Overview of the Caribbean DRF Landscape and Applicable Lessons Learned for PICs

Elizabeth Emanuel, Head of Technical Assistance & Head of Corporate Communications, CCRIF SPC

The Hazard Landscape in the Caribbean

- Vulnerable to storms, tropical cyclones, flooding, landslides, earthquakes, tsunamis etc.
- Intrinsic economic, environmental and social vulnerability, limited natural resource base, significant competition between different kinds of land use, a high level of dependence on major economic sectors that rely on the natural environment, fragile ecosystems, limited institutional capacity and low levels of insurance coverage
- High concentration of people and infrastructure located in the coastal zones, further increasing vulnerabilities to hydrometeorological events and climate change
- Multi-hazard environment

Natural Hazards	Manmade Hazards	Biological/Healt Related Hazard
 Natural Hazards Meteorological and Hydrological: Tropical cyclones (tropical storms and hurricanes) Rainfall, including severe rainfall events Lightning Extreme heat and increasing temperatures Floods Drought Sea-level rise Geohazards: Earthquakes Mud Volcanoes 	 Chemical: Oil spills Transboundary movement of hazardous materials/ wastes Technological Road, aviation, and nautical accidents Industrial accidents Infrastructure Failures Fires (bush and forest fires) Burning dumpsites and landfills 	 Biological/Health Related Hazards Biological: Human disease outbreaks, epidemic pandemics Animal (livestock) and plant (agricultural) epidemics Other biological/physical hazards such as poisoning, eutrophication, air pollution
 Tsunamis Submarine volcanic eruptions Environmental: Land degradation Coastal erosion/Coastal inundation Soil erosion Landslides 	 Fires Terrorism Cybercrimes/cyber security gaps Societal unrest 	

Sahara dust

- Sargassum
- **Coral reef degradation**

Natural disasters continue to cause significant impacts to the economies of the Caribbean...





Sources: EM-DAT; IMF. 2016. "Small States' Resilience to Natural Disasters and Climate Change—Role for the IMF"; IMF, *World Economic Outlook*; World Bank, *World Development Indicators*; and authors' calculations.



- An average of **17 hurricanes per year and 23 Category 5 hurricanes** (2000-2019).
- The 2017 hurricane season is the **third worst on record** in terms of number of disasters and countries affected as well as the magnitude of damage.
- In 2019, Hurricane Dorian became the **strongest Atlantic hurricane** on record to directly impact a landmass.

resulting in:

- Higher fiscal deficits
- Trade deficits
- Negative impacts on industries such as tourism and agriculture
- Increases in poverty levels
- Negative impacts on economic growth prospects
- Need for quick liquidity



How CCRIF Got Started

Prompted by Hurricane Ivan and request for assistance by Caribbean governments made to the World Bank

The world's first multicountry 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 and most successful multi-country, multi-peril risk pool based on parametric insurance
- Is a development insurance company as the goods and services we provide are designed to enhance the overall developmental prospects of our members
- Offers products not readily available in traditional insurance markets
- Provides parametric insurance a key component in a country's disaster risk financing strategy and is designed to pre-finance short-term liquidity, reduce budget volatility and allow countries respond to their most pressing needs post disaster
- Provides quick liquidity allowing governments to quickly support the most vulnerable in their population immediately after a natural disaster



In 2020/21 and 2021/22 CCRIF members transferred risk totalling US\$1 billion to CCRIF for financial protection.



More on CCRIF ...

- Payouts have been used to: "keep the wheels of government turning", repair and make improvements to critical infrastructure, institute mitigation measures and provide assistance and support to the most vulnerable in member countries.
- Payments are relatively small compared to the overwhelming cost of rebuilding, but the rapid infusion of liquidity can address immediate priorities, including humanitarian needs.
- CCRIF was not designed to cover all the losses on the ground – but rather to allow governments to reduce their budget volatility and to guarantee sufficient capital for emergency relief thereby reducing postdisaster resource deficits
- 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 and became CCRIF SPC

CCRIF - An Example of a Disaster Risk **Financing Instrument for Financing Recovery following a Natural Disaster**





Policies

Policies

Electric Utilities Policy

- 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.
- Parametric insurance enables payouts to be made very quickly after a hazard event.
- 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 can make payouts of up to US\$150 million per peril for each member country
- CCRIF makes payouts within 14 days of an event when a policy is triggered













Earthquake Policies

Tropical Cyclone Policies

Excess Rainfall Policies

Fisheries Policy -COAST

Electric Utilities Policy

CCRIF Parametric Insurance Products

- 1. EQ Based on losses due to ground shaking
- 2. TC Based on losses due to wind and storm surge
- 3. XSR Based on losses due to amount of rainfall
- 4. COAST Based on losses in fisheries sector due to rain, waves, wind and storm surge
- 5. Electric Utilities Based on losses for electric T & D lines due to wind

CCRIF Products – Current and Future

CCRIF Products	Perils											Add. Info
	GS	Wind	Rain	Flood	Drought	Heat Wave	Land- slide	Vol Er	Tsunami wave	Storm surge	Wave Height	
Earthquake												
Tropical cyclone												
Excess Rainfall			۲									
Products under De	velopr	nent										
Drought					٠				1			
Run-Off		•		•				2				
Eco Sectors Covere	d								A-			*
Electric Utilities		•						1	1	•		
Fisheries												
LPP (microins)			٠									Adaptive Social Protection
Eco Sectors under	Consid	eration	1									
Agriculture		•	•	•	٠		1			•		Including Livestock
Tourism	٠	٠							26	•		
Gov. Buildings and other Infra	٠	٠	٠	٠						•		Schools, hospitals, offices, PS, houses
Housing Stock	٠	٠	•	•						•		

USE OF CCRIF PAYOUTS 2007 - 2021



Since 2007, CCRIF SPC has made 54 payouts to 16 member governments totalling US\$ 244,789,789.

- Single Largest Payout: Haiti US\$ 39,953,272 for August 14, 2021 earthquake
- Member receiving the largest number of payouts – Barbados – 6 in total
- Member receiving the largest value in payouts – Haiti – US\$78.3 million

Examples of How Payouts Have been Used

			•
Haiti	EQ	7,753,579	Immediate reconstruction, clearing of debris,
			payment of salaries of emergency workers,
			provision of civilian security
			Providing medical assistance to affected persons
Anguilla	TC	4,282,733	Clearing of debris, repairing general damage,
			capitalizing a special recovery fund and purchasing
			upgraded weather monitoring data-capture
			technology and portable weather systems to
			improve early warning
Barbados	TC	8,560,247	Recovery efforts under direction of the
			environmental management agency and emergency
			repairs of key infrastructure, including a major road
			along the port
Saint Lucia	TC	3,241,613	Capital expenditures, e.g., clearing silty rivers,
			unblocking major roads, stabilizing drinking water
			plants, and repair of a key government building
St. Vincent &	TC	1,090,388	Acquiring building and other materials for persons
the			whose homes or crops had been damaged
Grenadines			Infrastructure
Anguilla	XSR	493,465	Repairs to government buildings: library, NEOC, fire
-			service, post office, Adrian T. Hazel Primary School
Anguilla	XSR	559,249	Establish Emergency Warning System; acquire VSAT
_			communication for NEOC
	Haiti Anguilla Barbados Saint Lucia St. Vincent & the Grenadines Anguilla Anguilla	HaitiEQAnguillaTCBarbadosTCBarbadosTCSaint LuciaTCSt. Vincent & the GrenadinesTCAnguillaXSRAnguillaXSR	HaitiEQ7,753,579AnguillaTC4,282,733BarbadosTC8,560,247BarbadosTC8,560,247Saint LuciaTC3,241,613St. Vincent & the GrenadinesTC1,090,388AnguillaXSR493,465AnguillaXSR559,249

Approximately 3.5 million persons in the Caribbean and Central America have benefitted from CCRIF payouts since 2007.

Examples of How Payouts Have been Used

Rainfall event August 31 - September 2 2020	Trinidad & Tobago*	XSR	176,146	Repaired roads in the city of <u>Scarbourough</u> and communities of Patience Hill, <u>Parlatuvier</u> and Belle Garden Provided assistance to 3 families in Tobago
Tropical Cyclones Zeta/Eta, October/November 2020	Jamaica*	XSR	3,500,000	99% - to cover costs under the "Island-wide Disaster Mitigation" activity – <u>e.g.</u> to reopen roadways impacted by landslides, clean and clear drains, rehabilitate damaged roadways, and support affected farmers 1% - used on the "Maintenance of Secondary Roads" activity
Tropical Cyclone Eta, November 2020	Panama	XSR	2,670,556	Payment made to Panama March 2021Contributed to Operación Patria (OperationHomeland), which focused on rescue of affectedpeople, and the transfer of humanitarian aid, whichincluded arranging for transportation of goods byair, sea and land (including through neighboringCosta Rica).Funded improvement of access roads tocommunities affected by landslides in Ngäbe-Bugléregion and Chiriquí, Veraguas, Coclé and PanamaOeste provincesProvided assistance to producers who lost theircrops as a result of flooding
Tropical Cyclone Eta,	Nicaragua	TC	7,793,524	Support to 38,117 families who were placed in
November 2020		XSR	2,956,021	shelters and solidarity houses - provided a cleansing
Tropical Cyclone Iota, November 2020	Nicaragua	тс	19,891,162	kit, food packages, blankets, etc. Removal of trees and earth from the main roads and highways Rehabilitation of the national road network, to facilitate the movement of persons and the flow of commerce

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CCRIF Lessons Learned 2007 - 2022

Reflections on Lessons Learned

 Much of the success of CCRIF has not been by chance. We have based our operation on learning lessons and on a culture of continuous improvement as well as projecting needs and recognizing the dynamic and ever-changing global environment of which we are part. There have been many lessons learned that countries, organizations and donors should take into account in pursuance of a similar facility. I will share the main lessons with you.



Lessons Learned over the past 14 years 2007 – 2021

Keeping premiums low - risk pooling; providing discounts and bundling products when possible bearing in mind the fiscal constraints of members Being flexible and responsive to members' needs; developing new products; providing preferable policy options (e.g. lower attachment points) due to expectations of payouts Stakeholder consultations aid project development and underpin continuous improvement; Stakeholder engagement is a continuing objective

Donor support is invaluable frequent interaction; sourcing funding for new products; premium support for most disadvantaged countries

Success depends heavily on the relevant knowledge and experience of decision makers

Stakeholders' interests must be represented

Macro, Meso and Micro parametric insurance is relevant and complementary Minimize non-essential bureaucracy to lower overhead costs and product price

Third-party monitoring and evaluation can help to broaden or streamline organizational focus as necessary

Know your limitations

Building capacity through training and technical assistance programmes to enhance understanding of CCRIF, DRF and risk transfer in general

Insurance is a form of Climate Change Adaptation

Insurance as a Form of CC Adaptation

- Climate risk insurance has the potential to reduce the catastrophic impact of disasters, enable a timely recovery and contribute to sustainable, climate resilient development allowing for building forward stronger
- CC adaptation means increasing one's or a country's ability to recover from a disaster; reducing vulnerability and promoting resilience (both physical and financial) to catastrophes. Insurance can be a key tool in both these aspects of adapting to climate change for example it can provide much needed resources for economies and people to begin recovery efforts timely financial relief for recovery of livelihoods and reconstruction, thus providing security in the post-disaster period
- Insurance can play a key role in risk assessments, and can support the identification of risks, mapping, analyzing, prioritizing and pricing risk – contributing to the wider understanding of climate change risks
- Insurance can also help with new and emerging risks and helping markets anticipate and prepare for these
- At the national and the local levels, insurance helps create a space of certainty within which investments and planning can be undertaken. This allows for climate-resilient investments in climate sensitive sectors such as tourism and agriculture as well as in job creation and market development





Some Challenges

- **High deductible** means that it only covers major catastrophe events in which national economies are severely impacted, and also currently only reaches the national government (not necessarily the most vulnerable people except with products such CCRIF's COAST policy for fisheries)
- **Basis risk** means that events can occur which produce significant losses but no payout (and the opposite is possible)
- Concept of parametric is not well understood, so clients still expect their 'insurance policy' to cover everything
- Scale of the risk currently retained is daunting when converted to annual premium, even at good rate
 - demonstrating that an appropriate place for risk transfer is as a complement to other DRF tools, and DRM initiatives and actions
- The need to develop hazard/risk models in regions with little historical data
- The need to drill down to the local level and ensure payouts reach vulnerable individuals



Final Words on Lessons Learned

- Financial mechanisms such as CCRIF must not be seen as a panacea but rather a complementary tool in addressing the much broader issue of disaster management within the state.
- An important theme in the sustainability of such an innovative tool for risk management is the avoidance of complacency and stagnation. Constant communication, accountability, evaluation and evolution are necessary to maintain the relevance and reliability of the mechanism. Decision makers must remain creative in their desire to grow and expand the worth of the tool to stakeholders while remembering the facility's initial mission and purpose.



• providing quick liquidity

In Closing CCRIF is essentially about...

- allowing governments to quickly support the most vulnerable in their population immediately after a natural 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 of 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

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pr@ccrif.org www.ccrif.org
