

CWUIC SP

Caribbean Water Utilities Insurance Collective Segregated Portfolio

Building the Resilience of Water Utilities in the Caribbean

With thanks for these slides to:



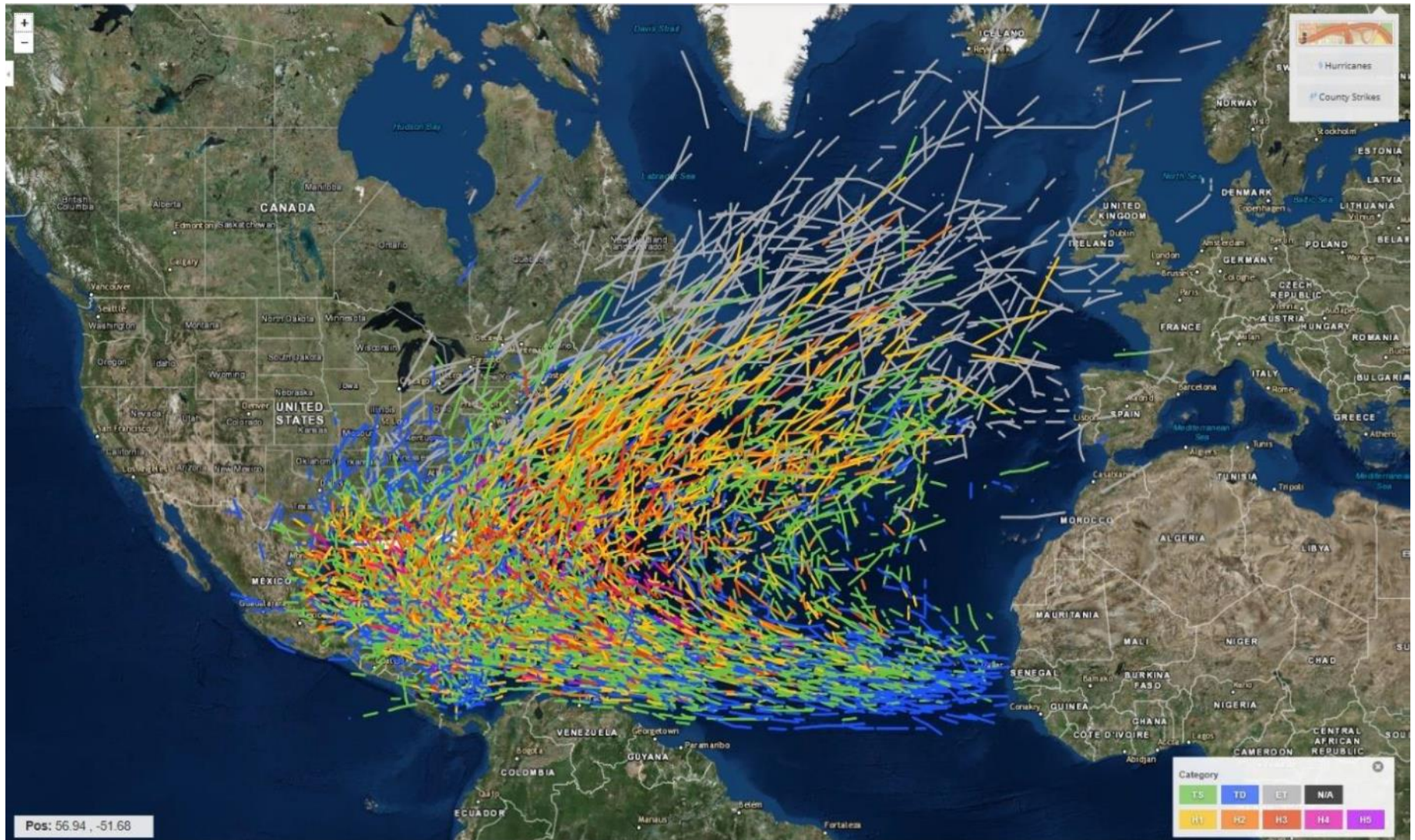
CWUIC SP

A photograph of a beach under a dramatic, dark, stormy sky. The water is a vibrant turquoise color, and white waves are breaking onto a sandy shore. The overall mood is intense and powerful.

Why CWUIC SP ?

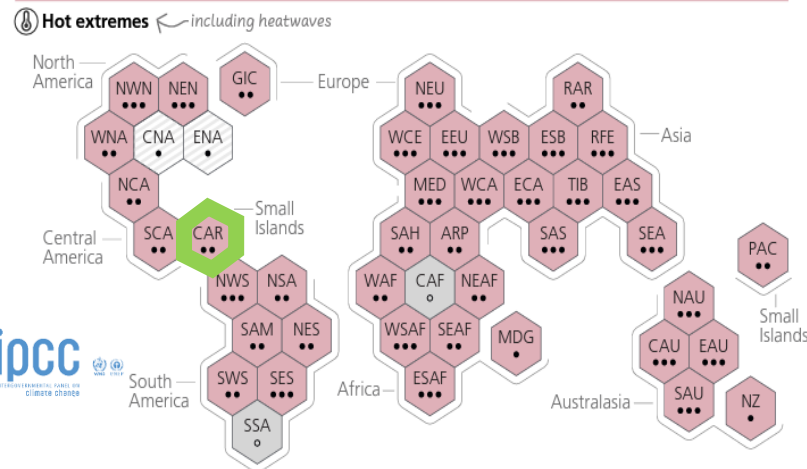
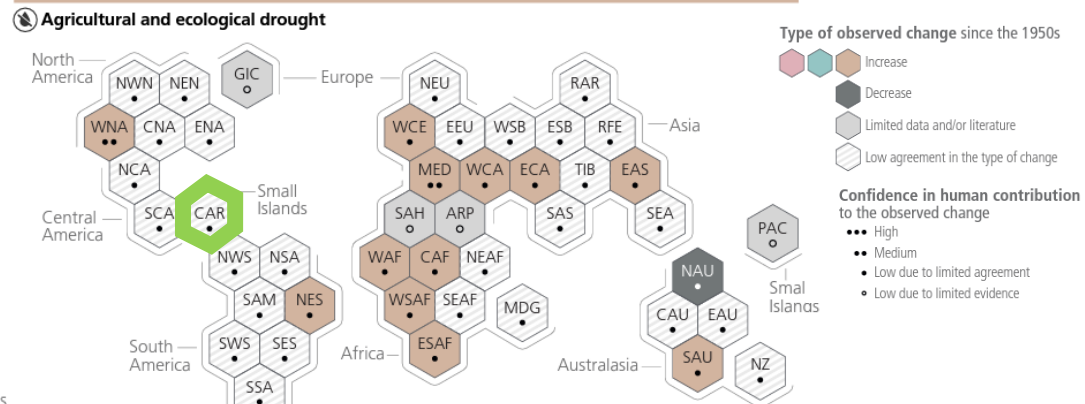
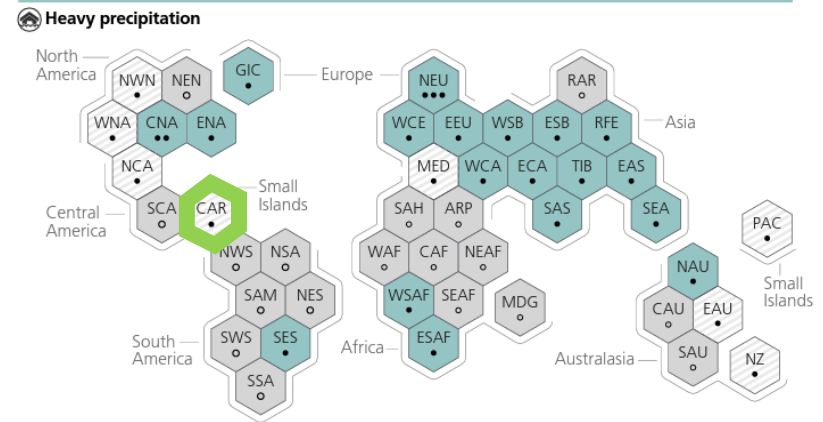
 CWUIC SP

Tropical Cyclone Tracks since 1850's (NOAA)



Impacts of Climate Change Observed in the Caribbean

- Hot extremes have increased⁸
- Changes in heavy precipitation and drought have varied across the region⁹
- Climate change has affected water security due to warming, changing precipitation patterns, and greater frequency and intensity of climatic extremes¹⁰
- Sea Level Rise – 20 to 25 cm over next 30 years





Natural hazards that can impact water utilities in the Caribbean

The Vulnerability of Water Utilities to Natural Hazards

Direct impacts include **asset damage to the facilities of the water utility, and expenses and losses of revenues experienced due to business interruption:**

- **Service disruption** to homes, schools, businesses, hospitals and hotels – health and disease risks. Water rationing and or emergency supplies distribution.
- Fixing and replacing damaged assets (infrastructure and equipment) incurs **unpredictable costs** that cannot be budgeted for by the utility and which are hard/unfair to pass on to consumers through increased prices.
- These critical services are an **implicit contingent liability** for Governments.
- Until service is restored, the company cannot sell water leading to **losses in revenue** while the utility incurs substantial repair costs
- Significant increase in operating costs likely due to trucking and other emergency short term options.

Indirect impacts include **electricity supplies being reduced or cut, disabling filtration, and pumping and leading to interruptions in service.**

A Sample of Water Utility Losses

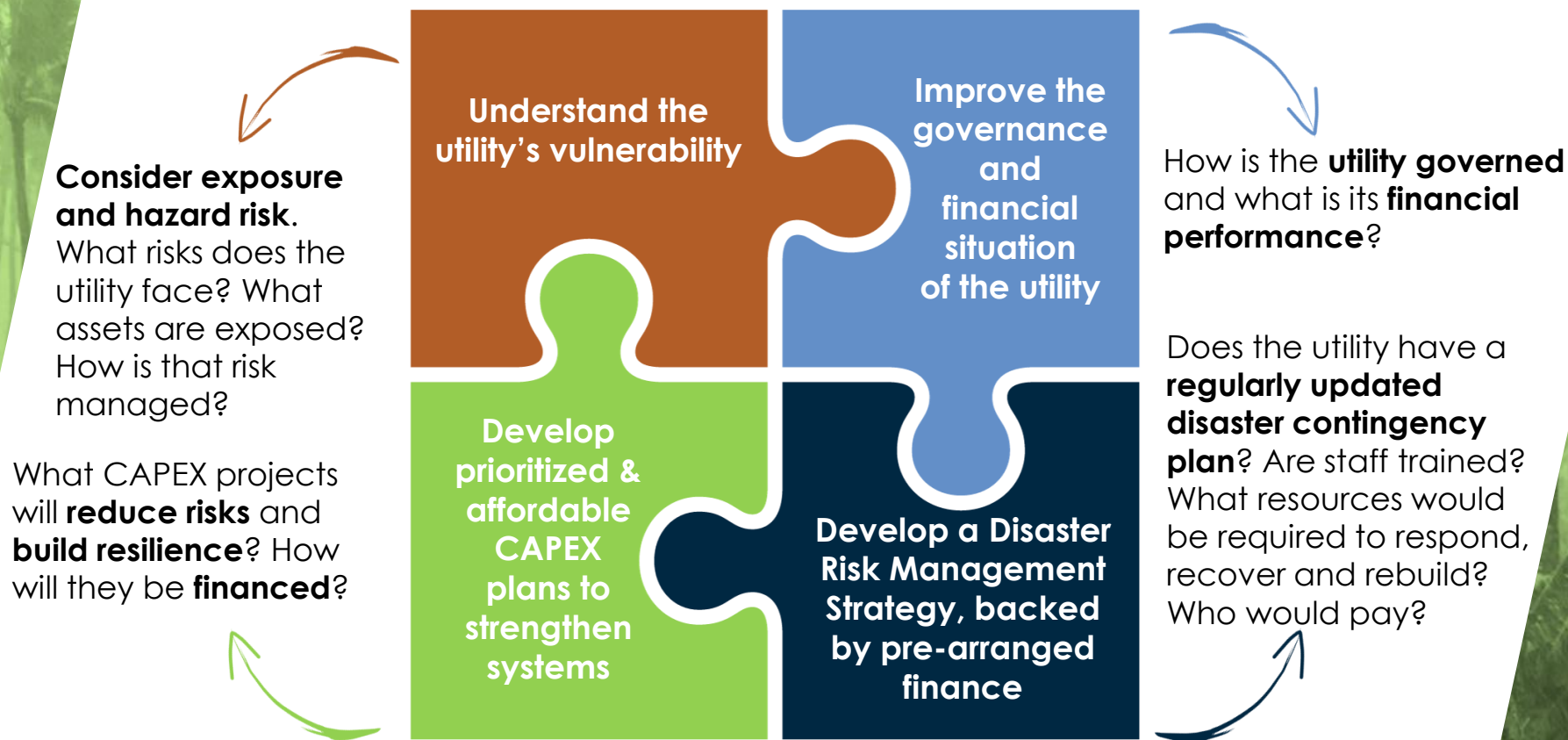
Utility and Jurisdiction	Event	Severity	Estimate of time during which service was interrupted*	Estimate of total cost incurred in US\$mil**
NWC in Jamaica	Flood Rains (May- June 2002)	Tropical Wave	12 days	1.8
NWC in Jamaica	Hurricane Ivan (Sep 2004)	Cat 5	14 days	9.4
NAWASA in Grenada	Hurricane Ivan (Sep 2004)	Cat 3	5 to 30 days	3
WSC in The Bahamas	Hurricane Frances - Andros (Sep 2004)	Cat 3	8 days	N/A
DOWASCO in Dominica	Hurricane Dean (Aug 2007)	Cat1	7 days	0.3
NWC in Jamaica	Tropical Storm Nicole (Sep 2010)	Tropical Storm	7 days	3.1
DOWASCO in Dominica	Tropical Storm Ophelia (Sep 2011)	Tropical storm	7 days	0.1
WASCO in St. Lucia	Christmas Eve Trough (Dec 2013)	Trough	16 days	1
DOWASCO in Dominica	Tropical Storm Erika (Aug 2015)	Tropical Storm	7+ days	14.6
WSC in Bahamas	Hurricane Dorian – Abaco (Sept 2019)	Cat 5	Months	15
DOWASCO in Dominica	Hurricane Maria (Sep 2017)	Cat 5	37 days	35.2
BWS in Belize	Hurricane Eta (Nov 2020)	Cat 4	1 day	

Source: Information provided by the utilities.

*Further data collection is required to ensure consistency in this estimate from utilities regarding the time of service interruption. Based on the data received, it is unclear if this is the time that elapsed for some systems or all systems to be restored.

**Estimated in cost in US dollars is equivalent to the value of the US dollar in the year in which the event occurred and have not been inflated to the value of the US dollar today.

Are Water Utilities Resilient?



A photograph of a beach with a dark, stormy sky and turquoise water. The text "How will CWIUC SP help?" is overlaid in white.

How will CWIUC SP help?

 CWIUC SP

CWUIC SP

Established 2023

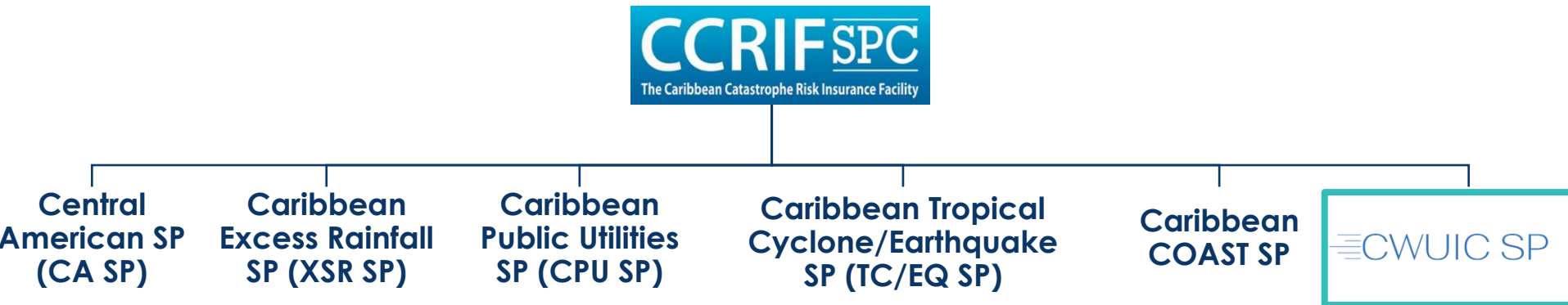
As of September 2023, CWUIC SP has been officially established as a segregated portfolio under CCRIF SP

A first of its kind facility, CWUIC SP will help water utilities in the Caribbean build resilience to natural hazards through disaster risk finance and management products, tools, and support

CWUIC SP Working Group and Partners



CWUIC SP is a Segregated Portfolio (SP) of CCRIF SPC



- ✓ CCRIF SPC has segregated portfolios that offer parametric insurance products
- ✓ Unlike other CCRIF SPs that only offer parametric insurance, **CWUIC SP will offer an additional two components:**



**Component 1:
The CWUIC
Response Program**



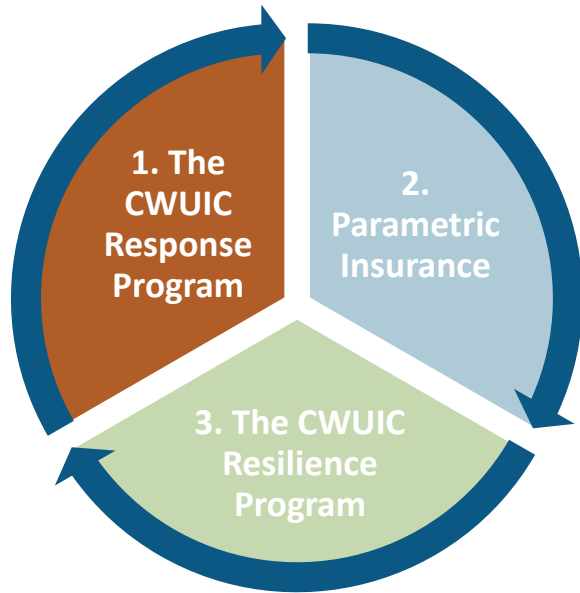
**Component 2:
Parametric
insurance for natural
hazards**



**Component 3:
The CWUIC
Resilience Program**

CWUIC SP's Three Components

CWUIC SP's objective is to build resilience and help utilities recover from disasters.



Component 1: The **CWUIC Response Program** will provide support for early recovery assistance among participating water utilities

Component 2: **Parametric insurance** will provide coverage against natural hazards and **provide quick liquidity after a qualifying natural hazard event**

Component 3: The **CWUIC Resilience Program** will facilitate access to **funding from development banks and other financial institutions for priority resilience projects**

CWUIC SP will be a first-of-its-kind facility providing Caribbean water utilities with access to a formalized response program and emergency preparedness training, parametric insurance, and funding for investments in priority resilience projects.

All Caribbean water and sanitation utilities are welcome and encouraged to join CWUIC. Subsidies and price discounts will help the utilities in ODA-eligible countries buy the cover they need.

Governance and Management Structure of CWUIC SP





Component I: The CWUIC Response Program

 CWUIC SP

Overview of the CWUIC Response Program

Component 1 of CWUIC SP will support a **post-disaster assistance and coordination between utilities** to **restore and rebuild water utilities post-hazard**

CWUIC SP will develop a program that, among other things, will:

- ✓ **Improve communications** among water utilities
- ✓ Provide guidance on **advanced agreements with suppliers**
- ✓ Develop procedures to **survey damage caused by the event**
- ✓ Develop procedures for the **mobilization, deployment and coordination of workmen and crew**
- ✓ Develop procedures for the **movement of materials, tools, and equipment**
- ✓ Provide **training and development** for personnel

IDB Group has worked closely with CAWASA, CWWA, and CDEMA to develop and reach an agreement in principle for Component 1.

CWUIC SP



Manager

Technical
Coordinator



Specialized
Technical Support

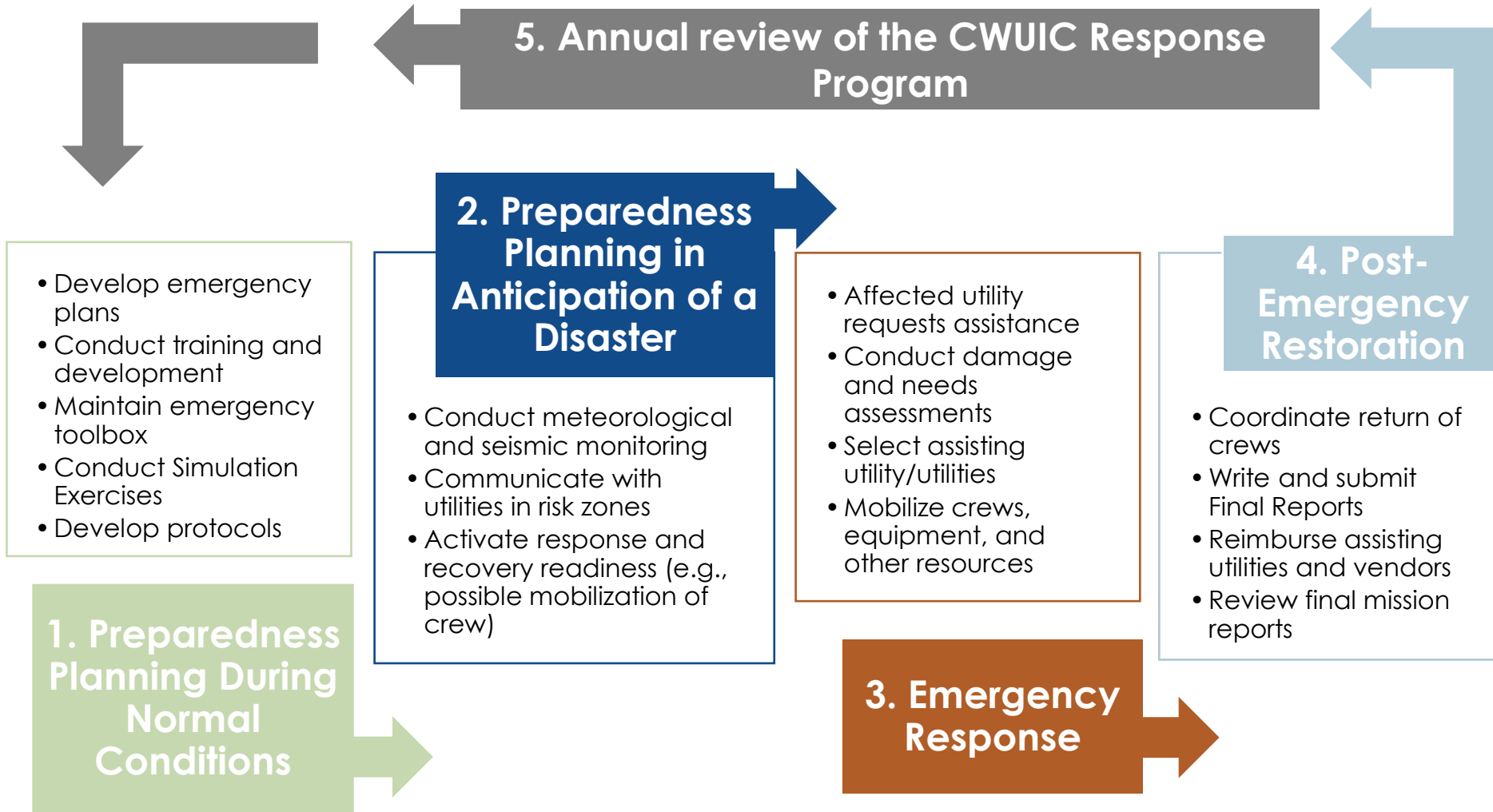


Early Disaster Warnings
and Impact Assessments



Water Utilities Provide
Personnel and Equipment

Phases of the CWUIC Response Program






Component 2: Parametric Insurance

 CWUIC SP

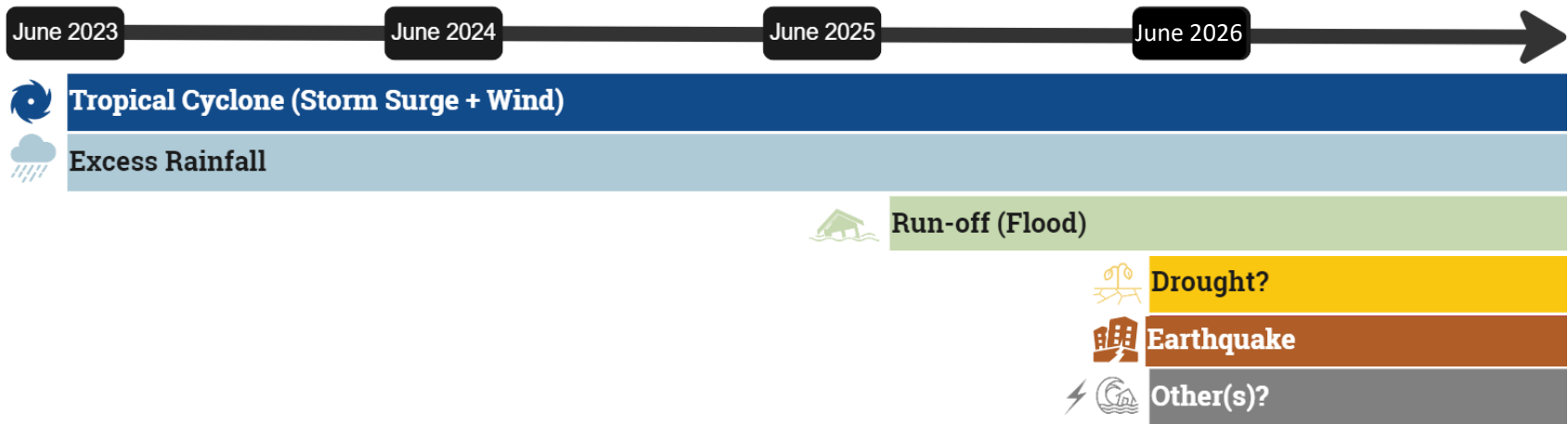
Preliminary Terms of CWUIC SP's Insurance Policies

Preliminary terms of insurance policies to be offered by CWUIC SP:

 **One-year policy periods** (typically 1 June - 31 May). In some cases, CWUIC SP may offer late entry policies that are shorter than one year

 The **premium for each utility's policy will be based on its risk profile**. It will also **depend** on the **Attachment Point, Exhaustion Point, and Ceding Percentage** as **determined by the utility**

 In 2024, CWUIC SP intends to offer utilities a hybrid **tropical cyclone (TC)** and **excess rainfall (XSR)** policy option for the hurricane season, before expanding to additional perils in the future.



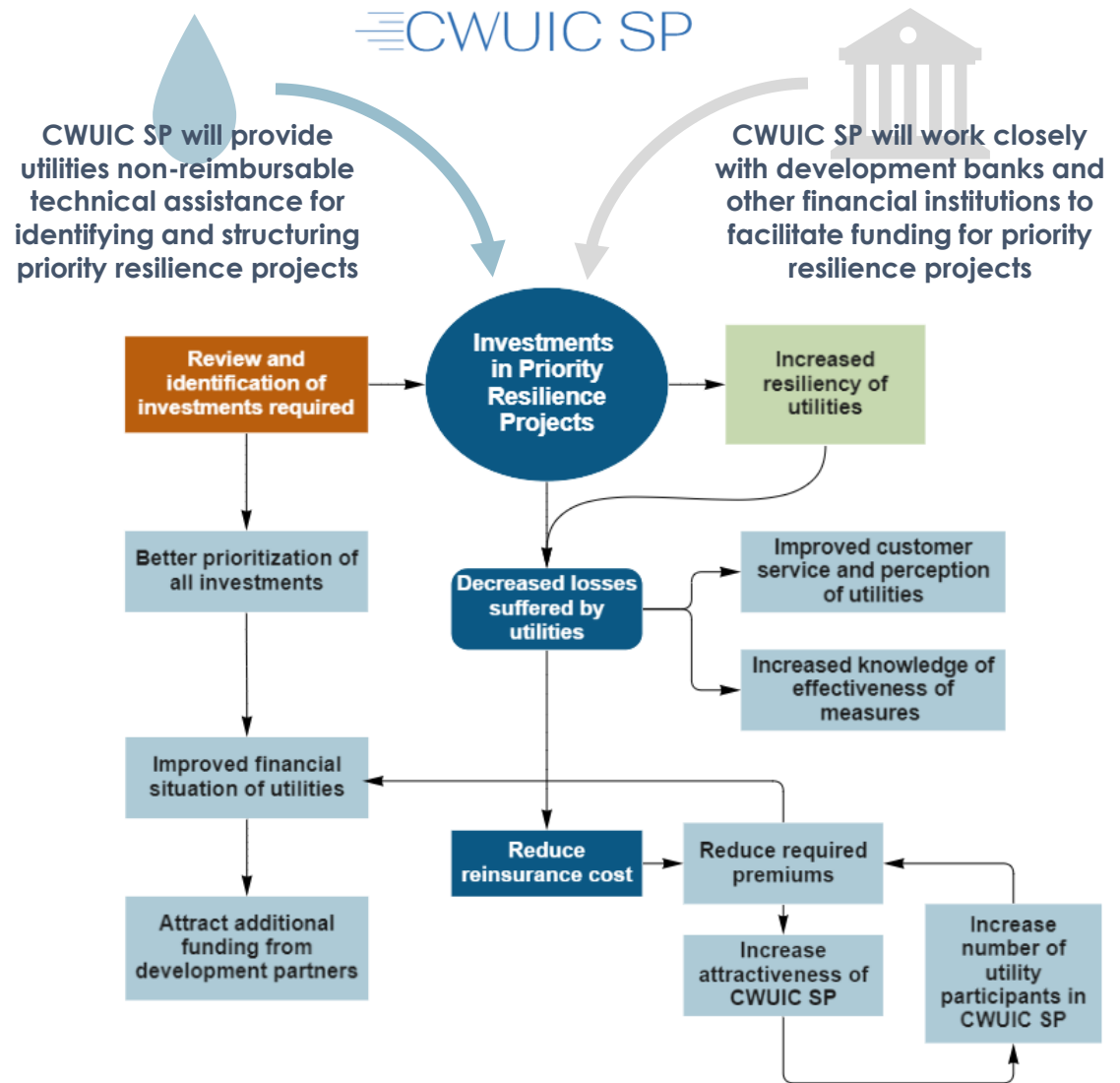


Component 3: The Resilience Program

 CWUIC SP

Overview of The CWUIC Resilience Program

- The objective of Component 3 is to **increase the resilience of CWUIC SP's member utilities to disasters**
- CWUIC SP will **support utilities in identifying and structuring priority resilience projects** and will **facilitate access to funding provided by development banks and other financial institutions** to its members
- Priority resilience projects will **reduce the risk** for participating members and should **reduce premiums for future policy terms**



Investing in Priority Resilience Projects

Priority resilience projects are **capital investments**, within the mandate and scope of the utility, that **reduce a utility's risk to natural hazards** and therefore reduce the likelihood that the utility may lose the ability to serve its customers during or after a disaster. Some examples are:



Constructing berms around dams or reservoirs to reduce the chances of contamination and obstruction from debris



Building in redundancy by installing back-up water supply pipelines, water storage, solar-powered generators, and water and wastewater treatment facilities in locations inland and less prone to natural hazards



Installing monitoring devices, providing real-time information, and radio-based systems that enable technicians to remotely configure water supply and sanitation systems during and after disasters



Reinforcing assets in vulnerable locations. For example, this can be achieved by installing protective walls and storm-water evacuation sewers, reinforcing intakes, placing water supply lines deeper underground, and inserting High Density Polyethylene (HDPE) and other coatings in water and wastewater pipelines to reduce permeation

Knowledge – a Centre of Excellence

Through The CWUIC Resilience Program, CWUIC SP will develop a close relationship with utilities, development banks, and other financial institutions. This will result in CWUIC SP developing **knowledge and expertise in disaster risk management** and **disaster risk finance**

Support utilities with the **identification and structuring of priority resilience projects**

Facilitate access to funding from development banks and other financial institutions **for priority resilience projects**

Collect, organize, and provide information on priority resilience projects that can be used to **make utilities more resilient**

As a **center of excellence**, CWUIC SP will become **highly specialized in priority resilience projects that reduce the vulnerability of water utilities in the Caribbean to natural hazards**



Water Utility Engagement

 CWUIC SP

CWUIC is open to all water and sanitation utilities in the Caribbean, including:



<p>Antigua Public Utilities Authority (APUA), Antigua & Barbuda</p>	<p>Water and Sewerage Corporation (WSC), The Bahamas</p>	<p>Barbados Water Authority (BWA), Barbados</p>	<p>Belize Water Services Limited (BWS), Belize</p>	<p>Water Authority of The Cayman Islands (WAC), Cayman Islands</p>
--	---	--	---	---



<p>Dominica Water and Sewerage Company (DOWASCO), Dominica</p>	<p>National Water and Sewerage Authority (NAWASA), Grenada</p>	<p>Guyana Water Inc (GWI), Guyana</p>	<p>National Water Commission (NWC), Jamaica</p>	<p>Montserrat Utilities Limited (MUL), Montserrat</p>	<p>Nevis Water Department (NWD), Saint Kitts and Nevis</p>
---	---	--	--	--	---



<p>Water and Sewerage Department (WSD), Saint Kitts and Nevis</p>	<p>Water and Sewerage Company Inc (WASCO), Saint Lucia</p>	<p>Central Water and Sewerage Authority (CWSA), St. Vincent & the Grenadines</p>	<p>Suriname Water Company (SWM), Suriname</p>	<p>Water and Sewerage Authority (WASA), Trinidad and Tobago</p>
--	---	---	--	--















Status of Data Provided by Utilities for Risk Modeling

				Data on Major Assets	Modeled	Policy Option Letter	
Utility	Jurisdiction	IDB BMC	CDB BMC	GIS Location	Replacement Value		
National Water Commission	Jamaica	Yes	Yes	Complete	Complete	Yes	April 2024
Water and Sewerage Corporation	Bahamas	Yes	Yes	Complete	Complete	Yes	April 2024
Water and Sewerage Authority	Trinidad and Tobago	Yes	Yes	Complete	Complete	Yes	April 2024
Belize Water Services Limited	Belize	Yes	Yes	Complete	Complete	Yes	April 2024
Dominica Water and Sewerage Company	Dominica	No	Yes	Complete	Complete	Yes	April 2024
National Water and Sewerage Authority	Grenada	No	Yes	Complete	Complete	Yes	April 2024
Barbados Water Authority	Barbados	Yes	Yes	Complete	Complete	Ongoing	April 2024
	Haiti	Yes	Yes	None	None	Bespoke	April 2024
Guyana Water Inc	Guyana	Yes	Yes	Partial	Partial	Starting	Late 2024
Suriname Water Company	Suriname	Yes	Yes	Partial	Partial	Starting	Late 2024
Nevis Water Department	Nevis	No	Yes	Partial	Partial	Starting	2024 – tbc
Water and Sewerage Company Inc	Saint Lucia	No	Yes	Partial	Partial	Starting	2024 - tbc
Water and Sewerage Department	Saint Kitts	No	Yes	None	None	Not Begun	2025 - tbc
Central Water and Sewerage Authority	St. Vincent & the Grenadines	No	Yes	None	None	Starting	2024 - tbc
Antigua Public Utilities Authority	Antigua & Barbuda	No	Yes	None	None	Not Begun	2025 - tbc
Montserrat Utilities Limited	Montserrat	No	Yes	None	None	Starting	2024 - tbc
Water Authority of The Cayman Islands	Cayman	No	Yes	None	None	Not Begun	2025 - tbc

Funding Arrangements

 CWUIC SP

Funding for CWUIC SP

	Source	Amount	Timing	Executor	Notes
<p>The Pilot Program for Climate Resilience (PPCR). Technical assistance for early-stage studies to develop CWUIC SP.</p>		US\$739K Technical Assistance	Approved and in execution		
<p>AquaFund managed by the IDB provided support to studies to structure CWUIC SP.</p>		US\$300,000	Approved and in execution		
<p>UK's FCDO has provided a US\$5.6 million grant for CWUIC SP's structuring and operations and US\$25 million returnable grant to CCRIF SPC to capitalize CWUIC SP</p>		US\$5.6 million for structuring and operations US\$25 million for Capitalization	Approved and in execution Approved and in execution	 	
<p>The Caribbean Development Bank (CDB) has provided grant funding for risk modeling for CWUIC SP</p>		US\$650,000	Approved and in execution		
<p>The Coca-Cola foundation has provided US\$500,000 to support Component 3: The CWUIC Resilience Program</p>		US\$500,000	Approved and in execution		Funds will be used for feasibility studies for priority resilience projects
<p>Green Climate Fund (GCF)</p>		US\$500 million to US\$1 billion	The IDB is in discussion with the GCF, mainly with the aim of increasing the level of support to the Component 3.	TBD	Funds may be structured for Component 3: The CWUIC Resilience Program and could also include capital contributions for CWUIC SP

Continued efforts to raise additional support

Next Steps

- Engage with water utilities and governments regarding CWUIC SP: build awareness and understanding
- Support water utilities in collecting data for risk modeling, finalize risk modeling and pricing.
- Agree the premium subsidies for utilities in ODA-eligible countries
- Issue policy options letters in time for 2024 season
- Launch Component 1: CWUIC Response Program
- Launch Component 3: CWUIC Resilience Program
- Continue fundraising efforts to ensure CWUIC SP is well resourced

Contact Us



Christopher Husbands

Team Leader
CWUIC SP

Email:

Ch.cwuic@ccrif.org



Isaac Anthony

CEO
CCRIF SPC

Email:

ccrif.ceo@gmail.com