Brief on CCRIF SPC (formerly the Caribbean Catastrophe Risk Insurance Facility)
How CCRIF Got Started

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

Originally designed to limit the financial impact of catastrophic hurricanes and earthquakes

Provides short-term funding to support relief in the immediate aftermath of a natural disaster
CCRIF is the world's first multi-country multi-peril risk pool based on parametric insurance and provides parametric catastrophe insurance for Caribbean and Central American governments.

CCRIF operates as a not-for-profit organization and currently provides its products and services to 19 Caribbean governments and 3 Central American governments. New entrants in 2018 were the British Virgin Islands, Montserrat, Sint Maarten and Panama. 2019 – Guatemala

Unlike indemnity insurance, CCRIF’s parametric insurance products are insurance contracts that make payments based on the intensity of an event and the amount of loss calculated in a pre-agreed model caused by these events.

CCRIF represents a cost-effective way to pre-finance short-term liquidity to begin recovery efforts for an individual government after a catastrophic event, thereby filling the gap between immediate response aid and long-term redevelopment.
CCRIF Members

19 Caribbean members:
- Anguilla
- Antigua & Barbuda
- Barbados
- Belize
- Bermuda
- British Virgin Islands
- Cayman Islands
- Dominica
- Grenada
- Haiti
- Jamaica
- Montserrat
- St. Kitts & Nevis
- Saint Lucia
- St. Vincent & the Grenadines
- Sint Maarten
- The Bahamas
- Trinidad & Tobago
- Turks & Caicos

3 Central American members:
- Nicaragua
- Panama
- Guatemala
In 2014, the facility was restructured into a segregated portfolio company (SPC) to facilitate offering new products (for example the excess rainfall product) and expansion into new geographic regions.

We are now named CCRIF SPC.

By establishing segregated portfolios, CCRIF is able to prevent the cross-subsidization of risk from one region to another, ensuring that each region’s risk will be based on the particular risk profiles of the countries in that region.

CCRIF SPC provides parametric insurance coverage for hurricanes, earthquakes and excess rainfall events to Caribbean and – since 2015 – Central American governments.
The Facility currently has established, or plans to establish, the following Segregated Portfolios (SPs):

- CCRIF SPC on behalf of Caribbean EQ-TC SP - Providing Earthquake and Tropical Cyclone Policies for Caribbean Governments

- CCRIF SPC on behalf of Caribbean XSR SP - Providing Excess Rainfall Policies for Caribbean Governments

- CCRIF SPC on behalf of Loan Portfolio Cover SP - Providing Loan Portfolio Cover policies for Financial Institutions in Caribbean Countries

- CCRIF SPC on behalf of Central America SP - Providing Earthquake and Tropical Cyclone Policies for Central American Governments

- CCRIF SPC on behalf of CAOST – providing a fisheries insurance product

The Caribbean EQ-TC, XSR, COAST and Loan Portfolio Cover SPs and their respective assets are owned by the CCRIF STAR Trust. The Central America SP and its assets are owned by the Central America STAR Trust.
Strong Focus on Scaling Up to entail:

• Addressing underinsurance by increasing coverage

• Rolling out new and improved models to underpin its existing products

• Bringing new products to market for drought, fisheries, agriculture, and public utilities to meet the demand of member governments in both the Caribbean and Central America

• Ramping up the research and development potential of CCRIF

• Supporting for example, the implementation of new and innovative projects such as the Integrated Sovereign Risk Management in the Caribbean initiative, CRAIC II Project (microinsurance) and the Resilience Solution (Reef Project)
• Natural disasters and financial crises are typically exogenous events that represent covariate shocks across a country and households
• Economic damages from natural hazards can jeopardize the health of national economies at a level comparable to or greater than that of financial crises
• Natural disasters also destroy human and physical capital stocks of countries – something that financial crises do not
It is becoming increasingly commonplace for governments to consider the inclusion of disaster risk in fiscal policy as this provides an efficient way for countries to financially protect themselves against events that cannot be prevented.

CCRIF has demonstrated that disaster risk insurance can effectively provide a level of financial protection for countries vulnerable to tropical cyclones, earthquakes and excess rainfall.

The Facility quickly provides financial liquidity when a country’s policy is triggered – providing payouts within 14 days after an event.

While these payments are relatively small compared to the overwhelming cost of rebuilding, all recipient governments have expressed appreciation for the rapid infusion of liquidity, which they are able to use to address immediate priorities.
A comprehensive risk management strategy should cover many other dimensions, including programs to better identify risks, reduce the impact of adverse events and strengthen emergency services.
CCRIF – An Example of a Disaster Risk Financing Strategy

CCRIF works to assist governments to financially protect their economies in the event they are impacted by a natural disaster. Parametric insurance really is a means by which governments can offload or transfer a portion of their risk to CCRIF and receive funds within 14 days after a catastrophic event.

<table>
<thead>
<tr>
<th>Post-disaster financing</th>
<th>Relief phase (1-3 months)</th>
<th>Recovery phase (3 to 9 months)</th>
<th>Reconst. phase (over 9 months)</th>
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<tr>
<td>Donor assistance (relief)</td>
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<td>Budget reallocation</td>
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<td>Domestic credit</td>
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<td>External credit</td>
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<td>Donor assistance (reconstruction)</td>
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<td>Tax increase</td>
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<td>Ex-ante financing</td>
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<td>Budget contingencies</td>
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<td>Reserve fund</td>
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<td>Contingent debt facility</td>
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<td>Parametric insurance</td>
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<td>CAT Bonds</td>
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<td>Traditional insurance</td>
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CCRIF = CCRIF

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CCRIF works to assist governments to financially protect their economies in the event they are impacted by a natural disaster. Parametric insurance really is a means by which governments can offload or transfer a portion of their risk to CCRIF and receive funds within 14 days after a catastrophic event.
Governments should build a financial protection strategy that combines a number of instruments that address different layers or types of risk. Such a strategy incorporates budget allocations and reserves, contingent credit, and risk transfer instruments.
After A Disaster: Sovereign Liquidity Gap

Liquidity Gap: little revenue to fund Government services
Disaster Risk Financing Strategies

• It is often argued that financial protection strategies treat the symptoms but not the cause of disasters.

• Good strategies can help governments cope with the financial impact of calamities, but do little to shelter populations and assets from the destruction of cyclones and earthquakes. Financial protection is only one component of a comprehensive disaster risk management strategy.

• Financial protection will help governments mobilize resources in the immediate aftermath of a disaster, while buffering the long-term fiscal impact of disasters.

• Clearly, well-designed disaster risk financing strategies can create financial incentives for governments and/or households to further mitigate their risks.

• When a Ministry of Finance is sensitized to a country’s exposure it can help mobilize resources beyond disaster response in support of risk mitigation.
Uniqueness of CCRIF Policies

• Unlike indemnity insurance, CCRIF’s parametric insurance products are insurance contracts that make payments based on the intensity of an event (for example, hurricane wind speed, earthquake intensity, and volume of rainfall) and the amount of loss calculated in a pre-agreed model caused by these events.

• Parametric insurance enables payouts to be made very quickly after a hazard event.

• CCRIF therefore represents a cost-effective way to pre-finance short-term liquidity to begin recovery efforts for an individual government after a catastrophic event, thereby filling the gap between immediate response aid and long-term redevelopment.
## Differences Between Parametric and Indemnity (Traditional) Insurance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Parametric Insurance</th>
<th>Indemnity Insurance</th>
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<tbody>
<tr>
<td><strong>Lower Premiums</strong></td>
<td>• Lower transaction and administrative costs</td>
<td>• Includes claim assessing costs</td>
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<td><strong>Faster Payouts</strong></td>
<td>• Payments based on a pre-defined hazard level</td>
<td>• Need loss adjustment process</td>
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<td>• This requires additional time</td>
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<tr>
<td><strong>Objective and Transparent</strong></td>
<td>• Direct access to information for policyholders</td>
<td>• Opinions on loss level depend on the adjuster</td>
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<td>• Objective payout calculation</td>
<td>• Conditions, exclusions and limitations often add uncertainty and delay</td>
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<tr>
<td><strong>Uniformly Defined Risk</strong></td>
<td>• All risk is defined with the same parameters</td>
<td>• Risk is valued under different assumptions depending on company parameters</td>
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Differences Between Parametric and Indemnity Insurance

**Moral Hazard Reduction**
- Parametric Insurance: Cost of insurance is related to event probabilities and payouts are not related to external efforts.
- Indemnity Insurance: Policyholders may engage in riskier actions.

**Simple Process to Obtain Coverage**
- Parametric Insurance: Governments do not have to provide detailed asset values and locations.
- Indemnity Insurance: Reversed claims process.

**Simplified Claims**
- Parametric Insurance: Reversed claims process.
- Indemnity Insurance: Often claims processing takes a long time to be completed.
CCRF Parametric Insurance Products

- **Tropical Cyclone**
  - wind and storm surge

- **Earthquake**

- **Excess Rainfall**
  - Since 2013

- **Fisheries**
  - launched in 2019 – Grenada and Saint Lucia -
  - developed through Caribbean Oceans and Aquaculture
  - Sustainability Facility (COAST)

- **Drought**
  - Product available in 2021

- **Public Utilities**
  - to be developed for 2021

- **Agriculture**
  - Model being developed
  - Potential partners: CDB, EU
CCRIIF Payouts to Date

43 payouts totalling almost US$155.8 million made to 14 member governments

Payouts to The Bahamas after Hurricane Dorian in 2019: US$12,824,153
~50% made within 7 days
Remainder within 14 days

Most recent Payout
US$3.6 million to Guatemala
under its XSR policy for 9 days of rain that occurred during Tropical Storms Amanda and Cristobal. The policy was triggered by rains that started on May 31

All payouts made within 14 days
Use of CCRIF Payouts

Approximately 2.5 million persons have benefitted from CCRIF payouts since 2007.
Use of CCRIF Payouts

- Provision of food, medicine and shelter for displaced persons
- Immediate recovery e.g. clearing silty rivers, unblocking major roads, stabilizing drinking water plants
- Stabilization of government processes
- Provision of civilian security
- Assistance to agriculture sector and farmers
- Assistance to tourism sector
- Repairs to roofs, bridges, roads
- Capitalization of a special recovery fund
- Rebuilding schools – to be hurricane-resistant

Governments can use CCRIF payouts to support their social protection programmes
CCRIF is essentially about...

• providing quick liquidity
• allowing governments to quickly support the most vulnerable in their population immediately after a disaster
• reducing budget volatility
• not increasing the debt stock of countries – parametric insurance will not result in an increase in debt stock as it is not a form or disaster relief as are credit facilities
• offering diverse products for both a range of perils and economic sectors and industries
• offering products and services not readily available in traditional insurance markets
## How CCRIF Policies Work

<table>
<thead>
<tr>
<th>Parametric insurance disburses funds based on the occurrence of a pre-defined level of hazard and impact</th>
<th>Policy triggered on the basis of exceeding a pre-established trigger event loss</th>
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<tbody>
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<td>Estimated based on wind speed and storm surge (tropical cyclones), ground shaking (earthquakes) or volume of rainfall (excess rainfall)</td>
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<td>Hazard levels applied to pre-defined government exposure to produce a loss estimate</td>
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<td></td>
<td>Payout amounts increase with the level of modelled loss, up to a pre-defined coverage limit</td>
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</table>
CCRIF’s Parametric Policies and Models

New Models for 2019/20

- **Tropical Cyclone – TC**
  - SPHERA* model

- **Earthquake – EQ**
  - SPHERA* model

- **Excess Rainfall – XSR**
  - XSR 2.5 model

- **COAST** for fisheries
  - Fisheries model

* System for Probabilistic Hazard Evaluation and Risk Assessment
** Caribbean Oceans and Aquaculture Sustainability Facility
CCRIF engaged with the Caribbean Electric Utility Services Corporation (CARILEC) to develop parametric insurance coverage for power supply companies in case of tropical cyclone-induced losses.

- Based on tropical cyclone risk model that computes losses caused by wind and storm surge to transmission and distribution lines
- Model being developed and tested on 3 pilot countries (Anguilla, Turks and Caicos Islands and Cayman Islands)
- Expected to be completed during 2020
- To be expanded to other countries
How?

• CCRIF was not set up to compete with the current insurance markets in the Caribbean or Central America. Where the private sector insurance markets are clearly not providing coverage for a particular market segment that is of vital importance CCRIF can provide support, both technical and financial, to develop parametric insurance solutions.

• The case of regional utilities – electric, water and wastewater is an example of where insurance is either too expensive or nonexistent.

• We can work with CARILEC and local electric utility companies to develop a stand-alone insurance product to provide such coverage, utilizing CCRIF’s technical expertise, modelling capacity and operational experience.

• A segregated portfolio for utilities or tied to the Caribbean SP

• Would provide rapid payments to assist with immediate repairs (Recall Hurricane Maria in Dominica and Dorian in The Bahamas – vast majority of T and D lines destroyed)

• Minimize interruption of critical services
Technical Assistance Programme

Components

1. Scholarship and Professional Development Programme
2. Regional Knowledge Building
3. Support for Local Disaster Risk Reduction Initiatives
WeMAp allows the user to easily access information about hazards related to tropical cyclones, rainfall, earthquakes and their impacts. It has four components: the Real-Time Forecasting System (RTFS) for tropical cyclones (an update of the original CCRIF RTFS) and monitoring tools for tropical cyclone, earthquake and excess rainfall events (including but not limited to cyclonic events).