Climate Risk Adaptation and Insurance in the Caribbean

Making Weather-Index Microinsurance Work for Vulnerable Individuals

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Coping strategies often lead vulnerable populations deeper into poverty.

Over the last 30 years **1.5 million affectees** of extreme weather events in the eastern Caribbean.

Losses of up to **6% of annual GNP** caused by extreme weather in some Caribbean countries.

Negative impacts on **economic growth** and **productivity**.

Poverty and social vulnerability are intertwined!
Framing: Big Picture

- German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU) approached Munich Climate Insurance Initiative
- Assignment: Showcase how insurance can contribute to risk reduction and adaptation especially within the Small Island Developing States context
- Support decision making process at UNFCCC (“SBI work programme on Loss & Damage”) with insights from implementation
Demand Study 2011

1. What coping strategies did low-income populations employ?
2. Was there a demand for risk transfer solutions?
3. Were they willing to pay?
4. How will the solutions be distributed?
Coping Strategies and their Impacts

Average % of Population taking Coping Strategy in Jamaica, Saint Lucia, Grenada and Belíz

- Used Savings: 60.5%
- Did not repair/replace: 38.7%
- Government Assistance: 17.6%
- Other (includes ‘waiting’): 17.3%
- Borrowed (formal): 13.6%
- Borrowed (informal): 12.1%
- Found another job: 7.2%
- Used Remittances: 4.6%
- Insurance Payout: 4.5%
- Sold possessions: 4.3%

Measure Names:
- Used Savings
- Did not repair/replace
- Government Assistance
- Other (includes ‘waiting’)
- Borrowed (formal)
- Borrowed (informal)
- Found another job
- Used Remittances
- Insurance Payout
- Sold possessions

*Stressor Levels from Sebestad et al. (2006)
Average level of demand for insurance

Results:
Moderate demand: 30.7%
High to very high demand: 25.4%

Source: Lashley and Warner 2012
Addressing the Adaptation Needs of Vulnerable Communities

- Using insurance to address adaptation needs: Not just about public OR private solutions
  - Innovations & partnerships in using insurance
  - Local level: Building resilience with local insurance & safety nets: Helping low-income people absorb shocks and temper downturns
  - National level: Combining risk transfer and measures to protect national development priorities
  - Regional & international: Combining risk transfer with regional risk capacity & forecasting
- Build resilience against weather extremes, climate shocks
- Provide recourse to coping strategies that ultimately lead to poverty
- Improve access to credit, financial stability
- Encourage risk aware behaviour
Our Goals

- Parametric weather index insurance solutions for low-income people
- Extend the financial safety net to previously excluded persons
- Find ways to catalyse sustainable adaptation to climate change
Livelihood Protection Policy
- Parametric product: Dual peril - wind-speed, rain
- Beneficiaries: Individuals
- Beneficiaries determine the level of coverage they require - product sold in units
- Effect: Provides liquidity to individuals in the aftermath of extreme weather events to protect livelihoods

Loan Portfolio Cover
- Parametric product: Dual peril - wind-speed, rain
- Beneficiaries: Development finance institutions, credit unions/cooperatives etc
- Beneficiaries determine what extent of the lending portfolio exposed to extreme weather they wish to insure (e.g. agricultural sector)
- Effect: Improves financial liquidity and terms of lending, increased economic activity in the long run
Weather Index Insurance: How it works

- Spatial Resolution of the target country
- Wind speed and Rainfall
- Correlation analysis for wind, rain

Trigger and payout structure of the Livelihood Protection Policy
Antoine’s story

HOW LPP COULD HAVE HELPED ANTOINE

- **Before the hurricane** Antoine receives an SMS warning of an approaching hurricane. He secures his property and leads his family to a safe location.

- **Immediately after** As he was able to secure his property only one greenhouse is lost. The hurricane exceeded the rainfall/wind speed threshold, so Antoine gets an SMS telling him he will receive a payout within 15 days.

- **Medium-term** With the payout deposited in his bank account Antoine can repay his loan and start rebuilding his livelihood without resorting to more desperate coping measures.

- **Long-term** Antoine is able to both repay his loan and rebuild the lost greenhouses with the payout he receives from his policy. This puts him and his family in a better position for when another hurricane inevitably strikes.
Target Countries

Jamaica
Pop. 2,909,714

St. Lucia
Pop. 162,781

Grenada
Pop. 109,590

Source: caribbean-on-line.com
Mexico City

Pop. 8,851,000
(2010)
Market Development

- Design
  - Needs Assessment
  - Costs

- Delivery
  - Coverage
  - Administration

- Outreach
  - Education
  - Experience

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Raising Awareness

Communities

- Local Insurer
- Government
- Distribution Channel
- Disaster Management Agencies

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Challenges

- Weather index-based parametric insurance is new
- Regulatory/legislative frameworks needed to be interpreted
- Data often incomplete or unavailable
- Strategies for increasing scale
- Investments in mass awareness raising, education essential
- Alignment with national systems
Next Big Questions

- What data/information needs exist and how can they be fulfilled in the most cost efficient, effective manner?
- What new challenges to the existing legal, institutional and regulatory frameworks are posed by the new types of insurance products that are emerging?
- What implications do vulnerability profiles of target groups have for social protection, green growth?
- How can the international climate policy negotiation process support and strengthen this and similar endeavours?
Conclusions

- Insurance can fulfill four functions to help meet the needs of low-income countries & communities
  - Assess and price risks
  - Reduce financial repercussions of volatility, create more certainty
  - Incentivize loss reduction & resilience building activities
  - Provide timely finance to recompense damage
Thank you!