

# Climate Risk Insurance and Adaptation in the Caribbean

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**MCI**



- German Federal Ministry for the Environment (BMU) interest in the development of climate risk transfer approaches
- Assignment: Showcase how insurance can contribute to risk reduction and adaptation in SIDS context
- Support decision making process at UNFCCC (*“SBI work programme on Loss & Damage”*) with insights from implementation

# Climate Risk Adaptation and Insurance in the Caribbean



Munich Climate Insurance Initiative

## Objectives

- Provide financially stable parametric insurance solutions for low-income people to cover medium-level weather events (return period 20-40 years)
- Find ways to combine approaches with DRR to catalyse sustainable adaptation
- Prove value of regional entities in achieving these goals
- Exchange experience & lessons learned with policy makers



## MCII CLIMATE RISK INSURANCE IN THE CARIBBEAN

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# Climate Risk Adaptation and Insurance in the Caribbean

## Partners: Research-Policy-Operational

- MCII at UNU-EHS: management, research, evaluation
- Caribbean Catastrophe Risk Insurance Facility
- Microensure
- Munich Re



## Donor

- International Climate Initiative:  
Federal Ministry for the Environment,  
Germany

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Federal Ministry for the  
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of the Federal Republic of Germany

# Target Countries



# How Research Supports Implementation

## **Understand risk management needs of low-income people**

- Fieldwork 2011

## **Assess the demand for risk transfer solutions by low-income people**

- Demand study 2011

## **Design of tailored parametric insurance products**

- Modelling & trigger design

## **Evaluation: Impact assessment of insurance products**

- Market test in Jamaica
- Baseline survey

# How Research Supports Implementation

## Understand risk management needs of low-income people

Fieldwork 2011 (Project Team)

- Qualitative Approach
- Focus Group Discussions with different stakeholder groups:
  - Low-income people (farmers, fishermen, day labourers)
  - Social Aggregators (credit unions, farmer associations, cooperatives, rural banks, etc.)
  - DRM organisations (CIMH, 5C's, NGOs, etc.)
  - Insurance sector
  - Government (MoAg, MoF, MoT, MoD, etc.)

# How Research Supports Implementation

## Assess the demand for risk transfer solutions

Demand Study 2011

- University of the West Indies, UNU-EHS, MCII
- Quantitative & qualitative approach
  - Expert interviews
  - 1059 HH surveys
- Assessment of DRM strategies of low-income people
- Demand for risk transfer solutions
- Indication on willingness to pay (premium)
- Distribution



# Main coping mechanisms for property damage, job loss, health emergencies (in %)



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	Grenada (%)	St. Lucia (%)	Jamaica (%)	Belize (%)	Stressor Level
Insurance Payout	4.8	1.5	2.9	8.6	Low
<b>Used Savings</b>	<b>45.7</b>	<b>96.2</b>	<b>65.4</b>	<b>34.5</b>	<b>Medium</b>
Used Remittances	3.8	3.1	9.6	1.7	Medium*
Found another job	10.5	6.1	0.0	12.1	Medium
Sold possessions	1.9	1.5	0.0	13.8	High
Government Assistance	<b>34.3</b>	8.4	1.9	<b>25.9</b>	<b>Medium*</b>
Borrowed (informal)	7.6	10.7	16.3	13.8	Medium
Borrowed (formal)	7.6	10.7	0.0	<b>36.2</b>	<b>Medium</b>
<b>Did not repair/replace</b>	<b>22.9</b>	<b>59.5</b>	<b>48.1</b>	24.1	High
<b>Other (includes 'waiting')</b>	<b>9.5</b>	<b>0.8</b>	<b>51.9</b>	6.9	High
<b>TOTAL</b>	<b>148.6</b>	<b>198.5</b>	<b>196.1</b>	<b>177.6</b>	-

*Stressor Levels from Sebstad et al. (2006).*

*Totals do not sum to 100% as multiple responses were allowed. High amounts over 100% indicates multiple coping strategies.*

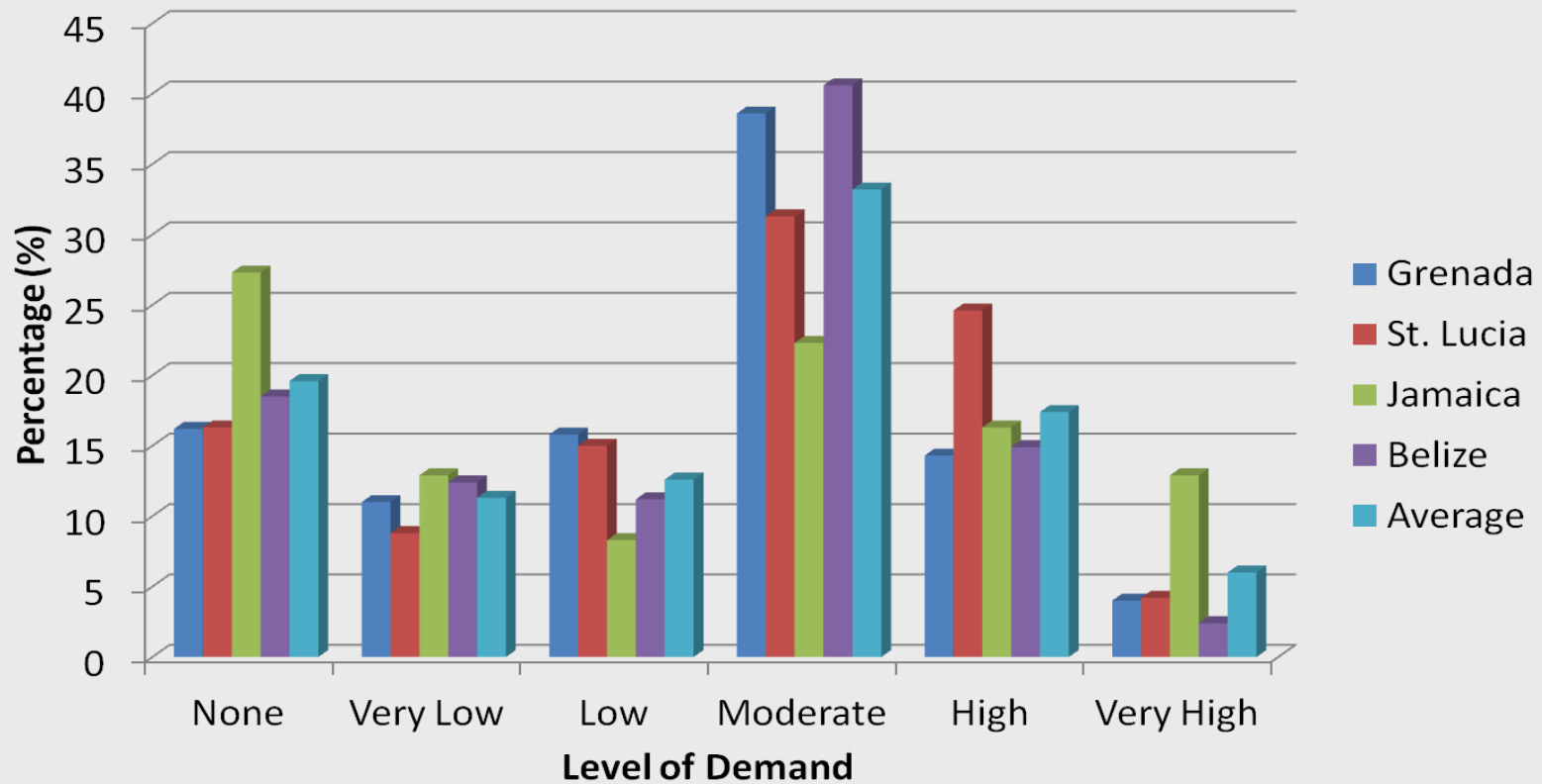
*\*Indicates that stressor level was not included in Sebstad et al. (2006) but inferred from other levels.*

## Conclusion:

Including low-income people in the formal financial sector <sup>2013</sup> could reduce their vulnerability and support a reorientation to less stressful coping strategies.

Source: Lashley and Warner

# Level of demand for insurance by country (in %)



Source: Lashley and Warner 2012

**Results:**

Moderate demand: 33%

High to very high demand: 23%

## Design of tailored parametric insurance

### Modelling & trigger design

- Wind speed + rainfall
- Data resolution vs. size of target countries
- Correlation analysis for wind speed & rainfall

### 2 Parametric products:

- Livelihood Protection Policy
- Loan Portfolio Cover

## **Livelihood Resilience in the face of disasters: Livelihood Protection Policy**

- Parametric product: Trigger wind-speed & rain; product will be sold in tranches
- Beneficiaries: Individuals
- Effect: Product should provide liquidity to individuals in the aftermath of extreme weather event to protect livelihood

## **Financial resilience and loan default: Loan Portfolio Cover**

- Parametric product: Trigger wind-speed & rain
- Beneficiaries: Banks or other loan provider with exposure to disaster related loan default
- Effect: Product should leverage lending to vulnerable people (e.g. agricultural sector)

## Evaluation: Impact Assessment of Insurance Products

Market Test in Jamaica (ETH Zurich, UWI, MCII/UNU-EHS)

- 100 villages in two parishes selected
- To demonstrate take-up of insurance products
  - Show-case for Jamaica regulatory authority
- Currently being implemented in Portland and St. Thomas parishes

## Evaluation: Impact Assessment of Insurance Products

Baseline Survey (ETH Zurich, UWI, UNU-EHS)

- What factors influence take-up of insurance products?
- How does the product influence people's livelihood?
- How does the product influence the adoption of preventive measures?
- Quantitative approach: 1500 households (100 villages), HH interviews
- Randomisation
- Timeframe: late 2012 – 2014

## What's Next

- Launching the LPP in St Lucia, Jamaica
- Embedding Climate Risk Insurance within national disaster management strategies
  - Model Parish concept
  - Agricultural Sector Development Plans
- Assessment of behavioural shifts

Thank you!

**For more information, visit us at:**

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