DISASTER RISK REDUCTION AND CLIMATE CHANGE ADAPTATION:

Pathways for Sustainable Development and Policy Coherence in the Caribbean Region through Comprehensive Risk Management

UNDRR
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SEI

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Table of contents

List of tables, boxes, and figures

List of acronyms and abbreviations

AAAA	Addis Ababa Action Agenda
AdCom	Adaptation Communication
ADS	Agricultural Development Strategy (for St. Kitts)
AF	Adaptation Fund
AIA	Agricultural Impact Assessment
AOSIS	Alliance of Small Island States
BBB	Build Back Better
BEST	Bahamas Environment, Science and Technology Commission
BPOA	Barbados Programme of Action
BSNPACC	Bahamas National Policy for Adaptation to Climate Change
BUR	Biennial Update Reports
CAF	Cancun Adaptation Framework
CAM	Cuban Municipal Administration Council
CAP	Cuban Council of the People's Administration
CARICOM	Caribbean Community
CBIT	Capacity-building Initiative for Transparency
CC	Climate Change
CCA	Climate Change Adaptation
CCFC	Belize Climate Change Finance Committee
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CCRIF SPC	Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company
CDEMA	Caribbean Disaster Emergency Management Agency
CDERA	Caribbean Disaster Emergency Response Agency
CDF	Jamaican Community Development Fund
CDM	Comprehensive Disaster Management
CDMPF	Comprehensive Disaster Management Policy Framework
CDRM	Comprehensive Disaster Risk Management
CNDC	Cuban's First Nationally Determined Contribution
COP	Conference of the Parties
CREAD	Climate Resilience Execution Agency of Dominica
CRM	Comprehensive Disaster and Climate Risk Management
CRRP	Dominica Climate Resilience and Recovery Plan
CSO	Civil Society Organisation
CSSI	Caribbean School Safety Initiative
CU	Coordinating Unit
CWP	Country Work Programme
DEM	Barbados Department of Emergency Management
DMPF	Disaster Management Policy Framework
DRM	Disaster Risk Management
DRMA	Disaster Risk Management Act of Jamaica
DRR	Disaster Risk Reduction

EDPU	Economic Development and Planning Unit
EMAC	Barbados Emergency Management Advisory Council
END	Dominican Republic National Development Strategy 2010-2030
ESIA	Environmental and Social Impact Assessment
EU	European Union
EWS	Early Warning System
FDI	Foreign Direct Investment
FP	Focal Points
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GFDRR	Global Facility for Disaster Reduction and Recovery
GHG	Greenhouse gases
GNI	Gross National Income
GOSKN	Government of St Kitts and Nevis
GPPI	The University of The Bahamas, Government and Public Policy Institute
GSDS	Green Development Strategy
HCPDN	Haitian National Determined Contribution
HFA	Hyogo Framework for Action (2005-2015)
HIA	Heritage Impact Assessment
IADB	Inter-American Development Bank
ICT	Information and Communications Technology
IFHV	Ruhr University Bochum – Institute for International Law of Peace and Armed Conflict
INDC	Intended Nationally Determined Contributions
IPCC	Intergovernmental Panel on Climate Change
IPPU	Industrial Processes and Product Use
JNAP	Joint National Action Plan
LDC	Least Developed Countries
LDCF	Least Developed Countries Fund
LEG	LDC Expert Group
MDG	Millennium Development Goals
MEL	Monitoring, Evaluation and Learning Framework
MEPyD	Ministry of Economy, Planning and Development
MER	Monitoring, Evaluation & Reporting
MHEWS	Multi-Hazard Early Warning Systems
MSI	Mauritius Strategy for the Implementation
MTDS	Medium-Term Development Strategy
NAP	National Action Plan
NAPA	National Adaptation Programmes of Action
NAPSPCS	National Action Protocol for Social Protection in the Event of Climatic Shocks
NC	National Communications
NCCC	National Climate Change Committee
NCCP	National Climate Change Policy
NCCPAP	National Climate Change Policy and Action Plan
NCCPSAP	National Climate Change Policy, Strategy and Action Plan
NCCR	National Coordination Center For Disaster Relief
NDA	National Designated Authorities

NDC	Nationally Determined Contributions
NDC	Cuban National Defence Council
NDC-RD	First National Determined Contribution of the Dominican Republic
NDP	National Development Plans
NDPBS	National Development Plan of the Bahamas
NDPR	Disaster Preparedness and Response Act (for Belize)
NDS	National Development Strategy
NEMA	National Emergency Management Agency
NEMO	National Emergency Management Organisation
NEMS	Barbados National Emergency Management System
NESDP	National Economic and Social Development Plan
NGO	Non-Governmental Organisation
NHMP	National Hazard Mitigation Policy (for Belize)
NIMOS	National Institute for Environment and Development in Suriname
NODS	National Office for Disaster Services
NPDP	National Physical Development Plan
NPIF	Nagoya Protocol Implementation Fund
NRDS	Dominica National Resilience Development Strategy
NSDP	National Sustainable Development Plan
OACE	Cuban Central State Administration Agencies
ODPEM	Office of Disaster Preparedness and Emergency Management (for Jamaica)
ODPM	Office of Disaster Preparedness and Management
OP	Suriname's National Policy Development Plan (Dutch abbreviation)
OPM	Office of the Prime Minister
OSDE	Cuban Higher Business Management Organization
PDP	Physical Development Plan in Barbados
PEECC	Cuban State Plan for Climate Change
PICT	Pacific Island countries and territories
PIOJ	Planning Institute of Jamaica
PMF	Performance Monitoring Framework
PNACC	National Adaptation Plan to Climate Change of the Dominican Republic 2015-2030
PNCC	Haiti's National Policy on Climate Change
PNDES	Cuba The National Economic Development Plan 2030
PNGIRD-RD	National Plan for Comprehensive Disaster Risk Management of the Dominican Republic
PNGRD	Haitian National Risk and Disaster Management Plan 2019-2030
PS	Participating States
PSDH	Haiti's Strategic Development Plan
PSIP	Public Sector Investment Programme
RASE	Rapid Assessment Sector Expert
RCP	Regional Coordination Plan
ROM	Ministry of Spatial Planning and Environment
RRM	Regional Response Mechanism
S.A.M.O.A.	Small Islands Developing States Accelerated Modalities of Action Pathway
SASAP	Sectoral Adaptation Strategy and Action Plan

SCCF	Special Climate Change Fund
SD	Sustainable Development
SDG	Sustainable Development Goals
SDI	Sustainable Development Institute
SEEA	System of Environmental-Economic Accounting
SEI	Stockholm Environment Institute
SFDRR	Sendai Framework for Disaster Risk Reduction
SFM	Sendai Framework Monitoring
SIDS	Small Islands Developing States
SNDC	Second Nationally Determined Contribution
SPC	Segregated Portfolio Company
TIA	Traffic Impact Assessment
UN	United Nations
UNDP	United Nations Development Programme
UNDRR/UNISDR	United Nations Office for Disaster Risk Reduction
UNFCCC	United Nations Convention on Climate Change
UNGA	United Nations General Assembly
USD	United States Dollar
WB	World Bank

Executive summary

Recognizing that enhanced coherence between disaster risk reduction (DRR) and climate change adaptation (CCA) policy and action can contribute to ensuring that development does not create new or exacerbate existing and future levels of risk, and that development gains are protected from the impact of disasters and climate change, UNDRR has embarked on an integrated approach that focuses on how to achieve coherence through comprehensive disaster and climate risk management. As part of this initiative, UNDRR has committed to enhance global, regional and national platforms and to strengthen national leadership to foster coherence at the implementation level with the overall objective to leverage synergies and mutually beneficial opportunities across policies to support risk-informed development. Through this initiative, UNDRR hopes to continue providing targeted technical assistance at the regional, national, and local levels, especially to developing countries that are particularly vulnerable to the adverse effects of climate change.

In line with UNDRR's approach to comprehensive disaster and climate risk management (CRM), UNDRR Regional Office for the Americas and the Caribbean, in partnership with the Stockholm Environment Institute (SEI), have conducted a study on the degree of coherence between national policies and plans focusing on the Sustainable Development Goals (SDGs), DRR and CCA in the Caribbean Region. This regional analysis aimed at enhancing our understanding of the level of and approaches to coherence of planning and policy implementation mechanisms in countries across the Caribbean Region. The study identifies key lessons for national governments and regional actors and forms the basis for future work in supporting coherent DRR-CCA-SDG approaches in the context of the 2030 Agenda for Sustainable Development (2030 Agenda) in the region.

This report builds upon and extends the methodology applied in similar baseline assessments of policy, institutional, operational and financial coherence in countries of the African Region (UNDRR 2020) and the Asia and the Pacific Region (UNDRR, forthcoming) The methodology includes a literature review on coherence between the SDGs, DRR and CCA, a desk review of national DRR and climate change (adaptation) documents of the Caribbean Region, key informant interviews, and an online stakeholder consultation workshop.

The report adopts the definition of coherence developed by GIZ 2019, which is '*The approach and deliberate processes and actions within a country to integrate – as appropriate – the implementation of the Sustainable Development Agenda, Sendai Framework for Disaster Risk Reduction, and Paris Agreement; in order to increase efficiency, effectiveness, and the achievement of both common (e.g. resilience) and respective goals*' (p. 7).

The linkages between DRR, CCA and sustainable development were analyzed using an analytical framework adapted from UNDRR (2020). The level of coherence between policies and actions related to DRR, CCA and the SDGs (substantial, partial, no coherence) in national policy and planning documents, was determined for the following six themes:

1. **Strategic coherence:** Looks at whether DRR and CCA are explicitly addressed jointly or if there is an aim to strengthen the relationship and linkages between the two fields.

2. **Conceptual coherence:** Explores how countries link DRR and CCA conceptually, in particular through the concepts of risk and resilience.
3. **Institutional coherence:** Analyses whether coordination between DRR and CCA is envisioned, and if and how institutional arrangements support coherence.
4. **Operational coherence:** Looks at measures, actions and activities which bring together DRR and CCA practices and, to which extent planning is considered cross-sectoral.
5. **Financial coherence:** Explores whether and how funding strategies, financing and investments frameworks bring together DRR and CCA.
6. **Monitoring, evaluation and Reporting (MER) coherence**: Looks at how MER mechanisms bring together coordination and synergies between the SDGs, DRR, and CCA.

The analysis was conducted for 16 selected countries of the Caribbean Region: Antigua and Barbuda, The Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago. These countries were selected because UNDRR and the Caribbean Disaster Emergency Management Agency (CDEMA) have been supporting them in the development of their Country Work Programmes (CWPs). The report identifies the following key findings:

Strategic coherence:

All 16 selected Caribbean countries have adopted the SDGs and the Paris Agreement (PA) and are committed to the Sendai Framework for Disaster Risk Reduction (SFDRR). Guided by these legally binding instruments and global framework and with support from CDEMA and other regional and international organisations, countries have identified the need to integrate sustainable development, DRR and CCA, and have articulated a strategic vision to create coherence at the national level under CDEMA's Regional Comprehensive Disaster Management Strategy (CDM) and Results Framework 2014-2024 in their CWPs. The following pathways to further strengthen strategic coherence have been identified by the analysis (please see report for the full list):

- CDEMA's CDM Framework represents an anticipatory, holistic approach to risk reduction and resilience building across all sectors. For some Caribbean countries, which already have a national strategy well aligned with the global frameworks, there is still scope to improve coherence by strengthening the links with the regional frameworks.
- The current design and revision of CWPs and National Adaptation Plans (NAPs) in many of the Caribbean Countries presents an opportunity to further strengthen the strategic vertical and horizontal linkages between institutions and policies, and across sectors.
- Strengthen the cohesion between national strategies with the national MER framework developed on regional and global indicators.

Conceptual coherence:

The selected Caribbean countries demonstrate an understanding of the linkages between sustainable development, DRR, and CCA, and the need for further integration and policy coherence, but this varies across countries. All countries establish 'resilience' as a common goal and as a vehicle to integrate strategies, policies and plans on climate and disaster risk in their CWPs. However, 'resilience' is rarely defined and used as an operational framework.

Few policies and plans truly represent systems thinking and tend to focus on resilience as an outcome. There is hence a greater need for understanding resilience and how different areas of work can come together in a coherent way. It is also important to understand the limitations to achieving coherence, as differences between the areas of work exist. The following pathways to further strengthen conceptual coherence have been identified by the analysis (please see report for full list):

- Enhance efforts to achieve comprehensive risk management and to address root causes of risk.
- Define "resilient" and "sustainable" development approaches to respond to climate change in a comprehensive manner.
- Promote risk-informed development that takes into consideration the impact of climate change on human security and the sustainable development process (e.g., Haitian National Plan for Risk Management).
- Strengthen gender equality, social equity, inclusion, and rights-based approaches.
- Integrate social protection mechanisms into the coherence agenda.

Institutional coherence:

Policies and institutions remain mostly siloed with conflicting mandates and competing interests. In many Caribbean countries, the responsibilities for sustainable development, DRR and CCA are given to different agencies. In many cases, climate change is under the prevue of the ministry of environment, whereas the national disaster management offices (NDMOs) are responsible for DRM. As a result of such silos, the roles and responsibilities of different government agencies and non-government stakeholders are not always clearly defined, information and data are not readily shared, and communication across ministries is limited. Institutional fragmentation can also cause conflict, power struggles, and competition between different government agencies over limited resources. The following pathways to further strengthen institutional coherence have been identified by the analysis (please see report for full list):

- Integrate risk-centered approaches in policies, plans and programmes through CRM.
- Establish a joint lead agency, coordinating body, or joint working groups (e.g., CWP committee that facilitates the coordination of CWP implementation).
- Clarify the roles and responsibilities of all stakeholders.
- Establish risk-informed national decision-making processes, conduct regular consultative meetings between the focal points and all relevant stakeholders.
- Strengthen national and sub-national coordination mechanisms, including among national and sub-national actors.

Operational coherence:

The analysis revealed both barriers and opportunities for operational coherence. Barriers, particularly in SIDS and at the local level, include limited human, technical and financial resources to cope with the considerable responsibilities allocated to local actors. Competing interests, lack of leadership and political will, and a lack of decision-making power are also considerable challenges to operational coherence. The need for operational coherence at the local level and the importance of engaging with vulnerable communities and

supporting local government and non-government organizations through community-based approaches and effective assistance for those at risk, is emphasized in many of the documents reviewed, but often in broad and aspirational terms. Cross-cutting issues, such as gender equality, social inclusion and empowerment, human rights-based approaches, and sustainable development, are commonly recognized in the context of the SDGs, DRR, and CCA. Opportunities for operational coherence identified in many countries include the application of innovative approaches, methods, and tools, conducting risk and vulnerability assessments, implementing nature-based solutions, establishing multi-hazard early warning systems, better land use planning, creating resilient infrastructure, building back better, and assessing losses and damages . Equally important are the coordinated collection of data and the creation of integrated monitoring and evaluation (M&E) systems. The following pathways to further strengthen operational coherence have been identified by the analysis (please see report for full list):

- Enhance coordination and collaboration at national and regional levels through multi-stakeholder mechanisms and regional dialogues such as the CDEMA Coordination Harmonisation Council and the Eastern Caribbean Donor Group.
- Conduct regular capacity-building activities for sub-national and local government officials on how to integrate the SDGs, DRR and CCA.
- Engage with vulnerable communities and support local government and non-government organisations through community-led approaches.
- Support integrated and risk-informed multi-hazard risk assessment and planning and MHEWS.
- Standardize data collection for risk assessment and for the different reporting mechanisms.

Financial coherence:

The biggest gap and hence perhaps one of the most significant opportunities for creating coherence lies in the financing of climate and disaster-resilient development approaches. Many countries express the need for improved budget planning and dedicated financing for DRR and CCA, but not many policies and plans provide specific information on how to achieve this. Very few countries have dedicated budgets and financing mechanisms in place that code and track expenditure against clear timelines and outcomes. Other key challenges associated with climate and disaster risk financing are short-term versus long-term needs, the lack of predictability of financing for developing countries, and aligning priorities and resources. The following pathways to further strengthen financial coherence have been identified by the analysis (please see report for full list):

- Streamline the screening process for applying to global funding sources.
- Align donor funding with the priorities of the CWP and support particular elements.
- Access funding for SIDS to update legislation and policies and implement DRR and CCA actions.
- Finance climate and disaster-resilient development approaches.
- Promote the principles of sustainable financing.
- Create insurance and risk transfer mechanisms.

MER coherence:

All 16 selected Caribbean countries have established, or are planning to create, a performance monitoring framework (PMF) as part of the CWP under CDEMA's CDM Strategy. However, systems to operationalize these intentions are few and far between as many countries currently lack a results-based management framework with the articulation of expected outcomes and impacts to systematically track achievement and development changes over the planning cycle of the CWP. MER could also play an important role in bridging the gap between national policy and the regional and global frameworks by selecting indicators that are aligned with international guidance and would facilitate the monitoring process, allowing a seamless implementation of the national development plan. The following pathways to further strengthen MER coherence have been identified by the analysis:

- Establish conscious decisions and frameworks for measuring progress and success in jointly tracking the SDGs, DRR, and CCA within the global and regional contexts.
- Enhance integration of tracking and monitoring processes for the three frameworks at the country level to improve reporting efficiency and to improve the dynamic understanding of coherence.
- Monitor sustainable and resilient development indicators over longer time-periods. Data on certain socio-economic indicators could be collected every 10 years through the census.

The baseline analysis of the status of coherence of Caribbean countries presented in this report helps us to identify recommendations for enhanced multi-sectoral sustainable development, DRR and CCA policy and governance coherence targeted at specific stakeholder groups. International organisations, donors and funders, regional stakeholders, and national stakeholders can help support coherence in Caribbean countries by doing the following:

Regional level

- Promote the implementation of the the Sendai Framework, Paris Agreement and SDGs, as well as existing regional agreements and decisions related to DRR, CCA, and sustainable development.
- Facilitate enhanced knowledge of coherent approaches among decisionmakers and political leaders.
- Strengthen engagement with marginalised populations and support community-based resilience building initiatives and social protection schemes for those most vulnerable to climate and disaster risks.
- Promote inclusion, gender equality and social justice throughout the design, planning and implementation of regional and national efforts to reduce risk.
- Strengthen institutional and policy frameworks at the regional level and further enhance coordination and collaboration between member countries.
- Support regional exchange of information, data, methods, tools, and good practice.
- Facilitate collection of and access to harmonized data for evidence-based planning and decision-making.
- Promote regional multi-hazard early warning systems, risk insurance and financing mechanisms, and regional response mechanisms to address transboundary risks.

National and sub-national levels

- Review and reform legislative frameworks for DRR and CCA to streamline: 1) mandates, roles and responsibilities; 2) how to integrate them in specific national sectors and cross-sectoral areas, and 3) resourcing of relevant government agencies.
- Review national policies and strategies for DRR and CCA in line with new legislation, align timelines to increase opportunities for interactions across policy processes, and consider the development of joint national policies and plans for DRR and CCA, following the model of the JNAPs in the PICTs.
- Establish a dedicated lead agency responsible for the coherent planning and implementation of risk reduction and resilience building activities across all government agencies and sectoral line ministries.
- Further strengthen the integration of DRR and CCA into national development plans and align with national sustainable development goals.
- Strengthen multi-level, multi-stakeholder and cross-sector collaboration to ensure the inclusive planning and implementation of coherent risk reduction measures.
- Enhance understanding of socio-economic drivers of climate and disaster risk and develop approaches, methods and tools for multi-hazard risk and vulnerability assessments and risk-informed development.
- Establish and further enhance social protection and risk insurance schemes for those most vulnerable to climate change and disaster impacts.
- Promote green growth approaches and nature-based solutions for risk reduction and resilient development.
- Establish joint monitoring, evaluation and reporting systems aligned with national reporting to SFM, UNFCCC, and the SDGs.
- Establish dedicated budget lines for risk reduction and track expenditure against timelines and expected outcomes.

International organizations

- Provide technical assistance and guidelines for sectoral government departments to facilitate the operationalization of coherence.
- Establish funding sources and financing mechanisms that specifically aim to support integrated climate and disaster risk reduction measures and risk informed development approaches.

The analysis of DRR-CCA-SDG coherence presented in this report is an important starting point to understand the state of policies and to inform future decision making. However, a number of stakeholders pointed out that achieving coherence should not be the end goal. Rather, the role of policy coherence should be seen as a means to an end, which is the strengthening of regional and national resilience to multiple interconnected risks factors and intersectional multidimensional vulnerabilities. Efforts to increase coherence and resilience need to give due attention to gender equality, social inclusion and human rights-based approaches so as to truly address the underlying causes of vulnerability and risk, which are so often linked with poverty, socio economic inequalities and marginalization, and a lack of access to resources.

1. Introduction

1.1. Background

Disaster risk reduction (DRR) includes policies and interventions that aim to reduce existing risk, manage residual risk, and prevent the creation of new risk (UNDRR, 2021a); climate change adaptation (CCA) concerns adjustment to actual or expected climate change to moderate negative impacts and exploit beneficial opportunities (IPCC, 2014). DRR and CCA, hence, are interlinked as they both focus on risk and seek to reduce vulnerabilities and build resilience of people, systems, and societies in order to achieve and sustain development. According to the IPCC's Sixth Assessment Report (AR6) (Pörtner et al., 2022), risk provides a framework for understanding the increasingly severe, interconnected and often irreversible impacts of climate change on ecosystems, biodiversity, and human systems. Resilience building is the shared foundation of the Paris Agreement on Climate Change (PA) and the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR), as well as the 2030 Agenda for Sustainable Development (i.e. SDGs). The shared goal is ever more important as the IPCC's latest report on the Physical Science Basis confirms that human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts and related losses and damages to nature and people, beyond natural climate variability (IPCC, 2022), increasing disaster risk , pushing impacts beyond the capacity to adapt and threatening development.

The processes of developing policies and investing in risk reduction and adaptation have similar approaches, common challenges, and complementary advantages for governance, financing, information and data analysis, capacity development, and monitoring UNDRR (2021i) For instance, both DRR and CCA address likelihood, outcomes and impacts of hazards, and societal responses (Solecki et al., 2011), targeting similar vulnerable communities and sharing similar approaches to programming and implementation (Islam et al., 2020). For adaptation and risk reduction to be well implemented, there is a need to identify approaches to bring them together UNDRR (2021i)..

Despite commonalities and complementarities, DRR and CCA are often planned, financed and implemented in separate ways as they have emerged from parallel global processes and they are led and managed at country level by different actors and custodian agencies. Major barriers to linking DRR and CCA include scale mismatches, norms and knowledge (Birkmann and von Teichman, 2010), as well as institutional, governance, financial, and policy challenges (Islam et al., 2020). While research has captured areas of common concerns between DRR and CCA, along with challenges facing their integration, a gap remains at the operational level for context-specific strategies (Islam et al., 2020).

Box 1 Comprehensive Risk Management (CRM – UNDRR).

Recognizing that enhanced coherence between DRR and CCA action can contribute to ensuring that development does not create new or exacerbate existing and future levels of risk, and that development gains are protected from the impact of disasters and climate change, the United Nations Office for Disaster Risk Reduction (UNDRR) has embarked on an integrated approach that focuses on how to achieve coherence through comprehensive disaster and climate risk management (CRM). UNDRR's CRM program seeks to integrate risk-centered approaches into National Adaptation Plans (NAPs), and climate/forecast information into national and subnational DRR strategies, aligning them better with the national adaptation goals. UNDRR is committed to supporting countries achieve a risk-informed and integrated approach to sustainable development.

This is reflected in the Strategic Framework 2022-2025 (UNDRR, 2021b), which identifies addressing the climate emergency as a high priority, embedded in the 'accelerator' on climate agenda and climate risk reduction. Result 1.2 of the Strategic Framework stipulates that 'Governments and other stakeholders are supported to integrate climate change and disaster risk reduction into relevant strategies and policies across and within sectors.'

1.2. Objective

The report aims to enhance our understanding of coherence of planning and policy implementation mechanisms in countries across the Caribbean. The study identifies key lessons for national governments and regional actors and forms the basis for future work in supporting coherent DRR and CCA approaches in the context of the 2030 Agenda for Sustainable Development in the region.

The study conducted by the UNDRR Regional Office for the Americas and the Caribbean, in partnership with the Stockholm Environment Institute (SEI), and with the support of members of the Issue-based Coalition for the Latin America and Caribbean region on Climate Change and Resilience, is in line with the programmatic approach on comprehensive disaster and climate risk management.

1.3. Target audiences

The report is targeted to the policy and decision-makers in: Ministries of Development and Planning, National Focal Points for the SFDRR - including national disaster risk reduction management agencies-, and the various National Focal Points under the UNFCCC of the countries in the Caribbean region; representatives of international and regional organisations (e.g., NGOs, CSOs, research institutions, multi-stakeholder platforms) working on the integration of disaster risk reduction, climate change adaptation and sustainable development; sub-regional, regional and global development financial institutions; and development partners, including from the donor's community, that actively support government institutions and mechanisms at the country level in the coherent implementation of the global frameworks.

1.4. Outline of the report

The report is structured as follows. Section 1 provides the background, objective, intended audiences, and methodology of the report. Section 2 introduces the conceptual framework used in this research, articulating the six dimensions of SDG-DRR-CCA policy coherence: strategic, conceptual, institutional, operational, financial, and monitoring, evaluation and reporting (MER). In Section 3 there is an overview of the international and regional frameworks guiding policy and action on SD, DRR and CCA. Section 4 presents the key insights of the desk review and in-country consultations for each of the sixteen selected Caribbean countries. Finally, Section 5 discusses the key findings for each of the coherence themes at the regional level, followed by recommendations for decision makers.

1.5. Methodology

This report builds upon and extends the methodology applied in similar baseline assessments of policy coherence recently conducted in countries of the African region UNDRR (2020) and in countries and territories of the Asia and the Pacific region (UNDRR, forthcoming). The methodology includes a literature review on coherence between DRR, and CCA; a desk review of national development, DRR, and climate change (adaptation) strategies, plans, and related documents, of sixteen selected countries in the Caribbean Region; key informant interviews with international, regional and national stakeholders; an online stakeholder workshop; and in-country consultations conducted by local consultants. The sixteen selected countries are Antigua and Barbuda, The Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago. These countries were selected because UNDRR and CDEMA have been supporting them in the development of their Country Work Programmes (CWPs).

A literature review was conducted to establish how coherence between DRR and CCA has been defined, and how the thinking on coherence has evolved over time, in theory and in practice, in the academic and non-academic literature. A review of national policies, strategies and planning documents relating to (sustainable) development, DRR and climate change (adaptation) was undertaken with the purpose of: (i) assessing how CCA is considered in development and DRR/disaster risk management (DRM) focused policy and planning documents, and (ii) how DRR/DRM is approached in development and CCA-focused policy and planning documents.

Documents reviewed include national DRRstrategies, national climate change (adaptation) strategies, national adaptation plans (NAPs), national adaptation programmes of action (NAPAs), national communications (NCs) to the UNFCCC, intended nationally determined contributions (INDCs), nationally determined contributions (NDCs), adaptation communications, and national development plans (NDPs) (see 2). In addition to the review of national development, DRR, and CCA policy and planning documents, this study also included a desk review of relevant regional and sub-regional plans and guidelines, support mechanisms such as multi-stakeholder partnerships and opportunities for financing joint initiatives for the SDGs, DRR and CCA.

In several of the selected countries, a detailed analysis of institutions, policies and plans relating to (sustainable) development, DRR and CC(A) was conducted by a locally recruited consultant. These national consultations have been essential in developing the Comprehensive Disaster Management Country Work Programmes (CWPs) in these countries.

Key informant interviews were conducted in September and October 2021 with National Sendai Focal points and National focal points for UNFCCC of selected countries in the Caribbean Region, representatives of ministries/agencies of national and sub-national sectoral policies and plans, and representatives of international and regional organisations working on the integration of DRR, and CCA (see Annexes 2 and 3 for more details).

An online stakeholder consultation workshop on -DRR-CCA coherence in the Caribbean Region jointly hosted by UNDRR and SEI was held on 14 October 2021. The purpose of the workshop was to seek wider stakeholder inputs in order to validate findings and gain additional insights on the status of coherence at different scales, to ultimately help identify innovative approaches and understand the opportunities and enabling factors and obstacles to enhanced coherence. Invited stakeholders included key global, regional and national stakeholders representing researchers and practitioners from government, UN and other international organisations, development partners (see Annex 4 for more details).

Box 2 Development, DRR and CC(A) planning documents at regional, national and sub-national levels

- **National Development Plans** (NDPs) set out the overarching framework that guides development efforts at national level and serve as the tool for the implementation of the SDGs. They provide the national vision and priorities and the leverage for DRR and CCA to be linked to the institutional arrangements, budget and programs aiming at enhancing resilience at the national level. Mainstreaming DRR and CCA into NDPs is a priority for both fields.

- The development of **National and Local DRR strategies and plans** by 2020 is a dedicated target of the SFDRR: Target E calls to "substantially increase the number of countries with national and local disaster risk reduction strategies." According to (UNDRR, 2019a), DRR strategies and plans define goals and objectives across different timescales and with concrete targets, indicators and time frames. In line with the SFDRR, these should be aimed at preventing the creation of disaster risk, reducing existing risk, and strengthening economic, social, health and environmental resilience.

- **National Action Plans for Disaster Risk Management** (DRM NAPs) documents guide day-to-day operations. Some include a monitoring, evaluation and learning (MEL) framework to assess performance and advance accountability of the lead agency and progress against the stated aims of the DRR strategy.

- **National Climate Change Adaptation Strategies** are policy documents that establish the government priorities to increase adaptation. They are sometimes integrated in a larger climate change strategy together with mitigation or stand-alone adaptation strategies.

- **The National Adaptation Plan** (NAP) process was established under the Cancun Adaptation Framework (CAF). It enables Parties to formulate and implement national adaptation plans (NAPs) to identify medium- and long-term adaptation needs and develop and implement strategies and programmes to address those needs. The objectives of the NAP process are: (a) To reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience; (b) To facilitate the integration of climate change adaptation, coherently, into relevant new and existing policies, programmes and activities, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate (decision 5/CP.17, paragraph 1). NAPs provide an opportunity to enhance coherence between DRR and CCA as they aim to reduce vulnerability, fostering dialogue and partnerships among sectors and stakeholders, including DRR. The technical guidelines for development of NAPs mentions risk and vulnerability assessments as one of the initial steps to develop a NAP.

- In implementing Article 4.9 of the Convention, the COP, in 2001, established the least developed countries (LDC) work programme, that included the **National Adaptation Programmes of Action** (NAPAs), to support LDCs to address the challenge of climate change given their particular vulnerability. NAPAs provide a process for the LDCs to identify priority activities that respond to their urgent and immediate needs concerning adaptation to climate change – those needs for which further delay could increase vulnerability or lead to increased costs at a later stage.

- As part of their reporting to the UNFCCC, Non-Annex 1 Parties are required to submit **National Communications** (NCs) and biennial update reports (BURs) within their respective capabilities. In addition to providing information to assess the progress of efforts to address climate change, national reports are helpful documents in the national planning and development process as well as for policymakers. NCs provide information on greenhouse gas (GHG) inventories, measures to mitigate and to facilitate adequate adaptation to climate change, and any other information that the Party considers relevant to the achievement of the objective of the Convention. (UNFCCC, 2021a).

- **Nationally determined contributions** (NDCs) embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive NDCs that it intends to achieve. Parties shall pursue domestic mitigation measures to achieve the objectives of such contributions (UNFCCC, 2021b).

- The COP, by its decisions 1/CP.19 and 1/CP.20, invited all Parties to communicate to the secretariat their **intended nationally determined contributions** (INDCs) well in advance of COP 21 (by the first quarter of 2015 by those Parties ready to do so) in a manner that facilitates the clarity, transparency, and understanding of the INDCs (UNFCCC, 2021c). INDCs were communicated before the Paris Agreement was adopted by Parties, but were.

- **Adaptation Communications** (AdCom) were established by Article 7, paragraphs 10 and 11, of the Paris Agreement. Each Party should submit and update periodically an adaptation communication, which may include information on its priorities, implementation and support needs, plans, and actions. Its purposes are to increase the visibility and profile of adaptation and its balance with mitigation, strengthen adaptation action and support for developing countries, provide input to the global stocktake, and enhance learning and understanding of adaptation needs and actions. The adaptation communication shall be submitted, as appropriate, as a component of or in conjunction with other communications and/or documents, including a national adaptation plan, a national communication, a nationally determined contribution, or a biennial transparency report (UNFCCC, 2021d).

Table 1 Types of national policies and plans of selected Caribbean countries.

Country	National Climate Change (Adaptation) Strategy	National Adaptation Plan (NAP)	National Adaptation Programme of Action (NAPA)	Intended Nationally Determined Contribution (INDC)	Nationally Determined Contribution (NDC)	UNFCCC National Communications (NCs)	National Disaster Management Plan, Country Work Programme	National Development Plan (NDP) / Physical Development Plan
Antigua and Barbuda	--	--	--	2016	2021	2016 (3rd)	2021	2015
Bahamas	2005	--	--	2015	--	2015 (2nd)	2006	2017
Barbados	--	--	--	2021	--	2018 (2nd)	2019	2021 (draft)
Belize	2014	--	--	2014	--	--	2000	2009
Dominica	--	--	2018	--	--	--	2020	2018
Dominican Republic	--	2016	--	--	2020	--	2013	2010
Cuba	--	2017	--	--	2020	--	2100	2017
Haiti	2019	--	--	--	2015	--	2019	2012
Jamaica	2021	--	--	2015	2020	2018 (3rd)	2014	2009
Grenada	2017	2017	--	2015	2020 (SNDC)	2019 (2nd)	2014	2019
Guyana	2015, 2019	--	--	2016 (Revised)	--	2012 (2nd)	2013	2019
Saint Kitts and Nevis	In progress	--	--	2016	--	2016 (2nd)	2001	
Saint Lucia		2018	--	2015	2021	2017 (3rd)	In progress	2020
Saint Vincent and the Grenadines		2019	--	2016	--	2016 (2nd)	2020	2013
Suriname	2015	2020	--	2015	2019	2016 (2nd)	In progress	2021
Trinidad and Tobago	2011	--	--	2018	--	2013 (2nd)	2013	2016

2 Policy coherence framework

This section summarises the coherence of the main policy instruments for CCA, and DRR, with the respective international governing frameworks in these areas i.e., the Paris Agreement and the Sendai Framework. Target 17.4 of SDG 17 acknowledges the need for policy coherence in support of sustainable development.

UNDRR's comprehensive disaster and climate risk management (CRM) approach is aligned with the Target E of the Sendai Framework that seeks to increase the number of countries with national and local disaster risk reduction strategies, wherein promotion of policy coherence with climate change, among others, is one of the defined principles. A comprehensive approach takes into consideration a number of factors to purposively strengthen synergies between disaster risk reduction and climate change adaptation, by identifying mutually beneficial opportunities across policies and programmes, while developing capacities of governments for cross-sectoral planning, and ensuring vertical alignment.

The linkages between national policy and planning documents were analysed using an analytical framework adapted from the report 'Disaster Risk Reduction and Climate Change Adaptation – Pathways for Policy Coherence in Sub-Saharan Africa' (UNDRR 2020). This framework was initially developed for the Africa study based on a preliminary analysis of planning documents, a literature review, and exchanges with practitioners in the Region. Developing the analytical framework was iterative and the levels of coherence defined in that report reflected the situation of policy integration in the African Region.

The level of coherence between the SDGs, DRR and CCA in national policy and planning documents was determined for the following six themes:

1. **Strategic coherence:** Looks at whether the SDGs, DRR and CCA are explicitly addressed jointly or if there is an aim to strengthen the relationship and linkages between the three fields.
2. **Conceptual coherence**: Explores how countries link the SDGs, DRR and CCA conceptually, in particular through the concepts of risk and resilience.
3. **Institutional coherence:** Analyses whether coordination between the SDGs, DRR and CCA is envisioned, and if and how institutional arrangements support coherence.
4. **Operational coherence:** Looks at measures, actions, and activities that bring together the SDGs, DRR, and CCA practices and to which extent planning is considered cross-sectoral.
5. **Financial coherence:** Explores whether and how funding strategies and investments bring together the SDGs, DRR, and CCA.
6. **Monitoring, Evaluation & Reporting (MER) coherence:** Looks at how MER mechanisms bring together coordination and synergies between the SDGs, DRR, and CCA.

The framework of UNDRR (2020) was reviewed by the UNDRR/SEI team for the current study and adapted with some modifications for the Asia Pacific Region. It also advances the analysis by securing coherence between CCA and DRR, and between CCA and DRR with SD. Table 2 describes the characteristics of coherence for each of the six coherence themes.

Table 2 Characteristics of coherence under each coherence theme.

Themes	Characteristics
Strategic	• Adheres to international and regional guidance and processes related to DRR, CCA. • Established laws for DRR and CCA. • Addresses SD, DRR and CCA jointly. • Mainstreams, DRR and CCA jointly into other sectors. • Identifies a lead entity for policy guidance and promotes coordination among them. • Articulates expected outcomes of DRR/CCA coherence.
Conceptual	• Aims to build resilience to climate and disaster risks and avoid the creation of new risks. • Establishes the links between sustainable development, disasters and climate change risks. • Goes beyond the influence of CC on extreme events to describe CC impacts on socio-ecological systems. • Discusses synergies and/or differences between DRR and CCA. • Specifies root socio-economic and environmental causes of climate and disaster risk and vulnerability, and describes them as an obstacle for sustainable development.
Institutional	• Describes coordination mechanisms and/or joint policy instruments to support coherence between, CCA and DRR (e.g. through SDG platform) • Describes coordination mechanisms for sustainable development (SDG or resilience platform) as a mechanism for strengthening coherence. • Identifies the lead agency for the coordination mechanism. • Describes institutional multi-sector mechanism for achieving coherence at sub-national levels. • Describes the roles and responsibilities of, DRR and CCA actors in creating coherence. • DRR and CCA are all under the responsibility of the same mechanism or institution.
Operational	• The formulation and implementation of the policy is based on multi-stakeholder engagement. • Identifies a lead entity for implementation guidance. • Identifies specific opportunities to enhance cohesion between DRR, and CCA. • Includes a detailed cross-sectoral plan of action, outlining specific activities. • Identifies specific sectors for which DRR/CCA are relevant (refers to separate policies for specific sectors, if they exist). • Includes a plan of action for DRR and CCA.
Financial	• Includes an estimation of budget in support of joint DRR/CCA activities. • Specifies a minimum allocation for DRR and CCA. • Refers to joint funding for DRR and CCA. • Refers to specific funding sources and has plans in place to access them. • Promotes risk insurance schemes to reduce the impacts of CC and multiple hazards. • Includes a budget code/tagging/tracking system for CCA and/or DRR used to account for public expenditure on climate and disaster risk reduction, aligned with development investments.
Monitoring, Evaluation & Reporting	• Specifies indicators for DRR and CCA and includes a joint DRR/CCA M&E framework. • Demonstrates alignment with global indicators and official reporting mechanisms (Sendai Framework Monitoring (SFM), SDG, National Communications).

The level of coherence for each of the six themes was determined by considering all of the individual scores received for each of the characteristics under that particular theme as presented in Table 2. The level of coherence for each theme was first determined separately for each document reviewed, and the scores for each document where then combined into one overall level of coherence score for the country. For most countries, several types of documents relating to, DRR, and CCA were available (see Table 1). If several versions of the same type of document were found (e.g., First National Communication to UNFCCC, Second National Communication to UNFCCC, etc.), only the most recent version was reviewed. Documents older than 10 years were excluded from the review, unless they were the only document available for that particular country.

3. Frameworks guiding policy and action on DRR and CCA

This section introduces the global frameworks and mechanisms aimed at supporting policy and action that address climate and disaster risks and promote sustainable and resilient development.

3.1. International frameworks, organisations, and multi-stakeholder partnerships

In 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development (UNGA, 2015), which incorporates the seventeen (17) **Sustainable Development Goals** (SDGs). The SDGs serve as a call to action for countries to implement strategies to peace and prosperity for all persons. The 2030 Agenda recognizes that poverty eradication must be accomplished through a holistic approach with considerations for health, education, environmental sustainability and climate change.

The **Sendai Framework for Disaster Risk Reduction** (Sendai Framework) 2015–2030 (UNISDR, 2015) was adopted at the Third United Nations World Conference on Disaster Risk Reduction, held in Japan in 2015. The SFDRR replaced the previous Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters and provides member countries with concrete actions to reduce disaster risk. It recognizes that the state has the primary role of reducing disaster risk, but that responsibility must be shared with other stakeholders, including local government, the private sector, and communities. The SFDRR establishes four priority areas for action and seven targets (comprising 38 indicators) through which member countries can measure their progress.

The **Paris Agreement** (UNFCCC, 2015) is a legally binding international treaty on climate change adopted by parties in 2015. Recognizing that anthropogenic activities are driving climate change, the Agreement was established to limit global warming to well below 2 degrees Celsius (ideally to 1.5 degrees Celsius), compared to pre-industrial levels. The PA brings nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects. This is especially crucial for SIDS, where climate change impacts are significant. Under the PA, countries prepare Nationally Determined Contributions (NDCs) to signal their contribution to emissions reductions efforts, in response to climate change. Parties have also agreed to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change in contribution to sustainable development.

Cognizant of the vulnerabilities of SIDS, the **Small Island Developing States Accelerated Modalities of Action** (S.A.M.O.A. Pathway) (https://sustainabledevelopment.un.org/samoapathway.html) was instituted to promote sustainable development within these SIDS due to their unique challenges such as climate change. The framework establishes thematic areas to promote sustainable development within SIDS. These are: climate change, inequality, green and ocean-based economy, sustainable energy, food security, and waste management. Trinidad and Tobago became a party to the S.A.M.O.A. Pathway in 2014.

The **Alliance of Small Island States** (AOSIS) (www.aosis.org) is an intergovernmental organization that was established in 1990 during the Second World Climate Conference in Geneva. AOSIS plays an integral role in carrying out advocacy for small island states and influencing international environmental policy. A priority area of advocacy for AOSIS has been global climate change and its detrimental socio-economic and environmental effects on small island states. In this regard, the Alliance has been closely linked with climate policy and specifically with the UNFCCC.

The **Least Developed Countries Expert Group** (LEG) (https://unfccc.int/LEG) was established in 2001 and is currently mandated to provide technical guidance and support to the LDCs on the process to formulate and implement national adaptation plans (NAPs), the preparation and implementation of the national adaptation programmes of action (NAPAs) and the implementation of the LDC work programme. The LEG is also mandated to provide technical guidance and advice on accessing funding from the Green Climate Fund (GCF) for the process to formulate and implement NAPs, in collaboration with the GCF secretariat. Furthermore, the LEG is mandated to engage a wide range of organizations in implementing its work programme.

3.2. Frameworks, strategies, and plans pertaining to the Caribbean region and small islands

Following the 1992 Earth Summit, the **Barbados Programme of Action** (BPOA) (https://sustainabledevelopment.un.org/conferences/bpoa1994) was adopted in 1994 to assist SIDS in achieving sustainable development. The Mauritius Strategy for the Implementation (MSI) of the BPOA addresses essential elements that cover the sustainable development of SIDS, as well as actions that should be taken in specific strategic sectors.

The Caribbean Disaster Emergency Management Agency (CDEMA) was established in 1991 as CDERA (Caribbean Disaster Emergency Response Agency) with responsibility for coordinating emergency response and relief efforts to Participating States. In 2009, it was renamed to become CDEMA, to acknowledge the comprehensive approach of the Agency as disaster management underwent a paradigm shift from response-centric to comprehensive.

The Comprehensive Disaster Management (CDM) Strategy 2014 – 2024 (CDEMA, 2014b) is the successor to the CDM Strategy 2007-2012. The CDM Strategy is aligned with critical international instruments such as the SFDRR, the SDGs, and the PA and aims to enable safe and resilient CDEMA Participating States through comprehensive disaster management. The CDM Strategy adopts a comprehensive approach, targeting all hazards in all phases of disaster management across all sectors. It is established through a comprehensive participatory process that outlines the results framework for the Participating States. The CDM for 2014-2024 promotes a safer and more resilient society, which in turn encourages sustainable economic development. It emphasises resilience in vital economic sectors; community resilience primarily focused on the most vulnerable groups and gender issues; harmonization with climate change adaptation; and resources. Gender mainstreaming, climate change, environmental sustainability, and information and communications technology (ICT) are identified as cross-cutting issues.

The National CDM Strategy, or **Country Work Programme** (CWP), is a core component of the CDM blueprint to support the implementation process. The CWP provides the strategic plan for CDM implementation over a 3-5 year period throughout the disaster management cycle. It provides the short and medium-term goals for disaster management based on the contextual understanding of priority areas and deficiencies within the national context.

CDEMA has adopted a Regional Response Mechanism (RRM) as the vehicle to deliver timely and coordinated responses to affected CDEMA Participating States (PS). The RRM consists of several contingency, continuity, and response guidance documents (plans, protocols, policies, guidelines) that outline immediate and coordinated response mechanisms at the regional level, in response to disaster events affecting CDEMA PS. The Regional Coordination Plan (RCP) was established to facilitate the RRM, supporting National Plans and requiring that National Plans include procedures for triggering the RRM and address the key emergency response functions. Under the RCP, a number of 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.

Climate Change and the Caribbean: A Regional Framework for Achieving Development Resilient to Climate Change (2009-2015) this regional framework provides a roadmap for action over the period 2009-2015, and builds on the groundwork laid by the Caribbean Community Climate Change Centre (CCCCC). The objectives of this document are to establish direction for the continued building of resilience to the impacts of GCC by CARICOM states. The framework document focuses on the identification and consolidation of a set of complementary activities that utilise the CCCCC and other regional institutions' current capacity and experience in addressing adaptation to climate change.

The **Caribbean Community** (CARICOM) members adopted the **Caribbean Resilience Framework** in 2018. Aligned to the CDEMA's Comprehensive Disaster Management Strategy, the framework establishes five pillars of resilience that must be addressed to reduce vulnerability to hazard impacts: 1. Social Protection for the Marginal and Most Vulnerable; 2. Enhancing Economic Opportunity; 3. Safeguarding Infrastructure; 4. Environmental Protection; and 5. Operational Readiness and Recovery.

The Regional Collaborative Platform (RCP) for Latin America and the Caribbean unites all UN entities working on development in the region to jointly respond to the Agenda 2030 for Sustainable Development, addressing critical challenges that transcend country borders. The RCP is currently prioritizing joint efforts around seven areas, with gender and youth as crosscutting issues. One of these seven areas is the **Issue-based Coalition for the Latin America and Caribbean Region on Climate Change and Resilience** (https://agenda2030lac.org/en/topics/climate-change-and-resilience).

Box 2 Global and regional financing mechanisms.

The **Global Environment Facility** (GEF) (www.thegef.org) administers several trust funds and provides secretariat services for the Adaptation Fund on an interim basis. The GEF Trust Fund was established on the eve of the 1992 Rio Earth Summit, to help tackle our planet's most pressing environmental problems. GEF funding to support the projects is contributed by donor countries. These financial contributions are replenished every four years by the 40 GEF donor countries. GEF funds are available to developing countries and countries with economies in transition to meet the objectives of the international environmental conventions and agreements. Other Trust Funds include the Special Climate Change Fund (SCCF), the Least Developed Countries Fund (LDCF), the Capacity-building Initiative for Transparency (CBIT), the Nagoya Protocol Implementation Fund (NPIF), and the Adaptation Fund (AF).

The **Adaptation Fund** (AF) (www.adaptation-fund.org/about) was established in 2010 under the Kyoto Protocol of the UNFCCC. It finances projects and programmes that help vulnerable communities in developing countries adapt to climate change. Initiatives are based on country needs, views, and priorities.

The Green Climate Fund (GCF) (www.greenclimate.fund), a critical element of the Paris Agreement, is the world's largest climate fund, mandated to support developing countries raise and realize their Nationally Determined Contributions (NDC) ambitions towards low-emissions, climate-resilient pathways.

The Readiness and Preparatory Support Programme (**Readiness Programme**) (www.greenclimate.fund/readines) supports country-driven initiatives by developing countries to strengthen their institutional capacities, governance mechanisms, and planning and programming frameworks towards a transformational long-term climate action agenda. The Readiness Programme provides grants and technical assistance to National Designated Authorities (NDAs) and/or focal points (FPs). Readiness funding can also be deployed to strengthen Direct Access Entities. The objective is to enhance the capacity of national institutions to engage with GCF efficiently. Dedicated readiness funding may also assist countries in undertaking adaptation planning and developing strategic frameworks to build their programming with GCF. All developing country Parties to the UNFCCC can access the Readiness Programme. GCF aims at least 50 per cent of the readiness support goes to particularly vulnerable countries, including Least Developed Countries (LDCs), Small Island Developing States (SIDS), and the African States.

The World Bank (WB) (www.worldbank.org) Action Plan on Climate Change Adaptation and Resilience (World Bank, 2019) aims to support countries' efforts to adapt and manage climate risk and to build resilience. The plan includes a new Resilience Rating System (World Bank, 2021) to improve tracking of global progress on adaptation and resilience and to create incentives to engage in more and better adaptation. In earlier work, the WB documented its experience in climate and disaster-resilient development (World Bank, 2013). The report contended that resilient development is essential to eliminating extreme poverty and achieving shared prosperity by 2030. Recognising that such development requires additional start-up costs, which pay off in the long run if done correctly, the report argues for closer collaboration between the climate resilience and disaster risk management communities and incorporating climate and disaster resilience into broader development processes.

The Global Facility for Disaster Reduction and Recovery (GFDRR) (www.gfdrr.org) is a global partnership that helps developing countries better understand and reduce their vulnerability to natural hazards and climate change. GFDRR provides technical assistance, capacity building, and analytical work to help vulnerable nations improve resilience and reduce risk.

The Caribbean Catastrophe Risk Insurance Facility (CCRIF) (www.ccrif.org), formed in 2007, is the first multi-country risk pool globally and is also the first insurance instrument to successfully develop parametric policies backed by both traditional and capital markets. In 2014, the Facility was restructured into a segregated portfolio company (SPC) to facilitate offering new products and expansion into new geographic areas and is now named CCRIF SPC. It is owned, operated, and registered in the Caribbean. CCRIF SPC limits the financial impact of natural hazard events to the Caribbean and Central American governments by quickly providing short-term liquidity when a policy is triggered. CCRIF offers parametric insurance policies for tropical cyclones, earthquakes, excess rainfall, and the fisheries sector.

The Caribbean Development Bank (CDB) (https://www.caribank.org), CDB is committed to helping Borrowing Member Countries reduce inequality and halve the incidence of extreme poverty by the end of 2025, through supporting inclusive and sustainable growth and promoting good governance. The CDB invests in the economic and social development of its Borrowing Member Countries. These investments, geared towards poverty reduction, span sectors such as agriculture and rural development, energy, and water and sanitation.

4. Status of coherence between SD, DRR and CCA at the national level

In this section, key insights of desk review and key informant interviews are presented for each of the selected countries.

4.1. Antigua and Barbuda

Risk context

The country of Antigua and Barbuda is exposed to a wide range of natural and anthropogenic hazards (CDEMA, 2021). The risk profiles of the two islands vary slightly in terms of priorities, but the types of hazards to which both islands are vulnerable are generally common. Antigua is characterized by densely populated areas and major infrastructural investment and development in the coastal zones. Hurricanes and droughts are frequent recurrent hazards. Wind, storm surge, and waves are caused by hurricane and tropical storm activity and are closely related. The country has experienced several significant hydro-meteorological hazard impacts – predominantly droughts and hurricanes; seismological events such as earthquakes, landslides, and other physical hazards; and anthropogenic and health-related hazards. According to the World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020), Antigua and Barbuda received a 'very high' WorldRiskIndex value and ranks 4th globally due to its vulnerability to climate change and other factors.

Strategic coherence

Antigua and Barbuda's policies and plans are aligned with the Sendai Framework, the Paris Agreement, and address DRR, CCA, and sustainable development within a broader resilience framework. The country is a member of the regional Caribbean Disaster Emergency Management Agency (CDEMA) and applies CDEMA's Framework for Comprehensive Disaster Management (CDM) (CDEMA, 2014b).

The Medium-Term Development Strategy (MTDS) 2016 to 2020 (Government of Antigua and Barbuda, 2015) integrates disaster risk management and climate resilience in its Core Programme of Action C – Sustainable Development 3: Improved Natural Resources and Sustained Historical and Cultural Assets. Action 11 is to reduce vulnerability to disaster and climate change risks. One of the Plan's actions is to "Review coordination arrangements and practices. This action will seek to improve the dialogue to disaster risk co-ordination and will inform steps that can be taken to encourage more effective participation of agencies across government. This will involve reviewing the requirements for selecting ministerial representatives on coordinating committees (p. 63)."

The Country Work Programme (CWP) 2020-2024 (CDEMA, 2021) uses the Comprehensive Disaster Management (CDM) approach with activities across all phases of the disaster risk management cycle. Regionally recognized cross-cutting themes – climate change, gender, information and communication technologies, and environmental Sustainability – have been mainstreamed into the CWP and are reflected in the results and activities, in line with the CDM Strategy and the SFDRR. The CWP allowed cross-sectoral, regional, and international synergies to be strengthened through a harmonized approach. The CDM Strategy represents

an evolution from a reactive disaster office, focusing 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.

Conceptual coherence

All of Antigua and Barbuda's policies and plans have the aim to build resilience to climate and disaster risks. The CWP takes a systemic approach to deal with risk to reduce existing risk and prevent future risk in multiple sectoral contexts. It aims to establish clear linkages of CDM with CCA and SD as part of its comprehensive approach.

The Government of Antigua and Barbuda has recognized climate change as a cross-cutting theme and has articulated specific goals, targets, or commitments that contribute to climate risk management and resilient development to combat the urgent threat of climate change. The country's NAP is the core guiding document for climate risk management and provides a strategic opportunity to formulate initiatives that support policy innovation.

The CWP articulates the country's intention to withstand a category five hurricane, one meter of sea-level rise, and a drought lasting over three years while the core economy remains functioning at a capacity similar to that if climate change was not occurring.

The (I)NDC specifies targets for adaptation relating to enhancing water supply through seawater desalination, upgrading urban building codes to cope with extreme events, promote renewable energy sources, and reduce the health impacts of vector-borne and water-borne diseases.

The CWP identifies a range of non-climatic factors that contribute to the country's vulnerability and exacerbate the adverse effects of climate change. These include unsuitable building techniques, substandard housing, building in unsuitable locations, squatting in flood prone areas, illegal backfilling of sites, scraping of hillsides, altering of water channels, and the backfilling of wetland and water catchments, littering, and illegal dumping. Other illegal activities described as documented environmental degradation that impact critical coastal habitats and increase the country's vulnerability to coastal hazards include beach sand mining and uncontrolled sewage disposal. The destruction of mangroves and breaches to natural coastal further increases vulnerability to coastal-based hazards such as sea-level rise, tidal waves, and tropical storm-related impacts.

The CWP recognizes the mainstreaming of gender equality and social justice as critical components in integrated adaptation planning. It refers to the Department of Environment programmes as a blueprint for how other agencies can advance gender equality and women's empowerment.

In 2020, the country took an essential step in securing social justice for its citizenry by ratifying the Escazú Agreement, the Regional Agreement on Access to Information, Public Participation, and Justice in Environmental Matters in Latin America and the Caribbean. The agreement aims to provide full public access to environmental information, environmental decision-making, and legal protection and recourse concerning environmental matters. It also recognizes the right of current and future generations to a healthy environment and sustainable development.

Institutional coherence

Disaster management legislation adopted in Antigua and Barbuda include the Emergency Powers Act of 1957 and the Disaster Management Act of 2002. The Disaster Management Act established the office of the Director of Disaster Preparedness and Response, which reports to the Prime Minister, and the National Disaster Preparedness and Response Advisory Committee. Disaster management is executed through the National Office for Disaster Services (NODS). NODS was established in 1984 and is the state-run agency of the Government responsible for the reduction of national vulnerability to natural and technological hazards through a multi-sectoral and integrated approach to hazard risk reduction management.

However, the CWP notes that 'the vertical silo structure of the governance system fosters an intrinsic resistance to coordination between and within state and non-state actors. According to the CWP, NODS proposed establishing an inter-sectoral coordinating unit for CWP implementation, to be led by NODS, in consultation with key stakeholders and sectors, who will directly contribute to this process.

Operational coherence

The CWP was developed through a multi-sectoral consultative process and serves the interest of the entire country including multi-sectoral cooperation, connections of disaster risk with climate change and sustainable development as well as risk financing.

NODS partners with key organizations and units to ensure the inter-sectorial nature of the CWP. As the coordinating unit during an event, NODS has a pool of resources to draw on. The actors involved in the development and future implementation of the CWP include both the public and private sectors.

The five priority areas identified in the CWP are 1. Institutional capacity building, 2. Knowledge management, 3. Sectoral integration, 4. Community resilience, and 5. Biological Hazards and Pandemics. A detailed cross-sectoral plan of action outlines specific activities under each of the priority areas. Annex A1 presents the detailed responsibilities, timelines, and targets of the CWP.

However, the CWP identifies risk identification as a major gap and highlights the need to ensure that national and key sector risk assessments are completed, up-to-date and accessible for use in planning. The NDC emphasizes the importance of data management to facilitate clarity, transparency and understanding in decision-making.

Financial coherence

The CWP stresses the importance of risk financing as an enabling factor in achieving climate and disaster resilience. According to the CWP, current financing needs for CCA are not being met. Implementing the country's (I)NDC adaptation targets alone are projected to cost $20M USD per year for the next ten years (World Bank, 2016a).

As a result of a lack of financing, ongoing adaptation efforts are not effectively protecting Antigua and Barbuda's vulnerable communities against predicted climate change impacts. The country's economy is not generating adequate resources for the Government to fund

adaptation. Further, there are limited financing options available for individuals, communities and businesses to access funds to implement ecosystem maintenance or restoration in the face of climate change.

To address this problem, the CWP recommends promoting the implementation of cost-effective adaptation measures by implementing adaptation in the environment and in the community, building both natural and social adaptive capacity simultaneously. It states that this can be achieved by: i) implementing adaptation in the watershed and waterways, such as climate-resilient drainage systems; 2) a "soft" loan program for home and business owners for adaptation; 3) providing grants to the community and NGOs to get their buildings ready for climate change, where upgraded community buildings can serve as hurricane shelters, community cisterns as emergency water reserves, and learning centers to strengthen social capital; and 4) to provide the community with the skills and capacity they need to maintain the waterway, with assistance and in partnership with the Government of Antigua and Barbuda.
The Ministry of Finance recommends for NODS to prepare a Disaster Risk Financing Plan. The plan should consider options for the selection of risk financing instruments based on frequency and severity of disasters. Some risks could be financed out of budgetary savings, multilateral resources, and alternative risk financing instruments from multilateral development banks could be used in other instances. The plan should provide details on how its funding strategies will support the SDGs, CCA, and DRR. Additionally, the Plan should ensure that all parties should have clearly defined methodologies for including non-state actors in the process.

The (I)NDC (World Bank, 2016a) is to create an affordable insurance scheme for farmers, fishers, and residential and business owners to cope with losses resulting from climate variability. Antigua and Barbuda is a member of the CCRIF.

The CWP does not envision or promote the mobilization of a budget dedicated to joint activities supporting the three agendas.

MER coherence

Objective 3 of the CWP is to create a Performance Monitoring Framework (PMF), which sets out standards for measurement of progress and achievements and provides the capacity to report on progress at any given time. The PMF comprises a set of measurable, verifiable targets and indicators, referred to as CARIBBEAN 2024.

The MER mechanism of the National Development Plan (Government of Antigua and Barbuda, 2015) does not consider CCA and DRR.

Table 3 Antigua and Barbuda levels of coherence.[1]

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

1 The levels of coherence are only indicative based on qualitative analysis and not meant for cross-country comparisons.

4.2. Bahamas

Risk context

The Bahamas, a country consisting of more than 700 low-lying islands and cays, has a long history of hurricane and tropical storm activities (IADB, 2020). Hurricane Andrew (1992) and Hurricane Floyd (1999) made landfall in the Bahamas and caused extensive damage on several islands. Coastal storms and storm surges can cause extensive flooding. Climate change and sea-level rise are expected to exacerbate these hazards. According to the World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020), The Bahamas received a 'low' WorldRiskIndex value and ranks 128th globally.

Strategic coherence

The National Development Plan of the Bahamas (NDPBS) (Vision 2040) (Government of the Bahamas, 2017), is The Bahamas's chief planning instrument, supported by the National Development Plan Bill, which provides the legislative framework to institutionalize the planning process in The Bahamas. The NDPBS is developed separately under the four pillars of Governance, Human Capital, Environment and Infrastructure, and Economy. The NDPBS is based on a vision of safe, protected, resilient, sustainable and competitive nation with stipulated outcomes and outputs, thus creating a measure of strategic coherence. The NDPBS is directly linked to the 2030 Agenda for sustainable development and the SDGs, and recognizes the country's commitment to DRR as a CDEMA Participating State. Moreover, strategies and actions incorporate climate change considerations, with explicit recognition of the PA and commitments thereunder. Goal 9 of the NDPBS creates significant linkages to CCA, advocating for "Modern infrastructure in New Providence and the family Islands built to grow the economy to withstand the effects of climate change and rising sea levels."

The NDPBS presents several meaningful processes that promote coherence. It has a stated strategy of integrating DRR into development policies. Under this strategy, Action 11.1.2 seeks to "Incorporate climate change adaptation and mitigation measures into public education, planning, and budgetary processes," while Action 11.2.1 aims to "Incorporate comprehensive disaster risk management strategies for disaster response". The corresponding outcomes include i) CDEMA's comprehensive disaster management strategies fully implemented; ii) NEMA's Emergency Operations Plan reviewed and strengthened, and iii) Risk reduction adaptation recommendations from the ESCI's Hazard and Risk Reduction Study fully implemented. However, these are for the response stage of the CDM as per the title of the Action 11.2.1, and hence may not incorporate mainstreaming into other vital sectors. Notwithstanding the importance of these outputs and outcomes, it can be seen that there is no direct correspondence with the seven global targets of the SFDRR. Furthermore, the outputs of the actions do not correspond to a reduction in the disaster risk drivers at the national level.

In 2005, the Government of The Bahamas developed the National Policy for Adaptation to Climate Change (BSNPACC) (Government of the Bahamas, 2005). The policy provides i) an assessment of the degree of vulnerability of the Bahamas to the projected impacts of climate change by sectors (coastal and marine resource and fisheries, terrestrial biodiversity resources, agriculture and forestry, human settlements and human health, water resources, the energy and transportation sector, tourism and the finance and insurance sectors); ii) an assessment of the capacity for adaptation to anthropogenic climate change; and iii) proposes strategies for anticipating and ameliorating or avoiding the negative impacts. The BSNPACC aims to foster and guide a national plan of action, formulated in a coordinated and holistic manner, to address short-, medium- and long-term effects of climate change, ensuring to the greatest possible extent that the quality of life of the people of The Bahamas and opportunities for sustainable development is not compromised.

Premised on the overarching objective of CCA in support of sustainable development, the BSNPACC presents a level of strategic coherence. However, predating the current global agendas, there is no reference to current international instruments. Furthermore, the document does not refer to the predecessors of the SDGs (MDGs) and SFDRR (HFA). However, the document does make reference to earlier agreements on climate change, particularly the UNFCCC. Additionally, the BSNPACC does address the impact of climate change on important environmental, social and economic sectors and proposes ways to ameliorate these impacts. The BSNPACC does not adequately and effectively articulate outcomes and impacts of policy directives. However, it should be noted that some of these policy directives have links to the goals and strategies within the NDPBS, which present the opportunity and the need to strengthen linkages between the two.

Conceptual coherence

Conceptual coherence is evident within the NDPBS through its recognition of the need for resilience within its vision for The Bahamas. While resilience is not defined in the NDPBS, the plan aims to build resilience to climate and disaster risks, albeit, mainly, in a siloed manner, mainly through *Strategy 11.1 Researching and Implementing Climate Change Adaptation and Mitigation Measures, and Strategy 11.2 Integrate disaster risk reduction into sustainable development policies and planning and build resilience to hazards.* A major strength of the NDPBS is its stated strategy to integrate disaster risk into development

policies, thereby signifying its recognition of the interrelated nature of disaster risk and development. Additionally, while not significantly explored, the NDPBS highlights that the root causes of vulnerability must be addressed in support of DRR. Notwithstanding, it does not sufficiently recognize development processes as a creator of risk when it is not risk informed. Furthermore, the unequal distribution of benefits and risks arising from natural resources as determined by particular development processes is also not sufficiently recognized. For example, sub-goals under Goal 14 for diversifying the economy include investing in tourism, agriculture and fisheries, and ICT amongst others. The actions, outputs, and outcomes of these subgoals do not sufficiently highlight the need that this investment be risk informed to prevent the creation of new risks as a result of new investments in these priority sectors.

The actions, outputs, and outcomes of the NDPBS do not sufficiently recognize the need to assess and reduce existing risks in these sectors due to any earlier development and investment processes that were not sufficiently risk-informed. Action 11.1.3 of the NDPBS which seeks to incorporate gender perspectives identifies outputs related to gender which shows promise towards conceptual coherence. Its outputs include the revision of the BSNPACC to ensure it i) incorporates gender considerations into national climate change strategies and regulations; ii) takes advantage of women's skills and knowledge – such as natural resources management and social networks – in community-based adaptation; and iii) ensures that the burdens and opportunities created by climate change adaptation work are equitable. However, the disaggregated manner of exposure, risks, and losses is not sufficiently assessed or analyzed in strategy's actions, outcomes, and outputs. The NDPBS also does not sufficiently or comprehensively describe climate change impacts on socio-ecological systems. For example, *Strategy 11.3 Sustainably manage and use natural resources while guarding against anthropogenic influences, unsustainable practices and invasive species which undermine terrestrial and marine ecosystems*, and its corresponding actions, outputs, and outcomes do not sufficiently refer to assessing climate change impacts on socio-ecological systems in order to develop mitigating actions to these impacts then. Furthermore, actions, outputs and outcomes under this strategy do not recognize the potential for socio-ecosystem protection and resilience building to act as an entry point for coherent integration of DRR, CCA, and SD interventions.

Conceptual coherence in the BSNPACC is evident, although requiring strengthening. While resilience in not defined within the BSNPACC, the policy promotes economic and environmental resilience, acknowledging that climate change impacts can disrupt these areas. However, it does not refer to community resilience, infrastructure resilience, or social factors contributing to resilience. The intricate linkage between disaster risk and climate change is not well built upon within the BSNPACC, however, the policy advocates for climate change considerations into disaster risk planning. The BSNPACC recognizes the link between CCA and sustainable development in several of its policy directives, e.g., agriculture and human settlements. However, it does not explicitly state that development processes are a risk factor in their potential contribution to exposure and vulnerability, particularly when they are not risk-informed.

The BSNPACC errs in concretizing linkages between disaster and climate change risks. In particular, it does not recognize the unequal distribution of exposure, vulnerability to climate change and natural hazards on different groups within the population as a result of particular development processes. However, it recognizes the impact of climate change on the frequency and severity of some hydrometeorological hazards. The BSNPACC errs in addressing the

root causes of disaster risk. The document recognizes "greenhouse gases" (GHGs) in the atmosphere due to the burning of fossil fuels and other human activities. However, it does not sufficiently recognize the impact of local and national development processes on the creation and distribution of exposure and vulnerability patterns to climate change and disaster risk. Furthermore, the BSNPACC does not address climate change impacts on social or socio-ecological systems. In particular, it does not refer to any linkages between social and ecological systems; does not identify any feedback loops and mechanisms between these systems and does not explicitly recognize the complexity of these systems, thus limiting conceptual coherence.

Institutional coherence

The NDPBS' steering committee is multi-stakeholder (finance, civil society, youth, academia, chamber of commerce) and multisectoral (tourism, economy, labour, culture, education, environment, central bank, port authorities, politicians). While the NDPBS prescribes lead agencies for the varying activities for each of its strategies, a coordinating mechanism at the national and subnational levels to enable the joint agenda is lacking. Moreover, many stakeholders are listed as provisional. The NDPBS is yet to be enacted as a law. However, once the plan is adopted, it will be supported by the National Development Plan Bill. This Bill will provide the required legislative framework to support the Plan and to institutionalize the planning process in The Bahamas. It will be able to build on the cross-sectoral, multi-stakeholder experience facilitated by the steering committee during the development of the plan.

The NDPBS presents further opportunities for strengthening institutional coherence. Once approved, Action 1.1.3 of Strategy 1.1 includes the creation of 4 subcommittees of cabinet accountable for delivering on the priorities of the National Development Plan each assigned one of the four pillars; and the creation of 4 committees of Permanent Secretaries assigned to work with the Office of the Prime Minister (OPM) in supporting each of the four pillar subcommittees of cabinet. However, these four committees (governance, human capital, environment and infrastructure, and economy) cut across the SDGs, DRR and CCA actors and concepts and vice-versa. This therefore provides a crucial opportunity for institutional coherence. Notwithstanding the important cross-sectoral and multi stakeholder coordination opportunities presented, it should be noted that the NDPBS does not explicitly refer to coordination mechanisms and joint policy instruments to specifically support coherence between SDGs, CCA, and DRR.

The BSNPACC errs in establishing mechanisms for coherence as well as defining the varying stakeholders and their respective roles and responsibilities, thereby limiting institutional coherence. While policy principles 7 and 8 of the BSNPACC aim to foster multi-stakeholder participation in climate change adaptation and BSNPACC calls for the "establishment of an effective legal and institutional framework for the maintenance and enhancement of the nation's natural environment", it does not provide any details of such coordination mechanisms and it does not explicitly state that it aims to support coherence with SDGs and DRR. The BSNPACC identifies the lead agency for the BSNPACC itself, namely the Bahamas Environment, Science and Technology (BEST) Commission that has administrative oversight and responsibility for climate change initiatives. All Ministries, departments, and statutory corporations are considered responsible for implementing specific activities or programmes falling within their portfolios to address climate change. They are required to report as

necessary to the National Climate Change Committee (NCCC) and the BEST Commission. While this may be the lead agency for a mechanism for strengthening coherence, no such mechanism is referred to in the document. Furthermore, there is a need to ensure that there is no contradiction with the lead agency for overseeing the implementation of the NDPBS. The BSNPACC does not identify or delineate the roles and responsibilities of SDG, DRR and CCA actors. Furthermore, the roles and lead agencies for each of the policy directives and actions within are also not identified or delineated.

Both documents do not specifically refer to coordination mechanisms at sub-national levels.

Operational coherence

Operational coherence is evident within the NDPBS through its multi-stakeholder base and identification of actors responsible for the varying activities under its strategies. The development and implementation of the NDPBS is based on multi-stakeholder engagement, and multi-stakeholder consultation, facilitated by a multi-stakeholder, multi-sectoral committee; namely the EDPU at the OPM, together with four corresponding sub-committees. The NDPBS does not explicitly identify SD, DRR and CCA actors in order then to develop detailed outlines for their roles and responsibilities. However, each strategy's actions under each goal identify lead and contributing agencies for implementation. The NDPBS identifies actions under each strategy for each of the goals that have been in turn categorized under four pillars for SD. Once the NDPBS bill is enacted, it is envisaged that each of these Actions should be further elaborated into a plan of action, that can strengthen operational coherence.

Sectors are covered implicitly across the varying pillars and strategies. Different sectors are referred to under different strategies corresponding to the various goals but the NDPBS does not sufficiently identify sectors for which DRR, CCA and SDG are relevant. For example, the tourism sector is not identified as a sector where DRR should be mainstreamed under environment and infrastructure pillar. It is also not identified as a sector which may be affected by climate change but is identified as a sector where green technologies may be mainstreamed. On the other hand, it is considered as a critical sector for the diversification of the economy. Similarly, the agribusiness and fisheries sector seen as an important sector for new growth opportunities, is not sufficiently addressed under the environmental and infrastructure pillars as a sector that can be detrimentally affected by both disaster risk and by climate change. More importantly, under new growth sectors that identify agribusiness and fisheries, additional effort should be directed at assessing and mitigating the risks to livelihoods relying on these emerging sectors given emerging climate change risks. A similar argument may be made for the ICT sector which is seen as a growth area without sufficiently looking at embedded cyber security risk. Hence it is clear that a more coherent approach is required for all sectors, including the health and education sector, that can look at development opportunities in each of these sectors while also accounting for climate change and disaster risk considerations rather than treat them in a siloed manner.

The BSNPACC presents evidence of operational coherence based on its recognition of the priority sectors within which climate change adaptation are critical. These include agriculture, tourism, health, forestry, energy, transportation, forestry, water resources, marine resources and biodiversity. While there are no sector-specific adaptation policies, the BSNPACC provides useful insight into the role of these sectors in climate change adaptation. However, it can be seen that not all the sectors identified in the policy directives contributed to the plan,

particularly the finance and insurance sector. Furthermore, the development of the BSNPACC included mainly only government sectors as contributors. The BSNPACC does not identify or delineate the roles and responsibilities of SD, DRR and CCA actors. Further, the roles and responsibilities of various actors in implementing the actions under each of the policy directives are also not identified or delineated.

The BSNPACC highlights the need to develop sectoral strategies for CCA for a range of sectors including agriculture, energy, forestry, settlements, infrastructure, tourism, land-use and water. While many of these strategies have a strong SDG/DRR perspective and relevance; the BSNPACC does not identify any role for SDG/DRR actors in these strategies. Furthermore, the BSNPACC does not make reference to other sectoral strategies/policies relevant to the SDGs and to DRR.

Two important actions specified in the NDPBS relevant to further strengthening operational coherence are to 1) Incorporate comprehensive disaster risk management strategies for disaster response (implement CDEMA's comprehensive disaster management strategy); and 2) Improve risk management capabilities and insurance schemes. This includes the creation of an early warning system that provides reliable information on a range of risks including climate, diseases, market trends etc.).

Financial Coherence

The NDPBS mentions generic innovative financing options, including seed funding, angel investing and venture capital. However, it does not refer to specific funds for sustainable development and CCA, which can also be used for DRR. The NDPBS does not refer to the Addis Ababa Action Agenda that provides the foundation for implementing the global sustainable development agenda, with a strong focus on financing as a lynchpin for development. Financial coherence within the NDPBS while somewhat low, is evident by its promotion of risk insurance schemes disaster and climate risks though focused on the agriculture sector. Notwithstanding the importance of insurance schemes to mitigate the effects of climate change on agribusiness, the potential for insurance in mitigating the effects of climate change on vulnerable population groups (micro-insurance) and all economic sectors needs further strengthening. Additionally, budget resources are prescribed for some of the activities within the Plan and it presents varying options to promote access to funding in support of the activities. Despite this, the NDPBS errs in recognizing sources for mobilization funding across the areas for the joint agenda.

The BSNPACC provides no budget estimates for any joint SD, CCA, and DRR activities. However, policy principle 4 states "Integrate CCA policies, plans, and projects into the national planning and budgetary processes" and Item 4 of the BSNPACC's policy directive to address the impacts of climate change on the financial and insurance sector is to collaborate with the financial sector to develop appropriate risk management measures and regimes to address the impacts of climate change. The mobilization of DRR funding for CCA and/or vice versa is not addressed in the BSNPACC. However, Item 5 of the BSNPACC directive on human settlements is to ensure the incorporation of climate change considerations into existing or proposed national disaster planning. Remarkably, the role of the insurance sector is not recognized across all relevant sectors, including the infrastructure and tourism sector and the potential for micro-insurance to mitigate climate change impacts on vulnerable groups is also not sufficiently recognized.

Neither the NDPBS nor the BSNPACC promotes risk insurance schemes to reduce the impacts of disasters. Consequently, more effort is required for i) incorporating insurance into schemes for developing infrastructure resilience frameworks, mainly related to the recovery along BBB basis, ii) protecting vulnerable communities livelihoods and assets from disaster risk losses partly through the use of micro-insurance, iii) protecting the development gains of the government and the citizens of the Bahamas and the investment portfolio of the private sector from disaster risk losses.

Box 3 Caribbean Disaster Risk Financing Technical Assistance Program.

The Bahamas are a beneficiary country of the Caribbean Disaster Risk Financing Technical Assistance Program (GFDRR, 2020). Under this program, the Bahamas government has been supported in the tracking of post-disaster and climate expenditure to enhance long-term resilience and adaptation capacity in the Caribbean. A disaster budget tagging methodology was developed for identifying and managing climate change mitigation and adaptation as well as DRM activities. This crucial reform has been led by the Ministry of Finance in coordination with the Ministry of Disaster Preparedness, Management and Reconstruction, the Ministry of Environment and Housing, and the Ministry of Public Works. The methodology integrates recent updates to the country's national climate and disaster risk policies, budgeting system, chart of accounts, financial management information systems, and budget documents, as well as global experience with climate tagging methodologies. It also identifies climate and disaster risk-related expenditure classifications, specifies coverage and weighting mechanisms, defines institutional arrangements, and outlines the integration of tagging into budgeting, reporting, validation, and evaluation mechanisms.

MER coherence

The NDPBS demonstrates a step towards MER coherence through its recognition of the SDGs targets and its indicators for success that accompany each of its strategies. It acknowledges its commitment under the UNFCCC and includes proposed national outcome critical indicators for each goal, with indicators, means of verification, and the timeline for measuring indicators beginning with a baseline, followed by measurement in the years of 2020, 2025, 2030, 2035, and 2040. However, the NDPBS does not refer to official reporting mechanisms. An alignment with the SFDRR and CCA indicators is also not evident. While the NDPBS has mainstreamed the 17 SDGs and key associated targets into its 16 NDP Goals, accompanying strategies and action plans, these targets have been established based on criteria that do not prioritize coherence across the frameworks. There is no reference to a common SDG-DRR-CCA M&E framework in the NDPBS. However, once the plan is adopted, it is stated that the Government and Public Policy Institute (GPPI) will serve critical advisory, monitoring and evaluative functions to ensure comprehensive and consistent monitoring of implementation progress, needs and challenges related to the National Development Plan. Hence its role may be then refined to include the development and adoption of a joint M&E framework.

MER coherence in the BSNPACC is low. The BSNPACC does not specify indicators for the SDGs, DRR and CCA. However, the policy states that the NCCC, or its successor body shall monitor the implementation of the BSNPACC. The BSNPACC does not include an M&E

framework, but many of the monitoring actions may form the basis for joining the M&E framework. Predating the current global agenda, the BSNPACC, developed in 2005, does not refer to current or earlier global indicators and reporting mechanisms articulated in the HFA and MDG frameworks, thereby limiting MER coherence.

Table 4 Bahamas levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.3. Barbados

Risk context

Barbados is the eastern-most Caribbean island. It is predominantly flat and is bounded in the east by the Atlantic Ocean and in the west by the Caribbean Sea. The closest neighboring islands are St. Lucia and St. Vincent. The island possesses many of the defining characteristics of SIDS, including low-lying topography, relative remoteness, limited resources and vulnerability to global changes. The Barbados landmass has an area of 432 square kilometers, with 92 kilometers of coastline. With a population of 287,025 (2019), the island is one of the most densely populated in the region with 661 inhabitants per km2. According to the 2000 Census, the population is 93 percent of African descent, three percent of European descent, and the rest of Asian or mixed descent. The majority of the population and infrastructure is located along or near to the coast.

Barbados has a small, open economy, typical for the Caribbean and other small island states. It is classified as a high-income country with a GDP of US$ 5.21 billion (2019 current USD), which translates into a GNI per capita of US$ 17,380 (Atlas method, 2019 current USD). Barbados is also affected by a number of social challenges, including poverty, unemployment, and chronic disease. The combination of these factors is likely to result in the country being one a handful of countries most intensely affected by the future impacts from climate change. The World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020) ranks Barbados 176th globally. With a Risk Index of 1.39 the country is in the range of nations with very low risk.

The priority sectors involved for climate change vulnerability and adaptation are agriculture, water resources, human health, coastal resources and human settlement, tourism, fisheries, and insurance. The tourism and insurance sectors are the most significant contributors to Barbados' economic growth. The environmental risk profile of Barbados is dominated by coastal and weather effects, especially sea level rise, storm surge and increased tropical storm and hurricane intensity and frequency. These effects have significant impacts on

food production, drought, rainfall patterns, disease outbreaks and storm damage, as well as exacerbating existing vulnerabilities to health and water availability. The environmental effects are expected to pose a significant threat to coastal resources, residents, and infrastructure. This will significantly affect Barbados' tourism sector, because of the reliance on low-lying coastal resources, and their inherent vulnerability to climate impacts.

The instruments analysed include the Barbados CWP 2019-2023, the Second National Communication (SNC) for the UNFCCC 2018, the Barbados INDC 2015 and updated 2021, and the Barbados Physical Development Plan (PDP).

Strategic coherence

Barbados' development efforts must be made resilient to the impacts of climate change and related disaster risks. The shared objectives of strengthening resilience, building adaptive capacity and reducing vulnerability to climate change and disasters, represent a strong rationale for alignment of the country's efforts under the 2030 Agenda for Sustainable Development, the PA and the SFDRR. Barbados' approach to achieving such alignment is determined by the particular country's context and capacities. The increased coherence (i.e., coordination and consistency in sectoral planning) will bring efficiency and effectiveness and thus improved outcomes.

The documents refer to the Barbados' Physical Development Plan (PDP) which codifies the land-use development areas and supporting policy goals and objectives. Accordingly, the Plan is an important instrument in enabling the implementation of adaptation strategies that build climate change resilience into public and private developments. Scheduled reviews and updates of the Plan are informed by national growth and development strategies, vulnerability studies and risk assessments, and extensive public and private sector consultation. The overall strategic coherence of PDP between SDG, CCA and DRR is partial because the SDGs are not integrated with CCA and DRR, instead CCA and DRR are fully integrated. In fact, NPD recognize the need to take into account CC in all governmental and private sector planning processes to ensure that adaptation and resilience building become a mandatory feature of all socio-economic, sectoral, and environmental development planning processes. In this way, DRR and CCA will be mainstreamed in development and programming, and disaster risk management will complete its transformation from short-term relief and response interventions to becoming a central element in the development process. Where required, planning decisions are informed by environmental impact assessments that also address climate change concerns. The PDP is currently under review and through this process climate change vulnerability, adaptation and mitigation will be extensively considered for integration into the development planning.

The INDC recognizes that the climate change risk profile of Barbados is dominated by coastal and weather effects, especially sea level rise, storm surge, increased tropical storm and hurricane intensity and frequency; and other more slow-onset environmental impacts, such as flooding and drought, which is a very important and specifically Barbadian nuanced issue, as the country already suffers from water scarcity, and changes in rainfall patterns exacerbate this considerably.

The Barbados Country Work Programme 2019-2023 (CWP) recognizes that managing disaster risk and building a resilient society becomes of paramount importance to maintaining

a trajectory of continued sustainable development. Given these considerations, the Barbados CWP is a strategy and action plan for addressing disaster risk utilizing a comprehensive, inclusive and results-focused approach. CWP begins by outlining the nature of disaster risk in Barbados, it then summarizes the process through which the CWP was developed, and highlights the cross-cutting themes and guiding principles for implementing the CWP. CWP has also the Logical Framework of the CWP and the results (Outcomes and Outputs) that are targeted for achievement during the program and it concludes with an outline of the Monitoring, Evaluation & Reporting (MER) mechanisms for the CWP. The references to SDGs and CCA are very broad and high level without address them in the details. CWP mainly address DRR, it refers in very broad sense to SDGs and promotion of a resilience country but do not provide vision/goals/principle to address CCA. Even if the CWP is focused only on DRR and not jointly address the SDG and CCA, but it promotes integration of DRR into other sectors with a specific Outcome 2.2 and Outputs.

Conceptual Coherence

Conceptual coherence examines how national policy instruments link the SDGs, climate change adaptation and disaster risk reduction conceptually through the concept of risk and resilience which is defined as: *"The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform 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 through risk management."*

In the PDP the conceptual coherence is largely addressed between CCA and DRR through the concept of risk and also the development is largely recognized as a possible risk factor. The resilience word is mentioned in the document but is not a central pivot of it and the PDP do not provide a definition of resilience. DRR and CCA share the common goal of reducing national and community vulnerability and contributing to resilient and sustainable development in the face of climate variability and CC which impacts can affect the frequency, intensity, duration, timing, spatial distribution and extent of the severe weather events to which the island is exposed, increasing the associated risks.

CWP is built around disaster risk, it recognizes that CC can induce more extreme and frequent events but do not elaborate in-depth synergy between DRR and CCA, and furthermore there are link with the development processes of the country. The root causes were explored in term of system capacity to DRM and not respect to specific hazards or vulnerability. In particular, the results from the Situation Analysis demonstrated that the Mitigation and Recovery phases of the disaster cycle were the lowest scoring areas and therefore required particular attention, with the Recovery phase having the lowest performance overall. CWP integrates consideration on the Gender Responsiveness as one of the four cross-cutting themes, but not further elaboration has been provided in the document.

Barbados refers to Article 8.1 of the PA, recognizing the importance that Parties should give to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events. In the mitigation section of the document, the aim is: *"Coherence between national development priorities and climate goals is key, as this enables maximizing the benefits of early action. A resilient economy is a precondition for Barbados' development. For Barbados, resilience bridges the mitigation-adaptation divide, seeking to prevent negative climate change impacts through a sustainable transformation of economic and social systems."*

Institutional Coherence

The PDP, even recognizing that due to the cross sectoral nature of many objectives to be achieved in the Plan it is required maximum coordination and collaboration amongst various Government levels and agencies, the development industry, civil society and the public the overall institutional coherence is almost non present. In fact, the PDP only identify as a key tools to assess proposed development projects four types of "impact assessment": 1) Environmental and Social Impact Assessments (ESIA); 2) Heritage Impact Assessments (HIA); 3) Agricultural Impact Assessments (AIA) and 4) Traffic Impact Assessments (TIA).

In the limitation highlighted in the conceptual coherence, the CWP identify the roles and responsibility of DRR, in particular define the National Emergency Management System (NEMS) as broad-based multi-sector, multi-stakeholder mechanism coordinated by the Department of Emergency Management (DEM). CWP does not refer directly to coordination mechanisms for sustainable development as a mechanism for strengthening coherence but instead underline those efforts made to ensure that the CWP is congruent with national, regional, and international policies and strategies that are relevant to Barbados and will contribute directly to achieving the goals and objectives of these initiatives. At sub-national level recognizes that the resilience of communities forms the bedrock of a nation's resilience but do not include coordination to promote it.

Instead, there are not explicit mechanism instruments put in place in the INDC reports, but only a strong direction to implement synergy by working across sectors; perhaps this aspect is also due to the nature of reporting of this document.

Operational Coherence

The 2030 Agenda for Sustainable Development presents an opportunity for small island developing states (SIDS) to optimize the potential benefits of implementing the 17 SDGs, and enhance the capacity of national frameworks to guide coherent policy design and integrated cross-sectoral implementation of development objectives. Barbados uses targeted policy formation and a monitoring mechanism on progress that identifies the achievement of its national development goals and their ability to ensure that actual development leaves no one behind; and that different groups of people; inclusive of women, youth, persons with disabilities, older persons and rural dwellers, are all engaged in and benefit from national development efforts. There is a list of Climate Change Impacts, Adaptation Options and Barriers for Priority Sectors that defines time scale and priority for each option. Various environmental protection policies, laws and management programmes contribute to the pursuit of Barbados' sustainable development aspiration. Several of these that are particularly relevant and influential in shaping the national climate change response are explicitly mentioned in the document. Furthermore, the crisis also revealed the strong connectivity between development, public health and nutrition security, education and tourism.

The PDP well recognized that CCA and DRR are central in all the identified core assets (valued and irreplaceable places, elements and resources that are key to the long term prosperity of the island) of Barbados: fresh water, areas best suited to produce food and agriculture, natural heritage systems, cultural heritage, the National Park and the central places in our communities. In particular, the recognition of the natural heritage systems as core assets substantially integrate CCA and DRR. Furthermore, PDP identifies specific opportunities to

enhance partially cohesion in raising awareness and in establishing multi-purpose database and substantial coherence in conduct climate and disaster risk assessment and promoting ecosystem-based approaches. In fact, the PDP recognize the value of data in assessing risk but do not establish a specific database for multi-purpose damage and loss. Finally, as updated mapping and data related to natural hazards and projected climate change threats becomes available, the PDP will be amended to include this information and related policies. In the limitation highlighted in the conceptual and institutional coherence, the CWP promotes actions and activities which bring together SDGs, CCA, and DRR practices and cross-sectoral planning. In particular, the research and knowledge management are an area that is vital to building resilience and cannot be neglected. Priority 4 of CWP addresses an area of relative weakness – the generation of data and information and its integration into decision-making. The aim of this priority is to improve knowledge management holistically by increasing and sustaining disaster management research, knowledge and learning. The Outcome 2.2 "CDM mainstreamed into key sectors" seeks to better integrate disaster risk management into traditional sectors such as Agriculture, Health, Education and Tourism and emerging sectors, with focus on the finance, blue economy and energy sectors, and the private sector. The NEMS will work with key strategic partners in each of these sectors to build their capacities for disaster mitigation, preparedness, response and recovery and implement initiatives that build resilience in their respective sectors, utilizing existing knowledge of hazards, vulnerability and risk. To this aim, The National Strategic Plan of Barbados defined the strategy to give greater and sustained attention to the systematic collection, analysis and dissemination of data and ensure the development of accurate data and information systems through mapping, recording and evaluation of all environmental assets.

Financial Coherence

The financial coherence is not present across different document analysed, the only financial references are related to DRM. There is a comprehensive list of different fund programs and project, both for adaptation/DRR and also for mitigation (e.g. "Water Resource Management and Flood Resilience Climate Change Programme, funded with assistance from the United States Agency for International Development).

The PDP do not include any references to funding mechanism or structures to bring together SDGs, CCA and DRR, this is in part due to the nature of the document that is to provide a clear and accessible framework for private and public investment in the physical environment without explicitly referring to an estimation budget.

The WCP references to an insurance scheme but in very general term and the related key activities are to develop a catastrophe and risk insurance product for chattel houses, crops, fisheries. Instead, the INDC documents strongly refer to the insurance sector. Barbados' insurance industry is fairly advanced compared to those in most emerging economies, which reflects the recognized exposure to natural hazards as well as the strength of the tourism industry which requires insurance services to protect its capital investments. Barbados is also a member of the Caribbean Catastrophe Risk Insurance Facility (CCRIF), the world's first index- based, multi-country catastrophe insurance pool (CCRIF, 2013). Within 14 days of Tropical Cyclone Tomas in 2010, Barbados received a pay out of US$ 8,560,247 from the CCRIF. The Government of Barbados also has a catastrophe fund with an approximate balance of US$ 20 million, which was established to assist homeowners whose small timber homes are uninsurable. The fund is financed by contributions to the National Insurance Scheme.

Insurance products are more effective when they are coupled with reward risk reduction measures and Barbados is considering a variety of insurance options that can be used to support enhanced climate resilience. The potential instruments are: Sovereign disaster risk transfer; Agricultural insurance; Property catastrophe risk insurance; Disaster micro-insurance to protect low-income households and Health insurance.

MER Coherence

In the implementation of the PDP is included the mechanism for monitoring and reviewing the plan, but the description is very general without providing specific objects and targets. The PDP recognizes that an ongoing measuring and monitoring is necessary since the objectives and policies of the PDP are based on situations and assumptions that are subject to change over time. The monitoring needs to identify the emerging trends and related issues, analyze the effectiveness of the Plan and its policies and allow for adjustments and updating as may be required.

Stakeholders have agreed to establish a Monitoring, Evaluation and Reporting (MER) mechanism for the CWP. This mechanism will be augmented by periodic assessments such as the CDM Audit. Stakeholders then selected useful indicators for measuring success, set targets for those indicators and timeframes for achieving the identified targets, and determined responsibilities for leading and supporting the implementation of activities. Most indicators were selected from a Basket of Indicators- a set of impact, Outcome and Output indicators collated for CWP development, that are linked to regional and international strategies and frameworks such as the SFDRR, the SDGs, the Caribbean Community (CARICOM) Strategy 2015-2019 and the Regional CDM Strategy and Results Framework 2014-2024.

The mechanism will involve the following: 1) An electronic tool for tracking CWP progress will be created, based on widely accessible, low-cost applications; 2) Quarterly progress updates will be shared electronically with the NEMS; 3) An annual MER consultation will be held at the start of each year of the CWP to review progress, identify challenges and lessons and make recommendations to improve implementation and 4) Annual reports on progress will be presented to the EMAC.

Table 5 Barbados levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.4. Belize

Risk context

Belize is a small country in central America bordering with Mexico and Guatemala. It extends for almost 23 thousand kilometres square and has a population of around 419 199 (2019) with a GDP of US$ $3.484 billion (2020). Despite achieving independence only in 1981 and having to fight a territorial dispute with Guatemala, Belize has a track of increasing both population and GDP every decade since 1981. The World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020) ranks Belize 64th globally, with a WorldRiskIndex of 7.95, which puts the country in the range of nations with high disaster risk. According to the World Risk Report, Belize faces a lower risk compared to other countries in the same Caribbean region. Nonetheless, Belize faces annual losses due to extreme weather events approximately around 4% of its GDP (Carneiro, 2016). Besides the frequent hurricanes that became to be expected considering the position of the country in the hurricane belt, in recent years, other natural hazards such as floods and storms have intensified their frequency of occurrence along with the occasional technological hazards. Additionally, 42% of Belize's population lives in poverty and is distributed in large part along the coastlines (i.e., 45%). The densely populated coastlines, along with the low-lying morphological conformation of the territory makes the country very vulnerable to long on-set threat of sea-level rise. Finally, the Belizean economy is largely based on agriculture, fisheries, and tourism all activities endangered by the raise of the temperature which is expected to be in the range of 2°C – 4°C in Belize.

The instruments analysed include the Horizon 2030 – Long Term National Development Framework for Belize (2011), A National Climate Change Policy, Strategy and Action Plan to Address Climate Change in Belize (2014) the Disaster Preparedness and Response Act, Chapter 145 (2000) and National Hazard Mitigation Policy (2004).

Strategic coherence

Horizon 2030 is Belize's long-term developing plan, which aims at bringing to light the vision of the entire country for a sustainable development. The plan focuses mostly on development goals that are not connected to climate change or disaster risk. The policy is written around 2010, thus, no reference could be made to well-established global or regional framework (e.g., SFDRR, PA, etc.). Also, the plan concentrates mostly on development aspect of the country more strictly related to national identity, reduction of corruption, health for everyone, which are all topic falling under the SDGs umbrella, nonetheless the policy still comes short in addressing sustainable development jointly with climate change adaptation and/or disaster risk reduction measures. Quoting the document: "*The theme 'care for the natural environment*" should be re-worked to give greater emphasis to climate change", addressing specific need of the country.

Differently from the NDP, the *"A National Climate Change Policy, Strategy and Action Plan to Address Climate Change in Belize"* (NCCPSAP), puts great emphasis over the importance of approaching the themes of SDG, CCA and DRR in a cross-cutting manner. The date of release of the document (2014) is prior to the mainstreaming of the Sustainable Development Goals, therefore, reference is made to the previously defined Millennium Development Goals. However, in the document the government of Belize recognizes the willingness and the need of the country to mainstream SDG, CCA and DRR practice over multiple sector and multiple agencies to increase the resilience of the country, making a good job in highlighting, for each sector, the strategies envisioned to achieve the outcomes proposed.

Disaster risk reduction in Belize is covered by the Disaster Preparedness and Response Act, Chapter 145 (NDPR), and the National Hazard Mitigation Policy (NHMP). The former is a law that defines thoroughly the actors and agencies involved in the response to a disaster and in the aftermath of such event. No connection is made with sustainable development likewise climate change is not really mentioned as could be expected by the date of the law (2000). The latter is a policy that aims at enhancing the safety of the country by integrating risk reduction measures into the development of Belize. As for the law, being divulged in 2004 the policy does not refer to climate change but introduces the necessity to heighten the resilience of the country not only to man-made hazard but to the technological ones too.

Conceptual Coherence

When looking into the capacity of this policy to link together SDG, CCA and DRR through the concept of risk, Horizon 2030 does not go much further than acknowledging climate change as a risk factor and a threat to development of Belize. Does not provide any insight on the causes of climate change neither defines resilience in any form or discuss the possible interaction between disaster risk reduction and climate change adaptation. Unrelated to risk, it is worth noting the effort the plan makes in addressing the importance of gender and social equity towards the achievement of development status.

The same can't be said about the climate change policy. Indeed, this document puts out a good effort into clearly defining the goals and the purpose of the policy, creates good links between the CCA and DRR topics trying to highlight the importance of integrating them into a coherent a sustainable development. It defines resilience as the ability of a system to cope and recover from a shock and pushes towards actions aimed at increasing the resilience

of the country. It identifies sea level rise as a threat to the coastal urban areas and marine habitat as much as the increase in severe extreme events in parallel with the commitment to gender and overall social equity.

The NDPR and the NHMP do not recall a definition of resilience, but in the second policy, the notion of resilience is underlined throughout the document when promoting the increase of capacity of the nation aimed at reducing the vulnerability towards natural and technological hazards. As already mentioned, neither policy goes beyond acknowledging the role of CC in increasing the vulnerability of the country to extreme weather events and sea level rise. Both documents do not address the theme of social and gender equity.

Institutional Coherence

Horizon 2030 comes up short on the aspect of linking the three themes together. Climate change is briefly mentioned, while disaster risk is not treated at all. Otherwise, the document reveals an overall strong institutional framework towards the implementation of the policy for the sustainable development of the country. It identifies most of the agencies and department involved and the activities envisioned for them. Also, the policy does a good job in finding link between existing policies and body and the new ones that Horizon 2030 suggests. Among these suggestions, the establishment of the District Committee in charge of coordinating the implementation of the policy at sub-national level adds a fine level of detail.

On the other hand, the climate change policy suggests an overall reconfiguration of the structure used as of now in Belize, given the cross-sectoral nature of the problem that is facing, placing at the core of this overhaul a Climate Change Department in charge of providing a much-needed coordination towards a more efficient governance. The policy defines a well-established institutional framework described with a good level of detail, breaking down for each sector identified as important, the agencies responsible to promotes and implement the strategies delineated in the policy to accomplish the goals set.

The NDPR as for the case of Horizon 2030 fail in linking SDG, CCA and DRR but does a fair job in explicit ministries, departments, and agencies (MDAs) and actors involved when dealing with an event or after the hazardous event occurred, describing their responsibilities. Instead, the NHMP does not explicitly link SDG, CCA and DRR but promotes the integration of risk reduction measures into national policy without refer to specific agencies or departments neither at a national or sub-national scale. Although the document does not address the way the integration could happen, the introduction of the policy summarises existing policies and laws that could play a role in the integration of SDG, CCA and DRR without explicating any linkage between them.

Operational Coherence

Horizon 2030 is a long-term development plan that span over 20 years, where the operational measures identified do not go into extreme detailed. Nonetheless, regarding sustainable development only, the policy takes well into consideration the cross-sectorial nature of the problem, detailing, for each sector, the key action that the agencies responsible need to undertake and highlighting link with other departments. Amid the sectors recognized by the policy, big focus is put on fisheries and tourism as the two major sectors in the Belizean economy. Also, one of the main goals of the policy is the ability to provide an effective health system able to accommodate all Belizean independently from their social status.

The NCCPSAP tackles the cross-sectoral nature of climate change adaptation and mitigation by providing examples of opportunities to promotes cohesion between SDG, DRR and CCA by pledging to raise awareness and educate the stakeholders involved in the decision process. Does also promotes ecosystem-based approach as conservation of mangroves and preservation of sea grass and coral reefs whose damage could lead to loss that would have a huge impact on Belize's GDP. For agriculture it is also introduced the concept of early warning system. Additionally, the policy does an excellent job in providing a detailed breakdown of the goals, strategies, and action to pursue for each sector deemed relevant.

The NHMP details the importance of raise awareness, among the population, towards the topics of risk mitigation and sustainable development and refers to the importance of aligning SDG, CCA and DRR without referring to specific opportunities where this could happen. The policy also focuses its effort on the sectors that are most important to Belize's economy: agriculture, tourism, fisheries, forestry, and housing promoting and increase of the capacity of the institution responsible to reduce the risk encountered by those that would be greatly affected in these sectors.

In regard to risk analysis and use of data operational level, the documents analysed provided general indication without any specific references to integration different data information sources. According to the NHMP, the Coordinate Unit shall to develop and maintain a comprehensive and reliable data base of key relevant resource persons, facilities, equipment supplies and a system of updating it.

Financial Coherence

A driving force towards the realization of these policies and laws is the impact that natural or technological disaster could have on the economy of countries like Belize and the exacerbation that climate change is providing to these events. Indeed, it is of paramount importance identifying funding opportunities and correct management of resources to adopt the best strategies. Horizon 2030 treats the financial aspect a bit shallowly, without budget estimation and with identification of few, sparse, funding sources not tightly linked with the strategies envisioned. Regarding SDG, CCA and DRR funding opportunities the suggestions do not go beyond the adoption of agricultural insurance for crop loss.

The suggestion of taking advantage of crop insurance for the agricultural sector is shared also in the NCCPSAP, where it is suggested as a risk transfer mechanism for farmers. The NCCPSAP provides an estimation of the cost that each sector would encounter to enable the strategies identified, it also identifies possibility of funding both at local level: a) carbon levy b) vehicle efficiency levy; and at international level: green climate fund or the UNFCCC adaptation fund. Lastly, the policy does recommend the establishment of a Climate Change Trust Fund and a Climate Change Finance Committee (CCFC) whose main function would be resource mobilization in support of Climate Change.

The NDPR does not treat the financial aspect at all, while the NHMP makes just brief reference to the need of identifying viable option for funding without providing any specific remarks on how that would be achieved.

MER Coherence

The successful implementation of a policy usually requires and effective monitoring and evaluation framework. Although without any reference to CCA and DRR, Horizon 2030 clearly establish a M&E framework, defining indicators used to evaluate the level of implementation of the policy towards the sustainable development of Belize. M&E is based on a result matrix where are reported the strategies and interventions, the indicators with their baseline and their targets with a 5-year cadence. The matrix is a tool useful to see the direction and allow to intervene in the mid-term if problem would arise. Another important aspect of the M&E phase is the ability to collect data from the stakeholders and disseminate the results achieved by the policy, enhancing the participation of the population.

The NCCPSAP dedicates a very brief section to monitoring and reporting without detailing any indicators or methods that would be used to evaluate the state of implementation of the policy. It illustrates the actors responsible for the annual reporting to the cabinet.

The NHMP does not have a proper M&E section, provides a bullet list with the requirements that should be fulfilled in order to implement successfully the policy.

Table 6 Belize levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.5. Cuba

Risk Context

The Cuban archipelago consists of the island of Cuba, the Isle of Youth and more than 1,600 islands, islets and cays, which represent a combined surface area of 110,922 km², inhabited by a population of over 11 million people (World Bank Group, 2021). Due to its geographical location in the western Caribbean Sea, Cuba's risk context is highly conditioned by the complex interactions between its socioeconomic vulnerabilities and exposure to different hazards (UNDP, 2010). For instance, between 1998 and 2008 Cuba was struck by more than twenty tropical storms. The archipelago struggles with managing the progressive impacts of climate change in sectors which are strategic to both the country's economy (agriculture, forestry, industry and tourism) as well as to the wellbeing of the population (health, transport, housing, and education). According to the World Risk Report (Bündnis Entwicklung Hilft, 2020), Cuba ranks 100th globally and has been assigned a 'medium' WorldRiskIndex value of 5.84, which is notably driven by the balance between its high level of exposure and its patent adaptive capacities.

Strategic Coherence

The *National Economic Development Plan 2030* (PNDES 2017) aims to overcome the structural imbalances of the Cuban economy based on a systemic, integral and sustainable approach that corresponds with a strategic and consensual vision consistent with the *Guidelines of the Economic and Social Policy of the Party and the Revolution* approved by the 6th Party Congress. Accordingly, the Plan has the potential to become a comprehensive policy addressing CCA and DRR considerations under the heading of sustainable development. However, its strategic coherence suffers from the lack of explicit references to global and regional frameworks on SDGs, CCA and DRR (vertical integration), as well as from weak linkages with relevant national policies (horizontal integration). In addition, while CCA and DRR considerations are presented by the Plan as critical for sustainable development, they

are not addressed through resilience building. Further details could help to understand how the PNDES 2017 mainstreams the SDGs, as well as CCA and DRR, into other sectors.

Although the PNDES 2017 does not refer explicitly to the SFDRR, its strategic axis Natural and Environmental Resources, specific objective 16, is in line with the SFDRR expected outcomes, goals and five out of seven targets. As in the case of the SFDRR, the Plan elaborates on environmental risk, vulnerability issues, and CCA and SDGs strategies. At a regional level, the PNDES 2017 connects indirectly to the CDM Strategy regional goal and cross-cutting themes, mainly through its strategic axis Natural and Environmental Resources. As stated in its Final Considerations, the PNDES 2017 conforms to the UN frameworks for action, which helps embed it within the UNFCCC and the PA objectives and principles. As with the UNFCCC and the PA, the PNDES 2017 considers climate change to be a risk and a challenge, urges the strengthening of national capacities for CCA and links them to the SDGs, and connects CCA measures to vulnerability issues, as well as to mitigation and the need for fostering multi-sectoral strategies. In practice, the link with the *SDGs Agenda 2030* is made throughout the implementation strategies for each macro-program and program. For instance, macro-program 1 covers the SDGs 2-3, 5-13, and 16-17. Therefore, a connection can be established between the PNDES 2017 macro-programs and the SAMOA Pathway commitment to sustainable development of small island developing States. While the PNDES 2017 also considers poverty eradication, sustainable patterns of consumption and production, and efficient management of natural resources, as critical for Cuba's sustainable development, it does not correlate them to resilience building. The Caribbean Safe School Initiative (CSSI) critical issues 1-4, 7 and 9, and commitments 2-3, are partly addressed by the PNDES 2017 specific programs on education.

The *Cuban State Plan for Climate Change 2017* (PEECC 2017) and the *Cuban First Nationally Determined Contribution 2020-2030* (CNDC 2020), owing to the thinking of the historic leader of the Cuban Revolution Fidel Castro Ruz, scientific results and guidelines issued by the General of the Army since 2006, are presented as key instruments to confront the current and future impacts of climate change in the Cuban archipelago. While vertical integration in both policies is rather weak and limited to indirect links to the UNFCCC, the PA and the *SDGs Agenda 2030*, horizontal integration suffers from a lack of multi-sectoral inclusion of CCA actions. In any case, understanding the archipelago's CCA efforts, and their links to DRR and SDGs, requires taking the PEECC 2017 and the CNDC 2020 as complementary policies.

The PEECC 2017 and the CNCD 2020 contribute to the SFDRR expected outcomes, goals and targets. While the PEECC 2017 covers the SFDRR priorities 1-2, the CNCD 2020 connects to the SFDRR priorities 1-4 through its explicit link to the PNDES 2017 general objective 3 (specific objective 19) and the creation of the Capacity Building Center for DRR and CCA. Regionally, even while resilience is not addressed, the PEECC 2017 comprehensive approach to CCA and DRR facilitates its links with the CDM Strategy regional goal. Whilst the CNCD 2020 strongly connects to the CDM Strategy priority areas and focuses on resilience, it does not state clearly if gender would be considered as a cross-cutting theme. The PEECC 2017 adaptation measures cover the UNFCCC objectives and principles 1-4, as well as partially addressing the UNFCCC commitments 1-2 and 8 and the PA's articles 4, 7-8 and 10-11. Conversely, the CNCD 2020 links deliberately to the UNFCCC and the PA as the policy's adaptation measures comply with their principle of common but differentiated responsibilities. As the PEECC 2017 considers CCA as critical for the *Economic and Social Policy Guidelines of the Party and the Revolution 2016*, as well as for the PNDES 2017, the policy connects to the SDGs Agenda

2030. Likewise, the CNCD 2020 relies on guideline 237 to promote linkages between SDGs and CCA. Therefore, both policies are in line with the SAMOA Pathway commitment to the sustainable development of small island developing States. Specifically, the PEECC 2017 and the CNCD 2020 achieve this through their connections to the PNDES 2017 and the *Economic and Social Policy Guidelines of the Party and the Revolution 2016.* Linkages between the PEECC 2017 and the CSSI considerations on education and DRR might be inferred from the PEECC 2017 task 10 which, as recalled by the CNCD 2020, promotes knowledge and participation among the Cuban population.

The *Directive No.1 of the President of the National Defense Council for Disaster Risk Reduction 2010* (the Directive) is presented as a milestone for the implementation of DRR actions by agencies, State bodies, economic entities and social institutions, as well as for the preparation of documentation, guidelines and the DRR plans. However, the Directive struggles to associate its efforts on DRR to global and regional processes in this area. This partially developed vertical integration is contrasted by a substantial horizontal integration within the Directive. Concretely, as the Directive considers the SDGs and CCA to be critical for enhancing DRR, these three fields are consistently mainstreamed into strategic sectors identified by the National Defense Council such as energy, transport, health, and land use planning. As such, the Directive states that economic and social development must be compatible with the Civil Defense interests and concerns.

The Directive refers explicitly to none of the global and regional frameworks considered for the analysis. Indirect links can be found with the SFDRR priorities 1-2 and, even if resilience is not mentioned, the Directive also invests in DRR as promoted by the SFDRR priority 3. As with the SFDRR goal the Directive aims to substantially reduce disaster risk and losses. However, as Build Back Better (BBB) in recovery, rehabilitation and reconstruction are not addressed, the Directive fails in covering the SFDRR priority 4. At a regional level, the CDM Strategy focuses on resilience and sustainability in DRR are partly approached by the Directive. Likewise, the Directive comprehensive approach on DRR is endangered as it leaves out gender considerations and does not fully develop on sustainability.

The UNFCCC and the PA objectives and concerns are at the core of the Directive, as it places emphasis on climate impacts associated with the rising of the global temperature and the socio-natural threats set by a progressive environmental degradation. Whilst the Directive precedes the SDGs Agenda 2030, its development on DRR considerations can be fully related to the SDGs 3, 6, 9, 11 and 13-15. However, connections to the SAMOA Pathway are hindered as the Directive does not explicitly foster DRR synergies with SDGs and CCA ones. Lastly, besides referring to the contributions made by scientific institutions to risk assessment, the Directive does not connect to the CSSI; discussing linkages between the education sector and DRR actions is not part of the policy.

Conceptual Coherence

Although there is significant evidence in support of conceptual coherence within the PNDES 2017, explicit definitions of resilience, sustainable development, CCA and DRR are not provided. Linkages between the SDGs, CCA and DRR could be further developed by the PNDES 2017 through a clear conceptualization of resilience. As regards climate change, the policy considers it as a challenge which requires the strengthening of national CCA and mitigation capacities. Likewise, the absence of sustainability within development processes

is presented, in the context of climate change and high level of vulnerabilities, as a risk. The PNDES 2017 refers to climate change impacts as a cross-cutting issue that involves socio-ecological systems. Consequently, the PNDES 2017 strategic axis Natural and Environmental Resources addresses jointly the SDGs, CCA and DRR through the concept of risk, tightly linked to socio-economic vulnerabilities, as well as to social equity and gender considerations.

The PEECC 2017 and the CNDC 2020 conceptual coherence is partially met. Whilst resilience seems to be a cross-cutting theme in both policies, the PEECC 2017 does not refer to the concept and the CNDC 2020 does not provide a definition of it. For instance, the CNCD 2020 contemplates achieving sustainable and resilient development through its links with the PNDES 2017. The PEECC 2017 sees climate change as an aggravating factor of the country's environmental problems. Consequently, climate change is related to human activities that have altered the global atmosphere and worsened natural climate variability over the last 30 years in the Cuban archipelago. As the CNDC 2020 refers to climate change as a risk linked to socio-economic vulnerabilities, sustainable development, as well as CCA and mitigation measures are presented as urgently needed to tackle its devastating effects on socio-ecological systems.

The Directive fails in mentioning and offering explicit definitions of resilience, sustainable development, DRR and CCA. While resilience is not conceptualized, resilience building to disaster and climate risk are covered by the Directive's considerations and actions. Climate change is referred to by the policy as a serious challenge and risk that, in the absence of sustainable development processes, could aggravate the impacts of disasters on the island. Consequently, climate change is not only seen through the lens of extreme events. In fact, the Directive relates climate change to a multidimensional conceptualization of vulnerability, which takes into account physical, social, economic, organizational and environmental factors. However, the policy does not address explicitly cross-cutting themes, key to SDGs, CCA and DRR as gender and social equity.

Institutional Coherence

The PNDES 2017 offers a broad outline including vertical coordination mechanisms within the National System for Planning and the Central and Local Administrations. Although the policy refers to integration, coordination and collaboration as paramount to development processes, it does not provide the exact institutional mechanisms supporting coherence between the SDGs, CCA and DRR. Economic development at national and sub-national levels is expected to be guaranteed by the Economic Management System. As regards links between the PNDES 2017 and DRR, the policy's guiding principle 4 contemplates fostering the National Security and Defense System to achieve coherence, comprehensiveness, and efficiency in managing risks.

Whilst the PEECC 2017 and the CNDC 2020 identify multisectoral and interinstitutional coordination and collaboration as critical for CCA measures, the policies refer to some mechanisms for supporting coherence between the SDGs, CCA and DRR. However, roles and responsibilities of SDGs, CCA and DRR actors are only addressed superficially by both policies. For instance, the PEECC 2017 identifies the Ministry of Science, Technology and Environment, as well as the Central State Administration Agencies (OACE), the Municipal Administration Council (CAM), the Council of the People's Administration (CAP), and the Higher Business Management Organization (OSDE), as the leading institutional organisms

to oversee and strengthen multisectoral and interinstitutional coordination. Accordingly, the CNDC 2020 refers to the PNDES 2017 general objective 3, specific objective 12, as a tool for promoting the inclusion of systemic and intersectoral strategies.

Although the Directive develops straightforward strategies for enhancing DRR institutional coherence and national and sub-national coherence, institutional collaborations with the SDGs and CCA fields are not properly discussed. As multisectoral resilience building is not envisioned explicitly, the Directive struggles in elaborating on capacity building and cooperation processes between the State institutions and communities. Whilst DRR institutional coordination mechanisms follow the guidelines given by the administration's vertical hierarchy, the Directive does not explain how these mechanisms interact with the SDGs and CCA ones. For instance, the Directive refers to response and recovery coordination mechanisms planned by the president of the National Defense Council (NDC) and guided by the NDC. Likewise, the NDC Management Center for disaster situations is expected to oversee the implementation of DRR related decisions. The SDGs and DRR institutional synergies are guaranteed by the State institutions' obligation to conform their development plans and investing projects to Civil Defense interests. In addition, the policy promotes DRR interinstitutional coherence at the provincial, municipal, popular and community levels.

Operational Coherence

Although there is strong evidence in support of operational coherence for sustainable development within the PNDES 2017, there are several deficiencies that should be addressed. Whereas the policy broadly outlines roles and responsibilities of the SDGs actors, it does not specify the operational collaborations with CCA and DRR actors. Also, the PNDES 2017 misses the opportunity to elaborate on how the SDGs methodology interacts with DRR and CCA ones, as well as to promote the development of Multi-hazard Early Warning Systems and meteorological information systems. Within the PNDES 2017, collaborations between sectors are discussed under the heading of economic development rather than through the potential connections between the SDGs, CCA and DRR. As regards data gathering, sharing and application, PNDES 2017 recognises the need to introduce science-based assessments in environmental and development policies, plans and programmes. Accordingly, as noted by CNDC 2020 Objective 19, the policy aims to improve the Civil Defence System through the inclusion of DRR to reduce the impact of natural, technological and sanitary hazards, by using science and technology and developing efficient and effective comprehensive risk management.

The PEECC 2017 and the CNDC 2020 operational coherence relies on their commitment to develop a multi-stakeholder approach. However, collaborations between the SDGs, CCA and DRR actors are obstructed as the policies do not offer a detailed outline of their roles and responsibilities and do not align their methodologies. As regards the policies' cross-sectoral properties, the PEECC 2017, as recalled by the CNDC 2020, provides a comprehensive plan of action through its tasks 1-11 and 14 key points. Similarly, the CNDC 2020 offers a list of priority actions for CCA and a detailed outline for its climate change mitigation contributions and measures. However, while both policies cover almost all the strategic sectors to enhance synergies between the SDGs, CCA and DRR, housing and education have not been included. In regard to risk analysis and use of data, PEECC 2017 broadly refers to the prioritization of measures to raise risk awareness and increase the level of knowledge and commitment of the whole population in addressing climate change issues. Also, this Plan designates the Ministry of Science, Technology and Environment as a key actor for implementing science-

based assessments to enhance CCA measures. Similarly, CNDC 2020 recognises the importance of science-based assessments in addressing the impacts of disasters and the cost of adaptation to climate change effects, as well as in facilitating rapid and organised recovery within impacted areas and populations.

While there is evidence to support partial operational coherence in the Directive, several missed opportunities have been identified regarding operational synergies between the SDGs, CCA and DRR. The Directive does not discuss the role played by communities, it rather focuses on State institutions and gives little detail about how they collaborate with civil society. Although roles and responsibilities for DRR state actors are clearly outlined, the Directive fails in explaining how they connect with the SDGs and CCA actions at the local and community levels. Therefore, to connect DRR operational cohesion with the SDGs and CCA considerations the policy must elaborate on capacity building, promote ecosystem-based approaches, establish multi-purpose damage and databases, and refer explicitly to BBB strategies. From an operational perspective, the Directive provides the normative framework for integrated risk assessments and data implementation. For instance, this policy designates the use of the Unified Disaster Information System as the main tool for data sharing at all governance levels. Likewise, as suggested by the Directive, specialists coordinating, designing, participating in and carrying out hazard, vulnerability and risk assessments must comply to the approved scientific methodological procedures.

Financial Coherence

Substantial financial coherence is not supported by the PNDES 2017 as the identification of funding sources and an estimated budget are envisioned but not detailed. This might be explained by the fact that the PNDES 2017 is presented as an instrument establishing broad guidelines for budget and funding strategies. Therefore, considerations about how DRR and CCA would interact with sustainable development funding, as well as with the elaboration of risk insurance schemes, are not provided. As regards funding sources, the PNDES 2017 identifies the State budget, national savings, and international non specialized funds.

The PEECC 2017 and the CNDC 2020 strategic, operational and institutional coherence processes are put at risk as the policies do not properly discuss funding strategies. While the CNDC 2020 contemplates an estimated budget for CCA and mitigation measures, the PEECC 2017 states that the budget for implementing the policy will be established by the Financial Economic Commission. As both policies consider DRR as embedded within CCA considerations, they can be considered as implicitly taking into account synergies between DRR and CCA funding. It could be also argued that CCA funding strategies include sustainable development considerations as both policies connect explicitly to the PNDES 2017. Whilst the PEECC 2017 task 11 refers broadly to regional, bilateral and international funding mechanisms, the CNDC 2020 mentions multilateral funds and particularly the Green Climate Fund. As regards national funding sources, it is expected that they will conform to the Economic Plan cycles and be further explored by the Central State Administration Agencies, the Municipal Administration Council, the Council of the People's Administration, and the Higher Business Management Organization.

As financial coherence is barely discussed within the Directive, its operational and institutional coherence, as well as its horizontal integration of the SDGs, DRR and CCA, are obstructed. As a matter of fact, the policy does not mention either an estimated budget or a risk insurance

scheme for climate and disaster risk. Likewise, the mobilization of DRR for CCA is not suggested. As regards funding strategies, the Directive states that it falls to the Ministry of Economic and Planning to establish DRR funding sources.

MER Coherence

Whilst the lack of Monitoring, Evaluating and Reporting (MER) coherence within the PNDES 2017 can be explained by the fact that it is an instrument establishing broad guidelines, this represents an obstacle for the implementation of its actions on sustainable development. The PNDES 2017 contemplates a second stage for the implementation of the Plan which will include indicators to assess sustainable development specific goals. However, linkages with global indicators are neither specified nor envisioned by the policy.

MER coherence is partially covered by the PEECC 2017 and the CNDC 2020. As recalled by the CNDC 2020, the PEECC 2017 task 9 discusses strengthening MER systems. Regardless, while the policies provide indicators for climate change mitigation measures, they are not associated with those of DRR and the SDGs. The CNDC 2020 offers a follow up indicator for each climate change mitigation contribution; indicators for assessing adaptation measures are not discussed. Although the CNDC 2020 states that follow up methods must be aligned to the Intergovernmental Panel on Climate Change Guidelines 2006, national indicators are not fully in line with regional and international processes.

The Directive promotes, under the approval of the Danger, Vulnerability and Risk Group from the Ministry of Science, Technology and Environment, the elaboration of DRR indicators and MER systems for achieving the implementation of the policy. However, the Directive does not elaborate on how DRR indicators connect to SDGs and CCA ones. Also, there is no mention of how DRR indicators would be reported or connected to regional and global ones.

Table 7 Cuba levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.6. Dominica

Risk context

The Commonwealth of Dominica is one of the Windward Islands in the Eastern Caribbean, lying between Guadeloupe to the north and Martinique to the south. It is an upper-middle-income SIDS, with an estimated population of 73,543 (CSO 2016) and a gross development product of US$548.41 million. The country measures 289 square miles with a rugged and mountainous terrain and a number of natural landscapes features encompassing waterfalls, rivers and springs. Approximately ninety percent of the country's inhabitants reside along the coastal areas. Dense forest and woodland cover 59% of the land area, with subtropical vegetation and orchids in the valleys. Tree ferns are indigenous to the island. Arable and cropped land extends to some 32% of the total land area. The island has a fertile volcanic soil. Dominica is highly vulnerable to the effects of climate change, the impacts of which have already been experienced for example the impacts of hurricane Maria in 2017, Tropical storm Erika in 2015 and many other variations to the usual weather partners. There have been significant changes to Dominica's climate system overtime marked particularly by increases in temperatures, and the frequency and intensity of rainfall events that lead to flooding. It is expected that these temperatures will continue to rise along with higher sea levels and intensified storm surges. On September 18th, 2017, Hurricane Maria made landfall on the southwest coast of the Commonwealth of Dominica as a Category 5 hurricane, with 220 mph wind speed and higher gusts. Intense storm surges, torrential downpours, overflowing rivers, and unprecedented high winds across the island left dozens of people dead. The impacts on infrastructure and housing, the economy, livelihoods, basic services and society were severe – no sector was left unaffected by Hurricane Maria. The World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020) ranks Dominica 3rd globally, with a WorldRiskIndex of 28.47. This puts the country in the range of nations with very high disaster risk.

The instruments analysed include the National Resilience Development Strategy (NRDS) 2030 of Dominica (2018), the Climate Resilience Act (2018) and the Dominica Climate Resilience and Recovery Plan 2020-2030 CRRP (2020).

Strategic coherence

The National Resilience Development Strategy 2030 of Dominica (2018, NRDS), aims at integrating climate resilience and disaster risk management into the national growth and development planning framework. NRDS explicitly and concretely incorporates climate considerations hence ensuring that Dominica's new development pathway is more than likely to lead to improved development outcomes. This approach to growth which is called a "climate-resilient and sustainable" development approach seeks to respond to climate change in a comprehensive manner, cutting across all sectors and addressing issues of mitigation, rehabilitation, reconstruction and sustainable development. CCA is substantially integrated in the document, instead DRR is mainly incorporate in the "Environmental management" section within its 5 components: institutions, assessment and monitoring, culture, risk factor (CCA), preparedness for response.

Strong ties to SDGs are outlined and strategy for realizing these in line with national priorities are present and clear in the NRSD. The PA and UNFCCC are outlined in the NRSD with less centrality compared to SDGs. The NRSD clearly outlines mainstreaming of key CCA/DRR areas into development through priority sectors such as energy, health, education, and the economy at large. Cross cutting area (e.g. good governance, gender, etc.) and the identification of M&E mechanisms will facilitate the integration.

The Climate Resilience Act (2018) do not explicitly address jointly the SDGs, CCA and DRR but it is explicitly directly advocated to DRR, instead the SDGs and CCA are indirectly addressed by the overseen of the NRDS, the policy document on which this act is based. This act mainly addresses DRR in its goals, in particular the aim is to rebuild the nation as climate resilient nation which is better able to withstand future extreme natural events with minimal loss. This ACT is not referring to any global or regional processes, but the national act is committed to establishing an executive agency to be known as "the Climate Resilience Execution Agency of Dominica" (CREAD) in order to rebuild Dominica as the first climate resilient nation in accordance with a single Climate Resilience and Recovery Plan.

Conceptual Coherence

Conceptual coherence examines how national policy instruments link the SDGs, climate change adaptation and disaster risk reduction conceptually through the concept of risk.

The NRDS do not provide a definition of resilience but the concept or resilience is transversally applied across all the document. The country development is not explicitly considered in the NRDS as risk factor but it is highlighted that weather shocks are not they only challenge, their challenges are also economic and social. The concept of risk is represented to the extent that climate change is understood to be both an acute and acronical challenge for the development of their country. Climate change considerations are a common theme and is explicitly linked to all priorities outlined. DRR in its risk specific to the context of environmental management, in particular a specific section for disaster risk management. Also some concrete examples of synergies are addressed, in particular in the relation to the forest resources: biodiversity and ecosystem services. The section of Environmental Management specifies root causes of climate and disaster risk and vulnerability for the main sectors: water, forest, land, waste, leisure. And gender equality as one of the relevant crosscutting area.

The Climate Resilience Act (2018) do not have a conceptual coherence between SDGs, CCA, and DRR. It provides a clear definition of terminologies of the most relevant themes of the act but in all the document the articles are mainly regarding the management of extreme events and there are not any reference to CC and also very weak reference to development. In fact, this act aim to promote the swift and cost-effective recovery of Dominica from climate-related disasters: a hurricane, tropical storm or any other extreme weather event or natural hazard which causes. This act desire that due regard be had to applying the principles of gender equality in the structure and operation of CREAD and whereas it is understood for this purpose that "gender equality" means that women, men, girls and boys enjoy the same human rights status, have equal opportunities, equal access and control over resources and equal participation in decision making.

Institutional Coherence

The NRDS acknowledges that to build resilience into the national development planning and management process requires better and more careful preparation of project proposals, closer monitoring of key indicators, systemic reporting and frequent evaluation of programs and projects. Tasked with a collective responsibility for the fulfilment of this resiliency building vision, governmental ministries and agencies are expected to follow through. The NRDS defines the Climate Resilience Execution Agency of Dominica (CREAD) will focus not just on the physical reconstruction but also on establishing climate resilient systems, for example, in the energy, food production and transport sectors. The NRDS provides an opportune time to mainstream the SDG indicators in national and sub-national development frameworks and it presents an approach to building regional and community-level resilience. In the institutional Set-up for Action are defined the responsibilities by ministry but there is not a strictly division between SDGs, DRR and CCA.

The Climate Resilience Act is mainly regarding DRR and do not provide element to mainstream the SDG indicators for sustainable development. Even if this Act is advocated to manage extreme event, the establishment of the CREAD institution will support coherence across the sectors, in fact some of its functions are: to coordinate recovery action following a climate-related disaster, including the construction, reconstruction or restoration of physical or other infrastructure and the execution of projects aimed at building national climate resilience, in order to prioritise and accelerate projects and, where necessary, to ensure that projects are properly sequenced; avoid duplication; maximise economies of scale; identify and reduce critical gaps in funding and other areas; expedite the granting of approvals, permits and licenses and other processes; and ensure consistency with the Dominica Climate Resilience and Recovery Plan

Operational Coherence

The high-level nature of NRDS does not necessitate a detailed operational measures and actions but it is really comprehensive in providing strategy to most of the cross sectoral areas as well as most of the specific sectors. One of the three main forces of NRDS is "People-centered Development" that acknowledge the vital role of public consultations and community engagement. NRDS do not provide details on specific opportunities to enhance cohesion but clarify the need of these details across many topics: knowledge between actors, capacity building, risk databases, ecosystem-based approach and integrate climate scenario into BBB. The high level nature of the document does not necessitate a detailed action plan

but outline specific activities in the following cross cutting areas: Regional and International Relation, Good Governance, Gender Equality, Kalinago Rights and Perspectives, Law and Order, Labour Market, Data Capture and Dissemination, Legislative Framework. Finally, NRDS has dedication section for most of the sectors proposed and recognize the relevance of these to SDGs and CCA, instead DRR only in some of them.

The measures actions and activities of this act which bring together SDGs, CCA, and DRR are regarding some function of CREAD that it shall ensure that (a) there is community engagement in the design, implementation and evaluation of all projects managed by it; (b) public consultations are held for communities affected by large scale infrastructure projects; and (c) it holds stakeholders' forum meetings at least twice a year to engage in dialogue with, and receive feedback from, civil society, the private sector, and other interested individuals on its work and proposed work plan. The opportunity to enhance cohesion in this act are only regarding the capacity building, raise awareness and strengthen knowledge and the establishment of database. It does not make any specific reference to sectors, the only reference is to the general term "infrastructure". Instead, the CRRP identify the "Centre of Excellence for Data in Resilience Decision-making" as one of the critical high-impact climate resilience initiative and it will establish a dedicated geographical information systems unit within the Ministry of Economic Affairs, Planning, Resilience, Sustainable Development, Telecommunications and Broadcasting, centralize the gathering of data (GIS and beyond), and institutionalize a data-driven approach to all key planning decisions.

Financial Coherence

Climate change could imply higher risk of disasters in the future. It is estimated that damages from tropical cyclones directly related to climate change ranges from 4 to 8 percent of GDP. This reality strongly highlights the need to create a savings fund for disaster risk management, emergency response, recovery, rehabilitation and reconstruction after disasters.

The financial coherence is substantially evident respect to the high-level nature of the NRDS even if the budget is not provided. Specific mobilization is not mentioned but the vision and general plan macro-economic and fiscal policies and strategy are well reported and bring together SDGs, CCA, and DRR. NRDS identify where to collect the resources for its implementation: (a) surpluses on the primary account in the annual national budget; (b) grant aid from external development partners; (c) concessional loans from multilateral and bilateral financial institutions; and (d) funds made available from possible past debt relief. Finally, NRDS stresses the importance of having an insurance sector that protects businesses and individuals from unforeseen adverse events and a pension system that provides a secure retirement, both also providing capital for investment

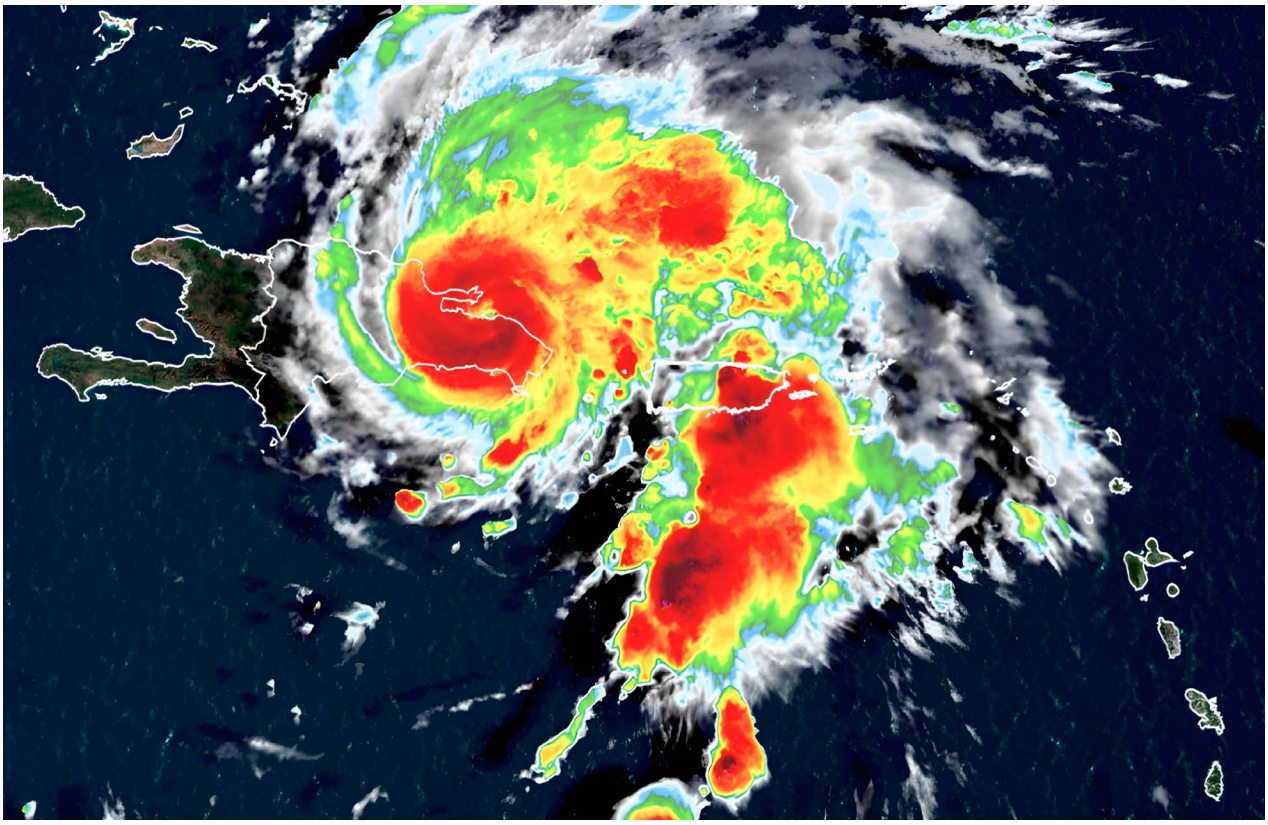
The Climate Resilience Act refers to the mobilization of funding to CREDA for DRR purpose: (a) sums provided by the Government; (b) any grant made to CREAD by a person, body or international organization; (c) all other monies and other property which may in any manner become payable. There are not reference to funding for CCA and SDGs

MER Coherence

The NRDS is to be monitored by a "Dominica's Resilient Development Results Monitoring Matrix" which is aligned to the SDGs. At high level nature of the document, M&E coordination is sufficiently guided to allow a coordinated implementation plan. The policy acknowledges the need of a specific plan of action ("Climate Resilience Plan") and at the same time has defined a Results Monitoring Matrix which specifies 43 'objectives', their corresponding qualitative and quantitative outcomes, as well as the specific indicators to consider for assessing their accomplishment. Instead, the monitoring, evaluation and reporting of the Climate Resilience Act is mentioned as one of the CREDA task but without providing substantial details for implementations and there are no references to join plan for CCA/SDGs and global framework.

Table 8 Dominica levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			



4.7. Dominican Republic

Risk context

The Dominican Republic, a SIDS with 10.8 million inhabitants, occupies the eastern two thirds of the island of Hispaniola. While over the past 25 years the Dominican Republic has experienced a remarkable period of robust economic growth, socioeconomic disparities remain deep and a high proportion of the population still lives in poverty. As a result, the country continues to be at high risk from extreme weather and long-lasting events, as clearly illustrated by the COVID-19 pandemic (World Bank, 2021). Therefore, owing to its geographic situation and socioeconomic conditions, the Dominican Republic presents high levels of exposure to tropical storms and hurricanes, floods, droughts, wildfires and landslides, as well as to seismic events and tsunamis (IFRC, 2012). The World Risk Report 2020 has conferred to the Dominican Republic a "very high" WorldRiskIndex value. Due to the country's "very high" level of exposure and patent lack of adaptive capacities, the country is ranked 32th globally (Bündnis Entwicklung Hilft, 2020).

Strategic Coherence

The National Development Strategy 2010-30: A Journey of Transformation Towards a Better Country (END 2030), is the Dominican Republic's roadmap to support and enhance sustainable development on the island. While the END 2030 is prior to six out of the seven global and regional frameworks on SDGs, CCA and DRR, the policy's four strategic axes substantially cover their contents. As the END 2030 brings together the SDGs, DRR and CCA processes, its strategic axes 2-4 can be considered as tightly linked to the SFDRR priorities 1-4. Regionally, the END 2030 partially addresses the CDM Strategy. While the END 2030 strategic axis 4 connects to the CDM Strategy priorities 1-2 and 4, its cross-cutting policy 3 addresses the CDM Strategy's priority 4. However, the absence of a full-fledged reference to

resilience building endangers the END 2030 links to the CDM Strategy's cross-cutting themes. The commitment of the END 2030 to sustainable manufacturing and consumption, natural resources and environmental protection, as well as to CCA, reinforces its embeddedness in CCA global frameworks even though there is no direct reference to them. Concretely, the UNFCCC objectives, principles and commitments are enshrined in the END 2030 strategic axes 1-4. Likewise, the PA's aim to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, as well as its articles 2, 4, 5, 7, 8, 10-12, are aligned to the END 2030 strategic axis 4.

The END 2030 vision on development explicitly promotes sustainable exploitation of national resources, and its strategic axis 3 plans for an environmentally sustainable economy for the country. Although the END 2030 does not refer directly to the SDGs' Agenda 2030, the policy's strategic axes, as well as its general and specific objectives, cover jointly all SDGs. Thereby, a clear link emerges between the END 2030 and the SAMOA Pathway commitment to the sustainable development of island developing States. As in the case of the SAMOA Pathway, the END 2030 strategic axes 2-3 promote a sustained and sustainable, inclusive and equitable economic growth with decent work for all. Critical themes for the SAMOA Pathway, such as climate change, sustainable energy and transportation, sustainable consumption and production, biodiversity, social development, DRR, gender equality, water and sanitation, food security and nutrition, oceans and seas, management of chemical waste, health and non-communicable diseases, and social development, are properly addressed by the END 2030. The policy relates to the CSSI considerations as its strategic axis 4 elaborates on environmental education and the participation of the population in the protection of the environment and the sustainable management of natural resources. In spite of that, the END 2030 fails to fully address the CSSI critical issues within the education sector.

The *National Adaptation Plan to Climate Change of the Dominican Republic 2015-2030* (PNACC-RD 2015), the *Dominican Republic First National Determined Contribution 2020* (NDC-DR 2020), and the *National Action Protocol for Social Protection in the Event of Climatic Shocks 2018* (NAPSPCS 2018), are complementary instruments to operationalize the national commitments to global efforts against climate change. The PNACC-RD 2015 strategic axes 1-6 discuss the SFDRR commitments H, C and F, as well as the SFDRR priorities 1-5, the NDC-DR 2020 considers the SFDRR as one of the global frameworks to which national policies should comply, and the NAPSPCS 2018 develops linkages between social protection, climate change and the SFDRR. Likewise, strong connections have been identified between the PNACC-RD 2015 comprehensive approach and the CDM Strategy goal, priorities and regional outcomes. In line with the CDM Strategy actions for safety, resilience and sustainability, the NDC-DR 2020 elaborates on a comprehensive legislation associating climate change and risk management, an institutional reform benefiting the National System of Prevention, Mitigation and Response, and a land use plan embedded in CCA, gender equity, risk management and poverty eradication considerations. Whereas the NAPSPCS 2018 does not refer directly to the CDM Strategy, it is aligned with its long-term goal. Specifically, the NAPSPCS 2018 identifies social protection and DRR policies as complementary, which enables it to address both social vulnerability and resilience through the concepts of DRR and CCA.

The UNFCCC and the PA are presented as critical for the PNACC-RD 2015, the NDC-DR 2020, and the NAPSPCS 2018. Whereas the PNACC-RD 2015 views the UNFCCC as the main global framework enabling the national development of CCA laws, policies, strategies, plans and agreements, the NDC-DR 2020 relies on the UNFCCC to establish the country's climate

engagements for the 2030 horizon. The NAPSPCS 2018 refers to the UNFCCC to illustrate the Dominican Republic's high vulnerability and exposure to climate change impacts. As regards the PA, the three policies considered for the analysis are strongly driven by its goals and considerations on CCA.

The PNACC-RD 2015, the NDC-DR 2020, and the NAPSPCS 2018 contemplate CCA as a critical factor for sustainable development. The NDC-DR 2020 states the need for both associating national planning processes to the SDGs and considering climate action and the SDGs implementation as complementary processes. Precisely, the NDC-DR 2020 argues that the SDGs 6, 7, 11, 13 and 15 are embedded in the current national efforts to promote CCA, as well as in the renewed national engagement to the SDGs 4-9, 11-17. Since the NAPSPCS 2018 focuses on response to climate change, the policy broadly links to SDGs through social protection and climate action considerations. Although none of the three policies refer directly to the CSSI, they designate the education sector as critical for the SDGs, CCA and DRR. Concretely, the PNACC-DR 2015 envisions education as relevant for changing the behaviour in individuals so as to enhance disaster preparedness. The NDC-DR 2020 elaborates on education as a tool to achieve DRR, CCA and mitigation goals, as well as promoting the enhancement of existing education infrastructure and school facilities. The NAPSPCS 2018 views the education sector as an instrument not just for diffusing knowledge about climate change vulnerability and resilience, but also to protect groups at risk before, during and after an emergency.

In the case of the PNACC-RD 2015, the NDC-DR 2020, and the NAPSPCS 2018, linkages identified between sustainable development, CCA and DRR are consistent and addressed under the heading of resilience building. As illustrated by the PNACC-RD vision and goals, sustainable development, CCA and DRR are expected to be coherently included within current and new policies, programs and activities. Nonetheless, while DRR and CCA are explicitly projected to be implemented by national and subnational policies, synergies between the SDGs and DRR are partially mainstreamed through sectoral policies; a clear reference to said connections is patently lacking in both the PNACC-RD and the NAPSPCS.

The *National Plan for Comprehensive Disaster Risk Management 2013* (PNGIRD-RD 2013) is the instrument enabling the Dominican Republic to implement programs that reduce disaster risk, ensure the safety of citizens and protect the country's economic, social, environmental and cultural heritage. Whereas the PNGIRD-RD 2013 is prior to six of the seven frameworks on SDGs, CCA and DRR considered for the analysis, its orientations align to them. As in the case of the SFDRR, the PNGIRD-RD 2013 also expects to substantially reduce disaster risk and losses, promote the understanding of disaster risk and strengthen disaster risk governance. However, as the PNGIRD-RD 2013 does not offer a definition of resilience, the policy fails in fully addressing the SFDRR priorities 3-4 and goal. At a regional level, the PNGIRD-RD 2013 connects to the CDM Strategy as both promote a comprehensive disaster management approach to achieve safety, resilience and sustainability.

The PNGIRD-RD 2013 identifies climate change as a man-made risk factor related to development processes. Although the policy acknowledges the urgent need for enhancing adaptation strategies and resilience building, it misses the opportunity to both explicitly mention and include the UNFCCC and the PA goals and principles. The PNGIRD-RD 2013 not only addresses sustainable development in its commitment to guarantee the universal rights of the Dominican Republic citizens (SDGs 2-4, 6 and 16), but also through the programmatic

lines of the policy (SDGs 3-7, 9, 11, 13, 16-17) and their links to the END 2030. Consequently, the PNGIRD-RD 2013 connects to SAMOA Pathway priority areas such as climate change, sustainable energy, DRR, food security, water and sanitation, health, gender, education. As concerns the CSSI, the PNGIRD-RD 2013 programmatic line 4.2 acknowledges the lack of Comprehensive Disaster Risk Management (CDRM) contents in schools and the need to include them in all educational levels to achieve security and resilience. At a national level, the policy expects to redress the lack of CDRM horizontal coherence, as well as to become the reference document guiding the elaboration of sectoral and institutional plans.

Conceptual Coherence

The END 2030 struggles to develop a clear conceptual framework for SDGs, CCA and DRR, which prevents the policy from addressing them jointly under the heading of resilience building. The END 2030 does not refer to resilience nor does it elaborate a full-fledged definition of the concept. Nevertheless, climate change and disaster risk links to SDGs are partially discussed by the policy's strategic axis 4 and cross-cutting theme 3. Precisely, the END 2030 defines climate change as a risk and a challenge to be addressed through sustainable development and CCA, as well as preparedness, and mitigation practices. Consequently, the END 2030 describes climate change impacts on socio-ecological systems beyond the impact of extreme events, focusing on natural resource management, environmental and biodiversity protection, and sustainable development processes. The END 2030 offers a comprehensive approach to development, which guarantees equal rights and opportunities, as well as tackling social inequalities and poverty.

The PNACC-RD 2015, the NDC-DR 2020, and the NAPSPCS 2018 refer to resilience as "the capacity of a social or an ecological system to absorb a disturbance without losing neither its basic structure or modes of functioning, nor its capacity for self-organization, nor its ability to adapt to stress and change". Therefore, resilience is presented as a cross-cutting concept allowing policies to bring together SDGs, CCA and DRR. Accordingly, the NDC-DR 2020 discusses climate change not just as a national and global threat, but also as a multi-risk factor to which the country urgently needs to adapt. As in the case of the NAPSPCS 2018, PNACC-RD 2015 argues that transforming development processes into sustainable ones requires the inclusion of CCA and DRR. Synergies between DRR and CCA are extensively discussed by the three policies, especially with the concepts of vulnerability, sustainable development and risk. Precisely, the PNACC-RD 2015 identifies water and food insecurity, precarious climate resistant infrastructure, unsustainable business models, inefficient intersectoral and interinstitutional collaboration, partial support to research and education, as well gender and social inequities, as root causes of climate change, disaster risk and vulnerability in the island. Although resilience building is considered as critical for DRR, as well as for CCA and the SDGs, the PNGIRD-RD 2013 does not offer a definition of the concept. The policy refers to climate change as a serious threat to sustainable development. Specifically, as the PNGIRD-RD 2013 refers explicitly to the END 2030, sustainability is considered as crucial for DRR and CCA. As long CCA actions are not part of a CDRM plan enhancing resilience, the PNGIRD-RD 2013 considers climate change to be a permanent risk factor to the island. Since the policy states that disasters are closely related to anthropogenic causes, gender and social equity are envisioned as cross-cutting themes to also be included by CDRM actions.

Institutional Coherence

The END 2030 broadly identifies the roles and responsibilities of sustainable development, CCA and DRR actors, as well as institutional mechanisms for achieving coherence, leaving out the possibility for a detailed outline stating cross-sectoral and interinstitutional collaborations. The policy articulates sustainable development, CCA and DRR institutional and sectoral plans through the *Pluriannual National Plan of the Public Sector.* The Ministry of Economy, Planning and Development (MEPyD) is expected to take the lead in articulating synergies between the END 2030, the *Pluriannual National Plan of the Public* Sector, and national and local budgets. While the PNACC-RD 2015, the NDC-DR 2020, and the NAPSPCS 2018 mention roles and responsibilities of sustainable development, CCA and DRR actors, the policies do not offer a centralized national platform systematizing institutional synergies. There are several institutional mechanisms to support coherence between the SDGs, CCA and DRR national efforts. PNACC-DR 2015 considers interinstitutional coordination as a guiding line for policies, plans and research in climate change, which is overseen by the Direction of General Regulation and Territorial Development. Also, the MEPyD is expected to have a crucial role in incorporating risk management into sectoral, institutional and ministerial planning. The NAPSPCS 2018 refers to the *Progresando con Solidaridad* program as a national platform supporting policy planning and providing assistance to vulnerable households to enhance post-disaster recovery.

There is substantial evidence to argue that institutional coordination between sustainable development, CCA and DRR actors is partially addressed by the PNGIRD-RD 2013. Whereas programmatic lines 1-5 indicate key organizations for implementing the policy, and a list of consulted institutions is offered, specific information about the roles and responsibilities is required to understand how policy instruments support coherence between the SDGs, CCA and DRR. While the PNGIRD-RD 2013 identifies the National System for Disaster Prevention, Mitigation and Response as the coordination mechanism for CDRM, insights about expected collaboration with CCA and SDGs actors are partly developed. As regards coordination within the DRR field, the PNGIRD-RD 2013 article 1, principle 4, states that national, regional, provincial, municipal and community entities must ensure due coherence in their activities.

Operational Coherence

While the END 2030 is presented as a cross-sectoral policy, its operational coherence between the SDGs, CCA and DRR is only partially achieved as the three fields are not addressed jointly. Sustainable development is cross-sectoral and mainly associated to CCA actions. However, operational collaborations between SDGs, CCA and DRR are not linked to critical concepts for coherence such as resilience, Build Back Better, Eco-DRR and EbA. There are also gaps in the integration of CCA and DRR in strategic sectors such as DRR, education, industry, energy, transport, housing, health and agriculture. The END 2030 promotes operational collaboration between public and private sectors as critical for the success of the Strategy. Raising DRR and CCA among the population, building capacity and envisioning the creation of information systems to tackle impacts caused by environmental degradation, as well as to enhance disaster assessment, alert and response, are some of the opportunities addressed by the END 2030 to enhance operational coherence between SDGs, CCA and DRR. As regards integrated risk assessments and use of data, END 2030 Cross-cutting Policy 6 advocates for data sharing and data access as a key component of policy-making in the country. Correspondingly, the Strategy's General Objective 4.3 promotes the development

of assessments addressing climate change and its environmental, economic, social and political consequences for different populations of the island. The aim is to properly inform the elaboration and implementation of public policies and raise DRR and CCA public awareness. Similarly, END 2030 Strategic Axis 4 acknowledges the need for including DRR and CCA actions to achieve sustainable development.

There is significant evidence to argue that when the PNACC-RD 2015, the NDC-DR 2020, and the NAPSPCS 2018 are considered jointly, operational coherence between sustainable development, CCA, and DDR is substantial. The PNACC-DR 2015 is based on cooperation between national public and private actors, as well as the participation of the population and of the regional and international cooperation agencies. Concretely, the PNACC-DR 2015 strategic axes 1-5 offer an outline for specific activities carried out by this cross-sectoral plan. The NDC-DR 2020 strengthens the SDGs, CCA and DRR linkages by associating the PNACC-DR 2015 activities to other cross-sectoral plans such as the END 2030. Likewise, the NDC-DR 2020 links specific SDGs to strategic sectors: education (SDG4), water (SDG6), energy (SDG7), industry and infrastructure (SDG9), and urban resilience, land use planning and housing (SDG11). Whereas the PNACC-RD 2015 is CCA focused, the policy elaborates on priority sectors to which sustainable development and DRR are also relevant such as water, tourism, agriculture, health, infrastructure, and energy. Also, PNACC-RD 2015 Cross-cutting Strategic Line 4 recognizes that data and knowledge production are closely linked to two key actions: (1) climate risk reduction; (2) research and assessments on climate change impacts and scenarios helping to better understand vulnerabilities. Concretely, the Plan notes that, according to the Ley 147-02, article 10, it falls to the National Emergency Commission to promote and implement the National Integrated Information System to collect and share data and knowledge related to hazards, vulnerabilities and risks in the Dominican Republic. Upon these foundations, NDC-DR 2020 acknowledges that DRR and CCA capacity building efforts rely on data sharing and implementation, tasks in which the Directorate of Environmental Education of the Ministry of the Environment and Natural Resources has a crucial role.

The PNGIRD-RD 2013 does not systematize the SDGs, CCA and DRR practices in a cross-sectoral plan, which hinders the total development of operational coherence between these three fields. While the PNGIRD-RD 2013 stated objective is to become a CDRM plan for the country, the policy partially links the SDGs and CCA to DRR on an operational level through its programmatic lines. As an effort to achieve this, the PNGIRD-RD 2013 strategic line 1 aims to raise awareness of all actors; strategic line 3, as well as programmatic line 5, seek to develop capacity building; programmatic line 1 contemplates establishing multi-purpose damage and loss databases; and programmatic line 3 considers strengthening early warning systems. Relating to integrated risk assessments and data use, PNGIRD-RD 2013 establishes that one of the purposes of the National Disaster Prevention, Mitigation and Response System is to develop and update an integrated National Information System serving as a knowledge base for the elaboration of plans, programmes and projects for risk prevention and mitigation, as well as for disaster preparedness and response. Similarly, PNGIRD-RD 2013 Programmatic Axis 1 and Programmatic Line 1 clearly identify programmes, goals, indicators, subprograms, projects and key institutions in charge of promoting and developing integrated risk assessments in the island. Whilst all sectors considered for the analysis except transport are considered explicitly as relevant to DRR, the policy could go further in including the SDGs and CCA.

Financial Coherence

Mindful of enhancing sustainable development processes, the END 2030 outlines broad funding strategies and investments without offering details about specific sectors. Besides mentioning a tax agreement to fund the END 2030 sustainable development goals, as well as a tax liability law to enforce its implementation, the policy does not provide joint funding strategies for the SDGs, CCA and DRR. Funding mechanisms for sustainable development lack a cross-sectoral dimension facilitating the *Pluriannual National Plan of the Public Sector* implementation and its links to the three fields. For instance, specific sustainable development projects are expected to be funded through mechanisms such as mining operations, a Territorial Cohesion Fund, credit facilities for high-risk groups, etc. While the policy considers risk insurance schemes to tackle severe events such as emergencies and disasters, it does not elaborate on long-term processes such as climate change.

When considered jointly, the PNACC-RD 2015 and the NDC-DR 2020 offer substantial financial coherence between SDGs, CCA and DRR. Indeed, sustainable development and DRR are presented as critical elements for CCA funding strategies. The NDC-DR 2020 advocates for the need to include climate considerations in the national budget, as well as for the creation of efficient funding mechanisms and tools. The NDC-DR 2020 offers an estimated budget for CCA (2021-2030) of USD$ 8,634,707,651.76 and specifies how it will be assigned to different sectors: water security (USD$ 670,822,568), food security (USD$ 4,736,170,000), health (USD$1,935,000), resilient cities (USD$ 3,113,827,790.59), ecosystems, biodiversity, forests (USD$ 106,686,622.14), coast and ocean resources (USD$ 7,200,630.94). Therefore, the NDC-DR 2020 tightly links CCA resources to sustainable development and DRR challenges. This is illustrated through the elaboration of a National Climate Funding Strategy and the mention of specific funding sources such as the Green Climate Fund, the National Fund for Prevention, Mitigation and Response, the Support and Funding Record, and the participation of national and international private banks. As regards risk insurance, the NDC-DR 2020 promotes an insurance system focused on damages caused by climate events within the water security, resilient cities, and infrastructure sectors.

While funding instruments are acknowledged as relevant to DRR and CDRM actions, the PNGIRD-RD 2013 does not offer a clear strategy to develop them. The policy refers to the lack of budget to fund risk reduction and to respond to emergencies as a clear sign of low economic resilience. However, the policy elaborates on emergency funds and specific funds for DRM and prevention. Also, sustainable development and CCA are barely associated with funding sources for DRR. Nonetheless, mindful to promote a comprehensive approach, the PNGIRD-RD 2013 programmatic line 2 discusses access to insurance schemes as critical for DRR.

MER Coherence

The END 2030 advocates for the creation of a National Monitoring, Evaluating and Reporting (MER) System responsible for the follow-up of the Strategy's goals, programs and projects, as well as for the sectoral, regional and institutional MER systems' compliance with it. Concretely, each of the END 2030 strategic axes contemplates a plan of action with specific indicators and short, medium and long-term goals. Nevertheless, the policy does not elaborate on lining-up MER with global indicators and official reporting mechanisms.

The PNACC-RD 2015 and the NDC-DR 2020 MER mechanisms are strong and complementary. Coordination and synergies between the SDGs, CCA and DDR MER mechanisms are presented as crucial for achieving CCA and mitigation in the country. While the PNACC-RD 2015 cross-cutting line 5 promotes the enhancement of MER mechanisms, the NDC-DR 2020 refers to SDG and END 2030 indicators. Also, the NDC-DR 2020 refers to the need for aligning national indicators to the Intergovernmental Panel on Climate Change orientations, methodologies and indicators. The policy identifies the *Third National Communication* as an official reporting instrument on greenhouse emissions.

In the case of PNGIRD-RD 2013, a joint MER plan for the SDGs, CCA and DRR is still to be developed. Whereas the PNGIRD-RD 2013 programmatic lines and programs 1-5 elaborate on DRR MER strategies, the policy fails in including CCA and DRR to fully achieve a CDRM approach as stated in its purpose and goal. Moreover, the PNGIRD-RD 2013 programmatic lines indicators are not expected to be in line with regional or global ones.

Table 9 Dominican Republic levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.8. Grenada

Risk context

Grenada is the southernmost country in the Windward Island chain of the Caribbean. The country comprises three islands, the largest of which is Grenada, followed by Carriacou and Petite Martinique. Grenada is exposed to a range of hazards that historically, have created devastating societal and economic losses (GFDRR, 2010). Hurrican Ivan in 2004 was one of the greatest disasters to affect the country, resulting in 39 deaths, the destruction of 90 percent of the country's buildings, and economic costs 200 percent of the country's Gross Domestic Product (GDP). While hydrometeorological hazards are most common for Grenada, the hazard landscape is much more diverse, including geological hazards such as earthquakes, landslides, rockfalls and volcanic hazards; environmental hazards including sand mining, erosion and deforestation; biological hazards; chemical hazards; technological hazards; and societal hazards. Limited coping capacities of specially vulnerable groups, settlement in high-risk zones, inadequate structures, and improper development planning contributed to the losses caused by Hurricane Ivan (UNDRR, 2021). Despite this, the World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020) gives Grenada a 'very low' WorldRiskIndex value and ranks it 178th globally.

Strategic coherence

The overall strategic coherence in Grenada's National Sustainable Development Plan (NSDP) 2020-2035 (Government of Grenada, 2019) is substantial. Built on the vision of a resilient nation, the NSDP clearly addresses the SDGs, climate change and DRR jointly within its goals and outcomes. The three overarching goals effectively demonstrate a joint agenda, underpinned by sustainable development: Goal 1: High Human and Social Development: Putting People at the Centre of Sustainable Development and Transformation; Goal 2: Vibrant, Dynamic, Competitive Economy with Supporting Climate-and-Disaster-Resilient Infrastructure; Goal 3: Environmental Sustainability and Security.

Strategic coherence is further substantiated by the NSDP's explicit recognition of global processes for the joint agenda including the SDGs, PA, SFDRR, and the S.A.M.O.A. Pathway. The outcomes are linked to the varying SDGs in support of policy coherence. While the NSDP clearly promotes mainstreaming into development, the emphasis is focused on CCA and implicit with the SDGs. A strategic action within the NSDP is to strengthen institutional structures and arrangements to support coordination, mainstreaming, and implementation of CCA and mitigation actions, along with the systematic integration of CCA into development policies, plans, programmes, projects, budgets, and processes. Strategic coherence can be further strengthened by articulating the need for DRR mainstreaming jointly.

The National Climate Change Policy (NCCP) (Government of Grenada, 2017a) presents partial strategic coherence. There is direct reference to the PA and its importance for achievement of the SDGs, thereby concretely establishing the link between climate change and sustainable development. Despite this, there is no explicit recognition of the SFDRR nor other regional mechanisms such as CDEMA Contingency Plans, CDM Strategy and Programming Framework or the CSSI (). Notwithstanding, the NCCP refers to the Regional Framework for Achieving Development Resilient to Climate Change and Grenada's commitment thereunder. The major shortfall is that the SDGs, climate change and DRR are not addressed jointly within the vision or principles of the policy. Despite this, the Policy has a stated objective to integrate DRM and CCA and another objective to mainstream CCA and mitigation into development policies, programmes, projects and budgets. The policy also aims to integrate CCA into the NSDP, corporate plans, the Public Sector Investment Programme (PSIP), and other programmes, thereby presenting a measure of strategic coherence.

Strategic coherence within the NAP (Government of Grenada, 2017b) is evident by its articulation of goals and indicators and its stated objective to integrate CCA in development planning processes. Additionally, there is explicit recognition of the country's commitment under the UNFCCC, the PA, the SDGs, SFDRR and regionally, the CARICOM Declaration for Climate Action. Strategic coherence can be further strengthened by specifically addressing related regional mechanisms for DRR such as the CDM Strategy and Programming Framework (2014-2024). Strategic coherence is also evident within the NDC (Government of Grenada, 2020). Explicitly recognising the SFDRR, SDGs and the PA, the NDC also has a stated aim to build coherence to comprehensive address damage and loss associated with disaster risk. While outcomes and outputs are not articulated, the NDC is premised on an overall target of a 40 percent reduction in greenhouse gas emissions by 2030, based on 2010 emission levels. Despite the CDM Policy and Strategy being in draft and yet to be operationalised, it presents a substantial level of coherence. The Policy successfully establishes the linkage among the SDGs, CCA and DRR within its goal and outcomes. The Policy's goal is "To provide a coherent management framework for reduction of vulnerability and disaster risks from all hazards, including climate-related effects, while optimising the contribution to sustainable national development." Attributed to the date of development, there is no explicit recognition of the post-2015 instruments (SDGs, PA, and the SFDRR), however, the Policy makes explicit mention of the Hyogo Framework for Action, the St. Georges Declaration and the CDM Strategy and Programming Framework, thus presenting strategic coherence.

Conceptual coherence

There is evidence in support of conceptual coherence of the SDGs, CCA and DRR agenda within the NSDP. In its stated vision, the NSDP sets out to build resilience, targeting a range of sectors and areas. Moreover, its recognition of climate change and disaster risk within the context of underlying development challenges, creates the coherence through the concept of risk. The NSDP acknowledges unsustainable development practices as drivers of disaster risk (deforestation, wetland destruction) but also recognises the reverse of this relationship where climate change and its knock-on effects hinder development objectives. The NSDP further advocates for community resilience through inclusion, targeting the especially vulnerable groups including women, children, persons with disabilities and other marginalised groups, further advocated for gender-sensitive policies.

Conceptual coherence within the NCCP is evident by its premise on resilience. While resilience is not defined, the Policy's vision statement seeks to build resilience at the individual, community and national levels. The policy objective further specifies the need to build resilience in specific sectors including water and sewage, agriculture, health, coastal zone management and biodiversity. Furthermore, climate change is recognised as a risk to the country's development, while development processes such unsustainable land use practices such as sand mining, mangrove harvesting and coral reef exploration are recognised as risks. The link with disaster risk and climate change is discussed in the context of extreme events such as hurricanes, droughts and floods. While there is a distinct recognition of the potential for extreme weather events with climate change, the NCCP also acknowledges other impacts, direct and indirect, including health, agriculture and economic implications. Extreme weather events referred to within the policy include hurricanes, storms, droughts and floods. The threat of sea level rise is emphasised due to the country's heavy reliance on coastal ecosystems, and the food security and economic implications of their destruction are discussed. The hazards associated with climate change are recognised as risks to human settlement, agriculture, food and water security, health, tourism, and ultimately the economy. The shortfalls however, are that social equity considerations are absent within the NCCP, failing to substantially promote gender-specific considerations among others, and erring in discussing the synergies and differences with DRR and CCA.

Conceptual coherence within the NAP is substantial. Premised on the concept of a resilient nation, the NAP successfully integrates disaster risk and climate change with one of its 14 actions dedicated towards DRR. Resilience within the NAP is identified more specifically in terms of climate resilience, which is defined as "the capacity of an individual, community, or institution to dynamically and effectively respond to shifting climate impact circumstances while continuing to function at an acceptable level." The NAP establishes the relationship between development and climate change, with a stated objective to integrate CCA, in a coherent manner, into relevant new and existing policies, programmes and activities, with particular emphasis on development planning processes. Conceptual coherence within the NDC is also evident. The NDC is underpinned by resilience, aiming to build resilience to the most vulnerable groups. While these vulnerable groups are not set out within the NDC, this thrust demonstrates commitment to social equity considerations.

Conceptual coherence within the Draft CDM Policy and Strategy (2014) is also evident. Resilience is the underlying theme of the policy, established within the policy's vision. The Policy adopts the UNDRR's definition of 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 as its driving factor." Conceptual coherence is further substantiated by the linkage between disaster risk and development. The Policy successfully establishes the role of DRR in sustainable development while also articulating the varying unsustainable development practices that contribute to disaster risk. These include improper and unplanned land use changes and practices, increasing informal settlements and increased travel and trade for the movement of pathogens. The relationship between climate change and disaster risk is established within the context of extremes, but also relating to the impacts of climate change on food and water availability, livelihoods and vulnerability of communities, especially poorer ones. The Policy highlights the synergies between DRR and CCA, advocating for adaptation as part of the overall risk reduction process. The Policy also indicates its alignment with gender policies and has a targeted action that involves gender mainstreaming but the role of gender and other social equity considerations is not well elaborated.

Institutional coherence

Institutional coherence in the NSDP is low. The Policy proposes the establishment of the Sustainable Development Institute (SDI) charged with implementation of the NSDP and serving as the national coordinating entity for SDG implementation in Grenada. The SDI will be required to work with line ministries, private sector and civil society to promote the implementation of the SDGs. The challenge to institutional coherence is the SDI focuses on the SDGs and the lack of emphasis on CCA and DRR. Despite this, acknowledging the SDI's role in implementing the NSDP which demonstrates substantial strategic and conceptual coherence, it is possible that institutional coherence can be obtained through coordination by the SDI if the relevant stakeholders are included and there is increased attention on DRR and CCA by the organisation.

Institutional coherence is evident within the NCCP, but requires strengthening. The NCCP acknowledges the crucial role of the National Climate Change Committee (NCCC), which is identified as the multi-sectoral committee lead entity for the NCCP. The NCCP also provides a mechanism for subnational coherence through sectoral focal points to support the NCCC. The NCCP establishes the need for sectoral climate change focal points for institutional mainstreaming. Focal points are required for key sectors including education, agriculture, fisheries, forestry, health, land-use planning, meteorology, tourism, water, works, physical planning and the smaller islands of Carriacou and Petit Martinique. Cognizant of the NCCP's governing role and its reference to the NAP and NDC for action plans, it does not identify specific responsibilities of key actors across the joint agenda. Institutional coherence within the NDC is low but suggested. The NCCC is identified as the lead mechanism but actions are required across four sectors including energy, forestry, waste and Industrial Processes and Product Use (IPPU). The NDC also clearly establishes its linkage with the SDGs, emphasising development outcomes focused on building resilience.

There is also evidence of institutional coherence within the NAP. Identifying the NCCC as the lead mechanism, the NAP has a stated output of "The institutional structure to support coordination, integration and implementation of CCA is strengthened." To achieve this, the NAP prescribes climate change focal points across government ministries and agencies for subnational coordination. Additionally, the UNFCCC climate change focal point sits within the

Environment Division, which spearheads the development of the NAP. As articulated within the NAP, the challenge to the institutional framework is the absence of a mechanism to support coordinating the various global, regional and bilateral climate change projects occurring within the country. A further challenge as presented within the NAP, is that the UNFCCC focal point is not integrated within NaDMA's coordination structure. As such, the NAP aims to address this issue by appointing a NCCC representative as a member of the National Drought Mitigation Center (NDMC) and a NaDMA representative as a standing member of the NCCC (apart from being just a member on the adaptation subcommittee of the NCCC). The NAP further establishes as a priority action, the need to revamp the Sustainable Development Council to include climate change and DRR which is a critical opportunity for institutional coherence which can strengthen coherence in other areas. Within this context, the thrust towards institutional coherence within the NAP is clear.

Institutional coherence within the CDM Policy and Strategy requires strengthening. While the Policy articulates a multi-stakeholder environment, involving the state, sector, district and community levels, the nature of the roles of responsibilities of these actors are not well established. Instead, responsibilities are outlined only in the context of the lead and coordinating agencies responsible for specific activities under the strategies. The Policy has a stated outcome of "Improved institutional mechanisms for CDM at all levels." While this is proposed through the strengthening of district and national committees, there is need for a mechanism that seeks to bring the agendas together.

Operational coherence

The NSDP shows evidence in support of operational coherence. The range of priority sectors and cross-cutting themes of sustainable development and CCA provide operational linkages. However, there is need for strengthening the sectoral activities to better attain coherence. While the NSDP implicitly and explicitly identifies the sectors for which CCA and DRR are relevant, prescribing sector-specific action at items, detailed sectoral policies have not been provided. The sectors within which this reference is made (explicit or implicit) include water, education, energy, transport, land-using planning. Despite the absence of action plans outlining roles and responsibilities, the NDSP provides specific opportunities to enhance coherence through capacity building and awareness building. The NSDP aims to support ecosystem-based adaptation (EbA) such as the creation of green spaces and tree-planting initiatives. A challenge identified in the NSDP is the inadequacy of data and information on vulnerable groups in resilience programming. One of the proposed national strategic actions is therefore to institutionalise systematic risk and resilience assessments that incorporate gender and social inclusion. Measures for joint climate and disaster risk assessments and advocating for a comprehensive damage and loss database are absent. The Situational Analysis for Grenada (UNDRR, 2021) identified the absence of a comprehensive national risk data repository; fragmented public awareness activities; inadequate mainstreaming in education; unavailiability of disaggregated data for vulnerability assessments; and outdated hazard mapping and modelling as gaps in the country's knowledge management.

Operational coherence is evidenced within the NCCP and the NAP by transboundary activities such as capacity building, outreach and sectoral integration, and its foundation of a multi-stakeholder, multi-sectoral environment. Key stakeholders identified are government ministries and agencies, citizens and communities, private sector organisations, research institutions, and CSOs. The NCCP clearly serves as the governing instrument, identifying the

NAP and the NDC as the action plans with indicators for adaptation and mitigation. As such, detailed-sectoral plans are not outlined within the NCCP. Despite this, the NCCP highlights select sectors of importance including: agriculture, fisheries, forestry, health, land-use planning, meteorology, tourism, water, works, physical planning and the smaller islands of Carriacou and Petit Martinique.

Operational coherence within the NAP is substantial and several windows of opportunity are presented for the integration of DRR. Addressing activities across key sectors including water, agriculture and fisheries, the NAP shows operational coherence through integration of the agendas. For example, under agriculture, the NAP advocates for a disaster management investment fund to aid farmers in mitigating against and responding to climate impacts and challenges. In the area of water resource management, the NAP advocates for a National Drought Management Plan. Moreover, the NAP clearly establishes the need for EbA, identifying a range of measures including outreach and awareness building in support of EbA. Operational coherence within the NDC is evidenced by its multi-stakeholder foundation, and its targeted actions to reduce greenhouse gases in specific sectors: energy (including transport), forestry, waste, and IPPU (cooling). The NDC also establishes the linkage with disaster risk and climate change through its advocacy for comprehensive damage and loss assessments. Despite this, detailed roles and responsibilities and cross sectoral action plans are not provided, thereby limiting coherence. Operational coherence across these instruments can be further strengthened by clearly detailing the responsibilities of key actors by institutions/agencies (in the case of INDC and NCCP) and not just sectors, as well as, integrating climate scenarios into BBB.

Operational coherence within the Draft CDM Policy and Strategy is low. There is a need to identify the priority sectors and to establish the responsibilities of these sectors. While operational linkages are evident by the wide range of stakeholders across varying segments of society, there is need to expand on the roles of these stakeholders. Despite this, the Policy provides opportunities for coherence through specific activities which include: awareness building; capacity building; damage and loss databases; and strengthening EWS.

Financial coherence

Financial coherence within the NSDP is limited. While the NSDP outlines risk transfer mechanisms as an area for strengthening, and advocates for insurance coverage, a budget for achieving these activities is not provided. Moreover, the NSDP does not provide a mechanism for mobilisation of funding across the platforms. Sources of funding as identified within the NSDP include government revenue; grants, concessional loans; philanthropic assistance from Grenadians and friends of Grenada in the Diaspora; and public-private partnerships.

Noting the NCCP governing role, financial coherence is low. Specific budget estimates are not provided, nor does it refer to the mobilisation of funding across the platforms in support of the joint agenda. The NCCP identifies four main sources of funding including: national budget; local and international private sector investment; bilateral and multilateral grants, bilateral and multilateral concessional loans. Financial coherence within the NDC is also low. An estimated budget for mitigation action of USD 984.9 and 1,054.5 million is provided with multilateral and bilateral support including through the GCF, multilateral agencies, and bilateral arrangements with development partners, identified as potential sources of funding. While meaningful, a mechanism for mobilisation of funding across the agendas is not provided. The

NAP provides an estimated budget of USD 260 million to achieve its objectives, identifying the estimated budgets for each programme of action. Adaptation funding is identified as a specific programme of action, outlining domestic and external financing as options. Specific sources of funding include the GCF, the PSIP, and the Community Climate Change Adaptation Fund (for local projects).

Financial coherence within the Draft CDM Policy is low. Budgets are specified for some of the listed activities but the sources of funding are not articulated. While the Policy establishes the need for CCA within the DRR process, it errs in promoting a mechanism for mobilisation of funding across the agendas. A notable strength of the Policy, however, is its promotion of risk transfer mechanisms, with a stated action to "Pursue, develop and implement risk transfer mechanisms for vulnerable groups and high-risk sectors through collaboration with local, regional and international agencies."

MER coherence

While a plan of action is not provided, the NSDP establishes 52 indicators and 156 targets across the 8 outcomes and establishes a mechanism for monitoring, evaluating, and reporting (MER). These outcomes are linked to the SDGs, creating an element of alignment. MER coherence can be further strengthened by establishing a joint framework. As the country's development instrument, the NDSP is best poised to institute and implement a joint reporting mechanism.

MER coherence, while suggested in the NCCP, is very low. The NCCP acknowledges reporting requirements under the UNFCCC and the NDCs as per the PA. However, it does not prescribe a mechanism for joint reporting or a detailed plan of action with indicators. However, the NCCP states that the detailed action plan with indicators are prescribed within the NAP and the NDC, which serve as the vehicles for adaptation and mitigation, respectively. While the NDC fulfils its reporting requirements under the UNFCCC and a clear target is established, a mechanism for joint reporting is not evident within the NDC. The NAP demonstrates a level of monitoring, evaluating and reporting coherence, though limited, through established responsibilities and reporting arrangements under the UNFCCC and NCs. Coherence can be further strengthening by instituting a join reporting mechanism.

The Draft CDM Policy and Strategy presents a well-articulated monitoring and evaluating framework with baselines, indicators and targets for each activity. Despite this, coherence is low as the Policy errs in articulating the need for joint reporting mechanisms. Due to the date of development, the Policy does not refer to current reporting processes such as the SFM and the SDGs platform.

Table 10 Grenada levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.9 Guyana

Risk context

Guyana is one of the poorest countries in South America, with 35 percent of the population living below the poverty line. It was ranked 122th among 189 countries in the 2020 Human Development Index (UNDP, 2020). Owing to its geography and socioeconomic conditions, Guyana has experienced its share of disasters and accompanying economic, environmental and societal losses over the years (UNDRR, 2021c). While floods, droughts, sea-level rise, and environmental hazards are most prevalent within the national risk profile, the risk environment is expanding. Compounding this, is the increasing threat of climate change and new and emerging risks that accompany the country's transitioning economy. The largest proportion of the national population resides in the low-lying coastal area to the north of the country. Moreover, recent oil and gas discoveries and extraction activities though with their economic benefits, expands the country's risk profile. According to the World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020), Guyana received a 'very high' WorldRiskIndex value and ranks 6th globally due to its vulnerability to climate change and other factors. A detailed analysis of DRR inclusion in national climate change commitments in Guyana is presented in (UNDRR, 2021d).

Strategic coherence

The Green Development Strategy (GSDS), Vision 2040 (Government of Guyana, 2019a) is a pivotal instrument in the national framework and is well-poised to set the country on a path to sustainable development. Aligned to the 2030 Agenda for Sustainable Development, the GSDS seeks to propel Guyana to a desired state of development that is climate-resilient and environmentally sustainable. The GSDS places significant emphasis on its biodiversity conventions but recognize its commitment under the PA. The GSDS however does not

explicitly recognize the SFDRR. Outcomes are well articulated in the GSDS but the disaster risk element supporting substantial strategic coherence is largely absent.

Strategic coherence is also evident within the National Climate Change Policy and Action Plan (NCCPAP) (Government of Guyana, 2019b). With direct reference to key international instruments such as the SDGs, PA, and commitments under the UNFCCC, the NCCPAP aligns its policy directives to SDGs targets. More so, it has a stated vision that signifies coherence where "Guyana's climate change policy integrates the socioeconomic and environmental challenges of climate change and provides strategic guidance for adaptation, mitigation and resilience to foster national sustainable development". While strategic coherence within the INDC is significantly lower, this is still suggested through the INDC's acknowledgement of the country's commitments under the UNFCCC.

The National Integrated Disaster Risk Management Plan and Implementation Strategy (Government of Guyana, 2013) presents some evidence of strategic coherence. Due to the date of development, the Policy aligns with previous international instruments such as the HFA and the MDGs. Climate change is recognized as a contributor to disaster risk, which is viewed within the Policy as a development hindrance. A key objective of the Policy is to "Promote linkage among disaster risk management, sustainable development and climate change adaptation for reduction of vulnerability to hazard impacts and disasters." The Policy has a stated aim to mainstream disaster management into development policies, planning processes, land planning and financial, formal and non-formal education systems as well as human-rights based related policies, strategies and measures, thereby addressing other sectors but not specifically detailing which sectors. Notwithstanding, the Policy has a key strategy of strengthening the nexus for CCA and DRM, which aids in strengthening strategic coherence. The Policy also has a stated principle of integrated DRM with climate risk management and vice versa.

Conceptual coherence

The GSDS provides some evidence in support of conceptual coherence. The Strategy is premised on the concept of building resilience, and while resilience is not specifically defined, it is referenced throughout the strategy across varying contexts, such as infrastructure, economic and climate resilience. Climate change is recognized as a development risk and the Strategy sets out to promote a climate-resilient country. Additionally, there are adequate considerations for the social aspect of vulnerability. Building human and institutional capacity is one of the three main overarching goals of the GSDS. This goal has a stated aim to provide for and protect the most vulnerable premised on the concept of "no one left behind". Vulnerable groups are recognized throughout the Strategy elements and activities, treated as a cross-cutting area. These include the elderly, persons with disabilities, indigenous people, indigent persons, children, and women. Despite these key aspects, conceptual coherence can be further strengthened by establishing and solidifying the relationship between disaster risk, climate change, and sustainable development. Disaster risk is predominantly viewed in the context of natural hazards but not well built upon in the Strategy. Disaster risk spans a range of hazard categories as developed in the previous sections. This expansive nature of disaster risk should be acknowledged in the Strategy to ensure there are adequate planning considerations for the hazard environment.

There is substantial evidence of conceptual coherence within the NCCPAP. With resilience-building being the underlying theme, the NCCPAP establishes direct linkages between climate change and disaster risk and aims to integrate activities in support of resilience. The NCCPAP also successfully establishes the underlying causes of vulnerability and recognizes social equity and gender considerations as cross-cutting areas, acknowledging that social circumstances contribute to vulnerabilities and adaptive capacities. Conceptual coherence is less evident within the INDC, presenting an area for strengthening. Risk and resilience building is less explored with the INDC, thereby presenting no significant conceptual coherence.

There is ample evidence in support of conceptual coherence in the DRM Policy. Built on the concept of resilience, the Policy clearly establishes the relationship among climate change, disaster risk, and development, recognizing that development challenges also exacerbate the risk profile. Commendably, the underlying social aspect of vulnerability and disaster risk are well-articulated. As a key strategy, the Policy identifies the adoption and maintenance of a human-rights-based approach within the disaster risk planning environment. It advocates for the inclusion of issues regarding equality and disparity, and recognizes vulnerable groups, including the elderly, indigent, children, persons with disabilities, and gender considerations. The social dimension and need for inclusion is well-built upon in the Policy with detailed considerations for these vulnerable groups and activities to promote gender inclusion are articulated. The noted gap in the area of conceptual coherence, is the detailed and well-developed relationship between climate change and disaster risk. Although the Policy seeks to integrate climate change and DRM, the details of this relationship are not well explored. Instead, the Policy proposes integrating measures without detailing the underlying relationship and resulting impacts of climate change and disaster risk. Only a few synergies are discussed within the context of CCA aiding in DRR and climate change contributing to disaster risk. Notwithstanding this, the Policy aims to promote knowledge of the synergies and differences between DRR and CCA.

Institutional coherence

There is little evidence in support of institutional coherence. While the GSDS is a well-poised tool for development, coordinating mechanisms at a subnational level are not outlined. While the strengthening of local government is a priority area in the GSDS, the coordinating mechanism supporting institutional coherence at the subnational level is not well established. Similarly, roles and responsibilities are not provided and there are no prescribed joint mechanisms for institutional coherence.

There is significant evidence in support of institutional coherence within the NCCPAP. The NCCPAP is linked to the objectives of the GSDS and aligned to the SDG Platform. The NCCPAP identifies the GSDS as the main supporting instrument. The challenge, however, is that the lead agency for these national instruments varies. Despite this, institutional coherence is also supported by the clear establishment of responsibilities of varying stakeholders in support of the NCCPAP. Institutional coherence within the INDC is much less evident. The INDC errs in clearly establishing roles and responsibilities of key stakeholders, as well as establishing a mechanism for coherence.

While institutional coherence is limited within the DRM Policy, it articulates the need for convergence of agendas within the wider development agenda. Institutional coherence can be further strengthened by clearly outlining the roles of varying stakeholders in the process and

clearly articulating a joint mechanism for coherence. The institutional framework presented in the Policy is broad but errs in providing an overarching mechanism for coherence of the agendas. While the Policy suggests coordination at the sub-national levels, roles and responsibilities are not clearly articulated. Despite this, the Policy provides a hopeful indication of the need for institutional coherence in aiming to develop and share institutional capacities in strengthening the nexus for disaster risk management and climate change.

Operational coherence

The GSDS presents a comprehensive indication of sustainable development activities across several sectors. With climate change and resilience building as the underlying concept, many sectoral activities involve climate change mitigation and adaptation. The major shortcoming is its failure to address the comprehensive nature of DRM directly. Disaster risk is addressed only via indirect activities such as land-use planning, climate-resilient infrastructure, environmental protection and sustainability, and infrastructural resilience. As such, operational coherence while evident, remains limited.

Operational coherence is evidenced within the NCCPAP by transboundary activities such as capacity building, awareness building, promotion of green technologies and practices and sectoral integration. Specific activities are outlined for each policy directive, with expected outcomes and responsibility entities, and for each of the key sectors identified, demonstrating sectoral mainstreaming. Operational coherence within the INDC is also suggested by the target sectors which include energy and forestry only.

The DRM Policy demonstrates operational coherence via the mainstreaming of disaster risk into the development planning process through land-use planning, and to a lesser extent into education. There is a need to identify the priority sectors and to establish the responsibilities of these sectors in contributing to the Policy and the disaster risk planning environment. While operational linkages are evident by the wide range of stakeholders across varying segments of society, there is a need to expand on these stakeholders' roles.

There are considerable opportunities for strengthening operational coherence through awareness and capacity building activities, the development of Multi-Hazard Early Warning Systems (MHEWS), and comprehensive risk assessments. The Situational analysis for Guyana (UNDRR, 2021c) identified a limited capacity for risk identification, mapping and modelling; unconsolidated hazard and risk information; a lack of a formalised public awareness strategy; fragmented risk data and limited risk assessments; and the unavailiability of disaggregated data for comprehensive vulnerability assessments as key gaps in knowledge management. The NCCPAP identifies a severe lack of physical, financial, technical and human resources for regular monitoring, assessment and maintenance; a lack of systems for risk identification and quantification; and little or no capacity for numerical modelling to aid in decision-making as weaknesses related to 'Policy Objective 1.3: Reduce disaster and hazard risks that jeopardize productivity and livelihoods'. The Policy aims to focus efforts on risk assessment, preparedness, prevention or mitigation, response, and recovery. To achieve these goals, the Policy aims to inform development activities and support risk identification and quantification strategies. One of its policy directives is to 'Invest in and support collection, management and use of scientific data and information for implementing climate actions'.

Given Guyana's rich biodiversity and natural resource base, a key opportunity to manage disaster risk and climate mitigation and adaptation that should be explored in the DRM planning environment is through the use of nature-based solutions (NbS). The Policy errs in specifically outlining the range of sectors that are crucial to CCA and DRR. Notwithstanding this, the agriculture sector is broadly referenced as being vulnerable to climate and disaster risks. Similarly, while not discussed in detail, the education sector is highlighted in the context of including DRM in school education. Mainstreaming in land-use planning is more developed within the Policy, with a recognized need for disaster risk to be integrated into the development agenda via risk assessments for land-use planning.

Financial coherence

While substantial financial coherence is not supported within the GSDS, several activities suggest there is a level of coherence. Chief of these is the recognition of funding sources from a range of mechanisms including development and climate financing. Under the financing aspect of the Strategy, development finance is referred to from several international institutions that support DRR through social mechanisms, vulnerability reduction (from disaster) and sustainable growth. The GSDS refers to climate financing for activities related to mitigation and adaptation in support of resilience-building. These activities have DRR co-benefits.

The NCCPAP though clearly providing useful insight into potential funding sources, errs in providing a mechanism for joint funding or the reallocation of funding, thereby limiting financial coherence. This is only suggested by development finance to meet climate change initiatives, but the sources of development financing are not identified. The NCCPAP also supports risk transfer mechanisms via insurance for floods and droughts, which promotes financial coherence.

The INDC provides much less support for financial coherence. Estimated budgets are presented in the sum of USD 1.6 million, however, funding sources identified are limited, referencing only the GCF. While funding options are specified in the DRM Policy, the overall financial coherence is low. Funding sources are outlined as government funding from the consolidated fund, private sector funding, and agency funding. However, budgets are not provided. Risk transfer mechanisms, while promoted, are broadly for disasters, though not specified for climate change risks. The Policy refers to the establishment of mechanisms to provide funding and to mobilize resources for CCA and DRR, which suggests some view towards financial coherence.

MER Coherence

MER coherence is low in the GSDS but suggested by the availability of listed activities with owners and overall alignment with the SDG Agenda. Activities are outlined in support of the development objectives with stipulated timeframes and responsible agencies. However, the Strategy does not indicate a joint reporting mechanism. A key opportunity is the alignment of strategies to the SDG targets, but this is not applied to all listed strategies yet can aid in reporting on the international agenda.

The NCCPAP presents a clear action plan that directly contributes to climate change mitigation and adaptation, with co-benefits to DRM and contributing to sustainable development. This

action plan aids in clearly establishing the activities to be carried out by stakeholders, with given indicators, enabling MER. The NCCPAP also links its activities to the SDG targets signifying a level of coherence in the monitoring framework. This coherence can be further strengthened by establishing a joint platform for monitoring and evaluating the agendas.

The INDC does not prescribe a MER framework or a mechanism for a joint framework. Coherence through MER is also low within the DRM Policy. The Policy refers to a Key Results Matrix that will serve as a coordinating mechanism for MER across the varying DRM instruments. However, this is not provided within the Policy. If available, this can be a useful tool in supporting coherence through MER. However, the Policy does not refer to alignment with current global indicators.

Table 11 Guyana levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

Risk context

Haiti's sustainable development is hindered by its political instability, increasing violence and fragility; the COVID-19 pandemic has aggravated these dynamics. In addition, due to its geographical position on the eastern third of the island of Hispaniola in the Caribbean, it is highly vulnerable to natural hazards, mainly hurricanes, floods and earthquakes, of which the frequency, intensity and impact are expected to be exacerbated by climate change (World Bank, 2021). The country's risk context is compounded by high poverty levels, the vulnerability of critical infrastructure, unregulated urban expansion, and the fragility of government institutions and agencies in charge of disaster response (GFDRR, 2017). With almost the entire country living at risk (GFDRR, 2016), exposure and vulnerability to extreme and long-lasting events are aggravated by the lack of substantial coherence between SDG, CCA and DRR policies. Accordingly, the World Risk Report places Haiti 22nd globally and classifies the country with a "very high" WorldRiskIndex (Bündnis Entwicklung Hilft, 2020). Haiti's risk rank is due to its "very high" levels of exposure, vulnerability, and susceptibility to risk, as well as explained by the country's lack of both coping and adaptive capacities to risk.

Strategic Coherence

Haiti's Strategic Development Plan 2030 (PSDH 2012) is the instrument guiding public and private actions until 2030, including those of international partners, to tackle the country's main development challenges. While the PSDH 2012 orientations can be linked to the global and regional frameworks for SDGs, CCA and DRR, vertical integration is partial as the policy precedes or does not mention most of them. The PSDH 2012 vision aligns with the SFDRR outcomes, goals and several of its targets, as it considers the 2010 disaster as an opportunity to address the urgent need for DRR mechanisms. In addition, the policy's *Grand Chantier* (GCH) 4 erects DRR as a cross-cross cutting theme for elaborating development strategies and enhancing institutional coherence. As in the case of CDM Strategy, the PSDH 2012 refers

to resilience and sustainability as critical to development processes. Concretely, the CDM Strategy priority areas (institutions, knowledge, integration, resilience) are enshrined within the PSDH 2012 GCH 1-4 (land use planning, economy, social concerns, institutions) and their programs.

While the PSDH 2012 does not refer explicitly to the UNFCCC or the PA, the policy refers to climate change as a contextual element threatening public administration and businesses on the island. Consequently, the policy connects to the UNFCCC as it considers reducing the ecological footprint as a major challenge for development. As regards the PA, the PSDH 2012 commits to strengthen the country's response and resilience to the threat of climate change in the context of sustainable development and efforts to eradicate poverty. The policy contemplates enhancing capacity building through education and CCA initiatives, as well as using information and communication technologies to modernize early warning systems. Whilst the SDGs are present throughout the policy's GCH, the PSDH 2012 does not fully include CCA and DRR considerations within its development policy vision, goals and principles. Horizontal integration is partial, CCA and DRR remain clustered in GCH1 and not mainstreamed jointly within the development sectors. The PSDH 2012 connects to the SAMOA Pathway by guaranteeing sustainable development and resilience building as a common basis for protecting the environment, as well as by addressing its overarching objectives and priority areas. With respect to the linkages between the SDGs, CCA and DRR within the education sector, the policy addresses the CSSI critical issues 1-2 and 9. GCH3 acknowledges the right to quality and inclusive education for all and promotes the enhancement of educational infrastructure. Also, the PSDH 2012 recognizes the country's exposure and vulnerability to natural, anthropogenic or socio-natural hazards.

Haiti's National Policy on Climate Change (PNCC 2019) is a broad policy expected to provide environmental and societal answers to the anthropogenic climate change processes endangering the Haitian development efforts and fight against poverty. The PNCC 2019 is complementary to the *Haitian National Determined Contribution 2015* (HCPDN 2015), which offers relevant information about the country's effort to tackle climate hazards. While contributing to enhancing resilience within the country, especially in the adverse context of global warming, both policies address and mainstream CCA, SDGs, and DRR jointly in other sectors. The PNCC 2019 guiding principles and pillars 1-4, as well as the HCPDN 2015 focus on climate change mitigation and adaptation, are in line with the SFDRR expected outcomes, goals, principles, and priorities 1-3. At a regional level, the PNCC 2019 and the HCPDN 2015 contribute indirectly to the CDM Strategy regional goal. As in the case of the CDM Strategy, resilience and sustainability are at the core of the PNCC 2019 and the HCPDN 2015 actions for enhancing CCA and DRR. The PNCC 2019 is presented as a programmatic framework for action in line with the UNFCCC principle 1 and the PA main objective to strengthen the global response to the threat of climate change. Similarly, the HCPDN 2015 measures to achieve CCA have been elaborated on the basis of the UNFCCC and the PA objectives, principles and commitments.

While the PNCC 2019 aims explicitly to contribute to the SDGs 7-8 and 13 through its pillars (strengthening institutions, improving governance, promoting endogenous climate funding, elaborating efficient actions against climate change), the HCPDN 2015 indirectly connects to the SDGs Agenda 2030 through its links with the PSDH 2012. Concretely, the HCPDN 2015 states the need for associating mitigation and adaptation efforts regarding global warming to development objectives set by the PSDH 2012. Consequently, there is sufficient

evidence to argue that both national policies align to the SAMOA Pathway commitments and objectives. In fact, explicit references to the urgent need for promoting sustainable socio-economic development are present in the PNCC 2019 and HCPDN 2015. In a small island characterized by vulnerability factors, such as poverty and weak institutions, climate change impacts are seen as a risk to sustainable development. Whilst the PNCC 2019 pillars 1-4 are expected to address climate change impacts on sustainable development, the HCPDN 2015 incorporates sustainable development within its cross-cutting priorities 1-5. Following the CSSI predicaments in the education sector, the HCPDN 2015 considers education as one of its five cross-cutting priorities and contemplates raising CCA awareness at primary, secondary and university levels. Although the PNCC 2019 focus is not put on the education sector, this policy can be considered as a programmatic instrument for the CSSI commitments 2-5.

Strategic coherence is substantial within the PNGRD 2019 due to its high levels of vertical and horizontal integration. The PNGRD 2019 not only considers the SDGs and CCA as DRR full-fledged elements, but also diffuses them within the political, social, economic and cultural sectors owing to its connections with the PNCC 2019 and the PSDH 2012. The SFDRR and the CDM Strategy are part of the DRR frameworks guiding the PNGRD 2019 actions and implementation. Specifically, the PNGRD 2019 strategic axes 1-4 and its resilience building approach are aligned with the SFDRR priorities for action 1-4 and to the CDM Strategy regional goal and priority areas. The PNGRD 2019 links with the PNCC 2019, enabling it to implicitly address the UNFCCC principle 1 and the PA desire to strengthen response to the threat of climate change.

Sustainable development is critical for implementing the PNGRD 2019. The SDGs 2030 Agenda is considered as another reference document for DRR and the efforts to fight climate change impacts in Haiti. Consequently, even if not specified, the PNGRD 2019 aligns to the SAMOA Pathway commitments owing to its linkages with the PSDH 2012. As also promoted by the SAMOA Pathway, the PNGRD 2019 advocates for the need to eradicate poverty, build resilience, and improve the quality of life of the population; SDGs, CCA and DRR are seen as linked. As regards the CSSI, its critical issues 1-5 and 7-9, as well as its commitments 2-5, are implicitly seen as critical for the progress of the Haitian Disaster Risk Management system.

Conceptual Coherence

There is partial evidence of conceptual coherence within the PSDH 2012. Key concepts such as sustainable development, climate change, and resilience are addressed but not properly defined, which prevents the policy from elaborating on SDGs, CCA and DRR under the heading of resilience building. Synergies between these three fields are discussed via the impacts that inefficient development processes can have in fostering the level of vulnerability among the population. Concretely, slow economic growth and lack of jobs, uncontrolled demographic growth, the lack of precarious housing and land planning, the centralization of the country, inefficient economic redistribution and persistent social inequities, and a weak rule of law, are identified as structural causes for vulnerability. Within this context, climate change is considered as an opportunity to implement development strategies and to address both climate and disaster risks. Therefore, *Grand Chantier* (GCH) 1 associates development to DRR actions and the need for climate risk adaptation strategies.

While resilience, climate change, and sustainable development are not defined, conceptual coherence is substantial within the PNCC 2019 and the HCPDN 2015 as both policies address jointly the SDGs, CCA, and DRR. The concept of risk is mobilized in the policies to

systemize synergies between CCA and DRR that would support Haiti in achieving sustainable development. The PNCC 2019 and the HCPDN 2015 aim to enhance Haiti's resilience to climate change and disasters. As such, resilience is implicitly referred to as a cross-cutting concept for the SDGs, CCA and DRR. As regards climate change, it is characterized as a multi-risk factor preventing socio-economic development, exacerbating Haiti's vulnerability, provoking damages within strategic sectors, worsening social and gender inequities, and aggravating the impacts of extreme and long-lasting events.

The PNGRD 2019 conceptual coherence is strong as it employs the concept of risk to enhance synergies between the SDG, CCA and DRR actions. The policy provides straightforward definitions of resilience, climate change and development, and associates them to global, national and subnational plans and programs. The PNGRD 2019 refers to resilience as "the capacity of a system, community or society exposed to hazards to withstand, cope with, adapt to, and recover from their effects quickly and efficiently, especially through the preservation and restoration of essential structures and functions through risk management". Likewise, climate change is defined as a major risk factor, especially due to Haiti's insular condition as well as its limited resources and high levels of vulnerability. In addition, the inefficient development processes are presented as a high-risk factor aggravating the impacts of disasters within the country. Thus, economic precariousness, high demographic concentration in urban areas, limited access to basic services, unsuitable housing, and social exclusion (e.g: gender inequity), are mentioned as factors impeding development on the island. Therefore, the PNGRD 2019 elaborates on climate change impacts on socio-ecological systems not only through the lens of extreme events, but also through human security and sustainable development concerns.

Institutional Coherence

Whilst the PSDH 2012 institutional coherence for SDGs is significant, formal collaborations between the SDG, CCA and DRR fields are patently weak. Concretely, coordination mechanisms to support coherence between these three fields are not specified, roles and responsibilities are not detailed, and SDGs, CCA and DRR institutional synergies are rarely discussed. The PSDH 2012 Grand Chantiers, programs and subprograms provide, under the guidance of the Ministry of Planning and External Cooperation, the institutional structure to enhance coordination between development processes. Additionally, so as to achieve institutional coherence for development at subnational levels, GCH 4 contemplates reinforcing the legal framework, strengthening the legislative and judiciary powers, modernizing the public administration, and supporting cooperation between local authorities and civil society. While each program and subprogram offer a roadmap for implementing the PSDH 2012 at national and subnational levels, they do not provide a clear outline of roles and responsibilities for all SDGs, CCA and DRR actors.

The PNCC 2019 and the HCPDN 2015 institutional coherence is only partially met, as policies do not fully include SDGs and DRR actors within the CCA field. The PNCC 2019 aims to reduce the dispersion of CCA efforts and support their coherence with the SDGs and DRR; Chart 1 specifies relevant actors and expected timelines to achieve this objective. Likewise, the HCPDN 2015 mentions the role of the Direction for Climate Change Management, a subgroup of the Ministry of Environment in charge of the National Committee for Climate Change, in supporting collaborations between institutions within the CCA realm. As mentioned by the HCPDN 2015, the PNCC 2019 gives the National Committee for Climate Change the

responsibility of fostering climate change cooperation between local, territorial, regional, and international actors. However, while roles and responsibilities are broadly identified for CCA actors, it remains unclear how SDGs and DRR actors interact with them.

There is substantial evidence of institutional coherence within the PNGRD 2019 as the policy successfully connects SDGs, CCA and DRR fields. The PNGRD 2019 identifies multiple platforms and coordination mechanisms that are expected to be further developed and consolidated. Concretely, the policy refers to the National Platform for DRR as a key coordination instrument and the Permanent Secretariat for Disaster Risk Management as the institution in charge of overseeing the DRR interinstitutional planning and coordination. Few details are given about how the SDGs and CCA coordination mechanisms interact with DRR instruments like the Sectoral and Thematic Panel on Risk and Disaster or the Emergency Operations Centres. However, the PNGRD 2019 refers to the Thematic Committees as a multisectoral platform facilitating the links between DRR and SDGs practices and tools. The PNGRD 2019 provides an organization chart and a results matrix detailing the envisioned results, expected interventions and activities, and the main institutions in charge of their implementation. At a subnational level, DRR coordination is ensured by the National Disaster Risk Management System.

Operational Coherence

The PSDH 2012 operational coherence is only partially met as the policy struggles in addressing jointly CCA and DRR considerations under the heading of sustainable development. In practice, the PSDH 2012 does not state a clear outline of roles and responsibilities of SDGs, DRR and CCA actors. Equally, there is no mention of awareness raising actions among the actors within and between the three fields. The disconnection between the SDGs, CCA and DDR continues, as synergies between the methodologies employed by these fields are not systematized. PSDH 2012 acknowledges that accessing and sharing data, as well as assessing its reliability, is often a challenge in the country. Thus, the Plan advocates for a continuous consultation of environmental data produced by centres and the integration of information into a database. Within this context, operational coherence remains a challenge as the SDGs, CCA and DDR considerations are not jointly mainstreamed into strategic sectors. As a matter of fact, the PSDH 2012 refers to specific sectors for which SDGs are relevant; CCA and DRR operational considerations stay fenced within GCH 1, especially program 1.2.

The operational coherence of the PNCC 2019 pillars 1-4 is based on a collective effort from the government, civil society, private sector, funding and technical partners, and international institutions. While the HCPDN 2015 singles out the Ministry of Environment as the main institutional actor, the PNCC 2019 Chart 1 offers a broad outline of the main CCA actors and the measures they are expected to put into place. One of the strongest operational features of the PNCC 2019 and the HCPDN 2015 is that both contribute to strengthening knowledge of actors. The PNCC 2019 does it within its guiding principles 1-3: decentralization, participation and dialogue, and transparency, immutability and accountability. The HCPDN 2015 refers to this point when consecrating information, education and raising awareness as one of its five priorities. However, several elements obstruct operational synergies between the SDGs, CCA and DDR fields. First, it remains unclear how the PNCC 2019 and the HCPDN 2015 bring together methodologies used within each field. Second, the SDGs, CCA and DDR practices are not brought together through multipurpose damage and loss databases. While both policies encourage the integration of risk assessments, they do not establish a clear path

for data access, use and exchange. Third, Build Back Better practices are barely considered as the concept has not yet been reappropriated by national actors, which is a sign of partial vertical integration. Neither the PNCC 2019 nor the HCPDN 2015 include the housing sector in their CCA and mitigation measures, which is an issue given Haiti's vulnerability while facing climate risks.

There is significant evidence of operational coherence within the PNGRD 2019. While the policy is focused on DRR, its vision, objectives, and strategic axes bring together the SDGs and CCA under the heading of a comprehensive disaster management approach. As the SDGs and CCA are considered critical for DRR plans and activities, the policy stresses their operational linkages. For instance, the PNGRD 2019 advocates for capacity building as a paramount tool for achieving DRR actions which include SDGs and CCA considerations. In practice, the PNGRD 2019 relies on multisectoral and interdisciplinary commitments, which include actions from the civil society, public and private sectors, as well as the international community. Consequently, the policy indicates roles and responsibilities of DRR, CCA and SDGs actors, not only through its National Disaster Risk Management System Chart and Results Matrix, but also by its links with the PSDH 2012 focus on the SDGs and the PNCC 2019 concerns on CCA. PNGRD 2019 indicates that the country has several tools for data collection in emergency and disaster situations, as well as people trained in their use, both in the emergency operations centres and the field. Also, the Plan's Strategic Axis 1 refers to 3 activities for data gathering and sharing to improve the integration of DRR assessments in public policies: (1) creating a unified and dynamic database on DRR; (2) assessing and ensuring the availability of equipment and tools for collecting and analysing disaster risk data; (3) developing protocols and procedures to link data producers and providers to end users.

Financial Coherence

The PSDH 2012 financial coherence is partially met. While the policy envisages a straightforward budgetary structure (Budget Program, Triennial Implementation Frameworks, Triennial Investment Programs & Annual Investment Programs), it does not specify how CCA and DDR will be included in its broad funding strategies for development. Although said strategies are supported by a Fund Program, which is expected to be implemented by the Triennial Implementation Framework, an estimated budget is not provided by the PSDH 2012. However, it could be argued that, as long as they are considered critical for the SDGs, DRR and CCA are implicitly included within the Budget Program for the PSDH 2012. The policy refers to national resources, budgetary support, multilateral funding, and Haiti's development and reconstruction funds as its funding sources. Insurance schemes to reduce the impacts of climate and disaster risk are not explicitly considered; Subprogram 2.5.1 refers broadly to multi-risk insurance.

While the PNCC 2019 and the HCPDN 2015 provide an estimated budget for CCA actions, it remains unclear how it is composed, which part of it corresponds to specific programs, and the timeline allocated to spend it. The HCPDN 2015 specifies that, within the 2015 horizon, the cumulative cost of climate change impacts is USD$ 1.8 billion if preventive measures are not implemented, and USD$ 77 million if adaptation efforts are put into place. Concretely, the implementation of the HCPDN 2015 commitments is expected to cost USD$ 25,387 billion. In addition, the PNCC 2019 states that a detailed estimate of the short- and medium-term costs for implementing CCA measures will be provided by the Strategy and Action Plan for

executing the policy. While in the PNCC 2019 and the HCPDN 2015 DRR is embedded in CCA funding strategies, the policies do not specify if and how sustainable development funding can be used for DRR and CCA. Funding sources are clearly identified by the PNCC 2019, which refers to national and international investing plans and budgets, private investments, bilateral and multilateral funding support from technical partners, international funds for climate, and market-based mechanisms. As regards insurance schemes, the HCPDN 2015 contemplates supporting the insurance sector for losses resulting from climate and disaster risk impacts.

The PNGRD 2019 partial financial coherence puts at risk the actions envisioned within its strategic, conceptual, institutional and operational coherence. As the policy does not provide an estimated budget for DRR, it becomes difficult to find linkages between DRR funding and CCA and SDGs ones. Specific funding sources are mentioned but it remains unclear what contribution is made by each of them. In addition, suggested insurance schemes for DRR do not consider climate change explicitly.

MER Coherence

Monitoring, Evaluating and Reporting (MER) is not fully developed in the PSDH 2012 but suggested by the implementation of a Development Management and Evaluation Information System. In practice, the system is expected to monitor and evaluate the PSDH 2012 progress according to a series of indicators. However, the main obstacle is raised by the fact that the PSDH 2012 does not go further in developing the details about this MER instrument, which also remains disconnected from regional and global frameworks.
The PNCC 2019 and the HCPDN 2015 MER frameworks are partially developed as they focus on CCA processes. While the PNCC 2019 considers MER performance indicators in line with the objectives of the policy, the HCPDN 2015 envisions a National Committee for Climate Change in charge of monitoring its implementation. As regards their linkages to regional and global processes, the PNCC 2019 MER mechanisms are expected to comply with international negotiations concerning the UNFCCC, the PA and other multilateral frameworks for action. A PNCC 2019 first official evaluation and reporting is scheduled for 2022.

There is ample evidence for substantial MER mechanisms in the PNGRD 2019 as it provides a straightforward DRR plan including sustainable development considerations and contributing to CCA actions. Specifically, each of the PNGRD 2019 strategic axis presents both a target and an DRR indicator related to SDGs and CCA considerations. Coherence between DRR, SDGs and CCA are reinforced as the PNGRD 2019 MER framework is expected to be in line with MER mechanisms elaborated and implemented by the Ministry of Planning and Foreign Cooperation. However, there is a gap to fill regarding the linkages between the PNGRD 2019 MER tools and global indicators.

Table 12 Haiti levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.11. Jamaica

Risk context

Jamaica is the third largest island in the Caribbean Sea with 10,990km^2, a population of 2.7m (2018), and a GDP of US$ 26.981 billion (2018). Jamaica ranks first among Caribbean countries in the World Happiness Report (Helliwell, 2020), a report that rates countries by assess the quality of life based on different indicators. The position of the country inside the hurricane belt makes it so that its location together with its geography, and geology make the island susceptible to natural hazards. Jamaica, like most of the Caribbean countries, experiences hurricanes, storms, floods, and drought due to prolonged extreme temperature. Also, landslides are very common due to the geology susceptibility of the terrain, which are causes for damage to the infrastructure and interruption of services to part of the country (ODPEM, 2021). The island is vulnerable to sea-level rise, with negative implications for the population, most of which live within a few kilometers of the coastline, and for country's economy. Poverty, estimated at 11% in 2019 (JSLC 2019), is a contributor to the overall climate change vulnerability of Jamaica as is aged infrastructure. According to the World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020), Jamaica belongs to the very-high risk classification with a WorldRiskIndex of 12.08, which ranks the country 29th worldwide.

The instruments analysed include the Vision 2030 Jamaica - National Development Plan (2009), draft Climate Change Policy Framework for Jamaica (2021), Updated of Nationally Determined Contribution (NDC) of Jamaica (2020) and the Disaster Risk Management Act (2015).

Strategic coherence

Vision 2030 Jamaica - National Development Plan, under the stewardship of the Planning Institute of Jamaica, was promulgated in 2009, with the purpose of reaching developed country status by 2030. The document predates global frameworks like the PA and the SFDRR,

nevertheless, it refers to Hyogo Framework and Kyoto Protocol and recognize the importance of climate change adaptation and hazard risk reduction in its outcomes. Indeed, the document clearly identifies 4 macro goals to reach developed status: health and education, safety and governance, prosperous economy, and a healthy natural environment.. The document puts a good effort into detailing strategies to mainstream sustainable development, CCA and DRR into different sectors of Jamaican society. One analysis indicates that despite the Plan predating the SDGs, there is some 91% alignment of the two.[2]

The Climate Change Policy Framework for Jamaica clearly defines its purpose as an instrument conceived to help Jamaica achieve its goal of developed country by increasing the resilience of the country to the impact of climate change. It acknowledges the existing frameworks both at country and international level, framing inside them the aims of the policy and the way it wants to achieve it, pushing towards an integrated approach to sustainable development that incorporates climate change adaptation and an increase of the resilience of the country to disasters resulting from natural hazards. In line with the NDP, the CC policy treats CCA and DRR as two very linked topics, specifying strategies for sectors and the governmental bodies interested. It highlights the willingness to implement the policy both at country and sub-national level. Finally, rather than outlining new outcomes and impacts expected, the document delineates how the strategies envisioned in the document will help achieve the outcomes outlined in the NDP.

The Disaster Risk Management Act (DRMA) is a law which aims are strictly linked with DRR. Sustainable development and climate change are not integrated into the law, which focuses mainly on the mitigation of, preparedness for, response to and recovery from disaster at national, parish and community level.

Conceptual Coherence

Conceptual coherence looks at the effectiveness expressed in the policy to link SDG, CCA and DRR to the concept of risk. The NDP associates the concept of resilience with the definition of Environmental Vulnerability Index as defined by the South Pacific Applied Geosciences Commission and highlights the risk factor associated with climate change. The policy explains the different threat posed by CC in the form of severe weather events and sea level-rise, recognising it as an amplifier of an already precarious situation, particularly threatening given the island nature of the country and the fact that most of the population lives and work on the coast. The document recognizes the transversal nature of CC by establishing connections between the impact of climate change and policy of other sectors related to health, land-use planning, and water resource management.

The CC policy gives its own definition of resilience as "*The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change.*" The document gives a brief, but well-put background on the origins of climate change using term that are easy to understand and would facilitate its dissemination. Also, it creates a nice connection between climate change and risk, presenting the efforts put forward by other policies at country, Caribbean, and international level. It goes beyond the threat already identified in the NDP and bridges the impact of extreme events and long on-set events to social impacts like the reduction of employment, and loss of functionality to infrastructure. Worth mentioning,

2 https://www.pioj.gov.jm/policies/sustainable-development-goals/#:~:text=A%2091.3%20per%20cent%20alignment,the%20Cabinet%20in%20June%202017.

the document focuses an entire section to gender equity and illustrates the importance of considering social equity between past and future generation in the context of SDG.

The DRMA lacks any reference to SDG and CCA, thus, the integrated link to the concept of risk is missing. But the DRM Act was promulgated in 2015 and before the adoption of many of the international agreements. Nonetheless, regarding DRR, the Act not only describes the strategies envisioned as essential to increase the resilience of the country to disaster but does a good job in clearly defining the various risk component, namely, hazard, vulnerability, and exposure.

Institutional Coherence

Vision 2030 Jamaica reckons the importance of improving the coordination amid governmental bodies aimed at correctly using resources and in turn increasing the capacity on large scale. The Cabinet is responsible to coordinate the high-level implementation of the policy; the Secretariat of the Plan is managed by the Planning Institute of Jamaica (PIOJ). For each outlined national outcome, ways to foster coordination and collaboration delineating actions required and the agencies responsible to carry out the strategies. The document does also provide some insights on the advantages that strengthening bodies like the Parish Development Committees could bring to local governance, facilitating the participation of the citizen into the decision-making process.

The Climate Change Policy Framework for Jamaica recognizes the role of the PIOJ as the institution responsible of coordination at multi-sectoral level and to mainstream CCA into the development of the country. The policy also depicts in a dedicated section a detailed institutional framework, it defines two coordinating bodies: the Climate Change Advisory Board that is responsible in big part for coordination on the thematic of climate change, and the Climate Change Focal Point Network with a broader purpose to coordinate development plan and strategies above multiple sectors. The policy also promotes the implementation of Local Sustainable Developments Plans and the integration of local government actors into national adaptation plan to promote development at all levels, detailing information about strategies, actions, and key actors and in form of table.

Regarding DRR, the act analysed does not identify coordination mechanisms between the three themes but just for disaster risk. Indeed, it establish the Office of Disaster Preparedness and Emergency Management (ODPEM) as the leading agency responsible to coordinate the disaster risk measures at national level and managing the coordination at parish and community level with the Parish Committees and Zonal Committees, respectively.

Operational Coherence

The operational coherence wants to check which measures and activities the policy defined to integrate SDG, CCA and DRR and whether the planning is considered the cross-sectoral. Vision 2030 Jamaica was drafted after several consultation with stakeholders from the public and the private sectors, hence, several sectors were considered during the writing of the NDP. The Plan acknowledge that prevention is less costly than rehabilitation and recovery and puts strong emphasis on adopting predictive and innovative tools for data risk assessment in an overhaul of old practices. Big focus is also put on the establishment of risk transfer measures and community-based approach based on the raising awareness among the population.

The Plan also makes specific reference to the necessity to adopt early warning system as a disaster management tool. Additionally, it illustrates energy conservation and reforestation strategies put in place to contribute to the reduction of GHG. The NDP provides a detailed description of the strategies envisioned to integrate SDG, CCA and DRR over multiple sectors, defining the actions and the actors responsible for the implementation of the strategies.

Based on the same principle of the NDP, the climate change policy framework is also based on consultation of stakeholders belonging to different sectors. The policy highlights the importance of adopting development strategies aimed at aligning SDG, CCA and DRR, and provides detailed information on the responsibilities and actions that the ministries, departments, and agencies (MDAs) identified as vital to the development of the country need to undertake. Still in accordance with the NDP, promotes the improvement of early warning system and introduce the importance of establishing database collecting general information and expertise on climate change. While data and analysis of environmental problems have improved over the last 12 years, serious gaps and a lack of time-series data hamper efforts to use quantitative indicators to spot emerging problems, assess policy options and gauge the effectiveness of environmental programmes. For this reason, NDP aims to institutionalize the results-based management systems and strengthen the capacity for the collection and analysis of relevant data to support continuous improvement. In order to do this, it is necessary to make available and accessible geospatial data, products and services to all users, to facilitate planning, sustainable use, management and development of the island's resources

DRMA does not envision measures and actions aimed at integrating SDG, CCA and DRR, since its focus is solely on DRR, for which it defines action and strategies without recognition of the cross-sectoral nature of the thematic areas.

Financial Coherence

A coherent financial framework is an important step in being able to translate the strategies identified in the policies into actions that can bring an impact in the livelihood of the people of Jamaica. The NDP does not provide an estimation of the overall costs of implementing the plan; this is justified by the long-term nature of the plan. Nevertheless, the NDP addresses the important aspect of lack and misplacement of existing funding, but no strategy is envisioned to correct this problem. At the sectoral level, encourages the improvements of financing practices and suggests for each outcome some potential synergy with existing mechanisms, the likes of International Fund for Agricultural Development for the agricultural sector or the Community Development Funds (CDFs) to bolster the economy of small and medium size enterprises. Among its suggestions, the NDP briefly touches upon insurance as a risk transfer mechanism to reduce losses in the agricultural sector.

The climate change policy framework, similar to the NDP, does not provide an estimated budget for the implementation of the measures suggested but paints a good financial picture with estimation of the losses that Jamaica is facing due to climate change and urges to the mobilisation of funding towards climate change adaptation strategies identifying possible funding opportunities from the Adaptation Fund and the Green Climate Fund. The policy states that, although the US$500M dollars used for climate action during the period 2009-2018 are a boost in the right direction, greater financing is necessary to achieve the adaptation and mitigation targets set by the policy.

The DRMA does not provide an estimation of a budget, neither provides any information about mobilisation of funding from or to DRR. Nevertheless, it establish the creation of a National Disaster fund that trickles down into financing the mitigation measures at national, parish and zonal level.

MER Coherence

The NDP devotes a chapter to the implementation, monitoring and evaluation of the development plan, where synergies among CCA and DRR are easily found while SDG is treated a bit separately from the former. The implementation of the plan will happen through 3-yearly Medium Term Socio-Economic Policy Frameworks with a results-based monitoring and evaluation mechanism. Cabinet will report to the Parliament on the progress of the implementation and coordination of Vision 2030 Jamaica. The monitoring and evaluation system is meant to be built on an already national existing and sectoral framework. The system in place recognizes three roles at different level: political, technical, and consultative. The political one, will involve the parliament, responsible to bring change to the current policy based on the advice proposed by Vision 2030 Jamaica, and the economic development committee. Several indicators were purposefully designed to monitor and track the progress towards the achievement of the results expected. Still, the document recognises gaps in the process of validation of the indicators proposed with no clear way to solve the problem. The main expected outcomes of the monitoring system are the Vision 2030 Jamaica Annual Progress Report, and the annual sectoral reports.

The climate change policy framework indicates the Ministry with responsibility for clime change and the Climate Change Division as the actors responsible for developing an M&E framework. The document mentions the need to identify indicators that would guide the mainstreaming of climate change topics into the various sectors. Also, a periodic review from branch of the ministry responsible for climate change is expected to cover the state of advancement in the implementation of the policy.

The Disaster Risk Management Act does not mention any arrangement for the establishment of a M&E framework.

Table 13 Jamaica levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.12. Saint Kitts and Nevis

Risk context

The two-island country of St. Kitts and Nevis is located in the northern part of the Lesser Antilles chain in the Eastern Caribbean. The country like other Caribbean islands is exposed to a number of natural hazards including hurricanes, storm surges, earthquakes, tsunamis, volcanic eruptions, landslides, coastal and inland floods and coastal erosion (EU and AECOM International, 2018). During dry periods, drought and bush fires also threaten the country which is expected to be amplified by climate change and variability. The National Climate Adaptation Strategy, 2018 summarized that climate change is likely to impact adversely on biodiversity, food, energy and water security, human health, physical infrastructure as well as economic development centered on tourism. Moreover, the COVID-19 pandemic has shown the need to ensure that the country's health systems are resilient and can continue providing access to health care to the population while at the same time combating the COVID-19 virus. A more detailed description of the countries characteristics is provided in the Situational Analysis conducted by UNDRR (2021).

Four major national documents for St. Kitts and Nevis – the National Physical Development Plan, National Climate Change Policy, the National Climate Change Adaptation Strategy and the National Hazard Mitigation Policy & Plan including several sector plans (e.g., energy, education, agriculture) – were assessed to understand how policy coherence is approached in St. Kitts and Nevis in order to propose key opportunities to strengthen policy coherence between DRR, CCA and the SDGs.

Strategic coherence

The National Physical Development Plan 2006-2021 puts forward the Government of Saint Kitts and Nevis (GOSKN) medium to long-term plan for achieving strategic goals of national growth and development. Of note is that the NPDP was promulgated and adopted prior to the

adoption of newer and recent global and regional frameworks on sustainable development, CCA, and DRR. Nonetheless, in principle, the plan captures these key global and regional processes for sustainable development, CCA, and DRR, including regional frameworks such as CDEMA's CDM Strategy. The overall score for strategic coherence of the NPDP with SDGs, CCA, and DRR is Partial. Attempts to promote policy coherence articulated through the government's commitment to global and regional agreements is evident but the integration of CCA and DRR is not explicitly addressed or reflected in the various strategic policy actions and proposals. The NPDP also promotes the mainstreaming of DRR and CCA into development and other sectoral policies and plans, but lacks specificity in terms of targeted sectors. The plan also lacks the articulation of expected outcomes and impacts.

For the Climate Change Policy, 2017 and the Climate Change Adaptation Strategy, 2018, vertical integration was demonstrated with clear linkages established with global and regional processes for SDG, DRR and CCA. Although the S.A.M.O.A. Pathway and CSSI were not explicitly mentioned, synergies were observed with some of the priorities of the S.A.M.O.A. pathway in relation to climate change, sustainable energy, DRR, health, food security, gender equality and biodiversity in the National Climate Change Adaptation Strategy. Overall, the National Climate Change Adaptation Policy and Strategy promotes coherence with sustainable development, CCA and DRR addressing them jointly to maximize synergies and achieve common policy objectives encapsulated within the larger framework of building resilience. The strategy addresses mainstreaming as a cross cutting theme – "integrated adaptation and risk reduction across all sectors", underpinned in the key areas/sectors for adaptation – agriculture, health, finance and banking, tourism, infrastructure etc. A shortfall of the strategy is the absence of a results based management framework with the articulation of expected outcomes and impacts to systematically track achievement and development changes over the planning cycle of the strategy.

The Natural Hazard Mitigation Policy and Plan identified Strategies, Policies and Programmes for disaster management over a ten year planning cycle 2001-2011. It was adopted prior to the adoption of the recent global and regional processes for SDGs, CCA and DRR. As a result, there's no explicit mention or reference to these frameworks. However, the policy and plan capture some of the main principles of SD, DRR, and CCA relating to environmental protection, reducing vulnerability, climate change, and effective coordination among agencies and institutions. Strategic coherence may be considered to be incidental. The next revision of the Policy and Plan presents the opportunity to integrate global and regional processes for SDG, CCA & DRR in a more meaningful and coherent manner.

Conceptual coherence

Conceptually, explicit linkage made between DRR and CCA is generally weak in the NPDP and the National Hazard Mitigation Policy and Plan. However, there's recognition in both plans that global climate change will likely cause an increase in the frequency and intensity of hurricanes and identified climate change and development processes as risk factors. Stronger linkages on the other hand were found in the Climate Change Policy and Strategy. An integrated approach to CCA and DRR is being promoted recognizing that climate change has the potential to exacerbate hydrometeorological disasters and have negative impacts on society, coastal and terrestrial ecosystems and key sectors (e.g., agriculture and tourism). However, the policy and strategy generally lacks sufficient details on the points of commonalities and differences between the two fields.

Institutional coherence

The St. Kitts Department of Environment, with oversight from the National Climate Change Committee (NCCC), has overall responsibility for coordinating the implementation of the National Climate Change Adaptation Policy and Strategy. The Strategy refers to establishing a cross-sectoral coordination mechanism for implementation through Climate Change Focal Points from relevant ministries and agencies to serve on the NCCC for which clear roles and responsibilities are to be defined for addressing the impacts of climate change. The proposed structure of the NCCC would provide a national platform bringing together stakeholders from the following ministries and agencies under one umbrella mechanism – Finance, Agriculture, Land and Housing, Sustainable Development, Public Infrastructure, NEMA, and Tourism. Conversely, institutional coherence in both the NPDP and the Natural Hazard Policy and Plan is weak. Coordination mechanism that supports coherence across sectors and at the national level (e.g., inter-agency task force/working groups) to deliver on common policy outcomes relating to SDGs, CCA, and DRR were not clearly defined and articulated. In the case of the Hazard Mitigation Policy and Plan although the plan identified the lead agency responsible for monitoring implementation of the Plan, institutional arrangements supportive of coherence were found to be absent.

Operational coherence

Weaknesses in institutional arrangements in both the NPDP and Natural Hazard Mitigation Policy and Plan to support the implementation of SDGs, DRR, and CCA have created operational weaknesses on several fronts, including the absence of assigned sector roles and responsibilities and detailed plan of action.

The CCA Strategy, NPDP and Hazard Mitigation Policy identified some operational actions to enhance cohesion between SDGs, DRR and CCA through common areas relating to raising awareness, strengthening knowledge of all actors, and capacity building. The CCA strategy also identified ecosystem-based approaches and multi-hazard EWS. However, recovery processes, including the notion of BBB with consideration for climate change and urban risk resilience, were not considered in any of the three documents.

All three national documents of varying levels refer to the specific sectors for which SDGs, CCA, and DRR are relevant. A summary of the sector-specific plans that were reviewed based on availability include:

- **St. Kitts Agricultural Development Strategy (ADS) 2013 – 2016)** – While the strategy identified climate change as a risk to the sector, an assessment of key impacts and vulnerabilities of the sector was not contained in the strategy. In other words, a risk profile for the sector is lacking. Development Goal 3 of the strategy however is to "create sustainable and resilient farming systems capable of adapting to hazards and changing climate".
- **National Energy Policy** – lays out the GOSKN strategy toward a sustainable energy sector cognizant of environmental challenges associated with climate change (Vision Statement [pg. 9] and para. 4 – Energy Outlook, respectively). Conceptually, the link between climate change and the sector was established but did not comprehensively address mainstreaming of DRR/CCA into the sector.
- **Towards Developing a Land Use Policy** – Section 1.4.2 of the policy conceptually

established the link between the relevant International Agreements or Protocols that were considered in its development including – SDGs (especially SDGs 11 and 15), The PA and the Regional Policy Framework of the CARICOM Caribbean Centre for Climate Change, The New Urban Agenda from Habitat III, SFDRR, and S.A.M.O.A. Pathway were also referenced in the document.

- **Ministry of Education – 2017–2021 Education Sector Plan – *Chapter 2 Education Sector Diagnosis*** of the plan acknowledged that disasters can negatively impact the delivery of education. As such, potential hazards should be planned for and mitigated by implementing appropriate crisis and DRR strategies. Through a conceptual lens the issue of climate change was also raised in this section. Furthermore, Policy Goal 2: Strengthen the quality and relevance of education at all levels to improve learning outcomes notes that it will strengthen the MoE's contribution to national sustainable development.

- **The National Physical Development Plan** – The water, health, infrastructure, transport, tourism, and industry sectors were assessed using the analysis, policy and proposals sections of the NPDP. In general, with the exception of the tourism sector, the analysis, as well as the proposed policies and proposals for the respective sectors, did not mention the significance or relevance of SDGs, CCA and DRR to the sector.

The Situational Analysis for Saint Kitts and Nevis (UNDRR, 2021e) identified several important gaps in knowledge management. These include a) limited cross-sectoral collaboration, sharing and dissemination of information and data among sectoral agencies; b) an absence of established risk assessment methodology that can be standardized and shared at sectoral and agency level; and c) a lack of information management systems for storing and sharing climate change data and information across sectors and various stakeholders.

Financial coherence

In general, financing for coherence in DRR and CCA requires strengthening. The NPDP did not identify specific funding streams to fund activities or joint funding mechanisms for DRR and CCA. It does, however, provide estimates of funding required to implement the 19 programme areas. Promotion of ex-ante financing of climate and disaster risk insurance schemes were not evident. The GOSKN is a member of the CCRIF.

Some degree of financial coherence was noticeable in the CCA Strategy. The estimation of budget to support the implementation of programmes areas along with the identification of various climate financing sources, including the AF, GCF, and GEF were identified.

Financial coherence in the Natural Hazard Mitigation Policy and Plan is very weak. No strategy identifies funding sources other than through budgetary allocations, which means uncertainty regarding the prospects of implementing the proposed strategies and programmes. Identification of other sources of financing could provide further support for implementation of programme areas.

MER coherence

A results-based management approach articulating expected outcomes and outputs to systematically track achievement and development changes is absent in the NPDP, CCA Strategy and Natural Hazard Mitigation Policy and Plan. The documents, however, acknowledge the need to conduct periodic reviews and evaluation of implementation.

Table 14 Saint Kitts and Nevis levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.13. Saint Lucia

Risk context

Saint Lucia is a SIDS located within the Lesser Antillean Arc of the Caribbean Archipelago. The island is characterized by steep, rugged landscapes with deep valleys and fast flowing rivers. The combination of the steep topography and young volcanic soils, subjected to seasonal high rainfall, make the island very susceptible to soil erosion. Poor practices relating to disposal of waste, deforestation and land use contribute to increased disaster risk (Luvette Thomas-Louisy, 2014).

Much of Saint Lucia's activities are concentrated along its narrow coastal belt. The narrow low land strip which circumscribes the island is characterized by concentrations of haphazard and unplanned human settlement and other development. The rapid urbanization of former rural areas of the island, manifested in approximately 60 percent of the population residing along the north-west corridor, has resulted in denser populations living in unplanned or informal settlements (Luvette Thomas-Louisy, 2014). Essential economic activities which include tourism, transportation infrastructure and other critical infrastructure such as schools and hospitals, lie within the island's coastal areas, thereby rendering the country significantly susceptible to climate change.

Climate change is one of the most serious threats to the sustainable development of Saint Lucia and the projected impacts of extreme weather events, sea-level rise and coastal erosion are expected to be devastating. In 2010, the cost of Hurricane Tomas accounted for 43.4 percent of the country's GDP (USD 350 million), resulting in an estimated USD 336 million in damages (Government of Saint Lucia, 2018). In 2013, rainfall associated with a low-level trough resulted in 6 deaths and 2600 persons directly impacted, 47 homes destroyed, and USD 89.2 million in losses. The World Bank (2016b) estimated that the Annual Average Loss (AAL) from hurricanes is USD 9.5 million (i.e. 0.7 percent of GDP), while the AAL from earthquakes is USD 2.6 million (0.2 percent of GDP).

In addition to hydrometeorological hazards and earthquakes, the country is also susceptible to other geological hazards such as volcanic activity and landslides, as well as a range of socio-natural hazards such as environmental degradation and civil unrest, and technological hazards such as pollution and toxic spills. Saint Lucia received a 'low' WorldRiskIndex value and ranks 123rd globally in the 2020 World Risk Report (Bündnis Entwicklung Hilft, 2020).

Strategic coherence

Perhaps Saint Lucia's most crucial policy instrument is its Medium Term Development Strategy (MTDS) 2020 – 2023 (Government of Saint Lucia, 2020a) that lays out the path to sustainable development. Aligned directly to the 2030 Agenda, the MTDS also presents linkages with the PA and the SFDRR. There is also a high level of strategic coherence within the NAP (Government of Saint Lucia, 2018) and the NDC (Government of Saint Lucia, 2021), presenting direct strategic linkages to the SDGs and the PA. The NAP explicitly recognizes Government's commitment under the PA. Similarly, the NAP produces strategic coherence with the 2030 Agenda, aligning with SDG 13 on Climate Action and other SDGs. The NAP forms a significant piece in the country's artillery to combat disaster risk and climate change, in support of the sustainable development agenda. Notwithstanding, the national climate change instruments err in establishing the relationship with the SFDRR. The Disaster Management Policy Framework (DMPF) (Government of Saint Lucia, 2004) does not establish a concrete strategic link between DRR, CCA and the SDGs. DRR is a core component of comprehensive disaster management and as such, it must occur in the context of CCA and SD. While the DMPF acknowledges some regional mechanisms, there is need to establish the policy context and goals within the wider regional and international mechanisms for sustainable development. The DMPF also errs in explicitly outlining the linkage between DRR and CCA. Some key regional and international instruments are absent from the DPMF due to its time of development (2004), prior to the finalization of these key development mechanisms.

Conceptual coherence

While the conceptual linkages between DRR, CCA and SD are evident within the MTDS through the concept of building resilience, there is a need to strengthen and build upon the relationship between these areas. Disasters are predominantly discussed in the recovery aspect and impacts to the economy, with little emphasis on how development processes interplay with disaster risk and efforts to reduce risk. Conceptual coherence is much more evident within the national climate change instruments, i.e. the NAP and NDC. Based on the concept of resilience-building, the NAP establishes the relationship between development processes and risk. Both the NAP and the NDC explore climate change risk beyond hydrometeorological extremes, articulating the transcending socioeconomic impacts of climate change. The national tools also lend due considerations for the social landscape of risk, with considerations for gender perspectives and the NAP presents a clearly outlined need for poverty assessments within the climate change planning landscape. Conceptual coherence is low within the DMPF. Emphasis is placed on DRR with some linkages to SD and development processes, while CCA is essentially excluded. Additionally, there are limited considerations for vulnerable groups within the disaster risk planning landscape. While mention is made of the poor, other social considerations are excluded from the discussion on vulnerability within the DMPF. The varying social terrain of vulnerability is not explored within the DMPF which and should advocate for these especially vulnerable groups and the need to address the underlying social driver of disaster risk.

Institutional coherence

A major drawback to harmonization of DRR, CCA and SD in Saint Lucia, is their segregated ownership under different state entities. The MTDS is led by Department of Economic Development, Transport and Aviation; the DMPF is owned by the National Emergency Management Organisation (NEMO), under the Office of the Prime Minister, while the NAP is championed by the Department of Sustainable Development. The national policy instruments also fall short in identifying the mechanisms for coordination at the subnational levels. While the NAP establishes roles and responsibilities of stakeholders, the MTDS and the DMPF fail to do so. There is little evidence outlined within the DMPF that demonstrates institutional coherence. Varying stakeholders and corresponding responsibilities are not well-explored, especially at the subnational level to support institutional coherence. Despite some evidence of institutional coherence in the NAP, this can be strengthened by the establishment of joint mechanisms for SDGS, DRR and CCA, such as joint committees or consolidating ownership under one department such as the Department of Sustainable Development that currently oversees sustainable development and climate change activities. The Department of Sustainable Development provides a unique opportunity to create a platform for joint policy and ownership of the CCA, DRR and SD agendas.

Operational coherence

Operational coherence is evident within the policy instruments via multi-stakeholder platforms that underpin the instruments and public awareness initiatives. There is significant evidence of operational coherence within the NAP and the NDC that acknowledge the role of key sectors in CCA and consequently SD. The NAP is supported by Sectoral Adaptation Strategy and Action Plans (SASAPs) that govern adaptation within priority sectors, where eight priority sectors are identified: tourism, water, agriculture, health, infrastructure and spatial planning, fisheries and natural resource management, education.

However, while both instruments indicate substantial stakeholder involvement, the detailed responsibilities of the varying nature of stakeholders are not presented. The MTDS and the DMPF require strengthening in the sectoral mainstreaming environment, where crucial sectors including water, housing and land-use planning are excluded from the targeted sectors environment. The Situational Analysis for Saint Lucia (UNDRR, 2021f) highlighted the lack of disaggredgated data; limited capacity for data collection, analysis and dissemination; and Inadequate application of GIS technologies for risk mapping and modelling as important gaps in knowledge management.

Financial coherence

The MTDS is the lone instrument demonstrating a step toward financial coherence, though this must be built upon. While the NAP and NDC present a small indication of financial coherence via insurance mechanisms, there is a need for this to be strengthened. Funding avenues are not consolidated for DRR, CCA, and SDG implementation, thereby limiting benefits of resource pooling. The DMPF has limited considerations for financial aspects of activities outlined for the achievement of goals. With the exception of the Emergency Disaster Fund, other sources of funding, such as those for risk reduction and CCA activities are not well articulated in the Policy. As such, there are no opportunities for the reallocation of funding from one area to another.

MER coherence

MER enables accountability at the national level and in support of regional and international commitments. There is an urgent need for attention to MER mechanisms across the wider policy instruments. The MTDS refers to official global reporting mechanisms such as those under the UNFCCC that provide a vital opportunity for MER, but coherence is limited to this aspect only. There is therefore a need to strengthen the monitoring and evaluating elements of the MTDS to support enhanced coherence for maximization of resources, especially in the context of limited capacity. As the country's development roadmap, the MTDS is well poised to steer the country towards the path of sustainable development with adequate considerations for the intricate nature of vulnerability and risk. It provides the synergistic platform for policy coherence for DRR, recognizing disaster risk resilience as a cross-cutting theme. While there is evidence of a MER framework for the NAP and the NDC, there is no evidence of a joint mechanism or plans thereof. Action plans and outputs are presented as part of the overall NAP for priority areas. The DMPF does not propose a monitoring and evaluating framework to allow for accountability and performance measurement and as such there are no opportunities for integration in this capacity.

The contributing sectoral policies to the DRR environment in Saint Lucia do not explicitly refer to the SFDRR, the PA or the SDGs. However, their contributions to the development agenda and DRR are implicit by the activities undertaken. What is now required, is the harmonization among these policies so that DRR activities are integrated throughout the range of sectors (Luvette Thomas-Louisy, 2014). This harmonization is necessary to provide a structured approach to responsibilities to enable accountability. Additionally, in the context of limited resources, policy coherence can aid in maximizing resource allocations for joint efforts and preventing the duplication of efforts.

Table 15 Saint Lucia levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.14 Saint Vincent and the Grenadines

Risk context

Saint Vincent and the Grenadines is a multi-island small island developing state located towards the Southern Caribbean. Historically, the islands have been exposed to variety of hazards ranging from volcanic hazards, hurricanes and most recently, the COVID-19 pandemic. As a SIDS with challenges due to economic openness, limited geographical capacities, and resource restrictions, the country is highly vulnerable to climate change's direct and cascading impacts. Saint Vincent and the Grenadines received a 'very low' WorldRiskIndex value and rank 179th globally in the World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020). The country is party to a range of international and regional agreements that promote DRR supporting sustainable development including the CDEMA Country Work Programme. A more detailed risk profile for Saint Vincent and the Grenadines, identifying hazard exposures, vulnerabilities and capacities so as to determine the priority areas for the design of the Country Work Programme is presented in UNDRR (2021).

Strategic coherence

The overall strategic coherence of the National Economic and Social Development Plan (NESDP) 2013-2025 (Government of Saint Vincent and the Grenadines, 2013) is low. Possibly attributed to the date of development (2013), the plan fails to recognize a range of current regional and international frameworks that support sustainable development, DRR and CCA. Despite this, there is some inherent alignment with predecessor instruments such as the MDGs and the Mauritius Strategy for the Sustainable Development of SIDS. There is substantial evidence of strategic coherence in the NAP (Government of Saint Vincent and the Grenadines, 2019). With direct reference to key international instruments, the NAP aligns each of its activities to the SDGs. More so, it has a stated mission to mainstream CCA

into development planning and implementation. While strategic coherence within the INDC (Government of Saint Vincent and the Grenadines, 2016) is lower, there is still evidence of this through the INDC's acknowledgement of commitment under the UNFCCC and its wider joint recognition of disaster risk and climate change. The CDM Policy Framework (CDEMA, 2020) presents some evidence of strategic coherence. Similar to the NESDP, possibly attributed to the date of development, the Policy Framework references and aligns with previous international instruments such as the HFA and the MDGs. However, climate change and disaster risk are referred to and there is a stated objective to reduce vulnerability and contribute to sustainable development practices.

Conceptual coherence

There is evidence in support of conceptual coherence of the SDGs, CCA and DRR within the NESDP. While not the stated vision, the NESDP sets out to build resilience, targeting a range of sectors and areas. Moreover, its recognition of climate change and disaster risk as underlying development challenges, creates coherence through the concept of risk. The NESDP's advocacy for revising the National Disaster Plan to include climate change presents a valuable opportunity for integration in the governance framework for DRR. However, there is a need to consider gender and other vulnerable groups into the broader development planning framework. The NAP presents substantial conceptual coherence. With resilience-building the underlying theme, the NAP establishes direct linkages between climate change and disaster risk and aims to integrate activities in support of resilience. The INDC presents evidence of conceptual coherence although less than the NAP. The overall concept of resilience building, recognition of climate change and development as risk factors and the wide-ranging impacts of climate change lend to a level of conceptual coherence. There is ample evidence in support of conceptual coherence in the CDM Policy Framework. The Policy Framework establishes the linkage between climate change and disaster risk into the broader development context and seeks to promote a resilient country. The relationship between climate change and disaster risk is clearly outlined although not discussed in significant detail. Furthermore, recognizing the Policy Framework as the tool to ensure comprehensive disaster management is an integral part of the development process, further solidifies its conceptual coherence.

Institutional coherence

Institutional coherence requires a major strengthening within the national policy context, with the exception of the NAP. The NAP identifies the NESDP as the main supporting instrument for coherence and the direct alignment supports this with the SDGs and overall leadership by the Sustainable Development Unit within the Ministry of Health, Wellness and the Environment. Institutional coherence within the INDC is evident only by its recognition of the NESDP as the coordinating mechanism. While the NESDP has a clearly identified lead i.e., the Central Planning Division within the Ministry of Finance and Economic Planning, coordinating mechanisms at a subnational/local level are not outlined. The only indication of subnational coordination is in a recommended strategic action to facilitate community participation in national development, but this mechanism is not prescribed.

Similarly, roles and responsibilities are not provided and joint mechanisms for institutional coherence are not proposed. While institutional coherence is severely limited within the CDM Policy Framework, it is surely present by the recognised need for convergence of agendas within the wider development framework, articulated as the NESDP. Institutional coherence

can be further strengthened by clearly outlining the roles of varying stakeholders in the process. It is important to note that coordination mechanisms within the areas are fragmented, across varying ministries and divisions, thereby hindering coordination benefits.

Operational coherence

The overall operational coherence for the policy instruments, while evident, requires strengthening. The NESDP supports some level of operational coherence. The range of priority sectors and cross-cutting themes of sustainable development and DRR provide operational linkages. However, there is a need for strengthening the sectoral activities to better attain coherence. While some sectoral activities such as agriculture present underlying cross-cutting themes (DRR and CCA in support of SD), other sectoral activities fail in establishing the linkages. For example, activities within the tourism sector fail to account for the risk of climate change even though tourism is widely recognized as a highly vulnerable sector, and the SFDRR (Priority 3) specifically calls for disaster risk planning in the tourism sector. Operational coherence is evidenced within the NAP by transboundary activities that focus on capacity building, outreach, and sectoral integration. Where the NAP comes up short in this area, is in specifically outlining the responsibilities by sector and integrating other key sectors such as energy. Operational coherence within the INDC is suggested by the target sectors, including energy and transport, industry, agriculture, land use, and water resources. The CDM Policy Framework requires strengthening to achieve the desired level of operational coherence. There is a need to identify the priority sectors and to establish the responsibilities of these sectors in contributing to the activities prescribed by the Policy Framework. While operational linkages are evident by the engagement of a wide range of stakeholders across varying segments of society, there is a need to better define their roles and responsibilities.

The Situational Analysis for Saint Vincent and the Grenadines (UNDRR, 2021g) identified several important gaps in knowledge management. These included a lack of a comprehensive national risk data repository; a lack of a formalised public awareness strategy; a limited emphasis on the need for social vulnerability assessments; a lack of climate risk information availability; a lack of disaggregated data especially for vulnerable groups; and limited hazard mapping and modelling.

Financial coherence

Financial coherence within the policy instruments requires urgent attention. The country's key development instrument, the NESDP, fails to prescribe a budget for activities and to identify a range of potential funding sources for the attainment of its targets. While there is reference to an annual budget, this alone is not adequate, especially given the current economic constraints faced by the multi-island state. The NAP clearly establishes the budgets needed for the implementation of the proposed actions, however, it fails in providing a mechanism for joint funding or reallocation of funding, thereby limiting financial coherence. The INDC provides much less support for financial coherence. Estimated budgets are not presented, however, the Pilot Programme for Climate Resilience which has proven beneficial to the disaster risk agenda is listed as a funding option. While funding options are specified within the CDM Policy Framework, overall financial coherence is not evident. No opportunities are presented for funding reallocation, and more so, the funding sources specified (such as donor funds and partnerships) are not guaranteed, creating an element of risk within the Framework.

MER coherence

The NAP provides promise in integrating the MER framework for the SDGs, PA and the SFDRR. While not yet established, the NAP outlines as a key strategic intervention the need for recognizing an overarching monitoring and evaluation framework covering the NESDP, INDC, NAP, SDGs, and the SFDRR. While the NAP presents a hopeful indication towards coherence in this area and a vital opportunity, there is an urgent need for attention to MER mechanisms across the more comprehensive policy instruments. The INDC does not prescribe a MER framework or a mechanism for a joint framework. Similarly, the NESDP and the CDM Policy Framework provide no indication towards a joint MER mechanism. While the Policy Framework presents a mechanism via annual reviews and reporting and measuring indicators, it does not support coordination.

Table 16 Saint Vincent and the Grenadines levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.15. Suriname

Risk context

Suriname is situated along the north coast of South America bordering on French Guiana in the east, Guyana in the west, Brazil in the south and the Atlantic Ocean in the north. The country's small population, major economic activities, and infrastructure are concentrated along the low-lying coast.

Suriname frequently experiences climate related hazards, such as hurricanes, storms, and floods. Severe flooding in 2006 and 2008 led to far reaching consequences in all key-sectors of the country's economy. In 2021, Hurricane Elsa battered the whole country with heavy winds and rainfall, causing widespread flooding. The 2021 and 2022 floods have shown severe flooding, not only in the coastal area but also in the interior leading to disruption in services and damages in assets and infrastructure. The 2021 floods affected all ten districts of the country with communities inundated for extended periods, and in some cases months[1].

Climate change is expected to increase the frequency and intensity of hydrometeorological hazards, significantly impeding Suriname's progress towards sustainable development (Jharap 2021). Suriname received a 'medium' WorldRiskIndex value and ranks 77th globally in the World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020).

Strategic coherence

The National Development Plan (NDP 2022-2026) (Government of Suriname, 2021) is the overarching development roadmap and is guided by the SDGs. Moreover, the Plan recognises the SDGs as a motivating factor to its preparation. Environmental well-being (inclusive of climate change) is an integral part of a plan with a dedicated policy area for the environment and corresponding strategic actions. A clear link can also be observed with sustainable

1 https://reliefweb.int/report/suriname/suriname-floods-dref-final-report-n-mdrsr003

development climate change action in the plan. Apart from the SDGs, there is also explicit recognition of the PA and national commitments thereunder, via the NDCs, that positions the NDP towards greater coherence. In addition, there are outcomes under the goals of the plan, further supporting strategic coherence. Notwithstanding these factors, strategic coherence is limited by the absence of a vision that jointly addresses SD, CCA and DRR, as well as the absence of explicit recognition of other key frameworks such as the SFDRR and CDEMA policy instruments.

Suriname's NAP (Government of Suriname, 2020) is designed as a ten-year framework (2019-2029) aimed at addressing 'impact reduction through adaptation responses and resilience building and integrating strategies across multiple sectors. At the national level, priorities include institutional strengthening, improvement of data and information collection, integration of climate change into economic development, enhancing technical capacity, consideration for gender inequalities in adaptation initiatives, and increasing access to financing and investment. These priorities are reflected as strategic outcomes under the action plan of the NAP. Strategic coherence is further substantiated as DRR is one of the cross-sectoral or integrated sectors that contribute to or impact on the functions of the productive sectors including their CCA and mitigation activities. The NAP also explicitly seeks to fulfil national commitments under the UNFCCC, the PA, and the SDGs.

Strategic coherence is also evident within the National Climate Change Policy, Strategy and Action Plan (NCCPSAP 2014-2021) (Government of Suriname, 2015), although low. Its two objectives provide a response to climate change along with a commitment towards climate compatible development. The NCCPSAP provides a roadmap from 2014 to 2021, including sectoral approaches towards climate resilience, capacity building, technology transfer and financing opportunities. Disaster Risk Management is one of the sectors within the NCCPSAP and clearly integrated with climate change.

The NDC (2020) (Government of Suriname, 2019) mentions that climate-resilience is key to sustainable development, and in particular to achieving the SDGs. The NDC aligns with long-term resiliency goals, included in the new National Adaptation Plan. Delivering on its NDC will help Suriname achieve the SDGs, and achieving the SDGs will facilitate Suriname's efforts to mitigate and adapt to climate change. However, apart from this linkage, strategic coherence is low.

Conceptual coherence

The NDP presents elements of conceptual coherence in its recognition of climate change and disasters (although more significantly naturally-induced), as risk factors to development. In fact, the Plan highlights that a threat to the country's security is the "Increase in natural disasters (sic) by 100% in 2020 compared to 2010". Additionally, resilience is integrated, in particular, financial resilience to disasters, physical resilience to floods, lending to conceptual coherence. However, resilience is not defined within the Plan. There is also some evidence to demonstrate the systemic understanding of climate risk, although not necessarily complete. Beyond climatic extreme events, climate-related risks identified include biodiversity loss and reduced agricultural land and yield. The Plan can however benefit from further exploring the cascading impacts of these among other, climate-related risks. A major strength of the NDP is its advocacy for social equity and gender inclusion, with direct strategic actions that include women, persons with disabilities and youth. Furthermore, the policy vision advocates for gender equity.

The NCCPSAP provides a clear roadmap to achieving adaptation goals in the short to medium-term and makes clear the linkages between the deleterious impacts of climate change and Suriname's risks of disaster. The Disaster Risk Management action plan within the NCCPSAP provides concrete actions the Government intends to embark upon to reduce the country's vulnerability by putting emphasis on research, increasing awareness, strengthening the institutional framework through laws, policy and regulation, integrating climate resilience in DRM infrastructure and operation, and financial measures to increase climate resilience.

DRR is a cross-cutting sector within the NAP, overarching the functioning of the productive sectors and has separate risk and vulnerability profiles. The first goal of the NAP 'Impact reduction through adaptation and resilience building' addresses CCA and DRR, whereas resilience is mentioned in the context of the HFA. The role of gender is well articulated in the context of DRR within the NAP, recognising the varying vulnerabilities and differing capacities among gender roles. Consequently, conceptual coherence within the NAP is substantial.

Suriname's updated NDC strives to achieve a net-zero emissions and climate-resilient future and in the context of the COVID-19 pandemic, it is also a guiding tool for sustainable recovery. The updated NDC is aligned with the main climate policy and planning instruments in the country such as the Policy Development Plan (2017-2021), the National Adaptation Plan, and the National Climate Change Policy, Strategy and Action Plan (2014-2021). Conceptual coherence within the NDC is evident by the underpinning theme of resilience. Despite these national plans and strategies such as the NCCPSAP and the NAP considering DRR and CCA together, the relationship regarding the influence of climate change on disaster risk is vaguely described.

Institutional coherence

In Suriname, the institutions for DRR and CCA are separate, which presents a challenge to institutional coherence. Whilst the NCCR is responsible for addressing DRM, the role of developing and coordinating the implementation of climate-related policies and plans in Suriname falls under the Directorate for the Environment at the Ministry of Spatial Planning and Environment. The Directorate's main responsibility is to develop and monitor the National Environmental Policy, as well as to coordinate the implementation of multilateral environmental agreements. This Directorate is the focal point for the UNFCCC and therefore plays a key leadership role in the implementation of the NDC and NAP together with the National Institute for Environment and Development in Suriname (NIMOS). The Ministry of Spatial Planning and Environment also serves as the national designated authority to the GCF and plays a role in accessing climate finance. NIMOS' role includes operational decision-making and collaboration with other government ministries in relation to environmental matters, and it is in the process of becoming the National Environment Authority[2]. The Ministry of Spatial Planning and Environment together with the NIMOS, are responsible for the implementation of not only the NAP but also the NCCPSAP.

The NCCR is the coordinating Institute for Suriname for the development of the CDM mechanism. Although the NCCR has no formal institutional arrangements with the Ministry of Spatial Planning and Environment nor with the NIMOS, partial integration regarding institutional coherence can be observed as the National Development Plan, the NCCPSAP as well as the NDC mention latter agencies as the lead regarding environment/climate change;

2 Government of the Republic of Suriname.2019. National REDD+ Strategy of Suriname. Paramaribo, Suriname.

and in the case of the NAP, the NCCR is mentioned as the lead DRM agency. Despite this, the segregated ownership and absence of a joint mechanism presents challenges to institutional coherence. The NDP is led by Suriname's Planning Bureau, *Stichting Planbureau Suriname*, which falls under the Ministry of the Interior, General Affairs Directorate[3]. However, the NDP identified responsible state entities for each of its outcomes, contributing to institutional coherence. Due to the Plan's place as the overarching development framework, it is well-poised to support institutional coherence.

Operational coherence

Operational coherence is evident across all the instruments through their multi-stakeholder platforms and multi-sectoral involvement. The limitation to operational coherence is the identification of the wide range of activities that enhance cohesion which are limited to capacity building and EbA across the policy instruments. In the case of the NDP, operational coherence is observed through its recognition of some sectors where climate change and disaster risk are relevant (such as agriculture, infrastructure, energy, water), although at times implicit. Operational coherence is partially evident in the NCCPSAP as it focuses on the following areas in responding to climate change: data generation, reducing vulnerability in coastal and interior regions, pursuing low-carbon emission, raising awareness, accessing climate financing, and integrating climate compatible development into national development planning and national budgets. The NAP shows operational coherence, focusing on sectoral adaptation action plans provided for twelve areas. The priority sectors identified in the NAP include water resources, sustainable forestry, energy, and agriculture, livestock and fisheries. For the implementation of each priority sector relevant ministries/agencies will be designated as focal points for respective sectoral plans while overall leadership and coordination will be overseen by NIMOS. Adaptation is a strong feature of Suriname's NDC, given the country's vulnerability to climate change.

The Situational Analysis Report for Suriname (UNDRR, 2022b) identified gaps in knowledge management that hamper operational coherence. These are an absence of a consolidated national risk database; challenges with risk perception and limited public awareness initiatives; an absence of a formalised training strategy and fragmented initiatives; limited capacity for data collection, analysis and dissemination; inadequate integration of traditional knowledge; and inadequate integration of CDM into education curricula.

Financial coherence

Suriname's investment strategy for the NDP 2022- 2026 recognises four basic financing sources, which are also the sources that will be targeted for climate change related programming. These are: government revenue or savings and private incomes or savings; International Funds including public funds and funds from public multilateral organizations or funds made available by partner countries; and foreign direct investment or international lending agencies. A total budget of USD 1.3 billion is identified as needed for the implementation of actions within the plan.

The NAP proposes to serve the strategic and sectoral objectives by various finance modalities, and by working with the Ministry of Finance to review modalities. The updated NDC presents a portfolio of projects and an estimation of costs related to the implementation of adaptation and mitigation measures. However, it is stated that the country does not have

3 https://www.planningofficesuriname.com/over-ons/

sufficient internal resources to achieve all goals with financial independence. Support from the international community in areas such as finance, technology transfer, renewable energy, and capacity building is expected. The NCCPSAP links development planning and climate change, promoting alternative financing sources for climate compatible development and the creation of a fiscal environment that attracts relevant investment from overseas and domestically. Furthermore, the NCCPSAP present a range of sector focused fiscal measures in selected NCCPSAP-planning theme programmes and actions. Apart from funding sources, financial coherence is evident within the NAP by its promotion of risk transfer mechanisms for DRR. Despite these starting points, financial coherence can be further strengthened across the policy instruments by providing a mechanism for the cross-mobilization of funds across the platforms.

MER Coherence

The NAP elaborates a framework for M&E, with key indicators. The M&E framework for the NAP provides an overview of the monitoring mechanism at the strategic and sectoral levels. The sectoral mechanism aims to inform ongoing and future planning and implementation processes in relation to the NAP. On the sectoral level, a M&E plan was drafted specifically for DRR. However, M&E coherence is limited as there is no synergy with CCA and/or SDGs mechanisms. The NDP demonstrates M&E coherence by the presence of a framework of targets and indicators for each goal, which are in alignment with the SDGs and their indicators. Moreover, a dedicated Monitoring and Evaluation Department was established within the Ministry of Planning to support M&E activities for the Plan. The NDC does not elaborate on a national system to track implementation, however, it recognises reporting commitments under the UNFCCC. The M&E programme proposed in the NCCPSAP is to assess the effectiveness of investment in climate resilience and low carbon emission development programmes and actions, to determine if finances are being spent prudently, and to guide future investments. The main drawback to MER coherence across the instruments is their failure to propose the implementation of joint monitoring platforms. Moreover, there is no explicit framework with linkages for reporting under the SFM.

Table 17 Suriname levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

4.16. Trinidad and Tobago

Risk context

Trinidad and Tobago is a twin-island state located in the Southern Caribbean. Historically, the islands have been exposed to variety of hazards ranging from tropical storms to oil spills. As a SIDS, Trinidad and Tobago is especially vulnerable to climate change's direct and cascading impacts. The country has a 'high' WorldRiskIndex value and ranks 47th globally in the World Risk Report 2020 (Bündnis Entwicklung Hilft, 2020).

Strategic coherence

The most critical driving policy at the national level is the National Development Strategy (NDS), Vision 2030 (Government of Trinidad and Tobago, 2016). Vison 2030 establishes the direction for the country and provides the basis for addressing crucial development challenges (such as poverty, inequality, gender equality) that contribute to the country's overall vulnerability and forms the basis for the inclusion of these vulnerable groups. Vision 2030 is pivotal in its direct alignment with the SDGs and acknowledgement of the PA and explicit recognition of climate change as a threat to development. While the Strategy fails to explicitly recognize the SFDRR as a driver for change in DRR, there is some implicit alignment to the Framework through its advocacy for strengthening environmental policies and legislation with a view of aligning the national legislative and regulatory framework with the SDGs and vulnerability risk assessments.

There is no National Adaptation Plan for Trinidad and Tobago. The National Climate Change Policy (NCCP) (Government of Trinidad and Tobago, 2011) and the accompanying INDC (Government of Trinidad and Tobago, 2018) are the leading national instruments in support of the PA. However, the Policy and INDC fail to acknowledge the SDGs and the SFDRR explicitly. While the linkage between DRR and climate change is not significantly built upon in the Policy,

the inherent relationship and opportunities for coherence are evident in the approaches proposed which seek to build resilience through capacity building, public awareness initiatives, sectoral climate change vulnerability assessments, and stakeholder committees. Likewise, climate change mitigation and CCA activities are in support of the SDGs. The NCCP and accompanying INDC are due for review to incorporate global, regional and national strategic changes and directions. This provides a prime opportunity for the creation of an integrated approach within the NCCP that places emphasis on the relationship between CCA and DRR, and ultimately the SDGs. It is recognised, however, that emphasis will be placed on climate change noting the nature of the policy (climate change policy), however a direct linkage to disaster risk should also be established. All policies, strategies and activities should ultimately align with the NDS and, consequently, the SDGs. It is also important to note that limited attention is placed on the adaptation aspect of climate change within the NCCP. The NCCP should be more comprehensive in nature and should lend due attention to the need for adaptation at varying levels.

The main national CDM policy, the Comprehensive Disaster Management Policy Framework (CDMPF) (Government of Trinidad and Tobago, 2013) was developed to align with the HFA. However, the CDMPF has the potential to enable strategic coherence among CCA, DRR and the SDGs. Comprehensive disaster management refers to all phases of disaster management, all hazards and all people. Climate change is linked in several ways to increasing disaster risk and there is a need to strengthen the linkage between CCA and DRR. Similarly, CDM must take place within the context of sustainable development. A core component of CDM is disaster risk assessment which should be done in the context of changing risk as a result of climate change. While the policy establishes the changing risk resulting from global climate change, there is need to dissect this in the context of disasters and performing risk assessments where both are considered. Therefore, the policy should explicitly create this linkage and advocate for achieving DRR in the context of sustainable development and the SDGs.

Conceptual coherence

The NDS refers to resilience on several occasions. However, no definition of resilience is stated, and the term is used in building climate resilience. The Strategy sees climate change as a challenge to development. Although not specifically in the context of DRR and CCA, the NDS explicitly recognises that development policy and actions can have impacts beyond those intended. The NDS recognises that the impacts of climate change go beyond the physical environment, with consequences for livelihoods and the economy. However, details of these impacts are not provided. The strategy provides no details on the linkages between CCA and DRR and does not specify root causes of climate and disaster risk and vulnerability. Gender is briefly mentioned in the context of health and education and identified as a cross-cutting theme. However, there is no discussion on gender and social equity in the context of CCA and DRR. Building climate resilience directly builds disaster resilience and lends to sustainable development. Like DRR and sustainable development, climate change should serve as a transboundary theme to capture their relevance across all areas.

There is little evidence to support a strong conceptual coherence in the NCCP and in the INDC. While emphasis is placed on climate change, the documents have not identified a substantial linkage with DRR and CCA. The NCCP and INDC also fail to consider the systemic effect of risk. Climate change is the underlying theme of the NCCP. The Plan does not define resilience specifically, but resilience can be inferred in the context of ability to adapt to the

adverse impacts of climate change. While implicit, the NCCP and INDC refer to a number of development activities such as housing, industry, etc. that lend to climate change risk. The links between disaster and climate change risks are established only the context of extreme events. The NCCP briefly addresses impacts of climate change to human health, settlement and population displacement, tourism. The synergies and differences between DRR and CCA have not been established in the Plan and limited emphasis is placed on the root causes of climate and disaster risk and vulnerability. Gender and socio-economic considerations do not feature in the Plan.

The CDMPF does not show evidence of a strong conceptual linkage in the context of risk and SDGs, CCA and DRR. Conceptually, emphasis remains on DRR. Resilience is defined as 'the ability of a system, community or society exposed to hazards to resist, absorb, accommodate and recover from the effects of a hazard in a timely and efficient manner, including through the perseveration and restoration of its essential basic structures and functions' (p. iv). The CDMPF refers to climate change in the context of increasing the nature of risk. It considers environmental factors associated with climate change, such as rising sea levels and flooding, but does not identify development processes as risk factors. It does not explore the synergies and differences between DRR and CCA and does not explicitly discuss the root causes of vulnerability and risk. Additionally, there are no considerations for gender or social equity to ensure the most vulnerable are reached. The policy should recognise the varying social terrain of vulnerability and should explicitly outline and advocate for these considerations.

Institutional coherence

While not explicitly stated, the NDS can be a useful tool to serve as a coordinating mechanism for mainstreaming CCA, DRR and the SDGs as it is built upon the SDGs. While sustainable development is an underlying theme of the NDS, the strategy does not include a coordination mechanism for sustainable development. The Ministry of Planning is responsible for the implementation of the NDS and has oversight. All ministerial and sectoral plans are to be aligned with the NDS and the priorities for development which are aligned with the SDGs. The responsibilities of key stakeholders are not clearly defined.

The NCCP falls under the remit of the Environmental Management Agency, under the Ministry of Planning (owner of the NDS). While a coordinating mechanism has not been established, the Ministry of Planning has been identified as the lead agency for implementation of the policy and is strategically positioned to be the driver of national coherence of CCA, DRR and SDGs activities. The NCCP advocates for sectoral and stakeholder involvement in CCA at the sub-national level but does not specify sectors. While activities have been identified in the NCCP, no owners of these processes have been proposed. Hence, there is a need for greater ownership of activities and, therein, advocacy for a cross-sectoral approach led ideally by the Ministry of Planning.

Under the CDMPF an institutional framework for different levels is proposed that addresses the strategic, tactical and operational groups involved in DRR activities under the HFA priorities. The CDMPF refers to the CDM Programme for resilience building and names the Office of Disaster Preparedness and Management (ODPM) as the lead agency for the CDM Programme. It identifies the roles and responsibilities for DRR stakeholders and outlines sectoral working groups tasked with planning DRR activities. There is some evidence of institutional partnership among key stakeholders, however, these activities remain focused

on DRR, and there is little integration with CCA and the SDGs.

Operational coherence

The NDS provides the strategic guidance of the country, and activities across sectors (especially as they relate to funding under the Public Sector Investment Programme) must be aligned to the NDS. However, while there is a strategic linkage between CCA and the SDGs in the NDS, there is limited evidence of operational coherence between CCA, the SDGs and DRR. Activities outlined in the overall implementation plan are not linked directly to CCA and DRR. While there is some level of coherence with activities to be undertaken, there is a need for mainstreaming these activities within sectors. The NDS is Trinidad and Tobago's "vision" document and can guide coherence and implementation across all sectors. There is a need for greater emphasis on DRR and the interplay of these themes to be recognised. This can be best achieved in Theme V of the 2020 strategies, "Placing Environment at the Centre of Social and Economic Development," and the identification of activities across this terrain to achieve greater coherence.

The NCCP recognises the critical role of a multi-stakeholder cross-sectoral environment for climate change mitigation and adaptation. Specific opportunities mentioned that might enhance coherence between the SDGs, DRR, and CCA include awareness raising, capacity building (in the context of climate change), and enhancing the resilience of biophysical systems to climate change. The Plan does not refer to any specific sectoral policies and plans but briefly mentions water, health, land-use planning, settlements and housing, and tourism in climate change impacts on sectors and subsequently GDP. Within the NCCP, there is a need for specific sectoral activities to be outlined in more detail. Awareness building initiatives and CCA within the school curricula present an opportunity to transcend from CCA in seclusion to an integrated context with DRR and SD.

The CDMPF broadly identifies some stakeholder groups, such as training institutions, central and local government agencies, and shows some evidence of sectoral involvement, but the specific sectors and the nature of this involvement are not clearly outlined. Moreover, the roles and responsibilities of actors mentioned are specified only for some national DRR actors and only in the context of DRR.

Awareness building and capacity building are transboundary activities that each policy (climate change, CDM, and development planning) speaks to and provide an opportunity for integrating CCA, DRR, and the SDGs. The Situational Analysis for Trinidad and Tobago (UNDRR, 2021h) identified the need to expand risk assessments and policies to include all hazards, with due consideration and planning for biological hazards, as a key gap.

Financial coherence

The NDS shows no financial coherence as there is no evidence in the document to support the reallocation of funding across the areas, nor is there support for the adoption of risk transfer mechanisms for climate change. There is no proposed budget for the activities outlined in the plan, and the only source of funding for projects and activities aligned to the NDS referenced is the PSIP.

The NCCP provides little evidence of adequate investment in CCA initiatives. Moreover, these initiatives are not directly integrated with DRR and the SDGs, and as such, there are no mechanisms in place for financial coherence. The source of funding stated is project grants from international agencies for climate change projects and activities. Grants alone and a lack of direct national investment may be insufficient to promote an integrated agenda.

The CDMPF outlines no considerations for financial aspects of activities outlined for the achievement of goals. As such, there are no opportunities for the reallocation of funding from one area to another. There is hence a need for financing and monitoring mechanisms to be clearly outlined in the CDMPF.

MER coherence

The entire NDS is to be monitored by a National Performance Framework, which is aligned to the SDGs.

The NCCP does not include a monitoring framework. Due to the limited coherence of CCA, DRR, and the SDGs, no monitoring strategy is prescribed for the integration aspect. Moreover, there is no overall monitoring mechanism to support the implementation of the policy.

The CDMPF does not propose a MER framework to allow for accountability and performance measurement. Subsequently, there are no opportunities for integration in this capacity.

Table 18 Trinidad and Tobago levels of coherence.

Coherence theme	Coherence score		
	Substantial	Partial	Limited
Strategic			
Conceptual			
Institutional			
Operational			
Financial			
MER			

5. Key insights on coherence themes

The analysis indicates that all sixteen selected Caribbean countries have achieved an overall partial degree of coherence between sustainable development, CCA, and DRR policies, strategies, and plans. Figure 1 summarizes the distribution of level of coherence (substantial, partial, Limited) across the sixteen analysed countries. For example, Guyana shows evidence of substantial strategic coherence, Antigua and Barbuda and Guyana exhibit substantial operational coherence, and Trinidad and Tobago lacks financial coherence.

Figure 1 Overall level of coherence per theme for the 16 selected Caribbean countries.

Table 19 Levels of coherence across the six coherence themes for the 16 selected Caribbean countries.

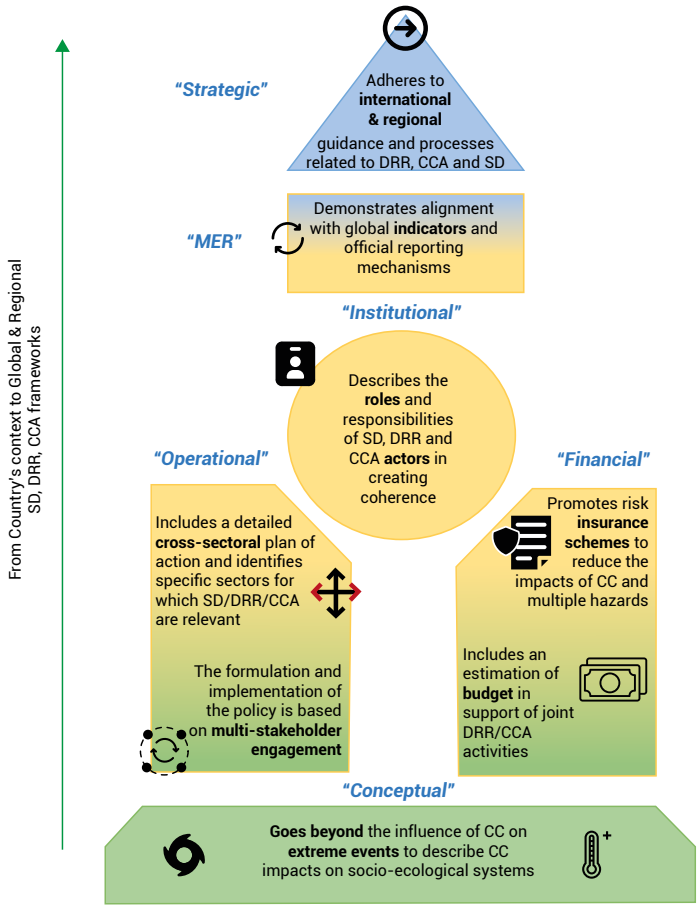
Country	Coherence theme					
	Strategic	Conceptual	Institutional	Operational	Financial	MER
Antigua and Barbuda						
Bahamas						
Barbados						
Belize						
Cuba						
Dominica						
Dominican Republic						
Grenada						
Guyana						
Haiti						
Jamaica						
Saint Kitts and Nevis						
Saint Lucia						
Saint Vincent and the Grenadines						
Suriname						
Trinidad and Tobago						

Figure 2 presents key selected characteristics of SDG-DRR-CCA coherence within the six coherence themes. The Figure provides a systematic and comprehensive overview, at Caribbean scale, of the interactions between the themes, and highlights opportunities for addressing the gaps identified in the policies during the review process.

The high-level connection is between the country's context, at the bottom, and the global/regional context at the top. The vertical dimension of the figure allows to integrate the six themes starting from the conceptual theme at the bottom, that needs to be specific to the local context, and arriving at the strategic theme at the top that needs to adhere with international and regional guidance. The graphical presentation of the relationships provides a visual guide that passing through the two pillars, operational and financial themes, reaches the figure's heart, the institutional theme. Continuing to the top, the centralized MER system provides the mechanism for actors to comply with the global/regional indicators.

The conceptual theme highlights the need to go beyond the influence of climate change on extreme events to consider climate change impacts on socio-ecological systems, to build resilience to (acute and chronic) climate and disaster risks, and to avoid the creation of new risks. A comprehensive analysis and detailed categorization of the risks would facilitate the identification of a focused strategy at the operational level to strengthen the integration of the SDGs, CCA and DRR both vertically within a specific sector, and horizontally across sectors. It would also aid the introduction of tailor-made insurance solutions as an important risk financing tool.

Figure 2 Relationships between selected characteristics of SDG-DRR-CCA coherence and the six coherence themes.



Most countries recognize the importance of involving multiple categories of stakeholders in the development process, yet many lack the institutional structure needed to guide this process. The fragmentation of the institutional framework is seen as hindrance to different components of the development process chain, this key aspect is graphically highlighted in the figure by the institutional pivot role. A better delineation of the roles of the actors involved at national and sub-national levels would enhance the ability of the policy to embed the interest of all stakeholders while avoiding wasted resources, allowing financially sound allocation of funding. A coherent delineation of the roles of the actors involved in the implementation of the policies would expedite the establishment of a centralized MER system that would function as a bridge between the national and the global/regional contexts, adopting indicators and targets that support the implementation process and align it with the global/regional frameworks. Table 20 shows the level of coherence (substantial, partial, Limited) in the 16 countries in the coherence themes. The connection between the themes is made by selecting specific questions from the coherence framework. If from one side, the stakeholder engagement path is already an important reality in most of the countries analyzed, the financial, institutional and MER coherence themes are aspects that still need more attention and commitment.

Table 20 Level of coherence with respect to selected charateristics of coherence across the six coherence themes (green = substantial, orange = partial, red = Limited).

	Antigua and Barbuda	Bahamas	Barbados	Belize	Cuba	Dominica	Dominican Republic	Grenada	Guyana	Haiti	Jamaica	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	Suriname	Trinidad and Tobago
Strategic coherence																
Adheres to international and regional guidance and processes related to DRR, CCA and SD																
Conceptual coherence																
Aims to build resilience to (acute and chronic) climate and disaster risks and avoid the creation of new risks																
Institutional coherence																
Describes coordination mechanisms and/or joint policy instruments to support coherence between SD, CCA and DRR																
Describes the roles and responsibilities of SD, DRR and CCA national and local actors in creating coherence																
Operational coherence																
Policy development is based on multi-stakeholder engagement																
Clarify how integrate SD, CCA and DRR in the national specific sectors & cross-sectoral areas																
Financial coherence																
Allocate specified budget in support of joint SD, CCA, and DRR activities																
Specify funding mobilization & insurance schemes																
MER coherence																
Establish a centralized MER mechanism complying with global/regional indicators																

5.1. Strategic coherence

Overall, the analysis of 'strategic coherence' shows that all sixteen selected Caribbean countries have signed up to and adopted the SDGs, PA, and the SFDRR. Guided by these global frameworks and with support from CDEMA and other regional and international organisations, these countries have identified the need to integrate CCA with DRR and SDand have articulated a strategic vision to create coherence at the national level under CDEMA's Regional Comprehensive Disaster Management Strategy (CDM) and Results Framework 2014-2024 (CDEMA, 2014a) (see Box 4) in their Country Work Programmes (CWPs).

Some countries in the Caribbean region have undertaken considerable changes to their legislative frameworks in order to address the challenges faced by climate and disaster risks. Effective disaster laws are crucial in allocating roles and responsibilities to institutions and authorities and in allocating funds to DRR measures. Without such laws there is no judicial review, which means that organisations are not bound to doing anything.

Efforts to create an enabling policy environment are currently underway, but despite this progress, in many cases, institutions and policy development processes remain largely separate. Timelines in producing and revising policies and plans are mis-aligned, leading to limited interaction and a lack of mutual recognition. In some cases, outdated policies and plans that lack consideration of the global agendas present a significant barrier to coherence. Changing and competing priorities are another barrier. Because national policies are often under different ministries the agendas are institutionally separated and this results in fluctuating priorities where one area tends to get more attention than the others. The issue is ongoing where climate change is garnering much more attention than DRR - The majority of climate finance in 2020 was directed at climate change mitigation efforts (Statement by the OECD Secretary-General on climate finance trends to 2020). Responsibilities are often unclear and are passed from one entity to another. These issues also occur at the sectoral level, with different entities competing for resources. There is hence a need to better understand how the policies and their implementation can be brought together more strongly.

Processes are needed that foster coherence through policy documents that allow for harmonisation and documentation, institutional arrangements, budgeting, and financial capabilities. The systems available for updating legislation are overloaded, so updating and getting new legislation through the parliamentary system is full of challenges, especially in the areas related to the environment, sustainable development, and climate change.

Recurring hazards triggering disasters, limited human resources, and technical capacities are major challenges to strategic thinking. Many of the stakeholders interviewed were of the view that the current response-oriented approach of many national and regional organisations limits a holistic and strategic vision that will reinforce coherence by targeting the underlying factors of risk. The current Covid-19 Pandemic adds further stress to systems that are already struggling to respond to multiple disasters.

Box 4 Regional Comprehensive Disaster Management Strategy and Results Framework 2014-2024.

The Comprehensive Disaster Management (CDM) strategy (CDEMA, 2014a) promotes an integrated risk management approach to building resilience and safeguarding lives and livelihoods against multiple risk scenarios in the Caribbean region for the period 2014-2024. The CDM Strategy 2014 - 2024 builds on the strengths of well- founded and functional governance structures. It is designed to continue the process of embedding and institutionalising CDM as the Caribbean's platform for achieving risk reduction. It proposes to do this over the 10-year strategic period by expanding the original key sectors embraced (Agriculture, Tourism, Health, Civil Society and Education) to include Finance/Economic Development and Physical and Environmental Planning. Additionally, it places increased focus on integrating disaster risk reduction and climate change considerations and their impact on vulnerable groups.

Box 5 Promoting Synergy and Alignment Between Climate Change Adaptation and Disaster Risk Reduction in the Context of National Adaptation Plans.

The guidance Promoting Synergy and Alignment Between Climate Change Adaptation and Disaster Risk Reduction in the Context of National Adaptation Plans: A Supplement to the UNFCCC NAP Technical Guidelines supplement to the UNFCCC National Adaptation Plan (NAP) Technical Guidelines (UNDRR, 2021i) provides practical recommendations to guide NAP technical teams and focal points on how to strengthen and better promote synergy and coherence between CCA and DRR, including within broader national development planning processes and implementation. It focuses particularly on the opportunities that the NAP process provides to national authorities and stakeholders for integrating risk-centred approaches and in creating synergies and effective connections with DRR efforts. It should be used in conjunction with the NAP guidelines (LEG, 2012) as it uses the four elements outlined in that document as its basis.

It was also developed to foster better understanding of the process to formulate and implement NAPs (NAP process) and to identify synergies with National DRR Strategies, with the end view of achieving resilient development. The supplementary guide, thus, also helps integrate climate and disaster risks in national planning processes.

Box 6 The COVID-19 pandemic - an opportunity for a systemic approach to disaster risk for the Caribbean.

This UNDRR and Economic Commission for Latin America and the Caribbean (ECLAC) joint report argues that the COVID-19 pandemic demonstrates the urgent need for new conceptual and analytical approaches to improve understanding and management of risk dynamics and complex, interconnected risk drivers with cascading effects. Progress will only be accelerated towards risk-informed sustainable development and regeneration by strengthening the understanding of system risk and incorporating systems-based approaches in the design of policies and investments across all sectors, geographies and scales. Improved risk governance is essential. There is an opportunity to build on progress to date.

Box 7 IFRC and UNDP Handbook and Checklist on Law and Disaster Risk Reduction.

Laws and regulations serve as an important foundation for building community resilience. They are essential for contributing to an enabling environment for reducing existing risks related to natural hazards, as well as preventing new risks from arising, thus making people safer. In 2005, the *Hyogo Framework for Action, Building the Resilience of Nations and Communities to Disasters 2005 – 2015* highlighted the important role legislation plays in supporting disaster risk reduction (DRR). This emphasis was reiterated in March 2015 in the *Sendai Framework for Disaster Risk Reduction 2015-2030*, which calls for a renewed focus on reviewing and strengthening legal frameworks.

The ***Checklist on Law and Disaster Risk Reduction*** (IFRC and UNDP, 2015a) provides a prioritized list of 10 questions that lawmakers, officials, practitioners and those supporting them need to consider in order to ensure that their laws provide the best support for DRR. It covers not only dedicated disaster risk management (DRM) laws, but also other sectoral laws and regulations – covering issues such as the environment, land and natural resource management, and climate change – that are critical for building safety and resilience.

The ***Handbook on Law and Disaster Risk Reduction*** (IFRC and UNDP, 2015b) provides guidance on how to use the Checklist with a view to support countries to undertake legislative review, identify strengths and gaps and develop effective legislative framework(s) through a multi-stakeholder consultative process addressing all aspects of disaster risk management while according priority to disaster risk reduction considerations in their national as well as sectorial laws.

Pathways to strategic coherence

- CDEMA's Comprehensive Disaster Management (CDM) Framework represents an anticipatory, holistic approach to risk reduction and resilience building across all sectors. For some Caribbean Countries, which already have a national strategy well aligned with the global frameworks, there is still scope to improve coherence by strengthening the links with the regional frameworks.
- The current design and revision of Country Work Programmes (CWPs) and National Adaptation Plans (NAPs) in many of the Caribbean Countries presents an opportunity to further strengthen the strategic vertical and horizontal linkages between institutions and policies, and across sectors.
- The Regional Framework for Achieving Development Resilient to Climate Change (2009-2015) represents a connecting tissue between CCCCC, CDEMA and other regional institutions, enabling the implementation of an integrated approach for CCA and DRR.
- The Covid-19 Pandemic presents an opportunity to further strengthen resilience and policy coherence.
- The outcomes and commitments from countries that will come under COP26 may create further opportunities to strengthen coherence.
- Extend the time horizon of strategic plans to at least 20 years or longer (an example of this is Agenda 2063: The Africa We Want).
- Engage universities and research institute to enhance countries' technical capacities to solve the challenges of CCA and DRR through education and awareness programs.

- Get ordinary citizens involved. There needs to be a change in mindset for communities to embrace the emerging trends and the emerging opportunities available to them to understand the need for resilient adaptations and resilient infrastructure and development planning.
- Strengthen the cohesion between national strategies with the national MER framework developed on regional and global indicators.

5.2. Conceptual coherence

Overall, Caribbean countries demonstrate an understanding of the linkages between DRR, CCA, and SD, and the need for further integration and policy coherence, but this varies across countries. All countries utilise the concept of 'resilience' as a common aim and as a vehicle to integrate strategies, policies and plans on climate and disaster risk in their CWPs.

However, 'resilience' is rarely defined and used as an operational framework. Few policies and plans truly represent systems thinking and tend to focus on resilience as an outcome rather than a process. There is hence a greater need for understanding resilience and how the different areas work can come together in a coherent way (see Box 7). It is also important to understand the limitations to achieving coherence as differences between the areas of work exist.

Further, in many cases DRR still focuses strongly on disaster preparedness and response (i.e., post-acute events), and more work needs to be done to achieve a more holistic and systematic approach to risk reduction. Conceptual understanding of the root causes and drivers of climate and disaster risks, particularly the socio-economic factors contributing to risk creation, and the synergies and differences between DRR and CCA are rarely articulated in detail. An aspect often overlooked that would play a major role in understanding the causes of climate change and simultaneously create the foundation for better disaster risk reduction measures is the institution of data collection systems. As further discussed below in the section on operational coherence, being able to gather data for different time horizons would help to raise the awareness of the population, while providing tailor-made information for locally data-oriented strategies. Focusing on vulnerable groups and strengthening gender equality and social equity are critical in reducing vulnerability to climate and disaster risks and achieving sustainable and resilient development outcomes for all. The level of conceptual understanding of risk and resilience is important as it determines the types of policies and actions taken to reduce risk.

Promoting the inclusion of both acute and chronic events would facilitate the integration of CCA and DRR, spreading the focus from extreme events (i.e., floods, hurricanes) to slow on-set event (e.g., sea-level raise, droughts) equally disastrous and even more exacerbated by the climate change.

St. Lucia's 2020-2023 Medium Term Development Strategy (MTDS) (Government of Saint Lucia, 2020a) is an example of an integrated strategy that is anchored in the SDG framework. It is a call for collective action to drive Saint Lucia's development agenda. It seeks to accentuate the interconnected nature of development planning by ensuring economic, social and environmental considerations are incorporated and mainstreamed into Saint Lucia's national planning framework. 'Adaptation for environmental sustainability, climate change

and disaster vulnerability' is one of seven strategic development pillars that are aligned with the SDGs.

Another stimulating example is Dominica's National Resilience Development Strategy (NRDS) 2030 (Government of the Commonwealth of Dominica, 2018) which is well anchored in the SDG framework and aims to integrate climate resilience and disaster risk management into the national growth and development planning framework. The NRDS stipulates that, at the highest level, the Climate Resilience and Recovery Plan (CRRP) should reflect three pillars of the resilience strategy. The CRRP expands these three pillars into six results areas for a climate-resilient Dominica. Based on these six results areas, the Government of Dominica is committed to achieving 20 Climate Resilience Targets by 2030. These targets will be realized through about fifty planned and on-going initiatives that are closely aligned to the six results areas. Of these, ten critical high-impact climate resilience initiatives will be delivered as a matter of immediate priority.

The COVID-19 pandemic offers further opportunities to strengthen the conceptual links between different types of risk, and to promote resilience building efforts. COVID-19 and other large-scale disasters demonstrate the increasing interconnectedness of different types of risk, the impacts of which are being felt across multiple systems and sectors. Addressing this complex and evolving risk landscape requires comprehensive and joined-up efforts to build resilience that can transcend a range of risks, sectors, and stakeholders (see Box 8).

Box 8 UN Common Guidance on Helping Build Resilient Societies.

The UN Common Guidance on Helping Build Resilient Societies (UNSDG, 2021) aims to strengthen coherence in UN resilience-building efforts at country level in support of Governments' sustainable development objectives. It shows a way towards joined-up solutions and collective outcomes that build on the comparative advantages of humanitarian, peace and security, development, and human rights interventions. It also provides a timely reference for the implementation of the UN socio-economic, health and humanitarian response framework to COVID-19 to ensure that a comprehensive and multi-dimensional approach to risk and resilience appropriately informs the 'new normal' during and after the COVID crisis. It aims to integrate a resilience lens into the decisions, programmes and interventions and existing UN policy and programming processes at country level, rather than establish new or stand-alone UN policy or action plans for resilience.

The Guidance offers a flexible approach that can be tailored to country contexts and needs. It is not a blueprint but aims to complements ongoing resilience building efforts at country level by helping to address gaps and bottlenecks towards a more comprehensive and joined-up endeavor. It is an operational guidance for practical application at country level that promotes a common understanding of resilience based on shared principles, and unpacks the process for building resilience together for the UN System and its partners, including a rich annex of practical tools and methodologies. The primary audience of the guidance are UN Teams to help them better equip governments at national and subnational levels to lead on resilience-building, by bringing the UN together around a common understanding and operational approach on risk-informed programming across sectors. The Guidance is also a useful reference for government and partners at country, regional and global levels.

Box 9 Developing Climate Risk-Informed National Disaster Risk Reduction Strategies.

Climate change is driving an increase in the frequency, duration, and intensity of climate extremes (IPCC, 2021). These climate variations are accompanied by uncertainty at various levels when used for planning or decision-making. The longer the term of planning, the larger the uncertainty. Climate change detected for the entirety of the planet can also be traceable for a given locality. For the past and present, climate analyses are mainly based in observed climate variables, whereas for the future, climate projections derived from climate models are used. Both carry uncertainties. Most areas of application of climate information are multi-hazard in nature and comprehend various scales in both space and time, as in the case of disaster risk reduction. Thus, a tailored approach is necessary to obtain, use and apply climate information into disaster risk reduction and climate resilience strategy planning.

This guidance aims to complement UNDRR-led/co-led guidance and tools, for instance:

- Technical guidance on comprehensive risk assessment and planning in the context of climate change (UNDRR, 2022)
- Promoting Synergy and Alignment Between Climate Change Adaptation and Disaster Risk Reduction in the Context of National Adaptation Plans (UNDRR, 2021j)
- Words into Action guide on Developing National Disaster Risk Reduction Strategies (UNDRR, 2019a)
- Implementation guide for local disaster risk reduction and resilience strategies (UNDRR, 2019b)

These guidance and tools provide the necessary know-how to develop and strengthen a policy basis for disaster risk management and risk-informed development. The present guidance provides pathways for the use of scientifically-sounding climate information that are publicly available. Ultimately, by accessing up-to-date or the best available climate information, planners, risk managers, and decision-makers will be empowered to develop their strategies and plans taking into consideration multiple climate hazards at different levels of uncertainty.

Pathways to conceptual coherence

- Enhance efforts to achieve holistic risk reduction and to address root causes of risk.
- Include both acute and chronic risks in the frameworks.
- Define both "resilient" and "sustainable" development approaches to respond to climate change in a comprehensive manner.
- Recognize socio-economic development as a driver of risk.
- Promote risk-informed development that takes into consideration the impact of climate change on human security and the sustainable development process (e.g., Haitian National Plan for Risk Management).
- Strengthen gender equality, social equity, inclusion, and rights-based approaches.
- Consider migration, displacement, and climate refugees' issues, ensure participation of migrants and refugees' organizations, and ensure the rights and protection of migrants.
- Integrate social protection mechanisms into the coherence agenda.

5.3. Institutional coherence

Policies and institutions remain mostly siloed with conflicting mandates and competing interests. In many Caribbean countries, the responsibilities for SD, DRR and CCA are owned by different agencies. In many cases, climate change is under the prevue of the ministry of environment, whereas the national disaster management offices (NDMOs) are responsible for DRR/DRM. For example, in Trinidad and Tobago, DRR at the national level falls under the Office of Disaster Preparedness and Management in the Ministry of National Security, whereas at the local level it is under the Rural Development and Local Government. CCA is the responsibility of the Environmental Policy and Planning Division, Ministry of Planning, and development is led by the Ministry of Planning. As a result of such silos, the roles and responsibilities of different government agencies and non-government stakeholders are not always clearly defined, information and data are not readily shared, and communication across ministries is limited. Institutional fragmentation can also cause conflict, power struggles, and competition between different government agencies over limited resources.

Establishing a national central coordinating and decision-making process, appointing designated SDG, DRR and CCA focal points in national sectoral ministries, and conducting regular consultative meetings between the focal points and all relevant stakeholders, are important steps in supporting coherence (see also GIZ, 2019). A national coordinating and decision process enables a more holistic 'whole of country' or 'whole of government' approach.

As mentioned, the majority of Caribbean countries have a siloed and disjointed institutional framework, where different MDAs tend to compete for resources increasing the difficulties in approaching a sustainable development in a cross-sectorial manner. This, inevitably, hinders the efforts of a country towards the integration of SDG, CCA and DRR. To overcome this problem, Belize's climate change policy suggests the establishment of a Climate Change department as a way to centralise the efforts necessary to provide effective coordination at regional, national and sub-national level to achieve the goals envisioned by the country enhancing the governance.

An important opportunity to create institutional coherence is the integration of the SDGs, DRR and CCA in the national development plan through a dedicated national institution. In this way, all plans and actions concerning the SDGs, DRR and CCA go through the lens of the national development plan and is coordinated by the relevant configuration for monitoring and implementation of the plan.

Some countries have established a joint government agency or joint committee for climate change and DRR. For example, in Grenada, the institutional framework for DRR and CCA has been further strengthened through the establishment of a dedicated ministry – The Ministry of Climate Resilience, The Environment, Forestry, Fisheries and Disaster Management. The Government of the Commonwealth of Dominica has established the Climate Resilience Execution Agency of Dominica (CREAD). It acknowledges that building resilience into the national development planning and management process requires better and more careful preparation of project proposals aimed at building national climate resilience, avoid duplication, maximise economies of scale, identify and reduce critical gaps in funding and other areas, closer monitoring of key indicators, systemic reporting and frequent evaluation of programmes and projects. Tasked with a collective responsibility for the fulfillment of

this resilience building vision, governmental ministries and agencies are expected to follow through. These activities have been facilitated by the CREAD, established by the Climate Resilience Act, which focuses not just on physical reconstruction after disasters, but also on establishing climate resilient systems, for example, in the energy, food production and transport sectors.

The participation of a wide range of stakeholders in the planning and implementation of SDG, DRR and CCA policies and measures is critical to open and improve the channels of public participation so as to promote the appropriation of the agendas by civil society, academia, non-governmental organizations, the private sector, and other actors. This step is essential for the SD, DRR, and CCA agendas to stop being a national state process and to become an issue for the whole country. A participatory process also ensures gender-sensitive and inclusive actions and outcomes (UNISDR and UNDP, 2012). Universities and research groups play an important role in transferring knowledge and in implementing projects that advance the goals of the three agendas. Thus, progress can generate public-private partnerships and investments to support relevant solutions to the environmental and social challenges facing the country.

Most countries recognize the importance of collaboration for coherence, however, the roles of different stakeholders are often unclear, the nature of participation varies, and collaboration between agencies, with non-government actors, and across levels of governance is not sufficiently strong for coherence. Achieving and maintaining multi-stakeholder coordination is often a challenge. It is also likely to be difficult to achieve in a particular area of work such as creating SDG-CCA-DRR coherence in countries that don't already have a transparent and inclusive governance system.

The CWPs are created by a process that engages multiple stakeholders. However, the nature of participation varies and it's not always clear who contributed to the development of the document, and how participatory the process was. Documents acknowledge the importance of and/or the intention of involving stakeholders of different ministries/agencies at different levels and in different sectors in the implementation of policies and plans. For example, one of the three main forces of Dominica's NRDS is "People-centered Development" that acknowledge the vital role of public consultations and community engagement.

The workshop highlighted the importance of validating policies and policy implementation, including multi-stakeholder participation, to ensure that the aims of the policies are pursued and that the implementation is following the proposed process. Often documents need further approval for implementation, so ongoing consultations with stakeholders are crucial. The general public should be aware of the whole process and be able to provide input and feedback on the policy's objectives and intended outcomes.

Other important elements supporting institutional coherence are political will, committed leaders, and strong leadership that provide a supportive environment and a clear directive to the relevant agencies. Close collaboration between the national and local levels, and collaboration between government agencies and Civil Society Organisations (CSOs) are also critical.

Pathways to institutional coherence

- Align national legislative and regulatory framework with the SDGs, SFDRR, and the PA.
- Map initiatives with linkages to each other to identify opportunities for institutional coherence in national policies and plans.
- Establish a joint lead agency, coordinating body, and joint working groups (e.g., CWP committee that facilitates the coordination of CWP implementation).
- Clarify the roles and responsibilities of all stakeholders.
- Establish national decision-making processes, appoint designated SD, DRR and CCA focal points in national sectoral ministries, conduct regular consultative meetings between the focal points and all relevant stakeholders.
- Strengthen sub-national coordination mechanisms and local government actors.
- Regional bodies provide guidance to national focal points to further enhance national policy development.

5.4. Operational coherence

As policy and planning documents tend to be high-level and aspirational in nature, expressing broader policy aims and outcomes, determining the operational aspects of policy implementation is not always easy from the documents alone. Many documents allude to the challenges in translating policies and plans into action, and these are also echoed by many of the key stakeholders interviewed.

Many of the Caribbean SIDS focus all efforts on specific objectives per sector, leaving aside actions that strengthen coherence in the operationalisation of sustainability frameworks. Most countries identify priority sectors (e.g., agriculture, forestry, water, energy, infrastructure) but stop short of detailing necessary initiatives and programmes. Notable exceptions are Barbados and Cuba. Outcome 2.2 "CDM mainstreamed into key sectors" of Barbados' CWP seeks to better integrate DRM into traditional sectors such as agriculture, health, education and tourism, and emerging sectors, with focus on the finance, blue economy and energy sectors, and the private sector. The National Emergency Management System (NEMS) is expected to work with key strategic partners in each of these sectors to build their capacities for disaster mitigation, preparedness, response and recovery, and to implement initiatives that build resilience in their respective sectors, utilizing existing knowledge of hazards, vulnerability and risk. The Cuban State Plan for Climate Change 2017, as recalled by the Cuban First Nationally Determined Contribution 2020-2030 (CNDC), provides a comprehensive plan of action through its Tasks 1-11 and 14 key points. Similarly, the CNDC 2020 offers a list of priority actions for CCA and a detailed outline for its climate change mitigation contributions and measures which cover almost all the strategic sectors to enhance synergies between the SDGs, CCA and DRR.

Increasingly, issues of displacement and human mobility due to disasters and climate change impacts mobilise action on risk reduction. Viewed from this perspective it becomes less relevant whether the driver is climate change or natural hazard risk as the consequences for vulnerable populations are the same.

At the local level key barriers identified, particularly in SIDS, include limited human, technical and financial resources to cope with the considerable responsibilities allocated to local actors. Competing interests, lack of leadership and political will, and a lack of decision-making power

are also considerable challenges. Many local government agencies experience high staff turnover and staff shortages, which then also leads to limited institutional memory. In some cases, provincial and local DRR and CCA committees operate only during emergencies and in the post-disaster relief and recovery phases, limiting the scope for DRR.

Despite these challenges many documents and interviewees stressed the importance of action at the local level. The need for operational coherence at the local level and the importance of engaging with vulnerable communities and supporting local government and non-government organizations through community-based approaches and effective assistance for those at risk, is emphasized in many of the documents reviewed, but often in broad and aspirational terms. Particularly in poorer countries, social protection mechanisms are paramount. A strong and well-financed social protection system can enable governments to protect households and livelihoods, especially children, from the worst impacts of shocks and disasters (Costella et al., 2021). Cross-cutting issues, such as gender equality, social inclusion and empowerment, rights-based approaches, and sustainable development, are commonly recognized in the context of SD, DRR and CCA.

Many countries identify opportunities for operational coherence, such as the application of innovative approaches, methods and tools, conducting risk and vulnerability assessments, implementing nature-based solutions, establishing multi-hazard early warning systems, better landuse planning, creating resilient infrastructure, building back better, and assessing damages and losses.

Science and technology play an important role in creating operational coherence. This includes the coordinated collection of data; the application of approaches, methods and tools, such as joint climate and disaster risk and vulnerability assessments (see Box 12); and the creation of integrated monitoring and evaluation (M&E) systems. Because there are common data and information requirements for the implementation of the global frameworks at the country level knowledge, technical information, data and related sharing mechanisms, are critical in supporting coherent policy-making and actions across the frameworks (GIZ, 2019; OECD, 2018; ICSU and IRDR, 2017; UNESCAP, 2017; UNISDR, 2017).

However, many countries lack good quality and high-resolution data needed for local level applications such as risk assessment. In addition, agencies use different methods and data for local planning processes, such as climate and disaster risk assessments. In many countries there is also no legislation for the dissemination of data. Several stakeholders have highlighted the need to strengthen information and data governance and to harmonise and standardise data collection and data sharing for the different reporting mechanisms.

There is also a need to utilise technology and innovation more efficiently. A major challenge in Caribbean countries is to improve access to technology and deployment of ICTs across the region. The technological deployment of alternative energy sources electric vehicles, and other new technologies to support sustainable development approaches will be considerable. However, there is currently a lack of experts and skilled labour to maintain, support, and implement these sustainable technologies.

The need for capacity building and the importance of generating spaces for training workshops for members of the community, hand in hand with the government and the private sector, was highlighted at the workshop.

Box 10 Caribbean Safe School Initiative

The Caribbean Safe School Initiative (CSSI) was launched in April 2017 during the First Caribbean Ministerial Forum on School Safety. The CSSI is the suggested framework to advance school safety in the Caribbean. The initiative is the Caribbean contribution to the Worldwide-Initiative on Safe Schools (WISS) and shall be a partnership for advancing safe school implementation at the national level among Caribbean countries. Ministries of Education will lead the implementation supported by international, regional and national partners.

The CSSI is supported by the Antigua and Barbuda Declaration on School Safety, currently endorsed by 18 Caribbean countries. School safety action guiding the commitment to the declaration are guided by the 'Caribbean Roadmap for School Safety', a key development during the 'First Caribbean Ministerial Forum on School Safety' in 2017 and updated in 2019 during the 'Second Caribbean Ministerial Forum on School Safety'.

The 'Third Caribbean Ministerial Forum on School Safety', originally scheduled to take place in 2021 in St. Maarten, has been postponed to 2022 due to the Coronavirus pandemic. In its place the 'Regional Review on School Safety in the context of Systemic Risk: The Virtual Caribbean Safe School Initiative Pre-Ministerial Forum', was held online in March 2021.

Box 11 Smart Hospital Initiative

The Smart Hospital initiative builds on the Safe Hospital Initiative and focuses on improving hospitals' resilience, strengthening structural and operational aspects, and providing green technologies (PAHO, 2021). Energy improvements include solar panels installations, electric storage batteries, and low-consumption electrical systems, which, in addition to reducing energy consumption, reduce health sector carbon footprint in the environment and provide the hospital with energy autonomy, allowing it to continue running during emergencies and disasters.

Smart Hospitals have already shown their cost-effectiveness and resilience to disasters. In St. Vincent and the Grenadines, Georgetown Hospital (benefiting from the intervention of a Smart hospital) was the only one that remained functional after a severe storm-affected 39 clinics and the reference hospital (Milton Cato Hospital). In addition, this hospital became a water supply center for the community after the storm, using rainwater reserves.

Box 12 Comprehensive Risk Assessment and Planning.

The ***Technical Guidance on Comprehensive Risk Assessment and Planning in the Context of Climate Change*** (UNDRR and GIZ, 2021) provides an orientation on how risks in the context of climate change can be comprehensively and systemically addressed in risk assessments as well as decision-making and planning by integrating perspectives and approaches from Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) while simultaneously linking to other goals and targets (such as the Sustainable Development Goals (SDGs)). The comprehensive approach for risk assessment and planning consists of 10 key principles:

1. Putting risk to human and ecologic systems at the centre,
2. Fully accounting for the context of climate change,
3. Recognising complex and systemic nature of risks,
4. Applying inclusive risk governance,
5. Using multidisciplinary approaches to identify and select measures,
6. Using the concept of risk tolerance,
7. Addressing, minimising, and averting risks through nature-based solutions,
8. Integrating risk across sectors and levels,
9. Strengthening risk communication, information, and knowledge sources,
10. Using iterative and flexible processes.

Explaining on the relevance of comprehensive risk assessments (CRA), the guidance recognized that well-designed decision-making and planning processes aim to realize agreed values, objectives and goals such as SDGs and to increase overall resilience (to a variety of shocks and adverse trends such as climate change, pandemics, financial shocks or other disasters). A CRA can support evidence-based and risk-informed decision-making and planning in the context of climate change. This can also be understood as managing risks, whereby "Plans, actions, strategies or policies to reduce the likelihood and/or magnitude of adverse potential consequences, based on assessed or perceived risks" are designed (Reisinger et al., 2020).

For risk assessment to be useful, it is important to reverse the concept and ask what additional information is needed to avert, minimize and address climate and disaster risks, reach existing and future development goals and ensure policy and development pathways do not create new risks. In the scoping phase, the policy and planning processes define the purpose, scope and type of risk assessment needed in the context of climate change. The risk identification and risk analysis phases aim to understand risks and vulnerabilities and identify them through collaboration with risk management practitioners providing clear entry points for action. The risk evaluation phase identifies risk hotspots, prioritizes risks and defines the urgency to act (facilitating decision-making and planning processes).

The guidance proposes an approach for comprehensive risk assessment covering DRR as well as climate – present and future, sudden and slow-onset, single and compound risks with impact chains that impact chains can serve as a basis for discussion on risk reduction and adaptation options.

Box 13 Words into Action: Nature-based Solutions for Disaster Risk Reduction.

This guide (UNDRR, 2021k) aims to give practical, how-to-do information on setting up and implementing nature-based solutions (NbS), especially for DRR, but also for CCA. It is designed to help implement the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR). The SFDRR recognizes that environmental degradation can cause hazards and that disasters also have an impact on the environment. It recognizes that environmental management is a key component that can reduce disaster risk and increase resilience:

- Poor land management, unsustainable use of natural resources and degrading ecosystems are highlighted as underlying drivers of disaster risk;
- Environmental impacts of disasters are recognized;
- Countries are explicitly encouraged to strengthen the sustainable use and management of ecosystems for building resilience to disasters.

The guide is organized into three main chapters:

- Introduction to what nature-based solutions are, why they are important, and what the current state of play is in the world.
- More detail on how to implement NbS in the context of the SFDRR. Many tools and resources are given non-exhaustively.
- Mainstreaming and upscaling NbS to deal with disasters and climate risks. It covers policy coherence and how to engage communities, including women and youth, and the private sector.

This guide will help stakeholders of all kinds (policymakers, civil society organizations, the private sector, etc.) deliver on the environmental components of the SFDRR and upscale implementation of NbS to increase the resilience of populations. Ensuring a gender- and rights-based approach is also an important component in this equation.

Pathways to operational coherence

- Enhance coordination and collaboration at national and regional level through multi-stakeholder mechanisms and regional dialogues such as the CDEMA Coordination Harmonisation Council and the Eastern Caribbean Donor Group.
- Conduct regular capacity-building activities for sub-national and local government officials on how to integrate the SDGs, DRR and CCA.
- Engage with vulnerable communities and support local government and non-government organisations through community-led approaches.
- Support integrated multi-hazard risk assessment and planning and MHEWS.
- Harmonize and standardize data collection for risk assessment and for the different reporting mechanisms.
- Integrate climate scenarios into BBB by investing in resilient Infrastructure and nature-based solutions.

5.5. Financial coherence

The biggest gap and hence perhaps one of the most significant opportunities for creating coherence lies in the financing of climate and disaster-resilient development approaches. Many countries express the need for improved budget planning and dedicated financing for DRR and CCA, but not many policies and plans provide specific information on how to achieve this.

The Low-to-Middle-Income Countries (LMICs) and LDCs of the Caribbean Region are highly dependent on global funding. But the international funding structure is highly siloed, and these silos cascade down to the regional and national level as funding for DRR and CCA arrive in the countries separately. This causes institutional and financial fragmentation at the national level because different ministries engage in a power struggle to receive the funding. Overall, there is also significantly more funding is available for CCA than for DRR/DRM.

Because the availability of funding is a challenge, projects are often rebranded to align with the particular funding available. Technical and bureaucratic issues can also present challenges in accessing funding. The process to access funding can be difficult with applicants sometimes needing to submit lots of similar information in different formats as part of the application process, regardless of which agenda an initiative may be linked to.

Specific allocation of funds for CCA and DRR activities, the inclusion of risk assessment for publicly funded projects, and risk sensitive budget reviews at the national level are limited. Disaster-related funds focus strongly on post-disaster response and recovery, and to a much smaller degree for disaster preparedness. An even smaller amount of funding is dedicated to holistic DRR. Ideally, resources should be utilised on the entire process of risk assessment and DDR and adaptation planning and implementation.

In many countries funds available at the national and sector levels are often limited and don't always reach down to the local level where they are needed for community-led risk reduction measures. The focus on disaster response also leads to a lack of human resources at the local level as funding tends to be available only during the duration of a project. This means that expertise needs to be built all over again when the officers change. St Lucia's recently finalised NDC Financing Strategy (2021) and Climate Financing Strategy (2020) (Box 14) present significant opportunities for financial coherence. Dominica's Climate Resilience and Recovery Plan (CRRP) 2020-2030 estimates the cost to Dominica of becoming Climate Resilient and also the expected financing gap to deliver the Plan to 2030, based on current Government capital expenditures, and assuming steady revenues and expenditures.

Box 14 Saint Lucia's Climate Financing Strategy.

Access to finance remains a challenge to the implementation of climate change adaptation actions throughout developing countries. As a SIDS, Saint Lucia is particularly vulnerable to the impacts of climate change and faces specific capacity constraints and circumstances. It is expected to need to mobilise significant international technical and financial resources to address climate change and its impacts. These resources will come in a variety of forms and sources: financial and non-financial; public and private; and national and international.

Saint Lucia's Climate Financing Strategy Under the National Adaptation Planning Process (Government of Saint Lucia, 2020b) contains the elements of a strategy to access finances and ensure that the resources available to Saint Lucia for the achievement of its NAP objectives are appropriate and commensurate to its needs. The Strategy reviews potential funding sources for NAP implementation, determines alignment of funding sources and instruments with Saint Lucia's NAP and SASAPs, maps key actors and roles in accessing finance, and looks at ways to finance the NAP.

Very few countries have dedicated budgets and financing mechanisms in place that code and track expenditure against clear timelines and outcomes. Other key challenges associated with climate and disaster risk financing are short-term versus long-term needs, the lack of predictability of financing for developing countries, and aligning priorities and resources.

Because of these challenges, there is a growing recognition that project-based, short-term financing is not going to put societies on a resilient pathway. Emerging thinking therefore focuses on the need to enable more predictable financing, to learn from past failures, and to try different approaches.

Recently, principles of sustainable financing (e.g., Watson et al., 2015; UNDRR, 2019) have seen an emergence of innovative ways to overcome the weaknesses in the financial infrastructure. Examples are catastrophe bonds, resilience bonds, and ecosystem insurance schemes.

Funding levels for DRR and CCA are currently insufficient to meet the needs of countries, but creating financial coherence and strengthening climate and disaster resilience is not simply a case of 'more money needed'. Rather what is required is better alignment of available resources, transparency and accountability, and locally-led finance models. Important considerations are 1) Effectiveness of funding; 2) Allocation to DRR, CCA, and development sectors; 3) Risk-informed investment across a number of sectors; and 4) Focus on holistic risk reduction and risk management.

The establishment of insurance schemes (e.g., parametric) as a transfer risk mechanism could be an option to integrate and strengthen the relationship between CCA and DRR, leveraging the ability of financing such programs to enhance the resilience of countries to both acute and chronic impacts of hazard events. Efforts directed at the adoption of such instruments have already been made at the Caribbean regional level as exemplified by CCRIF (e.g., adopted in Barbados), which could be used as a blueprint for the development of improved risk transfer mechanisms at regional, national, and sub-national scale, and as a way to direct funding coming from international organisations.

Budget holders, such as the ministry of finance or economy, need to participate in the development of national strategies to ensure that these considerations can be met.

Box 15 Opportunities to Integrate Disaster Risk Reduction and Climate Resilience into Sustainable Finance.

This UNDRR (2019b) report sets out recommendations on how the main sustainable finance initiatives of the European Commission can support a major reduction in disaster risk. Considering physical climate risk together with disaster risk caused by natural hazards, the analysis builds on insights from 35 stakeholders from the private, public and non-profit sectors as well as the European Commission, gained at a workshop in Brussels which was organized by UNDRR and E3G in March 2019.

Pathways to financial coherence

- Streamline the application process by developing a universal template and prioritize actions for applying to the different global funds. This will remove the complexities and barriers to accessing funding and maximize the potential benefits. An interesting example is provided by the work done in Dominica by the CREAD agency.
- Align donor funding with the priorities of the CWP and support particular elements.
- Access funding for SIDS to update legislation and policies and implement DRR and CCA actions and plans.
- Involve ministry of planning/ministry of finance in SD-DRR-CCA planning and agree on the resource requirements for the different initiatives.
- Finance climate and disaster-resilient development approaches.
- Promote the principles of sustainable financing and define the financing sources (e.g., governmental, philanthropist, private sector, multi-lateral, bi-lateral development partners).
- Attract the interest of donors and assistance for moving forward countries of the Caribbean in terms of infrastructure and data.
- Increase the capacity of different ministries to access funding.
- Create insurance and risk transfer mechanisms. Seek support from the private sector to engage into discussions on how to manage or transfer risk.

5.6. MER coherence

A number of organisations (GIZ, 2019; GIZ, 2017; GIZ and WRI, 2018; Peters et al., 2016; OECD, 2018; UNESCAP, 2018; UNISDR, 2017) note that more integration of tracking processes for the three frameworks at the country level could help improve Monitoring, Evaluation & Reporting (MER) efficiency and enhance dynamic understanding of linkages and coherence. All selected Caribbean countries have established, or are planning to create, a performance monitoring framework (PMF) as part of the CWP under CDEMA's CDM Strategy (see Box 16). However, systems to operationalize these intentions are few and far between as many countries currently lack a results-based management framework with the articulation of expected outcomes and impacts to systematically track achievement and development changes over the planning cycle of the CWP. MER could also play an important role in bridging the gap between national policy and the regional and global frameworks by selecting indicators that are aligned with international guidance and would facilitate the monitoring process, allowing a seamless implementation of the national development plan.

Improving public policy reviews is critical in achieving the sustainable development agenda. This process involves strengthening the monitoring and available information on sustainability, DRR and CCA. A concrete example is the conception of environmental-economic accounting, which allows the monitoring of the intensity of resource use, ecological impacts and the impacts of social policies, as well as intensifying the monitoring of the SDGs and of climate change and resilience indicators in order to report progress more regularly and to prioritize the issues addressed (see Box 17).

Box 16 Performance Monitoring Framework for the Regional Comprehensive Disaster Management Strategy and Framework 2014-2024.

The Performance Monitoring Framework (PMF) for the Comprehensive Disaster Management (CDM) Strategy 2014-2024 presents five instruments to guide the monitoring and evaluation (MER) processes at regional, national and CDEMA Coordinating Unit levels for the CDEMA System. The objective of the five instruments is to have quality information on programme results and performance available in a timely and complete fashion for decision-making and accountability for CDM in the region.

Box 17 System of Environmental-Economic Accounting.

The System of Environmental-Economic Accounting (SEEA) (United Nations, n.d.) is a framework that integrates economic and environmental data to provide a more comprehensive and multipurpose view of the interrelationships between the economy and the environment and the stocks and changes in stocks of environmental assets, as they bring benefits to humanity. It contains the internationally agreed standard concepts, definitions, classifications, accounting rules and tables for producing internationally comparable statistics and accounts. The SEEA framework follows a similar accounting structure as the System of National Accounts (SNA). The framework uses concepts, definitions and classifications consistent with the SNA in order to facilitate the integration of environmental and economic statistics. The SEEA is a multi-purpose system that generates a wide range of statistics, accounts and indicators with many different potential analytical applications. It is a flexible system that can be adapted to countries' priorities and policy needs while at the same time providing a common framework, concepts, terms and definitions.

Pathways to MER coherence

- Establish conscious decisions and frameworks for measuring progress and success in jointly tracking the SDGs, DRR, and CCA within the global and regional contexts.
- Enhance integration of tracking and monitoring processes for the three frameworks at the country level to improve reporting efficiency and to improve the dynamic understanding of coherence.
- Monitor sustainable and resilient development indicators over longer time-periods. Data on certain socio-economic indicators could be collected every 10 years through the census.

The baseline analysis of the status of coherence of Caribbean countries presented in this report helps us to identify recommendations for enhanced multi-sectoral SD, DRR and CCA policy and governance coherence targeted at specific stakeholder groups. Box 18 shows what international organisations, donors and funders, regional stakeholders, and national stakeholders can do to help support coherence.

Box 18 Key recommendations to strengthen coherence in the Caribbean region.

Regional level

- Promote the implementation of the SFDRR, PA and SDGs, as well as existing regional agreements and decisions related to DRR, CCA, and sustainable development.
- Strengthen political will and commitment to enhance regional cooperation and collaboration amongst member countries, and engagement with all stakeholders.
- Strengthen engagement with marginalised populations and support community-based resilience building initiatives and social protection schemes for those most vulnerable to climate and disaster risks.
- Promote inclusion, gender equality and social justice throughout the design, planning and implementation of regional and national efforts to reduce risk.
- Strengthen institutional and policy frameworks at the regional level and further enhance coordination and collaboration between member countries.
- Support regional exchange of information, data, methods, tools, and good practice.
- Facilitate collection of and access to harmonized data for evidence-based planning and decision-making.
- Promote regional multi-hazard early warning systems, risk insurance and financing mechanisms, and regional response mechanisms to address transboundary risks.

National and sub-national levels

- Review and reform legislative frameworks for DRR and CCA to clarify: 1) mandates, roles and responsibilities; 2) how to integrate them in specific national sectors and cross-sectoral areas, and 3) resourcing of relevant government agencies.
- Review national policies and strategies for DRR and CCA in line with new legislation, align timelines to increase opportunities for interactions across policy processes, and consider the development of joint national policies and plans for DRR and CCA, following the model of the JNAPs in the PICTs.
- Establish a dedicated lead agency responsible for the coherent planning and implementation of risk reduction and resilience building activities across all government agencies and sectoral line ministries.
- Further strengthen the mainstreaming of DRR and CCA into national development plans and align with national sustainable development goals.
- Strengthen multi-level, multi-stakeholder and cross-sector collaboration to ensure the inclusive planning and implementation of coherent risk reduction measures.
- Enhance understanding of socio-economic drivers of climate and disaster risk and develop approaches, methods and tools for multi-hazard risk and vulnerability assessments and risk-informed development.
- Establish and further enhance social protection and risk insurance schemes for those most vulnerable to climate change and disaster impacts.
- Promote green growth approaches and nature-based solutions for risk reduction and resilient development.
- Establish joint monitoring, evaluation and reporting systems aligned with national reporting to SFM, United Nations Convention on Climate Change (UNFCCC), and the SDGs.
- Establish dedicated budget lines for risk reduction and track expenditure against timelines and expected outcomes.

International organizations

- Provide technical assistance and guidelines for sectoral government departments to facilitate the operationalization of coherence.
- **Establish funding sources and financing mechanisms that specifically aim to support integrated climate and disaster risk reduction measures and risk informed development approaches.**

Annex 1 – List of national documents relating to development, climate change, and disaster risk reduction of selected Caribbean countries

Country	Documents	Country	Documents
Antigua and Barbuda	CDEMA, 2021. Comprehensive Disaster Management Country Work Programme (CWP) Antigua and Barbuda. Caribbean Disaster Emergency Management Agency, St. Michael, Barbados. GFDRR, 2010. Disaster Risk Management in Latin America and the Caribbean Region: GFDRR Country Notes Antigua and Barbuda. Global Facility for Disaster Reduction and Recovery, the World Bank. Government of Antigua and Barbuda, 2021. Antigua and Barbuda Updated Nationally Determined Contribution. Government of Antigua and Barbuda, 2015a. 2015-2020 National Action Plan: Combatting Desertification, Land Degradation & Drought. Government of Antigua and Barbuda, 2015b. Antigua and Barbuda Intended Nationally Determined Contribution. Government of Antigua and Barbuda, 2015c. Medium-Term Development Strategy 2016 to 2020. Ministry of Finance and Corporate Governance. Government of Antigua and Barbuda, 2001. Antigua and Barbuda's Initial National Communication on Climate Change. Office of the Prime Minister, St. John's, Antigua and Barbuda. Government of Antigua and Barbuda, n.d. National Comprehensive Disaster Management Policy. O'Marde, D., 2017. Country document for disaster risk reduction: Antigua and Barbuda, 2016. European Commission's Humanitarian Aid and Civil Protection Department Office for Central America and the Caribbean Managua, Nicaragua and United Nations Office for Disaster Risk Reduction Regional Office for the Americas Ciudad del Saber (Clayton), Panamá, St. Johns, Antigua and Barbuda. Rashauna, A.-M., 2019. Advancing Gender Equality and Women's Empowerment in Climate Finance in Antigua and Barbuda. World Bank, 2016. Antigua and Barbuda (Intended) Nationally Determined Contribution. International Bank for Reconstruction and Development, The World Bank, Washington, D.C.	Guyana	Government of Guyana, 2019a. Green State Development Strategy: Vision 2040. Government of Guyana, 2019b. National Climate Change Policy and Action Plan 2020-2030. Office for Climate Change, Ministry of the Presidency, Guyana. Government of Guyana, 2016. Guyana's Revised Intended Nationally Determined Contribution. Government of Guyana, 2015. Climate resilience strategy and action plan. Government of Guyana, 2013. National Integrated Disaster Risk Management Plan and Implementation Strategy for Guyana. Civil Defense Commission. UNDRR, 2021. Situational Analysis Guyana. United Nations Office for Disaster Risk Reduction. Weekes, C., Bello, O.D., 2019. Mainstreaming disaster risk management strategies in development instruments (II): Policy briefs for Barbados, Guyana, Saint Lucia, Suriname, and Trinidad and Tobago (No. No. 75 (LC/TS.2019/7; LC/CAR/TS.2018/3)), Studies and Perspectives Series–ECLAC. Economic Commission for Latin America and the Caribbean (ECLAC), Santiago, Chile.

Country	Documents	Country	Documents
Bahamas	Government of the Bahamas, 2017. Vision 2040: National Development Plan of the Bahamas (2nd working draft). National Development Plan Steering Committee, the Commonwealth of the Bahamas, Nassau, the Bahamas. Government of the Bahamas, 2015. Intended Nationally Determined Contribution. Government of the Bahamas, 2006a. Chapter 34a Disaster Preparedness and Response, in: National Disaster Risk Reduction Strategy / Country Work Programme. Commonwealth of the Bahamas, Nassau, the Bahamas. Government of the Bahamas, 2006b. Disaster Risk Reduction in the Commonwealth of the Bahamas - Status Report. Commonwealth of the Bahamas, Nassau, the Bahamas. Government of the Bahamas, 2005. National Policy for the Adaptation to Climate Change. The National Climate Change Committee & The Bahamas Environment, Science and Technology Commission, Nassau, the Bahamas. IADB, 2020. Disaster Risk Profile for The Bahamas. Inter-American Development Bank. IOM, 2021. Emergency Preparedness and Risk Reduction Plan in the Caribbean 2021. International Organization for Migration.	Haiti	Gouvernement de la République d'Haïti, Ministère de la Planification et de la Coopération externe, 2012. Plan Stratégique de Développement d'Haïti : Pays Émergent en 2030. République d'Haïti, Ministère de l'Environnement, 2006. Plan d'Action National d'Adaptation. République d'Haïti, Ministère de l'Environnement, 2015. Contribution Prévue Déterminée au niveau National. République d'Haïti, Ministère de l'Intérieur, 2019. Plan national de gestion des risques de désastre 2019-2030. République d'Haïti, Ministère de l'Environnement, 2019. Politique Nationale de lutte contre les changements climatiques 2019.
Barbados	The Barbados Comprehensive Disaster Management (CDM) Country Work Programme (CWP) 2019 – 2023, The Department of Emergency Management, Government of Barbados December 2019 (link, access on 14 Jan 2022). Barbados' Second National Communication Under the United Nations Framework Convention on Climate Change (UNFCCC), April 2018, Barbados' Second National Communication (SNC) under the UNFCCC was developed according to Articles 4.1 and 12.1 of the UNFCCC and in line with the requirements of the Non-Annex I Convention Parties. Published by Government of Barbados (link, access on 14 Jan 2022). Barbados 2021 update of the first nationally determined contribution, Government of Barbados (link, access on 14 Jan 2022). Emergency Management Act 2006-20, by Proclamation (S.I. 2007 No. 25). Printed by the Government Printer, Bay Street, St. Michael, by authority of the Government of Barbados (link, access on 14 Jan 2022). Barbados Physical Development Plan Amendment - Toward a Green, Prosperous and Resilient Nation, 2017, Town & Country Development Planning Office (link, access on 14 Jan 2022).	Jamaica	Vision 2030 Jamaica: national development plan, 2009, Planning Institute of Jamaica (link, access on 14 Jan 2022). Climate Change Policy for Jamaica, 2015, Government of Jamaica (link, access on 14 Jan 2022). Climate Change Policy for Jamaica (Updated), July 2021, Government of Jamaica (link, access on 14 Jan 2022). Update of Nationally Determined Contribution (NDC) of Jamaica, June 2020, Government of Jamaica (link, access on 14 Jan 2022). The Disaster Risk Management Act, 2015, 2015, Government of Jamaica (link, access on 14 Jan 2022). The Disaster Risk Management (Amendment) Act, 2021, 2021, Government of Jamaica (link, access on 14 Jan 2022).

Country	Documents	Country	Documents
Belize	Horizon 2030: the long-term development framework for Belize, June 2011, Barnett & Company Ltd. (link , access on 14 Jan 2022). A National Climate Change Policy, Strategy and Action Plan to Address Climate Change in Belize, December 2014, Caribbean Community Climate Change Centre (CCCCC) and Ministry of Forestry, Fisheries and Sustainable Development (MFFSD), Belmopan, Belize (link, access on 14 Jan 2022). Disaster Preparedness and Response Act Chapter 145, 2000, Government of Belize (link, access on 14 Jan 2022). Belize National Hazard Mitigation Policy, April 2004, The National Emergency Management Organization and The Caribbean Disaster Emergency Response Agency (link, access on 14 Jan 2022). Updated National Determined Contribution, 2021, Government of Belize (link, access on 14 Jan 2022).	Saint Kitts and Nevis	Government of St. Kitts and Nevis, 2017. Ministry of Education 2017–2021 Education Sector Plan: Education for All: Embracing Change, Securing the Future. Ministry of Education. Government of St. Kitts and Nevis, 2016. The Intended National Determined Contribution for the Federation of St. Kitts and Nevis. Federation of St. Kitts and Nevis. Government of St. Kitts and Nevis, 2011. National Energy Policy St. Kitts and Nevis. Ministry of Public Works, Utilities, Energy and Housing, Federation of St. Kitts and Nevis. Government of St. Kitts and Nevis, 2001. Natural Hazard Mitigation Policy and Plan for the Federation of St. Kitts and Nevis. Federation of St. Kitts and Nevis. UNDRR, 2021. Situational Analysis Paper (Country Risk Profile) St. Kitts and Nevis. United Nations Office for Disaster Risk Reduction.
Cuba	Gobierno de Cuba, Estado Mayor Nacional de la Defensa Civil de Cuba, 2014. Documento de País: Cuba 2014. Gobierno de Cuba, Ministerio de Economía y Planificación de Cuba, 2017. Plan Nacional de Desarrollo Económico y Social 2030 de Cuba. Gobierno de Cuba, Ministerio de Ciencia, Tecnología y Medio Ambiente, 2017. Plan de Estado para el Enfrentamiento al Cambio Climático en la República de Cuba. Republic of Cuba, 2020. First Nationally Determined Contribution (Updated) of Cuba. República de Cuba, Consejo de Defensa Nacional, 2010. Directiva No. 1 del Presidente del Consejo de Defensa Nacional para la Reducción del Riesgo de Desastres.	Saint Lucia	Government of Saint Lucia, 2021. Saint Lucia's Updated Nationally Determined Contribution. Department of Sustainable Development, Ministry of Education, Innovation, Gender Relations and Sustainable Development. Government of Saint Lucia, 2020a. Medium Term Development Strategy 2020 - 2023 of St. Lucia. Department of Economic Development, Transport and Civil Aviation. Government of Saint Lucia, 2020b. Saint Lucia's Climate Financing Strategy. Department of Sustainable Development, Ministry of Education, Innovation, Gender Relations and Sustainable Development. Government of Saint Lucia, 2018. Saint Lucia's National Adaptation Plan (NAP) 2018–2028. Department of Sustainable Development, Ministry of Education, Innovation, Gender Relations and Sustainable Development. Government of Saint Lucia, 2017. Third National Communication on Climate Change for Saint Lucia. Ministry of Education, Innovation, Gender Relations & Sustainable Development, Department of Sustainable Development.

Country	Documents	Country	Documents
Belize		Saint Lucia	Government of Saint Lucia, 2015. Saint Lucia Intended Nationally Determined Contribution. Government of Saint Lucia, 2004. Disaster Management Policy Framework for Saint Lucia. National Emergency Management Office (NEMO) Secretariat. UNDRR, 2021. Situational Analysis Saint Lucia. United Nations Office for Disaster Risk Reduction. Weekes, C., Bello, O.D., 2019. Mainstreaming disaster risk management strategies in development instruments (II): Policy briefs for Barbados, Guyana, Saint Lucia, Suriname, and Trinidad and Tobago (No. No. 75 (LC/TS.2019/7; LC/CAR/TS.2018/3)), Studies and Perspectives Series–ECLAC. Economic Commission for Latin America and the Caribbean (ECLAC), Santiago, Chile.
Dominica	Dominica Climate Resilience and Recovery Plan 2020-2030, 2020, by the Climate Resilience Executing Agency of Dominica and the Ministry of Economic Affairs, Planning, Resilience, Sustainable Development, Telecommunications and Broadcasting, Commonwealth of Dominica (link, access on 14 Jan 2022). National Resilience Development Strategy (NRDS), 2018, by the collaborative efforts of the various Ministries, Departments and Agencies (MDAs) of the Government of the Commonwealth of Dominica, led by the Ministry of Planning and Economic Development (link, access on 14 Jan 2022). Climate Resilience Act 2018, No. Act 16 2018, Government of Dominica (link, access on 14 Jan 2022).	Saint Vincent and the Grenadines	CDEMA, 2020. Comprehensive Disaster Managemnt Country Work Programme (CWP) Saint Vincent and the Grenadines (draft). Caribbean Disaster Emergency Management Agency, St. Michael, Barbados. Government of Saint Vincent and the Grenadines, 2019. National Adaptation Plan of Saint Vincent and the Grenadines. Government of Saint Vincent and the Grenadines, 2016. St. Vincent and the Grenadines Intended Nationally Determined Contribution. Government of Saint Vincent and the Grenadines, 2013. National Economic and Social Development Plan (NESDP) 2013-2025. NEMO, 2014. Disaster risk reduction country document, Saint Vincent and the Grenadines, 2014. National Emergency Management Organisation (NEMO) Ministry of National Security, Air and Sea Port Development, Kingstown, Saint Vincent and the Grenadines. UNDRR, 2021. Situational Analysis Saint Vincent and the Grenadines. United Nations Office for Disaster Risk Reduction.

Country	Documents	Country	Documents
Dominican Republic	Gobierno de la República Dominicana, 2020. Contribución Nacionalmente Determinada 2020. Gobierno de la República Dominicana, 2013. Plan Nacional de Gestión Integral del Riesgo de Desastres en la República Dominicana – Decreto No. 275-13. Gobierno de la República Dominicana, Ministerio de Economía, Planificación y Desarrollo de la República Dominicana, 2012. Ley 1-12 Estrategia Nacional de Desarrollo 2030. Gobierno de la República Dominicana, Ministerio de Economía, Planificación y Desarrollo de la República Dominicana, 2014. Decreto 134-14 Reglamento Estrategia Nacional de Desarrollo 2030. Gobierno de la República Dominicana, Ministerio de Medio Ambiente y Recursos Naturales de la República Dominicana, Presidencia de la República Dominicana, GEF, UNDP, 2016. Plan Nacional de Adaptación para el Cambio Climático en la República Dominicana 2015-2030. Gobierno de la República Dominicana, Vicepresidencia de la República Dominicana, 2018. Protocolo Nacional de Actuación para la Protección Social frente a Choques Climáticos.	Suriname	Government of Suriname, 2021. Multi-Annual Development Plan 2022-2026 of the Republic Suriname. Government of Suriname, 2020. Suriname National Adaptation Plan (NAP) 2019-2029. Republic of Suriname, Paramaribo, Suriname. Government of Suriname, 2019. Nationally Determined Contribution 2020. Cabinet of the President of the Republic of Suriname, Paramaribo, Suriname. Government of Suriname, 2017. 2017-2021 Policy Development Plan. Suriname Planning Bureau Foundation, Republic of Suriname, Paramaribo, Suriname. Government of Suriname, 2016. Suriname Second National Communication to the United Nations Framework Convention on Climate Change. Office of the President of the Republic of Suriname, Paramaribo, Suriname. Government of Suriname, 2015a. Final National Climate Change Policy, Strategy and Action Plan for Suriname 2014-2021. Ministry of Labour, Technological Development and Environment, Republic of Suriname, Paramaribo, Suriname. Government of Suriname, 2015b. Intended Nationally Determined Contribution Under UNFCCC. Jharap, R., 2021. Suriname Disaster Risk Reduction Status Report. Schmeitz, M., 2017. Disaster Risk Reduction Country Document for Suriname. National Coordination Center For Disaster Relief (NCCR), European Commission's Humanitarian Aid and Civil Protection Department Office for Central America and the Caribbean, and United Nations Office for Disaster Risk Reduction Regional office for the Americas. UNDRR, 2022. Situational Analysis Suriname. United Nations Office for Disaster Risk Reduction. Weekes, C., Bello, O.D., 2019. Mainstreaming disaster risk management strategies in development instruments (II): Policy briefs for Barbados, Guyana, Saint Lucia, Suriname, and Trinidad and Tobago (No. No. 75 (LC/TS.2019/7; LC/CAR/TS.2018/3)), Studies and Perspectives Series–ECLAC. Economic Commission for Latin America and the Caribbean (ECLAC), Santiago, Chile.

Country	Documents	Country	Documents
Grenada	Government of Grenada, 2020. Second Nationally Determined Contribution. Government of Grenada, 2019. National Sustainable Development Plan (NSDP) 2020-2035. National Plan Secretariat Ministry of Finance, Planning, Economic, and Physical Development. Government of Grenada, 2017a. National Climate Change Adaptation Plan for Grenada, Carriacou and Petite Martinique (2017-2021). Ministry of Climate Resilience, the Environment, Forestry, Fisheries, Disaster Management and Information. Government of Grenada, 2017b. National Climate Change Policy for Grenada, Carriacou and Petite Martinique (2017-2021). Government of Grenada, 2015. Intended Nationally Determined Contribution (Revised). Government of Grenada, 2014. Grenada Country Work Programme 2015-2019. UNDR, 2021. Situational Analysis for Grenada. United Nations Office for Disaster Risk Reduction.	Trinidad and Tobago	Government of Trinidad and Tobago, 2018. Trinidad and Tobago Intended Nationally Determined Contribution. Government of Trinidad and Tobago, 2016. Vision 2030: The National Development Strategy of Trinidad and Tobago 2016-2030. Government of Trinidad and Tobago, 2013. Comprehensive Disaster Management Policy Framework for Trinidad and Tobago. Office of Disaster Preparedness and Management. Government of Trinidad and Tobago, 2011. National Climate Change Policy (NCCP). ODPM, 2014. Disaster risk reduction country document, Trinidad and Tobago, 2014. Office of Disaster Preparedness and Management. UNDRR, 2021. Situational Analysis for Trinidad and Tobago. United Nations Office for Disaster Risk Reduction. Weekes, C., Bello, O.D., 2019. Mainstreaming disaster risk management strategies in development instruments (II): Policy briefs for Barbados, Guyana, Saint Lucia, Suriname, and Trinidad and Tobago (No. No. 75 (LC/TS.2019/7; LC/CAR/TS.2018/3)), Studies and Perspectives Series—ECLAC. Economic Commission for Latin America and the Caribbean (ECLAC), Santiago, Chile.

Annex 2 – Key informant interview for national focal points for SFDRR and UNFCCC

The United Nations Office for Disaster Risk Reduction Regional Office for Regional Office for the Americas and the Caribbean, in partnership with the Stockholm Environment Institute (SEI), are currently conducting a baseline study of the degree of coherence between national policies and plans focussing on disaster risk reduction (DRR), climate change adaptation (CCA), and sustainable development (SD) in the Caribbean region. The project includes a desk review of relevant national policy and planning documents, key informant interviews, and consultations with key regional actors. This project is meant to enhance our understanding of the level of coherence of planning and policy implementation mechanisms in countries across the Caribbean region and forms the basis for future work on coherence between DRR, CCA and SD in the Region.

> *Coherence is 'The approach and deliberate processes and actions within a country to integrate – as appropriate – the implementation of the Sustainable Development Agenda, Sendai Framework for Disaster Risk Reduction, and Paris Agreement; in order to increase efficiency, effectiveness, and the achievement of both common (e.g. resilience) and respective goals'* (GIZ, 2019, p7).

The purpose of the key informant interviews is to capture primary information on national level efforts in the countries of the Caribbean region to create coherence across national DRR, CCA, and SD policies, strategies, and plans aimed at reducing climate and disaster risks and supporting resilient development. The information gathered in the interviews will a) complement the secondary data obtained in the document review of national policies, strategies and plans; b) provide additional insights into the status of measures to create coherence described in the documents; c) identify opportunities and challenges encountered in the planning and implementation of these measures; d) collect examples of innovative approaches and interesting initiatives, and e) identify opportunities to further strengthen coherence.

Key informant interviews will be conducted with National Sendai Focal Points and National UNFCCC Focal Points of selected countries in the Caribbean region, representatives of ministries/agencies of national and sub-national sectoral policies and plans representatives of international and regional organisations working on the integration of DRR and CCA, as well as academic experts.

The expected outcomes of the key informant interviews are:

- Insights into the status of current and planned national efforts of selected countries in the Caribbean to create or strengthen coherence between DRR, CCA and SD policies, strategies, and plans.
- Opportunities for coherence are identified, and examples of innovative approaches are shared.
- Enabling factors and obstacles to creating/strengthening coherence are identified.
- Recommendations of pathways for achieving enhanced multi-sectoral DRR and CCA policy and governance coherence are developed based on interviews and desk study insights.

Questions to National Sendai Focal Points and National focal points for UNFCCC:

- What efforts have been made to integrate DRR and CCA in policies, strategies, and plans in your country? What is the primary motivation for integration among DRR and CCA agendas? How do these efforts link with goals to achieve sustainable development in your country?
- How do you envision policy coherence to manifest within and between DRR and CCA at the sub-national and local levels with regards to the implementation of the agendas?
- Who is responsible for the coordination, implementation and monitoring of coherence? At what level do these institutions work? Is it in their mandate to interact with each other? What is the role of non-government actors in this process?
- What measures have been taken to mainstream DRR and CCA into development planning and/or across sectors (horizontal coherence) and from the national to the sub-national levels (vertical coherence)? How is coherence evaluated?
- What funding strategies and investments are in place to support national and subnational government agencies and non-government stakeholders to create coherence between DRR, CCA and SD through integrated projects and programs?
- Have these efforts been sufficient to ensure a coherent implementation between the agendas?
    - √ What has worked well? Which factors enabled integration in the measures you described?
    - √ What obstacles did you encounter, and how did you overcome them?
- What are examples from your country of approaches to link DRR, CCA and SD in policy or practice that have worked well? These could be, for example, a newly created government agency, office, or committee responsible for integrating DRR, CCA and SD, a coordination mechanism, a joint policy mechanism, a joint monitoring & evaluation framework, or a joint funding mechanism.
- In your view, what needs to be done to better link DRR, CCA and SD in policy and practice moving forward? How do you think it can be ensured in the short and long term that the adoption, integration, and implementation of these are coherently aligned and do not create obstacles between them or other agendas and actors?
- Is there any specific sector experience on integrated approaches for DRR, CCA and SD that you would recommend us to find out more about? Is there a focal point that you would advise us to follow up with?

Annex 3 – List of key informant interviews

Date	Organisation	Interviewee
21/09/21	Caribbean Natural Resources Institute (CANARI)	Ainka Granderson, Senior Technical Officer, climate change adaptation specialist with expertise in community-based adaptation, vulnerability assessments and participatory development of adaptation plans and policies. Candice Ramkissoon, Technical Officer, Expert in Disaster Risk Reduction (DRR) and Management; Environmental and Natural Resources Management; Health, Safety and Environment; and Geographic Information Systems (GIS).
22/09/21	Economic Commission for Latin America and the Caribbean (ECLAC)	Artie Dubrie, Coordinator, Sustainable Development & Disaster Unit
22/09/21	Civil Defence Commission (CDC) Guyana	Allana Walters, Mitigation and Recovery Manager Alana Lewis
28/09/21	United Nations Development Programme (UNDP)	Massimiliano Tozzi, Project Manager of ENGENDER, Expert in Development, Disaster Risk Reduction and Post-Disaster Recovery, Barbados Marium Alleyne, Technical Associate for Climate Change, Barbados
28/09/21	United Nations Development Programme (UNDP)	Dorine Jean Paul, Senior Program Officer for UNDP Country Office and working on the Resilience Program, Haiti
29/09/21	Caribbean Meteorological Organization (CMO)	Arlene Laing, Coordinating Director of the CMO and the Permanent Representative of the British Caribbean Territories with the World Meteorological Organization (WMO) Donneil Cain, Project Development Specialist/ Economist, Caribbean Community Climate Change Centre (CCCCC)
30/09/21	UNFCCC, CDEMA	Vintura Silva, Programme Officer at UNFCCC Andria Grosvenor, Deputy Executive Director, CDEMA Coordinating Unit Sharleen Dabreo, Acting Permanent Secretary, Deputy Governor's Office at Government of the British Virgin Islands
30/09/21	University of the West Indies	Kerian Ferreira, Climate Scientist and Lecturer

Annex 4 – Summary of stakeholder consultation workshop

Sustainable Development, Climate Change Adaptation and Disaster Risk Reduction: Pathways for Policy Coherence for Resilience in the Caribbean Region

Background

In October 2021, UNDRR and SEI convened an online stakeholder consultation workshop on the degree of coherence between national policies and plans for disaster risk reduction (DRR), climate change adaptation (CCA) and sustainable development in the Caribbean. The workshop sought broader stakeholder input to validate the preliminary findings and obtain more information on the status of coherence at different scales to help identify innovative approaches, understand opportunities, and enable drivers and barriers to improve coherence in the region. Thirty-nine participants from diverse backgrounds related to DRR, CCA, and sustainable development in the area were present.

Following a presentation on key findings, participants were divided into three breakout groups for an in-depth discussion. Each group focused on a coherence theme, i.e., technical and conceptual coherence (group 1), strategic and institutional coherence (group 2), and operational and financial coherence (group 3). Participants shared their reflections on the challenges and barriers, opportunities, and suggestions to build coherence in the region.

Participants generally agreed that the DRR-CCA and sustainable development coherence analysis is an important starting point to inform future decision-making at national and regional levels. Challenges, nonetheless, persist in limited capacities related to human, financial and technical resources, communication across ministries, and data dissemination. Participants precisely noted the role of policy coherence to address the challenges and opportunities holistically (i.e., building institutional and community-based capacities, prioritizing the allocation for enhanced coordination among each SD, DRR, and CCA actor). The following are the central ideas of the workshop based on the four critical questions that were discussed:

What are some of the challenges and barriers to coherence in your work and experience?

Regarding coherence between SDGs, DRR, and CCA, one of the significant barriers to coherence is outdated policy and a lack of processes to foster coherence through policy documents, institutional arrangements, budgeting, and financial capabilities. The agendas are separated institutionally, resulting in fluctuating priorities, so one area receives more attention. The issue is ongoing where CCA is garnering more attention while DRR gets pushed down since most financing goes to climate change. Still, there remains a focus on post-disaster activities and not on the entire process, including planning aspects of mitigation and preparedness. Overall, these areas tend to be left behind, and the resources are allocated for post-disaster activities. Limited capacities within countries represent a challenge as they relate to human, financial, and technical resources. Funding availability is also a challenge. Projects are rebranded based on where funding is available and technical and bureaucratic issues related to accessing

financing. The process to access funding is also complex, with entities needing to submit lots of similar information in different formats as part of the application process, regardless of which agenda an initiative may be linked. Participants recognized that these challenges and opportunities must be jointly addressed since operational coherence is related to financial coherence, and the issue of governance is also intertwined. In many cases receiving funding for adaptation and mitigation plans does not necessarily translate into receiving the support required to implement the recommendations provided to other departments. So that is something that needs to be addressed.

Furthermore, participants stressed that organizations often lack human resources and technical capabilities due to the government's short-term nature, which reveals a lack of ministerial articulation that focuses all their efforts on specific objectives per sector, leaving aside actions that strengthen coherence in the operationalization of sustainability frameworks. Moreover, participants stated that capacity issues also exist in contexts where ministries are critically understaffed, so despite possessing technical capacity, the extent of human resources is insufficient to deal with all the facets of DRR, CCA and sustainable development.

What opportunities, solutions, and recommendations for enhanced coherence do you see?

National strategies present an opportunity for coherence. At the national level, participants stated that it would be helpful to have nationwide focal points where the three agendas (SD, DRR, and CC) coincide under one unit to prioritize budget allocation and enhance coordination among the areas. Participants also identified issues in intersectoral communication at the national level and cross-sectoral and vertical institutional coordination.

Ins this regard, engaging the community within the existing frameworks is a significant opportunity for coherence. Institutional engagement and cooperation across realms and disciplines can aid in understanding perspectives and breaking down ideas into meaningful actions. One of those can be developing a single template for applying to the different funds to streamline the application process, which will remove the complexities and barriers to accessing funding.

It should be noted that the signing and adoption of different agendas such as the PA, the Kyoto Protocol, and the SDGs generate a kind of push for governments and institutions to partner in achieving the goals. Nevertheless, while adopting agreements offers much potential, it is also something that certainly needs to improve.

What aspects of the preliminary findings resonate with your work and experiences, and what is missing?

Participants claimed that expertise needs to be built on data dissemination and financing since these are the most challenging topics. Furthermore, the missing general themes include outdated risk identification and assessment, institutional challenges, financing, and limited capacities. On the other hand, although country capabilities are limited, the participants pointed to resilience as a unifying concept that can serve as a hinge for integrating and improving CCA, DRR and SD schemes. However, the need to clearly define it and to consider its limitations to coherence was highlighted.

How can non-governmental actors - such as civil society organizations, academic institutions, and non-governmental organizations - effectively participate in the coherence of global frameworks within a country?

Participants considered that capacity building, validation and coordination are crucial aspects to enhance participation and coherence. Inter-institutional and multi-stakeholder approaches are needed to avoid siloed work by the state. Capacity building can be promoted through training workshops for community members, the government, and the private sector.

Incorporating a multi-stakeholder approach should be considered an integral part of the formulation of public policies, especially in terms of validation and evaluation. These processes were deemed crucial to enhance stakeholder participation in policy implementation, build on and improve the institutions' expertise, and foresee their potential impact on national development plans.

Furthermore, the need for community engagement and community-led approaches was highlighted. Considerations for social protection mechanisms must be integrated into the agenda to build coherence. When people are aware of the processes, they can provide comments and feedback. Long-term exercises can enhance a policy informed nationally and not just by crucial sector workers or key DRR stakeholders. Getting ordinary citizens involved, especially preparedness, is essential because the Caribbean is one of the most disaster-prone regions. There is a need for a culture change for communities to embrace the emerging trends and opportunities available to understand the need for resilient adaptations.

Finally, climate refugees and migrants should be safeguarded, and their rights should be ensured by creating insurance and risk transfer mechanisms. It can require support from the private sector to engage in discussions on how to manage or transfer risk and displacement. Additionally, Universities can bring technical capacity to implement education and awareness programs related to CCA and DRR.

List of workshop participants

Name		Organization	Country	Group
Alana	Lewis	UNDRR		3
Amrikha	Singh	CARICOM	Guyana	3
Arlene	Laing	Caribbean Meteorological Organization	Trinidad & Tobago	2
			Subregional Headquarters for The Caribbean	1
Artie	Dubrie	ECLAC		
Candice	Ramkissoon	CANARI	Trinidad & Tobago	2
Carlos	Uribe	UNDRR		
Daniel	Macguire	UNHCR	Guyana	1
Daniela	Maestre	SEI	SEI Latin America	1
David	Purkey	SEI	SEI Latin America	
Diana	Mosquera	UNDRR		
Donneil	Cain	CCCCC Belize	Belize	1
Efraim	Hernández	SEI	SEI Latin America	2
Ezra	Christopher	Min. of Env. Antigua and Bar.	Antigua and Barbuda	2
Frank	Thomalla	Climate and Disaster Risk Research and Consulting (CDRC)	Australia	1

Name		Organization	Country	Group
Guims	Germain	UNDP	Haiti	2
Jair	Torres	UNDRR		
Javier	Blanco	UNDP		2
Jean Ronald	Alexandre	UNDP		1
Juan	Betancur	SEI	SEI Latin America	1
Juan	Pita	SEI	SEI Latin America	
Kathryn	Milliken	WFP		3
Kerian	Ferreira	Climate Institute	Trinidad & Tobago	3
Marcello	Arosio	UNDRR		
Maria	Bances Del Rey	UNHCR	Panama	3
Mario	Cárdenas	SEI	SEI Latin America	2
Montserrat	Xilotl	UNDP		1
Muhammad Anward	Baksh	ODPM	Trinidad & Tobago	3
Nahuel	Arenas	UNDRR	Panama	3
Nicholas	Grainger	WFP	Barbados	1
Orlando Enrique	León	National Unit for Risk Assessment Cuba	Cuba	1
Paul	Saunders	Caribbean Development Bank	Barbados	3
Piero	Telleiras	UNDRR		
Rudy	Montero Mata	National Unit for Risk Assessment Cuba	Cuba	2
Sendy Augustin	Salomon	UNDP	Haiti	2
Sherrod	James		Antigua and Barbuda	3
David	Smith	UWI	Jamaica	1
Stephen	Russell	NEMA	Bahamas	2
William	Evans	UN		

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