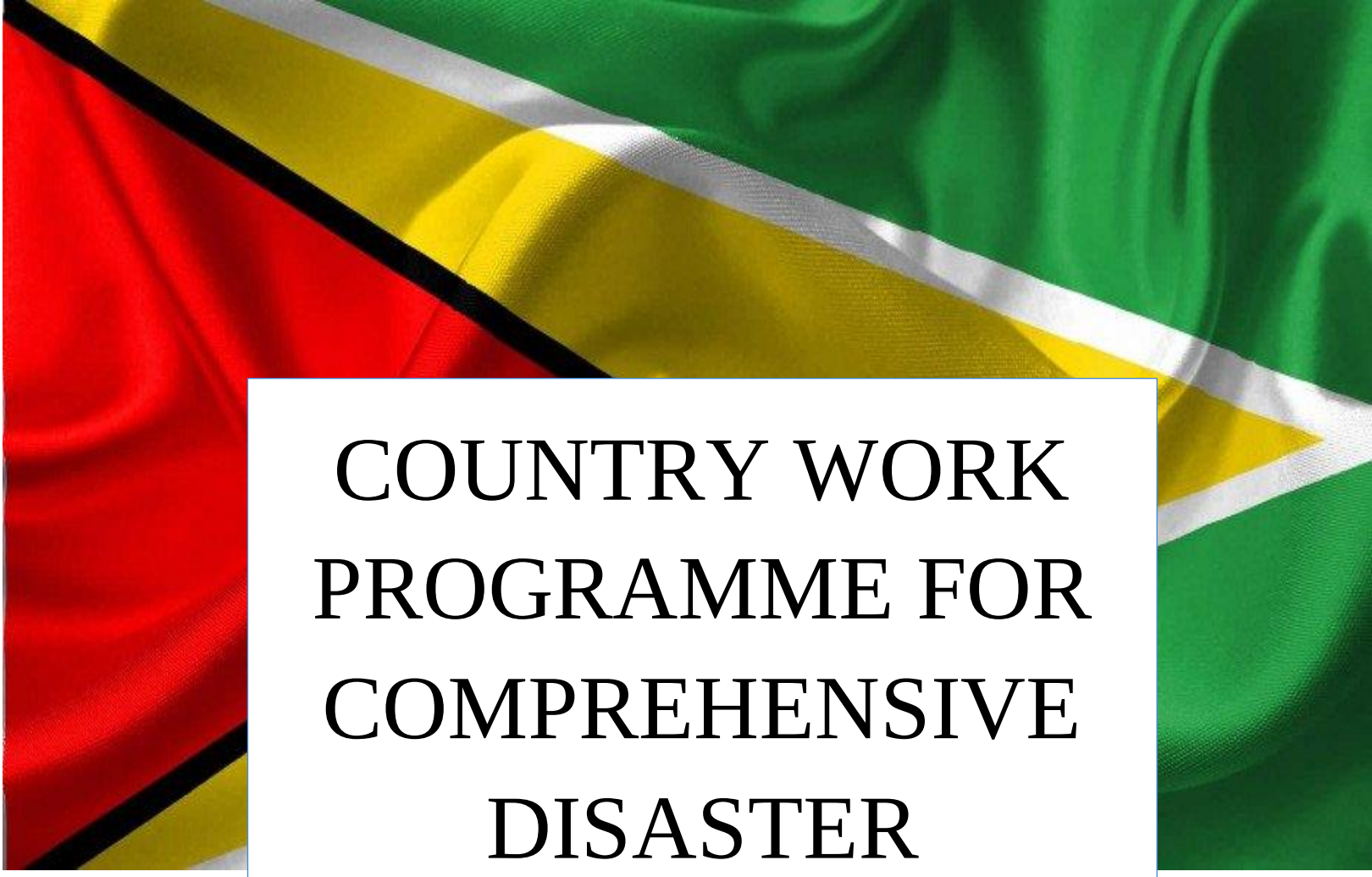


COUNTRY WORK PROGRAMME FOR COMPREHENSIVE DISASTER MANAGEMENT

2021-2025

CO-OPERATIVE REPUBLIC OF GUYANA

UNDRR
UN Office for Disaster Risk Reduction

CIVIL DEFENCE COMMISSION GUYANA

CDEMA
CARIBBEAN DISASTER EMERGENCY MANAGEMENT AGENCY
Resilient States · Safer Lives

Table of Contents

MESSAGE FROM THE PRIME MINISTER

Prime Minister of Guyana: Honourable Brig (Ret' d) Mark Phillips, MSM

The Government of Guyana is unwaveringly committed to propelling the country towards prosperity and recognises that building and sustaining disaster resilience are pivotal pillars towards the achievement of this goal.

In 2005 the Hyogo Framework for Action (HFA) was established, with Guyana being one of the nations to adopt this framework. That same year, Guyana would have coincidentally experienced its most disastrous flood of recent history, the effects of which impacted more than 60 percent of the country's Gross Domestic Product (GDP), and led to extensive disruption in livelihoods, damages to critical infrastructure and outbreaks of waterborne diseases, in some instances leading to death. The impacts of the 2005 floods, which remain fresh in the minds of many Guyanese, demonstrated the relevance and immense need for investments in programmes and policies at the local and national level, to address disaster risks and underlying vulnerabilities across Guyana.

Guyana's resilience has been tested and continues to be threatened because a large percentage of the country's population, natural resources and infrastructure are found along the low-lying coastal plain. Additionally, new and urgent threats face the nation with the daunting projections of climate change, introduction of new national industries, such as oil and gas, and the emergence and mutation of biological hazards, such as the ongoing Coronavirus Disease 2019 (COVID-19) pandemic. The Government of Guyana, recognises that if prosperity is to be attained and sustained there must be long-term planning, coordination, and integration of Disaster Risk Reduction (DRR) mechanisms to anticipate, plan for and reduce disaster risks to more effectively protect Guyanese lives, communities, livelihoods, health, cultural heritage, socioeconomic assets and ecosystems.

Guyana remains steadfast in the pursuit of these targets therefore, the Government of Guyana endorses both the Sendai Framework for Disaster Risk Reduction 2015 – 2030, and the Regional Comprehensive Disaster Management Strategy 2014 – 2024. The Government stands resolute to elevate Disaster Risk Management (DRM) as a national policy priority and mainstream DRM into all aspects of our country's development efforts in a bid to achieving these global and regional targets. The development and intended implementation of Guyana's Country Work Programme (CWP) 2021 – 2025 can be deemed as the country's official indication of this national priority and the intention to prevent disasters from undermining national development.

The importance of partnerships towards the attainment of these objectives cannot be overlooked; Guyana's CWP intentionally facilitates mechanisms for strategic international, regional, and transboundary cooperation to support the country's efforts in reducing disaster risks. It is

incumbent on us to reaffirm commitment to augment local resources and capacities through bilateral and multilateral channels. This will ensure adequate, sustainable, and timely means of implementation of capacity-building, financial and technical assistance, and technology transfer, in accordance with international commitments.

Guyana has long departed from the reactive approach to hazard management, recognising the importance of multi-hazard and multisectoral approaches and the need for adoption of a broader and a more people-centered, preventive approach to disaster risks. Guyana's CWP 2021 – 2025, is therefore, based on these underpinnings, and is intended to be the premier strategy to empower national and local authorities, as appropriate, through regulatory and financial means to adapt a more extensive and comprehensive DRM posture to prevent the creation of new risks, reduce existing risks and vulnerabilities and secure a sustainable Guyana for all.

Honourable Brigadier (retired) Mark Phillips, MSS
Prime Minister & Minister with Responsibility for DRM
Cooperative Republic of Guyana

MESSAGE FROM THE DIRECTOR GENERAL-CDC

Director General of the CDC:
Lt Col Kester Craig

The Civil Defence Commission (CDC), Guyana's National Disaster Office (NDO), accepts and holds with high esteem its role of stewardship towards the achievement of the Country Work Programme 2021 – 2025. Since 1997, the CDC has held primary responsibility to identify and implement mechanisms for disaster response and mitigation across Guyana; over the years the agency's mandate has expanded to accommodate the global paradigm shift towards risk reduction as a principal strategy to prevent and minimise disaster occurrence and losses.

Embracing the priorities of the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015 – 2030 and the Caribbean Disaster Emergency Management Agency's (CDEMA's) Regional Comprehensive Disaster Management (CDM) Strategy 2014 – 2024, the CDC has aligned its own programmes against these frameworks and has developed an internal theory of change with the overarching aim of reducing social, economic, physical, environmental and psychosocial impacts from hazards in Guyana.

Notwithstanding, the CDC recognises that great efforts and commitment will be required at all levels to attain the outcomes of the developed CWP; these will in turn serve as Guyana's national contributions and measure in global and regional evaluations of our nations' progress towards the targets of these international pledges. The CDC, as such, is committed to maintaining the required partnerships at the local, regional, and international levels to attain the fourteen (14) outcome indicators of Guyana's Country Work Programme (CWP), and more importantly, enhance national disaster resilience.

Sustainable resilience can only be attained if ample attention is given to all phases of the DRM cycle: namely mitigation, preparedness, response, and recovery. Notably, the CDC, recognising that Guyana has had some shortcomings in balancing its efforts to the different phases of the DRM cycle, intends to utilise the CWP to guide the strengthening of identified weak areas and the enhancement of noted strengths towards the implementation of a comprehensive and sustainable risk reduction programme. Monitoring, evaluation and reporting will be strategic and inclusive to provide an accurate and unbiased measure of Guyana's strides to facilitating better understanding of disaster risks among the population, strengthening of mechanisms for risk governance, maximizing and prioritising investments in DRR for resilience, and the enhancement of disaster preparedness for effective response and to "Build Back Better" in recovery.

The CDC acknowledges the efforts and support received by Guyana from CDEMA and the United Nations Office for Disaster Risk Reduction towards the development of the CWP and wishes to signal the country's commitment to continued partnership with these and other entities in the joint bid towards making the globe a safer and more resilient home for all humanity.

Lieutenant Colonel Kester Craig
Director General
Civil Defence Commission

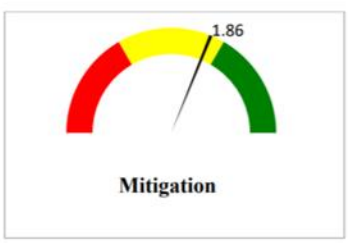
EXECUTIVE SUMMARY

The results-based, climate-smart 2021- 2025 Guyana Country Work Programme (CWP) is a systematic way to address Comprehensive Disaster Management (CDM) and Disaster Risk Reduction (DRR) at the country level, while fulfilling Guyana's commitments to the regional CDM Strategy 2014 – 2024 and the international Sendai Framework for Disaster Risk Reduction (SFDRR) 2015 – 2030, Sustainable Development Goals (SDGs), among others. In this regard, the Guyana CWP follows the regional CWP methodology, in which the country identified the Caribbean Disaster Emergency Management Agency (CDEMA) and the United Nations Office for Disaster Risk Reduction (UNDRR) as principle partners in the development process.

The Guyana CWP was developed through a multi-sectoral consultative process and serves the principles of CDM which cuts across various sectors. This multi-sectoral approach aims to foster a whole of government approach while reinforcing linkages among disaster risk, climate change, and sustainable development. The full document is comprised of three main parts. Part I reviews the context of Guyana and the normative framework, along with the CDM audit summary and gap analysis. Part II presents the methodology of the CWP, the actors involved, a logical model summary, the CWP summary and a proposal of recommendations for future improvement of the CWP process. Finally, Part III presents an overview of the systematisation of the Performance Monitoring Framework (PMF) and a proposition of a monitoring and evaluation mechanism. Annex A1 CWP PMF LogFrame is an essential part of the document as it functions as the main guiding tool for actors involved in implementation and monitoring.

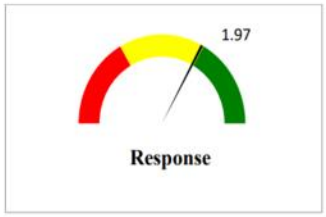
The results of the CWP were developed based on findings that emerged from a 2018 CDM Audit. The 2018 CDM Audit was conducted utilising a consultative, multi-sectoral process among 16 national agencies with the support of CDEMA. The audit process followed the guidelines for CDEMA Participating States in alignment to the Sendai Framework for Disaster Risk Reduction (SFDRR). This examined all four (4) phases of disaster management (mitigation, preparedness, response and recovery). The report identified several strengths and gaps across these phases and made some recommendations for areas that should be prioritised.

The audit tool provided scores ranging from 1 to 3, from unsatisfactory (1) to excellent (3): 1 = the standard is not met (includes areas not addressed at all or now being initiated); 2 = the standard is partly met (beyond the point of initiation but not final); 3 = the standard is entirely met (completed, available). Using these criteria, the results across the phases of disaster management are presented below:

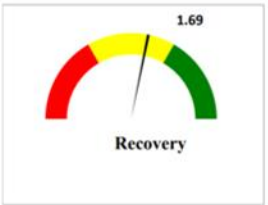


Components	Scores
Risk Identification	1.75
Non-Structural Mitigation	1.50
Structural Mitigation	2.75
Risk Financing	1.48

Components	Scores
Governance	1.80
Education & Information	1.52
Training & Exercises	2.25
Warning & Alerts	2.20
Finance & Administration	1.75
Community Resilience	2.83



Components	Scores
Activation	1.72
Resources	2.09
Immediate Rehabilitation	2.00
Deactivation	2.08



Components	Scores
Reconstruction and Repair of Damaged Infrastructure	1.56
Macroeconomic and Budget Management	2.50
Revitalisation for Affected Sectors	1.00

Figure 1: Dashboard of Guyana's Results of the CDM Audit

The gaps identified in these areas were then translated into five (5) priority programming areas, namely:

i. Institutional Strengthening for CDM
ii. Preparedness and Response Capacity
iii. Strengthening Capacity for DRR
iv. Knowledge Management Systems
v. Recovery – Rehabilitation & Reconstruction

As the region entered the COVID- 19 pandemic during the preparation of the final document, an additional priority area (vi), Biological Hazards and Pandemics, emerged. It is with this guidance that the CWP's principals are hinged.

These five (5) priorities were further divided into 55 short-term results (Outputs) and 14 medium-term results (Outcomes), to achieve the long-term result (Impact) of "Improved quality of life for all Guyanese through enhanced resilience to impacts and consequences of key hazards inclusive of climate related risk."

The monitoring of the CWP is based on the key indicators adapted from the regional Basket of Indicators and systematised to the PMF. The Technical Advisory Committee (TAC) of the National Disaster Risk Reduction Coordination Platform will function as an expert working group for the CWP monitoring and oversight. The TAC will be coordinated by the Civil Defence Commission (CDC) that functions as a secretariat for the platform and the lead implementing entity for the CWP.

LIST OF ACRONYMS

CCA	Climate Change Adaptation
CDEMA	Caribbean Disaster Emergency Management Agency
CDEMA CU Unit	Caribbean Disaster Emergency Management Agency Coordinating
CDEMA PSs	Caribbean Disaster Emergency Management Agency Participating States
CDM	Comprehensive Disaster Management
CSSI	Caribbean Safe School Initiative
CWP	Country Work Programme
GIS	Geographic Information System
LCDS	Low Carbon Development Strategy
LFA	Logical Framework Analysis
LLCS	Low-Lying Coastal States
NDC	Nationally Determined Contributions
NDO	National Disaster Organisation
NEOC	National Emergency Operations Centre
OIEWG	Open-Ended Intergovernmental Expert Working Group on Indicators and Terminology Relating to Disaster Risk Reduction
PMF	Performance Monitoring Framework
RBM	Results Based Management
RCP	Regional Coordination Plan

RRM	Regional Response Mechanism
S.A.M.O.A.	Small Island Developing States Accelerated Modalities of Action
SDGs	Sustainable Development Goals
SFDRR	Sendai Framework for Disaster Risk Reduction
SIDS	Small Island Developing States
UN	United Nations
UNDRR	United Nations Office for Disaster Risk Reduction
UNFCCC	United Nations Framework Convention on Climate Change

INTRODUCTION

Background

The Caribbean Disaster Emergency Management Agency (CDEMA) is the regional body in the Caribbean responsible for harmonising work related to Disaster Risk Management (DRM) among its 19 Participating States (PSs), which includes Guyana. In keeping with Comprehensive Disaster Management (CDM), the regional integrated risk management approach, alignment has been undertaken with the international Sendai Framework for Disaster Risk Reduction (SFDRR) 2015 -2030, reinforcing the focus of DRM in the Caribbean not just from one primarily driven by response to events, but to one grounded in risk reduction. This paradigm shift in the approach to risk management, necessitates more proactive and strategic planning to stimulate the necessary support by decision makers.

CDEMA in consultation with Governments and other stakeholders developed and promotes the practice of CDM since 2001, as an innovative approach for reducing the risk and loss related to hazards of natural or technological origin, through greater attention to prevention/mitigation, preparedness, response, and recovery (the Disaster Management Cycle). CDEMA encourages institutional capacity building, enhancing knowledge management on CDM, sector mainstreaming of CDM, and strengthening community resilience. The CDM approach considers all hazards, all peoples and sectors and identifies four (4) cross-cutting themes; climate change, information and communications technology and environmental sustainability, that must be integrated into all CDM programmes.

As part of the blueprint for advancing CDM, the multi-year CDM Country Work Programme (CWP) was developed as a strategic plan for organizing CDM implementation at the national level. It seeks to synergise national developmental priorities with regional, international goals, and commitments towards climate change, sustainable development and disaster risk reduction. Guyana's CWP is aligned to priorities 1-4 of the SFDRR and the CDM Strategy 2014-202, as its PMF draws directly from a basket of indicators which were derived from the two (2) frameworks. Further goals 1, 11 and 12 of the SDGs are strongly reflected in the CWP, therefore making it a tool to aid agencies in the realization of commitments and targets across several international regional reporting frameworks.

Moreover, The CWP organises work around each of the phases of the Disaster Management Cycle, facilitates key stakeholder and sector contribution and is the national CDM road map, aimed at reducing loss and vulnerability due to hazard events (elaborated in the methodology section).

At the same time, the sectoral planning needs to be clearly linked to the contingency planning to provide constant lessons learned between DRR and emergency preparedness and response. A systemic approach to dealing with risk is key to reducing existing and preventing future risk in multi-sectoral contexts. Clear linkages of CDM specifically to climate change adaptation (CCA) and sustainable development are essential in the comprehensive approach, as well as the linkage to risk financing as an enabling factor. This integration must guide implementation.

How to Use the CWP Document

This CWP covers the timeframe of 2021 – 2025 and is used as a mechanism for effective monitoring, reporting and evaluation of the overall CDM strategy at the national level. This document is a key output of the CWP process and captures the results of the CWP process implemented in Guyana. As such, this is an important tool to guide the CDC and other key sectoral stakeholders, to develop or update national DRM policies and strategies and to plan and implement CDM activities for a resilient Guyana. The country specific Performance Monitoring Framework (PMF) is one of the critical tools constructed during the CWP process and is featured in this document. It is intended to serve as the main practical tool for participating actors in implementation and monitoring.

PART 1:

THE CONTEXT AND NORMATIVE FRAMEWORKS

THE NORMATIVE FRAMEWORKS

Given the potential benefits of integrated approaches to CCA, sustainable development and DRR, the CWP has integrated national, regional and international agendas into all Programmes. Common themes, scopes and objectives are essential in national, regional and international agendas, therefore setting the stage for a coherence approach to DRR. These documents should be considered to reinforce each other in terms of their implementation.

National Level

Low Carbon Development Strategy, 2013

The Low Carbon Development Strategy (LCDS) sets out Guyana's priorities for sustainable development of in a low carbon economy. The strategy aims to achieve greater economic and social development along a low carbon path.

Among its priorities, the strategy identifies the reform of sectors dependent on the extractive industries so as to achieve sustainable mining and forest practices. Moreover, another priority of the strategy is the protection against climatological hazards and investments in climate resilient infrastructure. The LCDS also identified the rehabilitation of infrastructure for flood management as Government highest priority.

Some of the programmes identified to implement these priorities are:

- Revamping of Guyana's Early Warning Systems
- Innovative financial risk management and insurance measures for resiliency
- Diversification of Guyana's large agriculture sector into flood tolerant crops

Together aforementioned priorities and programmes represent key pillars of DRM and aligns with priorities three (3) and four (4) of the Sendai Framework for Disaster Risk Reduction. Additionally, Regional Outcomes 4.3 and 4.4 of the CDM Strategy 2014-2024 for CDEMA PSs are captured amongst these priorities.

National Disaster Risk Management Policy

Guyana's National Disaster Risk Management Policy details the national priorities for DRM with a focus on the integration of Climate Change Adaptation and a key tenet for reducing disaster risk. The policy outlines the international frameworks that underpin Guyana's CDM approach and provides a precursory glance at the institutional arrangements for the prioritization of DRM across all sectors. Key among the areas highlighted in the policy were the cross cutting them of gender equality and a human rights based approach to DRM.

Action Plan for the Control and Management of Severe Acute Respiratory Infection (SARI) 2019

Although a preparedness and response plan specific to the Novel Coronavirus (COVID-19) has not yet been finalised for Guyana, the Action Plan for the Control and Management of Severe Acute Respiratory Infection (in addition to other policies and protocols of the Ministry of Health) is being used as the key guidance documents in the country's response to the pandemic. The Action Plan, which is an extension on the Ministry of Health' National Influenza Pandemic Preparedness Plan (July 2010), identifies three (3) critical objectives towards the management of such respiratory illnesses, namely:

i. To assess and monitor the level of risk/ threat of outbreak of SARI in Guyana
ii. To coordinate, clinical response to the health emergency
iii. To ensure outbreak investigation team is adequately deployed and information relayed in a timely fashion for effective decision making

At present, Guyana's COVID-19 response is coordinated by an established COVID-19 Task Force, a multi-agency platform with the responsibility of guiding policy and technical interventions across Guyana to prevent and minimise the spread of COVID-19. The Task Force is chaired by the Prime Minister, who is also holds the responsibility of Minister overseeing Disaster Risk Management (DRM) in Guyana.

Regional Level

Small Island Developing States Accelerated Modalities of Action [S.A.M.O.A.] Pathway

The S.A.M.O.A. Pathway represents ambitious commitments on the topic of vulnerability and resilience, made by 115 leaders of Small Island Developing States (SIDS), at the Third International Conference, Samoa in 2014. The SAMOA Pathway recognises the unique challenges that SIDS face, particularly related to climate change, and articulates sustainable development pathways and aspirations, to support SIDS. Six (6) areas have been emphasized including: sustainable economic development, climate change and DRM, sustainable energy, social development, oceans and seas, food security and waste management.

The CDM Strategy and Programming Framework 2014 – 2024

The CDM Strategy 2014 – 2024 is an integrated risk management approach which focuses on all hazards including climate-related risks, all sectors and all people whilst recognising the critical link between DRM and sustainable development. The CDM Strategy serves as a guide for continued progress in DRM in the Caribbean and is supported by four (4) Priority Areas which include: Institutional Strengthening, Knowledge Management to

support evidence-based decision making, Mainstreaming of CDM in Key Sectors and building Community Resilience (Figure 2).

y

Figure 2: Results Framework for the Comprehensive Disaster Management Strategy 2014 - 2024 with Cross-Cutting Themes

The CDM Strategy represents an evolution from a reactive disaster office, with a focus on individual hazards, to an anticipatory, shared responsibility strategy, which views hazard exposure as an ongoing process that aims to reduce vulnerability across all sectors. The strategy is facilitated by a Performance Measuring Framework (PMF), comprising of a set of measurable, verifiable targets and indicators, referred to as Caribbean 2024.

It is also recognised that the Caribbean region is a microcosm of a larger global geo-political and inter-connected environmental landscape where its member countries are signatories to numerous international and United Nations (UN)-based conventions, treaties, and platforms. The importance of promoting DRR efforts on the international

and regional levels as well as the national and local levels has now truly been clearly accepted and recognised over the past few years as demonstrated in the number of key multilateral frameworks and declarations that have been implemented or are now in operations. In that context, implementation of the CDM Strategy is aligned with Agenda 2030 - the SFDRR, the Sustainable Development Goals (SDGs), the Paris Agreement on Climate Change as well as Rio+20. At the regional level, the CDM Strategy is closely aligned with the CARICOM Strategic Framework, the CARICOM Single Market and Economy (CSME), the Organisation of Eastern Caribbean States (OECS) – St. George's Declaration of Principles for Environmental Sustainability and the Regional Framework for Achieving Development Resilient to Climate Change.

The Caribbean Resilience Framework

Following the unprecedented 2017 hurricane occurrences and impacts in the Caribbean region and the recognition of the region's vulnerability to a variety of hazards, the Heads of Government of the Caribbean Community at their Twenty-Ninth Inter-Sessional Meeting (February 2018, Haiti) decided to revisit the region's resilience agenda in this context. This resulted in a consultative process involving CARICOM regional institutions and Participating States and resulted in the development of the Caribbean Resilience Framework which is aligned to the CDM Strategy and is based on five (5) pillars of resilience along with their foundational and reinforcing elements. The five pillars of resilience are:

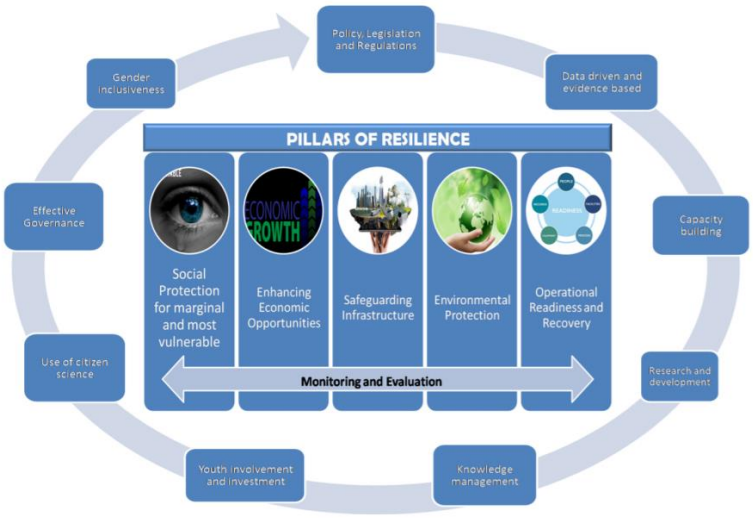


Figure 3: Pillars of Resilience of the Caribbean Resilience Framework

Pillar I – Social Protection for the Marginal and Most Vulnerable

Pillar II – Enhancing Economic Opportunity

Pillar III- Safeguarding Infrastructure

Pillar IV – Environmental Protection

Pillar V- Operational Readiness and Recovery

The Caribbean Resilience Framework was approved at the Thirty-Ninth Regular Meeting of the Conference of the Heads of Government of the Caribbean Community, July 4-6, 2018, Montego Bay. It was also discussed at the UNDRR Global Platform 2019 in Geneva

Switzerland and endorsed as an applicable pathway for Small Island Develop States (SIDS) and Low-Lying Coastal States (LLCS).

CDEMA Contingency Plans

Strengthened institutional arrangements and policy coherence are priority areas of both CDM and the SFDRR, as well as a requirement for CWP implementation, to strengthen resilience. Recognising Caribbean hazard exposure, vulnerability and capacity, CDEMA has coordinated a Regional Response Mechanism (RRM) as the vehicle to deliver timely and coordinated responses to affected CDEMA PSs. The RRM consists of several contingencies, continuity and response guidance documents (plans, protocols, policies, guidelines) which outline immediate and coordinated response mechanisms at the regional level, in response to disaster events affecting CDEMA PSs.

The Regional Coordination Plan (RCP) was established to facilitate the RRM, in support of National Plans. The RCP requires that National Plans include procedures for triggering the RRM and addresses the key emergency response functions. Under the RCP, several hazard specific plans and protocols have been developed for severe tropical weather systems, earthquakes, volcanic eruptions, oil spills, technological and chemical events, pandemic influenza, cholera and recently COVID-19. CDEMA Coordinating Unit's (CU) Contingency Plan sets out procedures for readying the Agency for executing its coordination and management functions.

Sectoral Regional Declarations

Like the previous regional frameworks, there are other regional engagements on which Guyana has committed to advance sectoral agendas. The Caribbean Safe School Initiative (CSSI) which was launched in April 2017 during the First Caribbean Ministerial Forum on School Safety, is one of these. The CSSI is the suggested framework to advance school safety in the Caribbean. The initiative is the Caribbean's contribution to the Worldwide-Initiative on Safe Schools (WISS) and is a partnership for advancing safe school implementation at the national level among Caribbean countries. Ministries of Education are now leading the implementation of a collectively agreed upon roadmap, which is supported by international, regional and national partners.

International

Sustainable Development Goals (SDGs)

The 2016 SDGs comprise 17 goals and 169 global targets, in which UN Member States have agreed to achieve by the year 2030, in the quest to achieve social, economic and environmental sustainability (Figure 3). Each goal has numerous associated targets and a set of indicators used to measure progress. There are several goals and targets that can inexplicitly speak to DRR and building resilience, for example the targets related to promoting education for sustainable development, sustainable management of water, ensuring healthy lives building, building resilient infrastructure, resilient cities, climate change and upgrading education facilities, among others. The document pledges that no one will be left behind highlights the universal and collaborative nature of the process.

Figure 4: The Sustainable Development Goals

Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030

The SFDRR 2015-2030 is the global roadmap for reducing human and economic loss as a direct result of disasters. The Framework represents a paradigm shift from managing disasters to managing current and future risks, with resilience-building as the primary target to be reached by 2030. The adoption of the SFDRR articulated the need for improved understanding of risk in all its dimensions and created new requirements and new opportunities for those building societal resilience to environmental and technological shocks. Over the last ten (10) years, disasters continued to exact a heavy toll worldwide, with more than 1.5 billion people affected and total economic losses of more than USD 1.3 trillion. The exposure of persons and assets in all countries increased faster than vulnerability decreased, thus generating new complex risks and a steady rise in overall disaster-related losses and damage and, in turn, undermining development gains. The impacts of these reduced gains are already being felt.

Figure 5: Global Targets of the SFDRR 2015-2030

Target E of the SFDRR aims to ***increase the number of countries with national and local DRR strategies by 2020***. The achievement of this target is conducive to achieving any of the other targets by 2030. The completion of CWPs that meet these criteria fulfills Sendai Target E. Sendai Framework's 'Words into Action' guidelines proposes a ten-step approach to the development of a national DRR strategy that is adaptable to country-specific contexts, thus facilitating the achievement of Target E; this approach has been harmonised with the CDM Strategy.

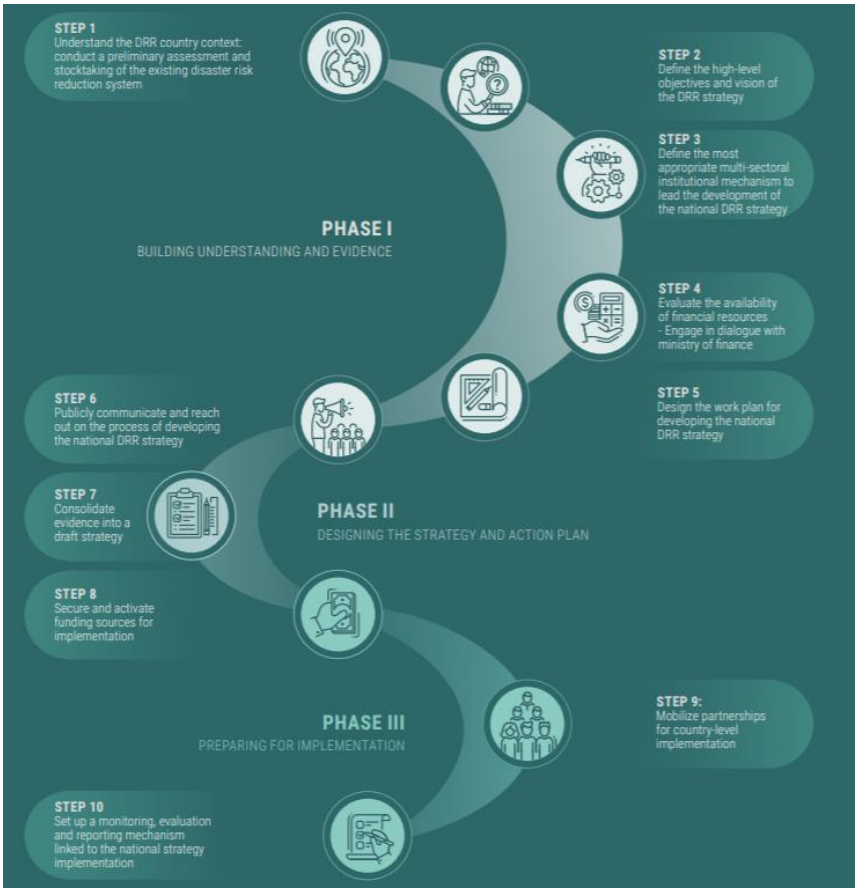


Figure 6: SFDRR's 10 Step Approach to Developing a National DRR Strategy

Notably, there is recognition in the proposals for both the SDGs and the SFDRR that their desired outcomes are a product of complex and interconnected social and economic processes with overlap across the two agendas. As a reflection of this, important synergies exist between reporting on the two frameworks. Monitoring of the Sendai Framework is intended to complement monitoring of SDG indicators, as several SFDRR were also adopted as SDG indicators, as shown in the table below:

SDG Indicators		SFDRR Indicators
Goal 1. End poverty in all its forms everywhere		
1.5.1	Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	A1 and B1
1.5.2	Direct economic loss attributed to disasters in relation to global gross domestic product (GDP)	C1

1.5.3	Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030	E1
1.5.4	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	E2
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable		
11.5.1	Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	A1 and B1
11.5.2	Direct economic loss in relation to global GDP, damage to critical infrastructure and number of disruptions to basic services, attributed to disasters	C1, D1, D5
11.b.1	Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030	E1
11.b.2	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	E2
Goal 13. Take urgent action to combat climate change and its impacts		
13.1.1	Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	A1 and B1
13.1.2	Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030	E1
13.1.3	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	E2

Table 1: Complementary Monitoring of SDG and SFDRR Indicators

Open-Ended Intergovernmental Expert Working Group on Indicators and Terminology Relating to Disaster Risk Reduction (OEIWG)

The OIEWG was comprised of experts nominated by States, for the development of a set of indicators and terminology to measure global progress in the implementation of Sendai Framework, in coherence with the work of the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs). In the follow-up to the adoption of the SFDRR, countries, through the OIEWG, adopted 36 indicators for measuring the 7 global Sendai targets. The report on recommendations of the OIEWG was subsequently adopted ny the UN General Assembly in February 2017.

Major accomplishments of the OIEWG include:

- The development of indicators to measure global progress in the implementation of the Sendai Framework;
- The update of terminology on DRR;
- The United Nations International Strategy for Disaster Reduction Secretariat's (UNISDR) (former UNDRR) technical follow-up to support Member States in monitoring activities.

Paris Agreement

The Paris Agreement is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC), dealing with greenhouse-gas-emissions mitigation, adaptation, and finance. The Paris Agreement was adopted at the twenty-first session of the Conference of the Parties in December 2015, and often referred to as the cornerstone of global climate policy and the battle against climate change. Guyana became a signatory to this Agreement in 2016. The Paris Agreement's central aim is "to strengthen the global response to the threat of climate change by limiting the global average temperature increase to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C." Reaching this target would avoid the most catastrophic impacts of climate change.

However, understanding that at least some level of warming is inevitable, the signatory countries, including Guyana, also recognise the need to scale-up adaptation efforts. Under the Paris Agreement, all countries must undertake nationally determined contributions (NDCs), in response to climate change. Signatories have also agreed to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change, in contribution to sustainable development.

CONTEXT OF THE COUNTRY, RISK PROFILE AND RISK FINANCING

Context

Demographic

Guyana, being the fourth (4th) least populated territory in South America and second (2nd) least populous sovereign state on the continent, boasts a population of approximately 747,884 persons. Guyana's population is fluctuating marginally, with a growth rate of between 0.34 to 0.4 percent per annum in the last four (4) decades (Bureau of Statistics Guyana, 2012).

With a population density of 3.5 persons per square km, Guyana is among the least populated territories within the Latin America and Caribbean Region. The country is demographically distinguished by a Regional distribution which the vast majority of Guyanese (approximately 89.1 percent) residing along the Low Coastal Plain, the smallest physical geographic area of the country (Bureau of Statistics Guyana, 2012). Although the hinterland and highland Regions are less densely populated, they represent the highest average number of persons per household, recorded at 4.7 persons per household, compared to the national average of 3.6 (Bureau of Statistics Guyana, 2012).

Guyana's population comprises six (6) main heterogeneous ethnic groups: East Indians, Africans, Amerindians, Portuguese, Chinese, and Europeans, in order of population share. The third largest ethnic group in Guyana, however, is persons of mixed ethnicities, an arguably 7th race (Bureau of Statistics Guyana, 2012). These demographics are significant when assessed for geographic distribution as Amerindians largely inhabit the hinterland Regions while the other six (6) groups represent the largest inhabitants of the coast (Ramraj, 2001).

Geography

The Cooperative Republic of Guyana is located to the North-Eastern coast of South America, lying between latitudes of 1° and 9° N. and 56° and 62° W. longitudes. Bordered by Suriname to the East, Venezuela to the West and Brazil to the South, Guyana is considered a coastal state with 430 kilometres on the country stretching against the Atlantic Ocean. Classified as highly forested, 18.4M hectares of Guyana's mass are tropical forests (Government of Guyana, 2018).

With a total land area of 214,970 square kilometres, Guyana is divided into three (3) counties, Essequibo, Demerara, and Berbice. Administratively, these counties span 10 Administrative Regions which are further divided into Neighbourhood Democratic Councils (NDCs) and Municipal Councils called Mayor and Town Councils (M&TCs). For geographic/topographic purposes, Guyana is further divided into four (4) natural

Regions; the Low Coastal Plain, the Hilly Sand and Clay Region, the Hinterland Forest and the Rupununi Savannah.

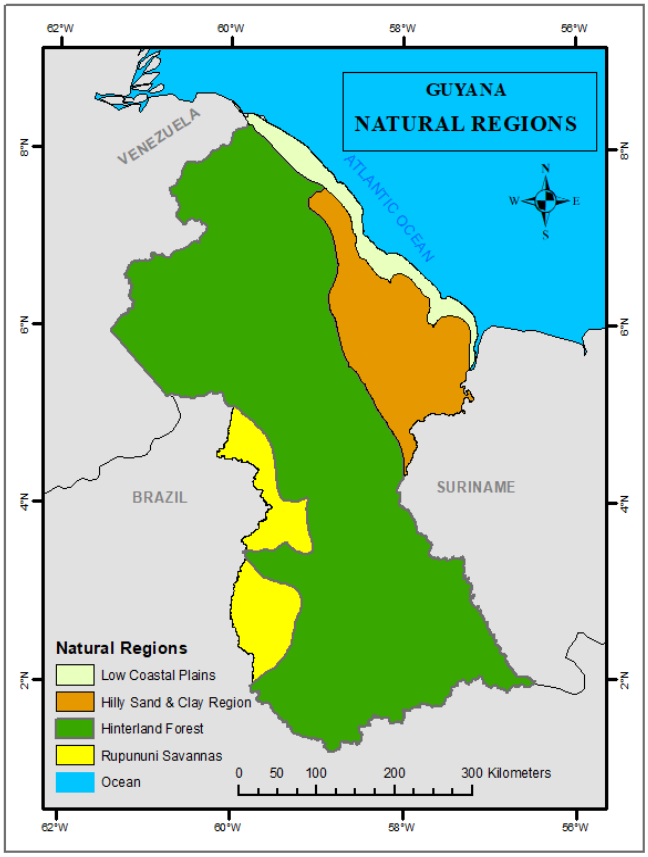


Figure 7: Map of Guyana showing Natural Regions

Climate

Guyana's climate is considered tropical with two (2) wet and two (2) dry seasons which occur annually. The dry seasons typically occur during February to March, and September to October, while the wet seasons typically occur during mid-April to mid-August and December to February. The wet seasons are influenced by the Intertropical Convergence Zone (ITZ) which renders the country a relatively wet and warm tropical climate.

Further, Guyana experiences high rain variability in terms of both time and spatial distribution (Shaw, 1987). Annual rains average between 2,200 mm on the coast to over 2,800 mm inland and can exceed 4,000 mm in mountainous areas. The coastal Regions experience rain for an average of 200 days per year with the Western parts of the country experiencing longer wet seasons (United Nations Institute for Training and Research, 2019).

Mean annual air temperatures range from 25°C to 27.5°C over most of Guyana, except for the cooler highland Regions where temperatures range between 20◦C to 23°C (Guyana Lands and Surveys Commission, 2013). Humidity levels are relatively high with an average of 80 percent and above for the coast while the savannahs experience levels of about 70 percent and rainforest areas can reach 100 percent (Government of Guyana, 2018).

Hazards

Guyana is affected by several hazards, with the following being named as the most predominant and frequently occurring within the country:

Meteorological and Hydrological Hazards

Guyana is vulnerable to a variety of meteorological and hydrometeorological hazards, with flooding and droughts being the most commonly occurring. Notably, flooding is often referred to as the primary hazard affecting the country with varying degrees and types being experienced on an annual basis. To date, the floods of January 2005 remain the country's most disastrous event caused by a natural hazard. Torrential rains caused catastrophic flooding along the coastal region affecting approximately 290,000 persons (close to 50% of the country's population) and resulting in total damages estimated at US$465 Million (close to 60% of the country's GDP) (Global Facility for Disaster Reduction and Recovery).

Regional risk assessments have prioritised flooding in all nine (9) Administrative Regions where these have since been conducted, and the country's low-lying Coastal Plain is particularly susceptible to flooding due to its topography.

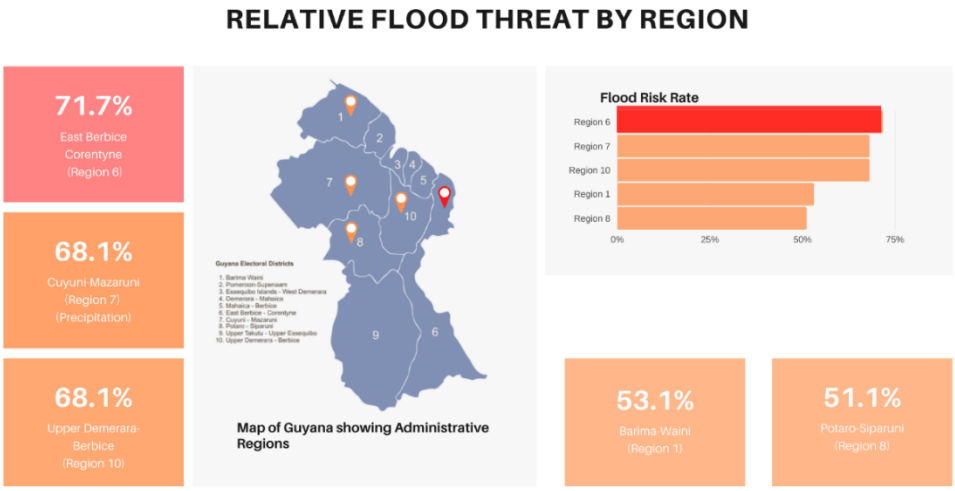


Figure 8: Relative Flood Threat by Region (Source: Regional Risk Assessments, CDC)

The most severe floods within the country usually occur across the Low Coastal Plain following periods of heavy precipitation; this typically occurs during the country's two (2) wet seasons. Flooding is also experienced due to breaches and overtopping of the sea defences, and because of trans-boundary interactions with neighbouring Brazil (Region 9).

Drought is the second hydrometeorological hazard commonly occurring in Guyana; researchers in various meteorological organisations in the Americas and the Caribbean have correlated the occurrence of droughts in several countries in the Region, including Guyana, to the El Niño phenomenon. The savannahs of Region 9, due to the large expanse of grasslands, are most susceptible to droughts and the impacts of prolonged dry spells.

Even though Guyana is not located in the North Atlantic hurricane zone, some parts of the country are sometimes affected by high winds and sea surges as a result of meteorological disturbances in the Atlantic Ocean (Civil Defence Commission, 2013). In most areas, communities are minimally affected by the occurrence of these winds, with occasional cases of felled trees, collapse of houses and displacement of roofs.

Forest or wildfires (sometimes referred to locally as bushfires) are also experienced, predominantly in the savannahs of Region 9 and agricultural fields in coastal regions during dry periods where vegetation is set alit either naturally due to intense heat, lightning or friction.

Societal Hazards

Fires are a commonly occurring societal hazard in Guyana. Urban fires (domestic fires)

intentional and accidental ignitions. Many houses and businesses, especially across the Coastal Region, are constructed of wood, and therefore, are more susceptible to rapid combustion and severe damage which resulted from the fire.

Chemical Hazards

Mining, which is one (1) of Guyana's main economic activities, is a sector which has been assessed to pose several hazards for those involved and the areas where these activities are conducted. Chemical hazards are the main threats linked to the mining sector, due to the high possibility of spill of pollutants such as mercury and cyanide which, despite being restricted, are sometimes used in different stages of small, medium and large-scale gold and diamond extraction. Both cyanide and mercury, in addition to several other chemicals, are pollutants that pose a high risk to human health and the environment; contamination from mining activities are a major source of water pollution, especially in river-dependent communities situated near mining activities. Notably, mining activities, which are primarily localised to the interior Regions one (1), seven (7) and eight (8), also often result in mining accidents such as pit collapses are also hazards of concern related to the mining sector; pit collapses due to unsafe construction of mine faces and limited

use of safety gear by workers are large contributors to mining accidents and deaths in these Regions.

Hazardous material spills are also related to the agricultural sector in Guyana, as the intensive use of chemicals in agriculture oftentimes affects the water quality of aquifers and, in turn, impacts human health.

Oil Spills or oil pollution has been linked with the mining and timber industries in the interior Regions of Guyana where these activities are prominent. Historically, mine dredging operations and spillage through negligence during small and medium scale gold mining were the primary concern with regards to this hazard, however the threat of oil spill has drastically increased in recent times with the commencement of oil and gas exploration and extraction offshore Guyana. Oil and gas exploration activities were initiated in 2008, and production commenced in December 2019. Comprehensive risk analyses are yet to be done to assess the areas most at risk for impacts due to oil spill from offshore activities, however preliminary data highlights the Low Coastal Plain and the Administrative Regions contained therein, as potentially at-risk areas to the impacts of an offshore oil spill.

The movement of hazardous materials to and from shore also has the potential to result in spills which can impact parts of Guyana.

Biological Hazards

Various forms of biological hazards (biohazards) are prominent in Guyana, and these largely increase the risk of impacts to the health of living organisms, primarily that of humans. The main biological hazards affecting Guyana are related to vector and waterborne diseases such as gastroenteritis, malaria, dengue, leptospirosis, and the chikungunya virus. The prevalence of these biohazards is largely as a result of poor hygiene and environmental conditions and practices, including improper solid waste management, and water quality. Notably, improper waste disposal is a major concern in the towns and capital city of Georgetown where it largely contributes to blockages in Guyana's drainage system and affects runoff of water during periods of heavy rainfall or high tides.

Moreover, the ongoing pandemic of Coronavirus disease 2019 (COVID-19), caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is one of the more worrying biological hazards currently affecting the country. Since the confirmation of Guyana's first positive case in March 2020, COVID-19 has resulted in the death of 154 persons of the 5,839 confirmed cases locally (as reported on December 11, 2020 by Ministry of Health). Like many other countries, COVID-19, which is primarily spread through contact with an infected person and respiratory droplets, has led to disruption in activities, unprecedented disease burden, increased healthcare costs, and notable economic impacts across Guyana.

With agriculture as one of the main economic activities, Guyana is also affected by biological hazards in the form of crop diseases and pests, in addition to epidemics in livestock. Typical diseases affecting livestock include rabies spread by bats, botulism, bovine spongiform encephalopathy, equine encephalomyelitis, and in the case of poultry hypo glycaemia, coccidiosis, fowl pox, and parasitism (Civil Defence Commission, 2014).

Factors that Contribute to the Guyana's Vulnerability

Climate Change Threats

Historically, hazard impact of a significant nature in Guyana is largely associated with climatological events, particularly rains and tidal surges. This is indicative of the country's vulnerability to variations in climate. While this is so, Guyana's Second National Communication to the UNFCCC presents concerning forecasts for increased temperatures, increased rains during the wet seasons and less precipitation during dry seasons. Further, sea level is expected to rise in the Region which concerns Guyana.

To be exact, the forecasts made in the Second National Communication indicate that a more than one (1) meter rise in sea level should be expected within the next century. Moreover, the mean air temperature is expected to increase by 2.4◦C by the 2060s and rainfall reduction and increase in the wet and dry seasons are projected to be 34 and 20 percent, respectively, in the next century (Government of Guyana, 2018).

Guyana's high exposure to climate change events coupled with its vulnerable low-lying coast requires careful consideration and deliberate action for reducing vulnerability.

The threats of climate change are one of the most significant contributors to Guyana's vulnerability. The projected effects of climate change include a globally averaged surface temperature increase of 1.4 to 5.8 °C over the period 1990 to 2100, which would, in turn, result in higher sea levels due to thermal expansion. Increases in sea levels will further increase vulnerability of the low-lying coastline, and intensify impacts of flooding, erosion and salt-water intrusion.

Climate change is also projected to cause changes in weather patterns, with hydrometeorological phenomena increasing in intensity and frequency. Floods and droughts, therefore, are expected to intensify increasing the destructive capacity of these phenomena affected areas across Guyana. Evidence is already indicating that forest fires are increasing as a result of higher temperatures and especially heat waves, in combination with greater water stress.

Limited Physical Resources and Systems

There are several notable limitations in the physical infrastructure across Guyana which contributes significantly to the country's vulnerabilities. The main mitigative measure employed for sea defence along the coastline are seawalls, the construction for which commenced in the 1800s. Many of these structures, therefore, are over one hundred (100) years old, requiring constant upgrading, maintenance and repairs.

The average gradient of the main rivers in Guyana is only 0.02 percent; this causes drainage throughout most of the country to be poor, with drainage by gravity being only possible during low tide. As a result, it was necessary to resort to drainage pumps in many areas, which require heavy financial investments to maintain and operate (FAO, 2015).

Limitations in land use planning (due to the need for a more comprehensive National Land Use Policy, and Planning System) and limited enforcement of building codes have resulted in ad hoc and unstandardised development in many areas, with buildings lacking the infrastructural requirements to be able to withstand or prevent hazard impacts. Additionally, there is a significant number of abandoned or damaged structures which pose hazards as projectiles during heavy winds and provide conditions for breeding of vectors such as rodents (Civil Defence Commission, 2013). The number of fire hydrants across the country are grossly inadequate. Many areas are without hydrants altogether, while many of the existing fire hydrants are inoperable.

Approximately ten percent of the country's population lives in severely remote areas (Sekhani, 2017), many with limited access and little to no communication with other areas of the country. Vulnerability is high in these areas, as infrastructural development and systems, including drainage, roads and housing are limited.

High Dependency on Weather Sensitive Resources and Livelihoods

Agriculture, which is one of the largest sectors in Guyana, is highly sensitive to the variable elements of weather and climate. A large percentage of the country's population, therefore, is reliant on the production of crops and livestock for income, particularly in those areas prone to floods and droughts. These communities, therefore, are highly vulnerable to the impacts of these, in addition to biological hazards which may negatively impact production.

Poverty

Poverty levels in Guyana are relatively high, with more than 36 percent of Guyanese (or almost 4 in 10 people) living in poverty and surviving on an income of US$1.75 per day, according to the Guyana Poverty Reduction Strategy: 2011 – 2015 (Sekhani, 2017). High levels of poverty correspond to an inability to meet basic needs and low purchasing power to procure essential goods and services. Poverty-stricken households are usually forced to occupy subs-standard living areas and conditions, including areas of high risk to hazards. Poverty also increases vulnerability as it drastically limits individuals' and households' abilities to implement safety and preventative measures against the impacts of hazards.

Environmental Threats

Environmental threats such as those related to natural resource depletion, environmental degradation and contamination influence and increase vulnerabilities. Further, natural protection systems are being weakened largely through anthropogenic activities; mangrove forests which are a crucial part of the shoreline protection system along the

Coast, for example, are being removed for infrastructural development. Mangrove habitats are also being compromised due large amounts of solid waste littered along the coastline.

Risk Financing

Disaster Risk Finance is a growing discipline that addresses the fiscal impacts and economic losses caused by hazards and supports countries to increase their financial resilience to disasters. Guyana's CDM Audit results revealed that this area is one of the pliable areas for strengthening in the disaster mitigation phase. Some of the existing building blocks such as the requirement for residential insurance as enforced by the banking sector, and national emergency fund mechanisms can be used as a catalyst for more robust financial framework pertaining to disaster risk.

Notably, the audit highlighted that the following measures to reach the SFDRR indicators on financial measures should be prioritised:

- Regulatory framework that allows micro-finance schemes to provide credit in case of disasters.
- A policy to set aside a percentage of the national budget for emergencies.
- Regulatory framework to provide compensation to households, businesses and farmers for disaster loss.
- Regulatory framework for the insurance of private sector against hazard impact.
- Regulatory framework and mechanism for insurance of infrastructure against hazards.

THE ACTORS INVOLVED

The CWP Actors

The CWP development involved many key organisations which reaffirms the inter-sectoral nature work programme. The actors involved spanned public and private sector entities, inclusive of private sector groups such the Private Sector Commission. Agencies identified as critical actors for the implementation of Guyana's CWP include the following:

- Office of The President
- Office of the Prime Minister
- Civil Defence Commission
- Ministry of Finance
- Ministry of Public Works
- Guyana National Bureau of Standards
- Ministry of Local Government and Regional Development
- Ministry of Legal Affairs
- Ministry of Health
- Ministry of Natural Resources
- Ministry of Agriculture
- Ministry of Education

- National Data Management Authority
- Ministry of Human Services and Social Security
- Guyana Lands and Surveys Commission
- Department of Climate Change and the Environment
- Guyana Hydrometeorological Service
- Guyana Red Cross Society
- Rotary Guyana
- Department of Public Information

Disaster Management System

DRM in Guyana is coordinated by the CDC; the CDC was reconstituted under Cabinet Note CP (97) 2:2: in 1997, and entrusted with the following responsibilities:

- To identify disasters according to established criteria and classification
- To produce plans for the Management of National Disasters
- To identify and implement mechanisms for disaster response and mitigation
- To maintain a permanent body, to enhance the national capacity for Disaster Management Services
- To train human resources involved in Disaster response mechanisms f. To educate all levels in the tenets of Disaster response

The CDC is headed by a Director General, and, at present, the agency falls under direct management of the Office of the Prime Minister (as of October 2020). The Prime Minister being the Minister responsible for DRM, holds responsibility for representing DRM issues at the level of Cabinet. The CDC coordinates the National DRR Platform, which is a multi-stakeholder body established in 2015. The Platform underwent a reconstitution in 2018 which saw the identification of a Technical Advisory Committee and a Policy Level Committee, in a bid to position this body as the key technical and policy-driving entity for DRM planning and implementation across all sectors in Guyana.

In 2015, the CDC commenced the development of Regional DRM systems, to build capacities at the local level and to achieve some amount of decentralisation in disaster preparedness and response across the country. The established regional mechanism, which currently exists in nine (9) of the country's ten (10) Administrative Regions, identifies and outlines the responsibilities of a Regional DRM Committee in the implementation of Standard Operating Procedures for DRM, and developed Multi-Hazard Preparedness and Response Plans.

At the National level, the National Emergency Operations Centre (NEOC) is activated by the CDC when necessary to ensure comprehensive and holistic response among stakeholders to large scale emergencies and/or disasters.

The Coordinating Unit for CWP Implementation

Implementation of the CWP will be led by the Technical Advisory Committee of the National Disaster Risk Reduction Coordination Platform. This TAC will function as an expert working group for oversight and monitoring of the CWP implementation under ambits of the CDC which functions as a secretariat of the platform. As the National Disaster Office (NDO) of Guyana, CDC will also be the lead implementing for the CWP.

As such, the TAC in as role of monitoring and oversight will function in keeping with the following two (2) main objectives:

1. Enhanced monitoring, follow-up, and evaluation of the progress of the CWP
2. Increase effectiveness and efficiency of assessment, documentation and reporting of successes, gaps, and next steps in the CWP implementation process

Specifically, the Platform's TAC would perform the functions related to analysis and review of the reports on the CWP implementation, as well as lobbying to ensure adequate buy-in and awareness at the policy level which will ensure the dedication of adequate resources to the CWP implementation.

PART 2: OPERATIONAL

METHODOLOGY

Objectives

The overall aim of the CWP is to establish a strategy and a plan to enhance the country's ability to implement, monitor and report on CDM progress. The objectives of the CWP are to:

i. Establish strategic planning of CDM and DRR for a multi-hazard context, aligned with the corresponding regional and international standards, linked with climate change and development efforts and enabled by effective risk financing
ii. Create the Logical Framework Analysis (LFA) which specifies the short, medium and long-term results and achievements to be derived over the programmatic period
iii. Create the PMF, which sets out standards for measurement of progress and achievements and provides the capacity to report on progress at any given time.

Practical Steps

To achieve CDM among its 19 PSs, CDEMA has adopted and employed the Strategy and Results Based Management (RBM) Framework 2014-2024, as a tool to incorporate CDM into decision-making and planning at the regional, national and community levels. To propel CDM implementation at the national and community levels, CDEMA developed a Blueprint for Advancing CDM at the National Level. The CWP is featured within the Blueprint, and is a programmatically driven strategic instrument, which spans 3-5 years. As a tool, the CWP improves the ability of National Disaster Organisations (NDOs) to monitor and report on a country's capacity to reduce vulnerability due to hazard events.

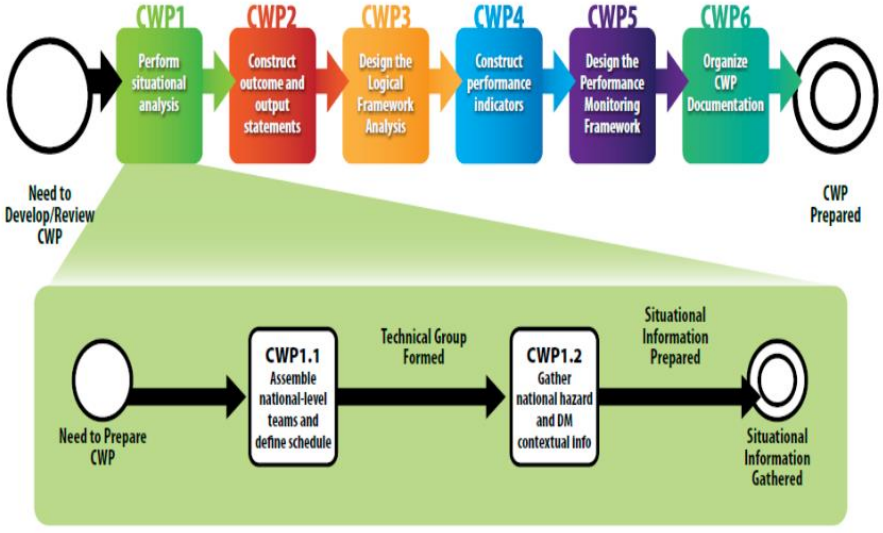


Figure 10: CWP Six Step Process

The process of generating a CWP requires the definition of six (6) phases of development to derive the plan.

The CWP process integrates tools such as the CDM Audit Tool and the Basket of Indicators which strengthen the

CWP and enhances its relevance on the regional and global levels.

The development of a CWP requires the recognition and understanding of eleven important criteria and guidelines based on Sendai Framework for Disaster Risk Reduction 2015-2030 and CDM requirements, shown in Figure 8 below, to ensure that the CWP is aligned with regional and international frameworks.

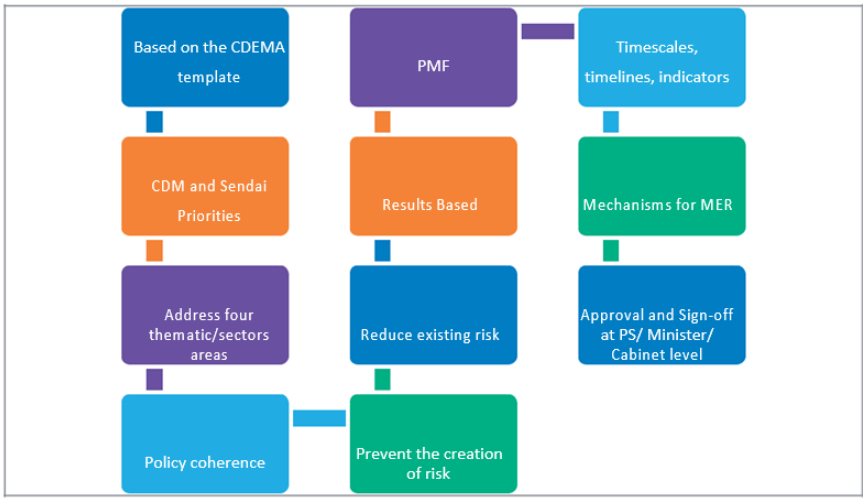


Figure 11: Eleven guidelines and criteria required for the development for CWPs

The methodology of the CWP process for Guyana generally followed the following six (6) logical steps, and were led by CDEMA's guidance documents for the development of the CWP:

Step 1: Perform Situational Analysis

The CDM Audit tool is an essential first step in the development of the CWP and was administered in Guyana, to gauge the level of DRM planning and the institutional support that was embedded in the CDC. The Audit process began with the assembling of a national team to define the CWP schedule, during an orientation meeting with twenty-four stakeholder agencies, conducted by CDC in partnership with UNDRR and CDEMA, on 29 August, 2018. Following the orientation session, CDM Audit Tool questionnaires (Excel sheets) were distributed to stakeholders and they were given three weeks to provide responses to the questionnaire, i.e to complete the tool.

A Country Consultation Verification Workshop was convened on August 29, 2018, with 18 stakeholder agencies representing departments across the government, to present and verify the information provided by the stakeholders. Collation of the stakeholder inputs and the preparation of a draft CDM Audit Report was conducted by CDEMA, through a Consultant, and submitted to CDC for review. The final CDM Audit report was prepared, after the completion of the verification workshop and amendments to the draft document.

Concluding the situational analysis phase, CDC prepared an up-to-date CDM Audit Report and gathered other national hazard and DRM contextual information. This included the review of existing data and analyses of the risk information and existing gaps contained therein, to complement the findings of the CDM audit. This was augmented by a review of strategic documents and priorities emerging from the Country Document, all of which are necessary to inform the determination of the outcomes and outputs. This information was then compiled to prepare the situation document.

Step 2: Construct Outcome and Output Statements
Situational and contextual information (problems, issues and needs) gathered during the initial phase were processed, to generate a suite of the main types of RBM results to be delivered by various stakeholders, over the programmatic period. Outcome statements were drafted first, then translated into output statements.

Step 3: Design the LFA
During Validation Logical Framework Analysis workshops convened on December 16, and 17, 2020 with the Management Team of the CDC and stakeholder groups, the outcome and output statements previously drafted were validated by a larger group of stakeholders beyond the individuals who constructed the outcome and output statements. Feedback on the outcomes of this process was noted by the Consultant responsible for defining and drafting the outcome and output statements. The outcome and output statements were then refined.

The Assumptions, Risks, Mitigation Strategies for the complement of results were also finalised and validated during the Logical Framework Approach Workshops. This process was supported by CDEMA and UNDRR.

Step 4: Construct Performance Indicators
Using the indicator reference sheet, performance indicators were selected from the harmonized basket of indicators (using the CDM Strategy and the Sendai Framework indicators) and drafted, to measure DRM at the national level. This activity was also conducted during the Logical Framework Approach Workshop. The choice of selection was based on the Results Chain previously derived. Technical assistance was provided by CDEMA and UNDRR during the selection process. The performance indicators were then validated and refined based on the feedback.

Step 5: Design the PMF Logframe
Expected results, indicators, baseline data, yearly targets, sources of data, frequency of collection, responsibility for data collection and data collection method, were defined by the CDC in consultation with technical stakeholders and those responsible for measuring

the CWP's performance. A logframe was administered to capture this information and a first draft was constructed during the August 2018 CWP Development Workshop. A validation meeting was subsequently convened with the CDC, CDEMA and UNDRR for thorough assessment.

Step 6: Organize CWP Documentation
The CWP document template was used to construct Guyana's CWP document. The documentation was led by a consultant, with the support of CDEMA and UNDRR; inputs from the CDC were incorporated into various sections of the document. A draft document was then sent to CDC, UNDRR and CDEMA for review. The draft CWP Report was then circulated for feedback, amendments were made and finally submitted for high level approval.

CDM AUDIT SUMMARY AND GAP ANALYSIS

Audit Summary

The CDM Audit Tool (2011) was developed by CDEMA and partners to promote CDM Standards. It aims to assess capacity, that is, the strengths and resources of CDEMA PSs at the national and regional levels. The CDM Audit Tool represents a comprehensive approach as it covers 457 indicators of the CDM Strategy and the SFDRR. The tool was used as the basis for developing the CWP and the PMF for Guyana. It was applied to gauge the level of DRM planning and the institutional support that is embedded in the CDC. The CDM Audit is in alignment with the International frameworks such as the Sendai Framework and the SDGs.

The answers obtained during the Audit implementation ranged from life support supplies information to insurance schemes to assist individuals to recover, which reaffirmed the comprehensiveness of the audit. The tool provides an assessment of the four phases of the CDM cycle and attributes scores for each phase, ranging from 1 (unsatisfactory) to 3 (excellent). Overall, the results of the CDM Audit were satisfactory, with the Preparedness phase scoring highest, followed by Response, Mitigation, and Recovery. Figure 9 shows the scores generated for each of the four (4) CDM phases resulting from the application of the CDM Audit Tool.

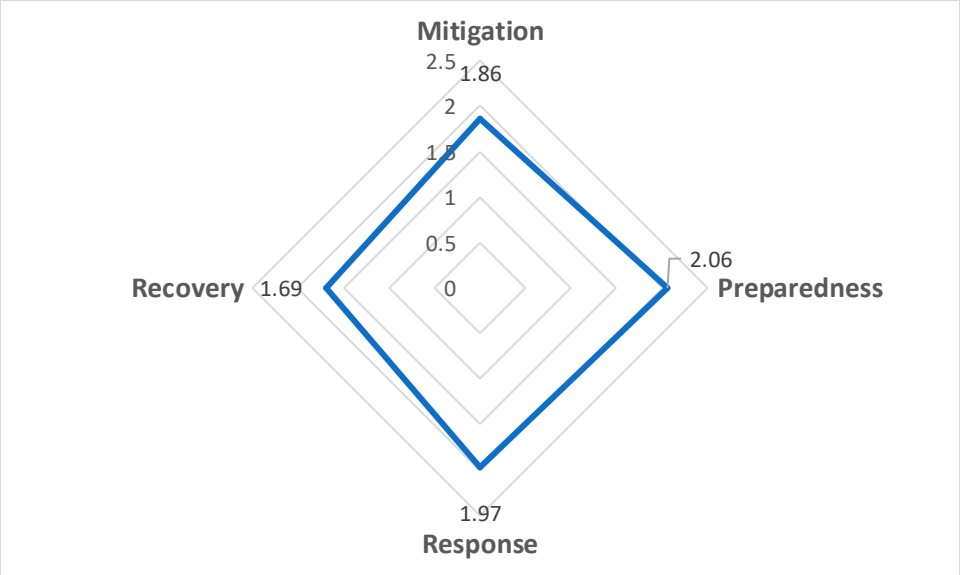


Figure 12: Results from Guyana's CDM Audit Tool to evaluate the current status of four CDM phases

The CDM audit reporting process identified both strengths and weaknesses in the phases of the CDM cycle for Guyana; namely, mitigation, preparedness, response and recovery. The key areas of strengths and weaknesses are highlighted in Figure 10 below:

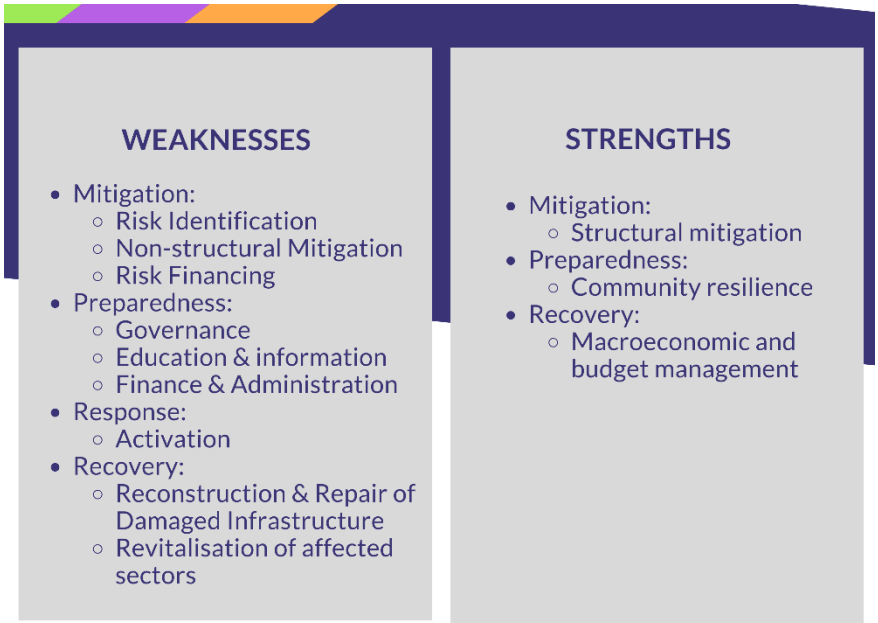


Figure 13: Summary of the key strengths and weaknesses identified during the CDM Audit. (Areas of strength were categorised by scores of 2.50 and above and areas of weakness were categorized by scores under 2.00)

The emerging weaknesses across the CDM phases were useful in revealing the gaps between current conditions and desired conditions. The identified gaps informed the priority areas which are the foundation from which national DRM policies, strategies and CDM activities are articulated in the development of this CWP.

Gap Analysis

Mitigation

The results of Guyana's CDM audit showed that, with an overall score of 1.86, there are still some strides to be made in meeting the different standards which are in alignment with the regional and international frameworks. The major weaknesses lie in the areas of risk financing and non- structural mitigation with scores of 1.48 and 1.50 respectively, however the country is performing satisfactorily in the area of structural mitigation.

Notably, the audit revealed key gaps such as the fact that there is little evidence of a national system for capturing past and current events (both small-scale and large-scale), as well as that data policies and mechanisms are not in place nor enforced so that hazard and risk data are centrally stored and accessible to all stakeholders. Further, Guyana's national data management analysis and information dissemination software was found to be limited in capability for GIS mapping and modelling. The national geospatial agency which is the Guyana Lands and Surveys Commission currently maps some of the data needed by the CDC however there is need for greater collaboration to ensure production of required products in a timely and efficient manner.

The audit showed low levels of application of the Caribbean Development Bank's National Hazard Impact Assessment (NHIA) methodology in the country, the absence of risk profiles for a vast majority of communities and, the lack of an existing national methodology to assess disaster risk impacts of major development projects, especially infrastructure, and there was a lack of evidence of its consistent application.

Non-structural mitigation looked at four (4) key areas, one of which was land-use planning. The major gap found was the lack of a land use plan or map for communities/local authorities with findings revealing that less than 80% of communities/local authorities had these in place. Land use planning in Guyana also showed very little link to the SFDRR. Significant shortfalls were found with regards to building codes, including lack of relevant legislation, enforcement (including clearly outlined roles and responsibilities) and technical inspection resources, and limited incorporation of these into risk and hazard impact assessments. There is also no National Land Policy for Guyana in existence.

Risk financing as a mitigative measure was also found to be a weak area for Guyana; the audit revealed that there are several areas of weaknesses in both the public and private

sector needing attention. Specific to the public sector was the need to secure catastrophe bonds and or pools for risk transfer and insurance for public sector structures, whereas within the private sector there is a need to address the lack of or enforcement of national policies which link the issuance and renewal of business licenses with insurance coverage, crop insurance for farmers and legislation for the acquisition for insurance for residential properties.

Notably, a comprehensive risk assessment is yet to be completed for Administrative Region 4 (Demerara – Mahaica) by the CDC. Currently, a Regional Multi-Hazard Preparedness and Response Plan exists, however due to limitations in scope of this plan, limited information and details are contained therein on the levels of disaster risk within this Region.

Additionally, the National Integrated Disaster Risk Management Plan and Implementation Strategy 2013 prioritised financial protection and risk transfer by proposing the implementation of a flood and drought insurance project to reduce (transfer) disaster risk for flood and droughts through insurance mechanisms at the national and regional level. To date, however, this has not been completed, solidifying the need for review, strategic implementation and necessary updating of existing policies and DRM mitigative plans. Further, there are strong synergies among the goals and main priorities of the LCDS, the SDGs and CCA. A risk centered approach, however, is needed, however, to capture DRR within the priorities of the LCDS, and the CWP will aim to provide this linkage through its sector-based activities for mitigation against resource depletion and protection of critical ecosystems.

Preparedness

Preparedness was found to be the best performing phase of the DRM cycle in Guyana; however, the audit did reveal some weak areas warranting significant improvements, especially in the areas of finance and administration, and education and information. Some of the major gaps found included the need to establish national and sectoral legislation for mandating CDM responsibilities, and for there to be clearly defined roles and responsibilities of National Emergency Operation Centre (NEOC) members, supported by legislation. A gap of high priority was the identified need to address climate change issues and adaptation in the national disaster legislation; Guyana's DRM legislation is currently undertaking steps towards its finalisation and approval, however it is crucial, before its finalisation that the legislation be reviewed to ensure integration of climate change adaptation. The outcomes of the CWP which speak to the finalisation of Guyana's DRM legislation, therefore, are intended to ensure that the finalisation of the legislation is not only complete but is comprehensive and inclusive.

Understanding of disaster risk is one of the priorities of the SFDRR, and this includes the understanding of announcements and warnings related to disasters across the country.

Notably, Guyana's due to the lack of legislation, has not yet defined key concepts such as the declaration of (i) a State of Emergency (ii) disaster and (iii) disaster area. The CWP is intended to not only ensure this national definition, but to promote the actions towards familiarization of these important concepts by all persons and ages across the country.

Moreover, it was found that only a limited number of the key sectors in Guyana have CDM or DRM strategies or frameworks, and there was limited evidence to show that a monitoring, evaluation and reporting process for tracking of CDM implementation was in place. Disaster Management Mutual Aid Memorandums of Agreement (MOUs) with adjacent countries and/or communities was also found to be lacking.

Education and information were found to be the weakest of the components within the preparedness stage, with notable shortfalls being limited inclusion of DRM related issues and materials in school curriculum at the primary and secondary levels, and absence of a countrywide public awareness strategy including outreach to urban and rural communities. There is also a need to strengthen CDM knowledge and experience management, through the implementation of mechanisms such as the development of a web-based information sharing network where stakeholders are notified of new materials and can freely access them, and the development of an indoctrination programme for new employees of the NDO that seeks to transfer knowledge related to CDM, project and programme management and RBM. The CDM audit also revealed that there is a need to strengthen Guyana's training regime with the conduct of annual exercises and simulations to test national response plans and sector capabilities. There is also the notable absence of a national alert system and evacuation protocol relevant to the country's priority hazards.

Response

Guyana's CDM audit found that the Response phase is performing fairly, however some areas, especially relevant to activation, need to be urgently addressed. Significantly, the NEOC, in terms of space, separate areas and equipment resources was found to be inadequate. No legal basis for mandatory evacuation procedures exists, and there is limited usage of different planning systems and studies for early estimations of resources availability and potential additional resource requirements in damage assessments. Further, there is a limited existence of robust links to communities/local level for early reporting on scope of damages in existence. Other high priority gaps revealed include the absence of a public information plan detailing authorities and responsibilities for information dissemination. Such a plan would also rectify the absence of tourists voluntary and mandatory repatriation plans for pre- and post-event situations.

The audit also revealed limited application of data management tools to assist in collecting and collating response related information for audit trail purposes and the establishment and/or utilisation of methodology(ies) for compiling and updating

inventories, databases, and lists. Management of the media for emergency public information also proved to be a weak area for Guyana, with a notable absence of a programme to integrate the media into disaster response.

There are existing needs for Guyana to establish protocols to integrate external humanitarian teams in the needs assessment process as well as to develop a national donation policy and/or plan that establishes guidelines for emergency donations; these are to be well understood by donors including Non-Governmental Organisations, Faith-Based Organisations and Community Based Organisations. Policies related to the development and benefits (inclusive of health coverage/insurance/ compensation) of volunteers involved in response in DRM development and benefits are also needed.

Several areas critical to safety and protection during response were found to be lacking, and as such, efforts to address these should be urgently made. These include the need for a shelter plan for all events and hazards, establishment of emergency protocols with food wholesalers to ensure provision of food during emergencies, the development of emergency waste treatment capabilities for temporary accommodation areas, and the development of post disaster airport and seaport operation plans which address the handling of large-scale visitors' repatriation needs, among others.

Logistically, there is a need for an inventory of national wholesalers and distributors of key equipment and supplies for emergencies, and the establishment of a mechanism and process to determine priority for fuel distribution during response.

The threats and related risks of oil spills, especially related to offshore activities, are yet to be analysed at the national level due to limited capacity and technical expertise within the country. Further, Guyana's preparedness and response capacities specific to an oil spill are currently being developed, with the recent finalisation of the National Oil Spill Contingency Plan. There are, however, much works to be done in building local capacities to adequately prepare for and respond to an oil spills, as this is a new industry in the country. The country's resource capacity is also to be built with the procurement, and subsequent training in the utilisation of adequate response equipment.

Recovery

The recovery phase was found to be the weakest of all the phases for Guyana, with major weaknesses in the revitalization for affected sectors and reconstruction and repair of damaged infrastructure. With regards to early recovery and reconstruction, there is need for the development of a Recovery Plan, which includes a policy for debris removal/disposal and dead body disposal with assigned responsibilities. Attention also needs to be given to the establishment of a contingency fund and, with regards to grants, the development of methodology to assess priority setting for reconstruction of critical infrastructure and housing stock during the reconstruction process, is needed and this methodology should be consistently applied.

Revitalisation for affected sectors was found to be an area of unsatisfactory performance in the CDM audit for Guyana, and the needs for the development and exercising of a Contingency Continuity of Government Plan and a Business Continuity Plan were highlighted. The audit also revealed that critical areas such as provision of catastrophe insurance to protect the private sector against hazards, implementation of risk transfer mechanisms and the agreement on contracts for contingency credit to prepare for disaster are current gaps which should be prioritised to enhance the country's systems for disaster recovery.

Another gap identified is the absence of robust links to communities/local level for early reporting on scope of damages during emergencies and disasters. As such, the CWP outlines mechanisms to facilitate this development, and to ensure that adequate resources, including financial and personnel, are identified to facilitate the attainment of goals related to the recovery phase. Improvements would also need to be made in critical sectors such as health, social services, transportation, and finance to ensure the development and maintenance of systems to protect and maintain life during disasters, and to facilitate return to normalcy in the shortest possible time with the least number of disruptions.

Post-Audit Tool Gaps

There was a notable lull in activities towards the finalisation of Guyana's CWP during the period of January 2019 – August 2020. Initial activities conducted prior to this included conduct of the CDM audit, and consultations and engagements with stakeholders which resulted in the development of a draft PMF. Technical support provided by CDEMA and UNDRR post this period reengaged stakeholders towards the finalisation of the existing draft. Notably, however, given the gap in time, some of the specific stakeholders engaged for the document's finalisation were not those initially consulted on the CWP.

Moreover, during the elaboration of Guyana's CWP, the country, together with the region, entered the COVID-19 crisis, affecting all the sectors of the society. Therefore, as the vulnerabilities were observed in practice, the country vulnerability to this ongoing pandemic (along with the global and regional vulnerability) is recognised as one of the current limitations. The threats of COVID-19 and local restrictions on gathering limits the ability for physical consultations with stakeholders for the validation and finalisation exercised; these, in this regard, were conducted utilising virtual platforms.

Guyana's public healthcare system comprise approximately 22 district hospitals, 112 health centers, 6 Regional Hospitals, 198 Health Posts, and 1 psychiatric hospital. Largely due to the ongoing pandemic, the country also commissioned an infectious disease hospital which is currently being used for the treatment of critical COVID-19 patients. These facilities, however, are still relatively inadequate to respond to a large-scale

pandemic, nor does the country's current healthcare regime cater specifically to the economic and multi-sectoral consequences of a biological hazard.

COUNTRY WORK PROGRAMME 2021 – 2025

Summary of the CWP

Guyana's five-year Climate Smart CWP is results-based and establishes short, medium- and long-term results (i.e., Outputs, Outcomes and Impacts respectively) as agreed by stakeholders from priority sectors. The CWP 2021-2025 was developed through a consultative process that was initiated in 2018. The CWP is supported by the Austrian Development Agency funded initiative Phase II of the Mainstreaming Climate Change and Disaster Management Project (CCDM-II), implemented by CDEMA with support from UNDRR.

The consultative processes considered the weaknesses and gaps of the Audit Tool process and identified further priority areas for the inter-sectoral CDM and DRR for the country. The results of connecting these gaps and priorities into the CWP priority areas.

The CWP covers the period 2021-2025 and uses the CDM approach with activities across all phases of the DRM cycle. Universally recognised cross cutting themes (climate change, gender, information and communication technologies and environmental sustainability), have been mainstreamed into the work programme and are reflected in the results and activities, in line with the CDM Strategy and the Sendai Framework. The entire CWP logframe (Annex A1) presents the detailed responsibilities, timelines and targets and it is an essential part of this document.

The CWP also built on previous and existing initiatives of the country and of the project implemented by CDEMA, UNDP Latin America and the Caribbean, UN Office for Coordination of Humanitarian Affairs (OCHA) and Red Cross and Red Crescent Societies called; "Strengthen integrated and cohesive preparedness capacity at a regional, national and community level in the Caribbean."

Timeline

Guyana's CDM CWP is not designed as if to start from zero. The CWP recognises that the country has made strides towards achieving some of the targets outlined in the CWP, and the document's development and timelines, therefore, incorporate the country's history, culture and also aims to facilitate constant learning.

The figure below highlights some of Guyana's main achievements in CDM and their contributions to the different CDM Priority Areas for Guyana.

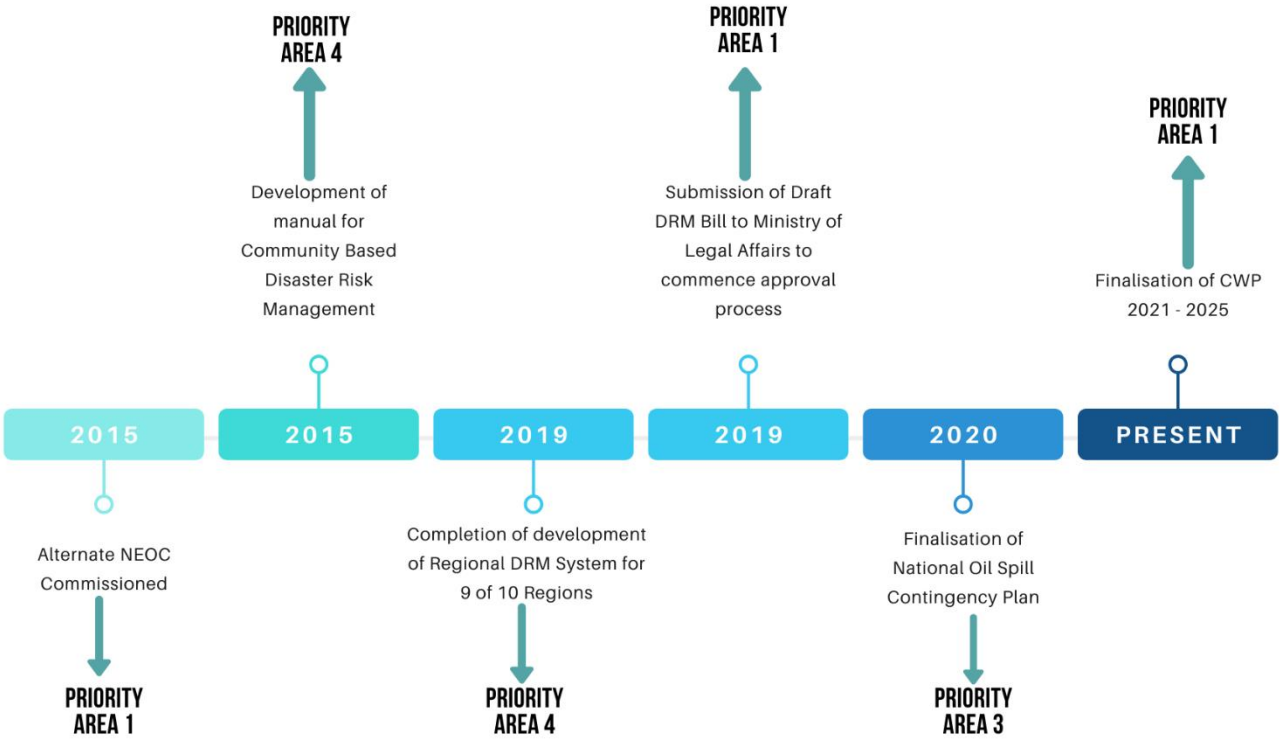


Figure 14: Timeline of implementation of key CDM achievements and their contribution to different CDM Priority Areas

Logic Model Summary

The long-term result of the CWP is "Improved quality of life for all Guyanese through enhanced resilience to impacts and consequences of key hazards inclusive of climate related risk." This impact will be realized through the achievement of fourteen (14) medium-term results or outcomes distributed across six (6) priority areas, fifty-five (55) short-term results or outputs and the completion of a variety of broad activities. The entire PMF Logframe is annexed as A1 and should be used as the main tool for implementation. The prioritised outcomes are as follows:

IMPACT:

Improved quality of life for all Guyanese through enhanced resilience to impacts and consequences of key hazards inclusive of climate related risk

Institutional Strengthening for CDM	Preparedness and Response Capacity	Strengthening Capacity for DRR	Knowledge Management Systems	Recovery and Reconstruction	Biological Hazards and Pandemics
• Outcome 1.1: Improved institutional arrangements for CDM • Outcome 1.2: Enhanced mechanism for establishment and implementation of CDM at the national level • Outcome 1.3.: Improved regulations, legislation and strategies for mainstreaming CDM principles	• Outcome 2.1.: Strengthened DRM coordination at national and subnational levels • Outcome 2.2.: Improved National and Regional Emergency Operational System • Outcome 2.3.: Enhanced capacity building initiatives for CDM	• Outcome 3.1.: Enhanced DRM initiatives for community resilence • Outcome 3.2.: DRR/DRM integrated into national plans & Policies (LCDS) • Outcome 3.3.: Integrate strategic DRR/DRM programming for priority sectors	• Outcome 4.1.: Improved systems for knowledge management at the multi-stakeholder level • Outcome 4.2.: Strengthen/ enhance public information and awareness system • Outcome 4.3.: Improved monitoring and evaluation mechanisms for public awareness and information sharing	• Outcome 5.1.: Strengthened mechanisms for post disaster recovery and reconstruction	• Outcome 6.1: Enhanced preparation and multi/sectoral coordination of biological hazards and pandemics

Figure 15: Prioritised Outcomes of Guyana's CWP

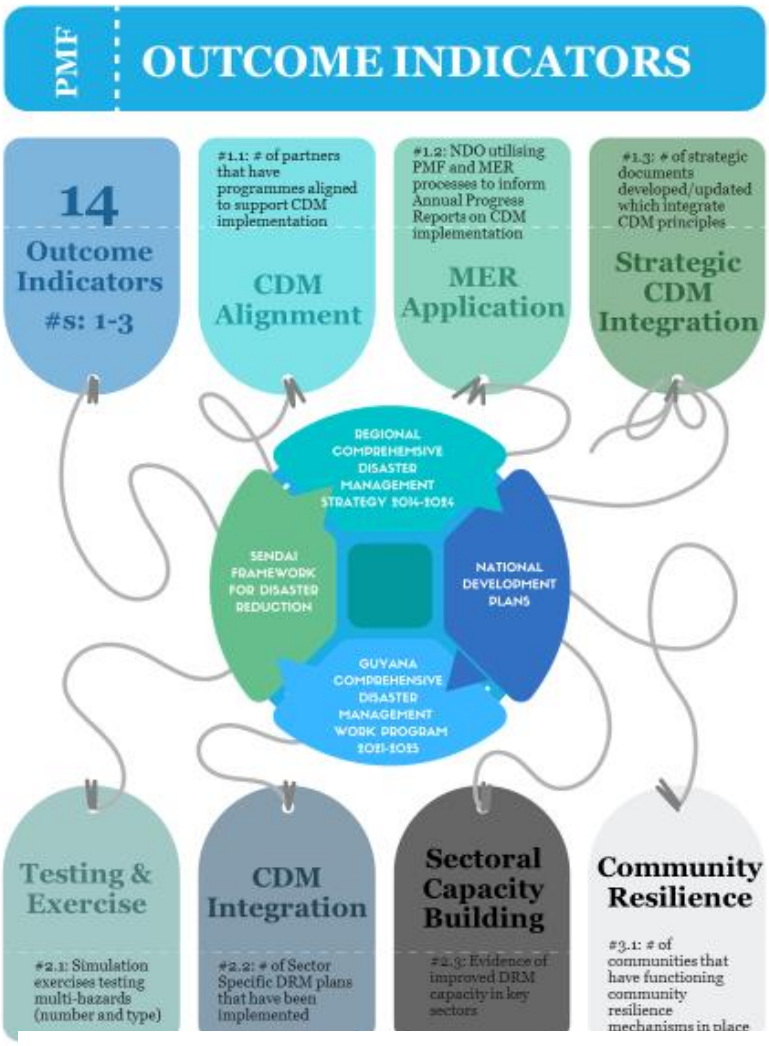


Figure 16: Main Themes of Outcome Indicators (#s 1 -3) of Guyana's CWP

The long-term result of the CWP was crafted in alignment with the national development agenda as outlined by the LCDS and incorporates the national strategic direction for climate change adaptation. Climate related risks are specifically named in the statement as these are recognised as a high priority to be addressed to build resilience in Guyana given the country's high vulnerability to climatic threats, especially meteorological and hydrological hazards.

The outcome indicators of Guyana's CWP can be categorised into nine (9) main themes, which, when examined can be linked back to one (1) or several of the priorities of both the CDM Strategy and the SFDRR. Importantly, among the identified themes, the indicators speak to the alignment to and strategic integration of the CDM Strategy, noting the importance for Guyana as a CARICOM member state to align its national DRM agenda with the Regional framework and targets. Further, this can be linked to the SFDRR, which, among its guiding principles, outlines that each State has the primary responsibility to prevent and reduce disaster risk, including through international, regional, subregional, transboundary and bilateral cooperation. The outcomes, therefore, speak to the number of local partners in Guyana with aligned programmes to support implementation of the CDM priorities as well as increasing the number of strategic documents developed and implemented with CDM principles integrated. These indicators would provide a basis for the country's measure towards effectively enhancing and implementing national DRR policies and measures in the context of local circumstances and capabilities through the provision of sustainable local, regional and international cooperation.

Sectoral DRM integration is also identified as a main theme, in keeping with the premise that DRR and DRM, as outlined in the SFDRR, depend on coordination mechanisms within and across sectors and with relevant stakeholders at all levels, and require the full engagement of all State institutions, and a clear articulation of responsibilities across public and private stakeholders, to ensure mutual outreach, partnership, complementarity in roles and accountability and follow-up. The priority sectors identified for Guyana's CWP 2021-2025 are: health, education, natural resources, agriculture, infrastructure, and finance. The outcomes and activities which reference sectors therefore refer to these sectors, which were named and prioritised through the consultative workshops of the CWP development. Notwithstanding, other critical sectors will be engaged and integrated into activities of the CWP where cross-cutting themes exist. Social services, for instance, will become an integral partner in the achievement of the CWP activities which speak to gender mainstreaming and addressing conditions contributing to vulnerability of persons and communities, including activities for the inclusion of gender considerations in community DRM planning.

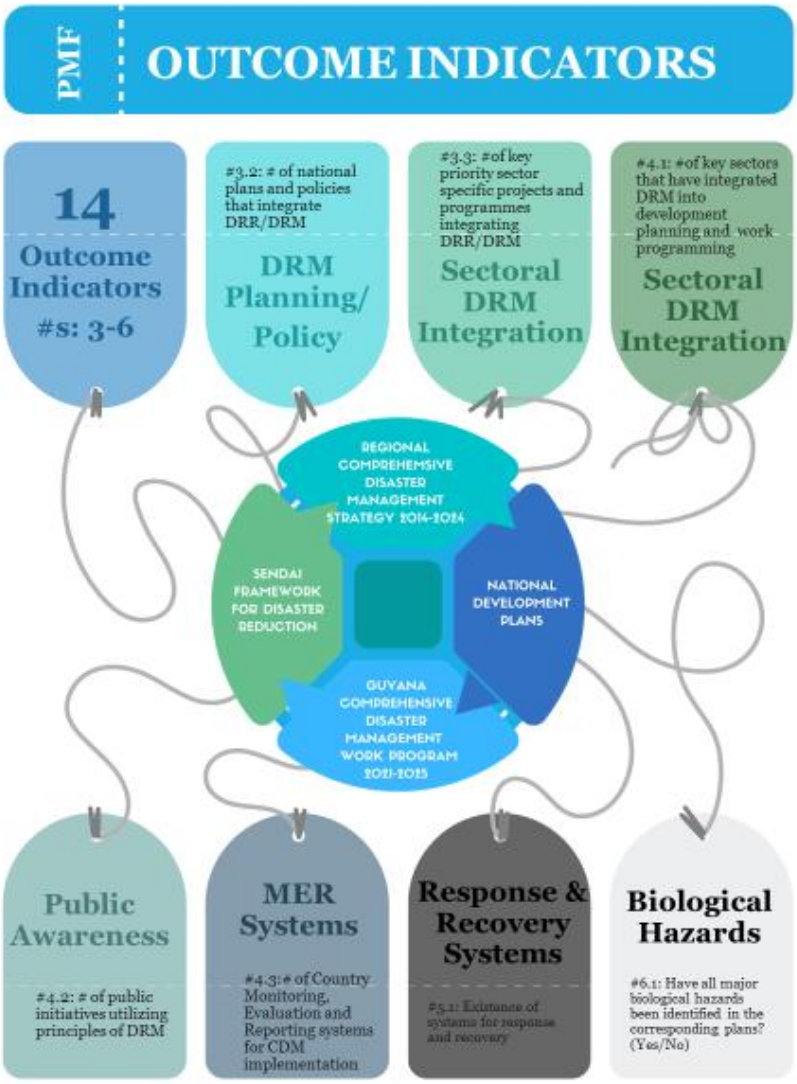


Figure 17: Main Themes of Outcome Indicators (#s 3 -6) of Guyana's CWP

The development and approval of sector specific CDM policies and plans for these priority sectors are agreed activities; the achievement of this will be pertinent to ensure that these policies are developed in a comprehensive and integrative way, to ensure mutualistic benefit and cooperation in addressing current and emerging risks, especially the threats of climate change and those related to oil exploration and production. Building resilient

infrastructure as a priority outlined in the LCDS for all future development; the CDM policy to be developed for the infrastructure sector, therefore, will be developed in alignment with this target. The review and approval of national building codes to include climate resiliency is also a prioritised activity of the CWP.

Understandably, the ongoing COVID-19 pandemic has caused greater attention to be given to biological hazards, and has caused countries, Guyana included, to recognise the urgent need for enhancing of health systems as a mechanism for risk reduction. The CWP therefore includes activities geared towards the development of an up-to-date national health strategy as a part of Guyana's DRM system, and the inclusion of pandemic preparedness and preparedness in public risk financing and investments.

Monitoring, evaluation, and reporting systems have also been identified as a critical theme, underpinning the importance of ensuring that mechanisms are in place to measure the achievement of the indicators and the corresponding impacts. Importantly, there is a current need in the DRM landscape of Guyana to address existing challenges and prepare for future ones by focusing on monitoring, assessing, and understanding disaster risk. The existence of country monitoring, evaluation, and reporting systems for CDM implementation will allow for national-level analysis of individual and collaborative efforts in risk reduction and provide a basis for cost-benefit analyses of DRM programmes across Guyana.

A total budget of **US$938,750** was estimated for the implementation of the activities of the CWP; most of the costs are anticipated to be expended in testing and exercise activities, which would include the conduct of simulations and drills to test the effectiveness of developed sectoral and/or hazard specific plans based on training needs, in addition to preparedness and response plans developed for various levels of localities across the country. Notably, the outcome aimed at improved CDM capacity in key sectors speaks to the development of a multi-year training programme for CDC personnel, technical training to stakeholders, and focused training to vulnerable groups, including indigenous populations, among other activities.

Further, it is estimated that larger percentages of the CWP's budget would be allocated to the phases of preparedness and mitigation, 43 percent, and 54 percent, respectively. Notably, decisions on the financial investments were made on the premise that larger investments in preparedness and mitigative activities will result in reductions in expenses incurred for disaster response and recovery. Preparedness and response capacities will also be built through the establishment of a national supplies management database to support operational readiness, and the development of national and regional repositories for hazard knowledge on small and large-scale events for past and current hazards. Figure 18 outlines the budget distribution by theme and phase of the DRM cycle.

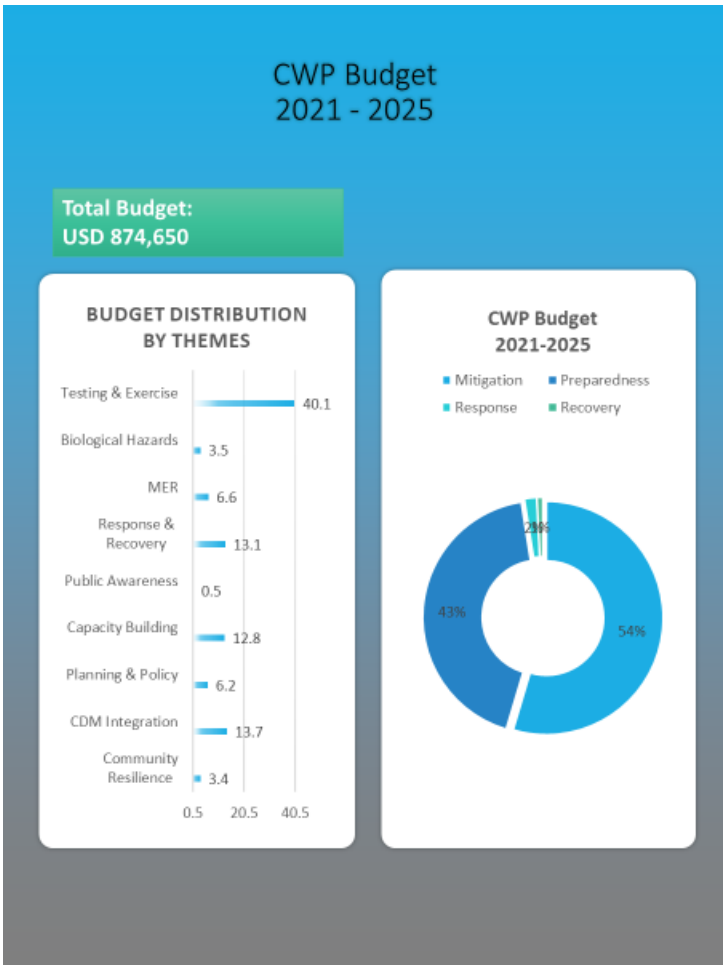


Figure 18: Distribution of Guyana's CWP 2021-2025 Budget by Themes and DRM Cycle Phase

The Government of Guyana has been named as the primary financer of the CWP's activities as such the activities will form an integral part of the CWP actors' work programmes and budgetary processes for 2021 to 2025. Moreover, collaborative execution will be essential between agencies to ensure maximisation of financial resources and to avoid duplication of efforts. Notably, some collaborative regional and international partners have been named inclusive of CDEMA, UNDRR, the Food and Agriculture Organization of the United Nations, United Nations Development Programme, and the United Nations Children's Fund, among others, to support the efforts of the CWP. In many instances, there are existing partnerships and agreements with these entities which will be harnessed to support the implementation of activities within the parameters of these. Where necessary, additional cooperative agreements will be developed to ensure that adequate resources can be dedicated through strategic action, in keeping with national, regional, and global commitments.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The CWP successfully brought together government departments, the private sector, technical experts and community groups, to assess the DRM efforts thus far, identify gaps in the national capacity, highlight needs and consequently develop a strategy and a plan of action for 2021 – 2025, for the achievement of Guyana's impact or goal of "Improved quality of life for all Guyanese through enhanced resilience to impacts and consequences of key hazards inclusive of climate related risks." Over the next five years, this impact will be fulfilled through commitment of the actors, along with the achievement of fourteen Outcomes, fifty-five Outputs and the completion of a variety of associated Activities.

The use of the CDM Audit was instrumental in identifying the gaps within DRM in Guyana, according to the phases of the Disaster Management Cycle: mitigation, preparedness, response and recovery. This provided a strategic opportunity to prioritize the areas that require strengthening, such as the area of Recovery. This provided a strong basis for the structuring of the CWP, enabling several gaps to be addressed simultaneously.

The CWP allowed cross-sectoral, regional and international synergies to be strengthened, through a harmonized approach, thus boosting national capacity to address national priority areas including institutional capacity building, knowledge management, sectoral integration, community resilience, recovery and biological hazards and pandemics. This type of engagement helped to create momentum for promoting DRR strategies and unlock the potential and resources to drive action at national level. This therefore ensures that the CDC is in a positive position to deliver on its mandate of crafting a resilient society.

With this CWP, Guyana fulfills the requirements of the regional CDM Strategy and the international Sendai Framework's Target E on having an all-of-society strategy for DRR.

Recommendations

For this CWP, emphasis was placed on addressing the gaps in the national capacity and institutional arrangements for reducing Guyana's vulnerability to hazards. Although strides were made to boost the national capacity to address priority areas, additional recommendations for actions for further improvement of risk reduction should be considered during short-, medium- and long-term planning. Key recommendations can be summarised as follows:

Each sector should proceed to implement the agreed upon activities under their responsibility. Although some sectors are affected more obviously than others, it must be emphasised that the recent increasing scale and frequency of disasters, has demonstrated

that all sectors should develop an effective approach to DRR, coordinated through the CWP.

Monitoring and evaluation of the implementation of the CWP is to be conducted on a regular basis by the CWP Expert Working Group and according to the recommendations defined in the part III of this CWP. The CDC should monitor timelines and coordinate with actors responsible for the execution of activities to ensure efficient delivery of activities.

With recognition that financing may be a constraint in implementation for various sectors, the CDC should develop relevant policies to guide risk financing and Public-Private Partnerships among relevant actors in the country. The CDC should also consider developing or encourage sectors to develop a framework for revenue-generating programmes that enable self-sustainability within the CWP sectors. Priority should be given to ensuring synergies with the critical areas outlined in the LCDS, and with the growing oil and gas industry.

Risk financing should be further developed between the sectorial ministries, under the leadership of the Ministry of Finance.

The private sector must be further recognised and engaged as a key partner in DRR. The private sector's role focuses on understanding resilience as a business opportunity, understanding business continuity planning and its influence on resilience of livelihoods. Additionally, the private sector can be viewed as an actor of EWS, an investor, a provider of data, research and innovation in discovering solutions to vulnerability and in exploring non-traditional avenues. The Private Sector Commission, therefore, should be an increasingly integral part of the CWP strategic planning and implementation.

Greater emphasis should be placed on standardised coordinated baseline data and post-disaster data acquisition. The CDC should initiate the strengthening of Databases and Analysis programs, to facilitate data collection, sharing and lessons learned to inform public investment and development planning systems, and to improve future disaster DRR (this will be detailed in Section III).

Considering the interconnectedness of the themes, the Ministry of Natural Resources, Department of Environment and Climate Change, and the CDC should strengthen the coherence between CDM, CCA and sustainable development, notably in harmonised institutional mechanisms, joint indicators, monitoring, and timelines, as well as harmonised investments and financing streams. This cooperation should include ecosystem/resource conservation and restoration, especially of mangrove forests which are crucial to shoreline protection in Guyana. Healthy resources/ecosystems are more resilient to shocks, which will also serve to secure investments in economic sectors through DRR. This should feature prominently throughout government planning. The

emerging oil and gas sector is another area requiring harmonisation of efforts with DRM mechanisms and monitoring frameworks, as prompt and effective spill management will largely draw on the mechanisms and partners involved in disaster response and management.

Greater focus should be placed on the systemic nature of risk, interconnectedness of disasters in a multi-hazard context, with specific focus on pandemics and biological hazards, taking the lessons learned from the COVID-19 pandemic (which was ongoing during the time of the development of this CWP).

The CDM Audit Tool revealed that there were major gaps in the creation of hazard maps and models within Hazard Assessment, in the execution of sector level risk assessments. It was found that there is an absence of community land use maps available to communities and local authorities to inform decision making processes. These concerns need to be addressed by the Guyana Lands and Surveys Commission, which is the entity responsible for land use planning at the national level in Guyana, and the Central Housing and Planning Authority, in conjunction with regional authorities at the community level, as an area of priority to increase community resilience.

The impacts of flooding have been identified as a particular area of concern for Guyana, especially along the Low Coastal Plain. As such, greater emphasis on incorporating flood early warning systems, and mitigation in community and formal education is encouraged. The implementation of the National Oil Spill Contingency Plan is urgently needed to ensure that the national capabilities and mechanisms for oil spill prevention and response are developed and institutionalised, given the magnitude of current and projected oil exploration activities offshore Guyana.

Progress on the CWP should be reported annually through an Annual Progress Report (APR) and information used to update the CDM Monitor on a biennial basis. The Audit Tool can be applied at the mid-term of the CWP implementation to facilitate an update if required. This is defined in Section III. In the update, it is critical to assess the capacities of each entity to ensure that they are not overwhelmed.

Annual reporting on the Sendai targets is recommended to be conducted utilising the Sendai Framework Monitor (SFM), in conjunction with the APR. Apart from strengthening the monitoring, evaluation and reporting of the CWP, the SFM can function as a management tool to aid the country in the further development of disaster risk reduction strategies, making risk-informed policy decisions and allocating resources to prevent new disaster risks. The CDC has been named as the national Sendai focal point, and therefore has the responsibility for coordinating the multi-sectoral monitoring and reporting for the SFM. Notably, there is need for updating the activities of the SFM for Guyana for the reporting period of 2005-2015, and an action plan towards the realisation of this has been developed and attached at Annex A6.

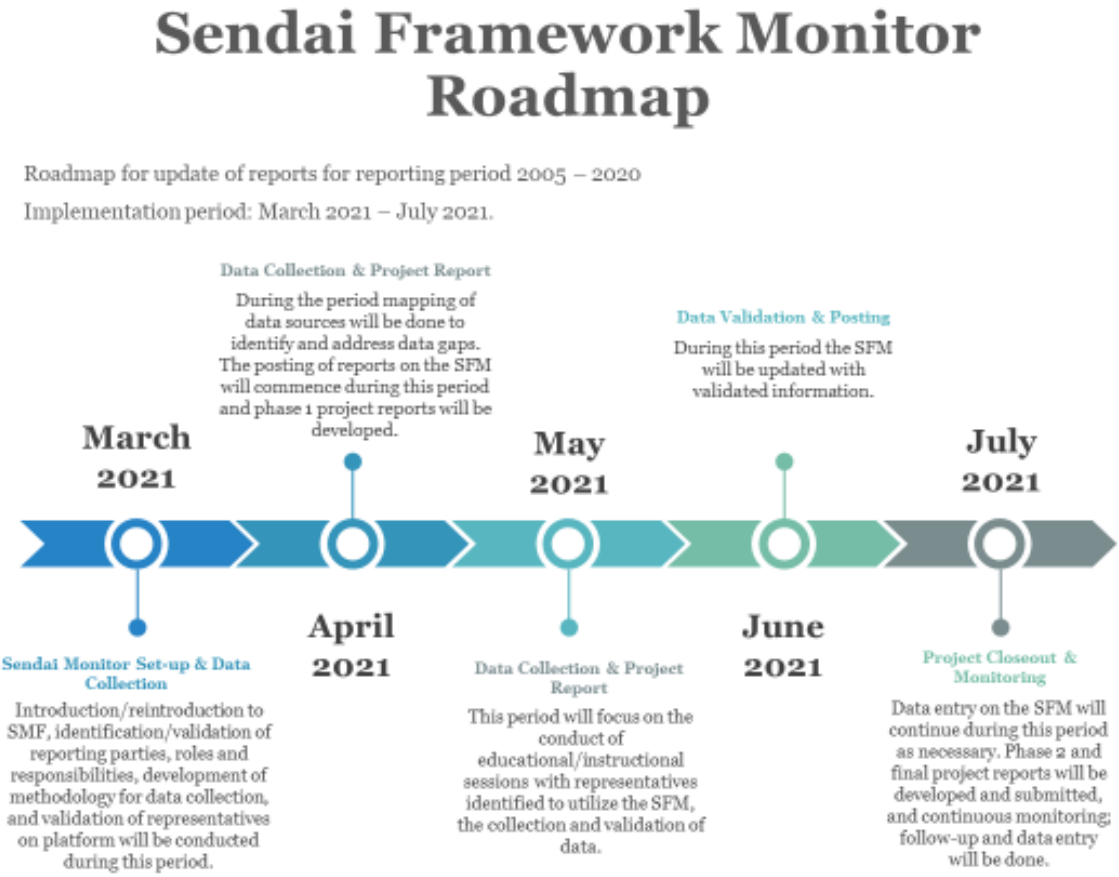


Figure 19: Roadmap for SFM updates for 2005-2015

It is intended that Guyana's updating of reports for the SFM for 2005-2015 would be conducted during the period of March to July 2021 with key activities being the setup of systems for data collection, the collection of data on yearly progress, validation of data collected and posting of relevant updates to the SFM database. These activities would be led by the CDC and would build on the capacities developed in a national multisectoral SFM monitoring and reporting workshop which was held in Guyana in January 2020 with participation from UNDRR and CDEMA.

PART 3: PERFORMANCE MONITORING FRAMEWORK

SYSTEMATISATION OF THE PERFORMANCE MONITORING FRAMEWORK

The PMF is the RBM tool designed to articulate how the achievement of results will be measured under the programmatically defined period in a CWP. The PMF is comprised of various components, which are incorporated in the CWP PMF logfame found in Annex A1:

- Expected Results – The outcomes hoped to be achieved under a programmatic period defined under the CWP.
- Indicators – The tools used to measure achievement of, or progress towards expected results on a regular basis.
- Targets/Milestones (e.g. yearly) – The goals to be achieved to attain CDM outputs and outcomes.

In addition, the PMF includes the following data collection components, which are under responsibility of the ministry/actor responsible of the specific indicator:

- Baseline Data – Serves as a measuring point in which to gauge progress towards the expected result.
- Source of the Data – Asks the question of where the information necessary for measuring progress towards results, will be obtained.
- Frequency of Data Collection- Asks the question of how often the data will be collected.
- Data Collection Method – This can either be quantitative (statistical analysis, questionnaires and polls, counting/measuring) or qualitative (interviews, focus groups, participatory rural appraisal)
- Responsibility for Collection of Data- Refers to the entity or person responsible for data collection.

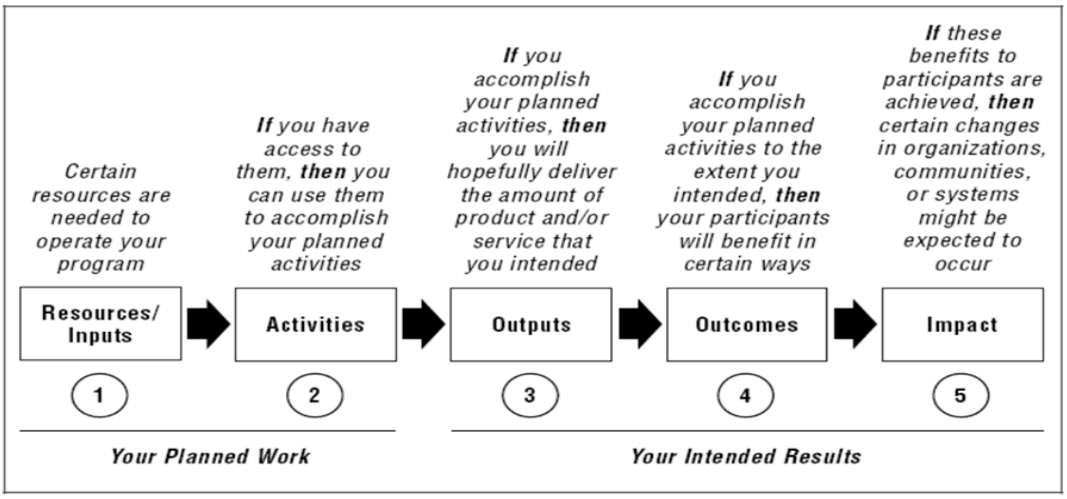


Figure 20: Results and Logical Model

THE OVERALL PROCESS

The Plan is a live document and will be reported upon annually and can be updated at the mid-term. The update of the Plan in January is recommended, considering the benefit of the lessons learned from the rainy season (the gaps found in the resilience of the country) and the construction of national budgets. To systematize the update process for constant development, the following steps are recommended:

i. **Assessment of the situation:** The assessment of the situation is carried out at the mid-term through the Audit Tool update;

ii. **Update of the Plan:** With the results of the audit tool the update of the CWP is carried out, with its respective activities;

iii. **Detailed design or revision of the performance indicators** is conducted, according to the basket of indicators harmonized between the CDM Strategy and the Sendai Framework;

iv. **Implementation and Monitoring:** The actions will be implemented according to the times defined in the Annex A1. Each actor reviews their specific responsibilities, defined in the Annex A1, and prepares a Plan to execute the actions in which they have responsibility. Progress will be monitored quarterly by the CWP expert group, following the monitoring and evaluation section steps and the indicators defined in the Excel Matrix;

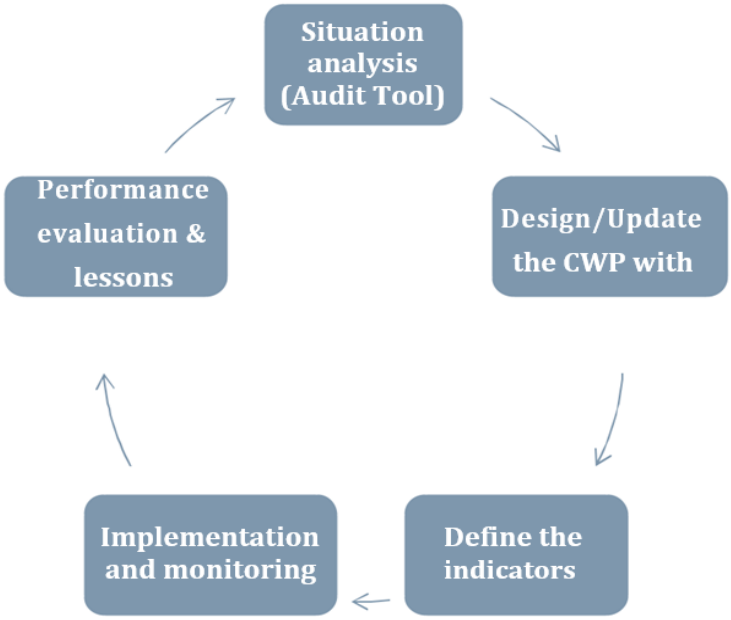


Figure 21: CWP Development Process

v. **Evaluation and Lessons Learned** (closing of the Action Plan): An evaluation of the actions is made, and an Annual Progress Report is prepared at the end of the 12 months, including good practices and lessons learned. These will be integrated into the planning for the following year, thus enabling a constant and systematized development of the process.

The call for Plan update will be sent by the Director General of the CDC. The identification of all the various contributors to the monitoring framework will take place within the context of the national development agenda and an understanding of the country's capacity to deliver the CWP over the programmatic period.

Linkages to the national development agenda (the LCDS) and risk finance instruments have been established. These were integrated into the crafting of the indicators and activities of the CWP. The CWP therefore, is intended to facilitate significant

contributions towards Guyana's targets for Climate Change adaptation and national development.

MONITORING AND EVALUATION

Monitoring Plan

The membership of the TAC or the National Disaster Risk Reduction Platform was updated during validation workshops held in December 2020. This group of stakeholders who were involved in the CWP development will function as monitoring and oversight body for its implementation. The CDC was identified as the coordinating agency, while other agencies were identified as members of the working group who will oversee implementation across the CWP's priority sectors, namely:

i. Health
ii. Education
iii. Natural Resources
iv. Agriculture
v. Infrastructure
vi. Finance

Notably, any additional agency from the National DRR Coordination Platform may be added to the membership of the Working Group, once a decision is taken by the group that their inputs and representation is warranted. It was agreed that the CWP Expert Working Group would meet on a quarterly basis; these meetings would be convened and chaired by the CDC. Prior to meeting, the CDC will share the CWP Excel table to all CWP members and coordinate the follow up with members on the updates regarding implementation of the CWP activities. The meeting's agenda would include:

- Revision of the CWP Excel table for the implementation per activity
- Provision of recommendations for each Ministry/sector/actor
- Addressing of other relevant matters which may arise

Key implementing actors at the national level should submit annual report to the CDC in an agreed format. At the end of the one-year implementation period, the CDC will engage the CWP members for a progress meeting. The agenda items will include:

- Revision of the implementation of all activities and conduct a performance evaluation;
- Discussion of best practices and lessons learned during the process throughout the year;
- Identification of solutions to challenges being faced in implementation, and replication of best practices;
- Agreement on the planning schedule for the next year´s implementation;

- Other relevant matters to be addressed.

An assessment of the actions is to be made and a Final Report is prepared at the meeting, including best practices and lessons learnt. These will be integrated into the planning for the following year, thus enabling a constant and systematised development of the process.

Evaluation Plan

At the end of the five-year implementation period, the CDC will engage the CWP members for a CWP evaluation meeting. The agenda items will include:

- Review of the implementation of all activities and conduct of a performance evaluation;
- Discussion of best practices and lessons learned during the process throughout the year;
- Identification of best practices and mechanisms for their replication in other activities;
- Agree on the planning schedule for the next multi-year implementation;
- Other relevant matters to address.

An evaluation of the actions is to be made and a Final Report of the multi-year implementation prepared at the meeting, including best practices and lessons learnt. The outcomes of the evaluation plan will be integrated into the planning and coordination for the upcoming CWP, thus enabling a constant and systemised development process. Specifically, the evaluation plan will serve as the critical document to guide planning for continued and enhanced disaster resilience in Guyana post 2025, which would be built on the strengths and successes attained between 2021 to 2025 and designed to address the gaps and shortcomings observed within the five-year implementation period.

ANNEX 1

(Included for ease of reference)

LIST OF ANNEXES

To facilitate the work of the Plan and future work, there is a package of relevant materials at international, regional, national and local levels, to be used as sources and justifications for the process. Special attention should be placed to Annex A1 – CWP LogFrame, as this is the main tool for the actors in the implementation.

A: National Documents

A1- CWP Performance Monitoring Framework Logical Framework (CWP PMF LogFrame)

A2- Low Carbon Development Strategy

A3- Guyana Multi-Hazard Disaster Preparedness and Response Plan (2013)

A4- Action Plan Control and Management of Severe Acute Respiratory Infection (SARI) (2019)

A5 – Action Plan – Sendai Framework Monitor Reporting 2005 - 2020

A6 – Coherence Matrix

B: Regional Documents

B1- The Basket of Indicators (CDM Strategy Indicators and Sendai Monitor Indicators)

B2- SIDS Accelerated Modalities of Action [S.A.M.O.A.] Pathway

B3- The CDM Strategy 2014 – 2024

C: International Documents

C1- Sustainable Development Goals (SDGs)

C2- Sendai Framework for Disaster Risk Reduction (SFDRR)

C3- Paris Agreement

C4-Open-ended Intergovernmental Expert Working Group on Indicators and Terminology Relating to Disaster Risk Reduction (OEIWG)

GLOSSARY OF TERMS

The glossary below presents some general definitions of frequently encountered terms throughout the document. These definitions are taken from the OEIWG Updated Terminology relating to DRR.

Comprehensive Disaster Management (CDM): Comprehensive Disaster Management which includes attention to all phases of the Disaster Management Cycle – prevention, mitigation, preparedness and response, recovery and rehabilitation. It includes emphasis on reducing risk. This nomenclature is the term that reflects the global trend in the discipline for increased focus on risk management and the intense desire among disaster risk management stakeholders in the Caribbean to accelerate initiatives in promoting disaster loss reduction.

Disaster: A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.

Disaster Risk Reduction (DRR): Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

Disaster Risk Management (DRM): Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses.

Hazard: A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.

Mitigation: The lessening or minimizing of the adverse impacts of a hazardous event.

Outcomes: Targets to be achieved in the Medium-term in the results-based framework. Outcomes result from an amalgam of short- term outputs (Baastel)

Outputs: Short-term Results from activities undertaken toward the medium-term outcome (Baastel)

Preparedness: The knowledge and capacities developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters.

Prevention: Activities and measures to avoid existing and new disaster risks.

Recovery: The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster - affected community or society, aligning with the principles of sustainable development and "build back better", to avoid or reduce future disaster risk.

Rehabilitation: The restoration of basic services and facilities for the functioning of a community or a society affected by a disaster.

Resilience: The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

Response: Actions taken directly before, during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.

Results Based Management: Rather than focusing programme/project management efforts on the monitoring of inputs, activities and processes, an RBM approach concentrates on 'results' and places emphasis on the following dimensions: Defining realistic results based on appropriate analysis and context; Clearly identifying programme beneficiaries and designing programmes/projects that meet their needs and priorities; Using results information to make effective management decisions; Monitoring the progress made towards expected results with the use of appropriate indicators (Baastel).

Risk: The probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between natural or human-induced hazards and vulnerable conditions.

Vulnerability: The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.