste	Guajará Mirim	Ji-Paraná	Porto Velho	Manicoré
r	0,92 a 0,95	0,92 a 0,95	0,93 a 0,95	0,92 a 0,95
C_{NS}	0,80 a 0,89	0,80 a 0,89	0,84 a 0,87	0,80 a 0,89

	Rio Acre	Rio Solimões		Rio Amazonas
Teste	Rio Branco	Fonte Boa	Manaus	Óbidos
r	0,92 a 0,95	0,89 a 0,92	0,89 a 0,92	0,92 a 0,95
C_{NS}	0,80 a 0,89	0,77 a 0,80	0,77 a 0,80	0,88 a 0,90

	Rio Tapajós		Rio Araguaia	Rio Tocantins
Teste	Barra de São Manuel	Itaituba	Conceição do Araguaia	Marabá
r	0,90 a 0,92	0,93 a 0,95	0,92 a 0,95	0,86 a 0,90
C_{NS}	0,82 a 0,84	0,84 a 0,88	0,88 a 0,90	0,80 a 0,90

Prognóstico de Longo Prazo



	Normal
	Anomalia Fraca
	Anomalia Moderada
	Anomalia Severa

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus

Google Earth



Obrigado!!!

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