

Disaster Recovery Planning in the Caribbean:

Revisiting the Challenge

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Environment, Rural
Development and Disaster
Risk Management

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EXECUTIVE SUMMARY

Even though the number of disasters and their catastrophic consequences increase, few governments are well prepared to undertake the recovery efforts necessary to bring affected areas and communities back to normal [as quickly as possible] in the aftermath of a disaster. The economic and social losses associated with disasters remain substantial. The average annual losses from earthquakes, tsunamis, tropical cyclones and river flooding are estimated at US\$ 314 billion in the built environment alone.

One of the four pillars of the Sendai Framework for Disaster Risk Reduction, 2015-2030 highlights that building effective recovery governance before a disaster occurs represents a critical opportunity to “Build Back Better”. One way of advancing this is to plan for recovery before disasters happen. The International Recovery Platform, 2012 noted that much can be done pre-disaster to alleviate recovery planning demands after the disaster.

There is consensus among the global DRM community that Pre-disaster recovery planning (PDRP) is a catalyst to effectively address the challenges of planning and implementing successful disaster recovery to ensure long-term social and economic sustainability after a disaster. There are several documented benefits of PDRP in the literature including expediting the recovery process when appropriate structures, policies, plans are prepared and understood prior to a disaster, provides Build back better as a “window of opportunity”, inclusive as it fosters engagement and participation of multiple stakeholders including communities and reduces recovery costs. Notwithstanding these benefits, the wide scale adoption and implementation of PDRP is still incipient and not common practice.

While disasters are a common feature of the Caribbean, there has been little serious reflection on the types of action needed for long-term resilience. In establishing the baseline status of PDRP in the region, it was necessary to determine the presence/existence of a national or sectoral disaster recovery plan or framework. An overwhelming 70 per cent of CDEMA Participating States indicated the absence of a national or sectoral PDRP or framework. However, most of the respondents (90%) are aware of the MNRF that was developed by CDEMA. The findings also show that sixty (60) per cent of jurisdictions have either not commenced or made very little progress (incipient) with implementation (preparing PRDP) using the MNRF guide.

The main barriers that have contributed to the absence of institutionalization of PDRP in the region stems from governance issues related to the existing legal frameworks for disaster risk

management (DRM), financing for PDRP implementation, institutional capacities to support recovery planning and the disconnect between PDRP as part of comprehensive DRM and the long-term development goals among decision-makers.

The discussion and recommendations put forward both policy and operational level recommendations that are much needed to strengthen PDRP in the region. At the policy level actions include the strengthening of policies and laws to support Recovery Planning, developing National Disaster Recovery Frameworks, promote business continuity planning of key and financing PDRP implementation. The operational level seeks to establish the necessary systems and capacities pre disaster including research and data for PRDP, capacity building for pre and post disaster recovery planning, strengthening monitoring mechanism and public education campaign to entrench recovery planning.

1.0 INTRODUCTION

Even though the number of disasters and their catastrophic consequences increase, few governments are well prepared to undertake the recovery efforts necessary to bring affected areas and communities back to normal [as quickly as possible] in the aftermath of a disaster.⁽¹⁾ Limited and inadequate investments in developing capacities and policies to support recovery planning and where policies exist, insufficient resources to carry out implementation are some of the main challenges echoed in the literature to building governance for efficient recovery.

The economic and social losses associated with disasters remain substantial. According to the Global Assessment Report [GAR], (2015), disaster risk is increasing, causing economic losses averaging US\$250 billion to US\$300 billion globally each year. The average annual losses (AAL) from earthquakes, tsunamis, tropical cyclones and river flooding are estimated at US\$ 314 billion in the built environment alone.⁽²⁾

In the case of the Caribbean region, the 2017 hurricane season will be remembered for years to come given the human cost and destruction left behind by Hurricanes Irma and Maria. In the words of the Dominican Prime Minister at the 72nd session of the General Assembly of the United Nations: “72, 000 Dominicans lie on the front line in a war they did not choose with extensive casualties in a war they did not start”. This statement is the constant reality for Caribbean Island States which may be exacerbated with climate change with likely increased intensity and frequency of hurricanes and storms. Considering these trends, how can we build resilient Caribbean countries through efficient recovery governance?

One of the four pillars of the Sendai Framework for Disaster Risk Reduction, 2015-2030 highlights that building effective recovery governance before a disaster occurs represents a critical opportunity to “Build Back Better”. One way of advancing this to plan for recovery before disasters happen or pre-disaster recovery planning (PDRP).

The International Recovery Platform, 2012 noted that much can be done with pre-disaster to alleviate recovery planning demands after the disaster. This includes not only the central and local governments’ preparing, planning and strengthening institutions, but also the ability of a community to accelerate the recovery process begins with its efforts in pre-disaster preparedness,

¹ United Nations Development Program. 2012. *Putting Resilience at the Heart of Development: Investing in Prevention and Resilient Recovery*. June 2012.

² UNISDR. (2015). *The Pocket GAR 2015. Making Development Sustainable: The Future of Disaster Risk Management*. Geneva, Switzerland: United Nations Office for Disaster Risk Reduction (UNISDR).

including coordinating with whole community partners, mitigating risks, incorporating business continuity planning, identifying resources, and developing capacity to effectively manage the recovery process, and through collaborative and inclusive planning processes.

1.1 Objective

The objective of this technical paper is to evaluate the state of pre-disaster recovery planning in the region, analyze the key challenges that have hindered implementation and explore effective approaches that could facilitate the implementation of actionable recommendations for the institutionalization of pre-disaster recovery planning among Caribbean states.

This technical paper acknowledges that pre-disaster recovery planning is not the panacea for building back better. Challenges such as fragile economies dependent on climate sensitive sectors, weak enforcement of environmental and planning laws and regulations, fiscal and governance challenges among others will also need to be addressed. However, recognition of the planning for post disaster recovery with the requisite investments in developing capacities for managing disaster recovery and policy to support recovery planning is taking serious action to building resilience. In addition, comprehensive planning that can address short-term imperatives as well as long term resilience such as business resumption/continuity, economic reactivation, reconstruction of infrastructure and other mitigation works, financing for recovery, sustainable land use and environmental protection and restoration are key elements to building back better.

1.2 Structure of Technical Paper

This technical paper is organized into five sections.

Section two (2) discusses in detail global perspectives of pre-disaster recovery planning, highlighting some of the challenges with the use of three case examples of good practices of lessons.

After setting the global context, the focus of section three (3) is on regional efforts with recovery planning in the Caribbean, particularly the Caribbean Disaster Emergency Management Agency (CDEMA) Participating States. Case examples from four (4) Participating States are presented to highlight the disaster recovery model/approach that is generally adopted and the pre - disaster recovery planning efforts of two (2) of the Hurricanes Irma and Maria affected countries. Analysis of past and recent report on status of recovery planning in Dominica, Antigua & Barbuda and the British Virgin Islands is conducted in the wake of Hurricanes Irma and Maria in 2017.

The fourth section of the paper presents the survey findings of the baseline status of national and sectoral Pre-Disaster Recovery Planning (PDRP) in the region; stakeholders' perceptions of barriers to PDRP and recommendations of transformational actions to advance PDRP agenda among Caribbean States.

The fifth and final section summarizes and concludes the main/key considerations as well as puts forward key steps/actions to institutionalize pre-disaster recovery planning in the region.

1.3 Methodology/Approach

The methodological approach adopted in the development of this technical paper used a combination of qualitative methods and from various sources including the administering of an online survey, interviews with the Executive Director of CDEMA, case studies and extensive literature reviews.

The online survey was administered to all eighteen national disaster coordinators (NDC) of CDEMA Participating States in which a timeframe of two (2) weeks was allotted for completion of the survey (September 10 - 24, 2018). The survey consisted of nine (9) questions with the main objective to:

- rapidly baseline the status of national and sectoral PDRP in the region;
- identify stakeholder perceptions of barriers to national and sectoral PDRP;
- identify potential foundational and transformational actions/interventions to advance national and sectoral PDRP.

Interviews, especially related to section four were also conducted with the Executive Director of CDEMA about recovery planning in the region, challenges and concrete actions necessary to “move the needle” on PDRP in the region.

Secondary data sources were also conducted through extensive reviews of policy documents, articles and published reports on pre and post disaster recovery planning regionally and internationally to distill lessons learned as well as how challenges can be overcome relating to policies and governance for effective PDRP implementation.

1.3.1 Limitations

- The participation among CDEMA Participating States in the survey was just over fifty percent (55%). This was because at the time of the survey two tropical storms, namely Isaac and Kirk based on projected paths threatened to impact several countries in the region. The focus and attention of the national disaster coordinators was preparing their respective countries and population of likely impacts. The survey which was initially to be completed within one week was extended to two (2) weeks to allow more time to respond.
- Electronic documentation about recovery planning, challenges and lessons learned from previous disasters for the Caribbean region is limited or inaccessible.

2.0 GLOBAL PERSPECTIVE ON PRE - DISASTER RECOVERY PLANNING (PDRP)

There is consensus among the global DRM community that PDRP is a catalyst to effectively address the challenges of planning and implementing successful disaster recovery to ensure long-term social and economic sustainability after a disaster. The conduct of pre-disaster recovery planning is considered integral to manage all recovery effectively and efficiently (including relief/humanitarian assistance), rehabilitation and reconstruction in the aftermath of a disaster. ⁽³⁾

The concept of PDRP according to the International Recovery Platform (IRP), is built on the recognition that much can be done before a disaster happens to facilitate recovery planning after a disaster and improve recovery outcomes. It is a pro-active process of anticipating future recovery issues, developing a framework for better coordination, determining the key strategies for recovery, and building capacity to improve recovery outcomes – all before a disaster occurs. ⁽⁴⁾

The Florida Division of Emergency Management notes that

“Without a comprehensive, long-term recovery plan, ad hoc efforts in the aftermath of a significant disaster will delay the return of community stability.

Creating a process to make smart post-disaster decisions and prepare for long-term recovery requirements enable a community to do more than react....”⁵

³ UNISDR.2017. “Build Back Better in recovery, rehabilitation and reconstruction”. Consultative version: In support of the Sendai Framework for Disaster Risk Reduction 2015-2030. <http://eird.org/cd/recovery-planning/docs/2-planning-process-scenario/1c-Pre-disaster-plan-of-Tokyo.pdf> (accessed July 17, 2018).

⁴ International Recovery Platform and United Nations Development Programme. 2012. “Guidance Note on Recovery: Pre-Disaster Recovery Planning”. IRP, 2012.

⁵Florida Department of Community Affairs. 2010. “Post-Disaster Redevelopment Planning: A Guide for Florida Communities”. Florida Division of Emergency Management.

There are several documented benefits of PDRP in the literature. The IRP which was established following the second UN World Conference on Disaster Reduction in Kobe, Japan in 2005 to address the gaps and constraints experienced in the context of post-disaster recovery, notes that the proactive nature of pre-disaster recovery planning benefits the recovery in several ways:

1. **It expedites recovery** process when appropriate structures, policies, plans are prepared and understood prior to a disaster which will only need to modify rather than developing a new plan. This enables recovery efforts to be initiated more quickly and decisively.
2. It provides **Build back better** as a “window of opportunity” to integrate mitigation measures in recovery and initiate larger development changes to strengthen resilience for future events.
3. **It incorporates Demand-driven and inclusive** aspect that fosters engagement and participation of multiple stakeholders including communities.
4. **It minimizes development deficits** in two ways. The first is through planning for anticipating multiple primary and secondary disaster impacts and secondly, advancing long term development plans in a shortened timeframe.
5. **It reduces recovery costs** through clearer understanding of expected needs that will limit expenditure on poorly informed programmes.

These reflect a common set of principles in the literature which underpin the benefits of PDRP. The UNISDR in support of the Sendai Framework in the Build Back Better Consultative version document on Priority 4 reinforced that PDRP allows some of the more difficult, time-consuming decisions to be addressed in a time-relaxed environment where ample thought and energy can be dedicated to identifying possible opportunities within the Build Back Better⁶ strategy. In addition, PDRP is not a replacement of post- disaster planning efforts but rather enables effective coordination and decision-making structures and facilitates rapid yet informed action in an otherwise demanding and chaotic environment.

The concept of PDRP is not new. Kates, 1977⁷ in her research paper noted that pre-planning for disaster reconstruction, other than aid policies, has hardly been broached. In recent times,

⁶ Build-Back-Better: Systematic process to investigate the underlying reasons for failure and incorporating the lessons learned to inform the reconstruction and redevelopment process. Build- back -better priorities are identified and influenced by the recovery process – International Recovery Platform

⁷ Kates, R.W. 1977. “Insights: A Summary and Recommendations”. In: J.E. Haas, R.W. Kates and M.J. Bowden (eds). *Reconstruction Following Disaster*. Cambridge, Mass: MIT Press, pp. 261-293.

however, there is a plethora of literature documenting the benefits as well as the process or steps to initiate and sustain ex ante and ex post recovery planning. Albeit, the wide scale adoption and implementation of PDRP is still incipient and not common practice. Questions such as why PDRP is conducted so infrequently? and how can the lessons and experiences of others enable and encourage other jurisdictions to invest in PDRP? Should be explored.

Challenges such as limited and inadequate investments by governments in developing and strengthening capacities for PDRP and management of recovery processes (UNDP, 2012; IRP, 2012; UNDISR, 2017) as well as the absence of policy to support proposed changes stifles incentive to develop PDRP (Smith and Wenger, 2007) are arguments that have been put forward by several authors.

Despite the absence of the widespread adoption of PDRP, three examples are cited below, two at the local level and one at national have engaged and recognized the value of pre-disaster planning. Importantly, these examples represent good global practices of lessons transferable for other jurisdictions to adapt, learn and improve their own PDRP efforts.

Box 1: Tokyo, Japan PDRP⁸

Learning from the 1995 Hanshin-Awaji Earthquake, the Tokyo Metropolitan Government (TMG) has conducted pre-disaster recovery planning in recognition of the significant potential for a future damaging earthquake event. Recovery planning efforts have been fully integrated with regional disaster management plans, thereby providing strong coordination between response and recovery activities [rehabilitation and reconstruction]. The planning process in Tokyo began with a review of theoretical recovery models, specifically those which are community-based and which focus on socio-economic development. Damage models, which helped to scope out likely recovery requirements, included consideration of infrastructure, housing, livelihoods, social networks, and human welfare. The resulting plan consists of three documents: the grand design (which articulates the framework and responsibility of the TMG), and sub-manuals for - (i) officers (outlining municipal responsibilities), and (ii) citizens. To test their recovery plan and familiarize citizens with their recovery roles and responsibilities, the TMG conducted a unique exercise that helped planning participants to better understand the planning scenario inclusive of visiting potential reconstruction sites and providing experiences for citizens spending a night in a disaster shelter. Pre-disaster recovery measures covered in the plan include estimating disaster damages given the present planning context, preparing recovery concepts and methods based on estimates, and sharing methods between municipalities and citizens in order to enhance recovery capacity.

Box 2: The United States National Disaster Recovery Framework (NDRF)⁹

Federal legislation that was passed in the United States in the aftermath of Hurricane Katrina in 2005 mandated the creation of an improved national-level disaster recovery strategy. The US Federal Emergency Management Agency (FEMA) led the development of a National

Disaster Recovery Framework (NDRF), which was first released in 2011, to satisfy this requirement. The new NDRF was developed to better define how the national government organizes and operates to utilize existing resources to promote effective recovery in support of disaster-affected communities, which has included the creation of a “NDRF Cadre” of experts that may be requested by disaster-impacted communities to assist with both general and sector-specific recovery planning. In addition to reinforcing the importance of building back better, the NDRF describes key principles and steps for community recovery planning and implementation and promotes a process of widespread community engagement. Since its release, many local communities have developed complementary pre-disaster recovery plans and frameworks that enable enhanced coordination of resources in the event of a disaster.

⁸ UNISDR. 2017. “Build Back Better in recovery, rehabilitation and reconstruction”. Consultative version: In support of the Sendai Framework for Disaster Risk Reduction 2015-2030. <http://eird.org/cd/recovery-planning/docs/2-planning-process->

[scenario/1c-Pre-disaster-plan-of-Tokyo.pdf](http://eird.org/cd/recovery-planning/docs/1c-Pre-disaster-plan-of-Tokyo.pdf) (accessed July 17, 2018).

⁹ Ibid.

Box 3: Makati City, Philippines PDRP¹⁰

Makati City developed an earthquake-specific pre-disaster recovery plan in 2014. The PDRP is the product within a framework of comprehensive and coordinated capacity building and planning effort that has also included the development of a city-wide emergency operations plan, an earthquake hazard-specific contingency plan, and a 5-year disaster risk reduction and management strategy (each of which was adopted through passage of a city ordinance). The PDRP organizes assistance into seven recovery sectors inclusive of: Economic; Infrastructure; Governance; Health and Psychosocial; Financing; Housing; and Environment. Prior to a disaster, the PDRP guides the collection and analysis of baseline recovery data, the formulation of appropriate recovery-based policy, procurement of specialized equipment, and other capacity building efforts.

Once a disaster occurs, the plan guides the conduct of coordination with rapid damage assessment and needs analysis (RDANA) efforts, the post-disaster needs assessment (PDNA)⁽¹¹⁾ the formulation and implementation of recovery activities (including those specifically targeting Build Back Better outcomes), and the tools for monitoring and evaluation recovery success. Planning has allowed the city to make careful study and consideration of important recovery issues such as evacuation destinations, and the construction of multi-hazard emergency management resources such as multi-level evacuation centres. Moreover, it has enabled the conduct of recovery-focused training and relationship-building activities among municipal staff that will conduct recovery operations in an actual disaster event.

In summary, the illustration demonstrates the conventional versus the emerging approach to recovery planning.

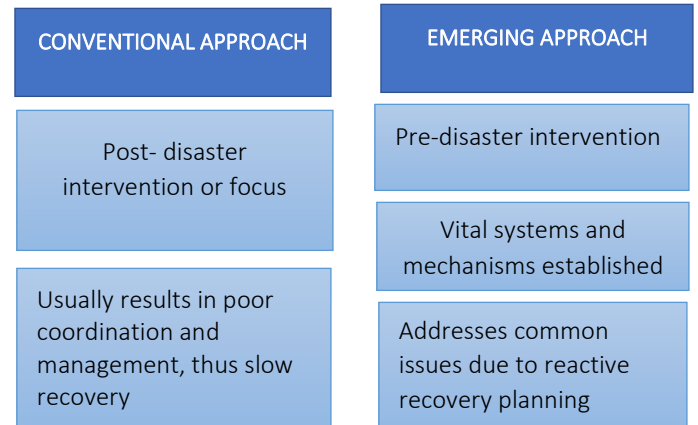


Figure 1 Conventional Approach Versus Emerging Approach to Recovery Planning¹²

¹⁰ UNISDR, 2017. Build Back Better in recovery, rehabilitation and reconstruction: Consultative version. In support of the Sendai Framework for Disaster Risk Reduction 2015-2030. Task 4b.2: Enable pre-disaster recovery planning among all Stakeholders.

¹¹ RDANA-rapid assessment of extent of damage to inform emergency response & rehabilitation while PDNA focuses on long -term reconstruction.

¹² Somer-seva. V. 2014. Gaps in HFA Articulation of Resilient Recovery and the Makati Recovery Framework. Internal Recovery Platform. <https://app.box.com/s/cd21mejmfcoxptmki8y4ottf4dqamma> (accessed July 17, 2018).

What are some of the key lessons that can be extracted from the three case examples?

- Recognizing the need for a paradigm shift in thinking and approach to recovery planning with emphasis on being pro-active by anticipating future recovery issues and planning for them instead of being reactive.
- Integrating lessons learned in previous disasters to guide and improve recovery outcomes for future disasters.
- Establishing the necessary systems, mechanisms, and capacities prior to the occurrence of a disaster.
- Political support evidenced by enabling legislation and provision of sufficient resources to carry out the recovery plans.
- Facilitating annual exercising to review the performance and amendment of the plan, where applicable prior to a disaster.

3.0 DISASTER RECOVERY PLANNING IN THE CARIBBEAN

3.1 Disasters in the Caribbean

Hurricanes Irma and Maria in September 2017 caused widespread destruction across the Caribbean with an estimated US\$130 billion in losses (Munich Re, 2018). While disasters are a common feature of the Caribbean (see Table 1), there has been little serious reflection on the types of action needed for long-term resilience.⁽¹³⁾

Recognized as being the second most disaster-prone region in the world (UNDP, 2011; UNISDR, 2003; United Nations, 2013), PDRP provides an opportunity for Caribbean countries to Build Back Better. According to Wilkinson, 2018, a comprehensive plan and set of actions and skills that can address short-term imperatives, as well as long-term resilience needs is required.⁽¹⁴⁾ In a recent roundtable discussion on January 30, 2018, hosted by the Overseas Development Institute with Caribbean decision-makers along with other key recovery experts noted that the concept [PDRP] is not new, but it has not been rigorously applied or, as Executive Director of the Caribbean Disaster Emergency Management Agency (CDEMA) puts it: 'These are not new lessons, we just haven't addressed them in a programmatic way before'.

¹³ Wilkinson, E.; J. Twigg and R. Few. 2018. "Building back better A resilient Caribbean after the 2017 Hurricanes". Overseas Development Institute Briefing Note.

¹⁴ Wilkinson, E. 2018. "Towards a more resilient Caribbean after the 2017 hurricanes". Report from roundtable discussions, 30 January 2018. Conference Report.

Table 1 Five Costliest Hurricanes in the Caribbean (1990-2017)

Date	Tropical cyclone	Affected area	Overall losses (US\$m, 2016 values)*	Insured losses (US\$m, 2016 values)	Fatalities
6–14 September 2017	Hurricane Irma	Anguilla, Antigua and Barbuda, Bahamas, British Virgin Islands, Cuba, Dominican Republic, Florida (US), Haiti, Puerto Rico, Saint Martin, Sint Maarten, St Barthelemy, St Kitts and Nevis, Turks and Caicos, US Virgin Islands	67,000	32,000	128
19–22 September 2017	Hurricane Maria	Bahamas, Dominica, Dominican Republic, Guadeloupe, Haiti, Martinique, Puerto Rico, Turks and Caicos, US Virgin Islands	63,000	30,000	108
20–30 September 1998	Hurricane Georges	Antigua and Barbuda, Cuba, Dominican Republic, Haiti, Puerto Rico, Saint Kitts and Nevis, US Virgin Islands	14,700	3,800	3,661
6–14 September 2008	Hurricane Ike	Cuba, Dominican Republic, Haiti, Turks and Caicos Islands	7,600	39	82
7–21 September 2004	Hurricane Ivan, storm surge	Barbados, Cayman Islands, Cuba, Dominican Republic, Grenada, Haiti, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago	5,900	2,300	67

Source: Munich Re (2017), Munich Re (2018), EM-DAT (2018)

3.2 Regional Efforts with Pre-Disaster Recovery Planning

3.2.1 Model National Recovery Framework (MNRF)

Consistent with global thinking on PDRP, the regional inter-governmental disaster management agency, the Caribbean Disaster and Emergency Management Agency (CDEMA), developed a draft Regional Comprehensive Disaster Management Strategy and Programming Framework (CDMSF) 2014-2024. The goal of the CDMSF 2014-2024 is to realize “safer, more resilient and sustainable CDEMA in participating states through Comprehensive Disaster Management.” The CDMSF 2014-2024 has one of its four priority areas dedicated to “Strengthen institutional arrangements for Comprehensive Disaster Management implementation at national and regional levels”. Of specific relevance to planning for pre and post disaster recovery is Output 1.4 which emphasizes maintaining a focus and capacity for preparedness, response and recovery.

Under this regional policy framework, CDEMA revised the Model National Recovery Framework designed to support effective recovery in its eighteen (18) member states. The framework was first developed in 1999, however, several new issues have emerged relevant to recovery

planning, necessitating the creation of a new and updated framework for disaster recovery.⁽¹⁵⁾ The revised 2014 Framework serves as the essential supporting structure for disaster recovery within CDEMA's Participating States, and contains the essential definitions, policies and supporting actions to facilitate effective and efficient recovery. This Framework provides guidance to recovery planning by:

- Identifying key considerations for establishing the governance for effective PDRP such as risk assessments, institutional strengthening, legislation, application of science and technology, provision of financial instruments and preparedness, climate change and gender, among others to build quick resilience;
- Defining the scope of recovery and explaining key elements/components that should be considered for delivery of effective and efficient recovery which include economic, supporting services (health, education, public transportation etc.), vulnerable groups etc.;
- Establishing standardized methodology for the conduct of needs assessment, resource mobilization from a wide range of partners including private sector, governmental agencies, multilateral agencies, NGOs etc.;
- Recommending recovery coordination structure which is to be led by Cabinet through the establishment of a recovery committee supported by a task force with definition of the key activities, roles and responsibilities;
- Developing a policy that factors PDRP, including capacity building, identifying and addressing functional/operational requirements, resource needs, management of recovery processes with various stakeholders and coordination arrangement to improve and enhance recovery outcomes.

3.2.2 Proposed Establishment of Caribbean Resilient Recovery Facility

Recovery capacities and coordinated efforts to recover from devastating impacts of various disasters remains the missing blocks of realizing Comprehensive Disaster Management in the region. It is against this background that CDEMA in partnership with UNDP has proposed the establishment of the Caribbean Resilient Recovery Facility. This facility is to be established in 2019 and the purpose of this facility is to:

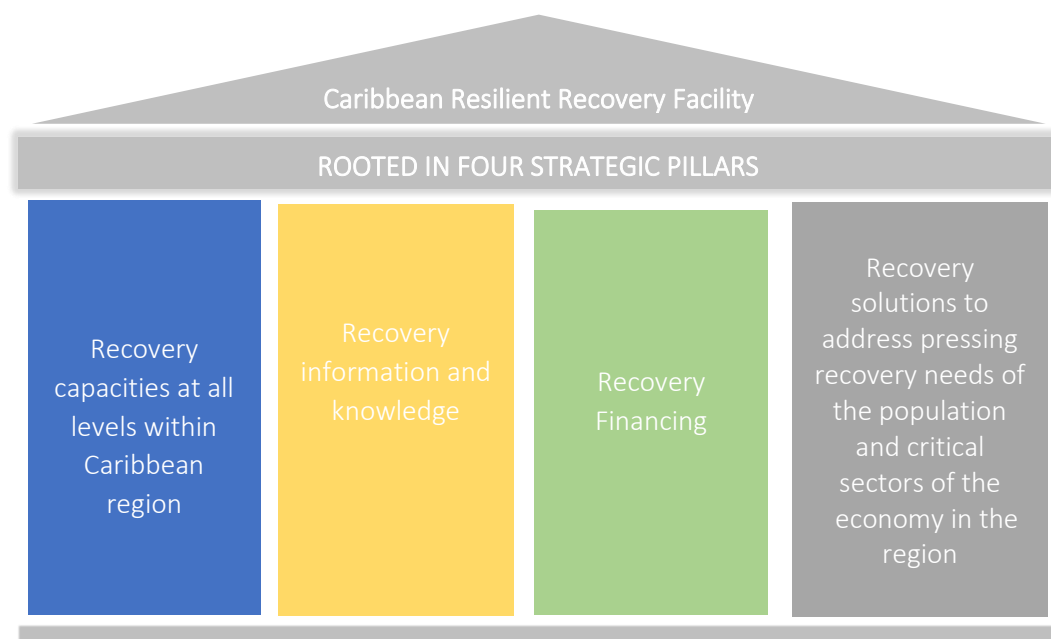
1. Build national recovery capacities before disasters (i.e. preparedness for recovery)

¹⁵ Phillips II, G. et al. 2014. Model National Recovery Framework: Enhancing Disaster Recovery among CDEMA Participating States: Final Version.

2. Fast track recovery in the aftermath of disasters (i.e. short and medium-term recovery)
3. Build resilience of the region by ensuring resilient (risk -informed) recovery efforts based on the principles of building back better and inclusion (i.e. long-term recovery).

The proposed programme of the facility is rooted in four strategic pillars:

Figure 2 Strategic Pillars - Caribbean Resilient Recovery Facility



3.3 How Recovery Planning has been Approached in the Caribbean?

Although CDEMA's Model National Recovery Framework was developed and promoted since 1999, pre-planning for disaster recovery operations is not common practice among Caribbean states. In fact, the recovery thematic area generally receives the least attention. Often significant effort and resources are invested in preparedness and response and to a lesser extent mitigation. Chakallal and Walling¹⁶ noted that countries [in the region] should [...] have systems in place to enable effective and efficient rapid recovery and business continuity [...] in getting their economic engines up and running as swiftly as possible so as not to retard their development.

¹⁶ Chakallal, Y; and Walling, L. (n.d.). Incorporating Business Continuity and Disaster Recovery (BC/DR) in Governance and Planning Systems of Caribbean SIDS. <https://www.cavehill.uwi.edu/salises/conferences/past/2009/chakalally--bc-dr-in-caribbeansids.aspx> (accessed July 2, 2018).

A review of select case studies will be used to provide insight and greater understanding of the recovery model that is generally implemented among Caribbean states after a disaster. Case examples from Jamaica and Grenada both affected by Hurricane Ivan in 2004 will be used as well as a summary of progress with recovery in two (2) of the countries affected by Hurricanes Irma and Maria in 2017, namely Dominica and British Virgin Islands.

3.4 Case Examples

3.4.1 Jamaica

The government of Jamaica after the devastation caused by Hurricane Ivan established the Office of National Reconstruction (ONR) to spearhead and anchor the programme of activities necessary for full and expeditious national recovery. Established with a bi-partisan Board, the ONR was mandated to fully involve the entire Jamaican society in the rebuilding drive, working closely with the private sector, trade unions, corporate groups, Non- Governmental Organizations (NGOs) and the entire civil society, to secure their full participation.⁽¹⁷⁾ The ONR reported directly to the Office of the Prime Minister.

The United States Agency for International Development (USAID) worked with the governments of Grenada and Jamaica to establish independent coordination entities separate from those countries' ministries to facilitate the recovery process and streamline working with the government. One of the lessons documented in US Government Accountability Office (GAO) review of USAID's disaster recovery efforts to Hurricane is that the USAID and other donors should take into account the time needed to establish these agencies when developing implementation schedules and setting program completion time frames.⁽¹⁸⁾

Osei (2007) investigated how the government responded to the Hurricane Ivan against established institutional response [and recovery] framework. He concluded that:

- established configurations of working relations were upset by the establishment of Office of National Reconstruction (ONR);
- the decentralised institutional level of response and recovery, the Parish Disaster Committees, were expected to possess the relevant capacity for damage assessment and

¹⁷Jamaica Information Service. 2004. Terms of Reference for ONR Expanded. <https://jis.gov.jm/terms-of-reference-for-onr-expanded/>, September 17, 2004. (accessed August 22, 2018).

¹⁸United States Government Accountability Office. (2006). Foreign Assistance: USAID Completed many Caribbean Disaster Recovery Activities, but several challenges hampered efforts. Report to the Chairman, Subcommittee on Foreign Operations, Export Financing and related Programs, Committee on Appropriation, House of Representatives.

response, even though these committees had not been capacitated to make an appropriate response;

- With the establishment of ONR with independent institutional arrangements, the government had weakened the prospects for institutional learning and preservation of institutional memory, as well as generated undue conflict between existing line ministries and ONR which impinged on coordination, at a time when unity of purpose was most required.⁽¹⁹⁾

In summary Osei (2007), concluded that “if there was a real and continuous need for an ONR, then its location would be better within the Office of Disaster Planning and Emergency Management” (ODPEM), national agency established under law with responsibility for disaster risk management in the country.

3.4.2 Grenada

Grenada lacked a central coordinating agency immediately following Hurricane Ivan, 2004 to facilitate disaster recovery within the country.⁽²⁰⁾ With the assistance from the donor community, the government of Grenada established the Agency for Reconstruction and Development (ARD), an independent agency outside of existing line ministries, departments or agencies of government to coordinate and lead recovery efforts in the country. The ARD’s mandate was to provide technical assistance to government agencies and ministries; facilitate coordination and information exchange among agencies (national and international) to avoid duplication and to increase effectiveness; and to ensure that reconstruction is accomplished in a manner which minimizes the country’s vulnerability to hazards.⁽²¹⁾ The country’s experience is summarized below:⁽²²⁾

- The Government at the time imposed a reconstruction levy with the objective of financing the Reconstruction Fund which was established by act of parliament;
- Interestingly, ARD, the agency set up to lead and manage recovery efforts was unable to secure finances from the Fund and manage the Fund;

¹⁹ Philip D. Osei. 2007. “Policy responses, institutional networks management and post-Hurricane Ivan reconstruction in Jamaica”. *Disaster Prevention and Management International Journal*. Vol. 16 Issue: 2, pp.217-234.

²⁰ Ibid

²¹ United Nations Development Planning. 2007. “Post-disaster Early Recovery in a Caribbean Small Island Developing State”. The Case of Hurricane Ivan in Grenada (2004). Best Practices & Lessons Learned.

²² Chakalall and Walling (n. d.). “Incorporating Business Continuity and Disaster Recovery (BC/DR) in Governance and Planning Systems of Caribbean SIDS”. <https://www.cavehill.uwi.edu/salises/conferences/past/2009/chakalally--bc-dr-in-caribbeansids.aspx> (Accessed July 2, 2018).

- The agreed initial reporting mechanism was to Cabinet through an established Stakeholder Council. However, after a few meetings, the Stakeholder Council stopped functioning and as a result, ARD commenced reporting directly to The Prime Minister's office which affected governance arrangements. This further weakened the mandate of ARD;
- ARD's mission evolved rapidly, with changes to its formal mandate relating to the agency's role in facilitating, enabling, advising and coordinating Ministerial programs in the absence of its own turnkey recovery programs and due to unmet expectations in the context of securing large amounts of additional program funding from Development partners.

Chakalall and Walling from their investigation of the government's response to the hurricane noted that:⁽²³⁾

- pre-designation of a national body for reconstruction, development and cross-agency coordination; clear reporting and accountability mechanisms;
- effective public communications; agility and flexibility in approach and realistic expectations.

3.4.3 Status of Recovery in Select Irma and Maria Affected Countries

This section summarizes the status of recovery in the Commonwealth of Dominica and the British Virgin Islands after Hurricanes Irma and Maria. ⁽²⁴⁾

a. Commonwealth of Dominica

Hurricane Maria was an exceptional event which devastated the Commonwealth of Dominica with estimated economic impact of 226% of 2016 GDP or US\$1.31bn²⁵. At the time of the CDEMA's recovery planning mission [one (1) month after the event], the "*focus was not on [...] reconstruction*"²⁶ but rather addressing basic human needs of the affected population and restoration of government functions and critical facilities. One of the recommendations of the

²³ Ibid.

²⁴ Draws on the reports of (i) CDEMA Recovery Planning Mission to Dominica, Antigua and Barbuda and the British Virgin Islands (UK Overseas Territory); (ii) Dominica Post Hurricane Recovery Plan; and (iii) Prioritization and Public Consultation on the Recovery and Development of the British Virgin Islands.

²⁵ Caribbean Community. Dominica Post Hurricane Recovery Plan and Prioritisation. Available: <https://resilientcaribbean.caricom.org/documents/dominica-post-hurricane-recovery-plan-and-prioritisation/>

²⁶ Caribbean Disaster and Emergency Management Agency. 2017. Report of the CDEMA Recovery Planning Mission to Dominica, Antigua & Barbuda, and the British Virgin Islands (UK Overseas Territory), in the wake of Hurricanes Irma and Maria. Conducted by Jennifer Worrell: Temporary Special Advisor on Recovery to CDEMA – on loan from the United Nations Office of the High Commissioner for Human Rights (OHCHR). October 4-24, 2017.

report is for the country to develop and make public in the shortest time possible, a national recovery policy.

By November 2017, the government made public its proposal to establish a special agency to rebuild the country due to “ the unprecedented challenge we face has led us to take the unprecedented decision to build an execution agency outside of our standard public service systems”.⁽²⁷⁾ A year later in December 2018, Dominica’s parliament passed legislation creating a special agency called Climate Resilience Execution Agency of Dominica (CREAD). It is an independent agency that will fund, design, procure, implement, and coordinate climate resilient projects.⁽²⁸⁾

According the Post Hurricane Recovery Plan:⁽²⁹⁾

- the design of CREAD was drawn from lessons of global best practice along with advice from development partners.
- preliminary budget for CREAD will cost close to US\$2.5m to US\$3.5m per annum
- CREAD will have a four-year mandate, and as the need for recovery action normalizes to ‘development’ it will establish and implement a strategy to transfer its capacities, skills, knowledge, and information.

b. British Virgin Islands (BVI)

Like Dominica, the impact of Hurricane Maria was unprecedented with total damage estimated at US \$ 3.6 bn, claiming four (4) lives and left one hundred and twenty (125) injured. The CDEMA recovery planning mission, the BVI context was different to that of Dominica in that some thinking on recovery had begun. A recovery committee was established comprising high- level government personnel and had met a few times³⁰. Notably, **BVI’s recovery framework was informed by the CDEMA Model Recovery Framework** and included overall recovery priorities, sectoral priorities, and recommendations for an institutional structure.

²⁷ Caribbean Community. “Dominica Post Hurricane Recovery Plan and Prioritisation”. <https://resilientcaribbean.caricom.org/documents/dominica-post-hurricane-recovery-plan-and-prioritisation/>. (accessed September 7, 2018).

²⁸ Clinton Foundation. Building the First Climate Resilient Nation in the World. <https://www.clintonfoundation.org/clinton-global-initiative/commitment/building-first-climate-resilient-nation-world>. (accessed April 17, 2019).

²⁹ Ibid

³⁰ Ibid

Like Dominica, the proposed recovery implementation structure is the establishment of an agency – Recovery and Development Agency (RAD) to coordinate the implementation of the Recovery and Development Plan³¹. This agency, established through legislation has a five (5) year mandate with principal objective to³²:

- i. Ensure that the Recovery to Development Plan is implemented in a timely and efficient manner;
- ii. Ensure that all processes are transparent;
- iii. drive the recovery process by fast-tracking the execution of projects and ensuring proper coordination, both with government Ministries and with external partners.

3.5 Key Points to Highlight

The results of the review found that the core feature of recovery model adopted among Caribbean governments is the establishment of ad hoc institutions to manage and lead recovery efforts. This model approach is pursued to accelerate rehabilitation and reconstruction activities and among other things to address issues relating to bureaucratic delays and “bottlenecks” relating specifically to the procurement and management of contracts through the existing institutional structures of government ministries, departments and agencies.

Wolfgang et al, 2008 argued that in most developing countries special reconstruction agencies are often the only feasible option when strong local governments with proven track record in reconstruction is absent. This one may argue is a cause-effect relationship in that the absence of investment in capacitating institutions to conduct PDRP and implementing post disaster culminates into the inability to effectively manage and coordinate recovery. It is not within the scope of this paper to discuss the advantages and disadvantages of the various recovery approaches, however, despite some successes with this model approach in the region, several drawbacks have been documented in the literature specifically relating to:

1. Absence of institutional and sectoral capacity development of existing ministries, departments and agencies for conducting PDRP because when the mandate of the temporary recovery agency expires, the knowledge and experience is lost;
2. Slow pace of startup and high administrative costs;

³¹ Government of British Virgin Islands.2017. Public Consultation on the Recovery and Development of the British Virgin Islands. <http://www.bvi.gov.vg/content/public-consultation-recovery-and-development-british-virgin-islands>. (accessed September 22,2018).

³² Ibid

3. Duplicated mandates between existing public entities/bodies and the newly established task force.

Important to note however, the recovery proposals for both Dominica and BVI have articulated and recognized the need to simultaneously strengthen the internal capacity of existing line ministries during the recovery process. Dominica’s recovery proposal noted that “*CREAD will also support the capacity of line ministries so that they are able to implement recovery projects – and so that after four years it leaves a more capable public sector. CREAD will be structured so that it can provide surge capacity in a variety of technical areas to ministries*”. In the case of BVI, the Agency is staffed through a combination of core personnel including secondment from government entities and other agencies, as well as outsourced experts and consultants.

While this may be considered a step in the right direction, ultimately Caribbean states need to institutionalize PDRP through capacitating ministries, departments and agencies to be engaged in disaster recovery. In the Japan case example, for instance, the government established a reconstruction headquarters after the Great East Japan Earthquake in 2012, however, the staffing and execution of the policies were led by various ministries in collaboration with the reconstruction headquarters. The proposed recovery model approach by BVI and Dominica, if followed, would be representative of a paradigm shift as well as an opportunity for lessons to be learned and distilled across the region.

Table 2 Summary of Institutional Arrangements for Recovery (Post Disaster Reconstruction)

Country	Event	Institutional Arrangement	Implementing Agency
Grenada	Hurricane Ivan, 2004	Centralized special agency (Agency for Reconstruction and Development (ARD))	Central government, donors, NGOs.
Jamaica	Hurricane Ivan, 2004	Office of National Reconstruction (ONR)	Reconstruction agency, Central government
Dominica	Hurricane Maria, 2017	Climate Resilience Execution Agency of Dominica (CREAD)	Reconstruction agency (proposed)
British Virgin Islands	Hurricane Maria, 2017	Recovery and Development Agency Reconstruction agency	Reconstruction agency, central government (proposed)

Source: Authors analysis

In addition, recovery should be inclusive and participatory with involvement of communities' involvement both before and after a disaster. A common theme in the international literature is that recovery planning should be inclusive which encourages the involvement and partnership of local communities and affected population to build consensus on key issues (Wilkinson et al, 2018; UNDP, 2012; World Bank et al,2015).

4.0 SURVEY FINDINGS ON RECOVERY PLANNING IN THE REGION

The results presented below represent the status of recovery planning, stakeholders' perceptions of barriers to national and sectoral PDRP; and recommendation of potential foundational and transformational actions/interventions to advance national and sectoral PDRP in the region. Refer to section 1.3 which provides a detail overview of the methodological approach.

4.1 Findings

4.1.1 Baseline status of national and sectoral PDRP in the region

Most of the respondents accounting for 90% of the total represented a national perspective about PDRP in the region while the remainder (10 %) represented sector perspective.

In establishing the baseline status of PDRP in the region, it was necessary to determine the presence/existence of a national or sectoral disaster recovery plan or framework. An overwhelming 70 per cent indicated the absence of a national or sectoral PDRP or its framework. Important to highlight, however, is that all the respondents noted that there is a willingness nationally or at the sector level to develop PDRP.

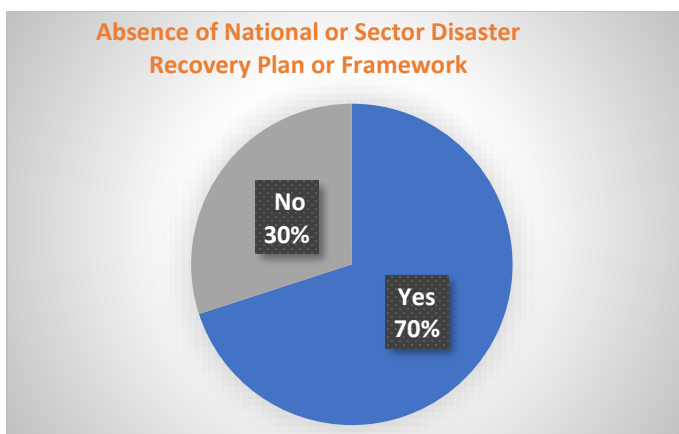


Figure 3 Absence of National Disaster Recovery Plan/Framework

For the 30 per cent that had an existing PDRP or framework, those respondents were asked to appraise the completeness of said plan and framework in terms of sufficiently addressing pre disaster recovery planning and operations. The survey results show that 66.7 per cent indicated that their existing PDRP/ its framework only addressed some components/elements of PDRP while 33.3 per cent indicated that the plan comprehensively PDRP considerations.

4.1.2 Awareness and Progress with Implementation of Model National Recovery Framework (MNRF)

As mentioned before, the MNRF serves as the essential supporting structure for PDRP within CDEMA's Participating States, and contains the essential definitions, policies and supporting actions to facilitate effective and efficient recovery. Against this background it was important to ascertain the degree of awareness among stakeholders about the MNRF and status of implementation of the recovery framework. The survey results show that most of the respondents (90%) are aware of the MNRF that was developed by CDEMA [then CDERA] in 1999 and revised in 2014. A small percentage accounting for 10% of respondents were unaware of the model recovery framework.

Figure 3 shows the progress with implementation³³ of the MNRF in CDEMA Participating States. The findings show that sixty (60) per cent of jurisdictions have either not commenced or made very little progress (incipient) with implementation (preparing PRDP) using the MNRF guide, combined. An equal number of respondents (20 %) have either fully implemented or has made some progress with implementation of the framework in their respective jurisdiction.

³³ Progress with implementation is categorized into four group as follows: Full implementation (100%), part implementation (50%), incipient (25%) and no implementation (0%).

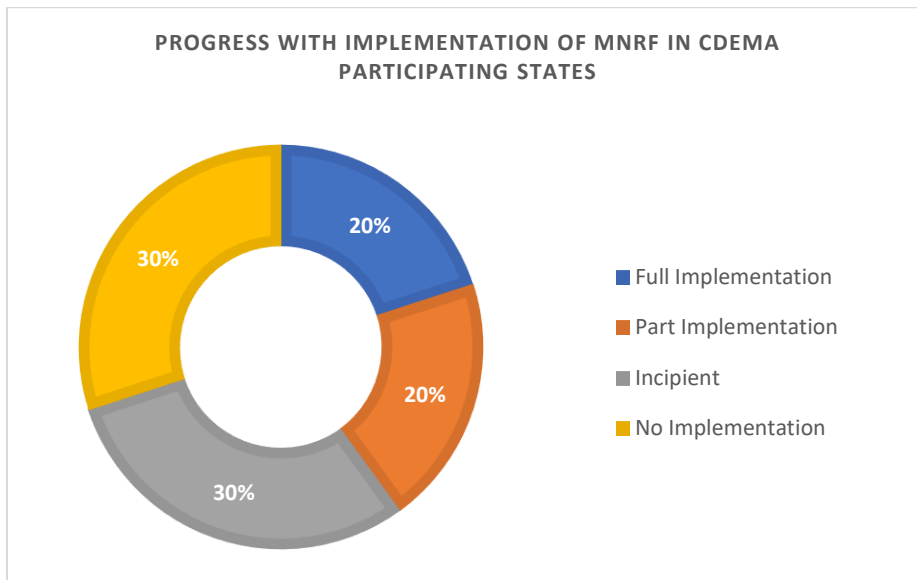


Figure 4 Progress with Implementation of MNRF in CDEMA Participating States

The issue of limited progress with implementation of the MNRF is consistent with the findings of the Index of Governance and Public Policy (iGOPP)³⁴, developed by the Inter-American Development Bank to evaluate the formal existence of a series of legal, institutional and budgetary conditions that are considered fundamental for the processes of DRM to be effectively implemented in a country. A summary of the key findings relating to PDRP is as follows:

- “There is **very limited progress seen in the normative and institutional frameworks for conducting PDRP**. The iGOPP component related to PDRP shows “low” level of progress in Guyana, Jamaica, Bahamas, and Guyana with 7%, 9% and 12%, respectively, of compliance for the related indicators in 2018. Limited progress seen in the normative and institutional framework for PDRP has contributed to:
 - the general lack of formulation of pre disaster recovery and continuity of operations plans for some of the 10 key sectors assessed in each country;
 - There is also the general absence of regulations mandating institutional coordination arrangements for recovery process and definition of the duration of the stage that will support restoration of livelihoods. Despite the absence of such policy instruments

³⁴ The practical use of the iGOPP lies in the identification of the gaps in the legal, institutional and budgetary framework to help to focus a country’s efforts on relevant aspects of governance aimed at strengthening the DRM public policy. The methodology has been applied in five (5) Caribbean countries to date – Jamaica, Trinidad and Tobago, Guyana, Barbados and Bahamas.

- across the region, the MNRF outlines the institutional and coordination mechanism for effective recovery as well as clearly defines the recovery timelines within the context of rehabilitation and reconstruction efforts.
- Legal and institutional framework that specifically assigns responsibilities to the design and implementation of financial strategy for recovery identifying appropriate financial instruments for risk retention and transfer is nascent. The CDEMA Participating State are members of a risk pooling facility (parametric based insurance) of the Caribbean Catastrophe Risk Insurance Facility (CCRIF), however, there is the absence of a comprehensive financial strategy which considers both ex ante (e.g DRR budget category) and ex post financial needs.

4.1.3 Main Barriers of Disaster Recovery Planning

An understanding of the main barriers that is hindering deep and entrenched institutionalization of PDRP in the region is explored to facilitate a better understanding of the potential transformational actions to effect change. Respondents were asked to identify what they perceived to be the three (3) main barriers/challenges that have prevented the development and institutionalization of disaster recovery planning. The barriers/challenges were grouped into four (4) thematic areas as follows:

4.1.3.1 Governance Issues for PDRP

Political commitment to effect the changes required to prioritize and institutionalize pre-disaster recovery planning is one of the main barriers identified by respondents.

Fundamental to the understanding of governance issues is related to the **existing legal frameworks for disaster risk management (DRM)**. In that, they **are still fundamentally oriented towards preparedness and response for emergency and not comprehensive disaster risk management** which addresses all the processes of DRM (including identification and knowledge of risk, risk reduction, preparedness for response, recovery planning and financial protection). ⁽³⁵⁾⁽³⁶⁾. This has contributed to the absence of appropriate institutional mechanism, policy and legal framework to effectively institutionalize PDRP promoting continuous improvement

³⁵ Key finding of the iGOPP assessment applied in five (5) Caribbean countries – Jamaica, Trinidad and Tobago, Guyana, Barbados and Bahamas.

³⁶ Personal Communication with Executive Director of the Caribbean Disaster Emergency Management Agency (CDEMA).

of all activities necessary for comprehensive DRM. In other words, there is the absence of a culture of PDRP in the region.

The other challenge which is well articulated in the international literature is **how to make recovery planning a major policy issue** (International Recovery Platform, n.d.). **The economic return of PDRP investment is in many cases intangible, not always immediate and obvious** and so policy-makers often pursue short to medium term imperatives perceived to provide greater visibility among constituents, generally aligned to the political cycle. The focus of PDRP in the region therefore continues to be short-term perspective rather than long-term because there is a constant tug-of-war between addressing immediate problems rather than to devote part of the nation's budget to programmes that will not provide immediate visible results.

4.1.3.2 Financing for PDRP Implementation

Financing for PDRP implementation was identified as a major area of weakness affecting countries across the region in the Comprehensive Disaster Management (CDM) Pilot Audit undertaken by CDEMA and further reiterated by respondents in the survey. One of the respondents noted that there is the lack of inclusion of disaster management stakeholders in [annual] national budget preparations because DRM is not treated as a priority policy issue. Of note, the lack of investment in recovery planning is not synonymous with the absence of awareness and acknowledgement among decision-makers about the need to improve financial resilience to disasters and to plan for future disasters. In fact, in the case of Jamaica for example, natural disasters are identified as one of the main risks to the country's macro-economic outlook,⁽³⁷⁾ a risk which holds true for the other Caribbean States.

Limited or lack of financing for recovery planning in the region is closely related and linked to the policy and institutional frameworks which are still oriented towards emergency preparedness and response. On the one hand, the widespread use of risk models and conduct of risk assessments to inform and provide greater understanding of financial management of disasters owing to a government's contingent liability is still not common practice.⁽³⁸⁾ Secondly, as aptly concluded by Lavell and Maskrey(2013), there is a stubborn adherence to post-crisis reflection on risk: 'Disaster risk reduction (DRR) and climate change adaptation are like "airbags"

³⁷ 2014 Article IV Consultation Fourth Review under the Extended Fund Facility and Request for Modification of Performance Criteria, June 2014.

³⁸ Personal Communication with CDEMA

or “cushions” that inflate (often too late) when there is a crisis but under other circumstances receive very little attention or finance’.

Kellet et al (2014), argued that national financing [...] is not about the availability of funding but rather about the priority attached to the need to fund. ⁽³⁹⁾

4.1.3.3 Institutional Capacities to Support Recovery Planning

Respondents have noted key institutions have not been sufficiently capacitated to effectively support PDRP because investment in pre and post recovery is woefully inadequate. The previous challenges discussed about governance and financing for recovery are symptomatic and directly correlates to limited or inadequate investments in developing capacities for managing PDRP. This has resulted in limited technical expertise across the region. The following challenges were elaborated by the respondents:

- Insufficient capacity building in terms of training of national disaster risk management offices and key sectoral agencies in PDRP has resulted in limited technical expertise.
- Absence of clear mandate of an institutional lead and lack of inter sectoral coordination with clearly defined roles and responsibilities in PRDP.
- Limited commitment of technical staff in national ministries, departments and agencies supporting recovery planning.

4.1.3.4 PDRP as part of wider Development Agenda

Respondents felt that there is a general disconnect between PDRP as part of comprehensive DRM and the long-term development goals among decision-makers. This is evident according to the respondents with the absence of DRM considerations and stakeholder involvement in the design and implementation of national development planning and projects.

Discussion with the Executive Director of CDEMA, echoed that long-term recovery planning in the region should be guided by analysis of risk to deepen understanding and knowledge of what is likely to be lost in, developing strategies to finance the recovery efforts whilst also linking this to the long term macro-economic program of the country to enhance fiscal resilience to natural

³⁹ This report examined five countries- Indonesia, the Philippines, Costa Rica, Mexico and South Africa regarding coordinated and coherent national financing of DRR. The report found that Indonesia and the Philippines are the poorest, relatively, of the five countries, but have the most coherent and coordinated financing, sector-integrated funding for disaster risk reduction (DRR).

disasters. The failure to prioritize or include disaster risk reduction in development policies, strategies and plans ultimately leads to an increased risk of the loss of lives and livelihoods.

4.2 Discussion and Recommendations

The discussion and recommendations result from the survey findings relating to challenges and the concrete transformational actions put forward by respondents to advance and PDRP in the region, and in addition to the extensive literature review of global good practices and lessons learned from other jurisdictions. This section puts forward both policy and operational level recommendations that are much needed to strengthen PDRP in the region.

4.2.1 Policy Level Actions

4.2.1.1 Strengthen Policies and laws to support Recovery Planning; Develop National Disaster Recovery Frameworks

The MNRF provides a solid foundation for each respective country in the region to commence the process of developing holistic cross-sectoral recovery frameworks. Developing holistic recovery frameworks is not enough without the requisite capacity to increase the readiness of governments to embrace recovery process [...] with clear understanding of roles and responsibilities of agencies. This according to the Recovery Planning Mission Report for Hurricanes Irma and Maria in 2017 noted that the presence of the MNRF requires further elaboration in the region. One of the key findings of this survey shows that while there is general awareness among CDEMA Participating States about the MNRF (90%), this awareness has not translated into action through the development of country specific PDRP frameworks.

The presence of holistic recovery frameworks in the absence of the necessary legal, policy, financial and technical support would be futile and meaningless without the necessary support mechanism. The following recommendations for national government are taken from UNISDR, 2017:

- **Establish legal frameworks for recovery to encourage local governments to prioritize DRR and to establish responsibility and accountability of key actor;**
- **Develop, strengthen, and invest in recovery-focused training and education for local leadership and the business and nonprofit sectors;**
- **Strengthen or implement DRR information sharing mechanisms to support PDRP and operations and coordination;**

- **Explore ways to improve donor engagement in longer-term recovery financing needs, and to promote a greater focus on the assessment of post-disaster needs when recovery planning and implementation are taking form.**

Additionally, from an institutional standpoint, there should be the establishment and assignment of a lead body or agency to take high level responsibility championing PDRP.

4.2.1.2 Business Continuity Planning/ Continuity of Operations

Business continuity /continuity of operations and continuity of government functions according to respondents is one of the concrete and vital components of overall PDRP. This gap was also found in the iGOPP assessment where there is the general lack of contingency, or continuity of operations plans for some of the 10 key sectors assessed in the five countries the methodology has been applied.

Linking Business Continuity Planning (BCP) with overall recovery plan/framework enables rapid restoration of government functions and productive outputs as well as ensures faster economic and livelihoods recovery post event. Key sectors should engage in the development of BCP linked to policy level actions described in 4.2.1.1 above, particularly relating to recovery-focused training and education and strong partnership with lead body/agency to provide leadership in assisting with the development of sector BCPs.

Business continuity for the private sector should also be encouraged. Recent research by the Mona School of Business and Management at the University of the West Indies, Mona, 2018 noted that enhancing business continuity capacities for Micro, Small and Medium Enterprise (MSMEs) is a hedge against economic impact of hazards. This is because this sector accounts “for roughly 70-85% of enterprise and around 70% of GDP in some countries with significant contribution to employment. Inadequate contingency measures can protract delays in resumption of productive outputs which in turn can severely undermine desired long-term economic recovery outcomes.

4.2.1.3 Financing PDRP Implementation

Governments across the region are generally aware of the need to improve financial resilience to disasters, however, financing for PDRP is perhaps the single greatest challenge facing governments in the region.

Financing for recovery should be strategically driven by government with the recognition of the debilitating effects of natural disasters and the need to strengthen financial management of disaster risk in its policies and programs. A strategic approach would comprehensively facilitate exploration and development of innovative financing strategies to complement already well-established ex ante financing mechanism such as risk transfer financial instruments namely, Caribbean Catastrophe Risk Insurance Facility (CCRIF). Instruments that could possibly complement CCRIF include risk transfer and risk coping mechanisms such as contingent credit, and social safety net programmes, respectively.

Moreover, a strategic rather than piecemeal approach will enable an integrated approach of fiscal risk management of natural disasters, understanding and developing measures to reduce the government's contingent liabilities against disasters over the medium and long term.

Box 4: National Disaster Risk Financing Policy, Jamaica

As part of the overall processes of DRM, the Government of Jamaica has recently taken steps with cabinet approval for the development of the Public Financial Management Policy for Natural Disaster Risk. The policy is intended to improve understanding of fiscal risks of natural disasters and recommend appropriate public financial management for natural disaster risk including the implementation of a layered financial strategy.

Jamaica has taken lead in the region of this initiative which is earmarked to be complete by October 2019. Importantly, this strategic approach to financial management of disaster risk serve as a good reference that other Caribbean governments are considering the development of a strategic document for financial management of risk.

Source: <http://www.mof.gov.jm/mof-media/media-centre/press/2577-government-approves-development-of-a-national-disaster-risk-policy.html>

4.2.2 Operational Level Actions

4.2.2.1 Mainstreaming disaster risk reduction and Climate Adaptation in Key Sectors

Sovereign Disaster Risk Financing instruments may never offer complete coverage to finance recovery especially, after a major disaster. Therefore, recognizing and focusing on the interface between PDRP and development planning is an important step for governments to pursue. Planning for recovery efforts should therefore be strategic and guided by a common

understanding of analysis of underlying risks across environmental, physical, social and economic domains.

Implementation of the UNDP practical framework for Mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into Development at the National Level is a good starting point. The framework is organized into five (5) spheres/categories: policy, organization, advocacy and knowledge, implementation and citizens which draws out the critical elements/components required for mainstreaming DRR and CCA, regardless of the sector or geographic level.

4.2.2.2 Invest in Capacity Building for Pre and Post Disaster Recovery

Investment of resources for pre and post disaster recovery capacity building is a major area of weakness identified by respondents. Across the case study countries in the Caribbean, a deeper analysis is required to determine the correlation, if any, between the historical pursued model of recovery planning and how that may have contributed to the absence of capacity and knowledge development in recovery planning. According to the draft proposal for the establishment of the Caribbean Resilient Recovery Facility, recovery capacities and coordinated efforts to recover from devastating impacts of various disasters remains the missing blocks of realizing comprehensive disaster management in the region.

- i. At the regional level, CDEMA could partner with international agencies such as UNDP, International Recovery Platform among others to **train a cadre of recovery experts from CDEMA Participating States**. The “MNRF Cadre” of experts maybe requested by disaster-impacted communities to assist with both general and sector-specific recovery planning, a new approach undertaken by the FEMA post Hurricane Katrina.⁽⁴⁰⁾ This recommended new approach would fit seamlessly within the established CDEMA Regional Mechanism for responding to disasters in their Participating States. This recommendation also **strategically aligns with the new thrust of CDEMA to establish the Caribbean Resilient Recovery Facility (CRRF)**. In addition, these trained group of experts would leverage their knowledge to build further capacity within their respective countries through multi-stakeholder training of government, private sector, academic

⁴⁰ UNISDR. 2017. “Build Back Better in recovery, rehabilitation and reconstruction”. Consultative version: In support of the Sendai Framework for Disaster Risk Reduction 2015-2030. <http://eird.org/cd/recovery-planning/docs/2-planning-process-scenario/1c-Pre-disaster-plan-of-Tokyo.pdf> (accessed July 17, 2018).

institutions and NGOs. This would also be a win-win in the advancement of developing recovery framework/plan at the national level as it would be an iterative process.

- ii. **Build up capacity and improve scientific/technical training** in the application of methodologies such as risk assessments and cost benefit analysis so that adequate expertise exists within countries **to help decision-makers**, such as ministries of finance, **better understand risk models and financial analysis to make informed decisions on the financial management of disasters.** ⁽⁴¹⁾

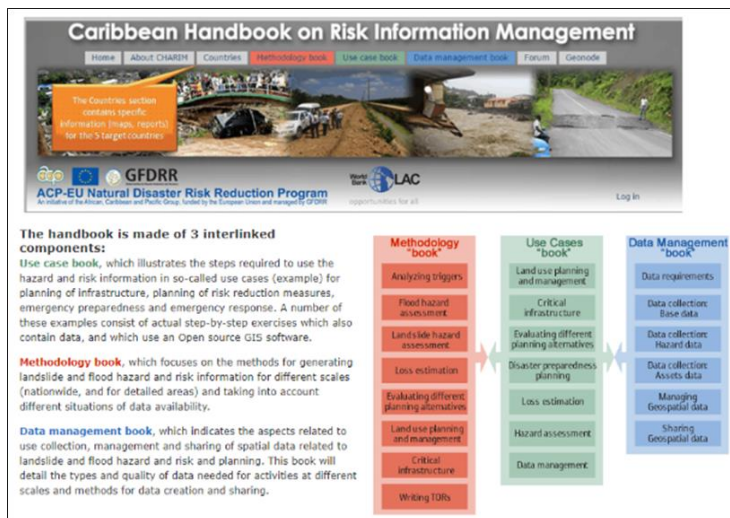
4.2.2.3 Research and Data Support for PDRP

Encourage greater use of and leveraging of existing risk information systems and databases to provide greater understanding of vulnerabilities and risk. For example, multi-lateral development Banks (MDBs) such as IDB Group and World Bank have developed risk profiles to quantify probable potential economic damages and losses due to eventual disasters in priority sectors and sub-national territorial areas for their respective member countries which provides data to support decision making and investments in PDRP. Greater awareness among CDEMA PS is also required to encourage use of two existing comprehensive access to data, methodologies, existing studies etc:

- Caribbean Risk Information Platform (CRIS) - is a multi-faceted virtual platform that hosts risk management data and information accessible to stakeholders to facilitate analysis, research, greater awareness of risk management and climate change adaptation in the region. CRIS can be leveraged as well as complement national databases to support PDRP in developing hazard and risk scenarios (or potential damage and loss) to identify likely recovery issues and the requirements for effective post disaster planning. The platform could also serve as the regional central repository for sharing lessons, good practices of recovery planning, and international literature on recovery which would align seamlessly with the proposed vision of the Caribbean Resilient Recovery Facility. Further information is available at <https://www.cdema.org/cris>.

⁴¹ Grandolini, G. 2016. Investing in pre-crisis financial risk management eases post-disaster recovery needs. <https://blogs.worldbank.org/voices/investing-pre-crisis-financial-risk-management-eases-post-disaster-recovery-needs>. (accessed January 18,2019).

- Caribbean Handbook on Risk Management (CHARIM)** - is an on-line handbook to support the generation and application of landslide and flood hazard and risk information to inform projects and program of planning and infrastructure sectors, specifically targeted to small countries in the Caribbean region. The handbook has three (3) interlinked components – Use Case Book, Methodology Book and Data Management Book can be harnessed to enhance technical capacity in the areas of hazard assessment, land use planning, preparedness planning and considerations in the design of critical infrastructure such as roads which are applicable for both pre and post disaster recovery planning. Further information is available at <http://www.charim.net/>.



4.2.2.4 Strengthening PDRP Monitoring Mechanism

Development of indicators to measure performance of PDRP using standard metrics/indicators to gauge how well the country or community is recovering from a disaster over time. Globally, there is the absence of systematic ways of measuring the disaster recovery process across events and over time (Chang and Miles, 2004; French, Feser, and Peacock, 2008). This is an opportunity for the proposed CRRF to lead the process in the development of a robust set of recovery indicators, with associated quantifiable metrics, according to Horney et al (2016), to support and build the capacity of local practitioners by improving pre-disaster recovery planning and providing data for decision-making during recovery. This is tied to the recommendation above about leveraging existing platforms which can help with access to data and other resources.

This proposed monitoring and evaluation of the recovery could form an integral part of a country's recovery framework/plan.

4.2.2.4 Public Education Campaign

A comprehensive on-going public education campaign about PDRP is imperative to effectively “move the needle” with institutionalizing and embedding of disaster recovery planning to become common practice and the norm within the region. With the use of the full range of social media, CDEMA being the regional disaster management agency could lead with the active involvement of its eighteen (18) Participating States through deliberate and continuous public education campaign to agitate for change. To be transformative and have the required impact of being proactive rather than reactive, such a campaign must be sustained for it to have the desired outcome. A sustainability plan clearly identifying among other things funding source (s) and public private partnerships (PPP) is critical for long term sustainability.

5.0 SUMMARY AND CONCLUSION

Disasters are a common feature of the Caribbean and erode development gains. Despite this fact, pre-disaster recovery planning is still incipient and not common practice. In fact, pre-disaster recovery planning generally consumes public discourse after a major disaster with little or no serious steps or actions taken to institutionalize pre-disaster recovery planning for future events. The ability of a community to accelerate the recovery process begins with its efforts in pre-disaster preparedness, including coordinating with whole community partners, mitigating risks, incorporating continuity planning, identifying resources, and developing capacity to effectively manage the recovery process, and through collaborative and inclusive planning processes.

The global perspectives on disaster recovery planning and case examples (Japan, USA and Phillipines) have demonstrated that legal and policy framework that clearly articulates recovery planning, established institutional structures and coordination mechanism, skilled personnel and stakeholder engagement are important to guide and improve recovery outcomes for future disasters.

Given the growing collection of recovery experiences in the region and globally, the time is now for organizing and synthesizing common lessons in such a way that develops and transfers actionable solutions about the process of rebuilding after disasters. The vision of CDEMA to establish the Caribbean Resilient Recovery Facility is a step in the right direction to anchor disaster recovery planning in a serious way in the region.

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ANNEX 1

Pre-Disaster Recovery Planning Survey

The Inter-American Development Bank thanks you for participating in this twenty (20) minute survey.

This survey forms part of a Regional Technical Cooperation with principal objective of providing Caribbean countries with key technical inputs to improve recovery, reconstruction and resilient development planning after natural disasters like hurricanes.

The United Nations Development Programme (UNDP), 2012 notes that even though the number of disasters and their catastrophic consequences increase, few governments are well prepared to undertake the recovery efforts necessary to bring affected areas and communities back to normal in the aftermath of a disaster. There is consensus among the global DRM community that pre-disaster recovery planning (PDRP) is a catalyst for effectively address the challenges of planning and implementing successful disaster recovery to ensure long-term social and economic sustainability after a disaster.

The concept of PDRP is built on the recognition that much can be done before a disaster happens to facilitate recovery planning after a disaster and improve recovery outcomes. It is a pro-active process of anticipating future recovery issues, developing a framework for better coordination, determining the key strategies for recovery and building capacity to improve recovery outcomes – all before a disaster occurs (International Recovery Platform, 2012).

The objective of the survey is to rapidly baseline the current status of national and sectoral PDRP in the region; to identify stakeholder perceptions of barriers to national and sectoral PDRP; and to identify potential foundational and transformational actions/interventions to advance national and sectoral PDRP.

Questions

1. Are you completing this survey from a national or sector perspective?
 - a. National
 - b. Sector

2. Do you have a national or sector have disaster recovery plan or framework?

Yes

No

If no, please proceed to question 4.

3. If the answer to question 2 is yes, does the existing disaster recovery plan or framework sufficiently address pre and post disaster recovery planning and operations?

- a. Plan/framework comprehensively addresses pre and post disaster recovery planning
- b. Plan/framework partly addresses pre and post disaster recovery planning
- c. Plan/framework only addresses post disaster planning

2a Please summarize the missing components, if any of the existing sector plan/framework

2c. Which institution leads recovery planning in your sector/jurisdiction?

4. Do you think there is a willingness in your sector to develop such a framework or plan?

Yes No

5. Are you aware of the Model National Recovery Framework developed by the Caribbean Disaster Emergency Management Agency (CDEMA) [then CDERA] in 1999 and revised in 2014?

Yes No

6. What is the progress with implementation of the MNRF in your jurisdiction?

- a. Full implementation (100%)
- b. Part implementation (50%)
- c. Incipient (25%)
- d. No implementation (0%)

7. What do you perceive to be the 3 main barriers/challenges that have prevented the development and institutionalization of post disaster recovery planning in your sector?

8. Identify 3 concrete actions/steps that you think are required to advance pre-disaster recovery planning in your jurisdiction.

9. What other considerations do you think are required to prioritize pre-disaster recovery to become institutionalized or common practice in the region?
