

**WEBINAR**

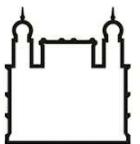
Simultaneous translation  
into Spanish & Portuguese



# Using interdisciplinary data and concepts in research: *The Trajetórias Project*

26<sup>th</sup> Oct 2023, 13:00 UK | 9:00 BR

**REGISTER**



Ministério da Saúde

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**WEBINAR**

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**26<sup>th</sup> Oct 2023, 13:00 UK | 9:00 BR**

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

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

**Raquel Martins Lana** - Postdoctoral Researcher, Global Health Resilience Group, Barcelona Supercomputing Centre (BSC), Spain

**Ana Rorato** - Postdoctoral researcher, National Institute for Space Research (INPE), Brazil

**Ana Paula Dal'Asta** - Postdoctoral researcher, National Institute for Space Research (INPE), Brazil



## Panel

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

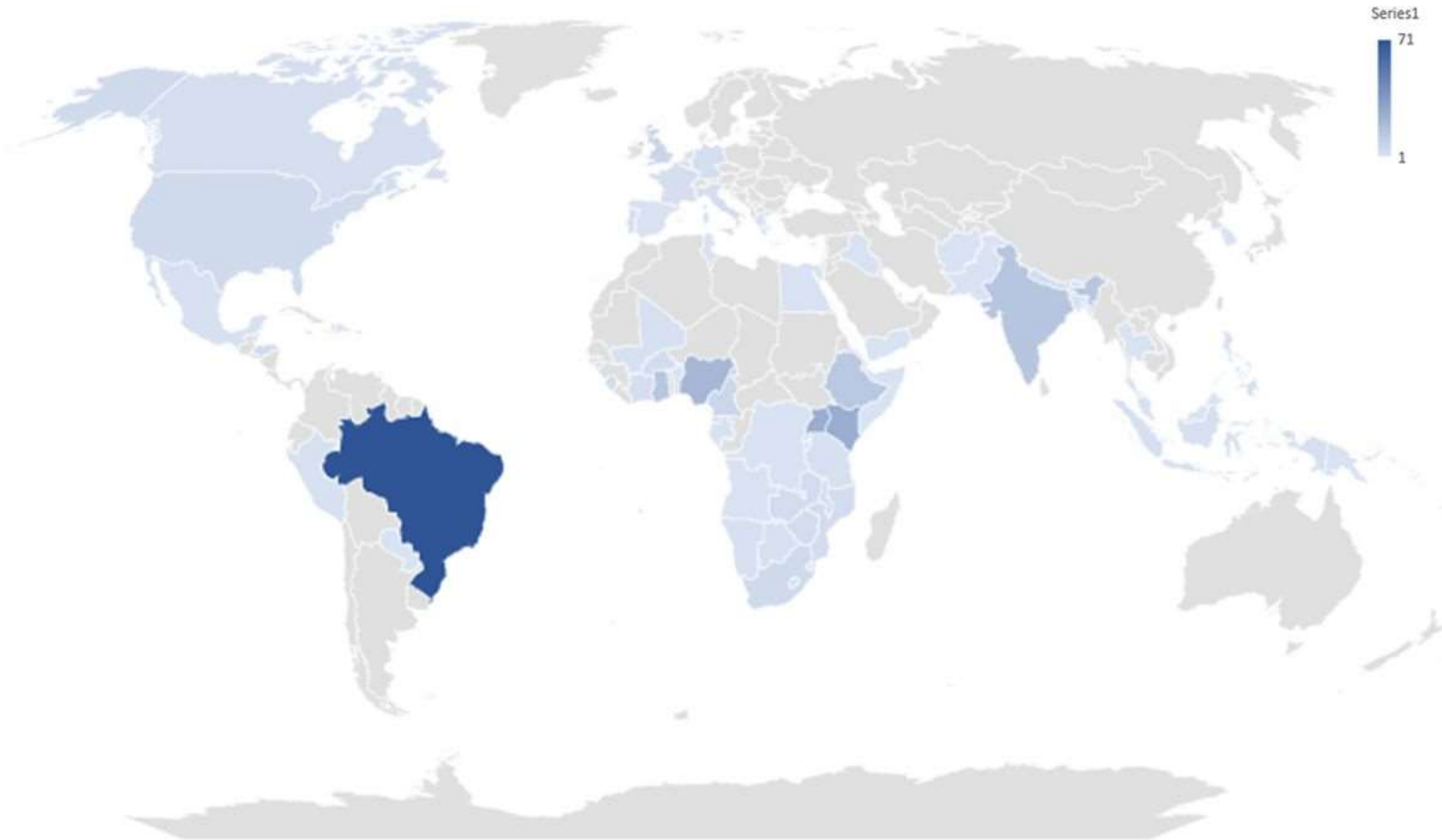
**Raquel Martins Lana** - Postdoctoral Researcher, Global Health Resilience Group, Barcelona Supercomputing Centre (BSC), Spain

**Ana Rorato** - Postdoctoral Researcher, National Institute for Space Research (INPE), Brazil

**Ana Paula Dal'Asta** - Postdoctoral Researcher, National Institute for Space Research (INPE), Brazil

# Joining us today

1	Country	Count
2	Brazil	71
3	Uganda	27
4	Kenya	27
5	Nigeria	22
6	Ghana	15
7	India	15
8	Ethiopia	14
9	United Kir	8
10	Cameroon	7
11	South Africa	5
12	United States	5
13	Honduras	4
14	Rwanda	4
15	Burkina Faso	4
16	Zimbabwe	4
17	Sierra Leone	4
18	Mozambique	4
19	Nepal	4
20	Zambia	4
21	Congo, Dem.	3
22	Germany	3
23	France	3
24	Portugal	3
25	Côte d'Ivoire	3
26	Canada	3
27	Italy	3
28	Malawi	3
29	Philippines	2
30	Mali	2
31	Tanzania	2
32	Botswana	2
33	Peru	2
34	Namibia	2
35	Mexico	2
36	Indonesia	2
37	Lesotho	2
38	Afghanistan	1
39	Yemen	1
40	Tunisia	1

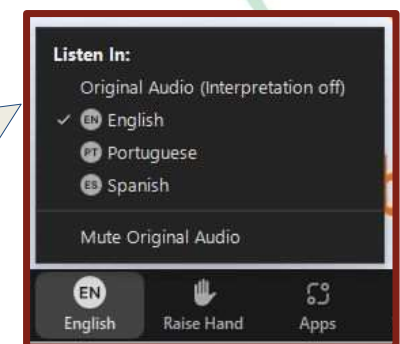


# Agenda

- Welcome and introductions
- The conceptual framework of the Trajetórias Project
- The epidemiological component of the dataset
- The environmental component of the dataset
- The economic component of the dataset
- Using the Trajetórias dataset for policy making
- Interactive session with panel discussion and Q&A
- Closing remarks

# Housekeeping

- This webinar is being recorded and will be shared on The Global Health Network platform - Fiocruz and Latin America and the Caribbean hubs.
- Due to the number of participants your camera and microphone are disabled.
- This webinar will be held in Portuguese and simultaneous translation will be provided into both English and Spanish.
- Navigate to the toolbar, click on **Language Interpretation** and select your desired language input.



# Housekeeping

- Please use the *Chat feature* for any technical issues.
- Please use the *Q&A feature* to post your questions. You can post anonymously.
- We have dedicated time allocated for Q&A so we'll try to get through as many questions as possible.



# Trajetórias Project: the conceptual framework

Dr. Cláudia Torres Codeço

Senior Researcher

Oswaldo Cruz Foundation (Fiocruz), Brazil





# The conceptual framework of the **TRAJETÓRIAS**

econômicas | ecológicas | humanas | epidemiológicas



## Centro de Síntese em Biodiversidade e Serviços Ecosistêmicos

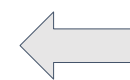
Integrando informações para gerar conhecimento novo e relevante para a ciência e para a sociedade

### Knowledge synthesis science

- Seeking answers to complex problems
- Interdisciplinary - transdisciplinary
- Integration/harmonization of concepts and data from different areas of knowledge



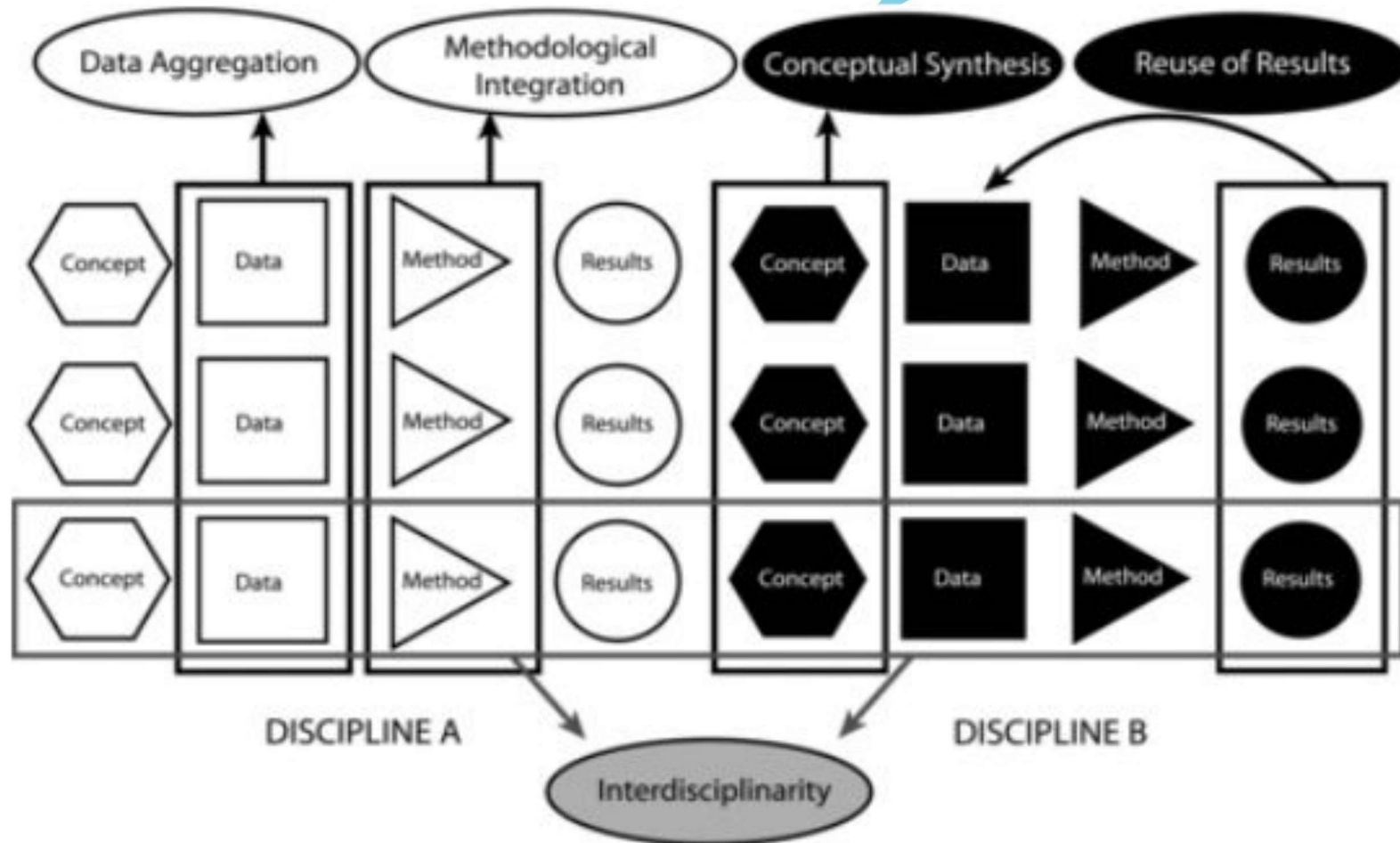
# The International Synthesis Consortium



**Brazilian Synthesis Center  
established in 2018**



# Scientific Synthesis



# Trajetórias SinBiose team



Antonio Miguel V. Monteiro (INPE)



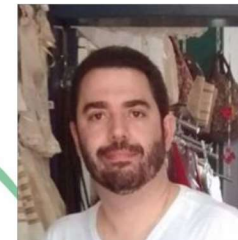
M. Isabel Escada (INPE)



Ana Paula Dal'Asta (INPE)



Ana Rorato (INPE)



Danilo Fernandes, (UFPA)



Danuzia Rodrigues, (Unifesspa)



Flavio Coelho (FGV)



Alexandre Gontijo (MAPA)



Monica Nunes (UFAC)



Milton Junior (UFMG)



Raquel Lana (BSC)



Izabel Reis (Fiocruz)



Tatiana Neves (Fiocruz)



Cecilia Andreazzi (Fiocruz)



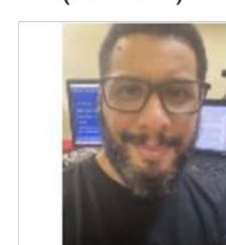
Marcelle Chagas (Fiocruz)



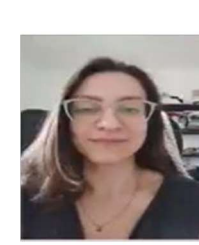
Claudia Codeço (Fiocruz)



Anielli de Souza (INPE)



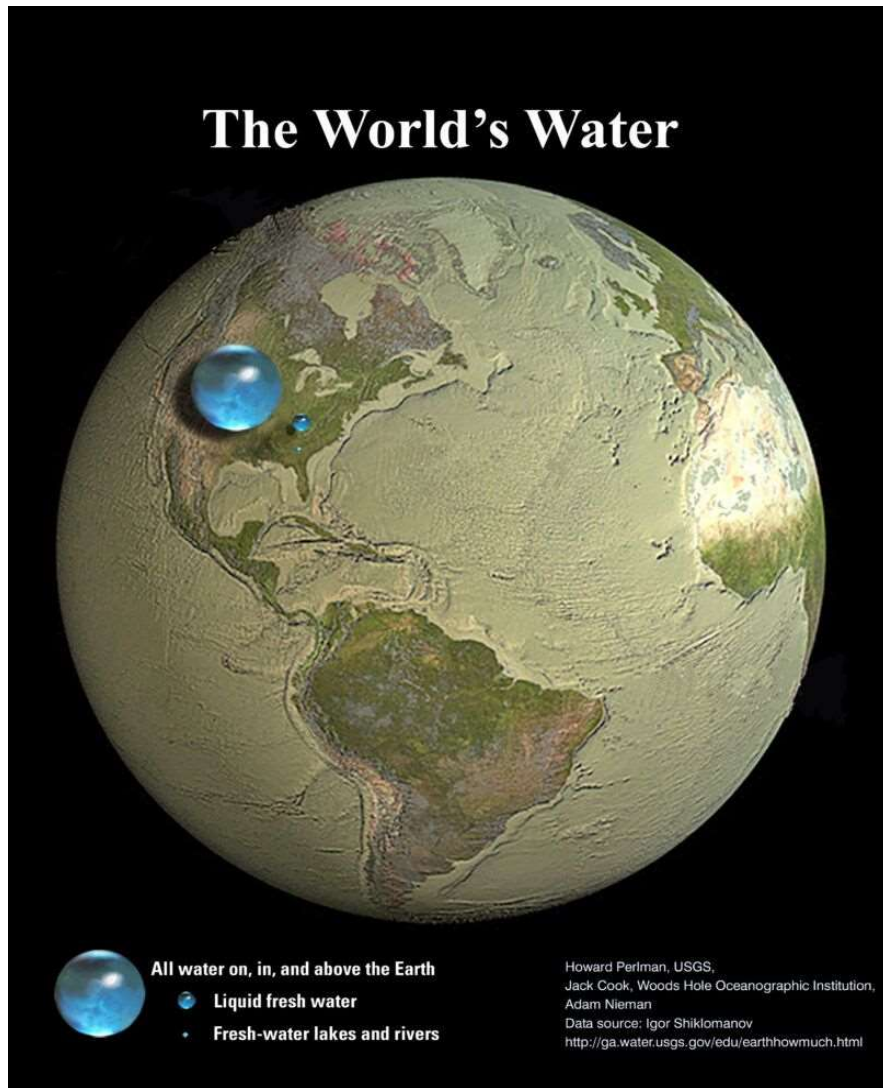
Ricardo Bruno (UFPA)



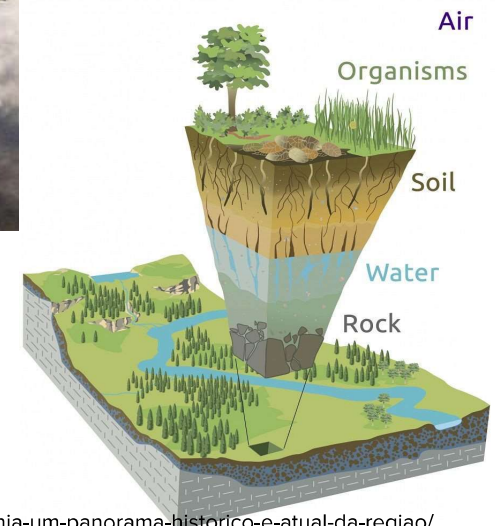
Camila Vogt (UFPA/UFMS)

biologists, ecologists, social scientists, geographers, economists, epidemiologists

# We need to think about water - water is life



20% of the world's freshwater is in the Amazon region

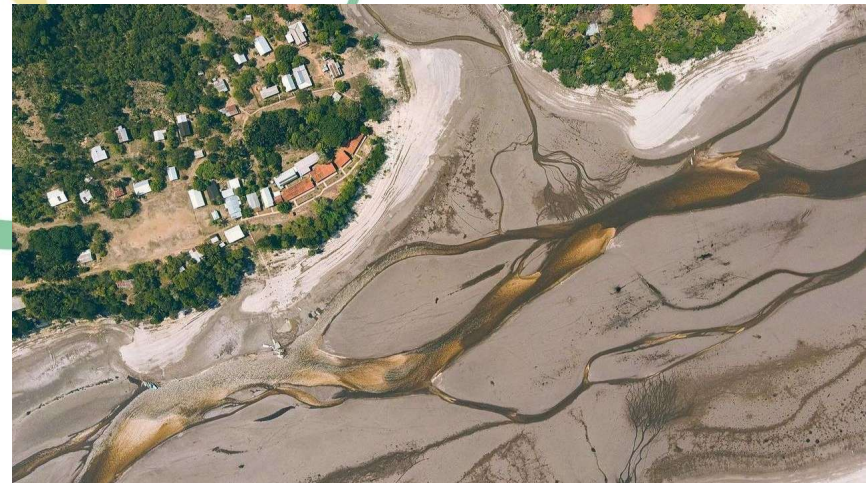


Fonte:  
<https://internacionaldaamazonia.com/2021/09/14/dia-da-amazonia-um-panorama-historico-e-atual-da-regiao/>

**There are 24 million people living in the Amazon region (Brazil)**



# Facing the worst draught



# Aerial rivers





# Competing development strategies in the Amazon

The biodiversity is the resource

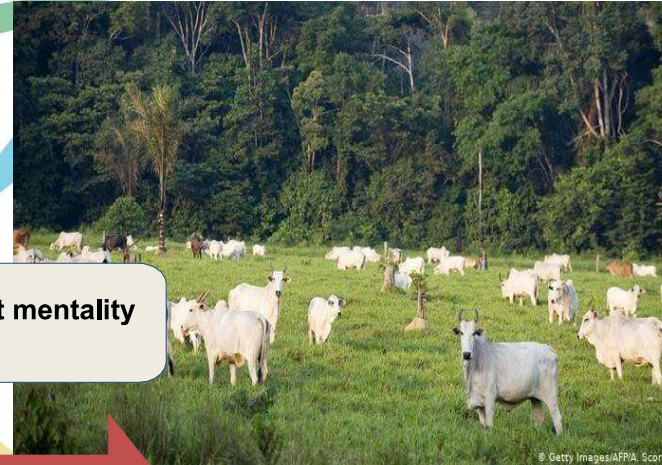
The land is the resource



# Competing development strategies in the Amazon

The biodiversity is the resource

The land is the resource



Dominant mentality

poverty - disease



development

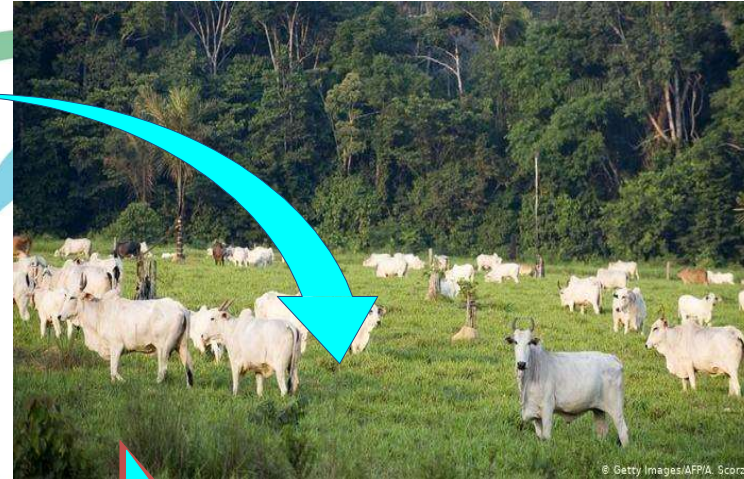
richness - health



# Competing development strategies in the Amazon

The biodiversity is the resource

The land is the resource



richness - health

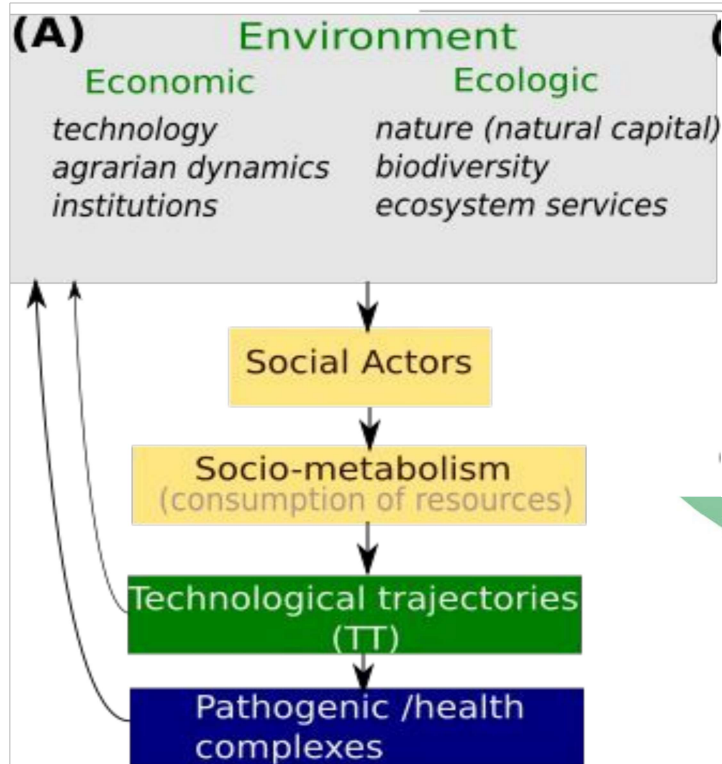
richness - health

sustainability



# Theoretical framework

Environmental conservation and the maintenance of human health in the Amazon depend on an understanding of how different trajectories of economic development affect the environment and influence the dynamics of tropical diseases in the region.



## Epidemiology, Biodiversity, and Technological Trajectories in the Brazilian Amazon: From Malaria to COVID-19

*Claudia T. Codeço<sup>1\*</sup>, Ana P. Dal'Asta<sup>2</sup>, Ana C. Rorato<sup>2,3</sup>, Raquel M. Lana<sup>1</sup>, Tatiana C. Neves<sup>1</sup>, Cecilia S. Andreazzi<sup>4</sup>, Milton Barbosa<sup>5</sup>, Maria I. S. Escada<sup>2</sup>, Danilo A. Fernandes<sup>6</sup>, Danuzia L. Rodrigues<sup>7</sup>, Izabel C. Reis<sup>8</sup>, Monica Silva-Nunes<sup>9</sup>, Alexandre B. Gontijo<sup>10</sup>, Flavio C. Coelho<sup>11</sup> and Antonio M. V. Monteiro<sup>2</sup>*



# Introduction

Theoretical-methodological framework developed by Prof. Francisco Costa (UFPA) to model the agrarian economy of the Brazilian Amazon in relation to the rationality of production systems:

Peasant trajectories (small or family arrangements, reproduction of ways of life).

Employer trajectories (salaried and profit-oriented work)

## Techno-productive Trajectories (TTs)

How do these different economic strategies affect the environment and social welfare?

How do they influence the patterns of disease occurrence in the region?

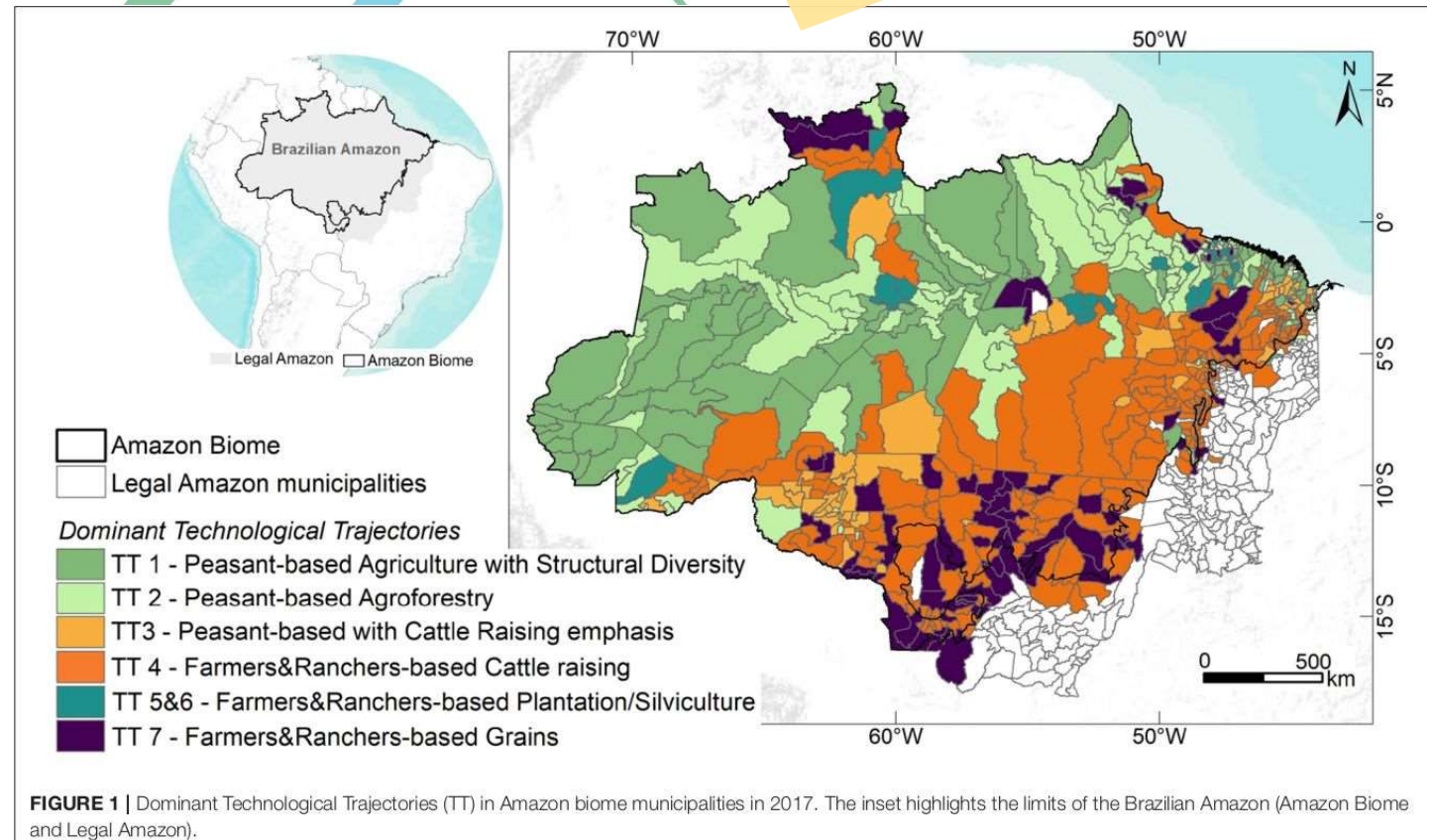


FIGURE 1 | Dominant Technological Trajectories (TT) in Amazon biome municipalities in 2017. The inset highlights the limits of the Brazilian Amazon (Amazon Biome and Legal Amazon).

# Goals

- Providing a theoretical framework for the joint debate of economic, environmental and health dimensions in the Amazon region;
- Creating a repository of epidemiological, environmental and economic indicators for monitoring human and environmental health in the Amazon;
- Scenario analyses of environmental and human health in Amazonian municipalities under pressure from competing land use trajectories.



# Trajectories dataset

www.nature.com/scientificdata

## scientific data

 Check for updates

OPEN

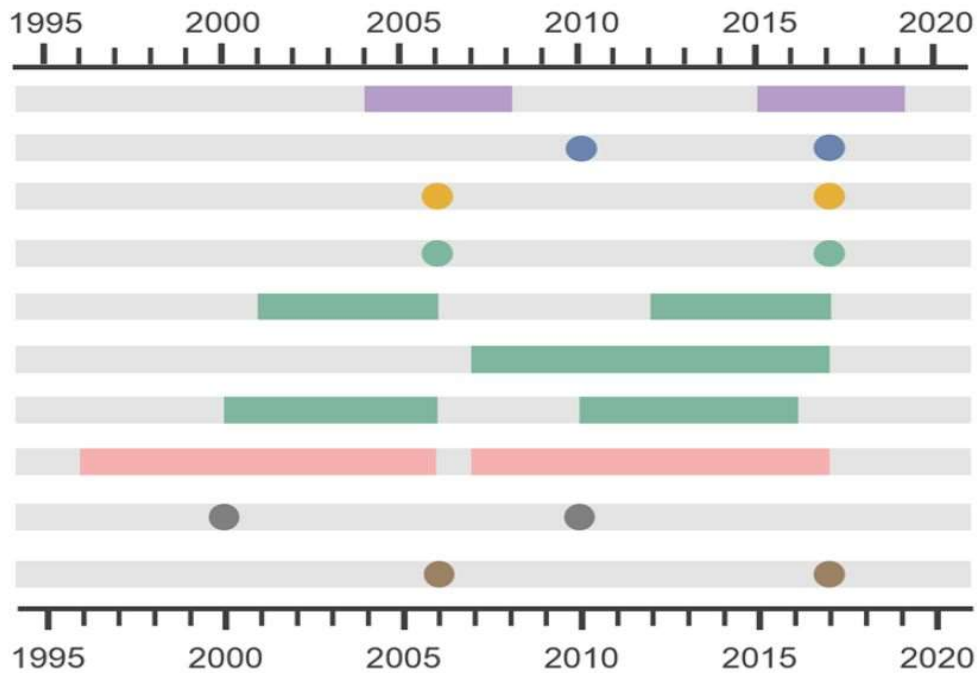
DATA DESCRIPTOR

### Trajetorias: a dataset of environmental, epidemiological, and economic indicators for the Brazilian Amazon

Ana C. Rorato <sup>1,11</sup>✉, Ana Paula Dal'Asta<sup>1,11</sup>, Raquel Martins Lana <sup>2,11</sup>, Ricardo B. N. dos Santos<sup>3,11</sup>, Maria Isabel S. Escada<sup>1,11</sup>, Camila M. Vogt<sup>4</sup>, Tatiana Campos Neves<sup>5</sup>, Milton Barbosa <sup>6</sup>, Cecilia S. Andreazzi<sup>7,8</sup>, Izabel C. dos Reis<sup>9</sup>, Danilo A. Fernandes<sup>3</sup>, Mônica da Silva-Nunes<sup>10</sup>, Anielli R. de Souza<sup>1</sup>, Antonio M. V. Monteiro<sup>1</sup> & Claudia T. Codeço<sup>5</sup>

36 indicators for all 772 municipalities in the Brazilian Legal Amazon.

# The time frame



- Vector borne diseases
- Transportation density network
- Pasture, crop, urban, 2nd vegetation, mining } LULC
- Vegetation core, edge indices } Habitat loss
- Burned area } Habitat loss
- Forest degradation } Habitat loss
- Deforestation indices } Habitat loss
- Precipitation and temperature anomalies
- Rural and Urban Population
- Multidimensional Poverty index (MPI)
- Technoproductive trajectories (TT)



# Resources

## Access the article

Rorato et al., 2023. Trajetórias: a dataset of environmental, epidemiological, and economic indicators for the Brazilian Amazon. *Sci Data* 10, 65 (2023).

<https://www.nature.com/articles/s41597-023-01962-1>

## Trajetórias Dashboard:

<https://trajetorias.shinyapps.io/trajetorias/>



## Resources

The recording, materials, presentations and resources will be shared on the **Fiocruz** and **Latin America and the Caribbean** knowledge hubs:

<https://fiocruz.tghn.org/> and <https://lac.tghn.org/>



<http://bit.ly/trajetoriasfiocruz>

# Thank you.



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