

WEBINAR

Preparing for the 2025 dengue season: insights from predictive models

October 31st, 2024

1 p.m. (London)

SIMULTANEOUS TRANSLATION

English | Portuguese | Spanish



Panel

Chair: Rachel Lowe - Research Professor, Catalan Institution for Research and Advanced Studies (ICREA) and Global Health Resilience Group Leader, Barcelona Supercomputing Centre (BSC), Spain

Claudia Codeço - Senior Researcher in Public Health, Oswaldo Cruz Foundation (Fiocruz, Rio de Janeiro), Brazil

Mauricio S. Vegas - Professor, Universidad de los Andes, Bogotá, Colombia

Flavio Coelho - Associate professor, School of Applied Mathematics, Getulio Vargas Foundation (FGV, Rio de Janeiro), Brazil and Principal Investigator of the Mosqlimate Project

Marcela Lopes Santos - Technical consultant, General Coordination of Arbovirus Surveillance, Ministry of Health, Brazil



Registered in today's webinar

Country	Count
1 Brazil	867
2 Colombia	37
3 United States	16
4 Spain	15
5 United Kingdom	14
Total	1141



Resources

The recording, materials and presentations will be shared on the TGHN LAC:



<https://bit.ly/webinfodengue>



InfoDengue: early warning system for arboviroses in Brazil

Claudia Codeço and Infodengue team



Fluxo InfoDengue				
DATA COLLECT	<p>Cases of arboviruses</p> <p>Arboviruses: Dengue Zika Chikungunya</p> <p><i>SINAN-MS data</i></p>	<p>Weather data</p> <p>Parameters: temperature and humidity</p> <p><i>Weather Underground data</i></p>	<p>Demographic data</p> <p><i>IBGE data</i></p>	
HARMONIZATION AND DATA ANALYSIS	<p>Notification delay fix (Nowcasting)</p> <p><i>Bastos et al. (2019)</i></p>	<p>Sustained Transmission Detection</p> <p><i>Codeço et al. (2018)</i></p>	<p>Receptivity analysis</p>	<p>Atypical situation detection</p>
GENERATION OF INDICATORS AND REPORTS	<p>Weekly reports</p>	<p>EpiScanner</p>	<p>E-learning course</p>	<p>Situation rooms</p> <p>Consultation API</p>
COLLABORATION AND INNOVATION	<p>Collaborator network</p>	<p>Github repository</p>	<p>CHALLENGES AND SOLUTIONS</p>	<p>Technical and scientific challenges</p>

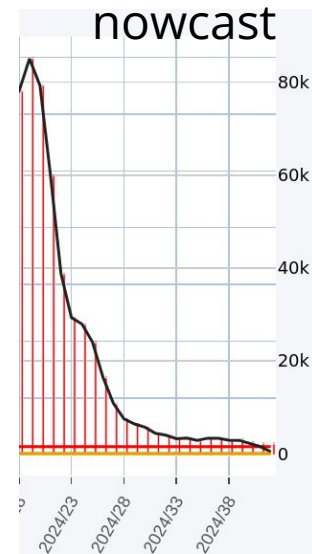
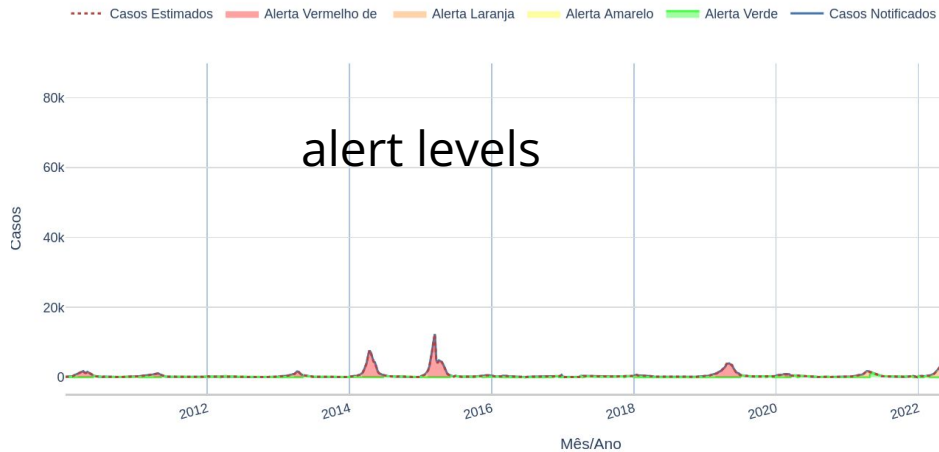
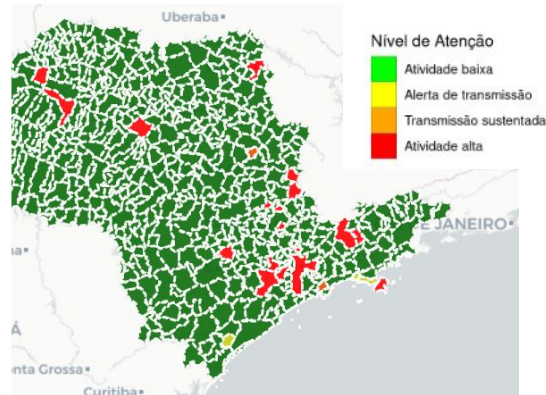
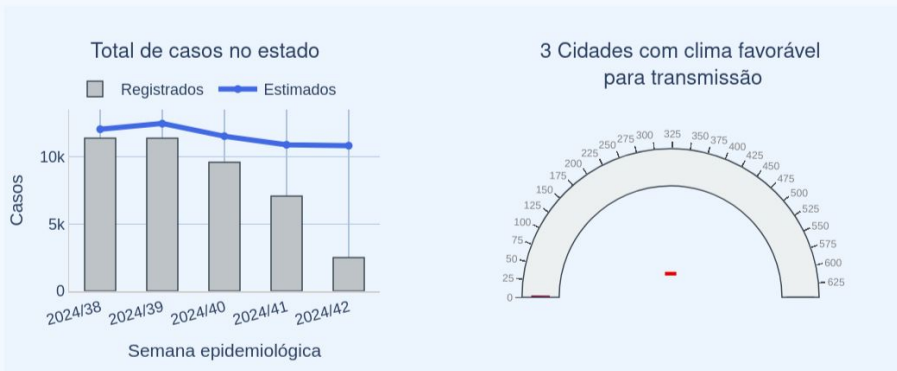


Infodengue pages per state and municipality

São Paulo

Dengue Chikungunya Zika Mapa de incidencia

645 Municípios monitorados. Última atualização na SE: 42/2024



Fast expansion of dengue in Brazil

Claudia T. Codeco,^{a*} Sara S. Oliveira,^a Danielle A.C. Ferreira,^b Thais I.S. Riback,^a
Leonardo S. Bastos,^a Raquel M. Lana,^{a,c} Iasmim F. Almeida,^a Vinicius B. Godinho,^a Oswaldo G. Cruz,^a and
Flavio C. Coelho^d

www.thelancet.com Vol 12 Month August, 2022

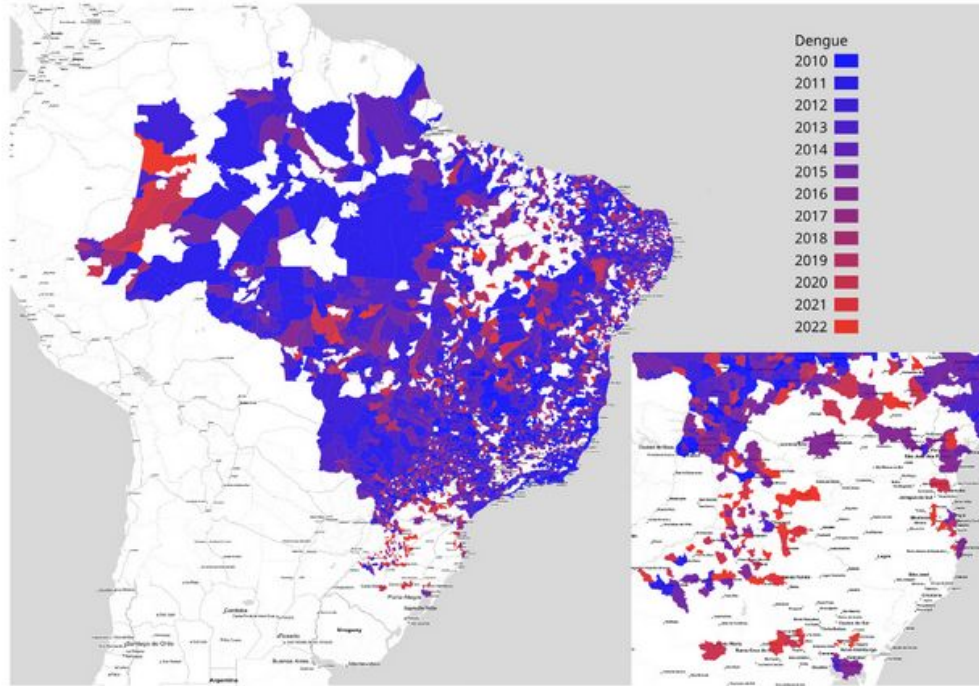


Figure 1. Map of Brazil showing the spread of dengue transmission into previously disease free regions (pre-2010 to March 2022). Source: Infodengue.

Increasing arbovirus risk in Chile and neighboring countries in the Southern Cone of South America

Elizabeth L. Estallo,^{a,b,*} Rachel Sippy,^c Michael A. Robert,^d Salvador Ayala,^e Carlos J. Barboza Pizarra,^f Pastor E. Pérez-Estigarribia,^g and
Anna M. Stewart-Ibarra^h

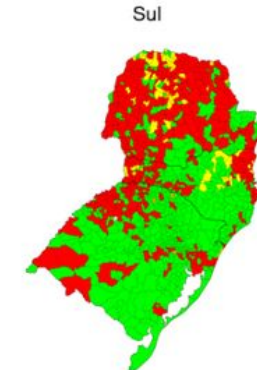
Internacional

Argentina enfrenta riesgo creciente de epidemia de dengue

Doença é conhecida também no país como "febre quebra-ossos"

JUAN BUSTAMANTE E LUCILA SIGAL - REPÓRTERES DA REUTERS

Publicado em 08/04/2024 - 13:31
Buenos Aires



In 2023, Infodengue launched a warning:

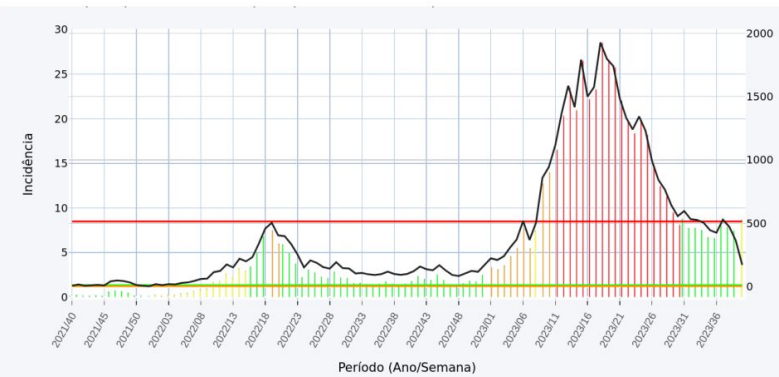
Relatório 02/23 (atualizado em 26/10/2023)

Reflexões sobre o risco de arboviroses em 2024

"The Earth is in Uncharted Territory"

Paulo Ceppi, Imperial College London climate science lecturer, 2023

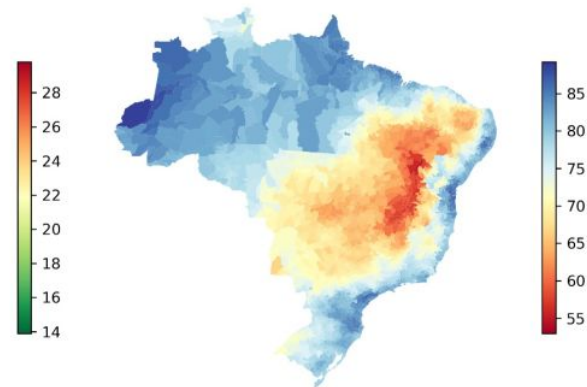
Winter with high notification + El Niño effects = high risk of epidemic



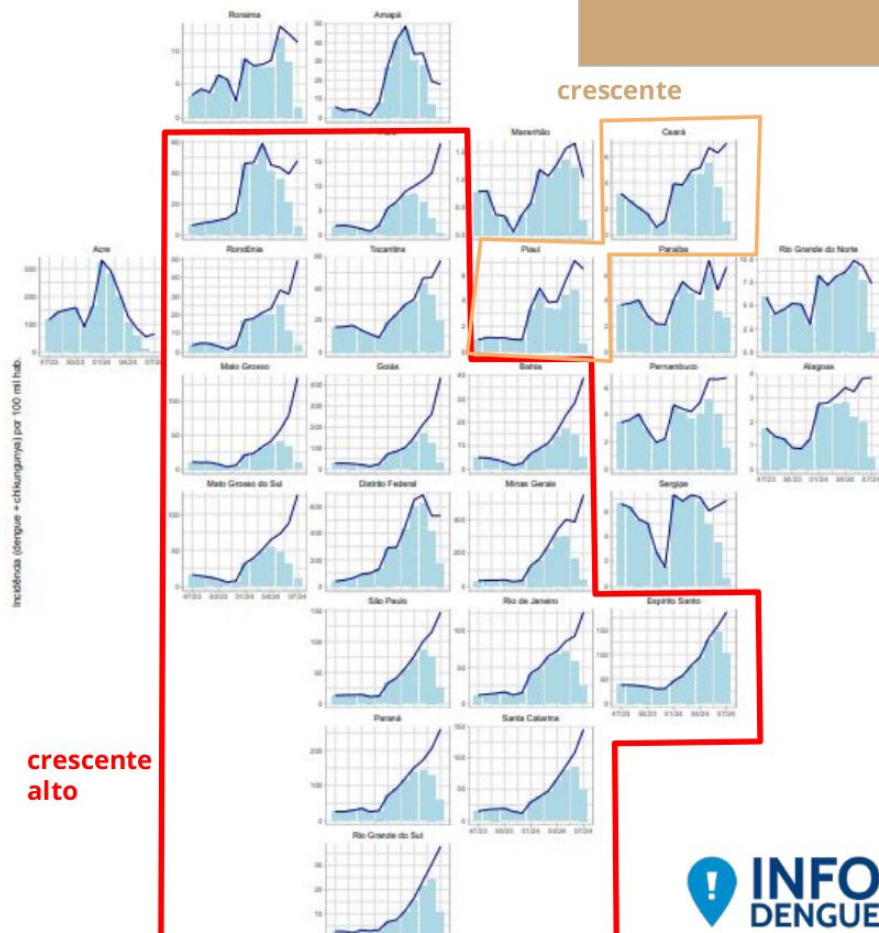
Temperatura média - 2023



Umidade média - 2023

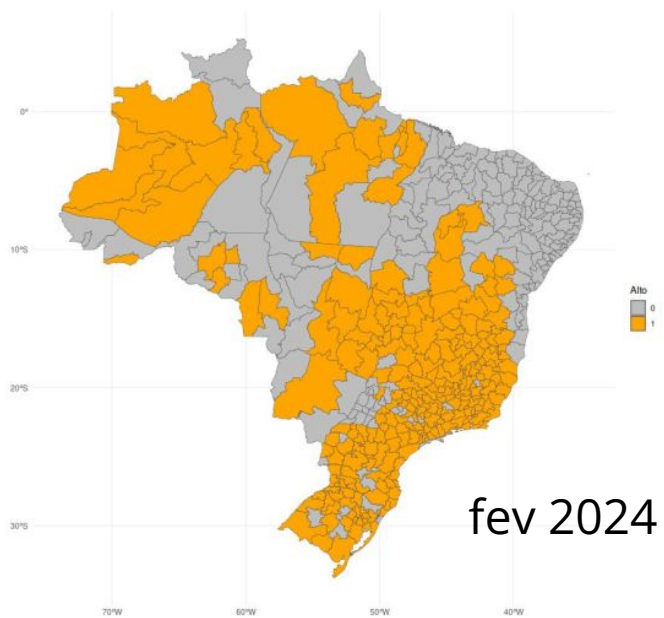


Weekly reports

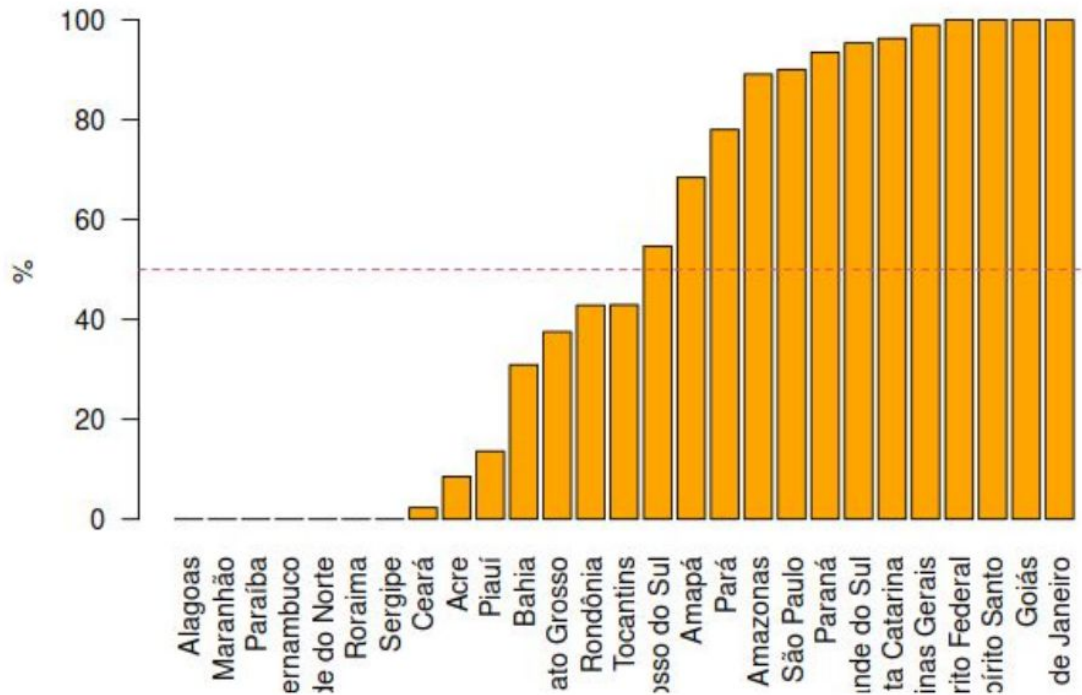


Região	UF	SE limiar alto	SE pico	nível atual SE07	tendência	Rt
Norte	Acre	46	2	médio	decréscante	<1
	Rondônia	3		alto	crescente	1,5
	Roraima			médio	estável	-1
	Amazonas	52	platô	alto	estável	-1
	Pará	2		alto	crescente	1,4
	Amapá	1	3	alto	decréscante	<1
	Tocantins	7		alto	crescente	1,4
Centro-Oeste	Mato Grosso	3		alto	crescente	1,5
	Mato Grosso do Sul	7		alto	crescente	1,6
	Goiás	3		alto	crescente	1,8
	Distrito Federal	49	5	alto	decréscante	-1
Sul	Rio Grande do Sul	1		alto	crescente	1,8
	Santa Catarina	1		alto	crescente	1,7
	Paraná	1		alto	crescente	1,5
	Nordeste	Alagoas			baixo	estável
Bahia		4		alto	crescente	1,8
Ceará				baixo	crescente	1,3
Maranhão				médio	estável	-1
Paraíba				baixo	estável	-1
Pernambuco				médio	estável	-1
Piauí				médio	crescente	1,2
Rio Grande do Norte				médio	estável	-1
Sergipe				médio	estável	-1
Sudeste	Rio de Janeiro	47		alto	crescente	1,4
	Minas Gerais	1		alto	crescente	1,6
	Espírito Santo	2		alto	crescente	1,6
	São Paulo	3		alto	crescente	1,6

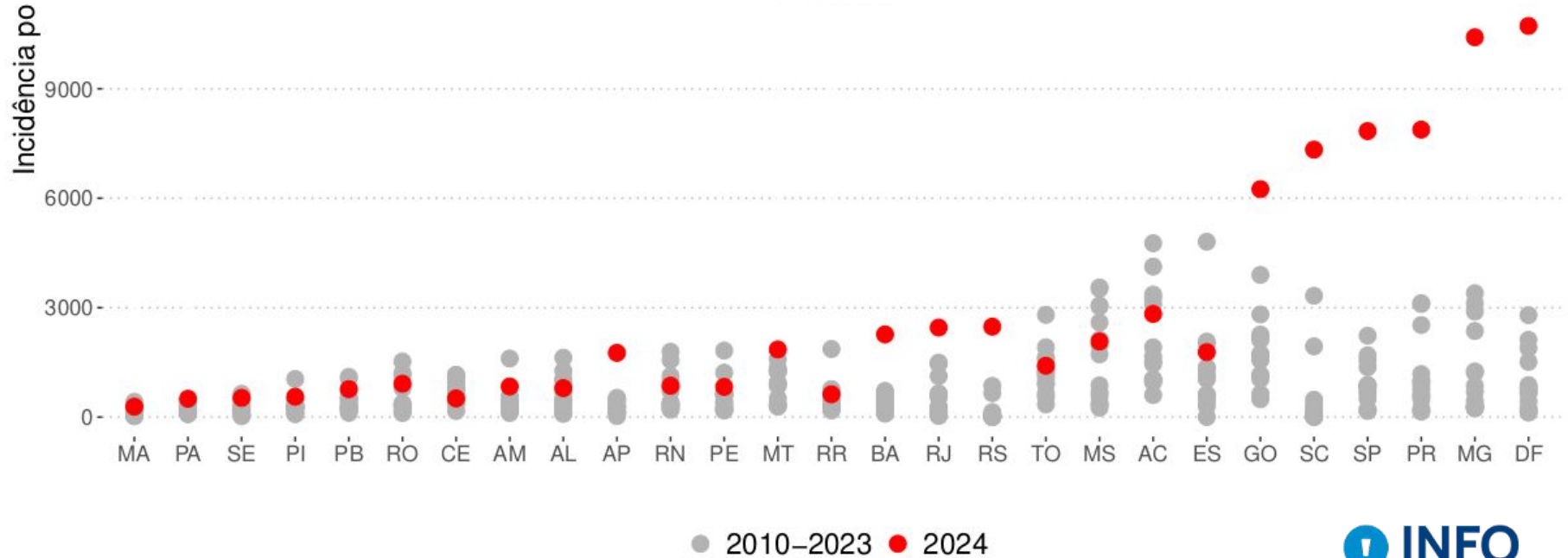
Weekly reports



pop em alto risco por estado



Epidemic of Dengue in 2024



What about 2025?

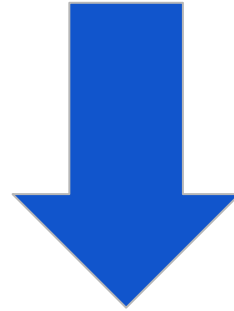


increased risk

Relatively high dengue notification off-season in some states

Uncertainty regarding the behavior of denv3

Favorable climate (but not as in 2023)



reduced risk

immunity to denv 2 and denv1

Greater awareness

Favorable climate is delayed, specially humidity