

# ANNUAL REPORT 2020 | 2021



**CDEMA**

C A R I B B E A N  
D I S A S T E R E M E R G E N C Y  
M A N A G E M E N T A G E N C Y

*Resilient States · Safer Lives*

An aerial photograph of a coastal town and agricultural fields. The town is in the lower half, with houses and a road. The upper half shows large, rectangular agricultural plots. A large purple diagonal shape is overlaid on the left side of the image, containing the text.

# BUILDING DISASTER RESILIENCE

IN THE CARIBBEAN REGION

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# ABBREVIATIONS

|                  |  |                     |  |
|------------------|--|---------------------|--|
| <b>AA</b>        | Administrative Assistant   | <b>IRLH</b>         | Integrated Regional Logistics Hub                                  |
| <b>ACP</b>       | African, Caribbean, Pacific countries                                    | <b>MER</b>          | Monitoring, Evaluation and Reporting                               |
| <b>ADA</b>       | Austrian Development Agency  | <b>MHEWS</b>        | Multi Hazard Early Warning System                                  |
| <b>BPI</b>       | Barbados Port Inc  | <b>MOU</b>          | Memorandum of Understanding  |
| <b>BRICS</b>     | Building Resilience in CARIFORUM States                                  | <b>NDC</b>          | National Disaster Coordinator                                      |
| <b>CANSEC</b>    | Caribbean Nations Security Conference                                    | <b>NDO</b>          | National Disaster Office   |
| <b>CARDI</b>     | Caribbean Agricultural Research and Development Institute                | <b>NEMO</b>         | National Emergency Management Office                               |
| <b>CARICOM</b>   | Caribbean Community  | <b>NEMO</b>         | National Emergency Management Organisation                         |
| <b>CARIFORUM</b> | Caribbean Forum of African, Caribbean and Pacific States                 | <b>NEOC</b>         | National Emergency Operations Centre                               |
| <b>CARPHA</b>    | Caribbean Public Health Agency   | <b>NOAA</b>         | National Oceanic and Atmospheric Administration                    |
| <b>CCRI</b>      | Caribbean Climate Resilience Initiative                                  | <b>OAS</b>          | Organization of American States                                    |
| <b>CDB</b>       | Caribbean Development Bank   | <b>ODPEM</b>        | Office of Disaster Preparedness and Emergency Management           |
| <b>CDEMA</b>     | Caribbean Disaster Emergency Management Agency                           | <b>OECS</b>         | Organisation of Eastern Caribbean States                           |
| <b>CDM</b>       | Comprehensive Disaster Management  | <b>OED</b>          | Office of the Executive Director                                   |
| <b>CDRU</b>      | CARICOM Disaster Relief Unit   | <b>OFDA</b>         | Office of Foreign Disaster Assistance                              |
| <b>CHaRIM</b>    | Caribbean Handbook on Risk Information Management                        | <b>PAHO</b>         | Pan American Health Organisation                                   |
| <b>CHC</b>       | Coordination and Harmonization Council                                   | <b>PBDD</b>         | Planning and Business Development Department                       |
| <b>CIMH</b>      | Caribbean Institute of Meteorology and Hydrology                         | <b>PMF</b>          | Performance Monitoring Framework                                   |
| <b>CivMil</b>    | Civil Military   | <b>PPE</b>          | Personal Protective Equipment                                      |
| <b>CRIS</b>      | Caribbean Risk Information System  | <b>PS</b>           | Participating States   |
| <b>CTO</b>       | Caribbean Tourism Organisation   | <b>RBM</b>          | Results-Based Management   |
| <b>CU</b>        | Coordinating Unit  | <b>RCC</b>          | Regional Coordination Centre                                       |
| <b>CWP</b>       | Country Work Programme   | <b>RCP</b>          | Regional Coordination Plan   |
| <b>DANA</b>      | Damage and Needs Assessment  | <b>RRM</b>          | Regional Response Mechanism  |
| <b>DDM</b>       | Department of Disaster Management  | <b>RSS</b>          | Regional Security System   |
| <b>DED</b>       | Deputy Executive Director  | <b>SAR</b>          | Search and Rescue  |
| <b>DEM</b>       | Department of Emergency Management                                       | <b>SRC</b>          | Seismic Research Centre  |
| <b>DFID</b>      | Department for International Development                                 | <b>SRFP</b>         | Sub-regional Focal Points  |
| <b>DRM</b>       | Disaster Risk Management   | <b>UAE</b>          | United Arab Emirates   |
| <b>DRR</b>       | Disaster Risk Reduction  | <b>UN</b>           | United Nations   |
| <b>EC</b>        | European Commission  | <b>UN OCHA</b>      | United Nations Office for the Coordination of Humanitarian Affairs |
| <b>ED</b>        | Executive Director   | <b>UNDP</b>         | United Nations Development Program                                 |
| <b>EDF</b>       | European Development Fund  | <b>UNICEF</b>       | United Nations Children's Fund                                     |
| <b>EKACDM</b>    | Enhancing Knowledge and Application of Comprehensive Disaster Management | <b>US/ SOUTHCOM</b> | United States Southern Command                                     |
| <b>ETS</b>       | Education and Training Specialist  | <b>USA</b>          | United States of America   |
| <b>EU</b>        | European Union   | <b>USAID</b>        | United States Agency for International Development                 |
| <b>GAIA</b>      | Grantley Adams International Airport                                     | <b>USAR</b>         | Urban Search and Rescue  |
| <b>GDP</b>       | Gross Domestic Product   | <b>UWI</b>          | University of the West Indies                                      |
| <b>ICT</b>       | Information and Communications Technology                                | <b>WHO</b>          | World Health Organisation  |

## WHO WE ARE



**The Caribbean Disaster Emergency Management Agency (CDEMA)** is a regional inter-governmental agency which specializes in disaster management for the Caribbean Community (CARICOM). Established in 1991 as CDERA (Caribbean Disaster Emergency Response Agency), the organisation transitioned to CDEMA in 2009 to fully embrace the principles and practice of Comprehensive Disaster Management (CDM).

CDEMA comprises nineteen (19) Participating States and is supported by a Coordinating Unit (CU) located in Barbados, which functions as a secretariat and programme implementation entity for the Agency.

For more information visit <https://www.cdema.org/>

# WHO WE ARE

## CDEMA's Mandate

CDEMA exists as a regional centre for Disaster Risk Management (DRM) excellence and the preferred partner for a safe Caribbean. The mission of the organisation is to empower participating states, influence, collaborate and partner with other organisations, to build disaster resilience in the Caribbean region.

Since the transition in 2009, the CDEMA mandate has been expanded to strategically position the organisation as the facilitator, driver, coordinator and motivating force for the promotion and engineering of Comprehensive Disaster Management (CDM) in all Participating States.



## Governance Structure

CDEMA is governed through a Council, the management committee of the council, a Technical Advisory Committee (TAC) and the Coordinating Unit.

- The CDEMA Council**  
 The Council comprises the Heads of Government of the Participating States or their nominees. The responsibility of the council is to determine the policies of CDEMA.
- The Management Committee of the Council**  
 A sub-committee of the Council responsible for administrative oversight issues, comprising Permanent Secretaries of the Ministries with responsibility for Disaster Management within the CDEMA participating states.

- Technical Advisory Committee (TAC)**  
 The Technical Advisory Committee (TAC) is the technical and programmatic advisory arm of CDEMA. The TAC is comprised of the National Disaster Coordinators and representatives of other specialized regional organisations, such as those engaged in technological, meteorological, and seismological fields, whose programmes are directly related to the regional disaster management agenda.
- Coordinating Unit**  
 The Coordinating Unit is managed by an Executive Director who is appointed by the Council. The unit functions within a framework that fully embraces CDM and deals with long-term mitigation issues. The responsibilities and operating functions of the CDEMA Coordinating Unit are centered primarily around four (4) programming areas:
  - Strategic Management
  - Preparedness and Response
  - Integrated Risk Management
  - Support Services (Human Resources, Administration, Finance & ICT)



# WHO WE ARE

## The Comprehensive Disaster Management (CDM) Strategy

CDM is the Caribbean brand of Disaster Risk Management (DRM) and its approach seeks to reduce the risks and losses associated with natural & technological hazards, and the effects of climate change to enhance regional sustainable development. CDM addresses all hazards, includes phases of the disaster management cycle, involves all people, and all sectors of society.

This indigenous approach to disaster management is guided by the Regional Comprehensive Disaster Management Strategy 2014-2024, the third iteration of the strategy, which was first launched in 2001. The overall aim is to link CDM more firmly to development decision-making and planning, giving broad strategic direction to addressing the challenges of disaster risk management in the Caribbean.

Specific priorities of the 2014-2024 CDM Strategy are i) institutional strengthening, ii) knowledge management to support evidence-based decision making, iii) mainstreaming of CDM in key sectors and iv) building disaster resilience. These outcomes and results guide the mobilisation of resources by the CDEMA CU on behalf of the Participating States as well as the development of multi-year CDM Country Work Programmes within the Participating States. Gender, climate change, Information & Communication Technologies (ICT) and environmental sustainability are cross cutting themes in the implementation of the CDM Strategy.

## Programming Architecture

The CDEMA Coordinating Unit established a Programming Architecture in 2014 to align the Agency's work more strategically with its mandate enshrined in Article XIII – Functions of the Coordinating Unit within the Agreement Establishing the CDEMA.

The programming architecture has also facilitated a deeper reflection and mapping of the responsibilities of Agency within the entire Agreement Establishing CDEMA to work envisaged under each of the Programming Areas and Programme Components. It has also provided an input to the identification of the appropriate Outcomes and Outputs which should be advanced, as well as key activities that are required to ensure that the mandate is being delivered.

The programming architecture is identified below as **Figure 4**.

This report provides a summary of results covering the period starting September 1, 2020, and ending August 31, 2021 and follows the components of the Four Programme Areas of the Corporate Plan as highlighted above.

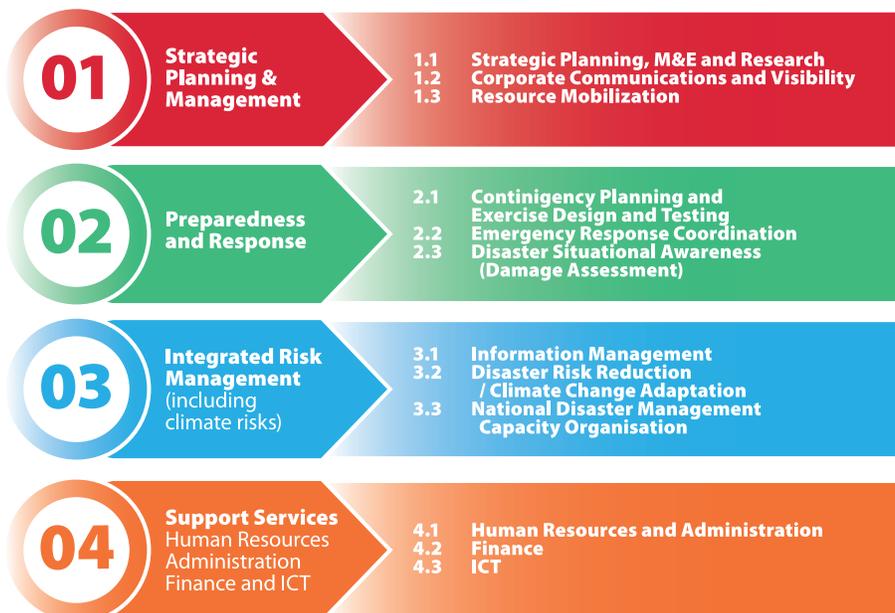


Figure 4: CDEMA Corporate Planning Architecture

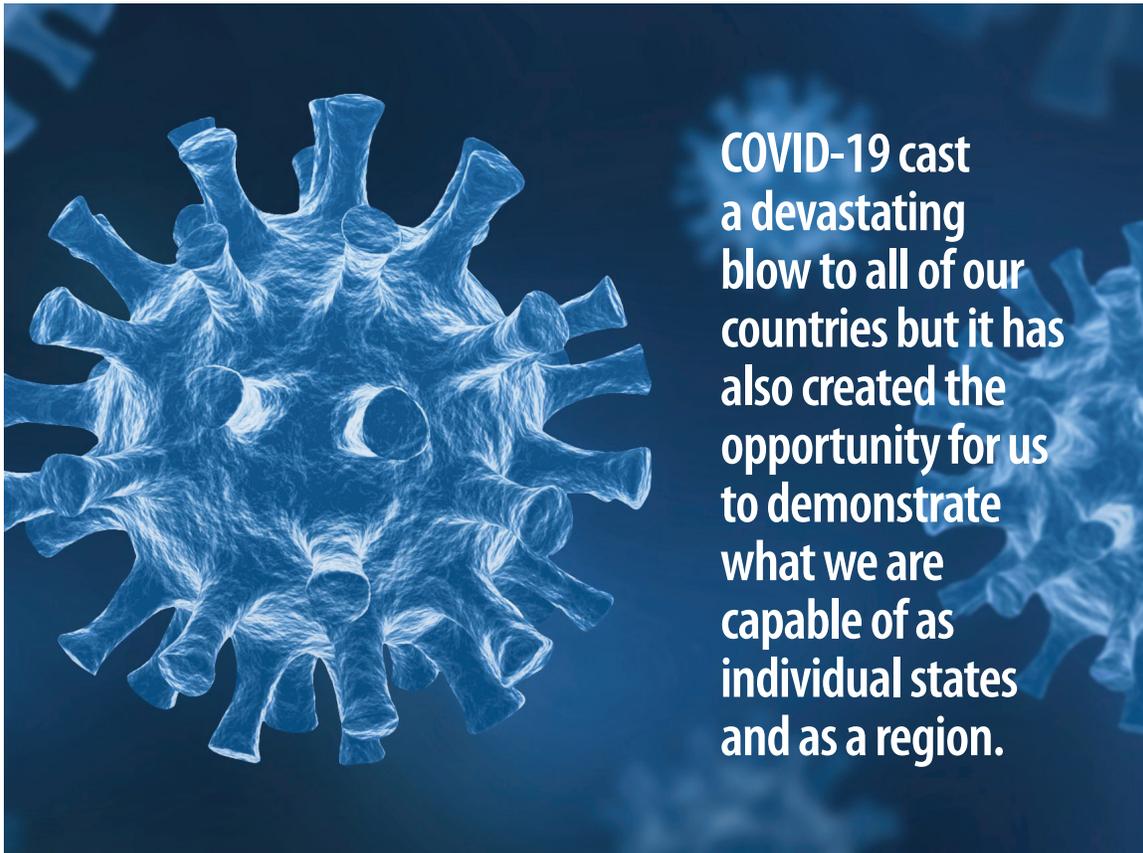
# Building RESILIENCE

The CDEMA Programmatic Year 2020-2021 brought with it a range of extraordinary events, some of which were historic in nature, and as Chairman of the Council of CDEMA, I would like to take this opportunity to recognize the immense work of the CDEMA CU, Development Partners and Participating States in bringing us through these unprecedented times.

During the period, the region continued to navigate the COVID-19 Pandemic, with Participating States having been through several pandemic waves. COVID-19 cast a devastating blow to all of our countries but it has also created the opportunity for us to demonstrate what we are capable of as individual states and as a region.

The La Soufriere Volcano in St. Vincent and the Grenadines transitioned from an effusive to an explosive phase on April 9, 2021 and this was compounded when the country experienced flooding and lahars due to subsequent heavy rainfall during the passing of Hurricane Elsa. Hurricane Elsa also made significant impacts on other Participating States, including St. Lucia and Barbados, the latter of which had been in the direct path of a hurricane in 66 years. Within this same timeframe, in May and June, Guyana and Suriname experienced historic floods. CDEMA and partners tackled these events within a complex pandemic environment.





**COVID-19 cast a devastating blow to all of our countries but it has also created the opportunity for us to demonstrate what we are capable of as individual states and as a region.**

In the midst of this we have had positives. The CDEMA System welcomed the Cayman Islands as the newest Participating State and commenced the process for the application of Sint Maarten.

The governance arrangements for the Agency were strengthened through the reconstituted the Finance Advisory Committee of the Management Committee of Council and we wish to thank Saint Lucia for its leadership in this regard.

These events reiterate resilience as a policy imperative within our Participating States.

Resilience is built on the 5 pillars of Social Protection for Marginal and Most Vulnerable; Environmental Sustainability; Safeguarding Infrastructure; Enhancing

Economic Opportunities and Operational Readiness and Recovery.

This period has also reinforced the vital need for and role of the Caribbean Disaster Emergency Management Agency and reiterated the importance of the Ministerial Council giving our full support to the Agency. Critical in this is financial support and I continue urge Participating States to prioritize contributions to CDEMA.

As this is the final year of my Chairmanship, I wish the CDEMA Coordinating Unit continued success as the Agency serves the Caribbean region in this important role of coordinating Disaster Management activities and building safer more resilient Participating States.

**THE HONORABLE VINCENT BYRON JR.**  
Chairman of CDEMA

# Revolutionized ENVISIONING



April 9th, 2021 was the day the La Soufriere volcano transitioned from an effusive eruption to an explosive eruption, displacing an estimated 18-20,000 persons and triggering immediate response from entities across the disaster landscape. The eruption took place in parallel with a major dengue outbreak and the highly contagious Delta Wave of the COVID-19. Even more is this, on April 28-29, St Vincent and the Grenadines was affected by a severe weather event which resulted in landslides in all zones of the island, flooding and lahars.

Hurricane Elsa impacted St. Vincent and the Grenadines and neighboring islands of Barbados and St. Lucia from July 1-2, 2021, even as CDEMA concluded its Detailed Damage Sectoral Assessment (DDSA) mission to Guyana which experienced one of worse flooding events on record. This was also the case for Guyana's neighbour Suriname, which was also severely affected by major flooding. On August 24, 2021, the southern region of Haiti was devastated by a 7.2 magnitude earthquake at a depth of 10 km and followed by several aftershocks. The estimated number of deaths was 2,248 and 329 persons were listed as missing. Approximately 12, 763 were reported to be injured and 53, 815 homes were destroyed.

The cascaded, compounded and protracted nature of the 2020-2021 hazard landscape reinforced the reality that isolated past events cannot be indicators of the future. No longer are we having conversations about discrete hazard events. There is a level of complexity which is unprecedented, resulting in the disruption and destruction of lives, livelihoods and life chances. It is beyond a doubt that climate change is not only in motion and gaining momentum but right here on our Caribbean doorstep.

In itself, the COVID-19 pandemic brought with it a plethora of far reaching impacts that continuously challenged our modus operandi and forced us to pivot in order to get through the pandemic while achieving the goals we set. One of the issues which came with COVID-19 was vaccines. The Caribbean discourse first focused on global inequalities in vaccine access. During the reporting year, most of our states have had vaccines in abundance, however, vaccine hesitancy posed a challenge of a different nature, with significant levels of vaccine wastage across our geographical space.

The pandemic also continued disruption of CDEMA's implementation environment, derailing national and regional programming. The CDEMA CU negotiated with development partners on the need for more realistic expectations with respect to the pace of result delivery and spend within a fundamentally changed environment. We have explored a diversity of innovative options to support our Participating States with mixed success.

The CDEMA CU continued to battle with unpredictable cash flow in a fiscally constrained environment, with added pressure from an unplanned 5-month dislocation and subsequent relocation. Amid it all we are thankful. Thankful for sterling support of the Government of Barbados during this transition and for the provision of a temporary headquarters for the Agency.

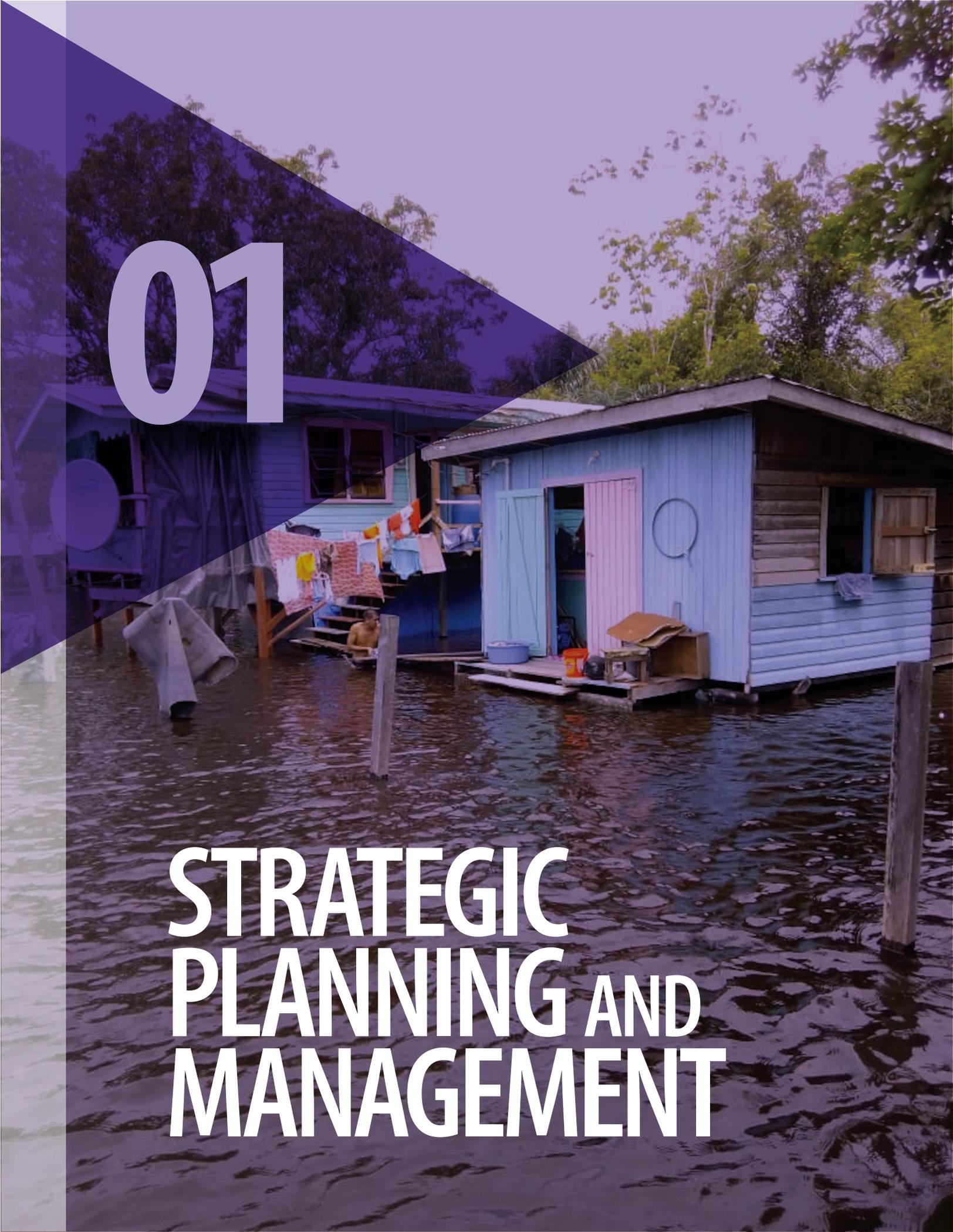
Despite the challenges, the CDEMA CU forged ahead and had many successes during the period. These include three successful RRM deployments to St. Vincent and the Grenadines, Guyana and Haiti with all deployed returning safely and COVID-19 free! This is a remarkable

achievement. We are breaking ground on new areas with new and renewed partnerships with the Caribbean Centre for Development Administration (CARICAD), the International Federation of Red Cross and Red Crescent Societies (IFRC), MapAction, the University of the West Indies (UWI) and Rotary International. We look forward to strengthening these relationships as we move forward.

CDEMA broke new ground in expanding the relief management and logistics programme including advancing the establishment of a permanent logistics hub in Barbados; the RTC offered a well-received course on Leadership to NDCs; we are feeling the presence of our gender specialist through training offerings and technical input to CDEMA guidelines and standards; a ground breaking relook at the issue of safer building is progressing well and will be a game changer in building physical resilience; we published our annual report, ramped up our visibility including through our social media presence, accelerated digital transformation of the agency, expanded the GEOCRIS and we have responded to the recommendations of our Participating States in making efforts to strengthen the relationship between CDEMA and PS through the introduction of the Quarterly Meetings for NDCs which has allowed a more predictable space for interfacing during the year.

There are other drivers of optimism. The CDEMA CU is developing its new Strategic Plan and we anticipate a revolutionized envisioning of CDEMA and the resultant enhancement of all our services offered to Participating States. Priorities of digital transformation, deeper leveraging of partnerships to reduce institutional stretch, upscaling capacity for more complex catastrophic events and implementation of appropriate recommendations emerging from the Consultancy to develop a Business Model, Strategy and Plan of Action for the Stable and Sustained Financing of the Caribbean Disaster Management Agency (CDEMA) have been identified as priorities and we look forward to and thank our Participating States as well as our Partners for your continued confidence and support as we forge ahead on the path towards a more resilient Caribbean.

**ELIZABETH RILEY**  
Executive Director, CDEMA



01

# STRATEGIC PLANNING AND MANAGEMENT

## 1.1. Strategic Planning, Monitoring, Evaluation and Research (MER)

The overall goal of the component is the achievement of greater levels of accountability within the CDEMA CU. This is a commitment which is part of the operational landscape of CDEMA, including the Coordinating Unit (CU) and the Participating States (PSs).

### 1.1.1. Strategic Planning and MER in the CU

One of the primary indicators for advancing the output was the completion of a final 2017-2020 Corporate Plan included in the CDM Monitor for MER purposes. This was achieved as the Organs of CDEMA endorsed the proposal of the CDEMA CU to extend the current Corporate Planning period by one additional year from September 2021 to August 2022. This request for extension was due to the transition of leadership which took place at the CDEMA CU during the Agency Year 2020-2021. The rationale was that this would allow the development process for the next Corporate Plan to benefit from the input of the new Executive Director. The CU further presented a Work Plan for the period 2021-2022 to the Organs. A draft approach for the development of a new strategic plan for CDEMA for the period 2022-2025 and a draft Terms of Reference (ToR) for the engagement of a consultant to support the development of the Strategic Plan was prepared for the review and consideration of the CDEMA management team during July 2021.

The agency also recorded a 100% achievement rate for the target number of research briefs prepared to inform high-level engagement of the CDEMA CU. Three (3) reports were developed which included a CDEMA briefing for the visit of the British High Commissioner, the CDEMA briefing of the Cayman Islands National Hazard Management Executive, and the CDEMA briefing for the General Meeting between the United Nations System & CARICOM and its Associated Institutions.

While there were many successes in this output, the Comprehensive Disaster Management (CDM) Monitor<sup>1</sup> continues to experience challenges which are to be investigated. As a result, no reports were generated using the tool, requiring the manual completion of all

reports manually. The Planning & Business Development Department (PBDD) will be addressing the process of updating the monitor in the upcoming year.

No sectors were assessed on the status of CDM integration during the reporting period. Rather, the sectoral assessment has been included in the ToR for the conduct of the Midterm Review (MTR) of the CDM Strategy. The MTR will assess how far sectors have progressed in integrating CDM at the regional and national levels. This was reviewed by the CDM Coordination & Harmonisation Council (CHC) during July 2021. It is anticipated that the MTR process will commence during the second quarter of the next reporting 2021-2022. The sectoral assessment is envisioned to involve the administration of the sectoral components of the CDM Audit instrument.

### 1.1.2. MER Processes in National Disaster Offices

Efforts were made to advance the provision of technical assistance through national consultants, to countries under the Building the Resilience of the CARIFORUM States to Disaster Risks and Climate Change Impacts (BRICS) programme for the administration of the Comprehensive Disaster Management (CDM) Audit and for the development of Country Work Programmes (CWPs). This support includes financial aid for the engagement of technical assistance at the country level. The CU shared correspondences which provided an overview of support with the eligible, prioritised PSs, including the Commonwealth of the Bahamas, Grenada, Haiti, and St. Kitts & Nevis. The CU also commenced the procurement processes for engaging the national consultants. On August 12, 2021, the CU convened a virtual orientation session to accelerate preparatory work in advance of the full roll-out of the technical support.

During the year, the Agency acted on its to integrate resilient recovery into its programming, by revising the recovery phase of the CDM Audit Tool in September 2020. The updated recovery phase endeavoured to ensure inclusiveness and gender responsiveness, and will better assess resilient recovery capacities, thereby identifying opportunities for improvement. In addition, the tool now includes a section to evaluate the recovery capacity of

<sup>1</sup> The CDM Monitor is a web-based application aimed at aiding the planning process of the Agency as well as facilitating monitoring of activities at various levels.

critical sectors in the aftermath of disasters. During March to August 2021, in collaboration with the World Bank (WB), consultations were undertaken with Antigua & Barbuda, Grenada, Guyana, and Saint Lucia.

Six (6) high-level missions were targeted to be convened during the reporting period to advance the mainstreaming of CDM programming at the sectoral level in PSs. However, one high-level mission was completed. This was primarily due to the challenges associated with travel during the ongoing COVID-19 pandemic. The high-level mission was conducted virtually with the Cayman Islands during January 2021 as an orientation session to the CDEMA system. Due to the impact of the pandemic, the CU sought to enhance the virtual convening of high-level missions through the engagement of consultancy support to develop audio-visual products. These products were developed through consultancy support financed by the Targeted Support to CDEMA project, to assist with the convening of virtual, targeted engagements.

## 1.2 Corporate Communications and Visibility

Corporate Communications & Visibility is an integral part of advancing the Mandate of the Agency, serving its PSs, and increasing awareness of CDM agenda to the region and at the international level.

### 1.2.1. Promotion of the CDEMA Brand

Guided by the revised 2017-2020 Communications & Visibility Plan, CDEMA continues to utilise key events and products to raise awareness regarding the work of the Agency within the Caribbean region. Two (2) signature events were hosted during the year. The Annual Press Conference was convened virtually on May 31, 2021. Discussions centred around a recap of the 2020 season, the forecast for the 2021 Atlantic Hurricane Season, and the launch of the Disaster Fighters public awareness & education campaign in collaboration with the WB. The session featured a question & answer segment with the regional media and was livestreamed across the Facebook page of the Agency, stimulating several regional press pieces.

The 30<sup>th</sup> Anniversary celebrations for CDEMA were planned and convened virtually due to COVID-19 protocols. Activities included a podcast, video messages from NDOs, partners, CDEMA leadership and CU staff, a partner feature, and a social media competition. The anniversary was aptly commemorated by the development of a special logo & webpage and a church service even though other face-to-face activities were placed on hold.

Other visibility events during the period included the launch of the Caribbean Risk Information System (CRIS)



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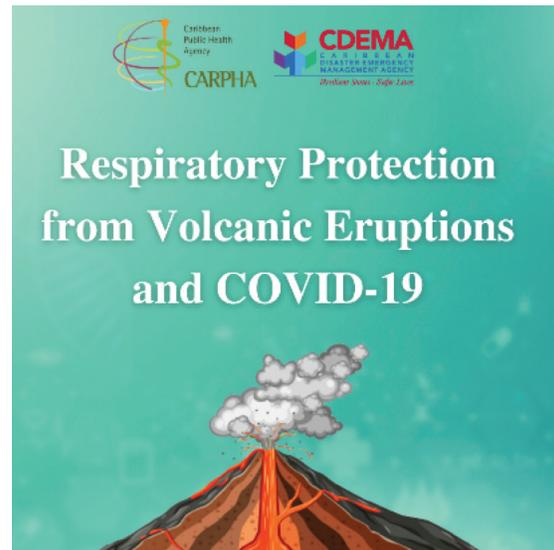
in November 2020 and the Action on Disaster Relief (ADR) 2021 conference in partnership with GRV Global in February 2021. In March 2021, event support and visibility were provided for the Virtual Safe School Initiative Pre-Ministerial Forum in partnership with the United Nations Office for Disaster Risk Reduction (UNDRR). Additionally, the CDEMA Logistics & Relief workshop as well as the launch of the "Crisis Communications TechCamp" virtual series, in partnership with the US Embassy of Barbados and the Eastern Caribbean, were both convened by the Agency.

The events were complemented by the development of several products promoting the CDEMA brand. During the period, twenty-five (25) press releases were produced, five (5) press briefings were initiated, eighteen (18) senior management press appearances were arranged, and two (2) web pages were created in support of emergency support for St. Vincent and Haiti. With support allocated under the Targeted Support to CDEMA project (TSCP), the Regional Response Mechanism (RRM) website was updated and launched, and a project magazine was created for dissemination. Agency apparel continues to be a reliable outlet for visibility as deployment packs and RRM jackets were branded with the CDEMA logo for use by RRM team members. Furthermore, CDEMA continues to utilise social media pages and the website of the Agency to provide insight into operations and to serve as hubs for the dissemination of information. There was significant visibility online and through social media around RRM activities in support of the events which impacts CDEMA PSs such as the La Soufriere volcano explosive eruption.

### 1.2.2. Knowledge and Awareness of Resilience Issues

Public awareness campaigns continue to educate and raise awareness for the importance of building resilience within the Caribbean region. The "Disaster Fighters"<sup>2</sup> campaign was launched on May 31, 2021, with the support of the WB. Ambassadors from the cricket and music arenas were used to launch an online campaign based on a viral music video in the wake of the COVID-19 pandemic. Through the social media influence of the ambassadors, a partnership with Tik Tok, the assistance of the NDOs, and other visibility opportunities, over 5.5 million people were reached. A

<sup>2</sup> To learn more about the Disaster Fighters campaign, visit the website at [www.disaster-fighter.org](http://www.disaster-fighter.org).



Graphic created for the CDEMA Social Media pages following the explosive eruption of the La Soufrière Volcano

### OUR REGIONAL RESPONSE MECHANISM WEBSITE IS LIVE!



With the support of the Targeted Support to CDEMA Project, the Regional Response Mechanism (RRM) website is officially live to provide updates and a greater understanding of the RRM.



Graphic created for CDEMA's Social Media pages for the launch of the RRM Website

# STRATEGIC PLANNING AND MANAGEMENT

Non-Fungible Token (NFT) component of the campaign was also launched to stimulate crypto-currency donations within and outside the region.

A public awareness and education campaign was launched in response to the St. Vincent & the Grenadines La Soufriere eruption in collaboration with UNICEF and the National Emergency Management Organisation St. Vincent & the Grenadines (NEMO SVG). The campaign produced five (5) animated videos, five (5) radio public service announcements, eight (8) social media graphics and four (4) posters. Generic versions of these assets were also produced for use during other emergencies. CDEMA also participated in the "I AM CARICOM" which produced four (4) "CDEMA- Did You Know?" social media posts during the overall campaign.

In review, the target of 40% annual growth of users of CDEMA website and social media channels was partially achieved. For social media channels, there were a total of 24,935 followers across Facebook, Instagram, and Twitter in the fourth quarter as compared to 17,427 in the first quarter, representing a 43% increase for the period. For the CDEMA website, there were 1,640,163 hits in the fourth quarter as compared to 1,276,808 hits in the first quarter, which represented a 28% increase.

### 1.3. Resource Mobilization

The PBBD as well as the Office of the Executive Director has responsibility for the development of proposals for the purpose of mobilising resources for CDM Programming through development and other partners. The mobilisation of these resources is guided by the priorities of the PSs as articulated in the CDM Country Work Programmes (CWPs) and the agenda of the country centred programming.

#### 1.3.1. Partner Engagement & Proposal Development

CDEMA continues to explore opportunities for partnerships and synergies with regional and international organisations to advance the CDM agenda. The CU undertook discussions with several partners with respect to ongoing and future collaborations on CDM implementation. Examples of partners included the Caribbean Public Sector Organisation (CPSO), the



CDEMA also participated in the "I AM CARICOM" which produced four (4) "CDEMA - Did You Know?" social media posts during the overall campaign.

International Atomic Energy Agency (IAEA), the WB, and the United Nations Development Programme (UNDP). In addition, the Agency signed Memoranda of Understanding (MoUs) with i) Inter Caribbean Airways Limited to strengthen disaster relief efforts, ii) the Caribbean Alliance of National Psychological Associations (CANPA) to build psychosocial resilience in the Caribbean, and iii) US AID to advance the fight against climate change. The reporting year also featured courtesy calls with the Ambassador of France to Barbados, the British High Commissioner, and the Canadian High Commissioner.

Similarly, CDEMA submitted two (2) proposals to the Caribbean Development Bank (CDB). One proposal was for support CDEMA under the revised Disaster Management Strategy & Operational Guidelines (DiMSOG) programme. This was a significant step towards securing an alternative source of funding CDM implementation for overseas territories which are restricted from receiving financing under some pots of donor funding. During the last quarter of the programming year, another proposal to the CDB was completed and submitted for "A Safer Building Caribbean Vocational Qualification and Marketing for the Code of Practice for Construction of Houses: An Instruction Manual for Foremen and Experienced Artisans".



**The CDEMA CU Team, including Executive Director of CDEMA Elizabeth Riley and the team at Global Affairs Canada including High Commissioner of Canada to Barbados Lilian Chatterjee for the handover of the deployment kit**



**Executive Director of CDEMA taking a tour of the Regional Coordination Centre with British High Commissioner Barbados and the Eastern Caribbean His Excellency Scott Fursedonn-Wood aided by Senior Programme Officer – Telecommunications, Courtney King**

**CDEMA continues to explore opportunities for partnerships and synergies with regional and international organisations to advance the CDM agenda.**

### 1.3.2 Sustainable Financing Mechanism for CDEMA programming

CDEMA has two (2) main sources of financing to deliver on its mandate which are i) contributions from PSs and ii) donor funding. As economic constraints continue to impact budgetary allocations, CDEMA continues to face challenges with sustaining its long-term financing. Consequently, CDEMA envisaged the development of a sustainable financing model for the Agency to be able to continue services to PSs and requested support from the WB to establish such a mechanism. The target to create the mechanism during the year was not achieved.

However, work was advanced on this as the World Bank Group (WBG) and International Financing Consulting Ltd. (IFCL) signed an agreement on behalf of the Caribbean Disaster Emergency Management Agency (CDEMA) on August 17, 2021, to undertake the development of a Business Model, Strategy and Plan of Action for the Stable and Sustained Financing of CDEMA. The Agency anticipates that the model will enable it to (i) predictably meet costs associated with the operations of the CDEMA CU and (ii) be able to continue execute its programmatic mandate on behalf of the services to PSs.

The development of the model is to be undertaken in two phases. Phase 1 involves an assessment of the structural, administrative, and operational dynamics of the Agency. The assessment will be carried out through the investigation of existing documentation and through consultations (including interviews and focus group discussions), with key stakeholders including officials of CDEMA PSs, the CDEMA CU management and staff, development, and technical partners. Phase 2 will facilitate the development of a medium-term Business Model, Strategy & Plan of Action for the Stable and Sustained Financing of CDEMA based on the results of the institutional assessment. The medium-term model will include a menu of sustainable financing options & potential sources of financing, and a sustainable staffing strategy both in terms of the number and the capacity based on the needs of the PSs. The strategy will be developed through an iterative and participatory process where feedback from CDEMA stakeholders, including the Finance Advisory Committee of the Council and the Council of Ministers of CDEMA, is solicited at various stages of its development and the strategy is adjusted accordingly. The final action of the consultancy will be the selection of a preferred sustainable financing option for the CDEMA CU t, including a mechanism and structure for its establishment, based on the outcomes of the preceding two phases.





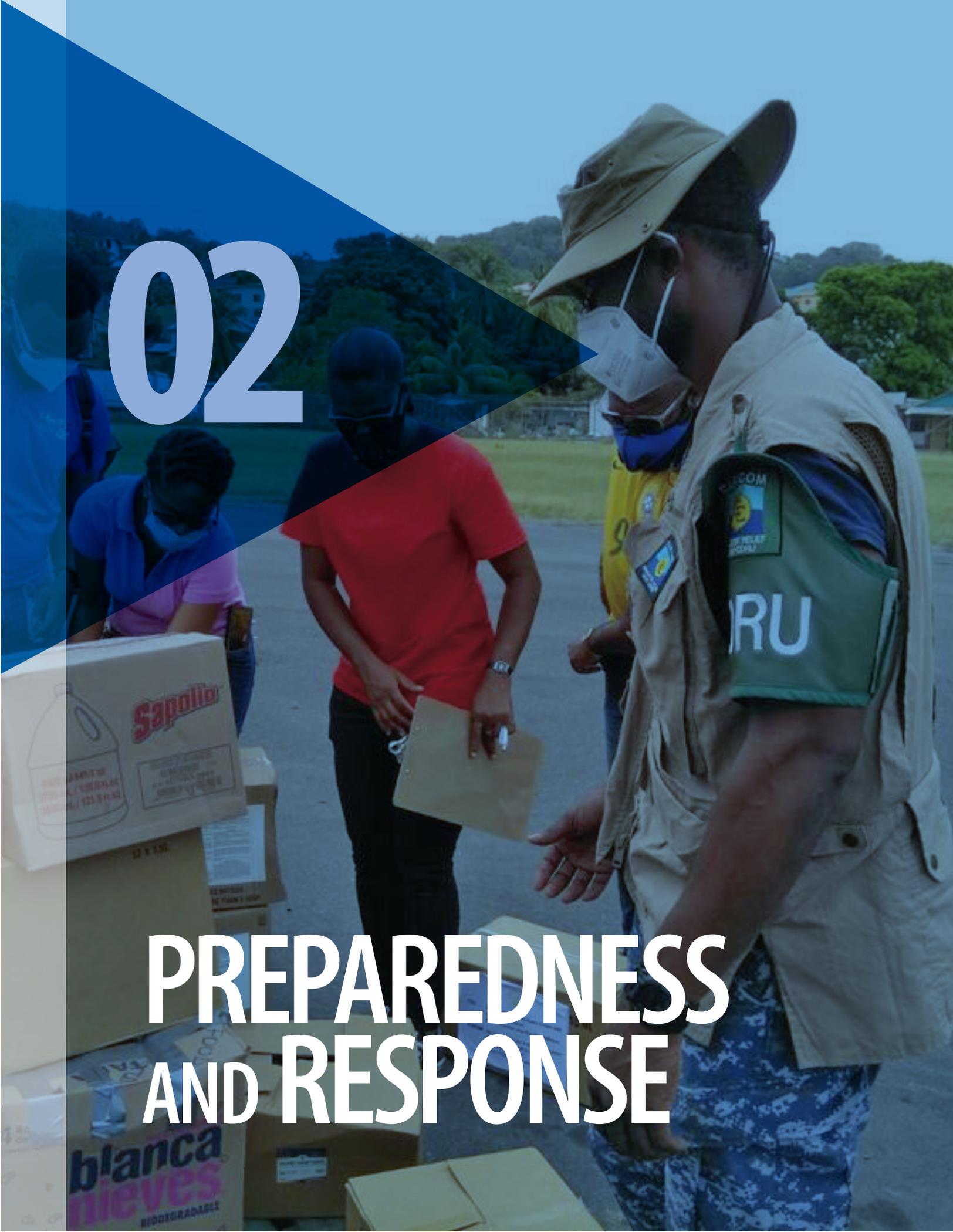
**DEMA**  
R I B B E A N  
S T E R E M E R G E N C Y  
M A N A G E M E N T A G E N C Y

**Participating States:**  
Anguilla, Antigua and Barbuda,  
Commonwealth of The Bahamas,  
Bonaire, Aruba, Curacao, Sint Eustatius, Sint Maarten,  
Cuba, Cayman Islands, French Polynesia, French West Indies,  
Grenada, Republic of Guyana,  
Haiti, Jamaica, Montserrat,  
St. Kitts and Nevis, Saint Lucia,  
Trinidad and Tobago, Virgin Islands, Suriname,  
Republic of Trinidad and Tobago,  
Turks and Caicos Islands.

Email: [cdema@cdema.org](mailto:cdema@cdema.org)

02

# PREPAREDNESS AND RESPONSE



## 2.1. Operational Readiness

In carrying out its mandate, the agency engages in several activities to advance the component of Operational Readiness. It looks at the enhancement of Regional Coordination Plans, initiatives which improve operational readiness and the maintenance of a database for operational readiness. These activities were aimed at the accomplishment of specific outcomes linked to the delivery of the CDEMA Corporate Plan.

### 2.1.1. Regional Coordination Plans

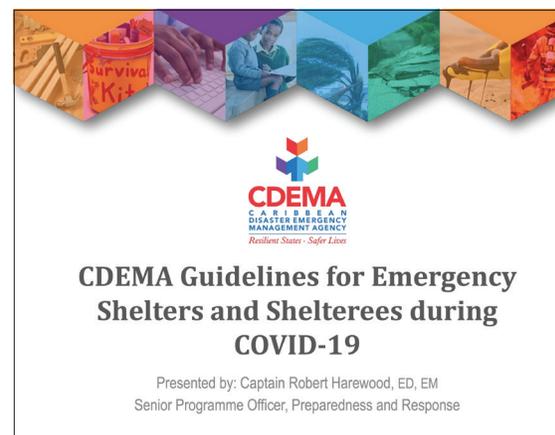
The overall goal of the output was to enhance Regional Coordination Plans (RCPs). The first indicator was the development of a Regional Response Mechanism (RRM) Review report which was completed and submitted in October 2020. The output indicator was then modified midway during the reporting period to focus on the implementation of the recommendations identified by the report, and to commence the implementation of recommendations which required little to no cost or were ongoing initiatives. The main purpose of the RRM Review was to determine whether the RRM was fit for purpose, which will influence the modalities of implementation. The strategic focus would also allow for the systematic analysis of the recommendations and the future implementation. Within this context, the guiding principles for implementation were developed to inform the process for integration into the work plan, specifically the Annual Work Plan & Budget (AWPB) 2020-2021, as well as to provide context for the 2021-2024 Corporate Cycle. The priorities for the AWPB 2020-2021 were the i) the revision of the Regional Response doctrine, ii) the development of an RRM accountability framework including minimum standards for the RRM operational performance, iii) the development of a operations plan for the multi-coordination platform and iv) the establishment of two (2) committees under the Global Affairs Canada (GAC) Project- Targeted Support for CDEMA.

In the second instance, four (4) functional annexes to the RCP were advanced. Firstly, the *CDEMA Shelter Policy* document was reviewed and updated, and an assessment form was created using the GeoCRIS, and this was subsequently shared with CDEMA PSs. The shelter form was designed to provide information on the geographical

location of primary and secondary shelters, capacities pre and post COVID-19, area demographics, shelter facility capabilities (i.e wheelchair & differently abled accessibility), COVID-19 readiness and supply requirements.

Secondly, the *Guidelines for Emergency Shelters & Shelterees during COVID-19* was drafted and presented to the regional workshop entitled "Organisation of Eastern Caribbean States (OECS) Shelter Management, Best Practices and Tools for Preparedness in the context of COVID-19".

Thirdly, the *Biological Hazards Plan* was targeted for upgrade specific to vector borne diseases in collaboration with the Caribbean Public Health Organisation (CARPHA) and the Pan American Health Organisation (PAHO). A draft of the vector borne disease plan was drafted for review.

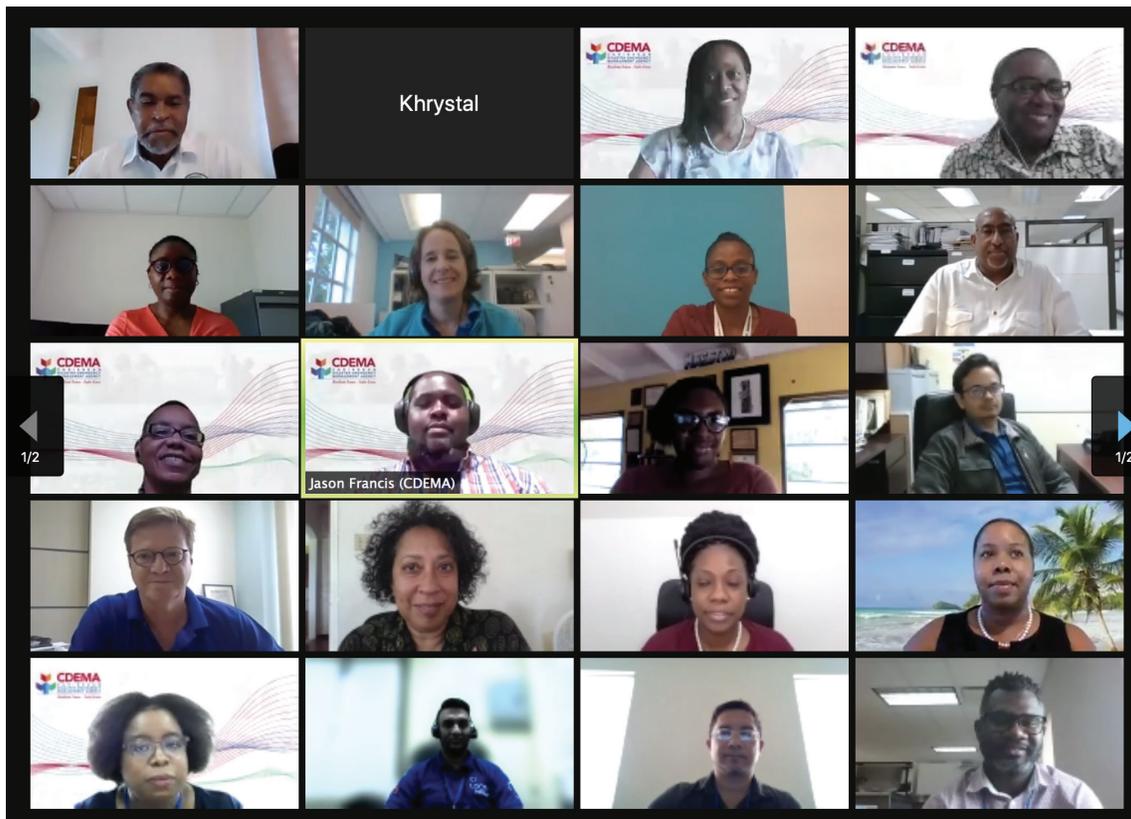


The final annex advanced was the *CDEMA Guidance Document for the receipt of displaced persons*. The process and approach for the receipt, housing and overall welfare of persons displaced by the volcanic eruption of La Soufriere raised major concerns among neighbouring PSs. To address these concerns, a detailed consultative process inclusive of the CARICOM institutions and UN partners was convened during April 2021 during the explosive eruption. The document covers guidelines for the coordination in receiving states, the receipt of evacuees, housing & accommodation, welfare, safety, and security. The consultation was a successful venture with the multi- institutional engagement towards the development of a comprehensive tool focused on several issues as it pertains to displaced persons.

On an annual basis, exercises are convened to test the plans developed with the objectives of building awareness and capacity among stakeholders to act in accordance with the various plans and protocols for use in times of emergency. Over the period, four (4) planned exercises were convened with numerous stakeholders across the CDEMA system and thus this was an immensely successful area of achievement despite challenges posed by the pandemic. The exercises included the CDEMA CU signature exercise SYNERGY, Exercise REGIONRAP, CARIBWAVE and Regional Coordination Centre (RCC) orientation.

**SYNERGY continues to hold the title as the flagship Regional Exercise designed to test the joint coordination of emergency response operations among the partners of the RRM in response to a disaster event in any CDEMA PS.**

Attendees at the virtual hosting of Exercise Synergy 2021



SYNERGY continues to hold the title as the flagship Regional Exercise designed to test the joint coordination of emergency response operations among the partners of the RRM in response to a disaster event in any CDEMA PS. The exercise for the year took the form of a virtual tabletop exercise and war gaming session focusing on the RRM response to a multi-island impact within the current regional multi-hazard context. The objectives of SYNERGY 2021 were i) to identify gaps in the RCP to strengthen the Regional Coordination mechanism at the sub-regional and national levels, ii) to generate discussion from the RRM Partners to inform the update of the RCP, iii) to raise awareness of the multi-island response procedures and protocols vis a vis the COVID-19 Pandemic during natural hazard impacts, and iv) to raise awareness of the logistical arrangements in relation to a multi-island impact under this multi-hazard context. These objectives were successful met based on the feedback from participants and the evaluation.

Exercise REGIONRAP 2021 was a Regional Emergency Telecommunications exercise which tested the telecommunications procedures, plans and network of National Disaster Organisations (NDOs) across the CDEMA PSs. The objectives of the exercise were i) to assess the PSs Telecommunications facilities against the proposed Minimum Standards on Emergency Telecommunications for NDOs, ii) to assess the ability of sub-regions, sub-regional Focal Points, CDEMA Partners and the CDEMA CU to communicate amongst each other using radio frequency, internet protocol based and satellite communication modes available, and iii) to record, collate and analyze the outcomes from the exercise, building datasets of emergency telecommunications coverage areas in accordance with responses and observations from stakeholders.

CARIBWAVE was conducted by UNESCO, with the assistance of the CDEMA PRD, namely via the attendance of several preparation meetings and the monitoring of the exercise from a regional lens on the day it was conducted. Additionally, RCC orientation was provided to new staff joining the CDEMA CU in 2021. Each staff member received information on the functions of the RCC when activated and their potential roles based on cell placements.



Poster created for Region Rap 2021

**Exercise REGIONRAP 2021 was a Regional Emergency Telecommunications exercise which tested the telecommunications procedures, plans and network of National Disaster Organisations (NDOs) across the CDEMA PSs.**

Another three (3) unplanned exercises were executed, two (2) of which were directly related to the increased activity of the La Soufriere Volcano in St. Vincent & the Grenadines. A war-gaming session was convened in January 2021, aimed at raising awareness for the National Volcano Plan in St. Vincent & the Grenadines. The target audience included national level stakeholders. The exercise placed emphasis on orienting the national disaster management office (NDMO) representatives to their specific roles and responsibilities within the Plan and utilising the standard operating procedures (SOPs) of the Plan along with varying impact scenarios to determine appropriate preparedness, response, and recovery actions. The session facilitated discussion to determine the primary and supporting interventions of each Emergency Support Function (ESF) and agree on a way forward to complete all considerations originating from the briefing and tabletop exercise. The session built on the introductory information provided during the war-gaming session, by training representatives of the National Emergency Management Organisation, St. Vincent & the Grenadines (NEMO SVG) in their specific roles & responsibilities and offering practices with emergency telecommunication between the National Emergency Operations Centre (NEOC) and the zones determined to be red and orange.

The *Multinational Civil-Military Coordination Cell (MNCCC)* exercise orientation was also unplanned but undertaken at the request of the Canadian MNCCC team based in Barbados during the latter stages of the 2020 Hurricane Season. The exercise allowed for practice of the response “call out tree” of the MNCCC Team B, the synchronisation of the “Battle Riddims” of the CDEMA CU and the MNCCC B, and practice in coordinating information at the mil-to-mil level. By the end of the exercise, the procedures were captured and documented for other team leads and in turn, the MNCCC was reoriented to the SOPs for activation guided by CDEMA.

### 2.1.2. Initiatives to advance Operational Readiness

Considering that the Caribbean region is prone to several natural & anthropogenic hazards, CDEMA recognizes the need to coordinate several activities which promote operational readiness. A total of four (4) initiatives across the areas of Search & Rescue (SAR), Relief Management, Regional & National Logistics were advanced by the CDEMA CU.

One such initiative was the convening of the 2<sup>nd</sup> meeting of the Regional Search & Rescue Working Group (RSAR WG) to guide SAR training during the COVID-19 pandemic. While the SAR programme has served the CDEMA PSs well over the last 18 years, it was recognised by both the CU and PSs that there is a need for the development of a more comprehensive SAR programme which would build on the achievements of the previous two (2) decades. The vision included the expansion of the SAR to cover air, land and sea and the advancement of the Urban Search and Rescue Light Level training to include Medium Level teams, for at least two (2) CDEMA PSs or within two (2) CDEMA Sub-Regions. During the reporting period, the 2<sup>nd</sup> meeting of the RSAR WG was convened, and there was separate collaboration with the Caribbean Association of Fire Chiefs (CAFC) to support the drafting of a virtual SAR workshop module for the Miyamoto PrepareTT Project in Trinidad & Tobago. However, the overall traction on progressing SAR has been hindered due to the impact of the COVID-19 pandemic.

The Relief Management Programme and the Regional & National Logistics Programme were jointly delivered for the reporting period. The Logistics and Relief Management Workshop was convened between March 9<sup>th</sup> – 23<sup>rd</sup>, 2021. Due to the COVID-19 pandemic, all sessions were conducted virtually. National offices and stakeholders involved in the emergency logistics supply chain from the Commonwealth of The Bahamas, Antigua and Barbuda, Barbados and Trinidad and Tobago were in attendance. The workshop highlighted the critical function of the NDO in PSs and the importance of possessing a viable emergency

relief and logistics system that encapsulates all elements of the emergency relief and logistics supply chain. The format comprised of working sessions that allowed participants to meticulously dissect and strategically examine in-country relief and logistical processes and systems. Under this initiative, national plans and policies for logistics were developed. The workshop targeted the following four (4) stages of the emergency logistics supply chain as participants were appraised of best practices in logistics and relief management as a suite of case studies, discussions and presentations were delivered by the CDEMA Preparedness and Response Department (PRD). The virtual delivery of the workshop limited the possibility for detailed multi-stakeholder discussions. Nevertheless, it was a success as upon completion of the session countries gained a broader comprehension the criticality of partnerships in relief and logistical planning and response to emergencies and disasters.

The two (2) outstanding initiatives to be completed in the upcoming year are the National Logistics and Relief Plan and the CDEMA Logistics System (CLS). The Model Logistics Plan & Policy as well as the Model Relief Plan & Policy were developed to facilitate a strategic approach for the management of relief & logistics in CDEMA PSs, and guide the creation and maintenance of procedures, systems, and mechanisms. As of August 2021, the framework was being utilized by five<sup>3</sup> (5) CDEMA PSs for the improvement of national emergency logistics & relief systems. Preliminary virtual one-on-one sessions were planned and executed with NDMOs, Offices with the aim of providing direct support in the completion of sections for both plans and policies. However, challenges to implementation stemmed from the volume of information required to complete both the logistics & relief plans. Multi-sectoral input was needed to properly complete requisite sections and all disaster offices did not have this information readily available for insertion. This delayed the completion of specific sections as greater multi-sectoral collaboration in-country is needed. This consequently led to sections of the national logistics and relief plans being 50% incomplete.

The CLS was reported at 70% completion. As a key element of the Logistics & Relief programme, the system was introduced to four<sup>4</sup> (4) CDEMA PSs during the Logistics & Relief Workshop. The CLS reported success in St. Vincent & the Grenadines in response to the volcanic eruption as it was implemented in the Arnos Vale Logistics Hub, distribution centres and satellite warehouses in St. Vincent. This indicated that CLS can function in a post-disaster scenario at various nodes and link with the NEOC in overall decision-making and response. The next step for the integration of CLS into operations in other CDEMA PSs will be training sessions for each of the four (4) Sub-regions.

### 2.1.3. Database for Operational Readiness

There are a total of three (3) databases that are being managed by the CDEMA Preparedness and Response Department under Programme Area 2. These are i) the events database, ii) the deployment database, and iii) the pre-impact data database. During the reporting period, the events and deployment databases were both maintained and updated periodically. However, the pre-impact database is dependent on data shared by the PSs and did not undergo any significant updates due to limited data being shared.

## 2.2. Emergency Response Coordination

The programming year 2020-2021 was riddled with a constant series of hazard impact events which ranged from an earthquake in Haiti and the volcanic eruption in St Vincent, to tropical storms and hurricanes, flooding, and the threat of an oil spill in the Gulf of Paria, Trinidad & Tobago. As a result, the period has been above normally active for the Preparedness & Response team, all within the context of the global pandemic of COVID-19. There was a constant demand for response coordination, deployments, redeployments, and support being provided to the PSs. The following section will present on the series of events and some of the basic actions taken for the reporting period.

<sup>3</sup> The five countries included Antigua & Barbuda, the Bahamas, Barbados, St. Vincent & the Grenadines, and Trinidad & Tobago.

<sup>4</sup> The four countries were Antigua & Barbuda, the Bahamas, Barbados, and Trinidad & Tobago.

### 2.2.1. Operationalisation of RRM to support affected PS

The COVID-19 pandemic required an alternative approach to the RRM operations. With the closure of borders and lockdowns and the implementation of curfews across the CDEMA PSs, the operational functioning of the RRM underwent several changes. One such modification was the provision of remote deployment support due to the closure of borders. The CDEMA CU offered significant assistance to its Participating Stats including technical guidance and documents on shelters, logistics & business continuity planning, online support with regular weekly meetings, regional level planning with the Core Coordination Group on COVID-19, distribution of personal protective equipment (PPE) and several other supporting mechanisms.

The 2020 Hurricane season was forecast to be a hyperactive season, with 30 named storms in one year. The season produced thirteen (13) hurricanes, of which Gonzalo, Nana, Delta, Eta, and Iota all made landfall in the CDEMA PSs. Several PSs experienced level 1 impacts from tropical systems, primarily due to excess rainfall, flooding, and landslides. As a result, no deployment of response teams was required. Similarly, the 2021 Hurricane season was predicted to be an above normal season. The season began earlier than June with the emergence of

Tropical Storm (TS) Ana on May 22, 2021. As of August 2021, 13 named storms had formed, of which five (5) had progressed to the classification of hurricanes. The most notable system by the end of the reporting period was TS Elsa which formed on July 2, 2021, impacting Barbados, Saint Lucia, Haiti, Jamaica, and The Cayman Islands. The Regional Coordination Plan was activated, and deployment teams remained on alert, while the PRD prepared an Operational Plan of possible impact scenarios and responses, and initial needs identified from PSs.

Though not affected by cyclonic systems, both the Cooperative Republic of Guyana and Suriname experienced flooding on the South American continent. In April 2021, increased levels of rainfall across Suriname which continued into May led to country-wide flooding. Flooding was reported in the Tapanahony and Marowijne rivers, partly or fully submerging various villages, their agricultural plots, and other surrounding lands. The capital Paramaribo and all the districts<sup>5</sup> in the coastal area were also adversely affected by the heavy and constant rainfall. For the first time, the capital city was subject to massive flooding, especially in the North and South of the city, particularly in residential areas. The RCP was already activated at the time of the flood in response to hazard impacts in other PSs. The RRM was placed on stand-by and was available to support Suriname as



**The most notable system by the end of the reporting period was TS Elsa which formed on July 2, 2021, impacting Barbados, Saint Lucia, Haiti, Jamaica, and The Cayman Islands.**

**Executive Director of CDEMA Elizabeth Riley and Prime Minister of Barbados the Hon Mia Mottley on the ground following the passage of Tropical Storm Elsa**

<sup>5</sup> Areas affected included Marowijne, Commewijne, Wanica, Para, Brokopondo, Saramacca, Coronie and Nickerie.



required. Surge support through the Detailed Damage Sectoral Assessment (DDSA) teams had been identified as a need, particularly covering the housing Sector, social & economic impact, water level monitoring systems, water & sanitation, and Geographical Infographic System (GIS) mapping. However, the teams eventually stood down based on the management of the event by national authorities in Suriname. From May to June 2021, a combination of weather phenomena, inclusive of a tropical wave embedded within the Inter Tropical Convergence Zone (ITCZ), impacted Guyana, and resulted in heavy rainfall. In turn, the high magnitude rainfall events caused widespread flooding across the country. On June 10, 2021, the Head of State, His Excellency Mohammed Irfaan Ali, declared disaster areas in Region 2 (Pomeroon - Supernaam), Region 5 (Mahaica - Berbice), Region 6 (East Berbice - Corentyne), Region 7 (Cuyuni - Mazaruni) and Region 10 (Upper Demerara - Upper Berbice). The President made the declaration after visiting, assessing some of the affected areas, and designated the flooding as a Level 2 event. The Civil Defence Commission (CDC) subsequently requested technical support from CDEMA CU in the form of a DDSA team to provide a damage and loss estimate report, with recommendations to support ongoing initiatives and future response and recovery operations. In response, DDSA reports were coordinated and organised for the aforementioned five (5) regions. Nine (9) sectors were assessed, including the health, water & sanitation, agriculture, infrastructure, housing & shelter, social, mining, and coordination sectors.

In addition to hydro-meteorological events, CDEMA PSs were also impacted by seismic hazards. On December 29, 2020, the La Soufrière volcano's alert level in St. Vincent



TOP LEFT: An aerial view of the flooding in Guyana  
 TOP RIGHT: The DDSA Team on the ground in Guyana  
 ABOVE: The DDSA Team on the ground in Guyana

**The capital Paramaribo and all the districts in the coastal area were also adversely affected by the heavy and constant rainfall. For the first time, the capital city was subject to massive flooding, especially in the North and South of the city, particularly in residential areas. The RCP was already activated at the time of the flood in response to hazard impacts in other PSs.**

and the Grenadines was elevated to Orange because of increased activity at the site. The volcano had an effusive eruption, with visible gas and steam eruption and a new volcanic dome formation. On April 8, 2021, the volcano transitioned to an explosive eruption. Significant ashfall and lahars resulted in the evacuation of over approximately 16,000 persons from the pre-determined red and orange zones, the loss of property, damages to critical facilities such as hospitals, water, and power stations. There was also significant loss experienced within the agricultural sector. In response to the volcanic activity, the RCP, RCC, Regional Logistics Plan (RLP) and RRM were all activated by CDEMA. In accordance with the Volcanic Annex of the RCP, the CARICOM Operational Support Team (COST), the Rapid Needs Assessment Team (RNAT), the Caribbean Disaster Relief Unit (CDRU), the Regional Urban Search and Rescue Teams (RSART), and the Detailed Damage Sectoral Assessment (DDSA) were all physically deployed to St. Vincent as RRM teams. The CU provided technical assistance to NEMO SVG through supporting the development of the evacuation plan and developing the National Relief & Logistics Plan. The CU assisted with the coordination of the Emergency Operations Centre (EOC) as i) the COST reviewed and evaluated the shelter system, making recommendations, ii) the CU sought to access support for psychosocial support in the EOC and iii) the CU arranged the NEMO information flow and reporting mechanisms. CDEMA also played a significant role in the mobilisation of resources for response and relief. Via funds sourced from the UK Foreign, Commonwealth & Development Office (FCDO) the CDEMA CU supported the procurement of helicopter services for a 7-day period to aid the Seismic Research Centre (SRC) team in transporting staff and equipment to the dome for a scientific mission. Moreover, the CU supported the coordination of the regional relief supplies, the use of the CLS system in collaboration with the World Food Programme (WFP) and the coordination of national relief supplies.

The southern region of Haiti was impacted by a 7.2 magnitude earthquake on August 14, 2021. The earthquake took place 13 km to the South- Southeast of Petit Trou de Nippes, in the department of Nippes at a depth of 10 km and was followed by several aftershocks. The estimated number of deaths was 2,248 with another



**The CDRU team and volunteers at the Arnos Vale Logistics Hub in St. Vincent and the Grenadines assisting with the coordination of relief supplies**

**The Arnos Vale Logistics Hub in St. Vincent and the Grenadines**

**On April 8, 2021, the volcano transitioned to an explosive eruption. Significant ashfall and lahars resulted in the evacuation of over approximately 16,000 persons from the pre-determined red and orange zones, the loss of property, damages to critical facilities such as hospitals, water, and power stations.**



329 persons listed as missing. Approximately 12,763 were reported to be injured and 53,815 homes were destroyed. The CDEMA CU activated the RCC and the RRM, deploying a COST team to Haiti to support the NEOC Operations. The RCC also coordinated the international partners via the Caribbean Development Partners Group (CDPG) meetings. The proposal for a CARICOM Legacy project was considered and two (2) engineers from the Jamaican Defence Force were deployed to conduct a feasibility study.

Beyond the impact of hydro-meteorological, seismic and volcanic hazards, the Caribbean region was exposed to the threat of an oil spill when the FSO (Floating Storage and Offloading unit) Nabarima, operated by Venezuelan oil company Petróleos de Venezuela (PSVSA) began to experience challenges in September 2020. Carrying 1.3 million barrels of crude oil, the ballast system valve of the vessel failed causing the vessel to lean to its starboard side. CDEMA took several precautionary steps in the preparedness and disaster risk reduction (DRR) aspect of this hazard as several PSs were in the danger zone of this potential hazard. These steps included the creation of a regional oil spill contingency plan for the effective management of the threat and placing the CDEMA CU RRM and regional response teams on standby. The CDEMA CU also proposed a DRM approach to manage the threat. This involved the organisation, planning and applying measures to mitigate, prepare, respond, and recover from a disaster or emergency event. However, the matter was eventually addressed, and no deployments were necessary.



**The COST Team on the ground in Les Cayes in Haiti**

**COST Members Mandela Christian and Virginia Clerveaux at the NEOC in Haiti following the earthquake in August**

**Scenes in Haiti following the August 2021 earthquake**



The first explosive eruption of the La Soufrière Volcano in St. Vincent and the Grenadines

## THE RRM IN ACTION

# A Case Study of St. Vincent & the Grenadines

### Background

The fictional movie “2012”, directed by Roland Emmerich, depicts the cataclysmic expiration of the earth as we know it. Perhaps if you watched the movie, you may have commented on or thought about the unrealistic manner of the cascading impacts of earthquakes, followed by the explosive eruption at Yellowstone National Park and the high-level tsunamis which overturned large ships. Yet, St. Vincent & the Grenadines experienced such cascading impacts of hazards occurring in succession. Though not at the apocalyptic scale, the impacts clearly reinforced the rhetoric of the Caribbean being one of the most hazard prone regions across the world, and the multi-hazard context of the region.

### The Multi-Hazard Context for St. Vincent & the Grenadines

On April 8, 2021, the volcano transitioned to an explosive eruption. An explosion generated an ash plume up to 8 km altitude that drifted mainly east-northeast. Ash was deposited across the island, affecting communities including Chateau Belair, Petite Bordel, the Belmont Observatory, and areas south of the island. The significant volumes of ash forced the closure of the Argyle International Airport, major water stations and power

stations. Furthermore, the explosive nature of the eruption triggered pyroclastic flows of hot ash, gases, and debris through surrounding areas. More than 16, 000 persons were displaced from the pre-determined red and orange zones. NEMO SVG reported that evacuations in the Orange and Red Zones were affected by significant ashfall and poor visibility, but by the evening of the eruption, most residents had been evacuated. Issues with evacuation were compounded by the need to enforce social distancing within shelters under COVID-19 protocols, which meant that shelters could not reach maximum capacity. The impacts were not isolated to St. Vincent alone, as the ashfall affected neighbouring CDEMA PSs such as Barbados and Saint Lucia. Similarly, the Grantley Adams International Airport (GAIA) in Barbados was also closed.

Prior to the eruption, the island had experienced the worst outbreak of dengue fever in recent history. This placed additional stress on the health sector, amidst the ongoing response to the COVID-19 pandemic. The COVID-19 virus itself had recorded an increasing number of cases during the first quarter of 2021, specifically impacting law enforcement personnel. From a socio-economic standpoint, poverty levels among the population were

## The impacts were not isolated to St. Vincent alone, as the ashfall affected neighbouring CDEMA PSs such as Barbados and Saint Lucia. Similarly, the Grantley Adams International Airport (GAIA) in Barbados was also closed.

already projected increase significantly due to the impact of the COVID-19 pandemic on livelihoods, which diminished the coping capacity and resilience of affected people. After the eruption, the island was impacted by a tropical wave which produced heavy rainfall. In turn, heavy rains triggered flooding and lahars in some areas across the island.

Preliminary damage assessments indicated the northern region of had been severely affected, with crops covered in ash, houses destroyed, and roads blocked. More specifically, the agricultural sector suffered widespread losses and disruption to both the cultivation of crops and the rearing of livestock. According to OCHA Services (2021), the most immediate humanitarian needs identified included access to safe water, hygiene & sanitation, personal protective equipment (PPE) and supplies, emergency food assistance, interventions in health, protection (including gender-based violence and child protection), shelter & education, as well as livelihood support for recovery & rehabilitation.

### Success Stories

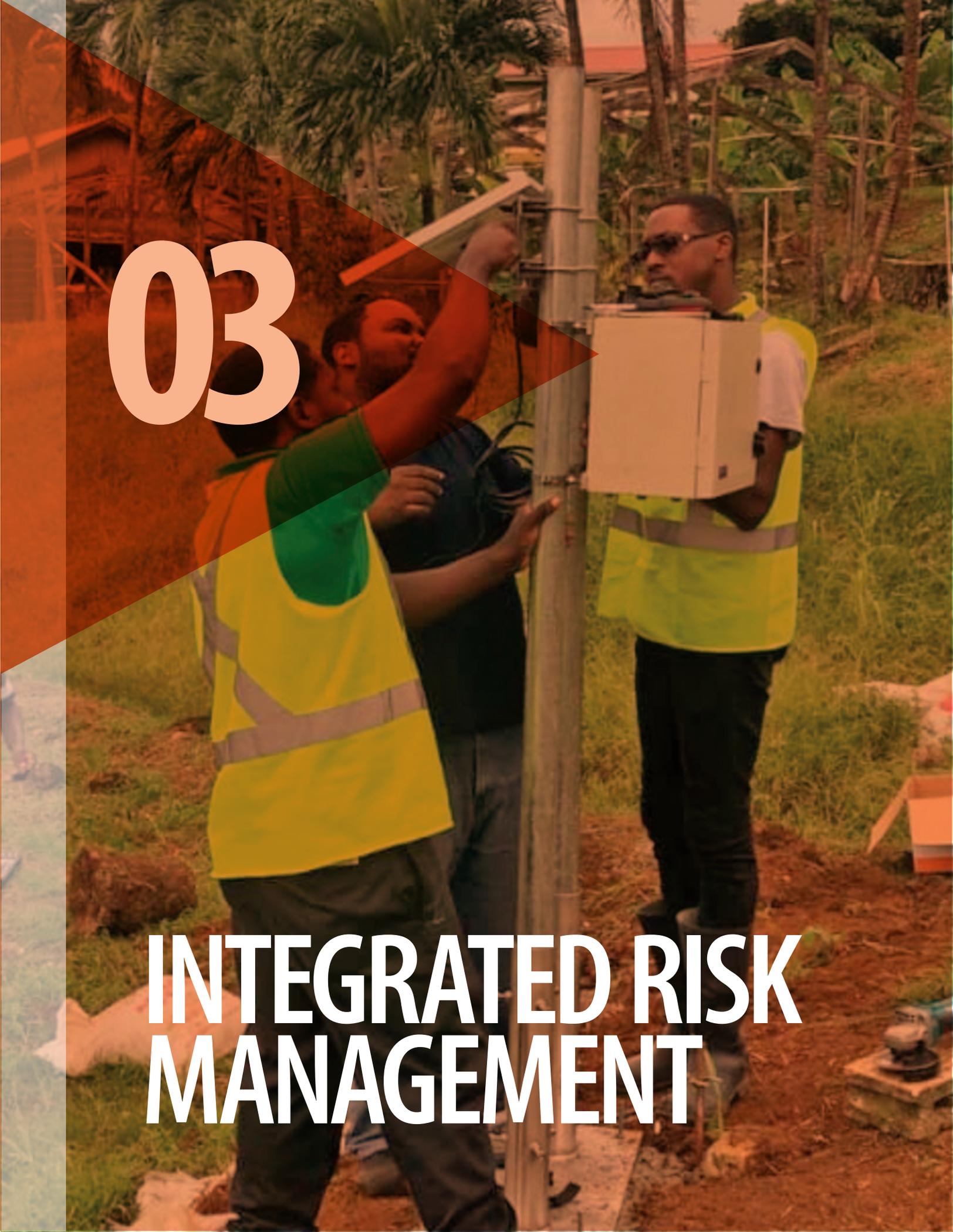
The most important statistic was that no fatalities were recorded due to the early warnings issued to those communities which were at risk. CDEMA takes this opportunity to acknowledge the work of the UWI SRC and NEMO SVG in coordinating mitigation, preparedness and response efforts relating to the

eruption. The RRM was able to deploy teams which reported no cases of COVID-19 during travel and the execution of activities on the ground in St. Vincent. Additionally, CDEMA played an important role in the development of a consolidated budget for the mobilisation of resources. As aforementioned in Section 2.2.1, these resources included funding from the UK Foreign, Commonwealth & Development Office (FCDO) to support the procurement of helicopter services for a 7-day mission to aid the Seismic Research Centre (SRC) team in transporting staff and equipment to the dome for scientific research. Moreover, the CU supported the coordination of the regional relief supplies, the use of the CLS system in collaboration with the World Food Programme (WFP) and the coordination of national relief supplies.

The case of St. Vincent & the Grenadines is an example of the exposure to systemic risks that the countries of the Caribbean will continue to face in the future. With the existential threat of climate change persisting and projected to intensify on the business-as-usual scenario, it is inevitable that the region will witness the interplay and amplification of the varied effects of multiple events. Governments of the region are already facing challenges with limited capacity to mitigate, respond and recover. For this reason, CDEMA remains committed to building resilience through the mobilisation of resources and training.

Scenes of ashfall in St. Vincent and the Grenadines following the explosive eruption of La Soufrière



The image shows three utility workers in high-visibility yellow and green vests working on a metal pole. One worker is adjusting a white electrical box on the pole, while another is reaching up to work on the wiring. A third worker is standing nearby. The background features a rural setting with palm trees and a wooden structure. The image is overlaid with a large orange triangle on the left side and a white number '03' in the upper left corner.

03

# INTEGRATED RISK MANAGEMENT

### 3.1. Information Management

CDEMA has emphasized the generation of evidence required to increase information and knowledge associated with hazards, climate change and disaster-related matters to aid in development, decision-making and planning processes. This falls under Priority Area 2- Knowledge Management CDM Strategy 2014-2024. The following section details the achievements of the CDEMA CU in advancing DRM information over the period 2020-2021.

#### 3.1.1. DRM Information Available via CRIS

The Caribbean Risk Information System (CRIS) was completed in October 2020 and the platform was officially launched on November 12, 2020, by CDEMA. The focus of the launch was the GeoCRIS and Virtual Library components, which were developed in collaboration with the World Bank, with financial support from the European Union (EU) in the framework of the ACP-EU Natural Disaster Risk Reduction Programme, managed by the Global Facility for Disaster Reduction and Recovery (GFDRR). Additional resources are being provided by the Canadian Government through Global Affairs Canada (GAC) for the Targeted Support to CDEMA Project to foster further development and awareness of the CRIS, stakeholder



**The Caribbean Risk Information System (CRIS) was completed in October 2020 and the platform was officially launched on November 12, 2020, by CDEMA.**

Poster created for the launch of the CRIS

engagement to support document & data collection. Two (2) virtual Geo-CRIS trainings were completed during the year in January and June 2021. Further to formulating a more strategic approach to the CRIS operationalisation, a CRIS Think Tank meeting was convened to provide an update on the overall development of the platform. It was proposed that the next phase of CRIS development across all components focus on the recovery aspect of the DRM cycle, with specific focus on the earthquake hazard.

Future developments are scheduled to be executed over the next reporting year 2021-2022. One such development is the sensitisation and additional training for stakeholders on the “CDEMA Information Products and Services Catalogue”, its alignment with the CRIS platform, and its functions. Secondly, a call for data and research is expected to be sent to CDEMA PSs and development partners. Additionally, it has been proposed that an internship incentive be offered to eligible PSs, geared towards interns from the University of the West Indies (UWI) who have interest in disaster management, GIS, or similar fields. The interns would be responsible for compiling and submitting relevant data for each National Disaster Organisation.

One document was uploaded in addition to the 21 documents/outputs under the Enhancing Knowledge & Application of Comprehensive Disaster Management (EKACDM) Project. This brought the total number of documents available on the virtual library to 22, corresponding to an achievement rate of 5% of the overall target. It is expected that the upcoming year 2021-2022 will exceed the target numbers of documents uploaded for both 2020-2021 and 2021-2022 as 77 documents/outputs from the several projects are expected to be uploaded in September 2021.

### 3.2. Disaster Risk Reduction

The CDEMA CU remains committed to supporting PSs in the development of CDM Blueprint components including policy, legislation, and country work programmes (CWPs). Activities under the output are designed to address barriers and opportunities to CDM implementation

as well as to identify recommendations which can overcome gaps. The intention is to mainstream CDM at the sectoral level through strategic engagement with priority sectors. Additionally, the CDEMA CU plays a critical role in harmonizing and coordinating regional efforts in promoting DRR through a Multi-Hazard Early Warning System (MHEWS).

#### 3.2.1. Institutional Framework for CDM Implementation

The NDMOs of Barbados and Trinidad & Tobago received technical support for the development of their CDM Policy and Legislation. The CU drafted the CDM Policy for Barbados and gathered feedback for the further refinement of the document. Two (2) national workshops were convened, and focus group consultations were facilitated with the Barbados Ministry of Finance, the Ministry of Environment, the Roof to Reef project, the Barbados Chamber of Commerce to include private sector stakeholders, and community development agencies. For Trinidad & Tobago, the CDEMA CU participated in and provided guidance through 14 review workshops as part of the technical review committee. A report was made available that details all the finding and recommendations made by the committee. The International Federation of the Red Cross (IFRC) provided technical assistance to the Office of Disaster Preparedness & Management (ODPM) for this process. The revision of the 2014 Draft CDM Bill will be based on the report provided by IFRC and most of the financing for the drafting of the Legislation will also be provided by the IFRC. With regards to the CDM Policy, the CU procured technical assistance to assist the ODPM with the development. The Policy is also critical to the legislation process. Consultations were convened during July and August 2021, led by a policy review committee including the National Disaster Prevention & Preparedness Committee (NDPPC) & government stakeholders, civil society, media & academia, and development partners. The stakeholder analysis and the draft Policy were planned for completion by the end of September 2021. Alignment between the draft CDM Bill/ legislation and draft Policy is being facilitated as the Policy consultant makes presentations to and is guided by the Technical Review Committee.

Target E of the Sendai Framework is to 'substantially increase the number of countries with national and local disaster risk reduction (DRR) strategies by 2020'. Country Work Programmes (CWPs) are the national level, official documents for CDEMA PSs which guide the implementation of DRR strategy under the CDM Blueprint. The CDEMA CU continues to provide technical support to PS in the development of CWPs. The development process is guided by agreed criteria which satisfy the CDM Strategy and Sendai Framework requirements and standards. It was planned that the number of CWPs would be substantially increased by the end of December 2020. While the COVID-19 implementation context greatly stymied progress, much advancement was seen in this area. With the financial support of UNDRR and EDF 10, the CU continued support to five (5) PSs<sup>6</sup> with the development of CWPs to ensure alignment with the eleven (11) criteria for CWP development. Support will continue to be provided for three (3) of the five (5) countries, namely St. Vincent & the Grenadines in view of the impacts from the eruption of the La Soufrière Volcano in April 2021 as well as Antigua & Barbuda and Dominica which both require modifications to the Performance Monitoring Framework component of their CWPs.

An additional four (4) PSs were being supported with developing their CWPs as of August 2021. A technical assistance plan was initiated, and with the support of the UNDRR, key country documents for Step 1 of the CWP development process were developed. The CDEMA CU has initiated the process for undertaking CDM Audits for the Bahamas, Grenada, Haiti, St. Kitts & Nevis, and a recovery Audit for Belize. The Audit is a critical path activity as it is one of the first steps in the development of Situational Analysis for a given PS. Trinidad & Tobago was the most advanced in the process since an Audit and Policy Coherence Analysis were both completed. Steps 2 & 3, the development of outcome & output statements and the development of a Logical Framework Analysis (LFA) respectively, were also completed in draft form for the Trinidad & Tobago CWP. After review of Steps 2 and 3 by national stakeholders, Trinidad & Tobago stands at 80% compliance with the CWP criteria.

<sup>6</sup> The five (5) PSs supported were Antigua & Barbuda, Dominica, Guyana, Saint Lucia, and St. Vincent & the Grenadines.

The planned review on the status of CDM Blueprint implementation was initiated with the procurement of consultancy services to undertake the work. The consultancy will seek to answer three main questions which are i) what is the status of Blueprint advancement in CDEMA PSs?, ii) what are the success factors and barriers to Blueprint advancement in CDEMA PSs?, and iii) what strategies, plans of action and specific interventions are needed to advance the Blueprint?. Following the completion of the procurement process, the consultancy firm, a joint venture between Desarrollo Multilateral SL (DEM) and Environmental Solutions Limited (ESL) (Spain/Jamaica) was recommended for the award of the contract. The Blueprint Review is being funded under the European Development Fund (EDF) 11 project activity 1.4 and expected to be completed by September 2022.

### 3.2.2. Guidance Toolkit for Integrating CDM into Sectors

The priority for the year was the provision of support to the Safer Building programme and developing strategic guidance for the Physical Environment sector. This support is underpinned by the resilience pillar on safeguarding physical infrastructure. The bulk of the support was in the form of consultations with key partners such as the CDB and CROSOQ on the development of a framework. This reinforced the importance of building partnerships to ensure that more institutions have a common interest in strengthening the informal building sector towards achieving improved resilience.

CDEMA strengthened its partnerships with CROSOQ to guide the process for developing the training programme for artisans for safer building in the region. The purpose of the training is to reduce damages in the housing sector resulting from disasters. The approach for revising the Code of Practice for the Construction of Houses: An Instruction Manual for Foremen and Experienced Artisans (COP) training programme, was further refined after a failed procurement process in January 2021. This highlighted the need for additional financing to be identified, to support the development of an accompanying Caribbean Vocational Qualification (CVQ)<sup>7</sup> for the COP. A cadre of trainers and strong market demand are also required to support the utilisation of COP and CVQ across the region.

<sup>7</sup> CVQs are competency-based occupational regional qualifications and will provide a means for certifying persons already practicing in the industry.

Several consultations were convened with stakeholders, including vocational institutions and development partners, to establish the justification for the CVQ and to secure the additional financing. As a result of these consultations, CDEMA also secured a partnership with the Caribbean Association of National Training Authorities (CANTA), the CARICOM organisation with responsibility for developing CVQs. An official Letter of Agreement is planned for completion in the upcoming corporate cycle.

With regards to the framework, the main components include training and financial incentives. CDEMA has continued to participate in a working group that includes representation from the OECS, CDB, CROSQ, CCRIF and World Bank on physical resilience and financial incentives for safer building. The World Bank has made progress on the development of the financial product which provides housing insurance for homeowners, based on the incentive that premiums will be reduced as a home becomes more resilient. In the Commonwealth of Dominica particularly, the provision of insurance will be coordinated through the national housing registry, via the World Bank Housing Recovery Project (HRP) which is currently working towards the reconstruction of four hundred and seventy (470) homes.

During the period, internal consultations were also convened that resulted in an indicative concept of the overall guidance toolkit. The toolkit will include indicators and criteria for mainstreaming CDM into key sectors. It will include a checklist and roadmap towards integration, in keeping with Priority Area 3 of the CDM Strategy and Framework. It was agreed that this will be advanced through consultancy services financed under Global Affairs Canada (GAC). It was also agreed that the agriculture and tourism sectors will be the first beneficiaries of having the toolkit promoted during the next corporate cycle.

### 3.2.3. National and Regional Capacity to Integrate Risk Information into Decision Making

The main indicator under this output is the number of standardised methodologies agreed for the assessment of risk from hazards, for which the target for 2020-2021 was one (1). At the end of the reporting year, the

achievement rate was 60% as there was some progress in advancing the activity. The first initiative was the revision and enhancement of the Caribbean Communities Risk Information Tool<sup>8</sup> (CCRIT), which commenced in May 2021 with gathering data to support the development and testing of the tool. The creation of the CCRIT was driven by the need for evidence-based information for decision making. The tool assigns a Risk Score to a community based on the measurement of its hazard exposure, coping capacity and vulnerability. Furthermore, CDEMA recognised a need to support its PSs with the creation of hazard and vulnerability profiles for communities in keeping with Priority Area 4 of the CDM Strategy and Framework (2014-2024), 'strengthened and sustained community resilience'. Once completed, the CCRIT will support the Risk Assessment component of the Community Resilience Framework.

Towards the end of the reporting year, the preparation of a research paper that addresses issues related to standardised methodologies in the context of Caribbean Small Islands Developing States (SIDS) and landlocked countries (LLCs) was in progress. Through the CCRIF internship programme, support was being provided to develop the paper, expected to be completed by October 2021. Moreover, the CCRIF intern was given the task of supporting the relaunch of the Regional Technical Risk Assessment Working Group (RTWG), the key expert group of the Physical and Environmental Planning Sector Sub-Committee (PEPSSC).

Other activities related to having standardised methodologies, which CDEMA is partnering on, include the UWI HIT RESET Caribbean project- 'Harnessing Innovative Technologies to support Resilient Settlements on the Coastal Zones of the Caribbean'. Funding was approved for the project in January 2021 and is a partnership with CDEMA, University of the West Indies (UWI) and Anton de Kom University of Suriname (AdeKUS). The project aims to strengthen urban/coastal planning & management, and more aggressively encourage the successful uptake of innovations on technologies to reduce vulnerabilities and enhance resilience in coastal communities. Following the approval of the project, the kick-off meeting was held in February 2021, the project was officially launched in April

<sup>8</sup> The Caribbean Community Risk Information Tool (CCRIT) is a tool that allows decision makers to objectively select communities for interventions to increase their resilience.

2021 and CDEMA participated in the project management meetings. The first call for pilot projects was launched in March 2021, and from May to August 2021, grant awards were advanced.

### 3.2.4. CDM Community Resilience Programme

In advancing this area, CDEMA sought to strengthen the Community Resilience Framework (CRF) and develop the CDM Community Resilience Programme Implementation Guide to provide guidance for the implementation of the Community-based Disaster Risk Management programme (CBDRM). A more strategic approach to this priority area will be undertaken with the application of the CRF and Caribbean Communities Risk Information Tool (CCRIT), along with supporting Community Plans of Action with greater oversight provided to six (6) National Disaster Management Offices. To this end, a Community Resilience Specialist was brought on board to facilitate the rolling out of the CBDRM programme across Participating States. Funding for the activities under this Output is being provided by the Norway Project, the 11th EDF BRICS Programme and the USAID CCRI over the period 2020-2022.

Several activities were undertaken to advance the CDM Community Resilience Programme. Community Emergency Response Team (CERT) training materials were shared with DDM, Anguilla in February 2021. A training/workshop was being planned with the IFRC however, this was postponed due to the ongoing COVID-19 pandemic. A follow up to this activity was done and the training rescheduled to the first quarter of the next reporting period (Sept-Nov 2021).

CDEMA also developed a Concept Note for the development of the Community Resilience Programme Implementation Guide which was presented during the TAC Meeting in April 2021. Terms of References (TORs) were drafted in July 2021 to review/update the Community Resilience Framework (CRF) and Community Resilience Programme Implementation Guide. The Request for Expressions of Interest was launched in September 2021. Proposals were submitted and intended start date was October 2021.

The Consultancy for the Review and Enhancement of The Community Resilience Framework (CRF) seeks to assess and undertake a comprehensive enhancement of the CRF, allowing for a more robust and focused approach to building resilience in communities. The CRF is a critical activity of the CDEMA Coordinating Unit's Work Programme, which speaks specifically to the development of appropriate governance mechanisms at the national level to advance community-based interventions. The revision and piloting of the CRF is being supported through the Caribbean Climate Resilience Initiative that is funded by the United States Agency for International Development (USAID).

The CDM Community Resilience Programme Implementation Guide is being developed to provide a pathway for implementing the CBDRM programme, drawing on the various existing tools and instruments, as well as those currently being developed. The Guide will also help countries to navigate the options for advancing the work being undertaken to achieve community resilience through a more harmonised approach. The development of the Guide is being supported through the 11th EDF BRICS Programme.

Another activity undertaken towards the promotion of community resilience was the facilitation of engagement with the UNESCO's Caribbean Young Professionals' Platform for Disaster Management in March 2021. A presentation was prepared and delivered on: "Challenges for Disaster Management in the Caribbean SIDS: How Young Professionals Can Engage?". Further, the planning and execution of the Youth Forum Organising Committee of the Virtual Caribbean Safe School Initiative Pre-Ministerial Forum (March 22, 2021) was undertaken. Two CDM Youth representatives from Barbados were recommended by the CU for participation in the Youth Forum. The Youth Forum was held under the Caribbean Safe School Initiative (CSSI) "Regional Review on School Safety in the context of Systemic Risk: The Virtual Caribbean Safe School Initiative Pre-Ministerial Forum, March 18-26, 2021".

During the reporting period, key elements of the Safe Schools programme were also advanced, which is currently being supported by the Government of Norway.

## INTEGRATED RISK MANAGEMENT

Structural and non-structural school safety measures were implemented in seven (7) schools in one of the beneficiary countries, Saint Lucia. The scope of works was developed based on a school safety assessment of the schools, which was previously undertaken. A contract valued at XCD\$ 255,856.00 (~USD 94,672.00) was successfully executed to carry out various works such as safety equipment installation and construction of walkways, drainage cover slabs, entry ramps, and/or school fencing throughout the seven schools in Saint Lucia. Other beneficiary countries were also engaged for similar support in Antigua and Barbuda, seven (7) schools; St. Vincent and the Grenadines, one (1) school; Barbados, one (1) school; Dominica, ten (10) schools; and St Kitts and Nevis, seven (7) schools. This result supports Priority Area (2) of the CDM Strategy – Increased and sustained knowledge management and learning for CDM. The CDEMA Safe Schools Programme being implemented is consistent with the Comprehensive School Safety Framework and the Caribbean Safe Schools Initiative (CSSI) which is built on three broad areas: (1) Safe learning facilities; (2) School Disaster Management and (3) Resilience education. The groundwork was laid for other outputs under the Safe Schools Programme as follows:

- Safe Education Sector Plan adapted by at least six (6) CDEMA PSs
- Safe School Recognition Programme advanced in CDEMA Participating States
- Web portal development for the RTC and advancing on the RTC accreditation process
- Technical review of Safer building training curriculum conducted

### 3.2.5. Gender Responsive Resilient Recovery Initiatives

The specific indicator for this output sought to measure the number of PSs supported by CDEMA CU in recovery planning and was only partially met, given that the support at the end of the reporting period was still ongoing. The matrix below captures the recovery support initiated by the CU in response to requests from PS as at the end of the Programme Year.

The Recovery Planning agenda is being advanced through three major initiatives, namely, the Caribbean Early Recovery Fund (CERF), the *Caribbean Climate Resilience Initiative (CCRI)* and the *Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (ENGenDER)*.

| CDEMA PS                       | HAZARD/DISASTER RISK | RECOVERY PLANNING SUPPORT STATUS   |
|--------------------------------|----------------------|--|
| Anitgua and Barbuda            | Floods               | LOA and Project Concept Note drafted   |
| Belize                         | Floods               | LOA and Project Concept Note drafted   |
| St. Vincent and the Grenadines | Volcanic Eruption    | Requests for recovery surge support to Economic Planning Division to be provided in Year 5; TORs for Project Officer and developed and shared with PS for approval |
| Haiti                          | Earthquake           | Early recovery project proposal being development  |



# EnGenDER

Enabling Gender-Responsive Disaster Recovery,  
Climate and Environmental Resilience in the Caribbean

The CERF was established under the Targeted Support to CDEMA Project. The fund supports local projects in the recovery period after impact. Priority is given to initiatives addressing the needs of women and girls, with resilience building to safeguard vulnerable communities. In Antigua and Barbuda, the CERF is funding a project to build flood resilience within one area of the St. John's Rural West district. This project will reduce the risk to people and infrastructure while also reducing the increased dependency on limited Government resources to facilitate temporary shelters, relief supplies and the deployment of limited search and rescue teams. In Belize, the CERF is providing targeted support for a project to promote and protect the health of the community by supplying safe and quality water for community consumption, supplying water in adequate quantities and making water readily available to the community in order to encourage personal and household hygiene.

The objective of the USAID-funded CCRI is to contribute to the reduction of the vulnerability of States and improving resilience to disaster risks.

The EnGenDER project, funded by UNDP, seeks to further integrate gender equality and human-rights based approaches into disaster risk reduction (DRR), climate change (CC) adaptation and environmental management frameworks and interventions and identify and address some of the gaps to ensure equal access to DRR and climate change and environment solutions for both men, women, boys and girls in nine Caribbean countries.

Under the broad areas noted above, three major activities were undertaken- the Model National Recovery Framework (MNRF), the CDM Audit and the Caribbean Resilient Recovery Facility (CRRF). These areas are detailed in the sections below.

#### **Model National Recovery Framework (MNRF)**

During the reporting period, the revision of the MNRF was completed and submitted. This guidance document is the latest addition to the recovery toolkit for the CDEMA PSs. The updated MNRF seeks to enhance gender-responsive resilient recovery approaches and solutions at the national level, including a monitoring and evaluation framework

template and accountability mechanisms. MNRF Country Adaptation Workshops were held for three (3) PS- Antigua and Barbuda, Dominica, and Guyana. Participants at Adaptation Workshops included representatives from women's organisations and civil society. MNRF Workshops were planned for two countries during the next reporting period.

A regional meeting was convened with relevant regional and national actors who reviewed the updated MNRF. Participants at the regional meeting included Representatives leading recovery from the Ministries of Finance, Planning and National Disaster Management Offices of selected CDEMA Participating States. A Regional Validation meeting has been planned for the next period to showcase how the five (5) PS have adopted the updated MNRF to address their respective national realities. This regional meeting serves as a platform to advocate for other states to adopt and adapt the MNRF and strengthen recovery capacities in the region.

#### **CDM Audit Recovery Component**

The CDM Audit instrument, with a specific focus on recovery was implemented during the reporting period. Beneficiary states that have already applied the CDM Audit Tool were targeted for the intervention to have the Recovery component of the CDM Audit Report completed. The roll-out of the CDM Audit Tool has been undertaken in close collaboration with the 11th EDF Natural Disaster Facility in the CARIFORUM and the Targeted Support to CDEMA Project financed by GAC to ensure the most efficient use of financial and human resources.

Additionally, the UNDP-funded EnGenDER project, in collaboration with the World Bank, has also sought to implement the CDM audit tool in nine (9) CDEMA Participating States. The project's Immediate Outcome 1120: 'Improved integrated recovery planning and frameworks at the national and regional levels for gender-responsive and resilient disaster recovery by key vulnerable groups', operates in tandem with the MNRF to strengthen capacity in Recovery Planning which are informed by gaps emerging from the Audit application. This activity will build upon and utilise the revised Model National Recovery Framework which is being updated

and adaptation workshops will be convened in each of the five (5) states. At the end of the reporting period, five (5) States completed the full CDM audit, including the Recovery Capacity Assessment, namely Dominica, Antigua and Barbuda, Guyana, Grenada and St. Lucia. Validation workshops and CDM Audit reports were being finalised at the end of the period.

#### **Caribbean Resilient Recovery Facility (CRRF)**

During reporting period, the inaugural meeting of the Caribbean Resilient Recovery Facility (CRRF) was held. This mechanism, akin to the CDEMA-coordinated Regional Response Mechanism (RRM), will provide critical support in a recovery context to affected countries where their capacities may be temporarily overwhelmed or non-existent to plan, implement and monitor a gender-responsive and inclusive resilient recovery process.

Through the leadership of CDEMA, the process for the establishment of a regional Working Group on Recovery has commenced. Through this group, continued dialogue is expected to be undertaken among key regional actors (including the Caribbean Development Bank, Inter-American Development Bank, CDEMA, CARICOM Secretariat, Private Sector; NGO representative, University of the West Indies, UNDP and select national disaster management and economic planning stakeholders on the nature and operation of the CRRF). For sustainability, it is intended that this Thematic Group will become a permanent Thematic Group of the CDM Coordination and Harmonisation Council and transition into a role of governance oversight for the recovery facility.

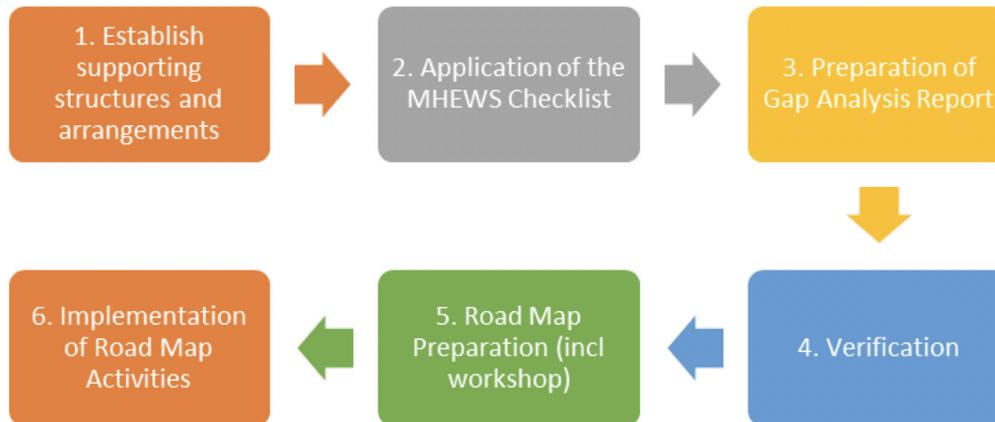
Building on the progress made toward the establishment of the CRRF, the second meeting of the Recovery Working Group and an official launch of the facility was scheduled to be convened during the following reporting year. Once established and operationalised, CRRF will provide rapid surge deployment of international and regional gender-responsive support and other expertise for disaster recovery. The work on the development of the Recovery Expert Roster has begun with input from regional and international partners.

Development of the Model Guidelines on Shock Responsive Social Protection (SRSP) for CDEMA PSs commenced in February 2021. Drafts of the Policy Guidelines and Needs Assessment were submitted. The purpose of this consultancy is to draft Model Guidelines for strengthening Participating States' social protection systems to be shock-responsive, paying particular attention to the most vulnerable, including children. The guidelines are anticipated to respond to the specific needs currently faced by practitioners at the country level, towards making social protection systems more shock-responsive promote discussion on key policy and operational challenges and how to best address them.

#### **3.2.6. Community Multi-hazard Early Warning System (MHEWS) Road Map**

Four (4) MHEWS roadmaps were completed during the previous year for Antigua & Barbuda, Dominica, Saint Lucia, and St. Vincent & the Grenadines. During 2020-2021, the implementation of the roadmaps was initiated with the support of a CCRIF intern, under the supervision of the Disaster Risk Management Specialist (DRMS).

Three (3) additional MHEWS roadmaps have been developed, for Barbados, Trinidad and Tobago, and Guyana. During the period, CDEMA was awarded a US \$50,000 contract from the World Bank to assess MHEWS in each country and to develop individual country reports and roadmaps to address the gaps. The roadmap provides a programme of support for needs in each country. The World Bank financing also supported the provision of additional capacity in the CU to coordinate the process through a Regional Technical Coordinator. The implementation of the roadmaps will be achieved under the EDF project. In August, the budget for financing the work under the EDF 11 project was confirmed (US\$20,000), roadmap reviews were undertaken, and meetings were arranged with each PS. During the first quarter of 2021-2022, an intern was scheduled to i) assist CDEMA PSs in undertaking projects as articulated in their MHEWS roadmaps, which corresponds with implementation and ii) ensure that the selected EWS project is undertaken as part of CDEMA's wider support to PS with community-based disaster risk management.

**Step wise process for the MHEWS**

### 3.3. National Disaster Management Organization Capacity Building

As the multi-hazard context within the region persists, capacity building is increasingly vital to CDM implementation and building resilience. The Regional Training Centre<sup>9</sup> (RTC) is supported and maintained by CDEMA, to provide necessary training to disaster management officials. Through the RTC, several training courses were offered in areas including but not limited to geographical information systems (GIS), social protection systems and the Caribbean Safe School Initiative (CSSI).

#### 3.3.1. Technical CDM Capabilities in National Disaster Management Offices

Continuous capacity building is integral to CDM implementation at both the national & regional levels, and an important facet of the CDEMA mandate. The training offered is aligned to priorities identified in the training needs assessment, and primarily to the training needs of Emergency Planning & Operations. During the reporting year, the training programme was expanded both in the number of courses offered and the scope of the content. For example, the UNICEF-supported short courses expanded the range of considerations for Emergency Planning & Operations, to treat issues within at-risk groups such as child safety and education continuity post-impact. This also demonstrated an ability to pivot quickly in response to challenges brought on by the on-going pandemic, to continue to deliver training virtually/online.

Once again, the target set for the number of persons from NDMOs participating in courses was 150. At the end of the year, a total of 169 persons from across the CDEMA PSs engaged in training, corresponding to a success rate of 112.67%. Several training activities contributed to the achievement of the target, including a series of short courses developed and delivered virtually in October 2020 through support from UNICEF. The courses were in the areas of i) Education in Emergencies, ii) Child Protection in Emergencies and iii) Shock Responsive Social Protection. The beneficiaries of the training included participants at the national and regional levels in the education, social protection, and DRM sectors. Generally, participants were drawn from the NDMOs, the wider national emergency management system and the CDEMA CU. Overall, 103 individuals from 16 CDEMA PSs benefited from the training, comprising 78 women and 25 men. Additionally, 27 regional GIS professionals from 18 PSs were trained in the use of the GeoCRIS platform in January 2021. The training was developed by the CDEMA CU, MapAction and Humanitarian OpenStreetMap Team (HOTOSM) with the support of the World Bank (WB) and funded by the ACP-EU. The participants were nominated by CDEMA PS and were drawn from various agencies including development planning and national GIS offices. A second offering of the GeoCRIS training was held in June-Aug 2021, which saw an additional 39 participants having completed the course.

<sup>9</sup> The Regional Training Centre has been established by the CDEMA Coordinating Unit to afford training options in a range of areas in DRM to its Participating States.

Apart from the priority courses, other notable training activities during the period included the Model Safe School Programme online course, which was piloted during September to December 2020, Damage Assessment & Needs Analysis (DANA) training held in Trinidad & Tobago and a special offering the online Basic CDM course was opened for the CDEMA CU throughout the year.

Moreover, the Regional Training Centre (RTC) supported the coordination and implementation of capacity building initiatives that benefited the wider regional DRM systems. These webinars reached at least 350 participants in education, shelter management, as well as the diplomatic, MSME and CBDRM fields. Examples of such initiatives included but were not limited to the KoBo Toolbox training in collaboration with the Caribbean Development Bank (CDB) which facilitated more than 100 participants and the OECS Workshop Series on COVID-19 Resurgence Planning in the Education Sector, which featured a presentation on “The Global and Regional Context for School Safety” to 140 participants.

During the reporting year, no training for deployment teams was held. However, several hazard events impacted CDEMA PSs during the 2020-2021 period which required the mobilization of the Regional Response Mechanism (RRM). Given that deployment training is valid for two (2) years, the CU was able to call on previously trained personnel to deploy CARICOM Operational Support Teams (COST) as well as teams to complete detailed damage assessment (DDSA) reports, to the affected States. This indicated that training completed during previous years built sufficient capacity to respond as required, despite challenges that limited refresher training, and points to tangible results emerging from the work completed during the programme period 2017-2021.

The capacity of the RTC to communicate its offerings and other training opportunities has improved. Two (2) of the targeted five (5) milestones identified for the RTC during 2020-2021 were advanced. In the first instance, improvements were made to the existing RTC webpage on the CDEMA CU website to facilitate publishing the

annual training programme and the calendar of RTC events. Further, the programme calendar was updated in quarters 3 and 4 of the year, with current events as well as scheduled training for the upcoming year 2021-2022. Secondly, guidelines were developed for creating and publishing entries to the online training calendar. The RTC Zoom platform continued to be used to deliver virtual training initiatives.

Other milestones were advanced though not completed. Work began on the development of a full-fledged RTC website with the recruitment of a website developer. The design and structure of the website was agreed, and a test site was developed. Content was created for the website and the process of uploading that content began. A creative brief to guide the design of a logo was developed and submitted to the website developer. However, given the ongoing response to emergencies in PS, the project was delayed, and the contract extended, to allow additional time to complete the work. The final website is on track for delivery by October 2021. Technical Assistance was recruited in July 2021 to support the accreditation process. A self-assessment study was begun to analyse the readiness of the RTC to apply for status as a Barbados Accreditation Council Registered Training Provider. Institutions must meet several criteria to be recognised as a Registered Training Provider. The study gathered data on the status of the RTC with respect to each criterion through desk reviews and key informant interviews and prepared a draft report of findings with initial recommendations for addressing the gaps. The report also examined the availability and location of verifiable evidence to support the criteria. A final report will be completed in September 2022. Other activities in pursuit of accreditation of the RTC and its training programmes included convening the Accreditation Working Group (AWG) of the RTC Advisory Council which provided several recommendations for the way forward. Two options are being explored concurrently which are i) application for status as a Barbados Accreditation Council Registered Training Provider status and ii) working with the UWI Open Campus to accredit specific training courses. These recommendations were pursued during this period.

### 3.3.2. Implementation of the Safe Schools Programme

Progress on the advancement of the CDM Safe Schools Programme was realised due to the contribution of three arrangements. These were the Implementation of the Model Safe School Programme in the Caribbean (MSSP), funded by the Caribbean Development Bank (hereby referred to as the CDB initiative), the Programme Cooperation Agreement between CDEMA and UNICEF, (hereby referred to as UNICEF support) and the project entitled *“Support to the Advancement of Comprehensive Disaster Management in the CDEMA Participating States”* funded by the Government of Norway (hereby referred to as the Norway project).

The CDB initiative was fully concluded through the development and piloting of an online, self-paced course on the MSSP assessment tools.

UNICEF support assisted with the hiring of a consultant for the development of a Safe School Recognition Programme

for Schools in the Caribbean Region. Additionally, the Caribbean Safe School Initiative (CSSI) Pre-Ministerial Forum was convened virtually during March through UNICEF support. Hosted by St. Maarten, the forum which was originally scheduled to be held face-to-face was shifted to an online modality of delivery due to COVID-19 restrictions. At the time of writing, the 3<sup>rd</sup> CSSI Ministerial Forum was scheduled to take place in St. Maarten from June 28-30, 2022. The forum has been carded to underscore the recognition of youth as a key partner in advancing resilience and reducing risk and seek ways to encourage youth to collaborate in the identification of emerging issues.

The Norway project financed the advancement of the roll-out of school safety action plans across six<sup>10</sup> (6) targeted CDEMA PSs. As of August 2021, physical infrastructural works were mostly completed for the schools in Saint Lucia (*See page 44*). For the other countries, support was being advanced for the implementation of costed action plans at the remaining 24 schools across the remaining five (5) CDEMA PSs.



Safe Schools Recognition Programme

**The Caribbean Safe School Programme commenced in 2016 under a United Nations Disaster Risk Reduction (UNDRR) lead project entitled “Strengthening Regional DRR Strategies and Capacities for Resilience in the Caribbean”.**

<sup>10</sup> The six (6) countries included Antigua & Barbuda, Barbados, Saint Lucia, St. Kitts & Nevis

## THE SAFE SCHOOLS PROGRAMME

# Physical Infrastructural Works Advanced in Saint Lucia

The Caribbean Safe School Programme commenced in 2016 under a United Nations Disaster Risk Reduction (UNDRR) lead project entitled “Strengthening Regional DRR Strategies and Capacities for Resilience in the Caribbean”. The project has supported a range of promotional activities, including the First Caribbean Safe School Ministerial Forum. One of the significant achievements recognized during the year was the improvement of physical infrastructure across several schools in Saint Lucia. The infrastructural development component of the programme acknowledges that children spend most of their lives on their school compounds, and that the physical environments of the school should reflect safety. Beyond the needs of students, communities benefit since schools typically serve as shelters for persons displaced from their homes during emergency situations.

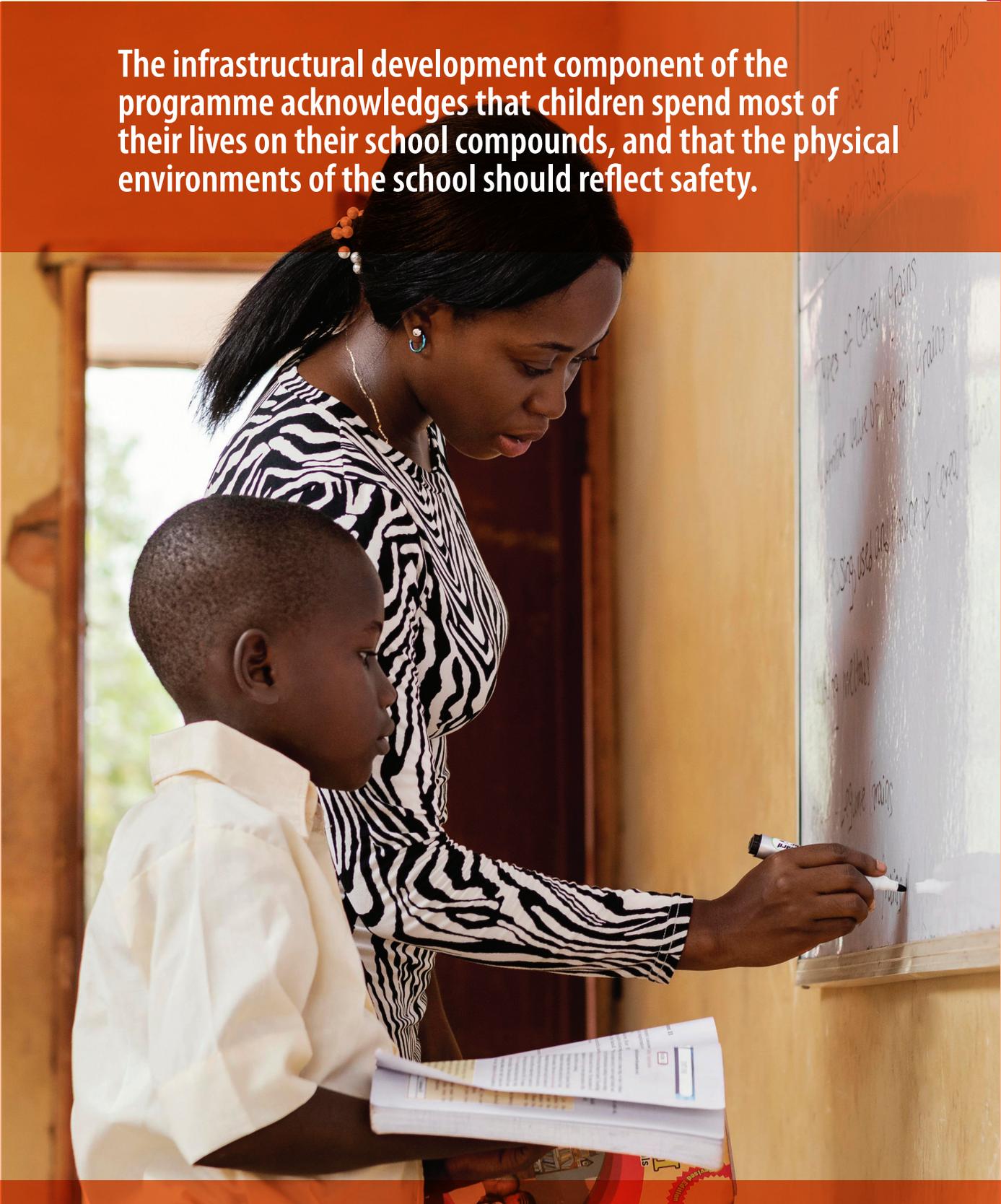


The project has supported a range of promotional activities, including the First Caribbean Safe School Ministerial Forum. One of the significant achievements recognized during the year was the improvement of physical infrastructure across several schools in Saint Lucia.

The following section details the work completed at seven (7) schools across Saint Lucia:

1. **Bexon Primary School** underwent the construction of walkways, the installation of 13 fire extinguishers & 42 smoke detectors, and the erection of emergency signage.
2. **The Camille Henry Memorial School** underwent the installation of drainage cover slabs, fire extinguishers, smoke detectors and the erection of emergency signage.
3. **Canaries Primary School** underwent the installation of drainage slabs, fire extinguishers, smoke detectors and the erection of emergency signage.
4. **Dennerly Primary School** underwent the installation of entry ramps, 15 fire extinguishers, 35 smoke detectors and the erection of emergency signage.
5. **The Gordon Walcott Memorial Methodist School** underwent the fencing of the school perimeter, the installation of 14 fire extinguishers & 30 smoke detectors and the erection of emergency signage.
6. **Soufriere Primary School** underwent the installation of drainage slabs, fire extinguishers, smoke detectors and the erection of emergency signage.
7. **Vieux Fort Primary School** underwent the construction of walkways, the installation of 15 fire extinguishers, and 30 smoke detectors and the erection of emergency signage.

The infrastructural development component of the programme acknowledges that children spend most of their lives on their school compounds, and that the physical environments of the school should reflect safety.



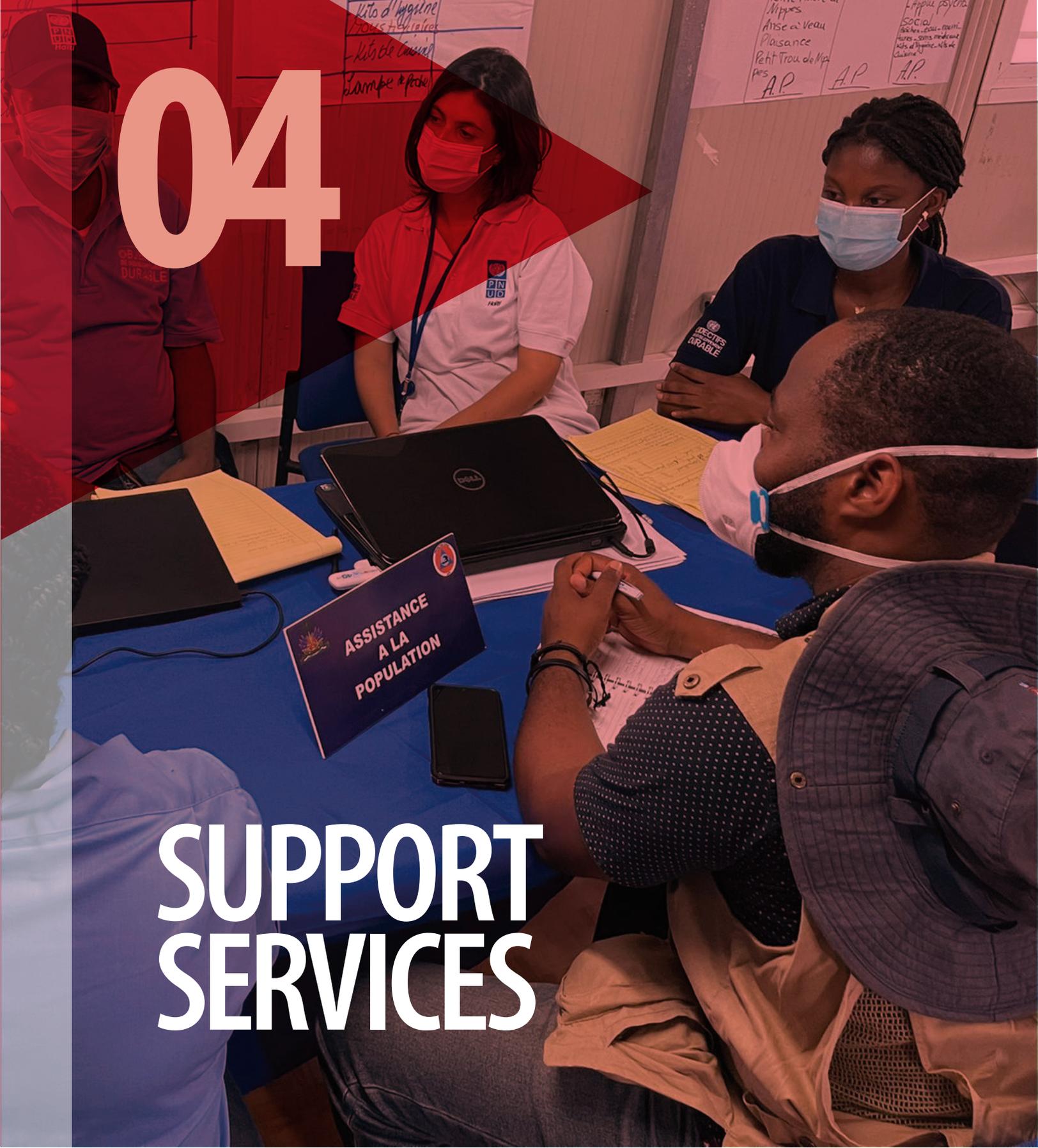
04

# SUPPORT SERVICES

SUD

| Quantités | ressources        | Quantités |
|-----------|-------------------|-----------|
|           | - Bâches          |           |
|           | - Eau             |           |
|           | - Nourriture      |           |
|           | - Soins médicaux  |           |
|           | - Kits d'hygiène  |           |
|           | - Kits de cuisine |           |
|           | - Lampe à poche   |           |

| Communes   | Sections                 | Com/Besoins |                 |
|------------|--------------------------|-------------|-----------------|
| Grand-Anse | Jérémie                  | Fond Cochon | Lampes Solaires |
|            | Pestel                   | Leon        | Appui psy       |
|            | Beaumont                 | Ste Helene  | Appui psy       |
|            | Corail                   | Laholiera   | Appui psy       |
|            | Rogean                   | Macandale   | Appui psy       |
|            |                          | Caracolie   | Appui psy       |
|            |                          | Digby       | Appui psy       |
| Mippes     | L'Agile                  |             | Lampes solaires |
|            | Baradières               |             | Appui psy       |
|            | Petite Rivière de Mippes |             | Appui psy       |
|            | Anse à Veau              |             | Appui psy       |
|            | Plaisance                |             | Appui psy       |
|            | Petit Trou de Mippes     |             | Appui psy       |
|            | A.P.                     | A.P.        | A.P.            |



## 4.1 Human Resources and Administration

As CDEMA continues to expand the delivery of disaster risk reduction services, new projects and programmes funded by development partners, there is a continuous need for human resources to achieve the desired outcomes. The Human Resources & Administration Department (HRAD) plays a critical role in recruiting the most suitable candidates to advance the work of the Agency. Beyond recruitment, the HRAD has responsibility for ensuring that CDEMA staff strengthen professional capacity and understanding of organisational procedures through various training and specialised orientation sessions. Further, facilities management, support services and the exercising of the bi-annual Business Continuity Plan were prioritized during the year 2020-2021.

### 4.1.1. CDEMA CU Human Resources Capacity

Priority was given to ensuring adequate staffing through recruitment for technical and project positions within the CDEMA programming framework. The substantial recruitment activity and supporting tasks associated with new staff appointments, represented a considerable portion of the engagement of the Human Resources & Administration Department (HRAD) during the year. A total of three (3) interviews were coordinated by the department for the positions of i) Project Assistant to the EnGenDer project, ii) Programme Officer for Preparedness & Response, and iii) Safe Schools Programme Officer. The department completed the evaluation of shortlisted candidates who applied for the positions of Human Resources & Administration Officer and Procurement Officer. Interviews for these positions were in progress at the end of August 2021. Evaluations were to be conducted for shortlisted candidates who applied for the positions of Monitoring Officer under the GAC programme and Accounts Officer under US AID, while applications for the position of Logistics Specialists were still being accepted as of August 2021.

CDEMA continues to offer opportunities to young professionals who are eager to obtain experience and build specialized expertise. On an annual basis, CDEMA serves as one of the regional host organisations for successful candidates under the Caribbean Catastrophe Risk Insurance Facility (CCRIF) internship programme. This year, the Agency welcomed two (2) CCRIF interns as well as one CDEMA intern who all performed tasks and assisted with projects assigned to them by supervisory members of staff. Beyond internships, the department has also sought to develop a database of volunteers who can be contacted as necessary to offer support when necessary.

In addition to recruitment, the HRAD continues to facilitate training and capacity development for current CDEMA staff. During the year, the department coordinated orientation sessions for the Revised Staff Rules & Regulations and Duty Officers. One of the other notable orientation sessions convened was to introduce the newly developed Operational Policies & Procedures Manual. Under the scope of the Pillars Assessment, the CDEMA CU determined that there was a need to develop an Operational Policies & Procedures Manual to ensure that robust policy frameworks were established. The manual will serve as the authoritative source of information on the operation of the Agency across the areas of project management, finance, human resources & administration. In response, a draft final Manual has been provided by the Consultant in collaboration with the staff of the various Departments of the CDEMA CU. Within the HRAD, the Safeguarding Policy, Human Resources Manual and Administrative Services Manuals were finalized through a consultative process, following circulation of the documents for comments from the CDEMA management team and staff.

All new staff members were afforded the opportunity to receive radio communications training, conducted by the Information & Communications Technology (ICT) department. The biennial staff survey was prepared and circulated to staff members to assist with evaluating the degree to which staff needs are met.

### Section 4A - The CCRIF Internship

The CCRIF regional internship programme provides career-related work experience for CARICOM and CCRIF member country citizens, that enhances the graduates' academic training and provides a real-world introduction to the graduates in the areas of disaster risk management, disaster risk financing, climate change, meteorology, risk transfer and/or risk modelling. CCRIF partners with national disaster management, meteorology offices and regional organizations involved in these areas. In response to the pandemic, the programmes adopted a hybrid mode of delivery which included i) on-site internships working face-to-face with a national or regional organization and ii) a limited number of virtual internships, working remotely with a national or regional organization in the Caribbean.

During the reporting year, CDEMA hosted Ms. Jessica McPherson and Mr. Daniel Rooplal. Jessica, a recent graduate of the University of the West Indies (UWI) Mona Campus, was assigned the task of advancing projects under the Multi-hazard Early Warning Systems (MHEWS) Roadmaps of CDEMA PSs. Daniel, a recent graduate of the UWI, St. Augustine Campus, was tasked with populating and maintaining the Virtual Library component of the CRIS. CDEMA takes this opportunity to thank both Jessica and Daniel for their assistance and wish them both success in their future endeavours.

#### 4.1.2. CDEMA CU Administrative Systems

During the period, the advancement of readiness actions at the CU took place through several endeavours. By the end of the reporting period, the Facilities Management manual, which is part of the Operations Manual was near completion and expected to be finalized during the next reporting period. Since the official opening of CDEMA headquarters in 2015, several infrastructural developments have been finished towards the completion of the physical building. At the time of reporting, the headquarters is approximately 90% complete, with the outstanding targets being the development of a records & archive centre and the procurement of an electronic surveillance system.

Record management and support services were provided for the CU through the preparation of meeting notes, RCC rostering, telecommunications, and mail management support. Additionally, a Concept Paper on Business Continuity for CDEMA was completed during the period. Further advancement is scheduled for the next reporting period.

## 4.2 Finance

The financial capacity of CDEMA is linked to the strengthening of key areas which are identified by the CDEMA CU and approved by the Council. During each reporting year, the outputs of the finance & accounting component of the Agency must be aligned to the standard of CDEMA's fiduciary management to meet international best practice, meet an acceptable standard of accuracy for administrative budget, meet an acceptable standard of accuracy for audited financial reports and maintain an acceptable level in relation to the degree to which the accounts receivable strategy has been implemented.

### 4.2.1. CDEMA CU Financial Capacity

Building on the re-establishment of the Finance & Administrations Advisory Committee in the previous year, the first meeting of the committee was convened May 27, 2021. During the meeting, an overview of the CDEMA Finance Department was presented. The committee received updates on the financial status of the CDEMA CU as of May 2021 and the status of the financial audit, and progress made towards the upgrade of finance and accounting procedures under the Pillars Assessment. The final presentation of the meeting was made on the ToR for a consultancy to develop a sustainable financing strategy for CDEMA. The outcomes of the meeting included the renaming of the group to the Finance Advisory Committee (FAC) and the submission of a revised Terms of Reference (ToR) to the FAC. The objectives of the FAC include i) to assist the MCC in assessing the risk management and internal control systems and procedures of CDEMA, ii) to review the relationship and planning of the external audit activities with the external auditor, iii) to provide oversight of the finance and investment functions of CDEMA, iv) to

assist the Management Committee of the Council (MCC) in evaluating investment transactions in which CDEMA engages as part of its business strategy periodically, and v) to make recommendations to the MCC arising out of the discharge of the roles and responsibilities set out within the ToR. Recommendations from the meeting of the FAC were presented at the 16th Meeting of the MCC and at the 11th Meeting of the Council of CDEMA.

### 4.3 ICT

ICTs continue to play a central role in enhancing the productivity and effectiveness of CDEMA to fulfil the mandate of the organisation. ICT is a cross-cutting theme, embedded within the regional Comprehensive Disaster Management (CDM) Strategy 2014-2024. The CDEMA ICT Department continues to enhance the ability of the Coordinating Unit and PSs to incorporate ICT for the implementation of the regional CDM Strategy through ICT Assessments. The desired outcomes of this support are the constant operation of critical CDEMA ICT systems and the upgrade of ICT platform capacities in PSs, through partnerships with regional and international partners, and through the provision of technical assistance.

#### 4.3.1. CDEMA CU ICT Systems

CDEMA has an established monitoring and evaluation framework which measures compliance with the ICT Policy of the organisation. The policy is guided by a vision to make optimal and appropriate use of current, new & emerging ICTs for the CDEMA CU to fulfil its mandate. One of the primary indicators for meeting an acceptable level of compliance with the policy is the continuous availability of critical ICT systems under normal and emergency conditions, with as minimal unplanned downtime as possible. Performance under this indicator is measured by the percentage uptime of critical ICT systems, which serves as an indicator that system downtime remains within acceptable limits. To facilitate the achievement of the target, the ICT Department takes proactive measures to maintain and monitor these systems through the implementation of a framework of procedures, checklists, and active monitoring of internal and external resources.

The department actively monitors server metrics, log files, websites, software updates, network statistics and many other variables to ensure unplanned downtime is kept to a minimum. For the reporting period 2020-2021, the percentage uptime for CDEMA ICT Systems was recorded to be 99.47%. The continuation of such statistics is ensured by the constant evaluation of options to improve and strengthen the robustness & resilience of the ICT platform.

Another indicator for measuring policy compliance is the number of solutions provided by the ICT department to support the needs of CDEMA CU staff and the CDEMA programming areas. For the reporting year 2020-2021, a total of 337 helpdesk requests were made by staff members, ranging in nature from software & computer hardware issues to email administration challenges. Of the 337 requests made, 315 (93.5%) were resolved, taking an average time of 6 hours and 20 minutes for resolution. In addition to responding to daily requests for assistance, one of the notable accomplishments completed by the ICT department was the preparation of the CU for remote work due to the COVID-19 pandemic. Software was procured through the support of Global Affairs Canada and procedures were put in place to ensure all staff had remote access to the CDEMA network. This ensured the continuity of the CDEMA CU operations, including the remote operation of the RCC to support regional response during the period. At the organisational level, the CU is mandated by the CDEMA Agreement to develop and maintain an emergency telecommunications system based on the most appropriate technology to ensure the coordination of emergency operations. On a weekly basis, radio nets continue with regular PSs to test the performance of NDMO equipment and the relevant frequencies. Steps have been taken to procure replacement HF Radios for the RCC due to the failure of the existing radio sets. The delivery of the sets is expected to be received during the first quarter of the 2021-2022 programming year. Drone technology has become an additional feature of the ICT inventory at the CDEMA CU. During the programming year, CDEMA received a donation of a drone from the Caribbean Institute for Meteorology & Hydrology (CIMH),

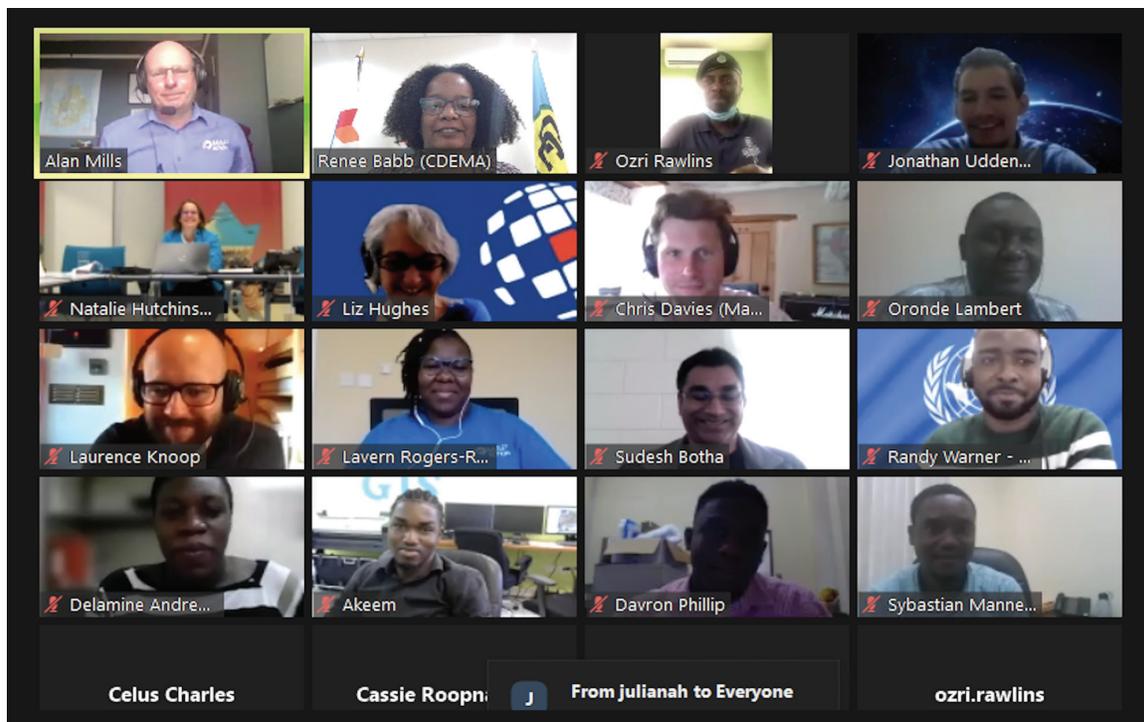
bringing the number of aerial vehicles in the possession of the agency to two (2). A cohort of CDEMA staff received drone familiarization training, to increase the number of individuals with capacity to operate the aerial vehicles when necessary. For the long-term, a Regional Emergency Telecommunications Strategy & Plan needs to be developed, which articulates and formalises the way forward for emergency telecommunications in CDEMA PSs. This Strategy is expected to be completed through a consultancy supervised by CDEMA during the upcoming programming year.

One of the outstanding targets to be achieved is upgrading the profile of the Regional Coordination Centre (RCC) ICT platform to the highest level of certification at Level III. CDEMA continues to operate at the Level I certification, requiring the implementation of a backup power protection solution through the installation of an uninterruptible power supply (UPS) for the critical computer equipment situated in the RCC. The preferred option is a single UPS device to serve the entire RCC. However, a lower cost alternative has been identified where the Agency will procure smaller UPSs which will serve individual desks. This has been determined to be

the most economically feasible option which will meet the requirements of Level II certification. At the end of the reporting year, the alternative option for procurement was set to be completed during the first quarter of the 2021-2022 CDEMA programming year. The long-term solution is to have one large, single UPS device to power the entire RCC.

Beyond the scope of the CU, the ICT department offers technical assistance to PSs, to facilitate the increased use of ICTs for the implementation of the regional CDM Strategy. As a baseline intervention, the department assesses the ICT platforms operated by the NDMOs, to identify gaps and areas which can be strengthened. During the reporting year, several PSs benefitted from additional technical support offered by the department. Examples of assistance included but were not limited to the completion of minor repairs to network cables at the Department of Emergency Management (DEM), Barbados, support to the development of Emergency Telecommunications Plans for St. Vincent & the Grenadines and Dominica, and the preparation of training materials for local Amateur Radio Operators to assist during emergency operations in Saint Lucia.

#### ICT Training participants



# APPENDIX 1

## INDICATOR TARGET RESULTS



|                      |   |
|----------------------|---|
| <b>COMPONENT 1.1</b> | <b>STRATEGIC PLANNING, MONITORING EVALUATION REPORTING AND RESEARCH</b> |
| <b>COMPONENT 1.2</b> | <b>CORPORATE COMMUNICATIONS AND VISIBILITY</b>                          |
| <b>COMPONENT 1.3</b> | <b>RESOURCE MOBILIZATION</b>  |

### STATUS OF OUTPUT INDICATORS

#### COMPLETED

- Corporate Plan completed and entered in the CDM Monitor for MER purposes.
- Three (3) research briefs prepared to inform high level engagements of the CDEMA CU.
- More than the targeted two (2) visibility events executed over the period, including the CDEMA 30th Anniversary Celebration and the launch of the CRIS.
- Several visibility products developed during the period including paraphernalia, infographics, and promotional videos.
- The knowledge awareness/ advocacy campaign target was achieved through the launch of the Disaster Fighters ([www.disaster-fighter.org](http://www.disaster-fighter.org)) public awareness and visibility campaign.
- Several partners engaged to align support for the implementation of the CDM programme.
- Greater than 40% annual increase in the number of users of the CDEMA website & social media channels.

#### IN-PROGRESS

- Operations Policy & Procedures Manual requires finalization following the orientation of staff members to the completed document.
- Procurement process on-going for national consultants to complete CDM Audit reports for the Bahamas, Grenada, Haiti, St. Kitts & Nevis.
- High-level advocacy missions are on-going through a blended approach of virtual and face-to-face meetings, despite the impact of challenges associated with travel during the on-going COVID-19 pandemic.
- A Communications & Visibility Plan is in existence but requires update.
- Proposals have been completed and submitted towards the support of resource mobilization, subject to approval.

#### OUTSTANDING

- Reported challenges with CDM Monitor to be investigated and subsequent follow-up with IDEA undertaken if issues are in fact identified.
- Sectoral assessments on the status of CDM integration are to be completed for the Mid-term Review of the CDM Strategy through the services of a consultant
- No Annual Performance Reports submitted during the current year.
- A sustainable financing mechanism for the CDEMA CU is to be developed.

#### MACRO PERFORMANCE OUTCOME INDICATORS

- Twelve (12) CDEMA system stakeholders utilising PMF and MER processes to inform Annual Progress Reports on CDM directly supported by CDEMA CU.
- 75% satisfaction of stakeholders utilising CDM report.
- 70% increase in the awareness of the work of CDEMA amongst key stakeholders
- At least 75% of resources for CDEMA Corporate Plan mobilised

# APPENDIX 2

## INDICATOR TARGET RESULTS



### COMPONENT 2.1 OPERATIONAL READINESS COMPONENT 2.2 EMERGENCY RESPONSE COORDINATION

#### STATUS OF OUTPUT INDICATORS

##### COMPLETED

- At least 4 annexes to the Regional Coordination Plan (RCP) updated.
- More than five (5) CDEMA stakeholders were involved in the testing of various plans and protocols via 10 CDEMA exercises.
- Significant developments in advancing the Regional and National Logistics Programme, particularly with the development of Model National Logistics Plan & Policy and the introduction of the CDEMA Logistics System (CLS).
- 3 databases completed—deployment, pre-impacts, and emergency events, to support operational readiness.
- At least 40% of milestones achieved in the population of databases.
- The RRM was able to respond to several hazard events which impacted the region, including but not limited to the La Soufriere Explosive Eruption, the floods which impacted Guyana & Suriname, and the 2021 Haiti Earthquake.

##### IN-PROGRESS

- The establishment of a strategic direction for the RRM, following the completion of the RRM Review Report and a systematic analysis of the recommendations made.
- Development of Annexes to RCP commenced during the period which require completion.
- The advancement of Civil Military Coordination Protocols was hampered by the impact of the COVID-19 pandemic but plans for Search & Rescue training have been developed for roll out in the following reporting year.
- Initial DANA training was delivered virtually, with an agreement to convene and execute a face-to-face exercise at an opportune time that the pandemic situation would allow.

##### OUTSTANDING

- No sub-regional emergency telecommunications plans were enhanced during the period but the increased capacity at the CU is present to facilitate potential advancements.
- The number of sub-regional operational plans to be enhanced.
- A review of sub-regional operational units, deployment, and supplies management processes in accordance with the standards commenced but saw delays due to impact of COVID-19.

##### MACRO PERFORMANCE OUTCOME INDICATORS

- 80% of objectives achieved in CDEMA CU annual exercises
- Increase in the level of operational readiness in CDEMA Participating states supported by the CDEMA CU
- 75% level of satisfaction among CDEMA Participating States with the support received by CDEMA through the Regional Response Mechanism (for response)

## APPENDIX 3

### INDICATOR TARGET RESULTS



|                      |                                     |
|----------------------|-------------------------------------|
| <b>COMPONENT 3.1</b> | <b>INFORMATION MANAGEMENT</b>       |
| <b>COMPONENT 3.2</b> | <b>DISASTER RISK REDUCTION</b>      |
| <b>COMPONENT 3.3</b> | <b>NATIONAL DISASTER MANAGEMENT</b> |
| <b>COMPONENT 3.4</b> | <b>CDEMA SAFE SCHOOLS PROGRAMME</b> |

#### STATUS OF OUTPUT INDICATORS

##### COMPLETED

- The Caribbean Risk Information System (CRIS) completed and officially launched by CDEMA.
- Two (2) virtual Geo-CRIS trainings completed.
- One document uploaded in addition to the 21 documents/ outputs under the Enhancing Knowledge & Application of Comprehensive Disaster Management (EKACDM) Project.
- CWP's completed for Guyana and Saint Lucia.
- CDEMA strengthened partnerships with CROSOQ and CANTA for the alignment and integration of CDM into the construction sector.
- The number of standardised methodologies agreed for the assessment of risk from hazards, for which the target for 2020-2021 was one (1) boosted by the revision and enhancement of the Caribbean Communities Risk Information Tool (CCRIT).
- Three (3) additional MHEWS roadmaps developed for Barbados, Trinidad and Tobago, and Guyana.
- 169 persons from across the CDEMA PSs engaged in training, corresponding to a success rate of 112.67% in comparison to the target.
- Two (2) of the five (5) targeted milestones for the RTC achieved including i) improvements to the existing RTC webpage on the CDEMA CU website to facilitate publishing the annual training programme, and the calendar of RTC events, and ii) guidelines developed for creating and publishing entries to the online training calendar.
- The Caribbean Safe School Initiative (CSSI) Pre-Ministerial Forum convened virtually through UNICEF support, hosted by St. Maarten.
- Infrastructural works completed at seven (7) schools across Saint Lucia under the CSSI including the construction of walkways & drainage slabs, the installation of fire extinguishers & smoke detectors, and the erection of emergency signage.

##### IN-PROGRESS

- The next phase of CRIS development across all components being built out to focus on the recovery aspect of the DRM cycle, with specific focus on the earthquake hazard.

- Sensitisation and additional training on-going for stakeholders on the "CDEMA Information Products and Services Catalogue" component of the CRIS.
- Continuous technical support being offered to Barbados and Trinidad & Tobago for the development of their CDM Policy and Legislation.
- Modifications to the Performance Monitoring Framework component of the CWP's for St. Vincent & the Grenadines (considering the impacts from the eruption of the La Soufrière Volcano), Antigua & Barbuda and Dominica.
- The procurement process underway for consultants to conduct CDM Audits for the Bahamas, Grenada, Haiti, St. Kitts & Nevis, and a recovery Audit for Belize.
- The development of a research paper that addresses issues related to standardised methodologies in the context of Caribbean Small Islands Developing States (SIDS) and landlocked countries (LLCs), and the relaunch of the Regional Technical Risk Assessment Working Group (RTWG).
- The implementation of the MHEWS Roadmaps for Barbados, Guyana, and Trinidad & Tobago.

##### OUTSTANDING

- 77 documents/ outputs from the several projects are expected to be uploaded by September 2021.
- The training of CDEMA technical teams for deployment.
- Additional resources needed to advance the integration of CDM into sectors.
- Implementation of the CBDRM Programme is incomplete.
- Implementation of the Youth in CDM Programme is incomplete.

##### MACRO PERFORMANCE OUTCOME INDICATORS

- 60% awareness of CRIS by Participating States.
- 75% of people utilising the CRIS are satisfied.
- Participating States are 75% satisfied with support received from the CDEMA CU in advancing loss reduction mechanisms.
- Participating States are 75% satisfied with support received from the CDEMA CU in capacity building for improving CDM implementation at the national level.

# APPENDIX 4

## INDICATOR TARGET RESULTS



- COMPONENT 4.1 HUMAN RESOURCES AND ADMINISTRATION**
- COMPONENT 4.2 FINANCE**
- COMPONENT 4.3 INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT)**

### STATUS OF OUTPUT INDICATORS

#### COMPLETED

- Orientation sessions convened to familiarise staff with the Revised Staff Rules & Regulations and the newly developed Operational Policies & Procedures Manual.
- New staff members trained in radio communications.
- Biennial staff survey prepared and circulated to staff members to assist with evaluating the degree to which staff needs are met.
- Record management & support services provided for the CU through the preparation of meeting notes, RCC rostering, telecommunications, and mail management support.
- Concept Paper on Business Continuity for CDEMA completed.
- Percentage uptime for CDEMA ICT Systems recorded at 99.47%.
- 315 (93.5%) of 337 requests made resolved.
- Successful transition and preparation of the CDEMA CU for remote work due to the COVID-19 pandemic.
- Drone technology added to the ICT inventory, with a total of two (2) aerial vehicles acquired by the CDEMA CU.

#### IN-PROGRESS

- Interviews in progress for Project Assistant to the EnGenDer project, Programme Officer for Preparedness & Response, and the Safe Schools Programme Officer.
- Evaluations on-going for shortlisted candidates under two (2) additional vacant positions.
- The development of a database of volunteers to offer support on demand.
- Audit of the financial records not concluded due to the impact of COVID-19.
- The Facilities Management manual, which is part of the Operations Manual, is near completion.
- Steps taken to procure replacement HF Radios for the RCC due to the failure of the existing radio sets.

#### OUTSTANDING

- The position of Logistics Specialists is still to be filled.
- The development of a records & archive centre and the procurement of an electronic surveillance system for CDEMA HQ.
- A Regional Emergency Telecommunications Strategy & Plan needs to be developed, which articulates and formalises the way forward for emergency telecommunications in CDEMA PSs.
- The upgrading of the profile of the Regional Coordination Centre (RCC) ICT platform to the highest level of certification at Level III.

#### MACRO PERFORMANCE OUTCOME INDICATORS

- 65% of staff are satisfied with Human Resource Management and Administrative Services.
- 75% percent of staff are satisfied with the level of service provided by the ICT Department.
- Adequate contributions received from CDEMA Participating States to sustain the administrative budget of CDEMA CU.
- CDEMA's fiduciary management meets international best practice.
- 99% uptime of critical ICT systems.



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