From Risk to Resilience: Advancing Climate Risk Microinsurance Through Innovation and Regional Collaboration for Sustainable Future

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CCRIFSPC

The Caribbean Catastrophe Risk Insurance Facility

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The Climate Imperative

Increasing Climate Risks: Hurricanes, floods, droughts intensifying annually with the economic costs of natural disasters being significant!



But lying behind these economic costs are the impacts on people, communities and livelihoods, with vulnerable communities i.e. low-income households facing the greatest exposure

Insurance and Resilience

- Resilience is the ability of systems, agents and their interrelations to prevent, reduce, cope and withstand shocks or stresses and bounce back quickly to normalcy after a disaster or crisis, by integrating adaptation and sustainability with disaster risk management.
- Insurance plays a crucial role in both climate change adaptation and resilience by providing financial protection, incentivizing risk reduction, and supporting recovery from climate-related disasters.





The Caribbean and Central America Parametric Insurance Facility and Development Insurer

A leading global development insurer, providing disaster risk financing products and services to member countries to improve lives and livelihoods, building resilience and advancing sustainable development agendas.

- Prompted by Hurricane Ivan and request for assistance by Caribbean governments made to the World Bank
- The world's first multi-country risk pool providing parametric insurance – established in 2007
- Originally designed to limit the financial impact of catastrophic hurricanes and earthquakes
- Currently provides coverage for tropical cyclones, earthquakes, and excess rainfall and for the fisheries, electric utilities and water utilities sectors.
- Provides short-term funding to support relief in the immediate aftermath of a natural disaster



CCRIF's Base Parametric Insurance Models... Key to Developing Products for New Sectors

- CCRIF is using its base models such as tropical cyclone (TC) and excess rainfall (XSR) to create products for sectors that either had no insurance or limited insurance or for groups that needed insurance.
- For example the TC model was used to underpin a product for the electric utilities sector and specifically for overhead transmission and distribution (T&D) lines.
- The TC and XSR models were used for the development of a product for the fisheries sector, not only for the big boat owners but for vulnerable fisherfolk, including fishermen, market vendors, many of whom are women, and other vulnerable groups along the fisheries value chain).
- The TC and XSR models were used to develop a product for water utilities.
- We create products for sectors by making changes to the exposure module of the CCRIF model shown at right. A model for a specific sector would require data for the exposure module specific to that sector.
- We are currently working on a drought model which would become another base model, enabling us to develop a multi-peril product for the agriculture sector that covers tropical cyclones, excess rainfall and drought.





*System for Probabilistic Hazard Evaluation and Risk Assessment

CRAIC Project Overview

Project Title:

Climate Risk Adaptation and Insurance in the Caribbean (CRAIC)

Innovative weather insurance and climate risk management in the Caribbean to enhance livelihood resilience in vulnerable communities.

Goal:

The CRAIC project seeks to address climate change, adaptation and vulnerability by promoting weather-index-based insurance as a risk management instrument in the Caribbean.

Transition Phase: 05.2022-12.2025

Project Partners:

CCRIF SPC, Munich Climate Insurance Initiative (MCII) and International Labour Organization's (ILO) Impact Insurance Facility.

Funded by:

The International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMUKN).

Pilot countries: Belize, Grenada, Jamaica, Saint Lucia, and Trinidad & Tobago

CRAIC Project Overview

The Livelihood Protection Policy (LPP)

- It is a parametric weather index-based insurance product.
- Targeted at individuals, the LPP is designed to help protect the livelihoods of vulnerable low-income individuals such as small farmers, tourism workers, fishers, market vendors and day labourers, by providing quick cash payouts following extreme weather events.
- It covers high rainfall and high winds and was designed using CCRIF's models.
- It is intended to provide policy holders with funds within a short period of time 10 to 14 days.
- It provides individual payouts that are tied to a series of thresholds for wind speed and rainfall.

Identifying Some Vulnerable Groups

- Persons living in poverty below the poverty line and immediately above the line
- Small scale farmers, fishers, seasonal tourism workers, day labourers, taxi drivers, construction workers etc...
- Micro and small business owners
- Women and girls
- Persons with disabilities
- Rural populations and rural women

Innovative Climate Risk Microinsurance Solutions

Climate Risk Insurance: financial risk transfer that provides protection against risks arising from extreme weather events that are increasing in frequency and severity due to climate change.

Microinsurance products have modest premium levels based on the risks insured and are developed specifically to serve the needs of the lowincome population. The insurer is the risk carrier and the product must be working towards profitability or at least sustainability and be managed on the basis of insurance principles.

Inclusive insurance is a broader term denoting all insurance products aimed at the excluded or underserved market; rather than just those aimed at the poor or a narrow conception of the low-income market. Parametric insurance: covers the probability of a predefined event happening (e.g., a major hurricane or earthquake), instead of indemnifying actual loss incurred and pays out according to a predefined scheme. It insures a policyholder against the occurrence of a specific event by paying a set amount based on the magnitude of the event, as opposed to the magnitude of the losses in a traditional indemnity policy. It makes a payment upon the occurrence of a triggering event and is detached from a specific underlying physical asset or piece of infrastructure. It makes payments based on the intensity of an event (for example, hurricane wind speed, earthquake intensity, volume of rainfall) and the amount of loss calculated in a pre-agreed catastrophe model caused by these events.

CCRIF Parametric Insurance – A Game Changer for Loss and Damage associated with Climate Change

With the increasing frequency and intensity of hydrometeorological events caused by CC, parametric insurance can help countries and key sectors (e.g., water, electricity, tourism and agriculture) better manage growing risks and losses.

Parametric microinsurance can benefit vulnerable groups, for example by using microinsurance to make social protection systems more shock responsive to support adaptation efforts.

Parametric insurance can address more than physical damage to assets and infrastructure and can provide solutions for economic exposure.

Parametric insurance payouts are quick and can immediately support countries following a natural disaster: to keep the wheels of government turning, address business interruption and the impact on the economy - including sectors such as agriculture and electric utilities - and on livelihoods.

With the increasing frequency and intensity of events caused by climate change and the increasing losses of governments, business and communities, parametric insurance can be viewed as being better able to match capital to the risk caused by climate change – in other words parametric insurance and the use of risk pooling is more economically viable than traditional insurance for fiscally constrained countries.

Use of Technology in Climate Risk Microinsurance

Design, rating and payouts	 Various technologies are used to design and price microinsurance products as well as in determining payouts.
Distribution	 Technology allows outreach to remote and underserved populations, digital onboarding and geospatial mapping to target and customize products.
Payment facilitation	 Technology enables premium payments and claims disbursements even in low-banking access areas, reduce delays and enhance trust in the system

Role of Stakeholders in Microinsurance

Local Insurance Industry/Companies

Bringing the concept to market Collecting and using data for risk assessments Social Impact by increasing access to insurance which helps beneficiaries avoid the poverty trap

Other Private Sector Partners

Supporting distribution frameworks to reach widest range of customers often located in remote areas (example partnerships with MNOs)

Maximizing position within the value chain (e.g. a milk production company connection to farmers)

Helping to support temporary workers (e.g. tourism industry) to access insurance by including microinsurance as a renumeration benefit

Role of Stakeholders in Microinsurance

Regulators

- Microinsurance products focus on the poor, and thus may need special consideration as compared to traditional insurance regulations.
- Addressed in some markets by creating microinsurancespecific regulation or the granting of special exemptions to established standards.

Role of Stakeholders in Microinsurance

Governments can:

- Incorporate microinsurance as part of social protection strategy or within local government departments purchasing group policies and using payouts to assist the most affected individuals or communities (purchase blocks of policies) Use microinsurance as a mechanism to increase the
- percentage of the population who uses insurance as a risk mitigation tool, instead of placing reliance on government resources, family members, sale of assets and depletion of savings in the event of a disaster. Use microinsurance as one medium to achieve the
- objectives of financial inclusion.
- Próvide subsidies for policy premiums or waive the premium • taxes or GCT/VAT
- Incorporate microinsurance into existing government rebates and subsidies for the fisheries sector or agriculture sector Require purchase of microinsurance as part of registration process for farmers, MSMEs etc. ٠

- Include insurance requirements in fisheries policies, agriculture policies or in MSME policies Sensitize vulnerable persons/low-income persons to the importance of insurance and these new microinsurance products in general

Cooperatives and NGOs

- Could purchase group policies on behalf of members and could use shares to pay for premiums
- Support the idea of microinsurance and sensitize members and communities

Microinsurance - Lessons Learned

CRAIC Project

- 1. Expectation Setting
- 2. Product Design
- 3. Market Development
- 4. Engagement for Sustainability

PICAP- Pacific Insurance and Climate Adaptation Programme

- 1. Partnerships
- 2. Developing Innovative Insurance Solutions
- 3. Distribution
- 4. Outreach and Capacity Building
- 5. Managing for Impact and Sustainability
- 6. Evidence-Based Programming

Pathways to a Sustainable Future

Social Impact of Microinsurance

- **Income Stability for Vulnerable Groups**: Protects livelihoods of smallholder farmers, fisherfolk, and low-income households from climate shocks.
- **Financial Inclusion**: Brings unbanked and underserved populations into formal risk protection frameworks.
- **Empowerment through Awareness**: Community engagement and education foster resilience and proactive risk management.
- **Trust & Uptake**: Transparent, timely claims build trust, increasing adoption and long-term sustainability.

Microinsurance and Environmental Resilience

- Incentivizes Climate-Smart Behaviour: Encourages adoption of sustainable agricultural and disaster preparedness practices.
- **Supports Adaptation Strategies**: Acts as a financial safety net during climate-related transitions and recovery phases.
- **Resilient Communities**: Insurance complements early warning systems and public adaptation efforts, enhancing community resilience.

Making Microinsurance Financially Viable

- **Cost- Efficient Delivery**: Digital platforms to lower distribution and claims costs
- **Public-Private Partnerships**: Blended finance models (donor support, government subsidies) enable affordable premiums and financial sustainability
- **Scalable Models**: Index-based products allow for standardized, scalable offerings with low transaction costs.

Livelihood Protection Policy (LPP)

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