

RESEARCH ON TAP

# BU and Africa: Culture, Development, Health, Environment, and Governance

Monday, April 8, 2024

[bu.edu/research/events](https://bu.edu/research/events)



# Agenda

- Welcome Remarks
- Presentations
  - Tsitsi Musasike
  - Elaine Nsoesie
  - Joanna Davidson
  - Jonathan Greenacre
  - Kevin P. Gallagher
  - Amruta Nori-Sarma
  - Lawrence Were
  - Mahesh Karra
  - Zana Wangari Kiragu
  - Peter Rockers
- Closing Remarks

## The 2030 Triple Challenge

# Tsitsi Musasike

Professor of the Practice of Global Development Policy  
Frederick S. Pardee School of Global Studies



# Agenda

- The 2030 triple challenge
- Project development process
- The research project

## The 2030 triple challenge (COP28)

- Triple global renewable energy capacity by 2030 to avoid  $>1.5^{\circ}\text{C}$
- Scale up to 11 510GW, an increase of 8 510GW
- Sub-Saharan Africa's target 300GW, an increase of 260GW
- SSA - 750 million people with no access to energy
- Abundant solar and wind resources – yet approx. 1% tapped
- Funding is not a problem
- The problem – pipeline of bankable projects

# The project development cycle



**Challenge:** Lack of structured support for early-stage development of renewable energy projects (funding, technical capacity)

Local developers struggle to access funding at prefeasibility level

## **No Structured support for project developers**

- Constraints – early-stage funding to prepare the projects
- Availability and accessibility
- Impacts pipeline of bankable projects to scale up renewables
- Need to mobilize funding for early-stage project development
- Research project – Evaluating the efficacy of Africa's prefeasibility facilities for renewable energy & energy access

# Data Science Africa: Capacity Building, Research and Community

## Elaine O. Nsoesie

Associate Professor

Department of Global Health, School of Public Health



Boston University Office of Research





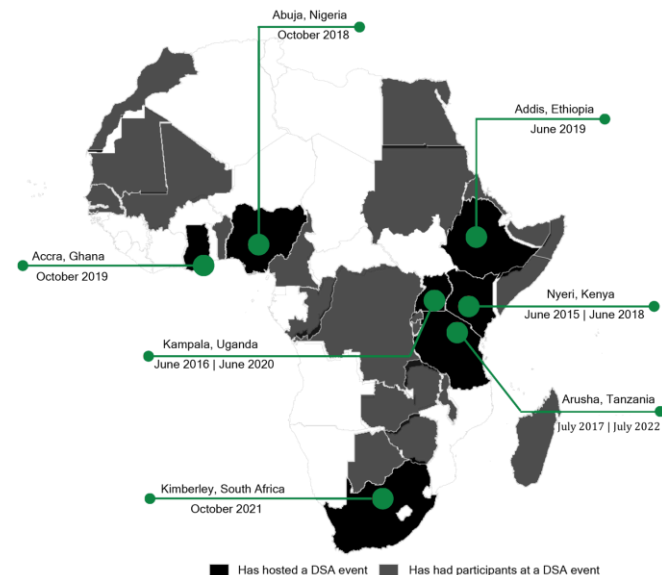


# About Data Science Africa

- Grassroots capacity building organisation
- Runs summer schools and workshops all over Africa in collaboration with local institutions
- Teach the theory and practice of data science and machine learning
- Support research focused on applications of data science to solve problems in Africa

## Data Science Africa Events

- Since 2015 - 11 events in eight countries.
- Most recent event in Rwanda in May 2023
- Participants from all over Africa
- Next gathering: Nyeri, Kenya



## DSA VISITING FELLOWSHIP



The DSA Visiting Fellowship presents exciting opportunities for members of the DSA community to explore and deepen their academic and professional interests through research visits to DSA partner academic institutions.

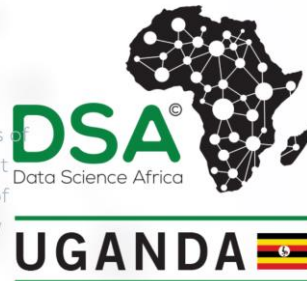
## DSA RESEARCH GRANTS



DSA grants to 10 projects based at African Universities covering 8 (eight) African countries including Benin, Egypt, Ethiopia, Kenya, Nigeria, South Africa, Tanzania, and Uganda. Covering areas of COVID-19, Agriculture, Climatic change, Urban planning and Health.

## LOCAL CHAPTERS

DSA local chapters are meant to consolidate the achievements of DSA at individual country level. DSA Uganda network is the first local chapter and its mission is to be "an all-inclusive network of data scientists, enthusiasts, and organisations inspired to grow data science skills and their usage to contribute to Uganda's development aspirations".



## Other Activities

Learn more:  
<https://www.datascienceafrica.org/>



# Ethnographic Entanglements in Rural Guinea-Bissau

Joanna Davidson

Associate Professor  
Anthropology, CAS













JOANNA DAVIDSON  
Boston University

## The problem of widows

### ABSTRACT

How does an ethnographer inquire about a social category that is neither named nor recognized as such? The Ejamat Jola language has no word for widow, even though more than a third of households in the Jola villages of Guinea-Bissau are occupied by women whose husbands have died. Over years of fieldwork, I have tried to explain why widows were not named or even seen by Jola villagers. Chronicling how each of my explanations was undercut by both Jola responses and my own critical scrutiny, I recount the impasses of an ethnographic quest and show the gradual process of gaining insight into experiences that cannot be encapsulated by either local or anthropological models. The unspeakable can signal not only profound fragilities in social relations but also openings for new social formations beyond the normative bounds of received cultural categories. [widows, marriage, gender, production, reproduction, silence, ethnography, Jola, Guinea-Bissau, West Africa]

Le mot « veuve » n'a pas d'équivalent en langue diola même si plus d'un tiers des familles des villages diola en Guinée Bissau est constitué de femmes ayant perdu leur époux. Comment donc rendre compte ethnographiquement d'une catégorie sociale qui n'a pas de nom et ne jouit pas de reconnaissance au sein d'un groupe? Au fil d'années passées sur le terrain, j'ai essayé d'expliquer dans mes productions scientifiques pourquoi les veuves demeurent une catégorie non nommée voire invisible pour les villageois diolas. Cet article est d'abord une chronique de la façon dont mes interlocuteurs diolas ainsi que mon propre

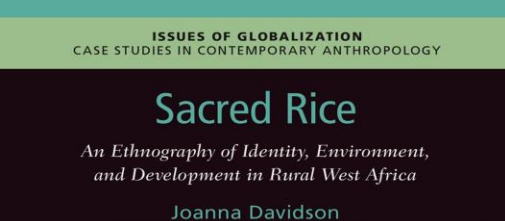
Most of us, given a choice between chaos and naming . . . would choose naming. Most of us see this as a zero-sum game—as if there were no third place to be: something without a name is commonly thought not to exist. And here is where we may be able to discern the benevolence of the untranslatable. Translation is a practice, a strategy . . . that does not seem to give us a third place to be. In the presence of a word that stops itself, in that silence, one has the feeling that something has passed us and kept going, that some possibility has got free.

Anne Carson (2014, 26)

Silence is as much a part of history as noise; the invisible as much a part of history as the visible.

Max Picard (2002, 73)

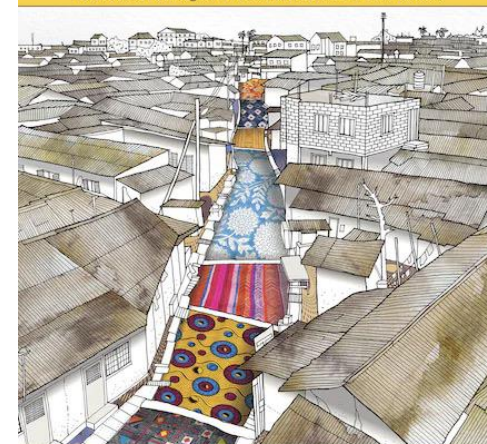
**S**alman Rushdie (1983) famously quipped that the key to any society is in its untranslatable words. I begin here not with an untranslatable word but with an absent one, a word to name a significant segment of a population, what you and I would call widows. More than a third of households in the Jola villages of rural Guinea-Bissau are widows' houses. Although there is no word for *widow* in the Jola language, there is a word for the houses in which women reside after their deceased husband's house is torn down.<sup>1</sup> Perhaps there is no word for *widow* because these houses, called *kungomaku* (sing. *hungomahu*), and the women who reside in them have, for reasons I discuss below, proliferated only recently.<sup>2</sup> But such an explanation fails to account for a range of dynamics involving women who live in *kungomaku* (who do not see themselves as part of a category into which most women eventually enter), as well as their Jola neighbors and kin (who seem



## Pathos & Power: Interdisciplinary Perspectives on Widowhood in Africa, Past and Present, Edited by Joanna Davidson and Benjamin N. Lawrance



### The Politics of Marriage and Gender: Global Issues in Local Contexts



## OPTING OUT

Edited by  
JOANNA DAVIDSON and  
DINAH HANNAFORD

Women Messing  
with Marriage  
Around the World









## Bridge Systems in Africa

# Jonathan Greenacre

Assistant Professor

The Pardee School of Global Studies, Boston University





1.3 billion people  
excluded  
(World Bank, 2021)



A new 'social contract'  
(2021)

Firms

Barriers to expansion  
(e.g. corruption, weak  
infrastructure,  
gender barriers)

Excluded  
communities



# Bridge systems



Firms

Barriers to expansion  
(e.g. corruption, weak  
infrastructure,  
gender barriers)

Excluded  
communities





## **GDP Center Africa Research**

# Kevin P. Gallagher

Professor, Pardee School  
Director, GDP Center





# GDP Center Chinese Loans to Africa Database

**Chinese Loans to Africa, 2000-2022: \$170 billion**

Source: Chinese Loans to Africa (CLA) Database, 2023. Boston University Global Development Policy Center

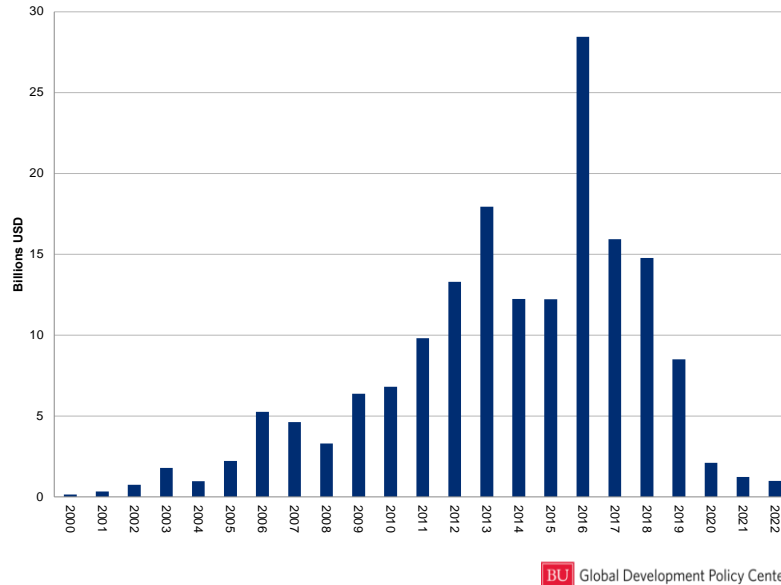
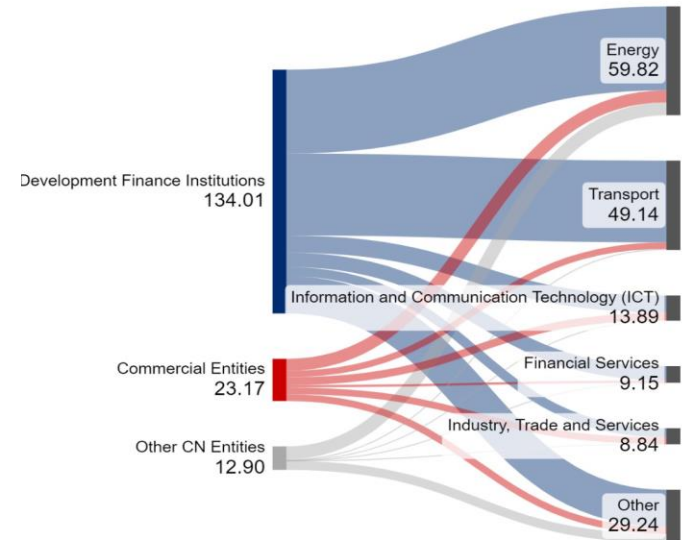
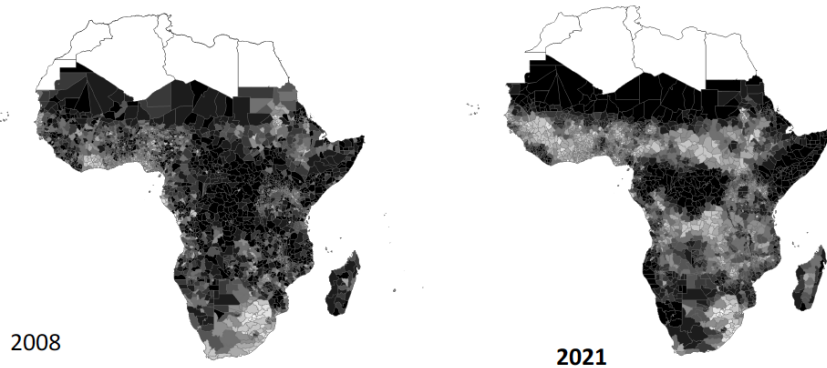


Figure 7a Chinese Loans to Africa by Sector in Billions USD, 2000-2022



Source: Chinese Loans to Africa Database, 2023. Boston University Global Development Policy Center.

## II. Dependent Variable: Nighttime Luminosity



2008

2021

## Regional spillovers of cross border infrastructure

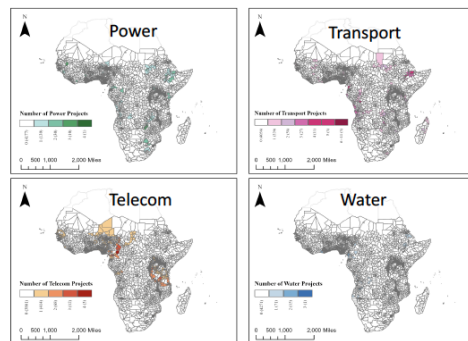
	Aspatial	Spatial Durbin model			
	(1)	(2)	(3)	(4)	(5)
Chinese Project	0.063** (0.025)	0.048*** (0.012)	0.042*** (0.012)	0.048*** (0.012)	0.043*** (0.012)
World Bank Project	-0.003 (0.014)	-0.003 (0.011)	-0.001 (0.011)	-0.003 (0.011)	-0.003 (0.011)
Spatially Weighted Chinese Project	-	0.107*** (0.025)	0.071*** (0.024)	0.146*** (0.033)	0.094*** (0.032)
Spatially Weighted World Bank Project	-	-0.018 (0.022)	-0.012 (0.022)	-0.019 (0.028)	-0.001 (0.028)
Spatially Weighted NTL	-	-	0.299*** (0.016)	-	0.405*** (0.019)
Country-Year FE	Y	Y	Y	Y	Y
Subnational level FE	Y	Y	Y	Y	Y
Studied Region FE	Y	Y	Y	Y	Y
Adjusted $R^2$	0.385	0.424	0.438	0.424	0.440
Observations	61012	61012	61012	61012	61012
Neighbor Rule	-	5 nearest	5 nearest	10 nearest	10 nearest

Source: Authors' elaboration.

Note: \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ ; standard errors clustered at country level for aspatial model and robust

## Explanatory Variable: CODF

- 295 infrastructure projects committed during 2008-2021, spanning 929 studied regions.
- 258 infrastructure projects committed during 2008-2017, spanning 727 studied regions.
- 4358 studied regions, in 708 ADM1 (state) regions in 48 SSA countries
- # of Observations: 61,012



BU Global Development Policy Center



# Solomon Owusu (Pardee) and David Lagakos (Econ)

## **Project title:**

- Chinese ties and low-carbon manufacturing and value chain integration in Africa

## **Overarching Research Question**

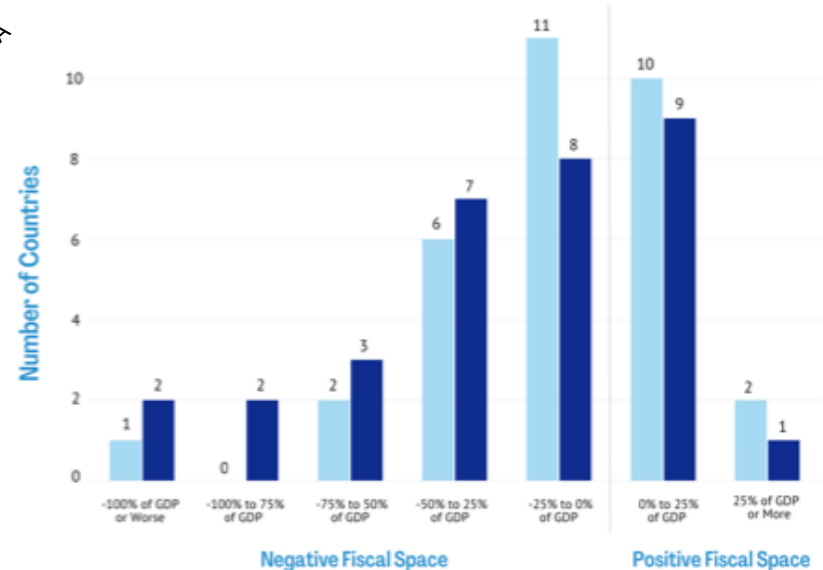
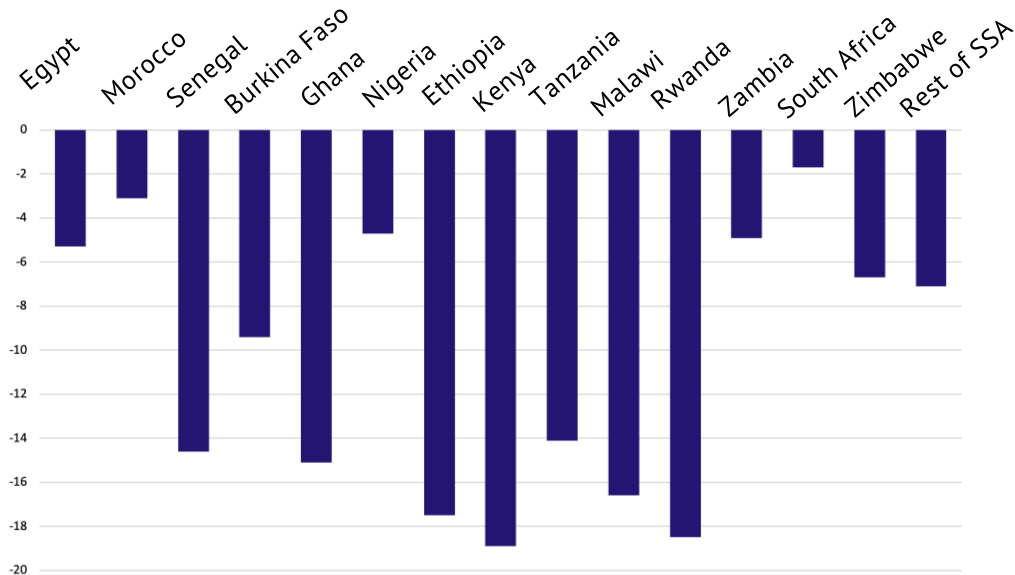
- What is the effect of Chinese FDI and development finance on low carbon manufacturing and value chain integration in Africa?
- Is the effect conditioned on FDI type or environmental regulation of FDI recipient country

## **Project title:**

- Why are measured hours of work so low for agricultural workers in Africa?

## **Background and Overarching Research Question**

- Measured hours worked in developing countries are consistently lower for agricultural workers than for non-agricultural workers
- Puzzling since agricultural workers are the poorest workers, on average, and so should have strong incentives to supply labor to bolster their low consumption levels
- Historical evidence suggests that workers on average supply less hours as they get richer over time and cross-country data show that poorer countries on average work more hours than richer ones
- So why are measured hours of work so low for agricultural workers?



# Macroeconomic Impacts of Climate Change in Africa

Change in Household Income (%)

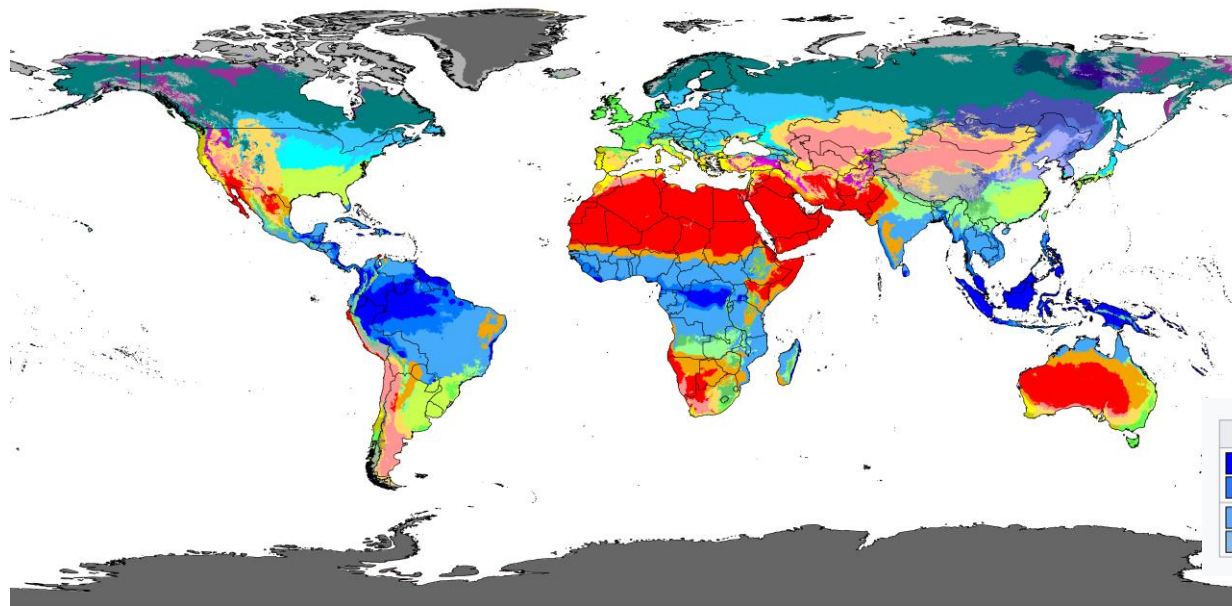
## Climate Change and Health in Africa

# Amruta Nori-Sarma

Assistant Professor  
Dept Environmental Health, BUSPH



# Köppen-Geiger Climate Zone Classifications



Beck, H.E., Zimmermann, N. E., McVicar, T. R., Vergopolan, N., Berg, A., & Wood, E. F. - "Present and future Köppen-Geiger climate classification maps at 1-km resolution". *Nature Scientific Data*. DOI:10.1038/sdata.2018.214.

Published Nov 13, 2023

SHARE



Residents of the Western Cape and Northern Cape have been advised to brace for extreme heat, with temperatures expected to soar to 43 degrees Celsius in some areas.

Proposed project: climate and MH presentations at local clinics and hospitals in Western Cape province, South Africa (PI: Laila Asmal, Stellenbosch University)

**Weather tracker**  
South Africa

This article is more than 1 month old

**Analysis**

## Weather tracker: South Africa floods kill at least 11 people

*Alice Fowle and Morgan Thomas (MetDesk)*

Cape Town mayor declares major incident as roads closed and 80,000 people left without electricity

Fri 29 Sep 2023 08:39 BST



A man walks across a rugby field during heavy flooding in South Africa's Western Cape.  
Photograph: Rodger Bosch/AFP/Getty Images

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## and Solutions

CRISIS - BIOSYSTEM VIABILITY | BY PAIGE STALLWOOD | AFRICA | DEC 15TH 2022 | 8 MINS

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Climate-induced desertification is having adverse effects on the African continent each year the

reliefweb

SEARCH UPDATES COUNTRIES DISASTERS ORGANIZATIONS TOPICS JOBS TRAINING

Informing humanitarian worldwide 24/7 —a service provided by OCHA



## Southern Africa: Drought - 2018-2022

Status: Past Disaster • Glide: DR-2018-000429-ZWE

### OVERVIEW

#### Disaster description

[Affected Countries](#)  
[Appeals and Response Plans](#)

### LATEST

[Latest Updates](#)  
[Maps and Infographics](#)  
[Most Read](#)

### OTHER

[Related Disasters](#)

### Disaster description

Between December 2021 and March 2022, around 336,000 people (29% of the population in **Eswatini**) are estimated to be facing high acute food insecurity (IPC Phase 3 Crisis or above) and require urgent humanitarian assistance. Of this population, 286,000 people are classified in IPC Phase 3 (Crisis) and 50,000 in IPC Phase 4 (Emergency). An additional 376,000 are classified in IPC Phase 2 (Stressed) and require livelihood support. Compared to the October 2021 - March 2022 projection period from the August 2021 analysis, this update shows a slight deterioration, with a slight increase in the food insecure population in IPC Phase 3 or above in all livelihood zones except for Highveld Cattle and Maize, Timber Highlands and Moist Middleveld, with the latter two having 47% of their households having food stocks lasting more than six months. This update has seen the population projected to be in IPC Phase 3 or above increase by 19,000 people. ([IPC, 25 Jan 2022](#))

**Tanzania:** For the current period of analysis (November 2021 - April 2022), about 437,000 people, representing 13% of an analysed population of 3.4 million, are estimated to be experiencing high levels of acute food insecurity (IPC Phase 3 or above). Overall, an estimated 22,000 people (1% of the population analysed) are

Proposed project: sustainable rainwater harvesting and mental health in communities in Kenya

# Climate Change and Health Research Coordinating Center - CAFÉ

- Aims to Convene, Accelerate, Foster, and Expand the Climate Change and Health Community of Practice

- [www.climatehealthcafe.org](http://www.climatehealthcafe.org)

Count by Continent	Count		
North America (including Caribbean)	1006	74.52%	
South America	25	1.85%	
Asia	120	8.89%	
Africa	118	8.74%	
Europe	61	4.52%	
Oceania	9	0.67%	
Middle East	11	0.81%	
TOTAL	1350	100.00%	25.48%

# Optimizing Health Systems for Health Disparities within Marginalized Populations: Focus on Africa

# Lawrence P. O. Were, PhD

Assistant Professor

Department of Health Sciences, Sargent College, &  
Department of Global Health, School of Public Health

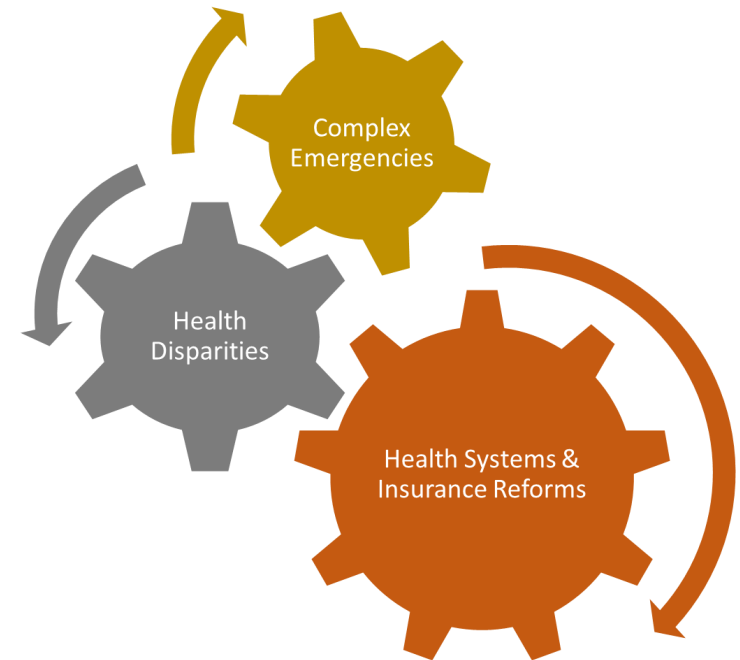
[werelpo@bu.edu](mailto:werelpo@bu.edu)



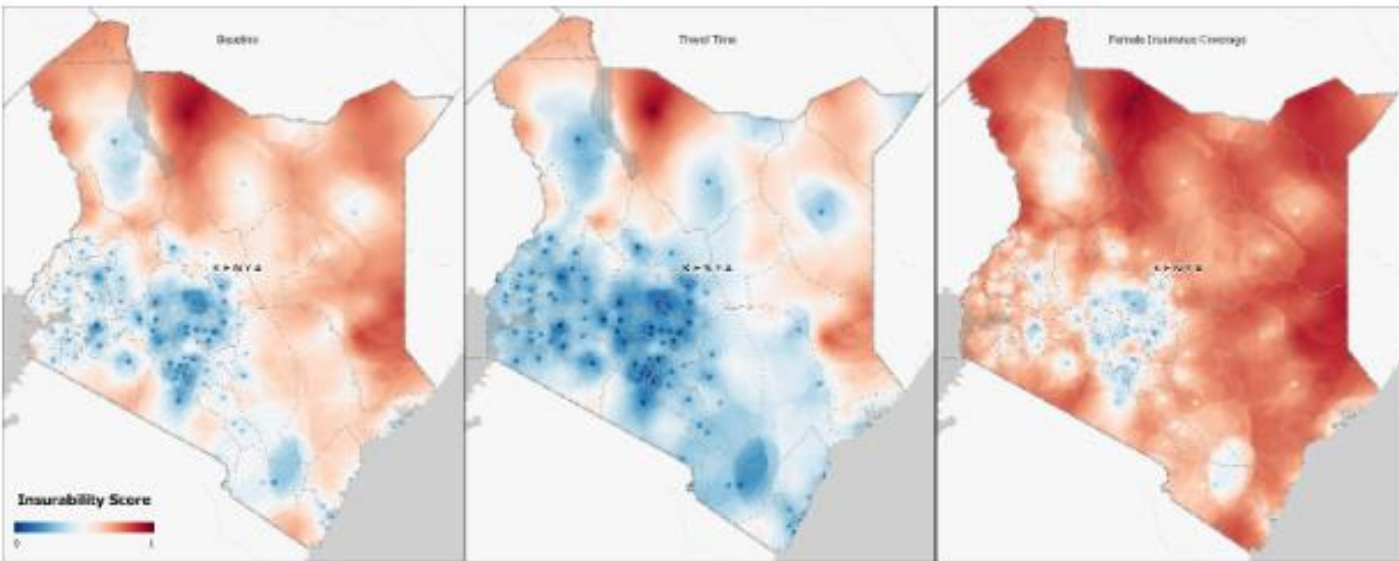


## The Global Health Systems R.I.S.E Lab

- Focus is on *how to optimize health systems* for marginalized populations:
  - Immigrants;
  - Informal Sector Workers;
  - Displaced Persons;
  - Persons Living With HIV/AIDS [PLWHA];
  - Persons with Mental Health Challenges;
  - Pregnant Women; Mothers and their Newborn Children; &
  - Refugees



## Ongoing Projects

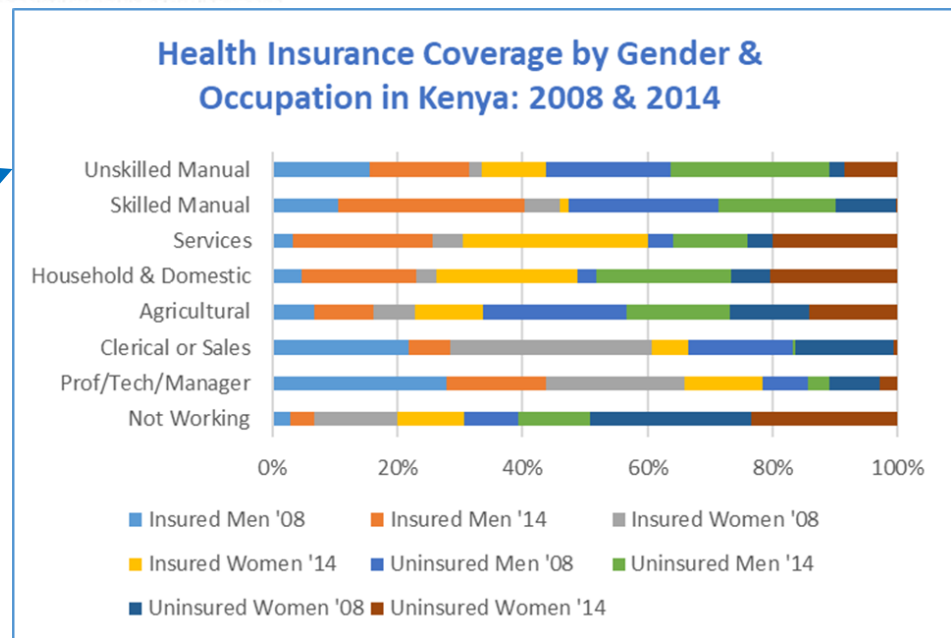


# Characterizing *Health Insurance Deserts* in Kenya

Models of weighted insurability for 2022. Left panel shows the baseline scenario. Middle panel shows higher weight given to travel time. Right panel shows higher weights given to women.

2

# Quantifying the relationship between *informal employment and health insurance enrollment* in Kenya



# Ongoing Projects

## Climate Change & HIV



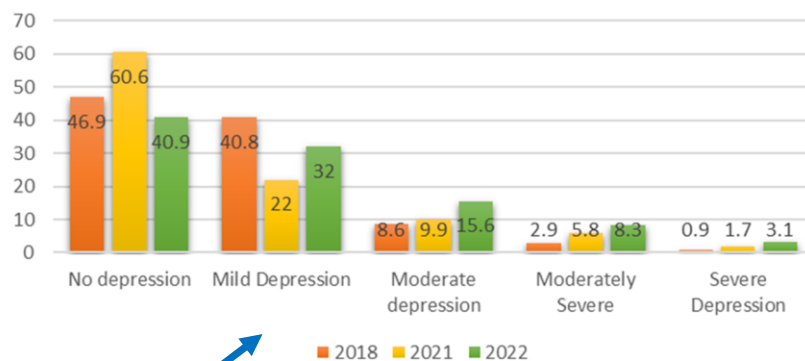
## Odds of Transactional Sex by Gender

Ave Rainfall		Men	Women
	Past 6 Months	4.144**	1.561
	Past 12 Months	2.391**	1.748
Ave Heat Wave Intensity			
	Past 6 Months	1.411**	1.767**
	Past 12 Months	1.454**	1.698*

3

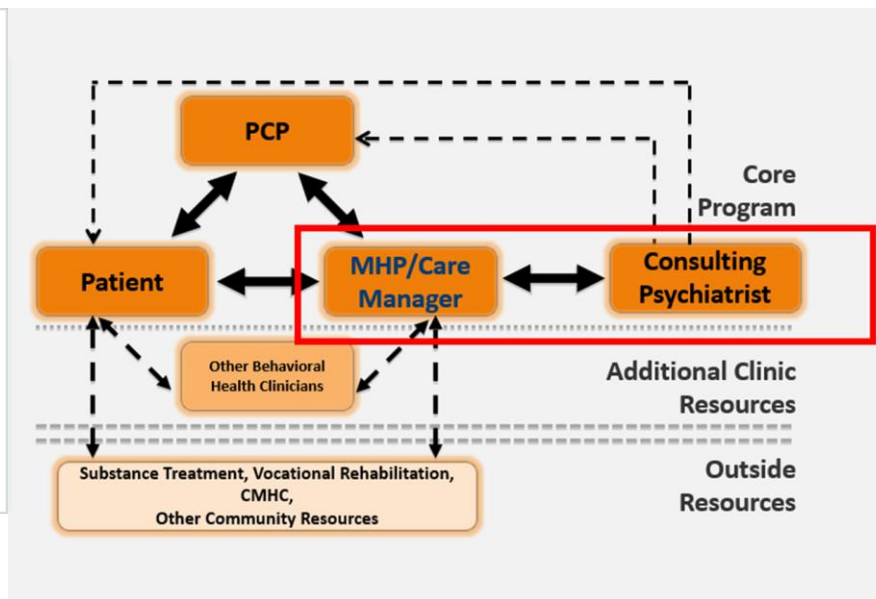
Characterizing the relationship between *climate and HIV risks* in the Lake Victoria basin, Kenya

## Prevalence of Depression in Lwala Catchment Area



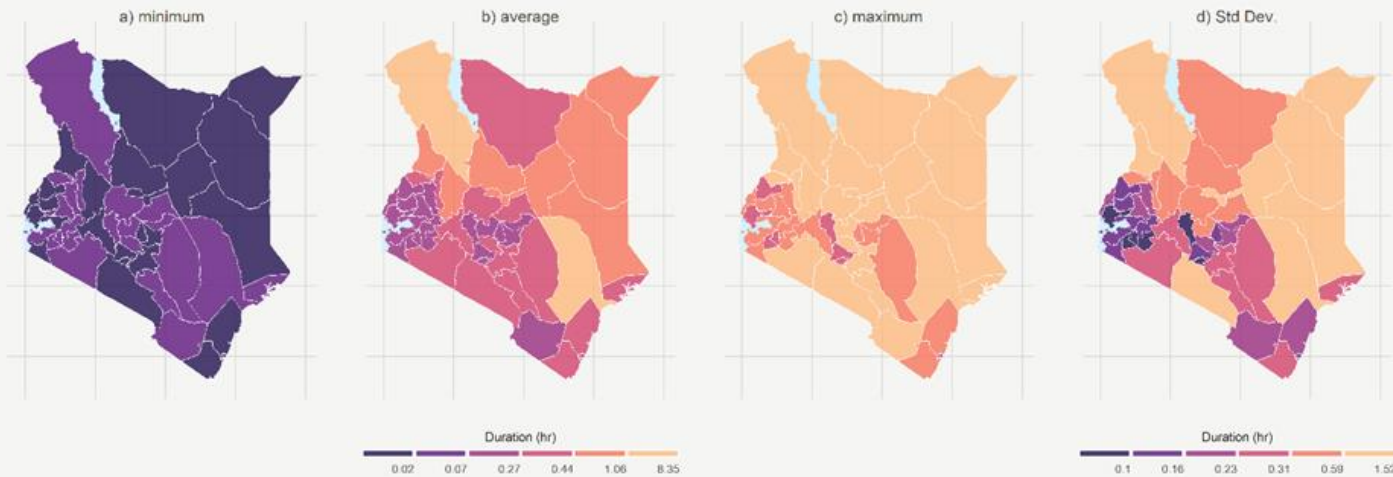
4

Collaborative care approach for *integrated mental health and HIV care* in rural western Kenya



# Ongoing Projects

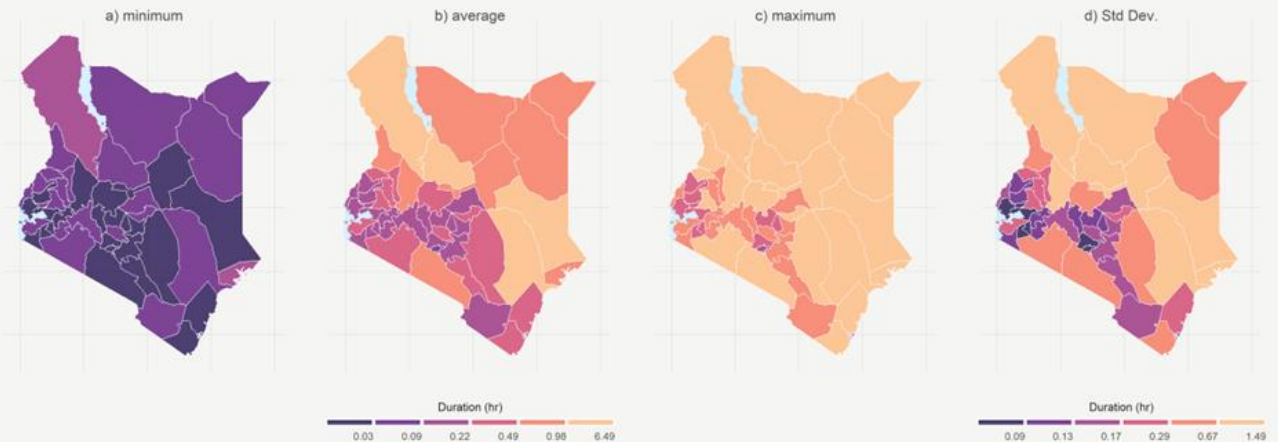
Driving Duration to the Closest Health Facilities  
DHS, 2014



5

Geospatial *access to maternal health services* in Kenya

Driving Duration to the Closest Health Facilities  
DHS, 2022



# **Population, Health, and Women's Empowerment in Sub-Saharan Africa**

## **Mahesh Karra**

Assistant Professor of Global Development Policy  
Frederick S. Pardee School of Global Studies



# My Work

- Global health and development economist

## **My research focus:**

- Relationships between population, health (MCH, SRHR), human capital, and economic development
- Broader interest in women's empowerment and women's well-being

## **My research approach:**

- Primary data (field experiments, interventions, qualitative)
- Secondary data analysis, modeling
- Integrating economics, demography, epidemiology, public health
- Policy-oriented research, with active engagement with partners

# POWER

## The Program on Women's Empowerment Research (POWER)

- Advance women's empowerment in order to improve human well-being through research, policy engagement, strategic communications
- Identify the extent to which program and policy efforts that seek to be empowering do, in fact, improve lives for women and communities

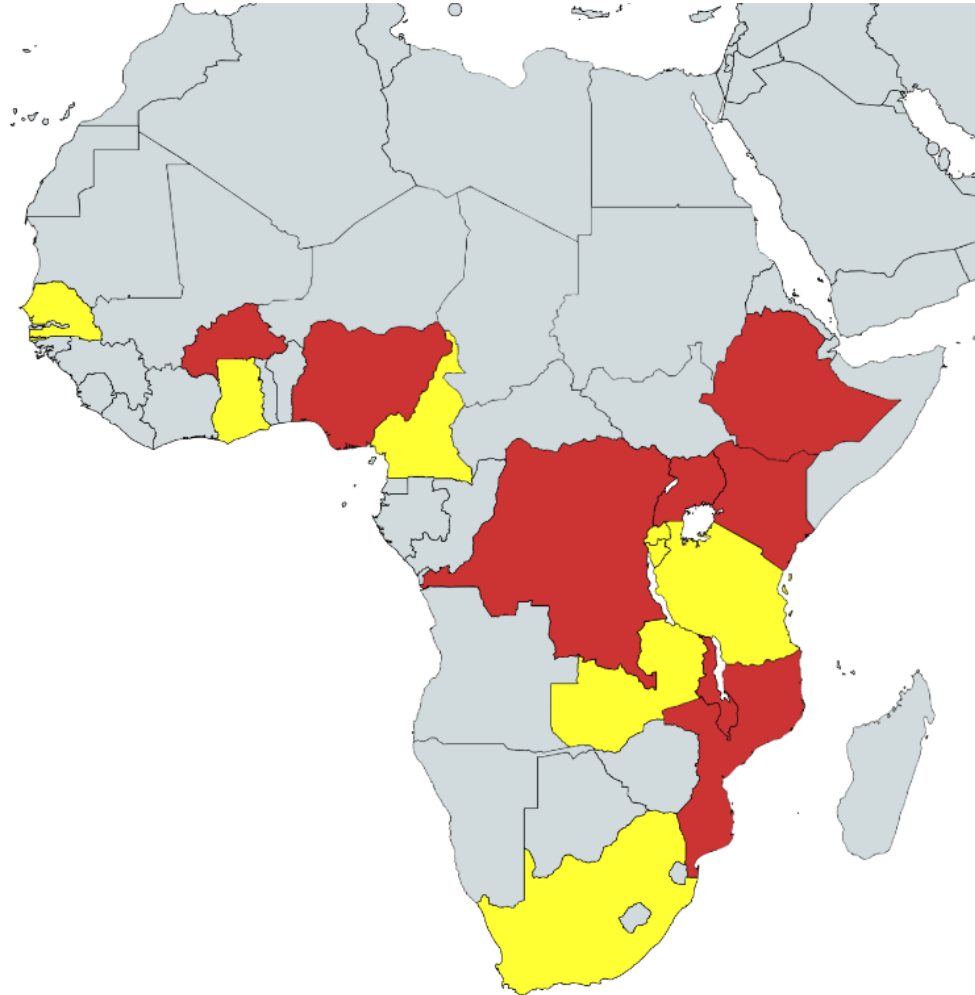
## POWER Africa Consortium:

- Facilitate collaborative partnerships across multiple institutions that work on a range of issues related to women's empowerment, gender equity, and human well-being in Sub-Saharan Africa
- **Current Members:** AFIDEP, AidData, IDInsight, EconInsight, BU





# Current Projects in Africa





## **Fairer Partnerships in Global Health**

# Zana Wangari Kiragu

Research Fellow, DrPH Candidate  
Department of Global Health, School of Public Health



# Introduction



## Fairer Partnerships in Global Health

- There are power asymmetries that exist, including legacies of colonialism that shape the context of global health work.
- Department of Global Health initiative: Fairer Partnerships in Global Health.
- Key objectives:
  - Collaboratively develop recommendations for the department and SPH community to guide self-study and promote fairer partnerships in Think.Teach.Do.
  - Provide a starting point for conversations within the department and the broader school community.
  - Motivate beneficial changes towards power symmetries in our research, teaching and practice.

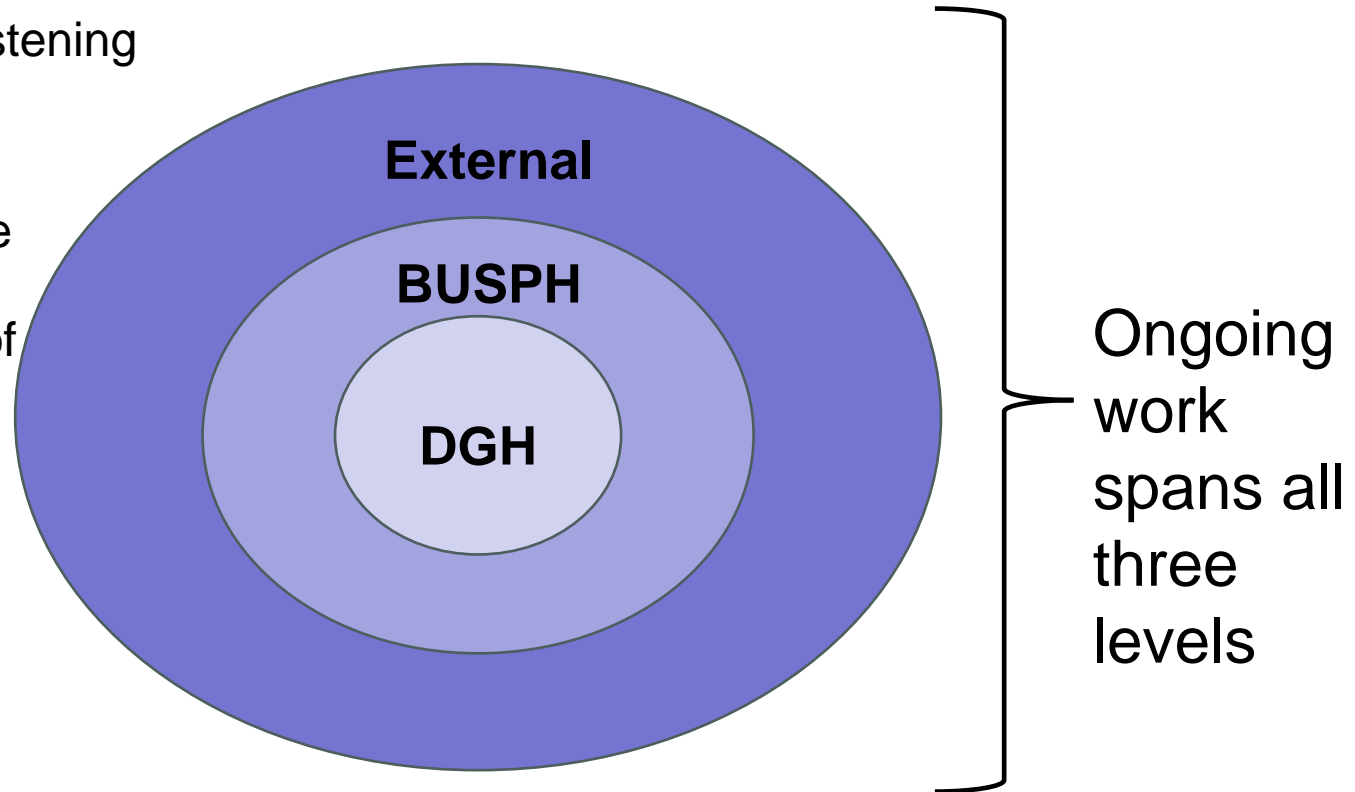
## Key Activities

External Partners: Listening sessions

Students at BUPSH: discussion roundtable

DGH: Development of practice guidelines

DGH: Faculty listening sessions



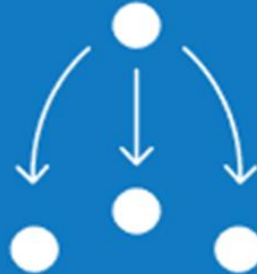
# Rethinking our approach to engaging with Africa

## Global Health 1.0



Protection of colonial  
representatives  
from tropical diseases.

## Global Health 2.0



Wealthier countries  
helping countries  
with less.

## Global Health 3.0



Collective action  
to address shared risks  
and responsibilities.

Canadian Coalition for Global Health Research



**THANK YOU**  
[zkiragu@bu.edu](mailto:zkiragu@bu.edu)



Salma Abdalla



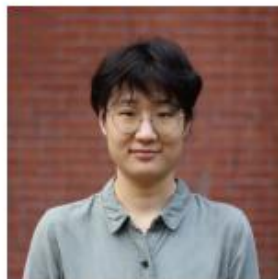
Mariet Benade



Noor Tarim Fahim



Matthew Fox



Yilan Gao



Aboli Goghari



Kashia Point Du Jour



Zana Wangari Kiragu



Monica Onyango



Allison Portnoy



Sowmya Rao



Gesine Meyer Rath



Kayoko Shioda



Veronika Wirtz



William MacLeod

<https://sites.bu.edu/fairergh/>

# **Access to Medicines in Africa: Biopharma Industry Reporting**

## Peter Rockers

Associate Professor  
Global Health, School of Public Health  
prockers@bu.edu



Collaborators: Veronika Wirtz

Professor, BUSPH  
vwirtz@bu.edu

Carlotta Cellini

Senior Research Fellow, BUSPH  
cellinic@bu.edu

Funding: Bill & Melinda Gates Foundation

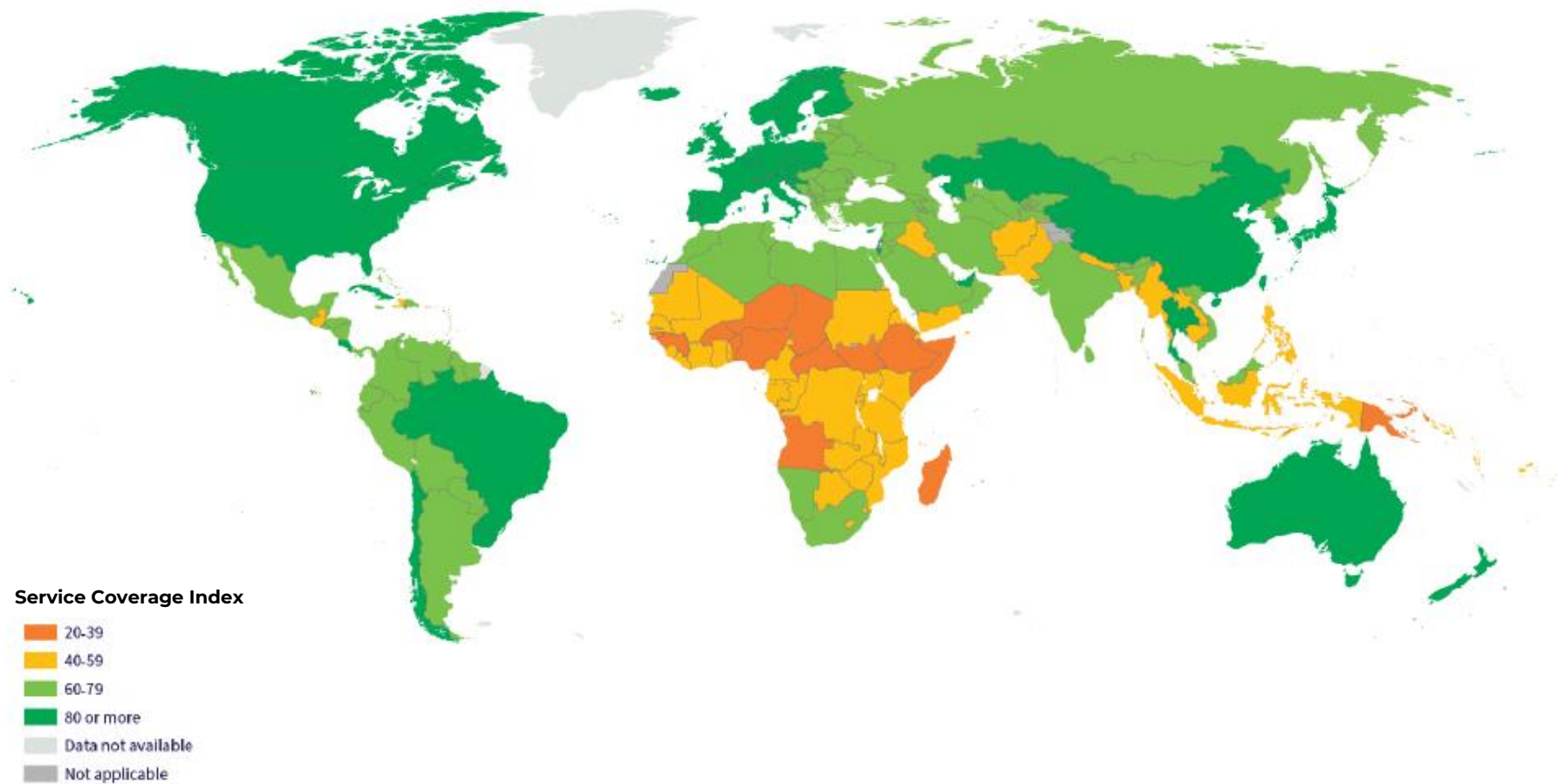


## **SDG 3.8**

Achieve universal health coverage [UHC], including financial risk protection, access to quality essential health-care services, and **access to safe, effective, quality and affordable essential medicines and vaccines for all**

*“Our world is way off track to reach the target on UHC.”*

-Tedros Ghebreyesus, Director-General, World Health Organization



Source: Tracking universal health coverage 2023 global monitoring report, 2023. World Health Organization, World Bank.

“If access to medicines is to be enhanced,  
numerous national and international actors  
have an indispensable role to play ...  
**pharmaceutical companies are among  
those sharing this responsibility.”**

UN General Assembly 2008 statement, “The Right To Health”

Industry accountability is highly fragmented

The European Sustainability Reporting Standards (ESRS) are a new set of regulations adopted in the European Union that will force nearly all large biopharma companies to comply with formal disclosure standards on access matters globally in the coming years

There is now an opportunity to influence ESRS standards specific to the biopharma industry, to strengthen accountability.

We have a grant from the Bill & Melinda Gates Foundation to engage stakeholders, including WHO, governments in Africa and elsewhere, and patient organizations, as well as industry and investors, to discuss in part what those standards should look like.

# THANK YOU!



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# UPCOMING EVENTS

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Learn more & RSVP: [bu.edu/research/events](https://bu.edu/research/events)  
Topic ideas & feedback: [bu.edu/research/topic-ideas](https://bu.edu/research/topic-ideas)

## RESEARCH HOW-TO

Amplify Your Expertise

Thursday, April 11, 2024 | 3-4 pm

The Innovator's Journey

Tuesday, May 7, 2024 | 3-5 pm

Meet the American Foundation for  
Suicide Prevention

Wednesday, May 8, 2024 | 12-1 pm

