

Chapter 8

Disaster Risk and Resilience in Small Island Developing States

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The United Nations first Global Conference on the Sustainable Development of Small Island Developing States (SIDS) was held in Bridgetown in April 1994.¹ Emerging from the Conference was a development agenda for SIDS, agreed on by UN member states and known as the Barbados Programme of Action (BPOA). Disaster, risk and disaster risk reduction were important elements in the BPOA, which also had a strong focus on environmental protection, a significant issue for the world's micro-island states. In order to fully grasp what disaster, risk and risk reduction mean for Small Island Developing States, an understanding of scale and context is essential.

Caribbean SIDS and Their Vulnerability

The Barbados Conference agreed that SIDS possess peculiar characteristics and vulnerabilities, including extreme vulnerability to exogenous shock, both economic and environmental. Consequently, they warrant special attention in the multilateral system and require specific and specialised policy, programmatic and financing approaches. The Barbados Programme of Action therefore identified 12 priority areas which put disaster and risk reduction at the centre of the development agenda for SIDS.

Since 1994, SIDS priorities have been climate change and sea-level rise, natural and environmental disasters, management of wastes, coastal and marine resources, freshwater resources, energy resources, tourism resources, biodiversity resources, national institutions and administrative capacity, regional institutions and technical cooperation, transport and communication, science and technology and human resources development.

The multilateral system also accepted that SIDS' very characteristics and vulnerabilities make resilience building a priority. Resilience is necessary to reduce the number and impacts of shocks, build capacity against shocks, as well as boost the time it takes to recover from such shocks. Disaster risk reduction is a fundamental element of resilience building. The SIDS Accelerated Modalities of Action agenda, also known as the SAMOA Pathway,² the Outcome Document of the third and most recent International Conference on Small Island Developing States held in Apia, Samoa in 2014, specifically addressed the nexus between disaster and

¹ <https://www.un.org/en/conferences/small-islands/bridgetown1994#:~:text=The%20first%20conference%20on%20sustainable,development%20challenges%20they%20were%20facing>

² SIDS Accelerated Modalities of Action <https://www.undp.org/samoa/publications/samoa-pathway>

development.³ The SAMOA Pathway placed emphasis on a range of issues across the development landscape and linked disaster risk reduction to achieving the broad developmental goals of SIDS.

The World Bank has classified Latin America and Caribbean as the second most disaster-prone area in the world.⁴ According to World Bank figures, between 2000 and 2019, some 152 million people in the region were adversely impacted by 1205 disasters of varying gravity. Regional disasters have ranged from seasonal and flash floods to earthquakes and volcanos, protracted droughts and hurricanes, either on their own or in combination with each other, resulting in “complex and multidimensional humanitarian needs.”⁵ This background enables one to fully appreciate why, in the Caribbean, disaster risk reduction is not merely desirable; it is both imperative and urgent.

Disasters In Caribbean SIDS

From June to November every year, the populations of the Caribbean’s SIDS live with the existential threat of the annual Atlantic hurricane season. A few examples from the experiences caused by extreme weather events in the Americas will serve to give both the context and the scale of the challenge for Caribbean SIDS. If one says Hurricane Katrina, listeners immediately visualise the severe damage this Category 5 Hurricane wreaked in 2005 on the Florida panhandle and the gulf states of the United States of America, particularly Louisiana.⁶ While the damage of US \$160 billion to the affected states is staggering, these states constitute a small percentage of the land mass of the USA and less than 1% of the country’s GDP.

Compare, for instance, the impact of Hurricane Maria on Dominica, an island state of 70,000 people. A more intense Category 5 hurricane than Katrina, Hurricane Maria in 2017 caused US \$1.3 billion in damage, impacted 90% of the housing stock of the island and wiped out 226% of Dominica’s GDP.⁷ Crops, livestock, the island’s fresh water and food supply, supermarkets, schools, hotels, and major infrastructure, were decimated in the space of a few hours. A mere 188 kilometres or 117 miles away, less than 30 minutes by plane, Maria’s estimated damage to the twin island state of Antigua and Barbuda was US \$138 million. The devastation this hurricane left in its wake was so severe that the entire population of the island of Barbuda had to be evacuated to the main island of Antigua.

Dominica is a special case with regard to the numerous strikes from extreme weather events with which it has had to cope and to the extent of the damage inflicted on lives and livelihoods by those disasters. Hurricane Dean, which struck in 2007, wrought approximately US \$37 million in infrastructural damage and destroyed 99% of the island’s banana industry. Eight years later in

³ <https://www.preventionweb.net/publication/small-island-developing-states-accelerated-modalities-action-samoa-pathway>

⁴ <https://www.preventionweb.net/publication/natural-disasters-latin-america-and-caribbean-2000-2019>

⁵ <https://www.preventionweb.net/publication/natural-disasters-latin-america-and-caribbean-2000-2019>

⁶ <http://www.hurricanescience.org/history/studies/katrinacase/impacts/>

⁷ <https://www.gfdrr.org/en/dominica-hurricane-maria-post-disaster-assessment-and-support-recovery-planning>

2015, Tropical Storm Erika caused approximately US \$483 million or approximately 90% damage to the country's GDP. In 2017, in the midst of rebuilding and recovery efforts, Hurricane Maria struck the island, further derailing national efforts at development, rebuilding and resilience.

Two years after Hurricane Maria left the economies and infrastructure of several Caribbean islands in ruins, Hurricane Dorian, a Category 5 behemoth of August 2019, sat over the Bahamas, particularly Abaco and Grand Bahama,⁸ with its full force. After leaving the Caribbean, this unwanted, unruly visitor then hit Florida. The Interamerican Development Bank estimated the damage Dorian left behind on the Bahamian archipelago at US \$3.4 billion, or a quarter of the GDP of that country.

Further South, in the Caribbean island-chain, in the 2021 hurricane season alone, Barbados was struck three times; first in April by extensive ashfall from the eruption of the La Soufriere Volcano in St Vincent and the Grenadines.⁹ This was followed in June, by a freak storm with 4700 lightning strikes in less than an hour¹⁰ and then in July the island was lashed by Hurricane Elsa¹¹ at Category 1 strength. With 21 named storms, including seven hurricanes, the year 2021 was the region's fourth most costly on record.¹² Hurricane Ida, in particular, caused considerable damage.¹³

The National Oceanic and Atmospheric Administration (NOAA) of the United States Department of Commerce, predicted for 2023, "a range of 12 to 17 total named storms (winds of 39 mph or higher). Of those, 5 to 9 could become hurricanes (winds of 74 mph or higher), including 1 to 4 major hurricanes (category 3, 4 or 5; with winds of 111 mph or higher). NOAA has a 70% confidence in these ranges."¹⁴ At the time of writing in June 2023, Barbados was already struck by Tropical Storm Bret, the second named storm of the season, which passed 58 miles north of the island at just under hurricane strength on June 22 and then went on to hit St Lucia two days later.

The island states of the Caribbean are very much on the front line of the climate crisis and face increased frequency and intensity of extreme weather events, with acute human, social, economic and environmental costs.

⁸ <https://reliefweb.int/report/bahamas/facts-hurricane-dorian-s-devastating-effect-bahamas>

⁹ <https://bb.usembassy.gov/natural-disaster-alert-volcanic-ash-in-barbados-u-s-embassy-barbados-and-the-eastern-caribbean/>

¹⁰ <https://barbados.loopnews.com/content/weather-expert-says-2021-freak-thunderstorm-could-reoccur-607091>

¹¹ <https://reliefweb.int/report/barbados/dem-reports-damage-hurricane-elsa> and <https://today.caricom.org/2021/07/02/elsa-is-the-first-hurricane-to-hit-barbados-in-65-years-reports-of-damage-across-the-island/>

¹² <https://public.wmo.int/en/media/news/active-2021-atlantic-hurricane-season-officially-ends>

¹³ <https://www.rainviewer.com/blog/main-facts-about-2021-atlantic-hurricane-season.html>

¹⁴ <https://www.noaa.gov/news-release/2023-atlantic-hurricane-season-outlook>

The region has suffered intense, frequent, devastating and deadly storms over the last 40 years.¹⁵ As has been shown, some islands have been hit more than once in the same hurricane season and others have been struck in consecutive hurricane seasons.

Moreover, the primary source of Caribbean foreign exchange earnings is the very highly environmentally dependent tourism sector. Add to these realities the fact that Caribbean countries are amongst the most heavily indebted in the world, with debt to Gross Domestic Product (GDP) ratios that are close to or exceed 100%,¹⁶ and one gets a clear picture of the magnitude of the threat impacting the lives, livelihoods and general wellbeing of Caribbean citizens.

SIDS are generally import dependent, especially for food¹⁷ and fuel.¹⁸ Their manufacturing and trading sectors are miniscule. These factors, added to small terrestrial and population sizes as well as distance from centres of production and distribution, mean that SIDS cannot generate economies of scale. Caribbean countries are water stressed and water scarce¹⁹ and insofar as they import rather than grow their own food, cost, distance and other supply considerations make the region food insecure.²⁰ These stressors are exacerbated by the climate crisis and its resulting incremental damage and environmental disasters. Yet, Caribbean SIDS have set a development agenda and, with the exception of Haiti, have achieved high ranking on the United Nations Development Programme's (UNDP) Human Development Index (HDI).²¹

Therein lies the double-edged sword for regional island-states. This facade of success and development as indicated by the high GDP and HDI rankings of Caribbean SIDS, without comparative analysis and set off of risk and vulnerabilities, prevents the islands' access to grant funding and concessionary loans and forces them on to the private markets where development capital costs in the region reach interest rates of 40%.²² And from whom does the high-cost,

¹⁵ Gilbert, Ivan, Katrina, Georges, Jeanne, Wilma, Hugo, Irma, Maria, Dorian were some of the worst hurricanes to hit the Caribbean island chain from the 1990s onwards.

¹⁶ https://repositorio.cepal.org/bitstream/handle/11362/47743/3/S2101019_en.pdf and

<https://www.statista.com/statistics/813474/public-debt-gross-domestic-product-latin-america/>

¹⁷ Roughly \$7 billion per annum or 5% of the GDP of CARICOM countries [https://carib-export.com/blog/food-security-is-not-a-](https://carib-export.com/blog/food-security-is-not-a-dream/#:~:text=Over%20the%20period%202018%2D2020,approximately%205%25%20of%20GDP)

[dream/#:~:text=Over%20the%20period%202018%2D2020,approximately%205%25%20of%20GDP](https://www.globalpetrolprices.com/gasoline_prices/)

¹⁸ https://www.globalpetrolprices.com/gasoline_prices/ and

<https://data.worldbank.org/indicator/EP.PMP.SGAS.CD?locations=S3>

¹⁹ <https://blogs.worldbank.org/latinamerica/latin-american-climate-crisis-also-water-crisis-how-do-we-move-forward> <https://www.ecowatch.com/water-shortage-caribbean-2650142909.html> and

<https://www.forbes.com/sites/daphneewingchow/2019/02/12/in-search-of-a-solution-for-water-scarcity-in-the-caribbean/?sh=30012bc91511>

²⁰ <https://www.wfp.org/news/food-insecurity-caribbean-continues-upward-trajectory-caricom-wfp-survey-finds> <https://www.worldbank.org/en/news/feature/2022/06/28/food-insecurity-caribbean> <https://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1470147/>

<https://www.caribbeanclimate.bz/blog/2023/03/07/caribbean-food-security-at-risk-from-the-impact-of-disaster-related-events/> <https://www.worldbank.org/en/news/feature/2022/06/28/food-insecurity-caribbean>

²¹ <https://hdr.undp.org/data-center/human-development-index#/indicies/HDI> and <https://hdr.undp.org/data-center/country-insights#/ranks>

²² <https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Domestic-Investment-and-the-Cost-of-Capital-in-the-Caribbean-19206>

private capital come? By cruel irony, private capital comes from the investors of the very high-carbon emitting countries which are the principal contributors to climate change.

Disaster Risk Reduction

The climate crisis places Caribbean SIDS in the crosshairs of risk of annual extreme-weather wipe-out events. Finding the capital and managing disaster risk reduction is therefore a pivotal enabler for the sustainable development of Caribbean SIDS. Capital is needed to build resilient infrastructure, protect the environment, safeguard communities and sustain economies, as well as to finance adaptation and mitigation in the Caribbean and to climate-proof the region's highly vulnerable countries.

The Bridgetown Initiative (1.0, 2022²³ and 2.0, 2023)²⁴ being spearheaded by Prime Minister Mia Mottley of Barbados is seeking to pioneer a new way of doing business within the context of the international development system and the multilateral development banks. The Bridgetown Initiative is lobbying for:

- Provision of emergency liquidity.
- Making the financial system more shock absorbent by embedding natural disaster and pandemic clauses in all lending instruments. When disasters strike, these clauses would lead to an immediate and unconditional suspension of debt service and an extension of the loan maturity by two years, with no loss of interest, hence lenders suffer no prejudice. This provision of the Prime Minister Mottley's Bridgetown Initiative received a boon when the President of the World Bank, Ajay Banga, announced the Bank's intention to adopt the use of such clauses²⁵ at the Paris Climate Summit held in June 2023.²⁶
- Funding Loss and Damage by drawing from a levy on fossil fuel production or implementing an international carbon tax on the oil and gas sector.
- Restoring Debt Sustainability including by speeding up debt relief.
- Mobilising private sector investment for green and just transitions.
- Increasing official development lending for SDGs achievement.
- Ensuring the multilateral trading system supports a green and just transformation.

²³ <https://www.globalcitizen.org/en/content/climate-change-bridgetown-initiative-mia-mottley/> and Bridgetown Initiative 2.0 <https://gisbarbados.gov.bb/blog/bridgetown-initiative-2-0-highlights-six-key-action-areas/>

²⁴ <https://gisbarbados.gov.bb/blog/bridgetown-initiative-2-0-highlights-six-key-action-areas/>

²⁵ <https://www.worldbank.org/en/news/factsheet/2023/06/22/comprehensive-toolkit-to-support-countries-after-natural-disasters> and <https://www.cnbc.com/2023/06/22/world-bank-unveils-debt-payment-pause-for-disaster-hit-countries.html>

²⁶ <https://www.theguardian.com/world/2023/jun/23/paris-climate-finance-summit-fails-to-deliver-debt-forgiveness-plan>

- Expansion of the lending facilities of multilateral development banks to better reach the climate vulnerable, particularly those the GDP of which prevents access to grants or concessionary climate financing.
- Establishment of a Global Climate Mitigation Trust.
- Making special drawing rights (SDRs) available to the developing countries, the most climate vulnerable which truly need the financial resources, rather than keeping them on standby for those which neither need nor use these resources.
- Reforming the governance and operations of International Financial Institutions.
- Expanding MDB lending for climate and SDGs by \$1trn by encouraging MDBs to lend a further \$1 trillion by raising their risk appetite and including donor guarantees and SDRs when determining their lending room.

Shaved down to its core elements, the Bridgetown Initiative unlocks capital that can be used for disaster risk reduction, disaster risk mitigation, and the kind of resilience building that characterises the Blue and Green Economies and climate proofs SIDS and small developing countries. The Initiative is in alignment with the mandates set out by the Climate Vulnerable Forum (CVF)²⁷ and the Vulnerable 20 (V20),²⁸ a group of countries regarded as disproportionately vulnerable to the impacts of climate change. Some of the principal objectives of the V20 are “to strengthen economic and financial responses to climate change and the promotion of climate resilient and low emission development ... with full competence for addressing economic and financial issues multilaterally.”²⁹

More than ever, the spreading tentacles of the climate crisis and the multiplicity of global disasters and their pervasive impacts make it incumbent on the multilateral system to integrate disaster risk reduction into social, economic and environmental planning processes as well as international conventions. In 2024, the United Nations will host a number of conferences on themes such as Oceans, SIDS, Water, Global Supply Chains, Biological Diversity and The Summit of the Future, to name just a few. It is becoming increasingly urgent to consider the impact of disasters on these thematic areas, as well as in the context of desertification, water, food and nutrition security, financing for development, and numerous other UN conventions and priority areas.

Consideration also has to be given to the health risks that follow extreme weather events, in addition to the scarcities of food and fuel coupled with severe price spikes. The issue of disaster risk reduction must be fully integrated into the multilateral development agenda and national development planning and strategies. It is noteworthy that following Maria’s battering, Dominica

²⁷ <https://thecvf.org/our-voice/news/press-releases/climate-change-wiped-out-fifth-of-vulnerable-countries'-wealth-over-last-2-decades---report-v20-group-of-55-economies-reinforce-demands-for-international-funding-for-loss-and-damage>

²⁸ Afghanistan, Bangladesh, Barbados, Bhutan, Costa Rica, East Timor, Ethiopia, Ghana, Kenya, Kiribati, Madagascar, the Maldives, Nepal, the Philippines, Rwanda, Saint Lucia, Tanzania, Tuvalu, Vanuatu and Vietnam

²⁹ <https://www.v-20.org/about>

identified resilience building as a national policy priority and developed a Disaster Resilience Strategy.³⁰

Of equal importance to the issue of disaster and risk is insurance, which is intended to address the budget volatility and high expenditures which disasters precipitate. Sendai promotes risk insurance as one of the financing solutions for disasters. Developed with funding from the Government of Japan, the Caribbean Catastrophe Risk Reduction Facility (CCRIF) “is a risk pooling facility, owned, operated and registered in the Caribbean for Caribbean governments.”³¹ Its purpose is to limit the catastrophic financial impact that extreme weather events create for the budgets of Caribbean governments and the lives of citizens “by quickly providing short term liquidity. ... It is the world’s first and, to date, only regional fund utilising parametric insurance and low pricing.” While insurance represents pre-disaster planning, it is but one of many approaches to disaster risk and financing in the Caribbean.

A corollary of the provision of insurance is the existence of databases and properly resourced statistical departments that have the capacity to actually document the nature, scale, and persistence of losses from disasters. That documentation should take place whether the losses are from sudden onset disasters or are incremental losses caused by an inability to adapt or mitigate. Documentation, record-keeping and statistical collection and analysis are important tools in planning and preparing for and managing disaster risk. In computing elements of loss and damage and the framing of a multi-dimensional vulnerability index, it is vital that national debt, the degree of climate vulnerability, and the capacity to and time taken to recover from climate disasters be considered crucial criteria for inclusion and analysis if such an index is to be beneficial to the most vulnerable and constitute an effective tool for widescale use.

Given this shortfall and the state of the planet, however one views the disasters to which the climate-vulnerable SIDS are exposed, it is imperative that the Parties to the UNFCCC target 1.5 in their NDCs at COP 28. This is all the more necessary considering the very narrow window that the Intergovernmental Panel on Climate Change³² (IPCC) has determined to be available for the global family of nations to course correct and halt the climate crisis. Greater ambition, even greater effort and far less lip service are needed if key targets and timelines set by the IPCC are to be met. The development challenges of our era call for action at reducing carbon emissions and accelerating efforts to achieve the SDGs, which United Nations member states were not target to reach even prior to the COVID-19 pandemic.³³

Sendai and the CARICOM Development Agenda

The Sendai Framework is critical to SIDS because it incorporates multidisciplinary and cross-sectoral approaches to disaster risk reduction. It focuses on mainstreaming for resilience building

³⁰ <https://www.imf.org/en/Publications/CR/Issues/2021/08/11/Dominica-Disaster-Resilience-Strategy-463663>

³¹ <https://caricom.org/institutions/caribbean-catastrophe-risk-insurance-facility-ccrif/>

³² <https://www.un.org/en/climatechange/reports> <https://www.wri.org/insights/ipcc-report-2022-climate-impacts-adaptation-vulnerability>

³³ <https://news.un.org/en/story/2021/07/1095722> <https://unstats.un.org/sdgs/report/2022/>

and prioritises the disaster development link. The Sendai Framework's seven global targets³⁴ are consistent with the policy approaches of the Caribbean Community (CARICOM).³⁵ The Caribbean Disaster Emergency Management Agency (CDEMA) is the regional inter-governmental agency for disaster management in the Caribbean Community (CARICOM). It was established in 1991 and was initially known as Caribbean Disaster Emergency Response Agency (CDERA). This successor organisation, CDEMA, has primary responsibility for the coordination of emergency response and relief efforts to its Participating States which require such assistance.

The Comprehensive Disaster Management (CDM) Strategy is the Caribbean's disaster risk reduction framework which is aligned to the Sendai Framework. It is an integrated and proactive approach to disaster management and seeks to reduce the risk and loss associated with natural and technological hazards and the effects of climate change and to enhance regional sustainable development. For Caribbean SIDS, resilience-building must be a key development across the social and productive sectors. The comprehensive disaster management strategy which is being used in the Caribbean is helpful and could, in fact, be scaled up or replicated across other Small Island Developing States.

The CDM promotes “the management of all hazards through all phases of the disaster management cycle – prevention and mitigation, preparedness, response, recovery and rehabilitation - by all peoples - public and private sectors, all segments of civil society and the general population in hazard prone areas. CDM involves risk reduction, management and integration of vulnerability assessment into the development planning process.”³⁶

There are points of intersection between Sendai and Caribbean regional policy; for example, attempts at building infrastructure, reducing the impact of disasters, minimising the number of people impacted by disasters, and reducing the nature and types of losses. Disaster planning for the water, energy and agriculture sectors is central to disaster risk reduction and disaster impact minimisation. It bears repetition that Sendai also promotes institutionalising the documentation of disaster losses. This will be a critical input to the loss and damage discussion at COP 28 and to the development of an effective MVI. CARICOM has several ongoing initiatives to develop databases for climate impacts and disaster losses and also to standardise post-disaster assessments as much as possible.

Early Warning Systems (EWS)

The United Nations Office for Disaster Risk Reduction (UNDRR) sees the need for “the adoption of a comprehensive risk management approach that encompasses loss and damage, a shared understanding of risk, and the integrated implementation of disaster risk reduction (DRR) and climate change adaptation strategies.” It regards these as “crucial” elements “for formulating

³⁴ <https://www.undrr.org/implementing-sendai-framework/what-sendai-framework>

³⁵ <https://caricom.org>

³⁶ <https://www.cdema.org/cdm>

effective policies and plans to address climate impacts and build resilience.”³⁷ An early warning system for disaster risk reduction is defined by UNDRR as an “integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.”³⁸

At COP 27, United Nations Secretary General António Guterres launched the UN’s Early Warning Systems for All (EWS4ALL),³⁹ which are important in avoiding disasters, mitigating disaster impacts and building resilience. Understanding risk and providing early warning systems for disaster allows for informed decision making, community sensitisation and whole of society responses. CDEMA has a regional response mechanism⁴⁰ that allows for early response from all participating countries and stakeholders – national, regional and international.

Despite their efficacy, cost effectiveness and beneficial impacts, more than half of UN Member States do not have early warning systems. The numbers for the Caribbean are similar. Some 19 States and territories participate in CDEMA, but only one third of them have established roadmaps for multi-hazard early warning systems.⁴¹ To strengthen response and capacity, the Caribbean’s first regional plan on early warning systems was launched between Caribbean and UN leaders in February 2023.

The scientific evidence on climate change is clear and mounting, and it paints a stark, almost apocalyptic future for Small Island Developing States. Climate parameters in the region are changing, as has been posited by (CDEMA) and climate change scientists who presented their findings in the 2020 State of the Caribbean Climate Report. In the circumstances, CDEMA has cautioned that it is unreliable to use past disaster events as an indicator of what to expect in future disasters. CDEMA therefore stresses the enhanced need for investment in Early Warning Systems (EWS), particularly multi-hazard early warning systems.

By way of an example of what is happening in the Caribbean region, the Barbados Meteorological Service (BMS) has been in the process of revamping its EWS since June 2020. This process has included implementing national multi-hazard, impact-based forecasting (IBF) products and services to encompass the major hazards that pose a significant threat to lives and livelihoods in that country. The hazards covered include excessive rainfall, high winds, marine swells, Sahara dust and severe thunderstorms; tsunamis and volcanos were added to the list in 2021. To foster national support, stakeholder consultations were included, as it is the strong view of the BMS that the national early warning system must be an amalgamation of various processes, networks and technology and must be under near constant review by the BMS, national stakeholders and all citizens of Barbados.

³⁷ <https://www.undrr.org/implementing-sendai-framework/what-sendai-framework>

³⁸ <https://www.undrr.org/terminology/early-warning-system> <https://www.un.org/en/climatechange/climate-solutions/early-warning-systems>

³⁹ <https://unsdg.un.org/latest/stories/caribbean-sees-first-regional-launch-global-plan-early-warning-systems>

⁴⁰ <https://www.cdema.org/rrm/>

⁴¹ <https://www.cdema.org/ews-project>

A United Nations report on Caribbean, multi-hazard, early warning systems (MHEWS) is available.⁴² It notes that gender considerations will have to be fully integrated into disaster risk reduction. The report further notes that the Caribbean is at a turning point towards addressing MHEWS in a comprehensive and sustainable manner. Such MHEWS are also being developed under South-South cooperation initiatives.⁴³ Technical cooperation is ongoing, but ultimately the establishment and functioning of such systems will depend on the access to the resources required to set these systems up and keep them working at critical times, particularly at the community level. Training for communities and identifying leaders who can be trained to support communities and assist with the spreading of best practices for disaster risk reduction at the community level will also be invaluable.

The Sendai Framework also articulates the following: the need for improved understanding of disaster risk in all its dimensions of exposure, vulnerability and hazard characteristics; the strengthening of disaster risk governance, including national platforms; accountability for disaster risk management; preparedness to “Build Back Better;” recognition of stakeholders and their roles; mobilisation of risk-sensitive investment to avoid the creation of new risk; resilience of health infrastructure, cultural heritage and work-places; strengthening of international cooperation and global partnership, and risk-informed donor policies and programs, including financial support and loans from international financial institutions. There is also clear recognition of the Global Platform for Disaster Risk Reduction and the regional platforms for disaster risk reduction as mechanisms for coherence across agendas, monitoring and periodic reviews in support of UN Governance. In the Caribbean where the risk and impact of disasters is high, the necessity of such EWHS and the protection offered by the policy umbrella of Sendai are equally high.

Given the high risk of and vulnerability to extreme weather events, the small island developing states of the Caribbean have given priority to disaster risk reduction and resilience building. Both are planks in the construction of national and regional development. The test of disaster risk reduction and resilience building is not merely one for the Caribbean region. Globally, from wildfires to droughts, to crop failures and famines, to heatwaves, to cyclones, to melting tarmacs, melting ice caps, ice storms, and every manifestation of extreme weather events, the world must adapt to and mitigate against climate change.⁴⁴

COVID-19 showed how interconnected the world is and the way in which a health challenge in the East ‘travelled’ the globe, not only affecting healthcare systems but supply chains, inflation, social stability, the labour market and every sphere of development, society, economy and environment. The lesson of Covid was that national problems cannot be contained or prevented from crossing borders. Common solutions are needed to save the planet and its people. Disasters

⁴² <https://reliefweb.int/report/world/caribbean-multi-hazard-early-warning-systems-mhews-thematic-case-view-mid-term-review-implementation-sendai-framework-disaster-risk-reduction-2015-2030>

⁴³ <https://www.undp.org/sites/g/files/zskgke326/files/migration/latinamerica/9e95e812b60a808821f897ae31ae7fc2af72d14dd11437c35cc2bc7f9f760c1.pdf>

⁴⁴ <https://www.globalcitizen.org/en/content/photos-extreme-weather-events-2023-climate-change/#:~:text=We%27ve%20already%20seen%20a,is%20happening%20here%20and%20now>

and difficulties are not another's – they belong to all of us. Our responses will determine if we succeed together or fail apart and fall apart. Real resilience is working together and winning together.