

WEBINAR

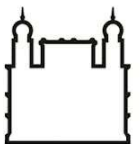
Simultaneous translation
into Spanish & Portuguese



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

26th Oct 2023, 13:00 UK | 9:00 BR

REGISTER



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

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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

Chair: Rachel Lowe - Catalan Institution for Research and Advanced Studies (ICREA) Research Professor 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

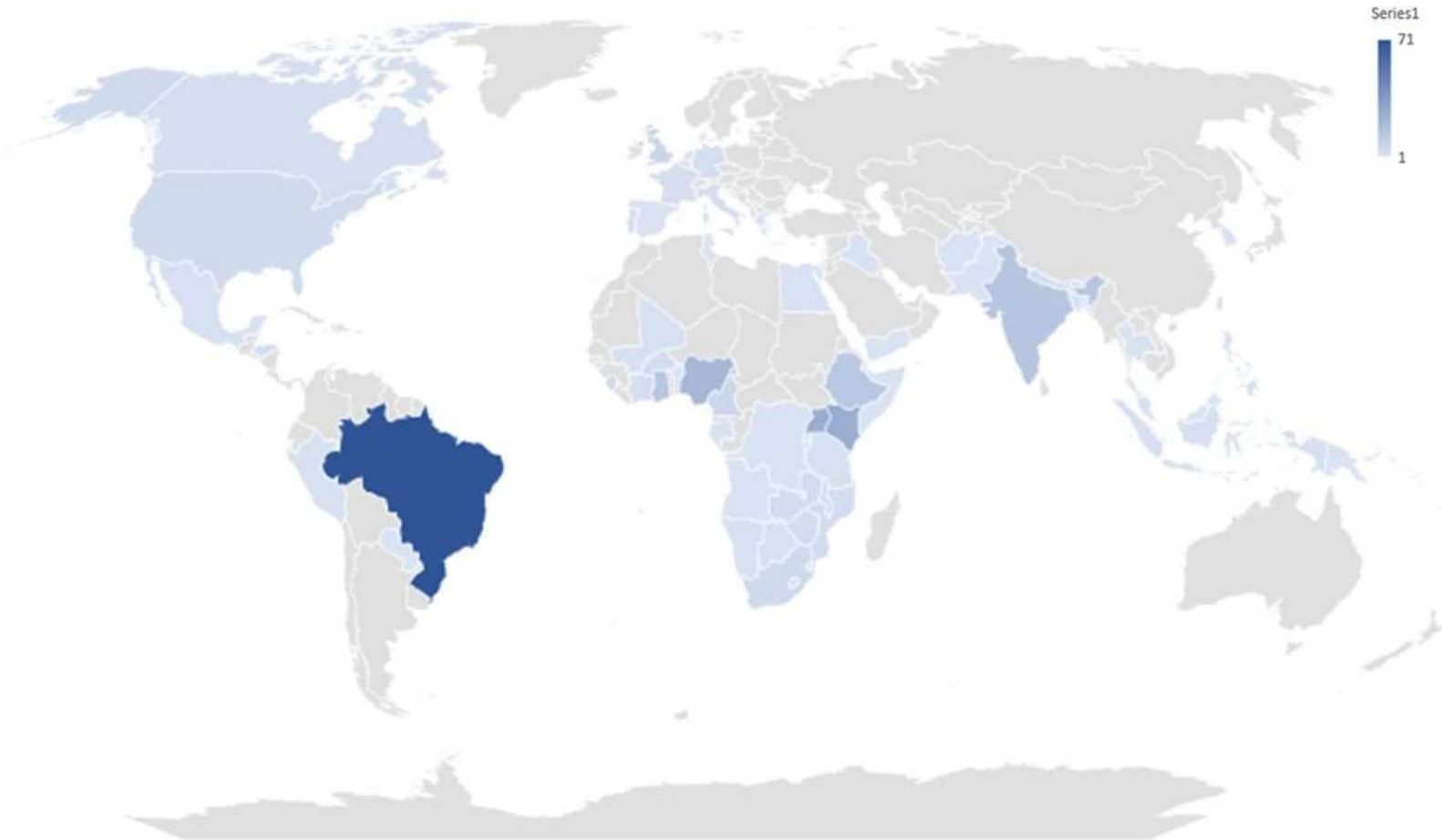
Raquel Martins Lana - Postdoctoral Researcher, Global Health Resilience Group, Barcelona Supercomputing Centre (BSC), Spain

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

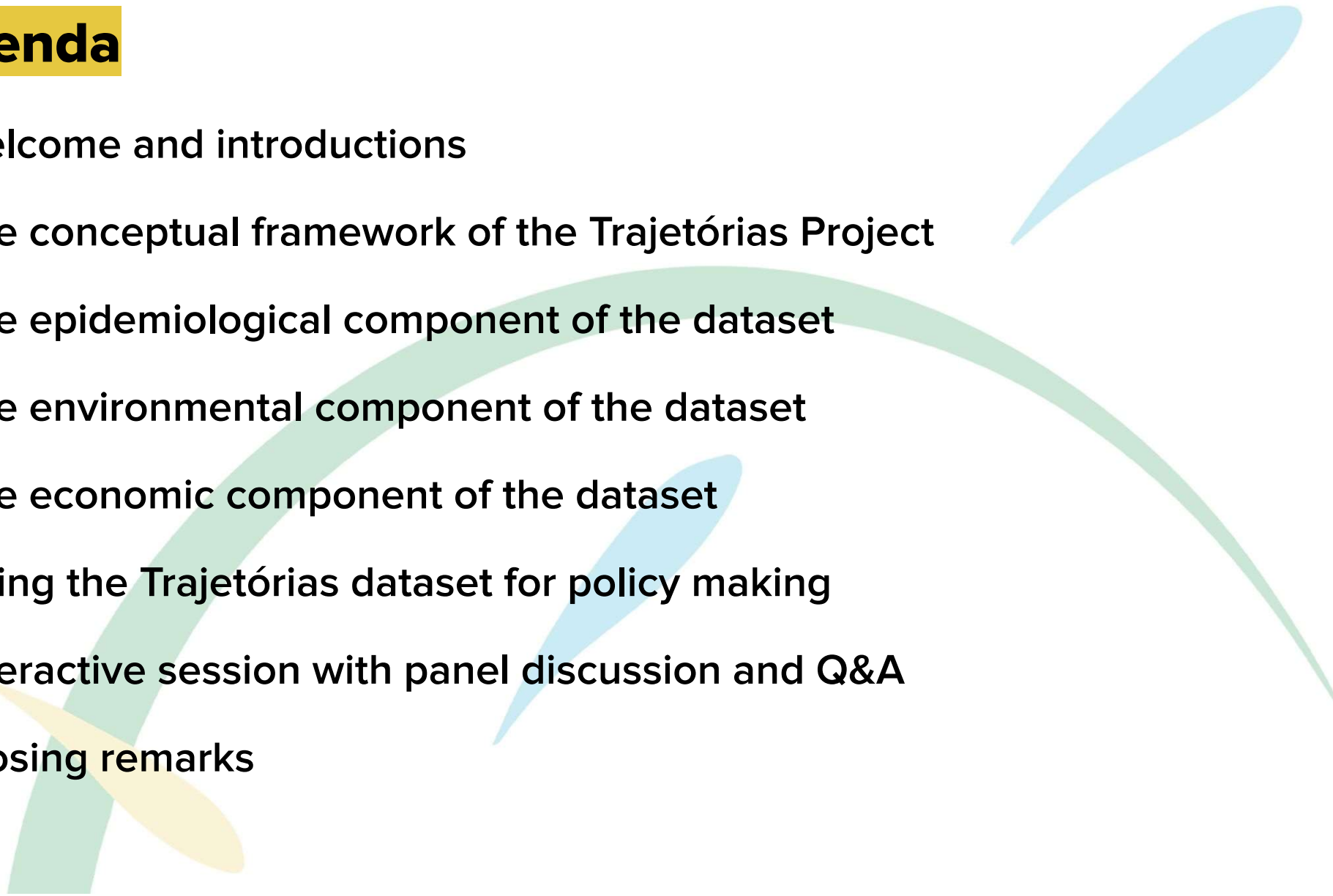
Ana Paula Dal'Asta - Postdoctoral Researcher, National Institute for Space Research (INPE), Brazil

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

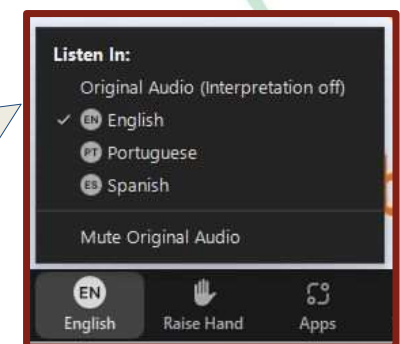


Agenda

- 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.



The economic component of the Trajetórias dataset

Dr. Ana Paula Dal'Asta

Postdoctoral researcher

National Institute for Space Research (INPE), Brazil



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Indicators



Subdimension	Indicator	Unity	Timeframe	ID
MPI	Multidimensional Poverty Incidence (H)	%	t = 2000 or 2010	h
MPI	Multidimensional Poverty Intensity (A)	%	t = 2000 or 2010	A
MPI	Deprivations	dimensionless	t = 2000 or 2010	carpon
MPI	Multidimensional Poverty Index	$MPI = A * H$	t = 2000 or 2010	mpi
MPI	Contribution of the Health Dimension	%	t = 2000 or 2010	csaude
MPI	Contribution of the Education Dimension	%	t = 2000 or 2010	ceduca
MPI	Contribution of habitation and sanitation	%	t = 2000 or 2010	ccv
MPI	Contribution of work and private consumer goods	%	t = 2000 or 2010	cnv
MPI	People	count	t = 2000 or 2010	totpescar
Population	Proportion of urban population in 2000	%	t = 2000	prop_urb2000
Population	Proportion of urban population in 2010	%	t = 2010	prop_urb2010
Population	Proportion or rural population in 2000	%	t = 2000	prop_rur2000
Population	Proportion or rural population in 2010	%	t = 2010	prop_rur2010

Multidimensional Poverty Index - MPI¹



Based on microeconomic data = multidimensional deprivation



*Housing and collective services & Work and Private Consumer Goods

Unit of analysis: rural and urban households from 2000 and 2010 demographic census (census microdata)

¹ SANTOS, R. B.N.; et al. Indicadores de pobreza e alternativas de desenvolvimento para a Amazônia: um debate necessário. 19º Seminário de Diamantina. Minas Gerais e o Brasil Pós-Pandemia: 40 Anos do Seminário de Diamantina. Diamantina, agosto de 2022.

Multidimensional Poverty Index - MPI



Poverty is more than deprivation of income. **MPI** measures a combination of the multiple deprivations each family experiences at a given time.



MPI - Trajetórias: measures family deprivation in the context of Amazonian livelihoods

Multidimensional Poverty Index - MPI

Dimension	Description	Weight			
		Urban MPI		Rural MPI	
		2000	2010	2000	2010
Education (1/4)	schooling of adults: at least one household > 18 years of age, excluding the head of household, who did not complete elementary school	1/12	1/12	1/12	1/12
	head of the household is illiterate	1/12	1/12	1/12	1/12
	schooling of children: at least one household, aged between 4 and 14, not in the school	1/12	1/12	1/12	1/12
Health (1/4)	death of newborn	1/4	1/12	1/4	1/12
	death of infants: at least one death of infants between 1 and 5 years of age	-	1/12	-	1/12
	early death	-	1/12	-	1/12
Living conditions: Housing (1/4)	house construction quality (not a permanent house made of timber or brick)	-	1/28	-	1/32
	temporary or collective house	1/24	1/28	1/28	1/32
	house size ((# householders / # dorms) > 5)	1/24	1/28	1/28	1/32
	Sewage: house not linked to a sewage network or septic tank	1/24	1/28	1/28	1/32
	Garbage: house without garbage collection service	1/24	1/28	1/28	1/32
	Energy: house without electricity	1/24	1/28	1/28	1/32
	Water: house without water services or piped water	1/24	1/28	1/28	1/32
Living conditions: income and consumer goods (1/4)	Land ownership: permanent house in ceded land or other similar condition	-	-	1/28	1/32
	social security: income only from social security or unemployment aid, or student aid, or family allowance or other social programs.	1/20	1/20	1/20	1/20
	Employment: head of the household without payment from main job in the last month	1/20	1/20	1/20	1/20
	food storage: household without a fridge	1/20	1/20	1/20	1/20
	Communication: household without computer or cell phone with internet access, or T.V. or radio	1/20	1/20	1/20	1/20
	consumer goods	1/20	1/20	-	-
	mobility (car or motorcycle)	-	-	1/20	1/20

Households: score 1 or 0

To compute the MPI, a weighted deprivation score was computed where each dimension received a equal weight 1/4. Within each dimension, all indicators are equally weighted.

A household is multidimensionally poor if deprivation score is greater than 25%.

Multidimensional Poverty Index - MPI

MPI at municipal level: combination of the poverty incidence (H), and the poverty intensity (A).

$$MPI(m, t) = H \times A$$

where:

$$H(m, t) = \frac{\text{number of multi dimensionally poor households in } m, \text{ at } t}{\text{households in } m, \text{ at } t} \longrightarrow \text{\% households in a multidimensional poverty condition}$$

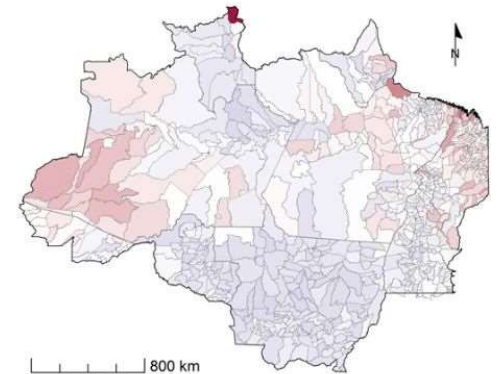
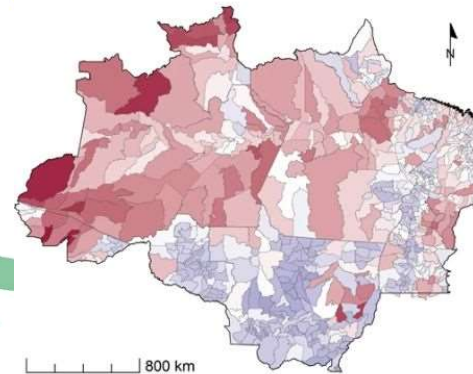
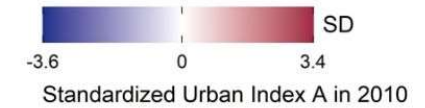
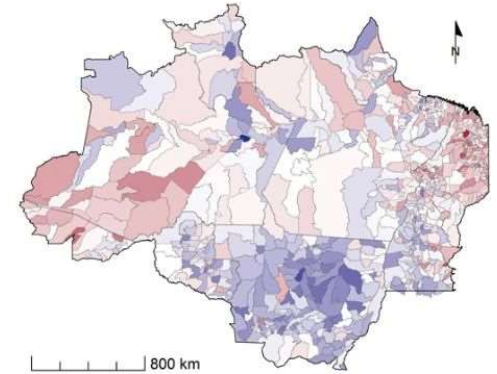
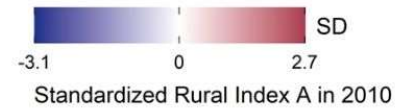
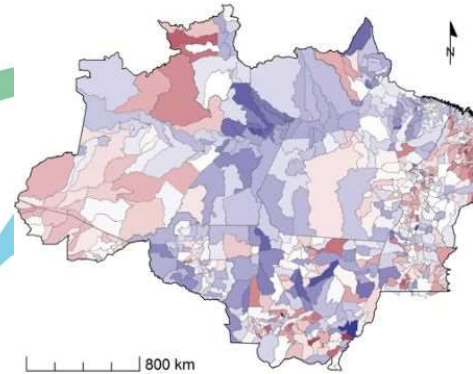
$$A(m, t) = \frac{\text{sum of household's deprivations in } m, \text{ at } t}{\text{households in } m, \text{ at } t} \longrightarrow \text{average household deprivation score}$$

where m is the municipality and $t = 2000, 2010$.

$$ContribDim(m, t, j) = \frac{\text{sum of deprivations at dimension } j \text{ in } m, \text{ at } t}{MPI \text{ in } m, \text{ at } t}$$

MPI Incidence H (% of poor) and MPI Intensity A (how poor)

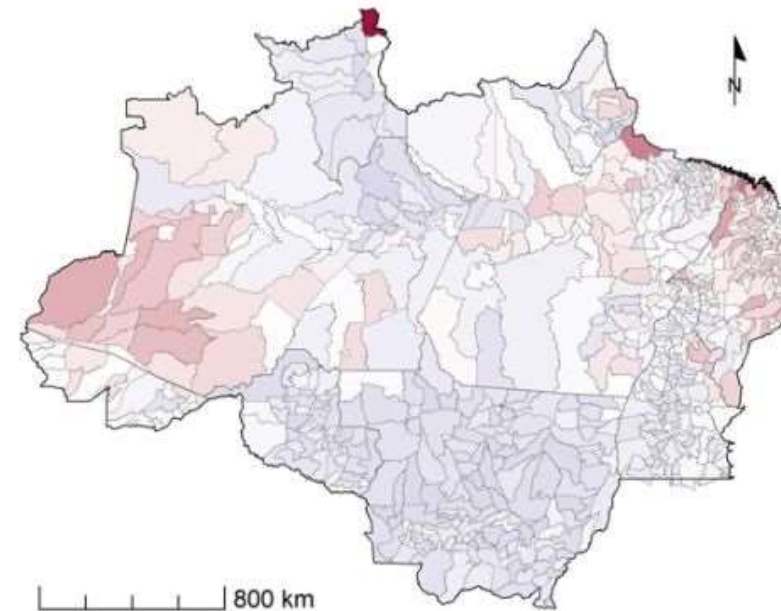
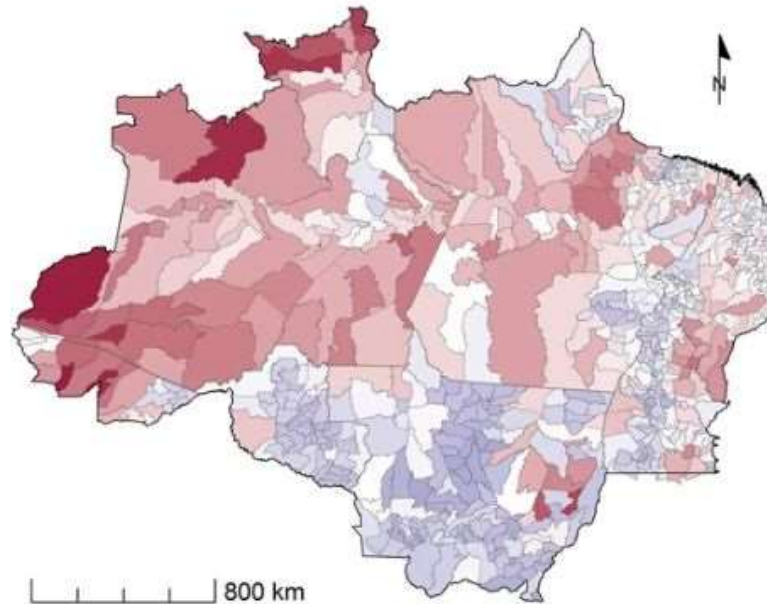
The higher the index (+), the more widespread are the population's deprivations (in health, education, and living conditions).



Deviation of the H and A indices in relation to the general average for the Amazon region.

Urban and rural MPI

The higher the index (+), the more widespread are the population's needs (multiple needs in health, education, and living conditions).



Deviation of poverty index in relation to the general average for the Amazon region.

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

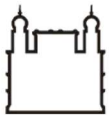
The recording, materials, presentations and resources will be shared on the **Fiocruz** and **Latin America and the Caribbean** knowledge hubs:

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



<http://bit.ly/trajetoriasfiocruz>

Thank you.



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