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Introduction

The Caribbean faces a long road to recovery after the pandemic rocked the region, devastating its vital tourism industry and exposing the deep-rooted vulnerabilities of countries which face multiple hazards and cascading risks.

As they get back on their feet, Caribbean countries now have a rare opportunity to future-proof both their economies and communities by fully integrating disaster risk reduction into their recovery, and building long-term resilience.

“COVID-19 is a vivid example of systemic compound risk,” says Mami Mizutori, UN Special Representative of the Secretary General for Disaster Risk Reduction. “It shows us that the very nature and scale of risk has changed to such a degree that it has the potential to overwhelm established risk management approaches and the reach of institutions. The Caribbean is no exception.”

As recent events have all too clearly demonstrated, disasters never happen in a vacuum. In Haiti, tropical deluges complicated earthquake rescue efforts, while St Vincent and the Grenadines was carpeted in volcanic ash as it wrangled with COVID-19 and a dengue outbreak.

Despite tightly-stretched finances, Caribbean countries have made considerable strides towards risk reduction. Multi-hazard early warning systems are saving lives, schools are becoming safer and community-level resilience is on the rise.

They are tightening governance and closing in on Target E of the Sendai Framework for Disaster Risk Reduction 2015-2030 which aims for risk-informed development through comprehensive indicators and targets.

Despite the chaos it has caused, the pandemic has revealed important silver linings. Regional cooperation is rising, systemic governance is center stage and businesses are taking an important role in disaster risk reduction — vital steps towards the ultimate goal of saving lives and livelihoods.

Disasters in the Caribbean have caused more than 245,000 deaths and cost $134 billion in damages since 1980, according to emergency events database EM-DAT.
Contents

How systemic risk plays out in real time................................................................. 6
Why we must prepare for a multi-hazard future ...................................................... 7
The VII Regional Platform for Disaster Risk Reduction ........................................ 8
Silver linings: Risk reduction center stage as Caribbean recovers ......................... 9
Battered Caribbean businesses set hopes on resilient future ............................... 12
On message: St Vincent eruption puts early warning to the test ............................ 15
Survival mode on as pandemic ramps up Caribbean debt .................................... 18
Making Caribbean children count in drive for safer schools ............................... 21
Caribbean beach communities strive to shut out tsunami risk ............................ 24
Climate, COVID spur Caribbean to ramp up risk reduction planning ...................... 27
How preparedness makes the difference when disaster hits ............................ 30
Conclusion .................................................................................................................... 33
As the United Nations Office for Disaster Risk Reduction, UNDRR brings together governments, partners and communities to reduce disaster risk and losses to ensure a safer and more sustainable future.

UNDRR oversees the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 which provides concrete actions to help countries lower their existing exposure and prevent the emergence of fresh risk.

As climate change and rapid urbanization threaten to exacerbate shocks and stresses, UNDRR focuses on the intersection between understanding risk and risk impact: reducing disaster loss and preventing the emergence of new risk. This includes promoting a holistic approach to governance and the systemic nature of risk.

In the Caribbean, UNDRR works with partners to make nations, schools, businesses and communities more resilient. By limiting the impact of the multiple, cascading hazards that threaten the region, it plays an important role in keeping development on track.
The nature of our globally interconnected world means shocks, stresses and crises reverberate globally and are exacerbated by the interaction between climate change, ecosystem fragility, pre-existing inequality, and political or financial instability.

COVID-19 is a vivid example of systemic compound risk.

It shows us that the very nature and scale of risk has changed to such a degree that it has the potential to overwhelm established risk management approaches and the reach of institutions.

The Caribbean is no exception.

As well as having to respond to the pandemic, it has experienced a very active hurricane season, a dengue epidemic, an earthquake and a volcano eruption testing its capacity to handle multiple hazards from diverse origins at the same time.

The global health crisis is affecting sectors that are critical for generating income and employment, such as tourism, and has revealed the precarious nature of other systems upon which trade, food, energy, transportation, and social safety nets depend.
By Raul Salazar, Chief of the United Nations Office for Disaster Risk Reduction (UNDRR) – Regional Office for the Americas and the Caribbean

The COVID-19 pandemic has changed our world and dramatically reshaped our reality. It has exposed the fragility of our networks and shaken our political, economic, commercial and social systems. It has redefined the meaning of governance.

Above all, the crisis has clearly demonstrated the profound impact of cascading disasters and systemic risks. It has highlighted our vulnerabilities to multiple threats, as we have seen during the earthquakes and volcanic eruptions that hit Caribbean countries during the pandemic.

Over the last 18 months, the Caribbean has exemplified the importance of implementing disaster risk reduction policies and strategies. Countries have grappled with a collapse in tourism alongside outbreaks of dengue and one of the most active cyclonic seasons in history.

Recovery from these events has required comprehensive planning and we have seen how the public and private sectors, along with civil society, have joined forces to create a more resilient and better prepared region.

Increasingly, we are seeing countries take a proactive approach to their national risk governance and make risk reduction — instead of emergency response — their primary focus.

This magazine shows precisely how the Sendai Framework for Disaster Risk Reduction 2015-2030 sets the stage for a multi-sectoral and multi-actor approach to tackling the increasingly complex hazards the Caribbean faces, both now and into the future.
The VII Regional Platform for Disaster Risk Reduction in the Americas and the Caribbean

Jamaica played host to November’s “VII Regional Platform for Disaster Risk Reduction in the Americas and the Caribbean” which provided a vital opportunity to define the region’s disaster risk reduction agenda at a pivotal time for countries as they look to recover from the pandemic.

Previously postponed due to COVID-19, the four-day virtual event brought together thousands of people from across the region to discuss how to advance resilience and tackle the multiple challenges that risk jeopardising growth and sustainable development.

Over 2,500 people joined the online event to share their expertise, concerns, perspectives and ideas on how to address climate risk and tackle the social and economic inequalities that have deepened during the pandemic.

Jointly organized by UNDRR and the Caribbean Disaster and Emergency Management Agency (CDEMA), the Regional Platform demonstrated the need for greater collaboration and deeper alliances as countries address the impacts of disasters and work to build resilient economies in the Americas and the Caribbean.
Tourism — the lifeblood of the Caribbean — is slowly trickling back and COVID-19 vaccines are being rolled out, but it could take several years for the hardest-hit countries to rebound from the pandemic.

Shutting their borders early initially helped countries but now experts worry the pandemic’s bruising economic impact combined with vaccine inequality will make people more vulnerable to other hazards.

Analyzing the fall-out of the complex COVID-19 crisis and integrating learnings into robust risk reduction strategies will be key to helping the Caribbean deal with future emergencies, say experts.
Facing challenges:

**Patchy access:** Inadequate supplies of affordable vaccines for countries including Jamaica and Trinidad and Tobago could delay their recovery.

**New variants:** As tourists return to Caribbean beaches, there’s a risk of new variants arriving with them, causing dangerous hotspots and burdening limited health facilities.

**Business as usual:** A sharp downturn coupled with heavy debt and limited investment means SIDS have little opportunity to diversify economies, leaving them vulnerable to future crises.

**Complicating response:** Dealing with all-too frequent hazards such as hurricanes has become even trickier. Quarantine restrictions risk complicating deployment, response and recovery in disaster scenarios.

Caribbean countries want to vaccinate 70 percent of their populations by year end. So far, 5.5 million jabs have been administered.
Vaccination, vaccination, vaccination and the right balance of public health measures will allow us to return to our main economic activity, which is tourism.

Dr. Joy St. John
Executive director of the Caribbean Public Health Agency (CARPHA)

Rethinking risk:

**Big picture:** The pandemic is sparking a stronger emphasis on health, resilience and cooperation among countries in the region which could strengthen systemic governance and make it easier to tackle common problems down the track.

**Inclusivity:** Opening up social protection measures to the Caribbean’s informal workers and including migrants in vaccination programs would better support families and bolster communities.

**Think holistic:** COVID-19 is changing the way countries view recovery. How effectively countries tackle the far-reaching social, economic and psychological impacts will determine how fast they bounce back.

**Advance planning:** Grabbing the opportunity to introduce stringent health and safety measures into sectors such as tourism could limit the impact of future health crises.
Thousands of small companies across the Caribbean have been forced to lay off staff or pull down the shutters for the last time as the impact of pandemic lockdowns and travel bans take their toll.

The pandemic has shown just how unprepared most small and medium enterprises (SME) were to deal with any crisis, let alone a once-in-a-lifetime event.

Now, as SMEs gear up to help drive recovery, many are using UNDRR’s business resilience “toolkits” to analyze their risk and put mitigation and prevention measures in place to better prepare for the next emergency.
Facing challenges:

**Cash cushion:** Larger firms are more likely than small businesses to have business continuity plans in place and healthy cash reserves to cushion them through COVID-19 and future crises.

**Shoestring:** Even before the pandemic, many SMEs struggled and few had money set aside to draw upon in difficult times. Now, many have exhausted whatever reserves they had and are increasingly vulnerable.

**Limited help:** Informal businesses that operate under the radar are struggling to tap into emergency business grants, loans or cash transfers to help them survive the impact of the pandemic.

**Slow return:** The myriad businesses that rely on tourism face extended uncertainty as many people remain reluctant to travel and a number of restrictions remain in place.
Nearly 90 percent of micro, small and medium-sized businesses had no contingency plans in place at the start of the pandemic, according to a CARICOM and Caribbean Export Development Agency survey.

**Rethinking risk:**

**Tighten up:** Businesses should look at ways to reduce their exposure to multiple hazards, become more efficient, ensure employee safety and calculate how much they can afford to set aside for emergencies.

**Go digital:** Ramping up their online presence, boosting cybersecurity and ensuring vital documents are stored in the cloud can limit the negative impact of future risks.

**Ask for help:** Tapping into the many available resources can help businesses boost their resilience. UNDRR skills-building workshops, organized with CARICHAM and regional chambers of commerce are providing support to small business owners.

**Tool-up:** UNDRR’s COVID-19 Small Business Continuity and Recovery Planning Toolkit helps firms protect their employees, customers and operations. Its online Quick Risk Estimation tool allows entrepreneurs to gauge their risk exposure.
Menaced by increasingly ferocious and costly hurricanes, alongside volcanic eruptions, earthquakes and floods, Caribbean countries have made huge strides towards developing multi-hazard early warning systems (MHEWS).

And these systems are saving lives. Thanks to extensive early warning, no deaths or injuries were reported from the recent volcanic eruption in St. Vincent and the Grenadines.

However, experts say technology gaps and patchy messaging are putting people at risk. Fine-tuning alerts to better target women, children and the LGBTQI community can boost their capacity to take action, as can integrating cultural aspects and perceptions into MHEWS development.
Rethinking risk:

Guidelines: Establishing a common regional framework is crucial to strengthening MHEWS and ensure forecasting helps protect communities. Closer cooperation with broadcasters is key to delivering clearer and more targeted information and alerts.

Leave no one behind: Women and children still need more protection in disasters. They run the risk of violence in shelters and are among the most impacted by the economic fallout of events.

Safe space: Confronting concerns LGBTQI-identifying people have about potential discrimination in shelters can help persuade them to evacuate to safe locations in time.

On paper: Communities need to strategize, practice and then document their evacuation plans so they are easier to carry out when an emergency strikes.

Climate change is making the storms that menace the Caribbean deadlier than ever. The 2020 hurricane season was the most active on record, while Hurricane Irma in 2017 ranked as one of the longest lasting events with 60 hours at Category 5.
Facing challenges:
Mix it up: From WhatsApp messages and emergency apps, to radio, television and bullhorns, using a variety of communication methods means more people are being reached.

Setting standards: CDEMA is setting up a consortium to bring together all groups dealing with hurricanes and other events to decide how to best get information across.

Make an impact: The Climate Risk Early Warning Systems (CREWS) initiative has strengthened climate-related and hydro-meteorological hazard warnings and is promoting a shift to impact-based forecasts to help fine tune alerts and better prepare for events including hurricanes and storms.

Mind the gap: Insufficient equipment is making it harder to monitor hazards such as tsunamis, so vulnerable communities have to rely heavily on spotting the natural warning signs.

“A warning is only effective if it gets to the people who need it most, in the way they can interpret it when they need it most and have the ability to take the right action.”

Andria Grosvenor
Deputy executive director of CDEMA
Survival mode on as pandemic ramps up Caribbean debt

The region’s fragile economy has been pummeled by the pandemic that kept tourists from its beaches and left heavily-indebted countries ill-prepared to cope with hazards such as violent hurricanes that can trigger emergencies.

Gnawing away at the disaster contingency funds countries struggled to save, the pandemic has forced many to ramp up borrowing and slash investments designed to make communities and infrastructure more resilient.

Devising innovative risk financing options while ensuring businesses and communities reduce their risk and are better prepared to deal with events will ultimately drive down damage and costs, say experts.
Facing challenges:

Debt burden: Heavily-indebted even before the pandemic, many countries have borrowed more to bolster health programs and provide support for families and businesses.

Paying the price: Tourism-dependent countries have been particularly hard hit. In Antigua, growth tumbled 16 percent last year and fell nearly 18 percent in Barbados.

Cutbacks: With limited room for maneuver, some countries may be forced to reduce their spending on adaptation, mitigation and preparedness programs.

Budget squeeze: As development partners’ finances come under increased pressure, support packages for Caribbean countries could be further reduced.

The Caribbean economy will grow 4.1 percent in 2021 as countries begin to recover, says the Economic Commission for Latin America and the Caribbean (ECLAC).
**Rethinking risk:**

Low key: As well as headline-grabbing hurricanes, countries need to pay more attention to lower-profile crises such as flooding or droughts which can have devastating impacts.

Spread the load: Governments alone cannot shoulder the responsibility for risk financing and need to more closely involve the private sector in disaster risk reduction.

Regional fund: Now more than ever, the countries need to consider setting up a regional contingency fund to help tackle systemic events such as the pandemic, say experts.

New tools: The Caribbean Catastrophe Risk Insurance Facility (CCRIIF) is considering branching out to add new parametric insurance policies for volcanic eruptions and drought.
Making Caribbean children count in drive for safer schools

The disruptive school closures sparked by the crisis have underscored the need for greater educational continuity and a stronger focus on school safety as the Caribbean faces ever-more deadly and systemic risks.

Programs to gradually assess and retrofit outdated facilities, ensure new buildings are safe and resilient and train both teachers and pupils, are gradually helping schools become better prepared for future cascading hazards.

Now, countries need to ramp up investments in education and technology so they can build on lessons learnt during the pandemic and apply them to future crisis scenarios, say experts.
Facing challenges:

Online learning: The remote learning systems most Caribbean countries scrambled to put in place during the pandemic can now be used to continue education in the aftermath of events such as storms, earthquakes or volcanic eruptions.

Connecting children: Countries such as the Dominican Republic, Jamaica and St. Lucia have rolled out free Wifi and handed out devices to teachers and pupils so they can learn remotely.

Back to the future: Countries are gradually improving outdated school facilities to make sure they are safe and new buildings are green and resilient.

Teach the teachers: Extensive school safety training for both teachers and pupils is better preparing them to deal with emergencies such as hurricanes, earthquakes and floods.

Rethinking risk:

Digital divide: Investing more in technology can help bridge gaping divides in the region. Many Caribbean homes have patchy electricity, let alone Wifi, and parents cannot always provide their children with devices so they can learn remotely.

Doing the math: The pandemic has underscored the need for greater investment in education to ensure school buildings are safe and have adequate water and sanitation facilities.

Staying in touch: More emphasis should be placed on protecting vulnerable children in remote learning environments where teachers find it hard to identify those who need psycho-social support, and drop-out rates rise.

In line: Education policies need to be aligned with the Sendai Framework for Disaster Risk Reduction 2015-2030, Sustainable Development Goals and the Paris Agreement. They should also be synced with national development, adaptation and disaster risk reduction strategies.
Eighteen countries including Cuba and Turks and Caicos have signed up to the Caribbean Safe Schools Initiative (CSSI) which provides a “roadmap” showing how to make schools safer and serve as a mechanism for improving cooperation among Caribbean countries.

“COVID-19 has provided us with an opportunity to enhance our whole resilience in terms of ensuring that education continues, even in times of national disasters or a pandemic.”

Curtis King
Minister of Education of St. Vincent and the Grenadines:
It’s been 75 years since a major tsunami hit the Caribbean but coastal communities are strategizing evacuation routes and running drills to ensure they will be safe if another crashes ashore.

The massive impact of the recent La Soufriere volcanic eruption in St Vincent and the Grenadines and the latest earthquake in Haiti have helped raise awareness of the need to prepare for less frequent, but potentially deadly hazards such as tsunamis.

But despite growing recognition of tsunami dangers, the pandemic risks reducing the funds available to better protect low-lying coastal areas which are vulnerable to multiple, complex threats.
Over 400,000 people took part in this year’s virtual Caribe Wave event which saw communities from 48 countries run through their tsunami evacuation plans.

**Rethinking risk:**

**Damaged goods:** A number of faulty sea-level monitoring stations in the Caribbean have not been duly maintained and repaired during the pandemic which means critical monitoring data may not be captured.

**Increasing risk:** Experts say that insufficient sea-level monitoring equipment risks making the region more vulnerable to tsunamis.

**Cash strapped:** More funding is needed to help communities prepare for less frequent but potentially devastating events such as tsunamis.

**Vulnerabilities rise:** Taking a more resilient approach to infrastructure is critical in the Caribbean where many assets such as roads and airports are in low lying coastal areas.
When the next tsunami hits, if countries aren’t ready, the devastation could be even worse than they’ve seen in hurricanes and earthquakes.

Christa von Hillebrandt-Andrade
Manager of the US National Weather Service’s Caribbean Tsunami Warning Program:

Facing challenges:

On your marks: More than 60 communities across the Caribbean, from Haiti to Grenada, are now “Tsunami Ready”, with evacuation routes prepared, and signage and community education programs in place.

Countdown: The pressure is on to ensure all vulnerable Caribbean communities are prepared for tsunamis by 2030.

Keep it simple: Across the region, tsunami risk is largely being integrated into existing disaster risk reduction planning and multi-hazard early warning systems.

Ground level: Low-lying coastal communities are actively involved in initiatives to run drills and identify vulnerable people who would need extra help in the event of a tsunami warning being issued.
Climate, COVID spur Caribbean to ramp up risk reduction planning

The harsh impact of COVID-19 on the Caribbean has rammed home the need to lock-down comprehensive strategies to help tackle disasters and improve governance as all forms of risks continue to rise.

While just a handful of Caribbean countries have fully-fledged disaster risk management frameworks in place, others plan to overcome hurdles thrown up by the pandemic and formalize multi-hazard strategies by year-end.

By setting up strategies, known as Country Work Programmes (CWP), the Caribbean is aligning with Target E of the Sendai Framework for Disaster Risk Reduction 2015-2030. This urges countries to target risk-informed development and resilience by implementing national and local strategies.
Facing challenges:

**Guiding hand:** CDEMA and UNDRR are playing a key role in supporting Caribbean countries as they develop CWPs which involve all sectors in cutting risk as persistent disasters threaten to derail development.

**International standards:** These climate-sensitive strategies are helping countries identify gaps and allowing them to measure their disaster risk management against international standards.

**Over the line:** Dominica, Barbados, Haiti, St. Lucia and Guyana have so far completed CWPs. Antigua and Barbuda, and St. Vincent and the Grenadines are close to finalizing theirs, while Trinidad and Tobago, Suriname, The Bahamas, St. Kitts and Nevis and Grenada hope to complete their CWP later this year.

**Sharing responsibility:** The multi-year strategies help spread responsibility for disaster risk management across government and include business, nonprofits and the public.

Rethinking risk:

**Limited resources:** Often run with just a few staff and already stretched disaster management offices, means SIDS often need more support to draw up the technical strategies.

**Delays:** The combination of the pandemic and the need to involve a wide variety of sectors is slowing the completion of the plans which require government sign-off.

**Drilling down:** Countries need to analyze how they have dealt with the pandemic and recent disasters so they can incorporate those learnings into improved preparedness.

**Long-term vision:** Strategic plans can play a vital role in the short-term, but experts say that countries need to look much further into the future if they want to ensure comprehensive development.
Across the Americas and the Caribbean, 49 percent of countries are now compliant with Target E of the Sendai Framework for Disaster Risk Reduction 2015-2030.

“It’s the performance measurement framework which is really the crux of the CWP... It demystifies who is responsible for what and when it should be done.”

Allana Walters
Acting mitigation and recovery manager at Guyana’s Civil Defence Commission
Many programs designed to boost Caribbean resilience and preparedness are funded by the Europe Commission Humanitarian Aid Office (ECHO which has provided $183 million in aid to the region — excluding Haiti — since 1994.

With ECHO funding, UNDRR has created the dipecholac.net platform for organizations to highlight their Caribbean work and show how projects relate to the Sendai Framework for Disaster Risk Reduction 2015-2030.

As middle-income Caribbean countries compete with other parts of the world for already tight donor funding, experts say it is more important than ever to show clear evidence of how projects protect lives and livelihoods.
Rethinking risk:

**Showcase:** UNDRR wants organizations to upload videos, documents and infographics to dipecholac.net to show how Caribbean projects have been adapted to make a difference during the pandemic.

**Blueprint:** Presenting evidence of successful schemes helps create templates that can be used in other parts of the world. UNDRR’s EU-funded project to improve school safety is now generating interest from Latin American, African and Asian countries.

**Forward thinking:** To help boost preparedness, WFP is using EU funding to support its work with CDEMA to pre-position generators, prefabricated units and other logistics gear as countries brace for emergencies.

**Attracting attention:** The Community Disaster Response Teams (CDRTs) trained by the Red Cross with ECHO funding, have attracted attention from major donors keen to set up similar teams elsewhere.

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“For ECHO, it's important to show evidence that projects save lives and make a difference, and that there are still needs in the region.”

_— Saskia Carusi_

External relations officer for UNDRR, Regional Office for the Americas and the Caribbean
The European Union has targeted around $50 million of its funding towards Caribbean disaster risk reduction and community resilience programs since 1994.

**Facing challenges:**

**Speeding up:** Supported by ECHO funding, the World Food Programme (WFP) adapted its shock responsive social protection during the pandemic to help Dominica digitize its payment systems and funnel cash to families.

**Reaping rewards:** UNDRR’s EU-funded projects to boost Caribbean business resilience reaped dividends during the COVID-19 crisis as companies quickly adapted their climate-related continuity plans to survive.

**Showing off:** Events such as the VII Regional Platform for Disaster Risk Reduction provide opportunities for both governments, multilaterals and non-profits as well as communities to highlight which projects best help boost preparedness.

**Double up:** A mix of quantitative data and qualitative examples is important to show how projects can save lives and make a difference.
Conclusion

The Caribbean has a unique chance to build on the lessons learnt from the pandemic as it strives to better incorporate disaster risk reduction strategies and protect the lives and livelihoods of its population.

By aligning with the bold targets of the Sendai Framework for Disaster Risk Reduction 2015-2030, the region can better position itself to cope with systemic risks and complex, cascading challenges in order to build a more resilient future.

“This is why it is so important to develop and finance multi-sectoral, national disaster risk reduction strategies and policies that are integrated into all sectors so we can effectively reduce disaster risk on every level,” says UNDRR’s Salazar.

“We can’t leave anyone behind.”