WHERE the RAIN FALLS

Where the Rain Falls:

Climate Change, Food and Livelihood Security, and Migration

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SUPPORTED BY: AXA redefining / standards MACARTHUR

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Project Objectives & Scope

SCOPE: Research - Advocacy - Practice

OBJECTIVES

1. To understand how rainfall variability, food security and migration interact today

2. To understand how these factors might interact in coming decades as the impact of climate change begins to be felt more strongly

Focus group discussion, India
Source: Afifi, 2011

3. To work with communities to identify ways to manage rainfall variability, food and livelihood insecurity, and migration

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Research Questions

Question #1: Under what circumstances do households use migration as a risk management strategy in response to rainfall variability and food insecurity?

Question #2: Under what scenarios do rainfall variability and food insecurity have the potential to become significant drivers of human mobility in particular regions of the world in the next two to three decades?

Question #3: In the context of climate change, what combination of policies can increase the likelihood that human mobility remains a matter of choice among a broader range of measures to manage risks associated with changing climatic conditions, rather than "merely" a survival strategy after other pathways have been exhausted?

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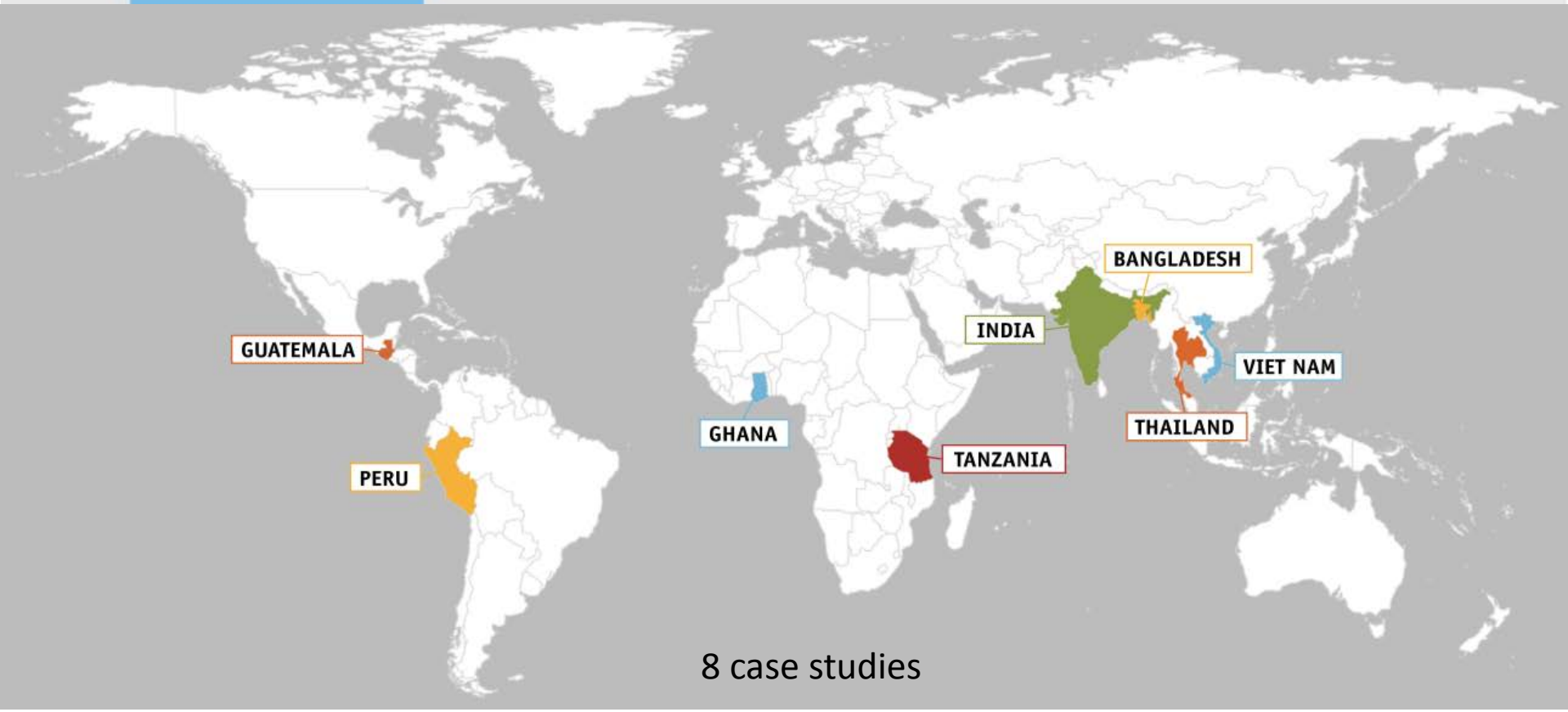
Geographic Diversity: 8 Countries



8 case studies

Source: CARE France

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Macro-level Context

	Low poverty and food insecurity	Medium-high poverty and food insecurity
More advanced stage of economic and demographic transition	Peru Thailand	Vietnam India Bangladesh
Less advanced stage of economic and demographic transition		Ghana Guatemala Tanzania

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Research Sites: Diverse agro-ecological and meteorological conditions

Research site	Approx. Average Annual Rainfall (mm)	Geography
Northern Bangladesh (Kurigram District)	1,700	Riverine lowland
Vietnam Mekong Delta (Dong Thap Province)	1,500	Delta lowland
Central India (Janjgir District, Chhattisgarh)	1,229	Irrigated lowland
Guatemala Western Highlands (Cabrican Municipality)	1,150	Highland
Northern Ghana (Nadowli District, Upper West Region)	1,036	Savannah woodland
Northern Thailand (Lamphun Province)	1,017	Upland and riverine
Peru Central Andes (Huancayo Province)	800	Highland
Northern Tanzania (Same District, Kilimanjaro Region)	560	Upland and riverine lowland

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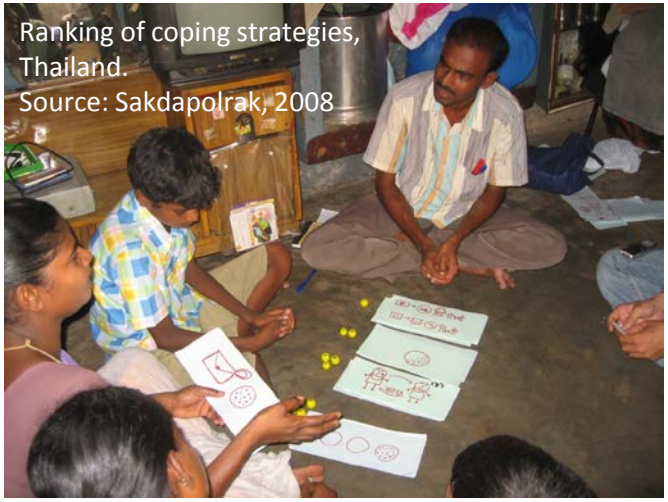
Field Research Methodology*

Expert interviews

Participatory Research Approach

Household surveys



Ranking of coping strategies, Thailand.
Source: Sakdapolrak, 2008

Resource map, Tanzania.
Source: Afifi, 2012

*See Rademacher-Schulz et al. (2012)

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Global: Findings

1. **Rainfall:**
   - Perceptions of change today – that influence risk management decisions
   - Changes in timing, quality, quantity, predictability of rainfall

2. **Food security:**
   - Rainfall variability already impacting production and food security
   - Rainfall's impact on food security + dependence on rainfed ag + diversity of livelihood options = impact on migration decisions

3. **Migration:**
   - Increased in recent decades
   - Male, individuals
   - Livelihood-related needs
   - Rural-rural & rural-urban

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4 household profiles: Circumstances under which households use migration to manage risk

Migration improves HH resilience

- **Economy**: poor
- **Adaptation options**: access to livelihoods options &assets (social, economic, political),
- **Education**: Children have 3-5 years more education than parents
- **Migrant**: early 20s, single; temporal migration
- **Remittances**: education, livelihood diversification, health

Migration used to survive, but not flourish

- **Economy**: land scarce
- **Adaptation options**: less access to assets & institutions for support
- **Education**: Children have same education level as parents
- **Migrant**: HH Head, mid 40s, migration in hunger season
- **Remittances**: Success in obtaining food or money to buy food

Migration erosive coping strategy

- **Economy**: landless
- **Adaptation options**: few adaptation options in situ, inability to diversify
- **Education**: All HH members have low or no education / skill levels
- **Migrant**: HH Head, mid 40s, migration in hunger season
- **Remittances**: Partial success in obtaining food or money to buy food

Migration not an option: trapped populations

- **Economy**: chronically food insecure, landless, Female -headed HH
- **Adaptation options**: insufficient assets to adapt locally or through migration
- **Education**:
- **Migrant**: not feasible
- **Remittances**: none. Abandoned / trapped populations

Resilience to climatic stressors — **Vulnerability to climatic stressors**

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Asian Research Findings Related to Rights and Equity Issues

Gender Inequality: Our research in Kurigram District in northern **Bangladesh** found that 97% of out-migrants are male, which imposes significant burdens on women left behind, including additional workload and vulnerability to sexual harassment.

Control over land and water resources: In our research site in the Mekong Delta of **Vietnam**, landless (31%) and land-scarce (26%) households are most vulnerable to climate hazards and most likely to use migration to manage risk. Land ownership is becoming more concentrated while mechanization has reduced the demand for labor.

Right to education: Migrants from Janjgir District in **India** most commonly move as families, resulting in significant disruption of children's education. Only 2% of migrants move to pursue educational opportunities.

Good Governance: **India** has put in place important national social safety net programs, including the 100 day guaranteed employment scheme and subsidized food rations for below poverty line families. However, our research found that these programs suffer from governance problems, with the most vulnerable families sometimes excluded.

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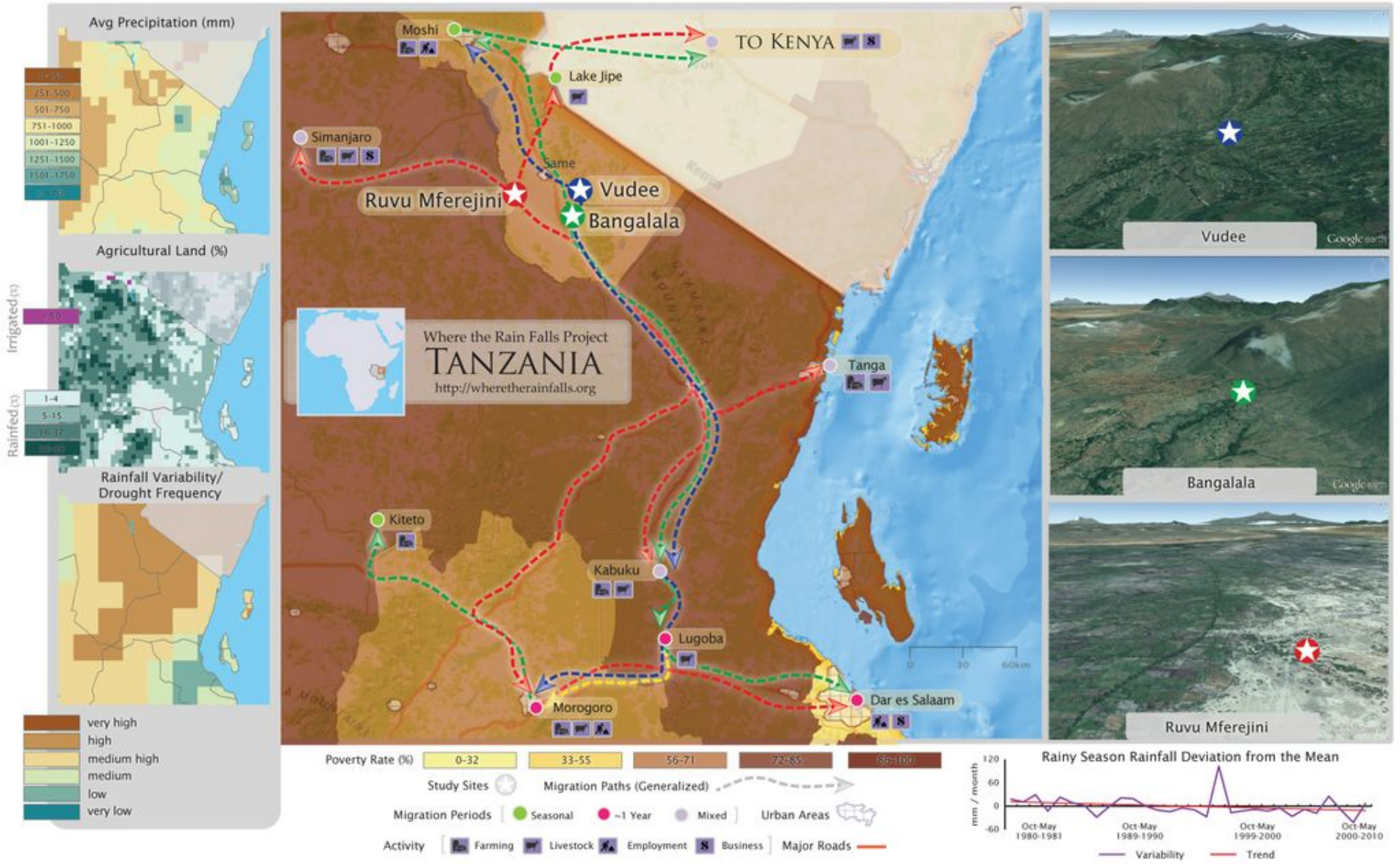
Tanzania: Their story

"We depend on rain. When it rains, there is change."
- Napenda Rabson, Bangalala, Tanzania

“Nowadays, the long rains are the short rains. I don’t want to move.”
– Aminaeli John Msuya, Vudee, Tanzania

“If the rains stop, there is nothing we can do. We have nowhere to go.”
– Maria Mathayo, Bangalala, Tanzania

Tanzania: Migration - common coping strategy for food insecure smallholder farmers & livestock keepers



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Tanzania: Key Findings

- **Rainfall variability & food security**
  - **Rainfall variability translates directly into impacts on food security**;
  - **Drought** identified as the **major hazard to household** livelihoods;
  - **Rainfall affects** food production of more than **80% of households 'a lot';**
  - Strong linkages between **unpredictable and changing weather patterns and the decision to migrate**;
- **Factors affecting migration**
  - Top three factors affecting household migration decisions are: (1) increased drought frequency; (2) longer drought periods; and (3) water shortage;
- **Migration patterns**:
  - While the majority of migrants are male and young, women now represent one-third of the total;
  - Out-migration from Same District is a mix of rural-rural and rural-urban migration.

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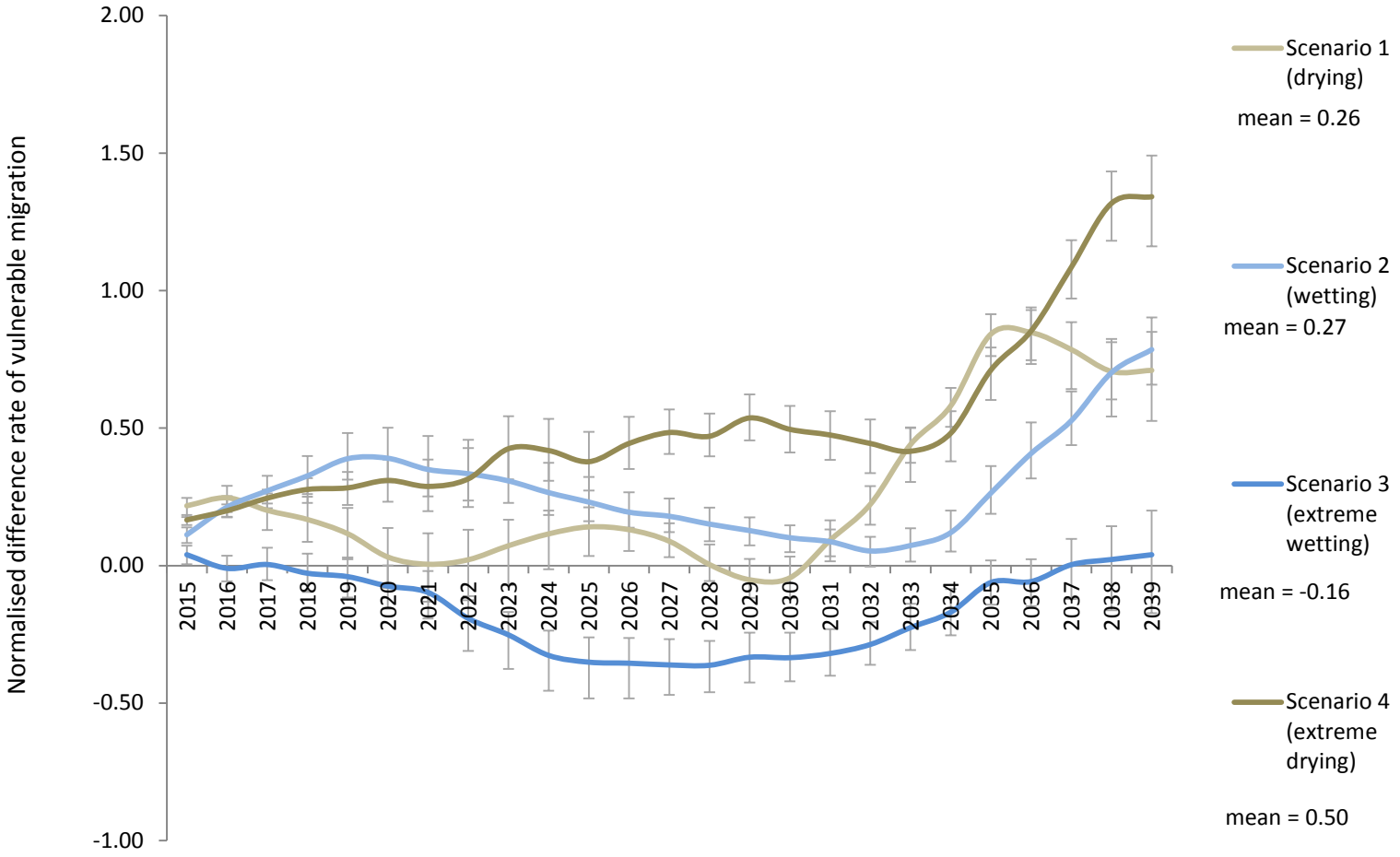
Agent-based Modelling: Tanzania

Potential future scenarios: Vulnerable Households



Tanzania: Community-based Adaptation

Focus

- ✓ women's empowerment
- ✓ access to water resources, transparent/participatory water governance
- ✓ focus on vulnerable, marginalized communities

Location:

Same District
7 communities
3 ecological zones

Initial Analysis & Planning

Rigorous, participatory, multi-disciplinary vulnerability & capacity analysis

- Coordinate with Global Water Initiative research agenda → further learning
- Indigenous knowledge & strategies identified in study → community planning

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Tanzania: Community-based Adaptation

Key outcomes & activities:

1. Equitable, informed water resource management decision-making
   - Empower & build capacity of women & girls through existing groups
   - Support use by district councils of analysis results in planning & budgeting
   - Empower local communities to hold district councils accountable
   - Build governance capacity of water user associations
   - Use mobile cinema to raise awareness of climate variability and response
   - Disseminate learning through Global Water Initiative national learning hub

2. Engendered implementation of climate resilient water resource management
   - Demonstration sites and farmer field schools
   - Collection and dissemination of rainfall and water management data through water user associations
   - Scale up ‘no regrets’ practices: farmer field schools, study tours, farmer-farmer contact

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Global Policy & Practice Reflections

UN Framework Convention on Climate Change

- Mitigation – commitment, ambition
- Finance – commitment, ambition, governance
- Adaptation Committee – coordination, support national adaptation plans
- Loss and Damage – prioritizing the most vulnerable

Global Food and Nutrition Security & Sustainable Development

- Reinforce the call to tackle the climate crisis
- Integrate climate change and gender
- Include sustainability in the next generation of Millennium Development Goals

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National Policy & Practice Reflections:
Governments, Donors, Implementing Partners

National and local plans

- Comprehensive: food and nutrition security, climate change, livelihoods
- Multi-sectoral, multi-ministry, multi-level
- Participation of food insecure populations

Comprehensive food and nutrition security for most vulnerable

- links with emergency assistance/DRR
- nutrition
- natural resource management & climate change
- risk management
- capacity building

Gender integration

- analysis & monitoring & evaluation
- women & girls – men & boys
- gender roles, power dynamics, equitable benefits

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Thank you!

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