



Environmental Change and Migration in Bangladesh

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Welcome!

We collaborate on innovative research that falls at the intersection of the environmental, social, and behavioral sciences. Our research uses mixed methods and diverse data to examine decision making and behavior that has environmental significance. Some of the questions we are currently exploring include:

1. How are smallholding farmers adapting to drought?
2. How does community and cultural context influence human-wildlife interactions?
3. Do pro-environmental interventions lead to positive or negative spillover effects?
4. Can immersive communication technologies provoke environmental empathy?



E&B Lab, November 2019 (left to right: Anna Hermes, Jeremiah Osborne-Gowey, Ash Gillis, Ashby Leavell, Amanda Carrico, Urooj Raja, Victoria Stout)

Environment & Behavior Lab

Household Adaptations to Climate Change

- Migration & Mobility
- Livelihood Activities
- Household-level adaptation



Jeremiah Osborne-Gowey



Helen Wilson



Natalie Bennett

Adoption of Conservation Behavior



Urooj Raja



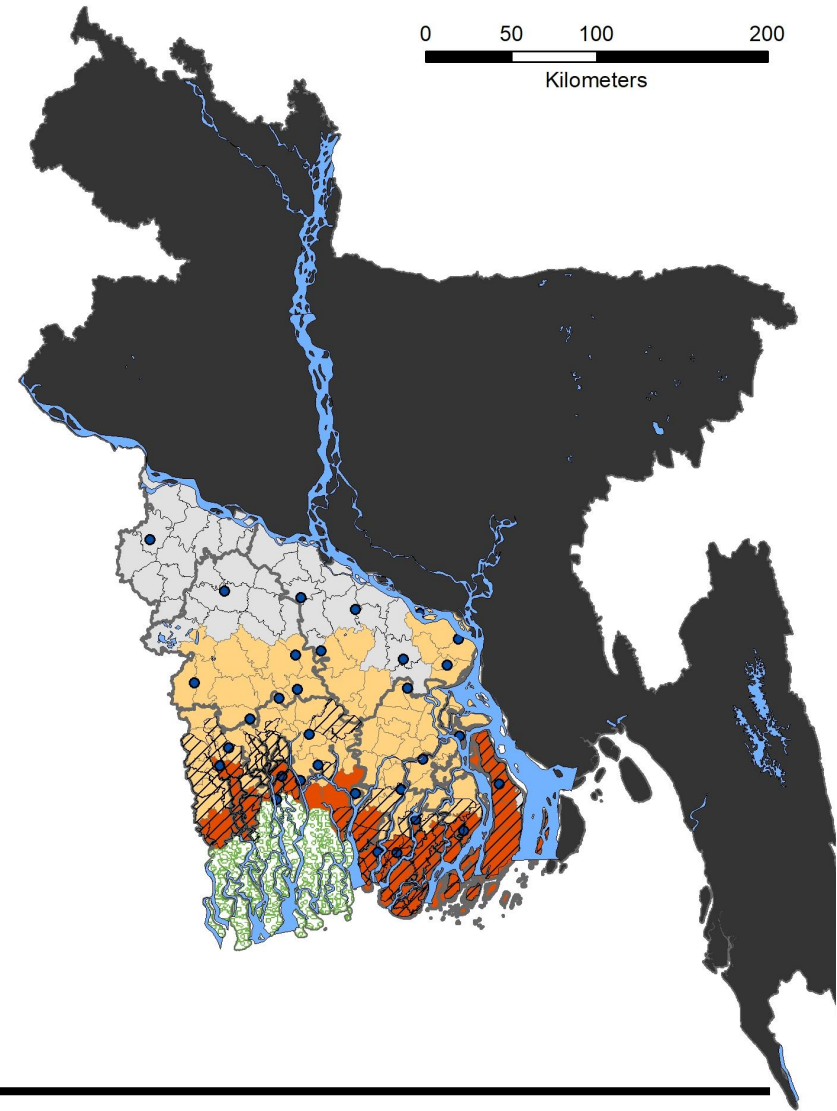
Victoria Stout

- Environmental values
- Environmentally significant behavior

Bangladesh Environment and Migration Survey (BEMS)

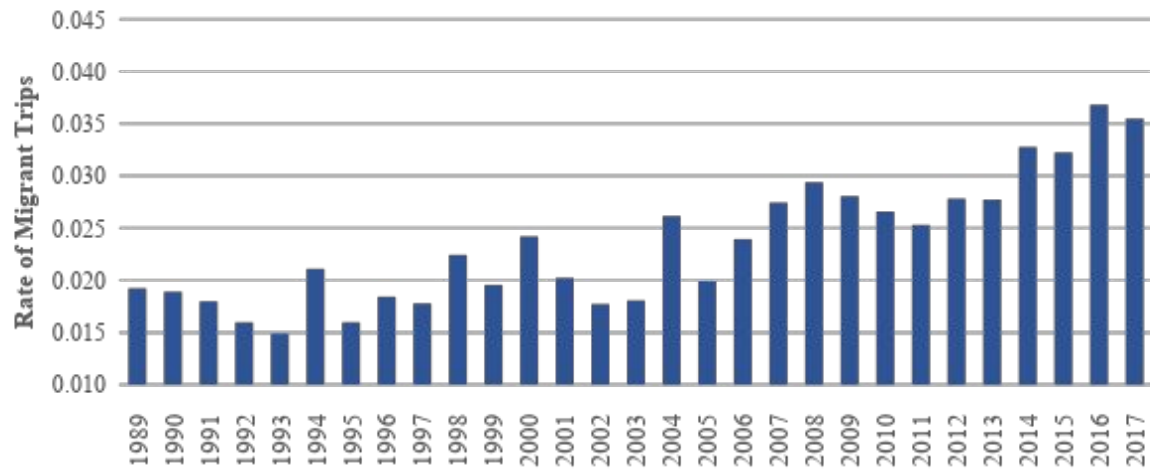
Data

- Random probability sample of 5800 households from 30 communities
- Retrospective data about migration, livelihoods, socioeconomic and demographic characteristics
- Data collected 2013 – 2019
- Longitudinal follow-up in pilot phase



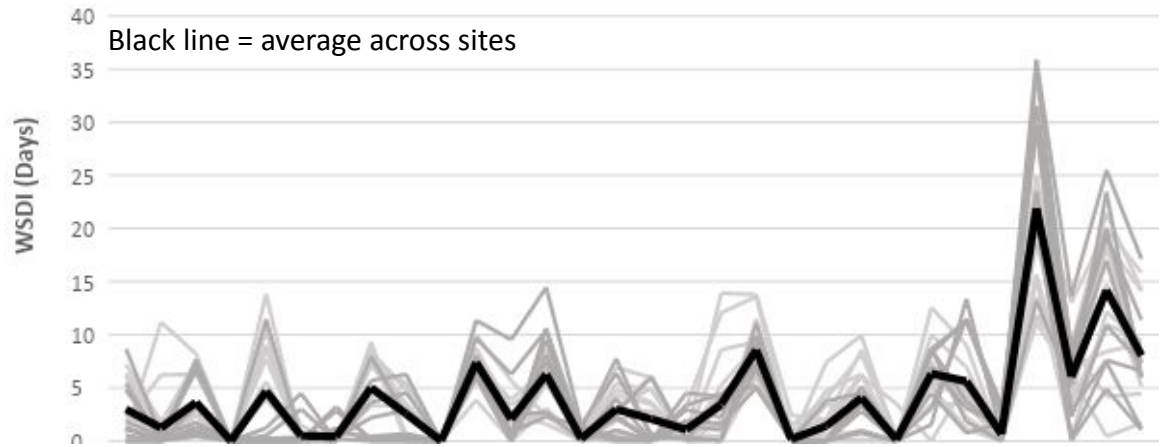
Domestic or international trips

Based on BEMS-2 data from all household members aged 15 – 45



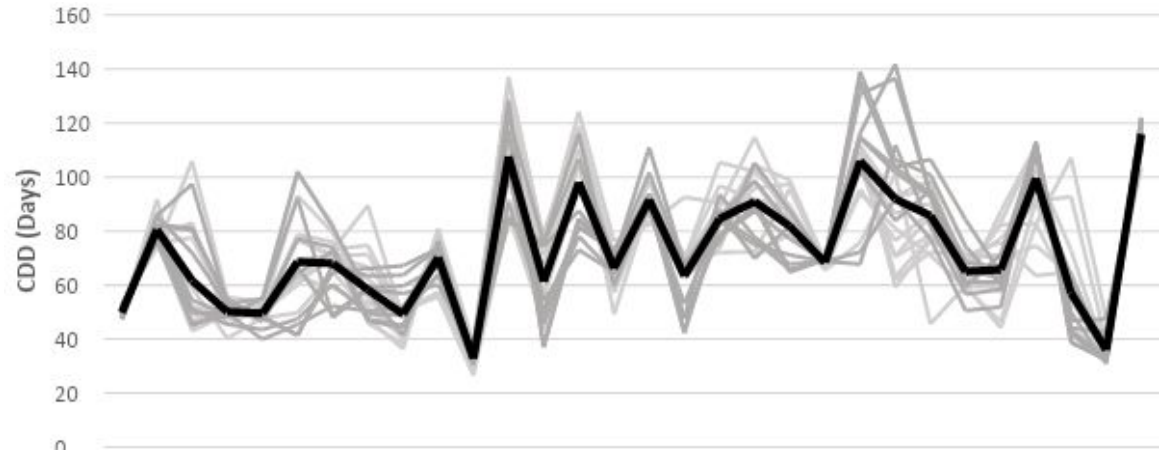
Heat Waves (WSDI)

Consecutive days exceeding 90th percentile of climate normal



Dry Spells

Maximum consecutive days without rainfall

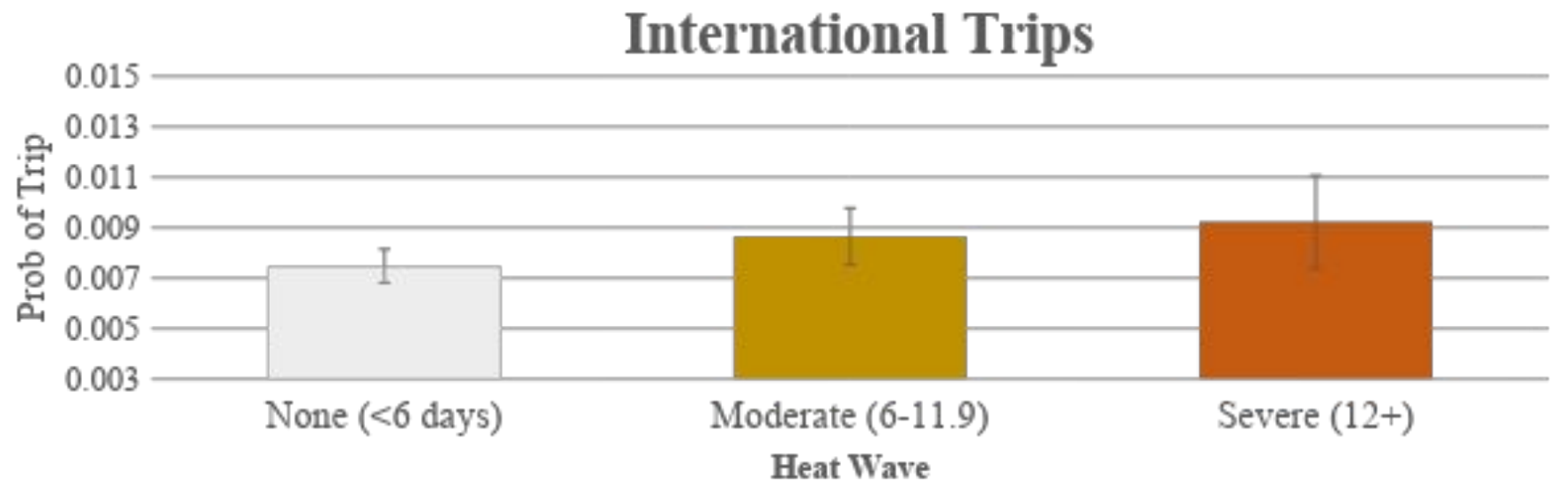
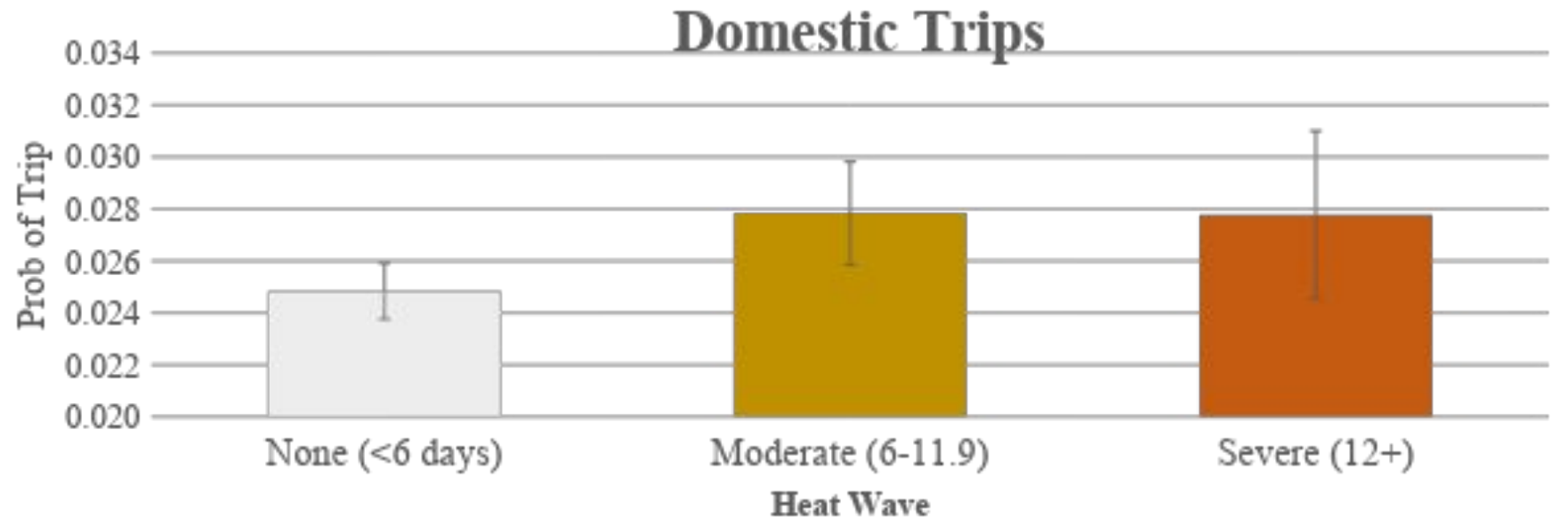


Effects of Heat and Drought on Risk of Migration (males 15-44)?

	Domestic			International		
	<i>OR</i>	<i>SE</i>	<i>p</i>	<i>OR</i>	<i>SE</i>	<i>p</i>
Controls						
Age 25 – 34	0.593	0.024	***	1.182	0.089	*
Age 35 – 44	0.350	0.020	***	0.812	0.077	*
Muslim	0.856	0.066	*	4.017	1.526	***
Primary educ (head)	1.147	0.061	**	1.324	0.142	***
Secondary educ (head)	1.287	0.074	***	2.055	0.216	***
Above secondary educ (head)	1.919	0.119	***	1.231	0.175	
Unskilled Sector (head)	0.699	0.041	***	0.470	0.058	***
Agricultural Sector (head)	0.649	0.030	***	0.579	0.049	***
Extreme Weather						
Heat Wave – Moderate	1.125	0.051	***	1.160	0.094	^
Heat Wave – Severe	1.123	0.077	^	1.238	0.144	^
Dry Spell - Moderate	1.139	0.061	*	0.948	0.082	
Dry Spell – Severe	1.108	0.076		0.811	0.113	
Constant	0.038	0.005	***	0.000	0.000	***
Adj / Pseudo R-Squared ^b	0.034			0.075		

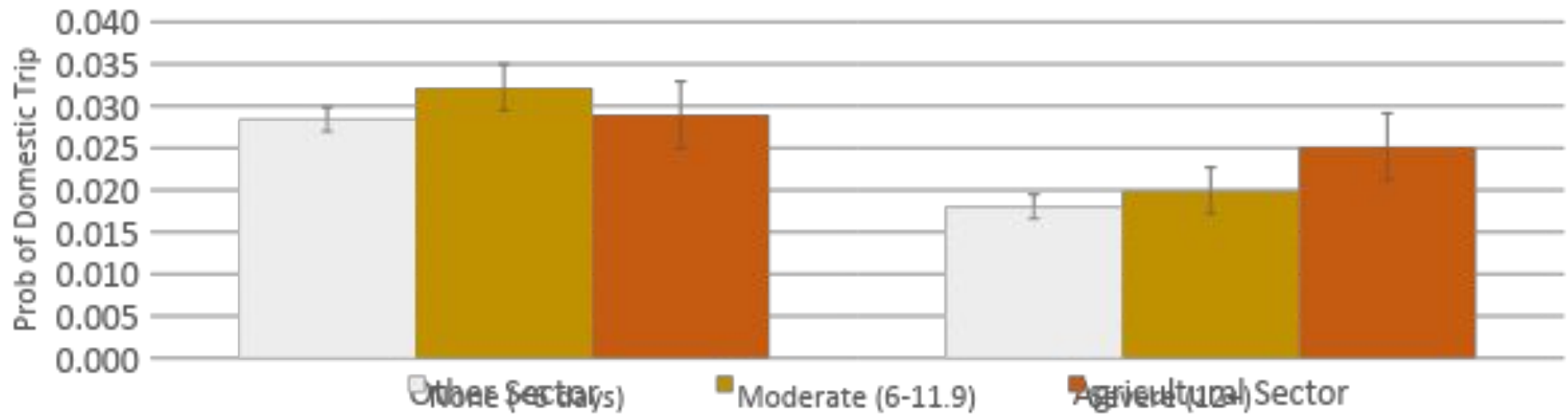
Carrico, Wilson, Rahaman, & Donato (2021). Social network effects on migration in response to weather shocks in Bangladesh. *In Preparation*.

Effects of Heat and Drought on Risk of Migration (males 15-44)?



Who Are the Environmental Migrants?

Agriculturalists are moving more in response to heat waves



Relative to migrants in unaffected years, environmental migrants are more often:

- Older
- Married
- Have more dependents in home

Thank you!

ধন্যবাদ



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