

Didier Alia, C. Leigh Anderson, Kelsey Figone, Basil Hariri, <u>Helen Ippolito</u>, Federico Trindade Evans School Policy Analysis and Research Group (EPAR) Bioeconomy Innovation Pipelines and Supply Chain Shocks | 26th ICABR Conference July 8, 2022

Evans School Policy Analysis & Research (EPAR) UNIVERSITY of WASHINGTON

# FINANCING FOR CLIMATE CHANGE IN AFRICA: A VIEW OF SOVEREIGN BORROWING FROM MULTILATERAL **FUNDING INSTITUTIONS**





#### Data & Methodology

# MOTIVATION AND RESEARCH QUESTIONS

#### Findings

#### Discussion



# BACKGROUND

- Development programs have traditionally been focused on increasing the productivity of small-scale producers (SSPs) and transforming rural spaces.
- SSP who dominate the agricultural sector in most low- and middle-income countries are increasingly affected by changing climate.
- While mitigation strategies are being developed and implemented, it has become clear locally that there is an urgency to improve the adaptive capacity of SSP.
- The 26th UN Climate Change Conference of the Parties stressed the critical role of mobilizing funding from public, private, and alternative sources to address climate change in LMICs.



# FLOW OF FUNDING TO CLIMATE CHANGE









# FOCUS ON ODA AND SOVEREIGN BORROWING









# **RESEARCH QUESTIONS**

component?

agricultural projects?

country's climate risk?

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### 1. What proportion of agriculture-related lending has a climate

### 2. Which countries are borrowing most for climate-related

## 3. Is climate-related agricultural borrowing correlated with a



# WHY MULTILATERAL FINANCING

- IFIs fund approximately 1/3 of all ODA, which constituted up to 1/3 of GNI in some sub-Saharan African countries in 2019.
- The 3 IFIs in the EPAR dataset constitute 87% of multilateral funding to SSA.
- Multilateral investment shows progress toward climate change adaptation and mitigation.



# DATA & METHODOLOGY

### Findings

#### Discussion





# IFI DATABASE

- Active or approved agriculture-related financing projects as of 2022
- 3 specific multilaterals (World Bank, AfDB, and IFAD)



Findings





# **COMPARISON WITH OECD**

## EPAR IFI dataset

- Agriculture-related financing projects as of 2022
- 3 specific multilaterals (World Bank, AfDB, and IFAD)
- Climate projects identified by searching project data for climate keywords
- Categorization of rural agricultural projects (and subset of on farm projects)



## OECD ODA dataset

- Climate-related ODA projects, 2000-2019
- Multilaterals, bilateral, and private donors.
- Climate projects identified/reported by donors according to Rio Markers or "climate component methodology"





# **ODA CONTEXT**

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### Findings

#### Discussion





### CLIMATE-RELATED FUNDING TO SUB-SAHARAN AFRICA, 2000-2019 (2019 USD)



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### CLIMATE-RELATED AGRICULTURE FUNDING TO SUB-SAHARAN AFRICA, 2000-2019 (2019 USD)

- Increase in climate-related agricultural financing from **\$709 million** in 2010 to ~**\$3** billion in 2019
- Growth driven by climate adaptation projects: 70% of climate-related agricultural ODA in 2019

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#### Motivation

#### Data & Methodology

# FINDINGS

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### Findings

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### Characterization of Multilateral Financing Projects



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### 1. What proportion of agriculture-related lending has a climate component?

Multilateral	Climate-Related Rural Agricultural Projects	Total Rural Agricultural Projects
World Bank	N = 32 <mark>12%</mark>	N = 259 100%
AfDB	N = 50 <mark>36%</mark>	N = 140 100%
IFAD	N = 7 <mark>7%</mark>	N = 106 100%
Total	N = 89 <mark>18%</mark>	N = 505 100%



How Much of Each Multilateral's Rural/Agricultural Funding is Climate-related?







## 1. What proportion of agriculture-related lending has a climate component?

Multilateral	Climate-Related On Farm Projects	Total On Farm Projects
World Bank	N = 23 <mark>13%</mark>	N = 177 100%
AfDB	N = 50 <mark>36%</mark>	N = 140 100%
IFAD	N = 7 <mark>10%</mark>	N = 71 100%
Total	N = 80 <mark>21%</mark>	N = 388 100%



How Much of Each Multilateral's On Farm Funding is Climate-related?







## 1. What proportion of agriculture-related lending has a climate component?

Multilateral	Rural Ag-Related Climate Projects	Total Climate Projects
World Bank	N = 32 <mark>55%</mark>	N = 58 100%
AfDB	N = 50 <mark>36%</mark>	N = 138 100%
IFAD	N = 7 <mark>100%</mark>	N = 7 100%
Total	N = 89 <mark>44%</mark>	N = 203 100%



How Much of Each Multilateral's Climate Funding is Rural/Ag-related?





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## 2. Which countries are borrowing most for climate-related agricultural projects?

Annual Borrowing for Climate-Related Rural/Agricultural Projects



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60M	70M	80M	90M	100M	110M	120M	130M	140M	150M



### 2. Which countries are borrowing most for climate-related agricultural projects?

Proportion of Annual Rural/Agricultural Borrowing that is Climate-Related by Nation



**EVANS SCHOOL OF PUBLIC POLICY & GOVERNANCE** UNIVERSITY of WASHINGTON Percentage of Annualized Rural/Agriculture Borrowing that is Climate-related 🖈 🗧

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40%	50%	60%	70%	80%	90%	10



- focused on climate.
- on-farm borrowing for climate-related projects.

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3. Is climate-related agricultural borrowing correlated with a country's climate risk?

No statistically significant relationship between a country's Climate Risk Index and its proportion of annual rural/agricultural borrowing that is

No predictive relationship between CRI and the proportion of annualized



#### Motivation

#### Data & Methodology

# DISCUSSION & CONCLUSION

#### Findings

#### Discussion



# DISCUSSION

- IFIs currently devote ~13% of SSA rural agricultural funding to climate.



Climate risk may be a driver of funding along with many other potential factors.

# CONCLUDING REMARKS & FUTURE WORK

- Distinguish between and within climate adaptation and mitigation projects
- Merge agricultural project database with OECD climate project database
- Add bilateral funding of SSA agricultural projects and additional multilateral funding sources
- Test associations of agricultural borrowing against additional measures of climate risk and other hypothesized drivers such as FDI, public finance systems, etc.
- Distinguish across financial instruments, degree of concessionality etc.



# Thank You

Federico Trindade

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### 2. Which countries are borrowing most for climate-related agricultural projects?

Per Capita Annual Borrowing for Climate-Related Rural/Agricultural Projects

Sey <mark>chelles</mark>																323	3.7
Eswatini																	
Lesotho																	
Central African Republic																	
Guinea-Bissau																	
Kenya 📕																	
Uganda																	
Benin																	
Mada <mark>g</mark> ascar																	
Ethiopia																	
Niger																	
Senegal																	
Eritrea 📘																	
Gambia 📘																	
Chad																	
Côte d'Ivoire																	
Republic of the Congo																	
Nigeria																	
Mozambique																	
Burkina Faso																	
Malawi																	
Mauritania																	
Zambia																	
Democratic Republic of the Congo																	
Burundi																	
Ghana																	
Botswana																	
Guinea																	
Rwanda																	
Mail																	
Zinibabwe	-																
\$0	\$20	\$40	\$60	\$80	\$100	\$12	0 \$140	\$160	\$180	\$200	\$220	\$240	\$260	\$280	\$300	\$320	\$340
					Per C	apita B	orrowing	for Clima	te-relate	d Rural/Ad	Projects	s (2019 U	SD) =				

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Motivation

### 2. Which countries are borrowing most for climate-related agricultural projects?



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### GLOBAL CLIMATE-RELATED FUNDING, 2000-2019 (2019 USD)

#### ODA DATA FROM OECD





