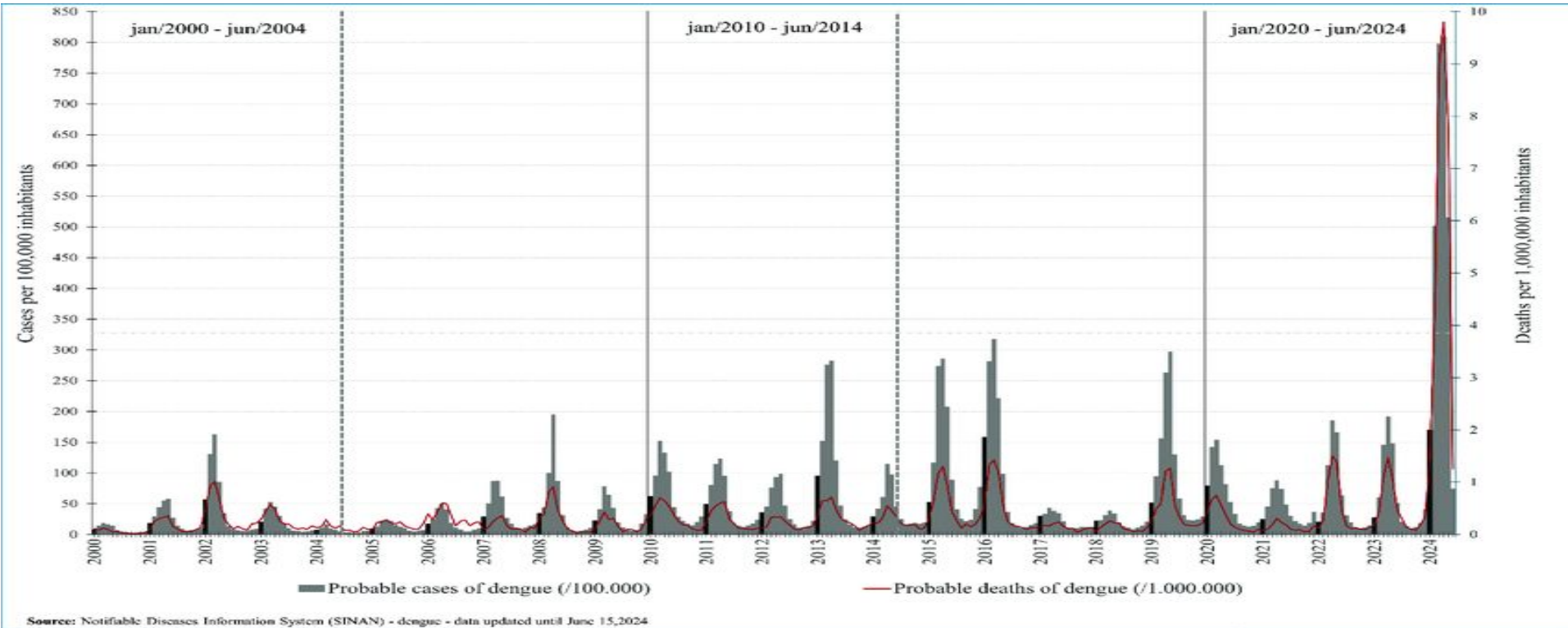




Infodengue para vigilância de arboviroses no Brasil e a iniciativa Infodengue-Mosqlimate

Claudia Codeço
Pesquisadora Fiocruz
claudia.codeco@fiocruz.br

A Dengue no Brasil (2000-2024)

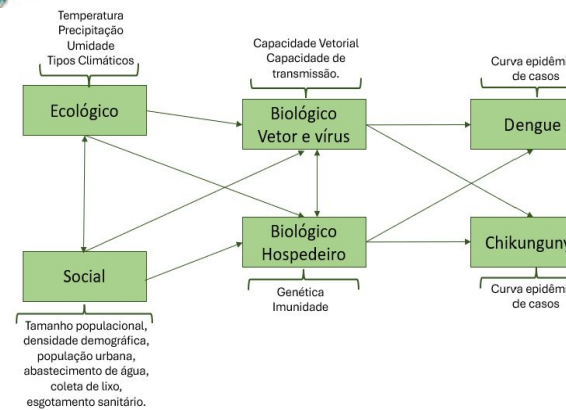
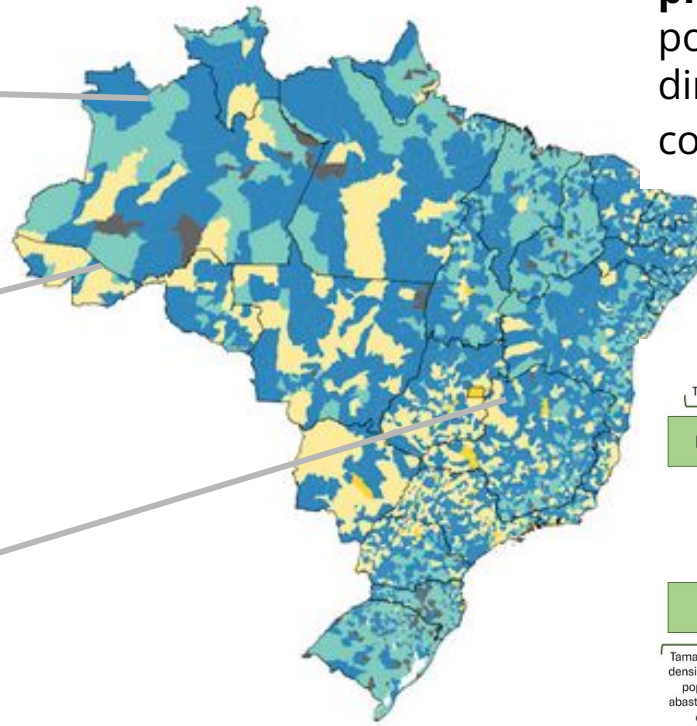


Epidemias de dengue são multi-causais e espacialmente heterogêneas

B - 2017-2022

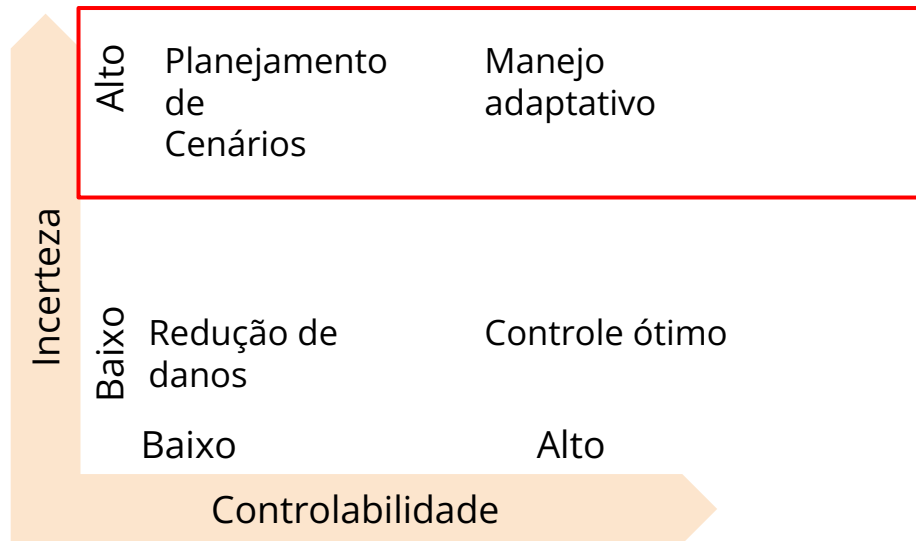
processos macro-escala: chegadas de sorotipos, anomalias climáticas, pandemia de covid

processos micro-escala: população de suscetíveis, dinâmica do vetor, taxa de contato, etc.

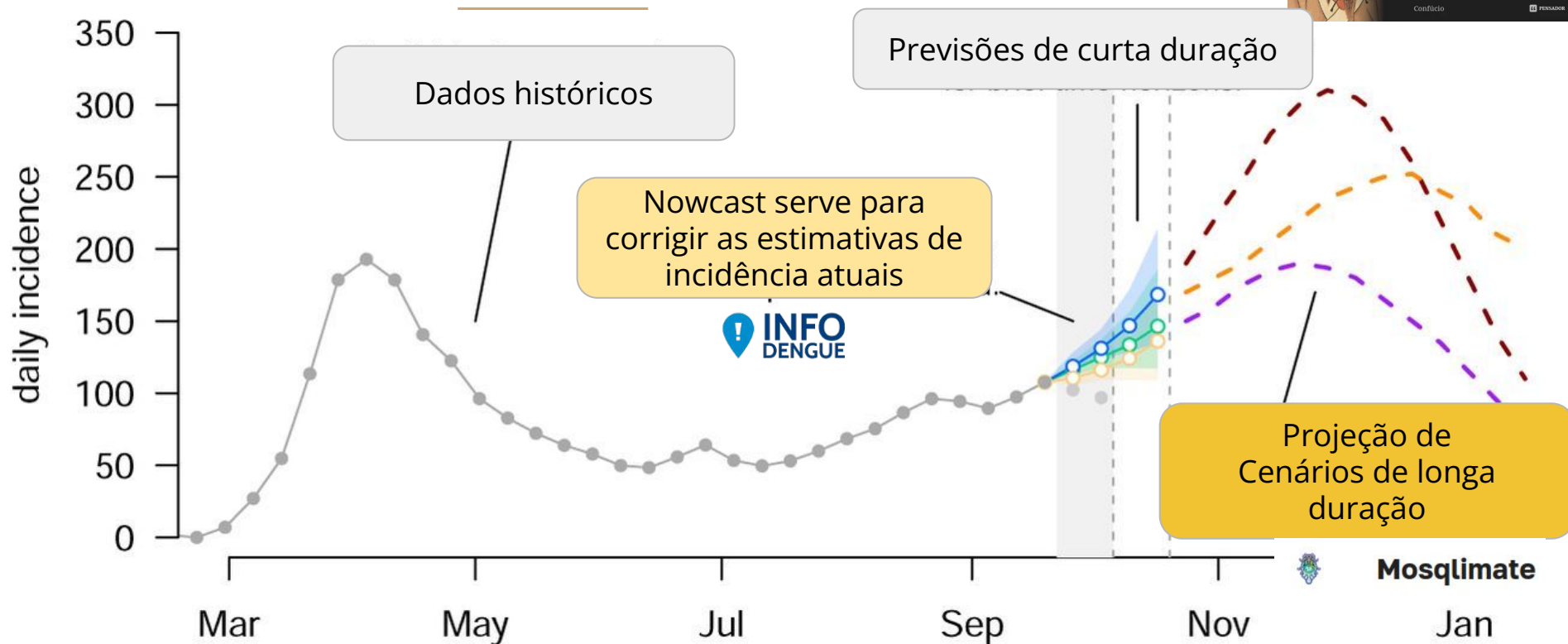
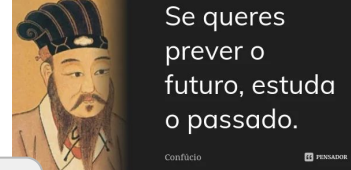


Modelos preditivos: instrumentos para ação

- Construção de cenários
- Análise de risco
- Simulação de respostas (manejo adaptativo)
- A interpretação precisa de experiência, e especialistas.



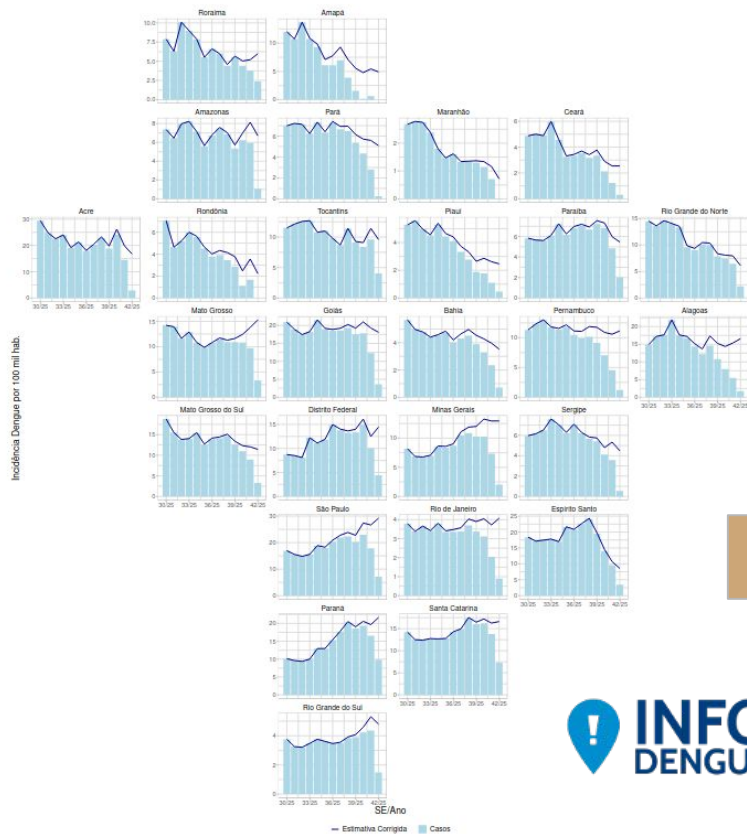
Infodengue e Mosqlimate: Modelagens preditivas para dengue



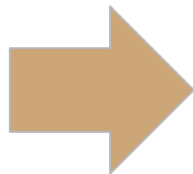
modelos estatísticos, machine learning, matemáticos

Infodengue sistema de Nowcast + alerta precoce

<https://info.dengue.mat.br/>



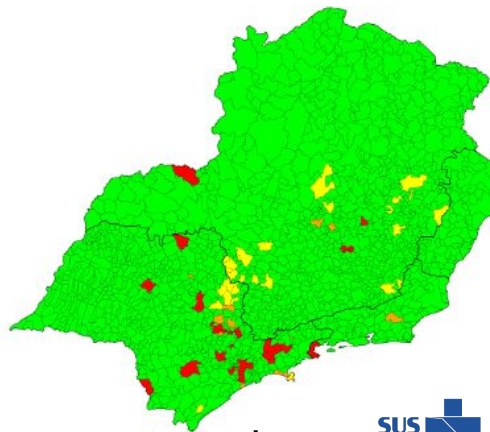
Estadual



Chance de alerta laranja ou vermelho de Dengue para o município de Campinas na próxima semana: 83,7%



Sudeste



Municipal



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Doenças Transmissíveis Sensíveis ao Clima

Prevendo a Evolução de Epidemias



Grupo Mosqlimate



“Ensembles” Probabilísticos de modelos preditivos.

Best model by state



- Model
- Beat it
 - CNNLSTM
 - Chronos-Bolt
 - Cornell PEH
 - Dengue Oracle M1
 - Dengue oracle M2
 - GHR Model
 - Imperial-TFT Model
 - LNCC-AR_p-1
 - LNCC-SURGE-1
 - LSTM-RF model
 - Model fourier-gravidade

Mosqlimate Data API

This platform makes available data to be used in the forecast of Arbovirus diseases in Brazil. It also serves as an open registry of forecasting models for such diseases in Brazil. Relevant climate data is also made available to help include climate influence into the modeling.

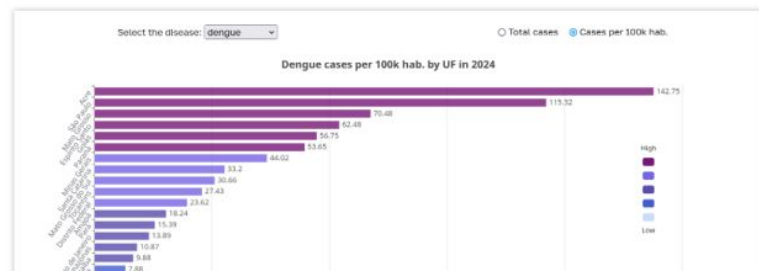
Currently, only data for dengue, chikungunya and Zika are available through this platform. More datasets will be made available in time. All the data made available are in the public domain and are official data made available by the Brazilian Ministry of Health.

The purpose of this platform is to enhance the comparability of forecasting models by making it possible for all models to learn from the same data. The model registry is open to anyone willing to contribute but will require creating a user account first. The Mosqlimate project reserves the right to curate the model collection and decide which one to make available through the platform.

Financiado por:

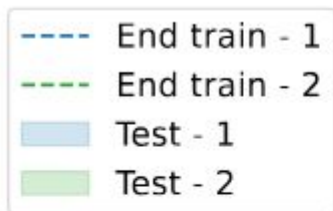


Desafio internacional de forecast



Desafio Mosqlimate-Infodengue 2024

Previsão de temporada anual, por estado



Teams:

D-fense: Américo cunha (UERJ)

Dobby Data: Eduardo Araújo (FGV)

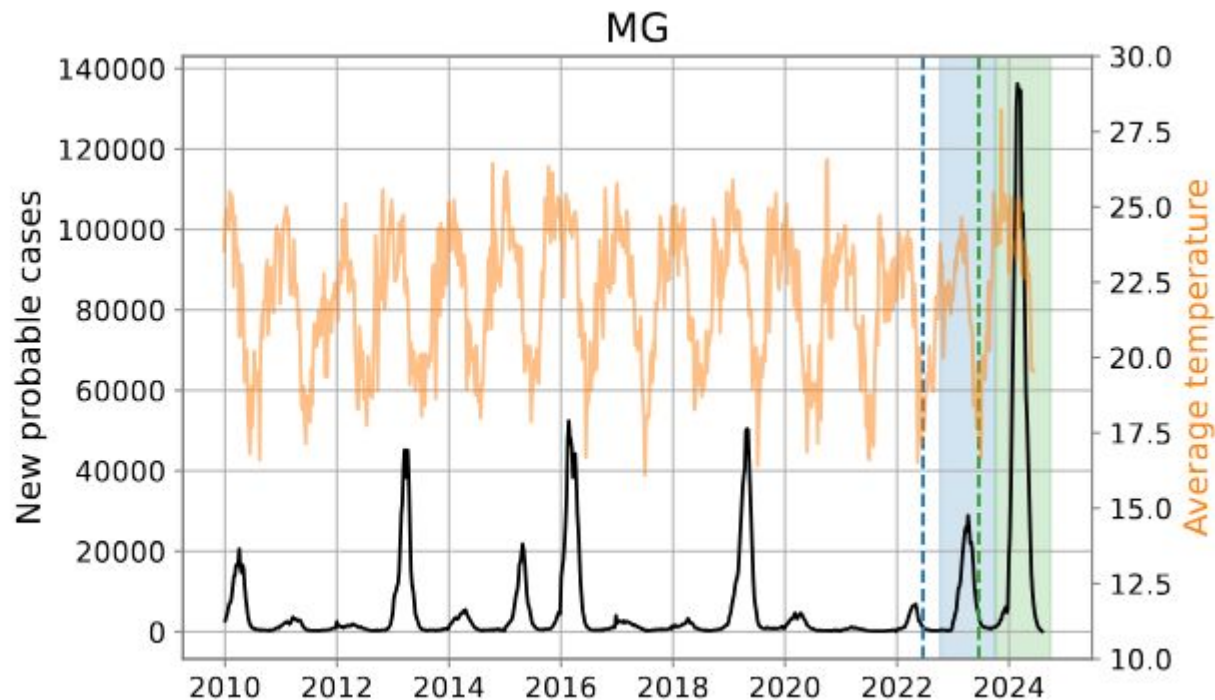
GeoHealth: Paula Moraga (KAUST)

Global Health Resilience: Rachel Lowe (BSC)

PET: Leo Bastos (PROCC-Fiocruz)

Ki-Dengu Peppa: Luiz Max Carvalho (FGV)

DS_OKSTATE: Lucas Stoleran (OSU)



Dados de treinamento e validação

Organization:



Funding:



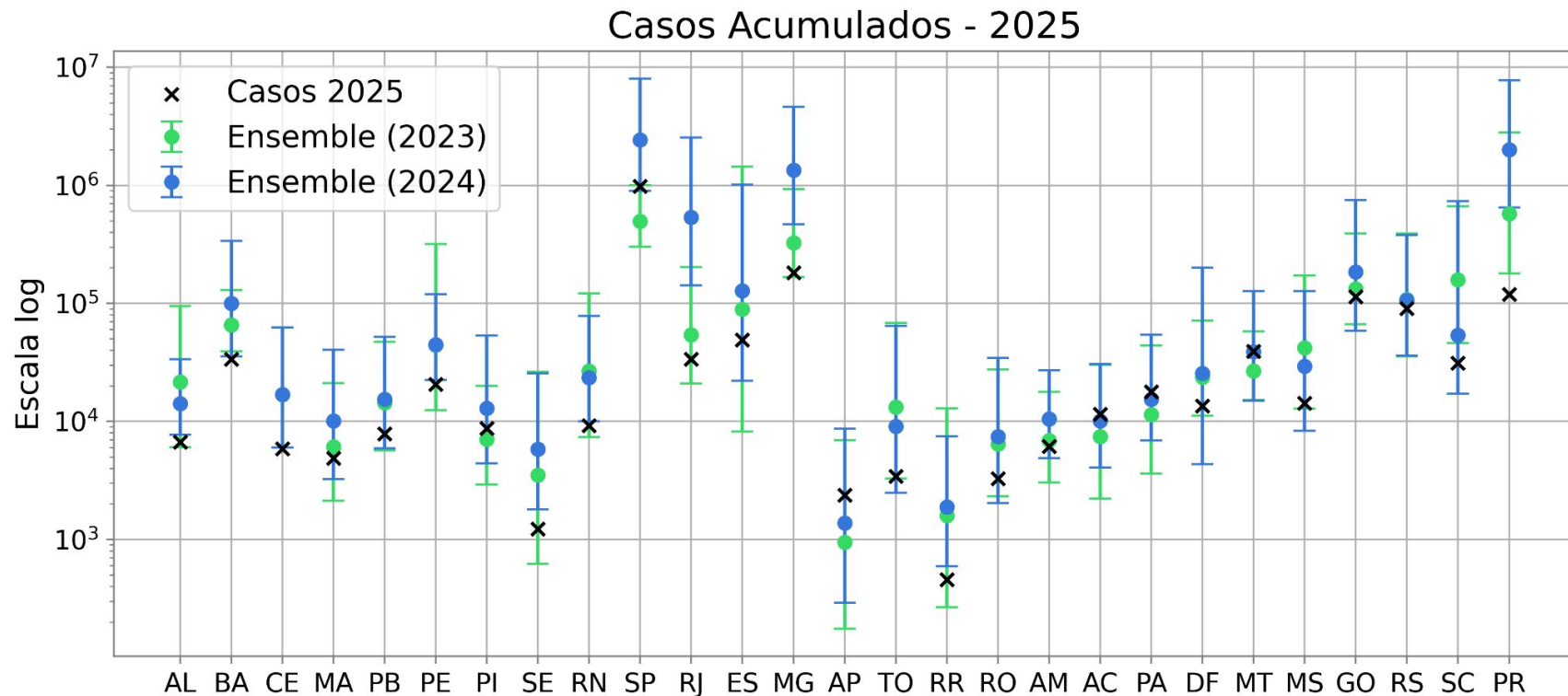
Resultado desafio 2024: Comparação das previsões de dengue para temporada 2025 com observado, por estado

Organization:



INFO
DENGUE

Funding:



2025 Dengue Forecast Sprint

Infodengue-Mosqlimate Dengue Challenge (IMDC)

Call for participation

The 2025 sprint will take place from **May 15th to October 15th, 2025**. The event will be held *online*.

Challenge

this sprint aims to promote, in a standardized way, the training of predictive models and to develop high-quality ensemble forecast models for dengue in Brazil.

The challenge involves three testing targets and one "true" forecast target. The period of interest spans from the epidemiological week (EW) 41 of one year to EW 40 of the following year, aligning with the typical dengue season in Brazil.

IMPORTANT DATES:

- RELEASE OF CALL FOR PARTICIPATION: **May 15th, 2025**
- FORECAST SUBMISSION DEADLINE (VALIDATION DATASETS): **June 30th, 2025**
- WEBINAR (RESULTS OF THE VALIDATION ROUND): **July 30th, 2025**
- 2ND FORECAST SUBMISSION DEADLINE (2026 FORECASTS): **September 23rd, 2025**
- PRESENTATION OF THE ENSEMBLE MODEL: **October 15th, 2025**

Equipes



Mosqlimate

Infodengue: <https://info.dengue.mat.br/>

Mosqlimate: <https://mosqlimate.org/>

Fiocruz: Claudia Codeço, Leonardo Bastos, Oswaldo Cruz, Sara Souza, Thais Riback, Raquel Lana, Iasmim Almeida, Marcelle Chagas, Lais Freitas, Lucas Bianchi, Ayrton Gouveia, Ramila Alencar, Danielle Ferreira

FGV-EMAp: Flavio Coelho, Fabiana Ganem, Eduardo Araujo, Luiz Carvalho, Luã Bida, Beatriz Laiate, Marcio Bastos, Davi Barreira, Julie Souza

Apoio:



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