

Sectoral Recovery Capacity Assessment Report for Dominica's Tourism Sector



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Executive Summary

Dominica is highly exposed to the impacts of natural hazards, including earthquakes and hurricanes, has suffered major disasters in the past decades, and continues to cope with the impacts of the COVID-19 pandemic. Based on sustained damage, estimated at 226 percent of the gross domestic product (GDP), the International Monetary Fund (IMF) ranked Dominica as the country that suffered the greatest economic impact from worst natural disasters between 1980 and 2017. With more frequent and intense extreme weather events expected due to climate change in the coming decades, there is an urgent need to prepare for timely, effective, and efficient disaster recovery, while building resilience at all levels and sectors of government and society. This involves strengthening the capacity of key national sectors to develop and execute climate resilient recovery project portfolios that are gender responsive and disability inclusive.

This report presents the results of the Sectoral Recovery Capacity Assessment (SRCA) undertaken in Dominica to assess the capacity of the country's tourism sector to plan, design, implement, monitor, and evaluate resilient and inclusive recovery projects. Tourism was selected as the priority sector for the SRCA by the Government of Dominica due to its economic importance and high exposure to natural hazard impacts. The assessment followed a consultative process facilitated by the Ministry of Tourism, International Transport and Maritime Initiatives, and the Office of Disaster Management (ODM). It was supported by the Canada-Caribbean Resilience Facility (CRF), hosted by the Global Facility for Disaster Reduction and Recovery (GFDRR) at the World Bank Group, and the Caribbean Disaster Emergency Management Agency (CDEMA).

The SRCA assessed in detail the existing capacity for resilient recovery in the tourism sector in enabling policies and legal frameworks, institutional arrangements, and available resources and tools. The assessment allowed the identification of gaps, bottlenecks, deficits, and other factors limiting the planning, design, implementation, and monitoring and evaluation of resilient and inclusive recovery projects, as well as of capacity building interventions, investments, and opportunities to solve pressing issues. The report includes practical recommendations, including proposed interventions to facilitate the prioritization and decision making on investments by national and international agencies supporting disaster risk management (DRM) and development efforts in Dominica. Figure 1 presents the results of the SRCA for each of the assessed issues.

At a high and strategic level, the assessment determined that the capacity of Dominica's tourism sector to implement resilient and inclusive recovery projects in a timely, efficient, and effective manner is moderate. However, key results of a more detailed analysis indicate that although major policy and strategic progress has been made to integrate resilient and inclusive recovery at the center of national and sectoral policy to support Dominica in achieving its vision of becoming the first climate resilient nation in the world, the level of knowledge and skills of sectoral actors is still insufficient to plan and implement rapid and effective recovery interventions. The SRCA identified a critical need to strengthen and sustain resilient and inclusive DRM and recovery capacity within the Ministry of Tourism International Transport and Maritime Initiatives to enable the implementation of strategic recovery projects and to ensure other sectoral decisions are risk informed. The assessment also found limitations

in the availability of hazard and risk information, and in the offer of and access to financial mechanisms for recovery, including insurance.

The SRCA identified the following as crucial for building recovery capacity in Dominica's tourism sector:

- » Strengthen the enabling national and sectoral policy and regulatory environment for recovery through the completion and approval of the Comprehensive Disaster Legislation and the National Action Plan and Strategy on Disaster Risk Reduction contemplated in the NRDS, the elaboration of a recovery policy for the tourism sector and a national environmental policy as well as through the preparation and implementation of the Resilient Dominica Physical Plan and the updating of building codes and design guidelines for the tourism industry. All these documents should ensure the integration of operational aspects for DRM, gender, and disability inclusion.
- » Reduce the vulnerability of critical infrastructure to climate change and weather extremes to lower the risk of disruptions that affect Dominica and the tourism sector and invest in new climate resilient infrastructure to support national development. This can be achieved by supporting the new investments and policies that are being identified and costed by Climate Resilience Execution Agency of Dominica (CREAD) and the government ministries.
- » Encourage owners of hotels and other tourism facilities to retrofit assets exposed to climate change by creating a technical assistance plan with a range of risk reduction interventions, including improved guttering and drainage, and increasing septic tank volumes to compensate for flooding. The plan should be accompanied by a suit of interventions to encourage owners to invest such as cost-benefit analysis to show positive rates of return on investments, reduced insurance rates, tax reductions, or subsidies to cofinance the investments.
- » Strengthen the generation, management, and use of baseline information as well as risk and recovery relevant data and information by completing the update of DomiNode and through the construction

of a platform that provides simple and useful risk information to stakeholders in the tourism sector.

- » Strengthen sectoral budgets for DRM and recovery by including a contingent annual recovery allocation in the Ministry of Tourism's budget and ensure legislation and procedures enable the rapid reallocation of annual budgets to support recovery efforts.
- » Enhance resilience and recovery funding instruments for subject matter experts (SMEs) in tourism by improving the availability of and access to financial mechanisms for resilience and recovery, including insurance, and creating a database of international recovery funding opportunities for tourism.
- » Create a plan to finance software updating and maintenance at the Ministry of Tourism to facilitate project management operations.
- » Raise awareness, at the strategic and operational levels, of the added value of acquiring and sustaining DRM, gender and disability inclusion mainstreaming capacity for the sector's development. This can be achieved through well designed awareness raising campaigns and events for public officers.
- » Build and sustain the required knowledge and skills for the implementation of resilient and inclusive recovery projects in the sector through the recruitment of specialized staff in areas specific to DRM, the institutionalization of training in DRM, gender and disability inclusion for public and private sectoral stakeholders, and the improvement of public recruitment protocols, among other measures.

It is expected that the results and recommendations made in this report will be taken into consideration and implemented by national and international agencies supporting Dominica's efforts to build resilience.

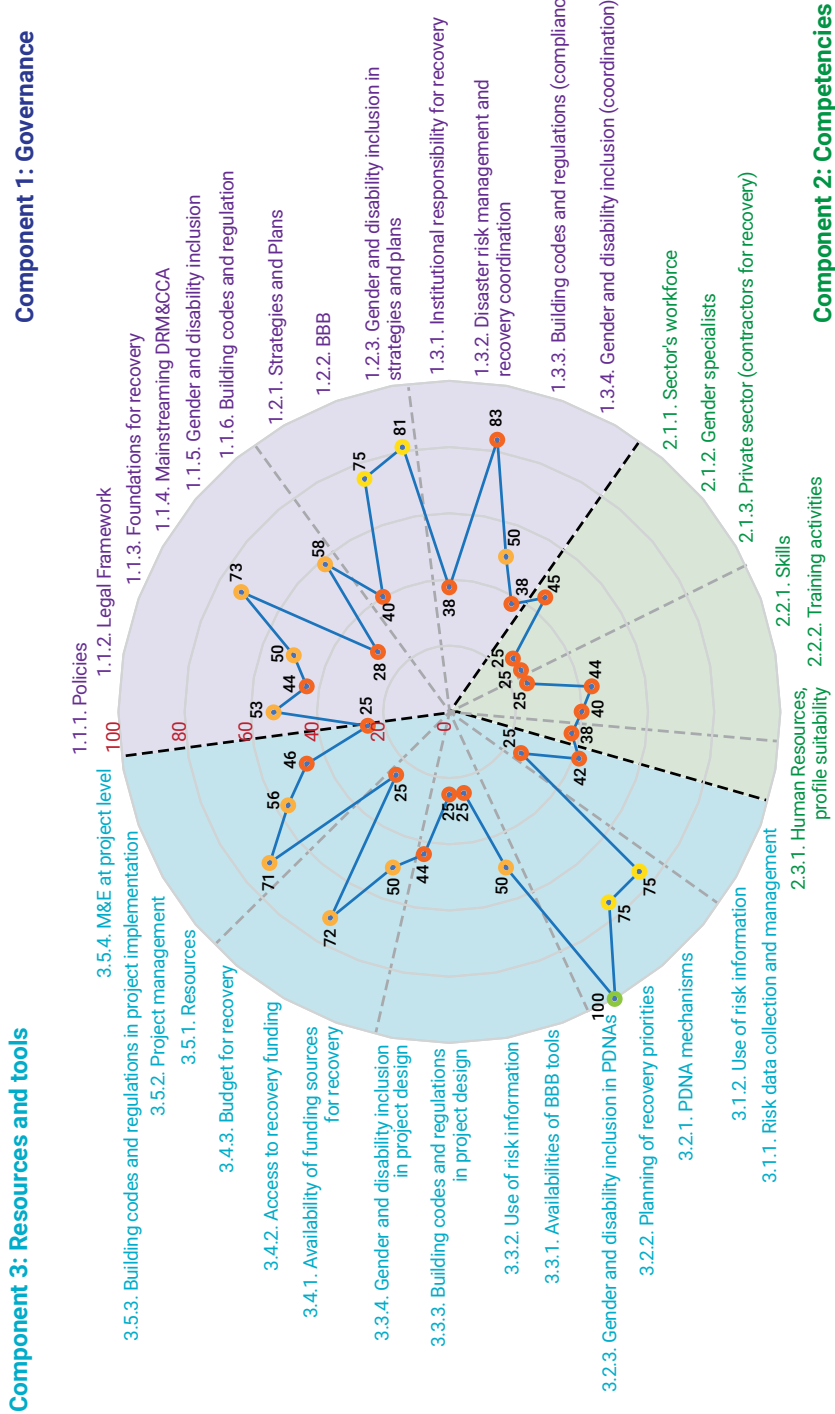
FIGURE 1

Sectoral Recovery Capacity Assessment results overview.

The issues addressed in the assessment were classified under three main components: Governance, Competencies and Resources, and Tools. For each issue, the level of existing capacity within the sector was determined using the Recovery Capacity Index.

Component 3: Resources and tools

Component 1: Governance



Acronyms

BBB	Build Back Better
CAFF	Climate Adaptation Financing Facility
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CDEMA	Caribbean Disaster Emergency Management Agency
CDM	Comprehensive Disaster Management
CERF	Central Emergency Response Fund
CRPD	United Nations Convention on the Rights of Persons with Disabilities
CREAD	Climate Resilience Execution Agency of Dominica
CRF	Canada-Caribbean Resilience Facility
DANA	Damage Assessment and Needs Analysis
DIMS	Disaster Information Management System
DAPD	Dominica Association for Persons with Disabilities
DRM	Disaster Risk Management
EnGenDER	Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean
ESL	Extreme Sea Level
GBV	Gender-based violence
GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Reduction and Recovery
GIS	Geographic Information Systems
GoCD	Government of the Commonwealth of Dominica
IOM	International Organization for Migration
M&E	Monitoring and Evaluation
MTDS	Medium Term Development Strategy
NRDS	National Resilience Development Strategy
ODM	Office of Disaster Management
PCM	Project Cycle Management
PDNA	Post-Disaster Needs Assessment
PwD	Persons Living with Disabilities

RCI	Recovery Capacity Index
RCP	Representative Concentration Pathway
SIDS	Small Island Developing State
SLR	Sea Level Rise
SMEs	Small and Medium-sized Enterprises
SRCA	Sectoral Recovery Capacity Assessment
TORs	Terms of Reference
UN	United Nations
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WBG	World Bank Group
XCD	Easter Caribbean Dollar

Glossary of key terminology

Building code: A set of ordinances or regulations and associated standards intended to regulate aspects of the design, construction, materials, alteration and occupancy of structures which are necessary to ensure human safety and welfare, including resistance to collapse and damage.¹

Build back better: The use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies and the environment.

Coping capacity: The ability of people, organizations and systems, using available skills and resources, to manage adverse conditions, risk or disasters. The capacity to cope requires continuing awareness, resources and good management, both in normal times as well as during disasters or adverse conditions. Coping capacities contribute to the reduction of disaster risks.

Critical infrastructure: The physical structures, facilities, networks and other assets which provide services that are essential to the social and economic functioning of a community or society.

Disaster risk management: Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk,

contributing to the strengthening of resilience and reduction of disaster losses.

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

Disaster risk assessment: A qualitative or quantitative approach to determine the nature and extent of disaster risk by analyzing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend.

Exposure: The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas.

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

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

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

¹ The following key terminology is provided by the United Nations Office for Disaster Risk Reduction. Online resource available at: <https://www.undrr.org/terminology>

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

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

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

Retrofitting: Reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards.

Reconstruction: The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community or a society affected by a disaster, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk.

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

01

Introduction



1.1 Need for Timely, Inclusive and Resilient Recovery in the Caribbean

The Caribbean region is highly prone to disasters, including hurricanes, earthquakes, droughts, flooding, and landslides. Higher temperatures, changing precipitation patterns, more frequent, intense, and extreme weather events, and sea level rise (SLR) resulting from climate change, further exacerbate disaster risk in the region. Major hazard impacts destroy infrastructure and property, result in losses from foregone output and incomes, and escalate costs as individuals and businesses are forced to work around disruptions. Disasters jeopardize hard-won national development gains and growth prospects, erode fiscal cushions, and disproportionately impact the wellbeing of the poor. Caribbean countries lost an average of 3.6 percent of aggregate Gross Domestic Product (GDP) per year Between 2000 and 2019 to damages related to natural hazards, compared to 0.3 percent in all emerging markets and developing economies (World Bank, 2021). Indeed, the economic cost of disasters in the Caribbean region is so high that it often exceeds the size of the economy of the countries affected (Ötoker and Srinivasan, 2018).

However, more timely and inclusive recovery efforts and consequently, faster and better reconstruction can lower social and economic burdens and allow a more rapid recovery of pre-disaster development levels. This critically depends on strong public systems that can rapidly coordinate and cost-effectively mobilize resources, reconstruct infrastructure, deliver services, and enable the rebuilding of local economies in the aftermath of disasters. Confronted with recurrent extreme weather conditions and the prospect of more frequent and intense hydrometeorological events with climate change, resilient recovery planning and investments have become a priority for the Caribbean region.

Preparing for recovery entails enhancing ex-ante the capacity of national governments to recover from losses and damages, define and strengthen institutional and financial systems that support the recovery process, and obtain the necessary political com-

mitment for the development of recovery policies and programs (GFDRR, 2020) more rapidly. This is particularly important in the Caribbean Small Island Development States (SIDS), where long-standing and pervasive human-resource constraints and country-specific technical-capacity gaps, both at the national government level and in all sectors, represent major obstacles for planning and implementing timely and efficient disaster-recovery operations. Consequently, a better understanding of capacity gaps and a focus on strengthening existing recovery capacity of the development sectors most affected by disasters in these countries can increase the efficiency and effectiveness of recovery investments. The Canada-Caribbean Resilience Facility (CRF) has engaged in the standardized assessment of recovery capacity needs in key development sectors of six Caribbean nations as a first step to assist countries to bridge recovery capacity gaps and build resilience to climate impacts and disasters. The countries are Antigua and Barbuda, Dominica, Grenada, Guyana, Saint Lucia, and Saint Vincent and the Grenadines and the assessment could be undertaken in other countries, depending on demand.

1.2 Assessing Sectoral Recovery Capacity in the Caribbean region

In order to assist Caribbean governments prepare for timely, efficient, and effective implementation of inclusive, climate-resilient recovery projects, the CRF developed the Sectoral Recovery Capacity Assessment (SRCA) in partnership with the Caribbean Disaster Emergency Management Agency (CDEMA) and has coordinated activities with the Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER) project for its implementation. The SRCA has been included in CDEMA's Comprehensive Disaster Management (CDM) Audit Tool, which covers the different phases of the Disaster Risk Management (DRM) cycle (figure 2), to complement the national recovery component of the tool, and to facilitate the identification of solutions to sectoral capacity issues that could delay the implementation of recovery projects.

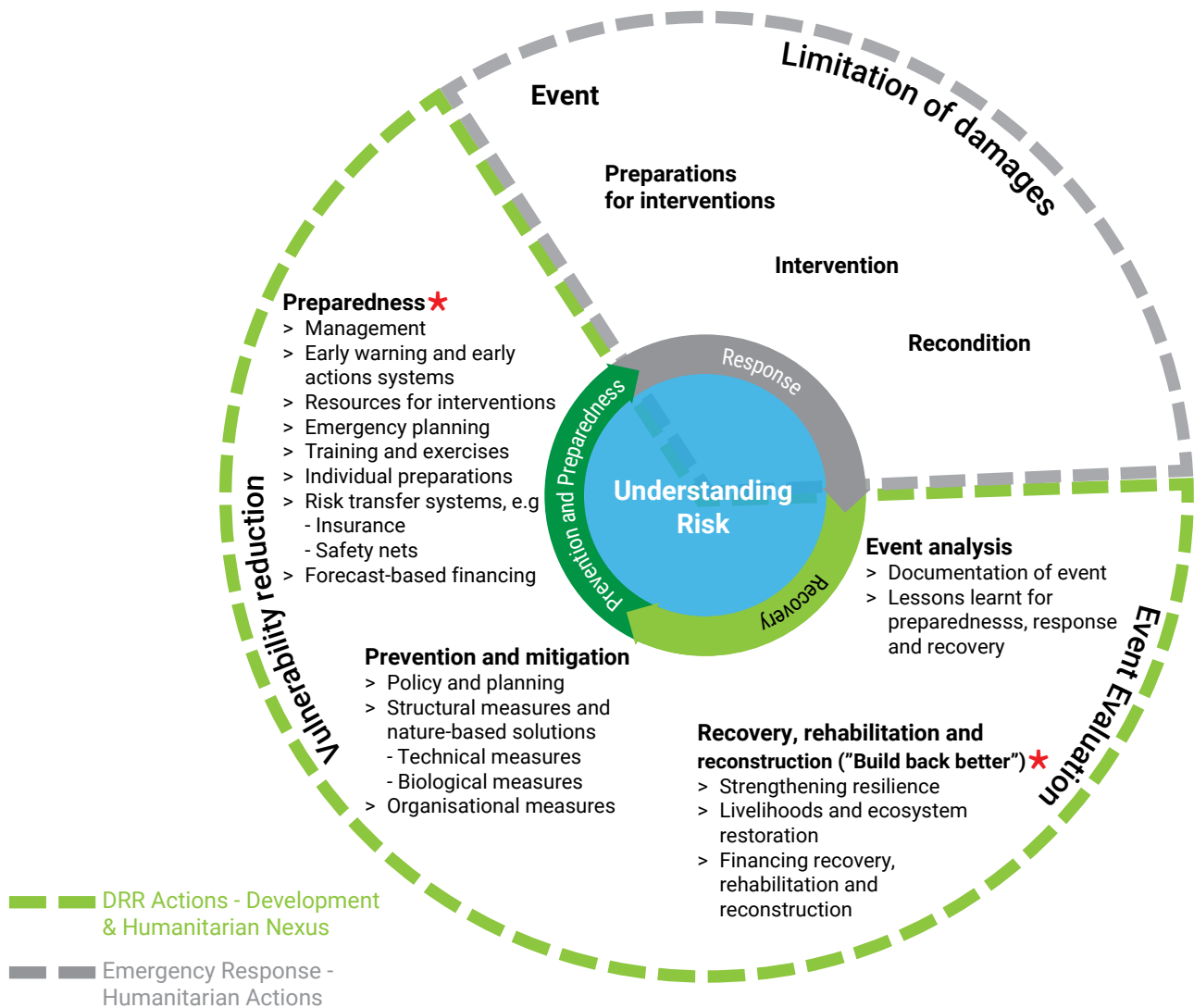
Results of the SRCA are expected to serve as planning instruments and benefit national governments, sectoral stakeholders, national DRM agencies, and CDEMA in their efforts to enable a rapid and effective recovery in the aftermath of disasters. Recommendations emerging from the assessment will also inform the prioritization, design, and implementation of recovery-related capacity-building activities under the CRF, and inform potential investments to prepare for recovery as well as additional activities to be led by national

governments and other stakeholders. Based on their own criteria, priorities, and needs, each government selects the sector to be assessed. The Government of Dominica selected tourism in view of its economic and social importance, the consequences of previous disasters and the vulnerability of the sector, its infrastructure and investments vis-a-vis projected climate change impacts, including more frequent tropical storms and sea level rise.

FIGURE 2

Disaster Risk Management cycle.

Asterisks indicate the phases of the DRM cycle that are most relevant for the SRCA. These are the recovery phase and the preparedness phase, where the necessary actions for recovery need to be implemented.



Source: Adapted from FOCP (2020).

1.3 Specific objectives of the SRCA for the tourism sector in Dominica

The objectives of the SRCA are to:

- » Improve the understanding of the existing capacity of the Government of Dominica, its Ministry of Tourism, and other key stakeholders in the tourism sector to take the necessary actions to prepare for and undertake timely and efficient climate resilient, gender responsive and disability inclusive disaster recovery projects.
- » Identify capacity gaps, weaknesses, and challenges that limit the timely and efficient implementation of recovery projects in Dominica's tourism sector.
- » Identify opportunities for investments to support Dominica's tourism sector and institutions in overcoming recovery capacity gaps, weaknesses, and limitations—policy reforms, institutional restructuring, training, and investments—and prioritize interventions to be financed by the government as well as by bilateral and multilateral donors to improve the sector's capacity to prepare for recovery.

1.4 Assessment methodology

The SRCA methodology was designed to evaluate the conditions and extent to which existing national and sectoral capacity enable timely, effective, and coordinated gender-informed and disability-inclusive climate-resilient disaster recovery in the framework of national DRM policy. Specifically, the SRCA assesses the conditions under which recovery considerations have been integrated into sectoral policies, plans, institutions, and administrative, financial, and operative processes, as well as the extent of the integration.

Assessment Framework: The SRCA framework consists of three main and interrelated components, namely, (i) Governance, (ii) Competencies, and (iii) Resources and Tools. Each of these components includes a series of complementary areas covered under the component, referred to as key elements. In turn,

each key element covers a series of topics, referred to as sub elements. Gender and disability inclusion are crosscutting issues. The assessment structure establishes a relational cascade between the components at policy-making level, their key elements at strategic and programmatic level, and the sub elements at operational level of each key element. This structure therefore allows addressing key enabling factors for recovery at each level of the framework (figure 3).

Data collection and analysis: The assessment is based on data and information retrieved from a desk review and a consultation process with key public and private stakeholders, who – over the course of multiple sessions carried out online – completed the SRCA questionnaire, which was designed following the SRCA framework structure (see Annex 3). When stakeholders disagreed on the response to specific questions, the team in charge of the assessment moderated discussions, based on evidence whenever possible, until an agreement was reached. Additionally, where the responses differed from the results of the desk review, the team posed additional questions to identify the reasons for the mismatch.

For the analysis of the collected information, the SRCA methodology uses semi-quantitative approaches that enable the translation of qualitative and value judgments into numerical values within established ranges. These approaches include a scoring system that assigns quantitative values to the qualitative information collected for each of the questions in the SRCA questionnaire, including the narrative responses that stakeholders provide during consultations (Table 1), and the Recovery Capacity Index (RCI) calculated from the scores assigned to the responses. Resulting RCI values describe the extent to which the considerations necessary for effective recovery are taken into account and integrated by the sector as part of standard sectoral processes and operationalization of the country's DRM policies.

FIGURE 3

The SRCA framework structure.

C1, C2, and C3 are the main and inter-related components of the assessment, each consisting of a set of key elements (KE) and their respective sub elements (SE). The information required for the analysis of components, key elements, and sub elements is provided by answers to a set of questions per sub element (Q) included in the SRCA assessment questionnaire. The yellow and purple circles represent crosscutting issues. The triangles indicate the relational cascade among the different levels of the structure and the dotted circle denotes the interconnectedness of the three main capacity components.

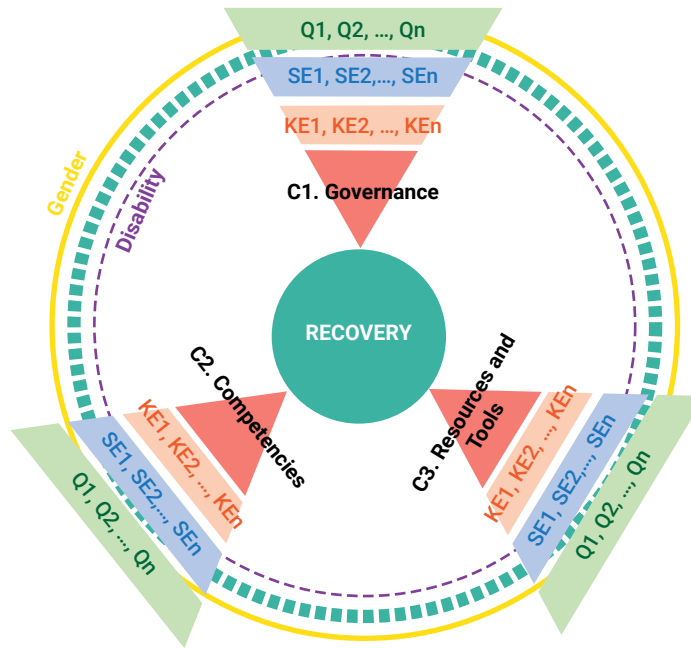


TABLE 1

Scoring system for the quantitative evaluation of qualitative responses to questions in the SRCA questionnaire.

Score	Type of response to the question				Evidence
4	A qualified YES	Minor problem / no problem	No need for action or measure	Yes	Adequate
3	In progress (> 75 percent completed)	Moderate problem	Need for action and measure	Partially	Acceptable
2	In progress (> 50 percent completed)	Major problem	Need for action and measure	Partially	Scarce
1	Planned or started with minimum actions	Severe problem	Immediate action and acute measure	No	Minimum
0	A definitive NO	Catastrophic problem	Immediate action and acute measure	No	None

The RCI values obtained for each level of the assessment are presented in spider charts and a traffic light system categorizes RCI values. This provides a rapid overview of the areas where recovery capacity is strong – high level of integration of factors enabling a

timely, inclusive, and resilient recovery – and of those in need for urgent capacity building or other interventions – areas with absent or low level of integration of factors enabling a timely, inclusive, and resilient recovery. Table 2 presents the traffic light system.

TABLE 2

Traffic light system used to categorize Recovery Capacity Index (RCI) values.

RCI value range	Appreciation of the extent to which recovery considerations are integrated in the sector
Low or absent integration 0–24	Absent integration of recovery considerations across the sector due to specific limiting elements. Low level of awareness and knowledge about the importance and added value of recovery integration for sectoral development.
Basic or incipient integration 25–49	Incipient integration of recovery considerations takes place at different levels of the sector. Some elements are under development, with a certain level of incidence to generate an institutional culture. There is a certain level of awareness and knowledge about the importance and added value of recovery integration for sectoral development.
Moderated integration 50–74	Evident integration of recovery considerations takes place at the majority of levels in the sector. An institutional culture that supports and updates recovery factors and includes them in sectoral planning processes is identified. A good level of awareness and knowledge about the importance and added value of recovery integration for sectoral development exists.
Advanced integration 75–89	Evident integration of recovery considerations takes place at most levels in the sector, as it is part of sectoral strategic planning processes. Adaptation tools are available to enable the continuity of operations during contingencies, in a coordinated, practical, and documented way. There is also a high capacity to value the impact and contribution of recovery integration to the sector development , and to programmatic efficiency and efficacy.
Full integration 90–100	Integrating recovery considerations at all levels is a working principle , managed as part of the sector’s organizational culture. Tools and protocols for the continuous improvement of the sector’s performance and impact are available.

HIGH



CAPACITY BUILDING NEEDS

LOW

02

The tourism sector in Dominica



Dominica has been pursuing tourism as an effective means of economic diversification from its traditional reliance on agriculture, with the result that the sector is the most important one for the economy. Tourism is considered a key engine of development which generates foreign exchange, employment, and opportunities for better livelihoods. Therefore, the development of tourism-related services and businesses has been encouraged through implementing several public programs, including the Eco-Tourism Development Program, the Tourism Sector Development Program, the Upgrading of Eco-tourism Sites Project, and the establishment of the Discover Dominica Authority.

Tourism constituted about 36 percent of Dominica's gross domestic product (GDP) considering the 2014–18 average, employed about a third of the labor force, and contributed roughly 76 percent of total export receipts (Mooney and Zegarra 2020). Specifically, tourism constituted 32.2 percent of total GDP for 2019, employed 35.9 percent of the labor force, and visitor expenditure was estimated to be USD165.9 million, or 82.6 percent of total export earnings (WTTC 2021). Although Dominica has the natural and cultural resources on which to sustain a thriving tourism industry, the number of arrivals has not grown over the past two decades (World Bank 2021d). Close to half of businesses active in the tourism industry affirm that the number of tourists coming has declined over the past 10 years, while regionally it is 17 percent of firms that indicate a decline in tourists according to a 2021 study developed by the World Bank (Erman and Dallman 2021). Dominica receives more tourists from the Caribbean than other countries in the region, especially from the French West Indies, but most clients still come from outside the Caribbean, particularly the US, France, the UK, Canada, and other EU countries, which together make up for almost all the rest of tourist inflow (WTO 2020). In the low season, domestic clients make up a larger share of clients, but Dominica still has a lower share of domestic tourists than the rest of the Caribbean (Erman and Dallmann 2021).

The impact of tourism on output, employment, and the balance of payments has been economically positive, yet the country is remarkably vulnerable to

external shocks and crises. For instance, the effects of the COVID-19 global pandemic have been severe and underscore the high dependency of Dominica on tourism and tourist revenues. Dominica ranks ninth globally, and fifth in Latin America and the Caribbean, on the Tourism Dependency Index, which assesses a country's dependency on tourism using five-year averages for the total contributions of tourism to export receipts, GDP, and employment (WTO 2020).

Dominica can market itself as an authentic Caribbean destination, with its niche product of nature, heritage, and adventure tourism well positioned to meet the demand of those seeking experiential tourism in these areas. However, the tourist sector is undergoing a rapid and radical transformation and is exposed to changing global market and consumer trends, the disruptive nature of technology, increased competition in the international markets, and the devastating effects of the pandemic, natural disasters, and climate change, among other important issues. This points to the crucial need for Dominica to develop a tourism industry that is resilient, and this involves action by the public sector—national, regional, and local—tourism businesses, communities, tourists, development partners, and financial institutions (World Bank 2020).

The tourism industry has great potential to generate economic and job growth in Dominica. Yet it has suffered and is still recovering two large shocks; first Hurricane Maria and then the crisis created by the COVID-19 global pandemic, both of which have affected the whole industry. Firms face growing competition globally and are increasingly impacted by the negative externalities generated by climate change. Although critical infrastructure is reportedly more reliable in Dominica compared to the regional average, a larger share of disruptions to water, energy, and roads are caused by natural hazards, calling for more investments in resilient infrastructure (Erman and Dallmann 2021).

The opportunities for growth for tourism businesses in Dominica in the prevailing environment are limited by the high costs of financing and access to credit, which represent standout factors that constrain the

sector. Corruption, an uncondusive business environment—customs and trade regulations, business licensing, and operations permits— crime, theft, and disorder further constrain doing business in the country (Erman and Dallmann 2021).

2.1 Disasters in Dominica

Dominica is exposed and vulnerable to the impact of meteorological and geophysical hazards including excess rainfall, hurricanes, earthquakes, volcano eruptions, and tsunamis. Recurrent disaster events have historically harmed the population's socioeconomic well-being and the country's general economic and fiscal stability. Based on sustained damage, estimated at 226 percent of GDP, the International Monetary Fund (IMF) ranked Dominica as the country that suffered the greatest economic impact from natural disasters between 1980 and 2017 (IMF 2019). It is important to mention that the devastating impact of Hurricane Maria, which ravaged the island in 2017, represents the single most important event contributing to such a high ranking.

On account of its location in the Atlantic hurricane belt, Dominica is extremely vulnerable to hurricanes and tropical storms. In the last two decades only, various hurricanes have hit the country, causing significant physical and financial damages. Category 5 Hurricane Maria devastated the island in September 2017, leading to 15 casualties and causing damages and losses equivalent to 200 percent of Dominica's GDP (GFDRR 2018). Tropical Storm Erika caused total damages in August 2015, and losses were estimated at USD 483 million, equivalent to 90 percent of Dominica's GDP.

Intense rainfall regularly provokes flooding and landslides. Floods can be severe and take a variety of forms including land-based floods, riverine and coastal floods, and ponding. Following the passage of Hurricane Maria in 2017, almost all the country's rivers flooded due to intensive precipitations, inundating an area of roughly 13 square kilometers, or almost 1.74 percent of the island's territory. Dominica is also particularly susceptible to landslides. In the aftermath

of Hurricane Maria, 9,960 landslides were identified, including 8,576 debris slides and 1,010 debris flows. Thirty-five people lost their lives due to landslides between 1925 and 2015, and slide clearance and road repair has had a long-term cumulative economic impact (GoCD 2017).

A single disaster event can affect the entire territory and economy and cause a disproportionately high loss of GDP and capital. People's livelihoods, especially those of workers in the tourist industry, are highly dependent on stable and healthy ecosystems—coastal, marine, forests, wetlands— and disasters cause a widespread destruction of these habitats, resulting in high losses of assets and incomes.

Disaster impacts on tourism

The Caribbean region depends on tourism and travel for its GDP more than any other region in the world (Mackay and Spencer 2017) and is therefore highly affected by the impacts of climate change, disasters, and other external shocks on the tourism industry. Disaster impacts occur mostly through damage, destruction of assets, infrastructure access, and the reduction in external demand. The latter is caused by the loss of reputation of tourist destinations, which can deter visitors for years after major disaster events (Erman et al. 2021). The 2017 hurricane season alone caused a reduction of more than 800,000 visitors in the region, and more than USD 292 million losses to regional GDP (WTTC 2018).

When Hurricane Maria hit Dominica, it severely damaged 39 percent of the tourist accommodation stock, disrupted the cruise season for more than a year, and caused damages to tour operators, vendors, and other support services for at least USD 1.59 million. Hotel staff and support personnel had to struggle with unemployment as they rehabilitated their own damaged or lost properties. Parks and natural areas, which represent the main tourist offers in Dominica, were equally impacted, which affected the attractiveness of Dominica as an idyllic Caribbean destination and delayed the recovery of the tourism sector and the economy as a whole.

Tourism is extremely important for local communities and their respective economies, in part because of the tourist industry interconnectedness with other key economic sectors such as transport, construction, agriculture, and energy, to mention a few. When a disaster hits, its impacts are multifold and have cascading effects across economic sectors. While tourist inflows may be directly affected, other sectors strictly related to tourism indirectly suffer as a consequence, as prospective construction developments are stalled, new airports or roads do not get built, food products largely consumed at hotels lose their usual outlets, and less local goods and services are demanded by tourist operators across the board.

At the local level, disasters force tourism enterprises to close, with immediate negative effects on sales and employment. In the aftermath of disasters, businesses close either to repair damaged assets or owing to the lack of tourists. A survey conducted in 2020 with 1413 tourism-related firms in 13 Caribbean countries, including Dominica, indicated that on average, firms close for 42 days after large hazard impacts, with major disasters potentially leading to even longer closures. After Hurricane Irma in 2017, 66 percent of firms closed for 77 days, on average, and it took them 131 days, on average, to recover their pre-shock revenue levels. Delays in the reconstruction of critical infrastructure and tourist attractions contribute to the length of the recovery process in the sector. The same survey, however, found that while countries affected by disasters lose tourism revenue, neighboring countries often benefit from the re-routing of tourists and increased demand, meaning that Dominica could economically benefit from a disaster happening elsewhere in the region. A further finding from the survey is that to prepare for hazard impacts, tourism enterprises resort to investments in backup infrastructure—including power generators and water storage facilities—and, wherever possible, insurance. In Dominica, 75 percent of tourist sector firms possess backup infrastructure, 66 percent have improved physical structures and disaster plans, and 62 percent have insurance plans. A significant number of firms, at 52 percent, also have business continuity plans and 41

percent have flood mitigation measures in place (Erman et al. 2021).

2.2 Climate change impacts on tourism

It is anticipated that the Caribbean region, largely consisting of small island developing states (SIDS), will be among the most severely impacted by changes in climate conditions. Higher regional temperatures and more uncertain precipitation patterns will possibly produce more transitory but severer phenomena during the rainy season while correspondingly modifying the duration and harshness of the dry season. The Intergovernmental Panel on Climate Change (IPCC) estimates that the consequences for the Caribbean region will be an intensification of the impacts from natural hazards, with extreme weather events becoming both more frequent and more intense (IPCC 2022).

The majority of Caribbean nations are small in size, feature high concentrations of human presence and infrastructure along the coast, and are located in areas highly prone to extreme weather events. Dominica is no exception, and climate change has the potential to result in serious human, financial, and environmental losses. Sea level rise represents a major threat to Dominica's tourism sector, as it is expected to increase coastal flooding and accelerate coastline erosion. An analysis by Giardino et. al (2021) suggests that, across all Caribbean countries, a 35-meter shoreline retreat of sandy beaches is projected under a high climate change scenario by 2050, increasing to 98 meters by 2100.

Climate change is expected to also increase the severity and frequency of hurricanes in the Caribbean, which would have ominous consequences for the tourism sector. A study by Scott et al. (2020) finds that, after accounting for fluctuations in global economic trends, disease epidemics, institutional capacity, and adaptation investment, high damage hurricanes reduce tourist arrivals by 11 percent during the following 12 months, compared to a year with low damage or no hurricanes. Powerful hurricanes force businesses to close, resulting in immediate losses in sales and

Climate change projections for Dominica*

- » Higher mean annual temperatures (1.8° to 2.3°C) by the 2090s.
- » Lower annual precipitation
- » (-137.21mm to 906.68mm) in 2040–2059.
- » Higher annual Maximum 5-day Rainfall (25-yr Return Level)
- » (-46.20mm to 202.84mm) in 2040–2059

* Representative concentration pathway (RCP) 8.5 ensemble.

Source: World Bank, 2020.

employment. But losses may also continue after firms reopen, as prolonged reconstruction of vital infrastructure and tourist attractions often limit travel, making tourists less willing to return to a country after a disaster.

The repercussions of climate change on tourism are multifold. Projected changes in aridity and less precipitation are expected to impose freshwater stress on SIDS, and might lead to shortages of fresh water, on which tourism depends. Higher temperatures might have devastating costs on natural resources, including coastal and marine environments, land flora and fauna, fisheries, and agriculture, thereby putting at risk Dominica's tourist offer. Projected climate and ocean-related changes will significantly affect marine and terrestrial ecosystems and ecosystem services, which will in turn have cascading impacts across both natural and human systems. Modeling of both temperature and ocean acidification effects under future climate scenarios of RCP 4.5 and RCP 8.5, suggest that some small islands will experience severe coral bleaching on an annual basis before 2040 (IPCC 2022), thereby reducing their tourist appeal.

Given that tourist infrastructure is mainly located on or close to the coast, sea level rise represents a significant threat for Dominica's tourist sector, as incremental sea level rise and erosion will potentially alter the

beachscape, decrease its aesthetic value, and affect tourist activities and the livelihoods of those depending on tourism, as well as the profitability of the tourism sector as a whole (Thin et al. 2019). Even under a relatively moderate carbon dioxide emissions pathway, RCP 4.5, 13 percent of nearshore hotels will experience beach loss resulting in a 17 percent decrease in tourism revenue for the region by 2050, with the figures being even higher, at 30 and 38 percent respectively, by 2100 (Campbell, Spencer, and Strobl 2021).

Figure 4 shows the areas affected by SLR under a high climate change scenario (RCP 8.5). Other inundation scenario maps for Dominica are presented in Annex 2.

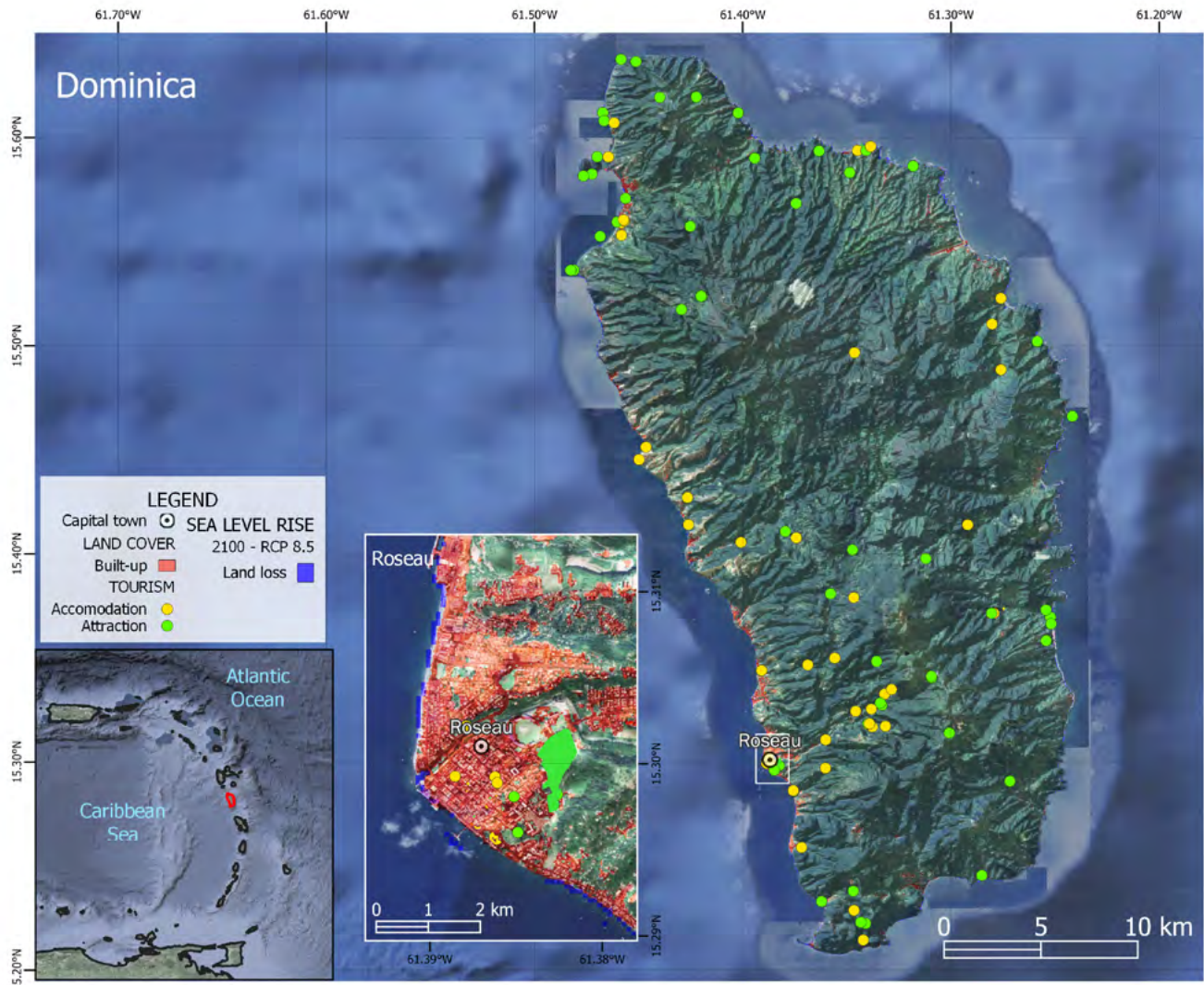
2.3 COVID-19 impacts on tourism

Of the 20 most tourism dependent small economies in the world, 13 are in the Caribbean region. Tourism in the region depends especially on visitors from Canada, Europe, and the United States, which have been severely affected by the pandemic. Most regional ports and airports were closed to prevent the spread of COVID-19, thereby hindering even intraregional tourism. According to Tourism Analytics (2021), tourist arrivals in the Caribbean in January and February 2021 decreased by 68 percent relative to 2020, and by 66 percent from January to December 2020 compared to 2019. The Caribbean Tourism Organization found that the drop in arrivals in 2020 would take the Caribbean back to 1995–96 tourism levels, reversing 25 years of growth in the sector (CTO 2021). The COVID-19 vaccine rollout is expected to gradually restore consumer confidence and contribute to an ease in travel restrictions. However, the International Air Transport Association (IATA) has warned that international passenger demand may not recover to pre-pandemic levels until 2024 (IATA 2020).

Dominica's tourism sector was severely hit by the COVID-19 pandemic, given Dominica's reliance on tourist revenues, the small size of the economy, and the low level of economic diversification. Dominica is an island that is only accessible only by sea or air, so the tourism industry suffered heavily due to global

FIGURE 4

Areas affected by Sea Level Rise in Dominica by 2100 under a high climate change scenario (RCP 8.5)



travel restrictions aimed at reducing the transmission of the virus.

Given the high dependency of Dominica's economy on tourism for revenues and the large size of the labor force employed by the sector, the socioeconomic spill-overs of the pandemic and related policies have been severe. According to the Economic Commission for Latin America and the Caribbean (ECLAC), Dominica might have faced losses of almost 80 percent of its 2019 level of exports of goods and services, with the loss in tourism revenues strongly curtailing the coun-

try's capacity to import necessary goods and services (ECLAC 2020). The steep fall in tourism revenues is likely to have a significant impact on overall GDP growth and employment levels in the medium term. In Dominica, the prevailing tourism crisis caused by the side effects of the COVID-19 global pandemic reduced GDP by 11 percent and total employment by almost the same amount, which might result in a profound socioeconomic crisis and negatively affect recovery prospects (IMF 2021 and ECLAC 2020).

2.4 Infrastructure

Dominica's tourism infrastructure includes air and seaports, the road network, the water supply system, IT and telecommunications, and energy infrastructure, and represents a crucial element for the continuous development and attractiveness of the tourism sector, as well as in the push towards achieving climate resilience. It is key that the capacity and quality of infrastructure continue to be ensured through investments so that they keep pace with the changing necessities of the tourism sector and international market trends.

Dominica's geography and the country's climatic, hydrological, and geophysical characteristics leave its infrastructure exposed to natural hazards such as tropical storms, floods, and landslides. As a result of climate change, the intensity and frequency of meteorological phenomena affecting the island are likely to increase, and the level of compounded risk would require the creation or upgrading of defense infrastructure that can offer protection against multiple adverse events.

The operations of tourism enterprises in Caribbean countries depend heavily on infrastructure and infrastructure services. As Dominica is sealoaked, access to well-functioning and reliable infrastructure systems—in particular, maritime and air transport systems—is vital. Seaports, airports, and local road networks are the lifelines sustaining the survival of SIDS, particularly in the Caribbean region. They are especially critical for the tourism industry, as underscored by the fact that 98 percent of tourism firms in the region see their customers arriving by air, and 70 percent of the firms by sea (cruises and private boats). Once at their destinations, the clients of 94 percent of the firms use the road network to access the establishments. In addition, 80 percent of tourism firms rely on electricity, water, phone, and internet services to maintain their revenue (Erman et al. 2020).

Most of the infrastructure in Dominica is prone to several hazard impacts. Roads and utility infrastructure are among the most vulnerable to landslides and storm surges, and adverse events sometimes leave

communities entirely cut off from the rest of the island, particularly communities with single road access in and out. Dominica's roads are built on steep topography, making them vulnerable to landslides. Moreover, the country has 365 rivers, which led to the construction of culverts and bridges that—over time and with the growing strength of recent hydrometeorological phenomena—might struggle to cope with higher than usual flood levels. As a SIDS, construction costs in Dominica are high, and the maintenance of infrastructure assets puts significant strain on government budgets. Slope stabilization, dredging, and other necessary resilience measures are critical for the continuous operation of the roadway, but further add to the financial strain. Given the country's lack of road network redundancy, most roads must perform acceptably during natural disasters and should, at a minimum, be accessible to first responders. Associated impacts are felt on communications, electricity, and water infrastructure, since most of these are placed along major road networks. Dominica's Growth and Social Protection Strategy (GSPS) 2014-2018 underscores how Dominica's terrain renders damage to physical infrastructure greater than in neighboring countries, and the cost of rehabilitation higher (Commonwealth of Dominica 2014).

In Dominica's coastal areas, where most tourist infrastructure is concentrated, natural flood management solutions such as mangroves or wetland areas might represent cost-effective investments, as they serve as natural barriers against inundation phenomena such as sea level rise, storm surges, and flash floods, while at the same time they benefit environmental and ecosystem conservation. In areas susceptible to landslides, afforestation and reforestation are effective means to decrease the impacts created by this hazard, due to the retaining strength of root systems. Indeed, revegetating areas have already improved slope stability on other eastern Caribbean islands and have been regarded as simple, cost-effective, and community-based risk reduction solutions (World Bank 2013). While more capital intensive to design, build, and maintain, large physical flood defense barriers such as seawalls can also provide effective defense systems against coastal flooding.

Temporary defenses could achieve critical infrastructure protection at a relatively lower cost, although more site specific analyses might be required to ensure temporary protection that effectively reduces hazard exposure. Design changes might include reinforcing existing coastal structures, increasing capacities in areas that are highly exposed, or enforcing established building codes. Such design alterations are inexpensive compared to large flood defenses but must be devised on a specific asset by asset basis. Infrastructural design upgrades could include encouraging developers and homeowners to strengthen guttering or drainage, implement jetties and landing docks, use increased septic tank volumes to compensate for flooding, or adhere to building design codes.

Dominica has set for itself the objective of being the first climate resilient nation globally. Yet, to accomplish this, physical infrastructure must be able to endure and recover quickly from natural disasters. The government is preparing a comprehensive plan encompassing all infrastructure, and the standards required to strengthen resilience. This plan will guide investments in utility infrastructure, ports, roads, bridges, drainage systems, housing, schools, health centers, shelters, and coastal and riverine defense infrastructure, emphasizing asset maintenance and considering the life cycle cost of investments. It will include a hydrological survey and flood or landslide risk mitigation plans, standards for resilient infrastructure and housing, sector master plans, and a redevelopment plan for the cities of Roseau and Portsmouth (Commonwealth of Dominica 2020).

The cost to Dominica becoming climate resilient by 2030 is estimated at approximately USD 3.5 billion, of which the government has already invested roughly USD 600 million on critical infrastructure projects since 2017. The remaining financing gap is estimated at about USD 3 billion. Based on current government capital expenditures, the expected financing gap would be approximately USD 90 to 130 million annually, or USD 12,500–18,000 per capita to achieve resilience by 2030 (Commonwealth of Dominica 2020).

2.5 Gender, tourism, climate change, and disasters

Gender gaps remain in Dominica, although women have a higher life expectancy compared to men—78.8 years versus 74.5 years (WDI 2019), and girls outperform boys in the educational system, with higher school enrollment rates—94.6 percent vs. 82.5 percent—and higher completion rates in secondary education—114.6 versus 98.2) (World Bank 2021a). Existing gender gaps and traditional gender roles in Dominica may lead to different levels of exposure and vulnerability for women and result in differentiated impacts, potentially widened after a disaster.

Labor market indicators show that men outperform women in economic outcomes and that a strong occupational segregation exists along gender lines. Women are prevalently employed in the services sector and in the informal economy, which makes them potentially more vulnerable to natural disasters. Women are increasingly overrepresented in the tourism sector, mainly in low paid, informal jobs in housekeeping and waitering, and are therefore more susceptible to be made redundant when a disaster strikes. Indeed, assessments following Tropical Storm Erika confirmed a higher level of vulnerability for women, as they were engaged in approximately 55 percent of the informal economic activities disrupted and they additionally reported major losses for home-based businesses and subsistence farming in the spaces directly around their homes (GoCD 2015b).

A higher percentage of the poor live in female headed households. Single parent families headed by women are more vulnerable to disaster-related shocks. They also given the double burden of reproductive and productive roles, and have a more limited access to financing, labor markets, social protection, support networks, and coping capacity (Bleeker et al. 2021). In terms of Women have a more limited access compared to men in financing for housing and enterprise development, which results in longer stays in temporary accommodations and in disruptions of livelihoods in the aftermath of a disaster. This seems to be especially true for female headed households. For

instance, after Hurricane Maria, single mothers were prevalent among the uninsured whose house was destroyed by the storm, and the vast majority of micro-businesses—a sector in which women predominate and 50 percent of the micro businesses are home-based—were uninsured. (GoCD 2017 and Bleeker et al. 2021). The disaster pushed many below the poverty line, and members of female headed households were particularly vulnerable on account of their typically larger family units, more limited skills, and loss of assets, and because they formed the highest share of displaced persons in the most affected communities (GoCD 2015a).

The threat of gender-based violence (GBV) after a disaster, especially in the form of intimate partner violence and child abuse, represents an additional issue in the country. During the postdisaster recovery period, the incidence of GBV may increase because shelters are not designed with gender considerationsto account. Particularly, issues such as overcrowding and lack of privacy, inadequate support, and protection for victims of GBV, deprivation, and poverty are widespread issues in shelters. Following both Tropical Storm Erika and Hurricane Maria, incidents of GBV and issues such as inadequate privacy and lacking security measures at shelters were reported (Bleeker et al. 2021). The International Organization for Migration (IOM) (2017a) reported that after Hurricane Maria, the majority of shelter dwellers slept in the same area on floor mats, and while 62 percent of shelters had gender separate lockable toilets, only 38 percent had separate bathing areas for women (IOM 2017b). Even when the shelter population had significantly reduced, in December 2017, 52 percent of shelters still lacked private living areas for households (IOM 2018). The prolonged period without electricity and reliable lighting contributed to an unsafe environment in communities, especially for women and girls at night (IOM 2018). Similar issues were discussed in a UN Central Emergency Response Fund (CERF) report, particularly highlighting how shelters hosting the displaced suffered from overcrowding, insufficient partitions in sleeping areas, inadequate locks, and a generalized lack of privacy for dressing and bathing in communal

areas, all of which increased the risk of sexual harassment and GBV (CERF 2017).

Key policy documents on disaster risk management acknowledge that existing gender inequalities may affect the level of vulnerability of women in case of natural disasters and define specific objectives and actions to be addressed:

- » The National Action Plan for Disaster Risk Reduction (2018–2022) proposes to strengthen disaster recovery plans by including sociopsychology training programs to minimize the adverse impact on victims, especially women and children (GFDRR 2021).
- » The Early Warning Systems Regulations (2014) requires an assessment of vulnerability and capacity to analyze gender and equity issues and ensure warnings meet gender differentiated needs and address cultural issues (GFDRR 2021).
- » The National Resilience Development Strategy 2030 acknowledges gender equality as a crosscutting area and directly aims to enhance women’s social status, ensure the protection of their rights and health conditions, and eliminate the feminization of poverty (GoCD 2018).
- » The Low-Carbon Climate Resilient Strategy includes priority investments and actions to address the vulnerabilities of women to climate change in pre- and post-disaster situations, in relation to the construction of community emergency shelters, training in vulnerability assessment and risk management, and provision of social safety nets in the form of microfinance and microinsurance to assist women in rebuilding their homes, businesses, and livelihoods (GoCD 2012).
- » The Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER) Project project includes as two main outcomes the enhancement of practices of relevant actors for the sustainable implementation of gender responsive climate change action and disaster recovery and the improvement of governance by relevant actors for gender responsive climate and risk resilience planning and decision making (UNDP 2019).

Despite such improvements, pending gaps still persist on gender in the overall disaster risk management policy framework that need to be addressed, including knowledge gaps. According to the World Bank (2021c), policies and practices still lack a requirement for sex- and age- disaggregated data collection on people affected and on damage to buildings and property. This clearly limits the quality of the information available to guide and plan interventions that directly address existing gaps, as also confirmed by the Post-Disaster Public Financial Management (PD-PFM) Review for Dominica (World Bank 2021b).

2.6 Disability and Tourism

Disability in the tourism sector should be considered from the perspective of the people in Dominica who live with a disability and of the visitors with disabilities for whom the tourism industry ought to provide a safe and pleasant holiday experience with access to a range of facilities and information, including emergency warnings and preparedness instructions, to be able to make informed decisions while on the island.

It is officially estimated that less than 10 percent of Dominica's population live with a disability. Available data suggest that mobility and vision impairments have the greatest prevalence. The number of persons with disabilities is higher among females across all categories of disability, and disability is higher in poorer communities and rural areas. Persons with disabilities in Dominica experience relatively higher levels of poverty compared to the rest of the population, as they typically have less access to employment and training (GoCD 2011).

Dominica signed the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) in 2007, then ratified it and gave consent for Accession to the Optional Protocol in 2012 (UNDESA 2006). However, to date the UNCRPD has not been implemented. Additionally, no laws or constitutional provisions that expressly prohibit discrimination against persons with disabilities. In 2014, the government began discussions to initiate the process of developing an official policy on disability. However, it is yet to be developed

and enacted. This means that there are currently no laws or requirements for any sector to be inclusive or supportive of persons with disabilities, both in terms of training and employment opportunities or access to funds to establish small businesses—provisions that are laid down in the CRPD—in Dominica's vibrant tourism sector.

Public buildings, commercial premises, and housing more generally can all provide safe refuge in time of a disaster to both locals and visitors. Dominica has planning legislation and building codes that include accessibility provisions for persons with disabilities, but these are poorly applied and do not seem to be enforced. The only exception is when donor funds are used to retrofit or rebuild schools or hospitals that may be used in case of a disaster for evacuation and safe refuge. The Physical Planning Act 2002 includes a building code that makes specific provisions for the accessibility of the disabled (Physical Planning Division Dominica 2002). Moreover, a "Guide to Dominica's Housing Standards" was released in May 2018, following massive damage in 2017 related to Hurricane Maria, when 90 percent of the national housing stock was damaged or destroyed, and the development of the guide was presented as a first response mechanism to address the need for climate resilient residential housing construction (ECLAC 2018). Additionally, the Building Code and Building Guidelines were reviewed based on standards for structural integrity and safe refuge, and amendments to the Physical Planning Act were proposed.

The Dominica Association for Persons with Disabilities (DAPD) is a strong and well-organized support group for persons with disabilities. It has a solid working relationship with emergency managers and disaster risk reduction planners and has developed a range of emergency and disaster management related materials (DAPD 2022). These resources are specifically targeted at people living with disabilities and their caregivers but are also useful for disaster and emergency management planners at all levels. They are available online and while directed specifically at the resident population they also have some relevance to tourist industry providers and visitors. They include:

- » A disaster preparedness guide for persons with disabilities in Dominica.
- » A disaster planning info sheet.
- » Earthquake preparedness for persons with disabilities.
- » A Dominica hazard map.
- » Dominica volcanic centers.

To provide for visitors with disabilities, some efforts are underway across the tourism industry to improve the accessibility of terminal facilities and selected local natural sites for people with limited mobility or in wheelchairs. Dominica's landscape presents disabled visitors with steep hills and rough terrain. Uneven

pathways and poor sidewalk accessibility make many of the country's natural attractions inaccessible, particularly those that are far from the port or further inland. Although the cruise port has a step-free access and no cruise tenders, once on the island most taxis and public transportation options are inaccessible for people on wheelchairs. The capital, Roseau, presents a variety of wheelchair accessibility challenges, including few sidewalk ramps and high curbs, deep trenches running between the street and the sidewalk that serves as drainage, and many of the shopping tents that are located on top of large, uneven cobblestones (Sage 2015).

03

The Sectoral Recovery Capacity Assessment implementation process in Dominica

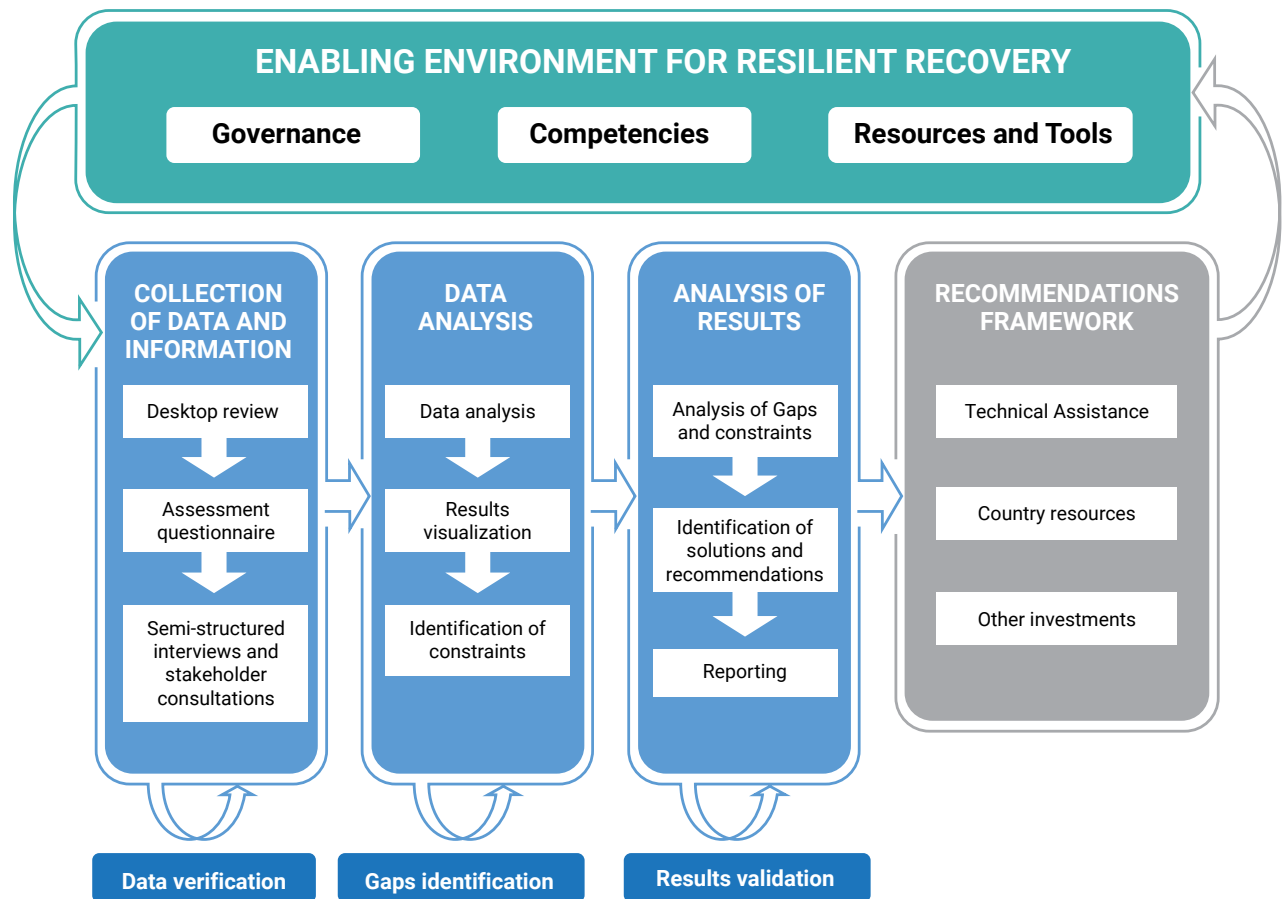


In Dominica, the Office of Disaster Management (ODM) bears the institutional responsibility for disaster management. ODM works closely with and supports the work of ministries, line agencies, and other actors in risk management at the national and sectoral level. This SRCA has been implemented under the leadership of the Ministry of Tourism, International Transport and Maritime Initiatives (Ministry of Tourism) and the ODM. The implementation followed the process

presented in figure 5. It started with a briefing to the ODM on the methodology and a desktop review. The Ministry of Tourism completed the assessment questionnaire and coordinated a consultation, involving private sector stakeholders, to confirm, complement, and discuss the responses provided to the questionnaire. Collected information was analyzed and results were presented to and validated.

FIGURE 5

Diagrammatic representation of the assessment process



04 Results Overview



4.1 General Findings

The analyses conducted assessed the capacity of Dominica’s tourism sector to implement resilient and inclusive projects in a timely, efficient, and effective manner as basic or incipient, with a sector-level RCI of 49 (figure 6). The implementation of recovery projects in the sector is enabled, at a moderate level, by the advances Dominica has made in the transformation of its national and sectoral development policy, strategies, legal and governance frameworks in the aftermath of Hurricane Maria (RCI of 54); and by the resources and tools available for recovery (RCI of 52). However, incipient competencies, operational capacity and skills for planning, implementing and monitoring recovery projects at the level of the Ministry of tourism and private actors involved in the industry limit the implementation of recovery (RCI of 38).

The above findings are supported by the analysis of results at the key element level (figure 7). It should be noted that whereas this more in-depth analysis suggests that an advanced capacity exists for conducting postdisaster needs assessments (PDNAs) and planning recovery projects in the sector (RCI of 78); this capacity is mainly due to the external support the

Government of Dominica received for the elaboration of the PDNA and the new development policy and strategic framework. Therefore, such capacity does not reside within the Ministry of Tourism or ODM. This ministry does not have the mandate or capacity to design and implement the full management cycle of recovery projects. Priority recovery and development projects are now being determined at the level of the CREAD and other ministries and funded by donors according to their own interests. These funds are generally channeled through the Ministry of Finance and restoration of services and reconstruction is implemented and monitored under the management of other ministries and sectors such as infrastructure and energy. At the private sector level, large and small enterprises involved in tourism undertake recovery interventions using the resources at their disposal and, for small and medium-sized enterprises (SMEs), particularly, this occurs without sufficient tools, knowledge, and experience or mentoring to ensure the build back better (BBB) approach leads their reconstruction efforts. It is crucial to strengthen the capacity of the Ministry of Tourism to facilitate the acquisition of gender- and disability-inclusive DRM and recovery knowledge and skills more effectively in-house and by private sector actors in the industry is crucial (RCI of 38). This, along with an improvement in the quality,

FIGURE 6

Recovery Capacity Index for the components assessed in the sector: Governance, Competencies (operational capacity) and skills, and Resources and tools.
Capacity levels are indicated by colored dots.

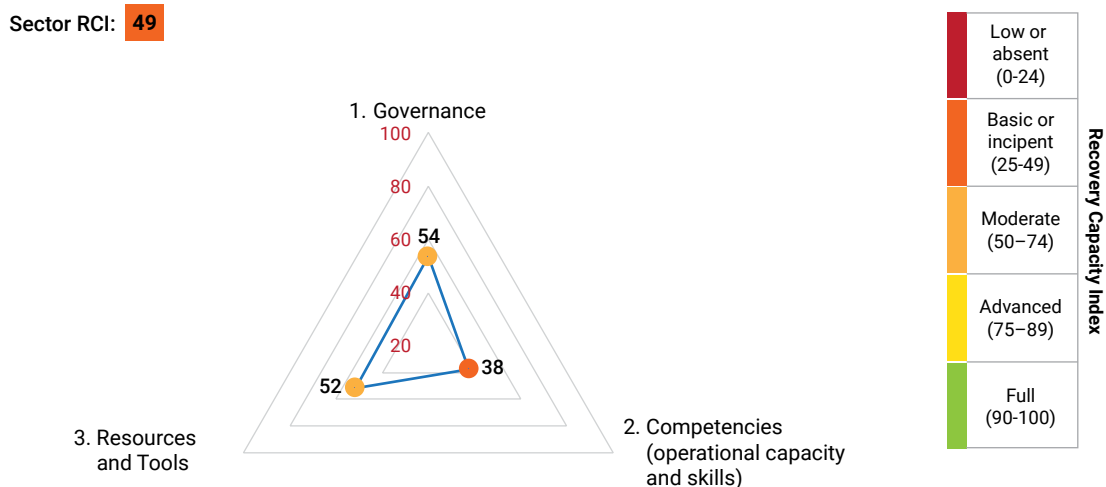
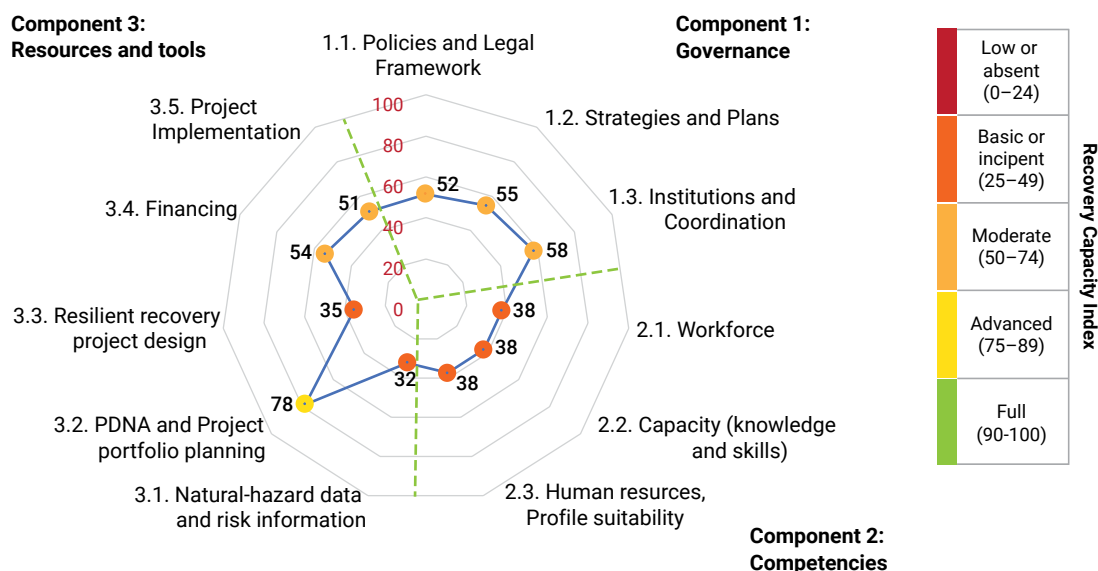


FIGURE 7

Recovery Capacity Index for the key elements assessed: Policies and legal framework; Strategies and plans; Institutions and coordination; Workforce; Capacity (knowledge and skills); Human resources, Profile suitability; Natural-hazard data and risk information; Post-Disaster Needs Assessment (PDNA) and Project portfolio planning; Resilient recovery project design; Financing; and Project implementation.

Capacity levels are indicated by colored dots.



availability, and access to relevant natural hazard data and risk information (RCI of 32), will enable public and private actors in the sector to adopt a risk-based approach to project design and implementation, and build the foundations for effective DRM and recovery integration, coordination, and action.

In general, capacity building interventions are required to:

- » Increase general DRM knowledge and basic DRM implementation capacity, with a focus on gender and disability-inclusive recovery, across key public and private actors in the tourism sector. This can facilitate the coordination and execution of recovery planning before a catastrophic event and enable better communication on the topic within the sector and across government agencies.
- » Strengthen and streamline strategic planning processes for recovery in the tourism sector, including ex ante definition of institutional arrangements for the development, coordination, and implementa-

tion of inclusive recovery strategies and plans. A recovery policy for tourism could support these efforts and ensure recovery creates opportunities for and builds resilience of women, people with disabilities, micro, small, and medium enterprises and other local livelihoods and trades associated with the tourism industry in Dominica.

- » Request donors that future PDNA development processes become an opportunity for training and building capacity of national technical staff.
- » Strengthen the generation, recording, and management of hazard data and risk information, and its use in the design of resilient and inclusive recovery projects as well as in everyday operations.
- » Improve and more widely disseminate information on funding sources, opportunities, and access mechanisms for recovery in the sector. Information should be shared using a range of communication platforms and networks utilizing accessible communications technologies, and with a deliberate focus on reaching women, people with disabilities, and other excluded groups. These platforms

should also support the sharing of information on risks, recovery opportunities, and performance of DRM interventions, including recovery programs and projects by communities.

- » Strengthen gender and disability-inclusive DRM and climate change integration in project design, implementation, monitoring, and evaluation through early engagement and working in partnership with gender specialists, people with disabilities, or their agents.

The following sections offer a more detailed analysis of the results obtained for each of the components assessed. Key recommendations, are provided in Section 5 and more detailed recommendations, including capacity building interventions, can be found in Annex 1.

4.2 Findings for Governance

At the level of governance, the capacity and enabling factors for recovery in tourism were assessed as moderate, with an RCI of 54 (figure 8). The country has a clear DRM governance structure, where sectoral government agencies, civil society organizations, and

the private sector are well represented. The current national development policy and strategic framework is focused on climate resilient and inclusive recovery. However, this framework represents a change in long term development and growth vision, and is to be accompanied by institutional, policy and legal reforms across government agencies, including in the national DRM system – Policy and Legal Framework RCI of 52. Some changes have already started, including the creation of institutions to improve recovery and development coordination at the national level (Institutions and Coordination RCI of 58) and the alignment of national and sectoral strategies and plans, including for tourism, with the new climate-compatible development and recovery objectives. However, the tourism sector still lacks a dedicated recovery strategy (Strategies and Plans RCI of 55).

At the level of sub-elements (figure 9), the assessment supports the described results and highlights that the advanced capacity for coordination of recovery activities (RCI of 83) has been enabled by the establishment of the CREAD, as well as by effective collaboration mechanisms between the sector and the ODM. The level of integration of gender and disability inclusion

FIGURE 8

Recovery Capacity Index for the key elements of Component 1: Policies and Legal Framework, Strategies and Plans, and Institutions and Coordination.

Capacity levels are indicated by colored dots.

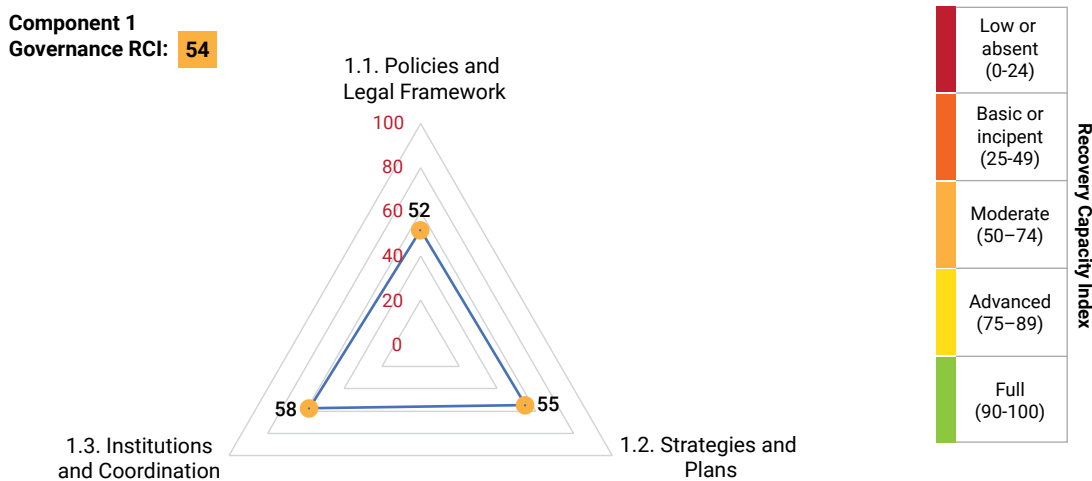
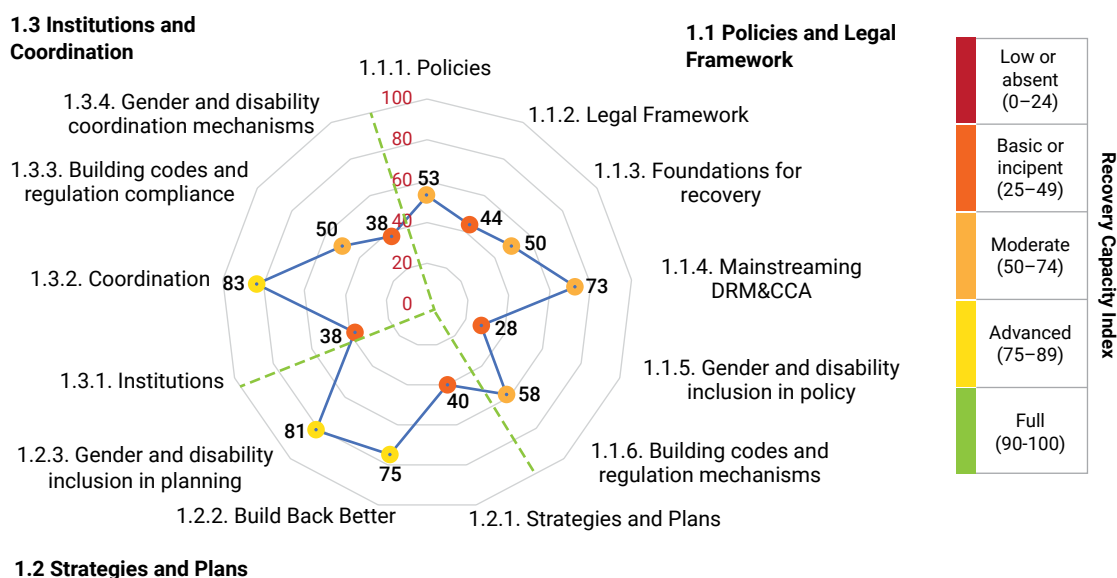


FIGURE 9

Recovery Capacity Index for the sub elements of Component 1: Policies, Legal Framework, Foundations for recovery, Mainstreaming DRM & Climate Change Adaptation (CCA), Gender and disability inclusion in policy, Building codes and regulation mechanisms, Strategies and Plans, Build Back Better, Gender and disability inclusion in planning, Institutions, Coordination, Building codes and regulation compliance, and Gender and disability coordination mechanisms.

Capacity levels are indicated by colored dots.



(RCI of 81) and of Build Back Better (BBB) measures is advanced in new national and sectoral strategies and plans (RCI of 75). However, in Dominica's climate resilient transformation, improvements in the legal framework for DRM and recovery are still needed (RCI of 44). Also needed are a disability policy and laws that specifically prohibit discrimination against persons with disabilities as well as mechanisms that enable the operationalization of the gender considerations included in the new national and sectoral policies and strategies –Gender and Disability inclusion in Policy, RCI of 28; Gender and Disability Coordination Mechanisms RCI of 38.

Other important findings of the assessment:

- » The National Disaster Plan of 2001 governs disaster management in the country in the absence of a dedicated policy. It establishes the structure of the national disaster management system, which

functions through the National Emergency Planning Organization (NEPO), chaired by the Prime Minister. NEPO is responsible for the planning and organization of counter-disaster measures at central level. It has an advisory committee, in charge of developing and recommending policies, plans and guidelines for prevention, mitigation, preparedness, response, and recovery, as well as a national emergency executive committee with task forces or subcommittees, in charge of specific disaster-related functions –damage assessment; search and rescue). Besides public institutions, nongovernmental organizations (NGOs) and private voluntary organizations, regional and international agencies participate in the task forces. The Office of Disaster Management (ODM) is NEPO's Secretariat, responsible for coordination of disaster programming in all phases of the disaster management cycle. Among multiple other functions, this includes establishing and managing a national emergency operations

center (NEOC) and coordination with district emergency committees and community emergency committees for the establishment of emergency operation centers at each of these levels.

- » The Government of Dominica issued the National Resilience Development Strategy (NRDS) in 2018—a high level policy framework to guide national recovery and development after Hurricane Maria. The NRDS, elaborated through a highly consultative process, lays out the government’s new approach to development as “climate-resilient and sustainable” and “seeks to respond to climate change in a comprehensive manner, cutting across all sectors and addressing issues of mitigation, rehabilitation, reconstruction and sustainable development.” The NRDS also establishes a vision for resilient development for each of the government’s ministries and states the government’s intention to rebuild Dominica as the first climate resilient nation in the world. This strategy also provides roles and responsibilities for its implementation, with explicit mention for responsibilities and actions in disaster management at the household, community, district, and national levels. Good governance and gender equality are crosscutting issues. Further, the NRDS includes strategies that directly address data, information, and support mechanisms for persons living with disabilities (PwD) and a monitoring matrix, with objectives, associated outcomes and indicators.
- » The NRDS is legally supported by the Climate Resilience Act, approved in 2018, which establishes a six-person Climate Resilience Policy Board, chaired by the Prime Minister, as the centralized political body defining resilience building, and by extension resilient recovery measures in all sectors. It also creates the CREAD as the executive body for the integration of climate resilience into Dominica’s infrastructure development, capital projects, recovery, and reconstruction interventions as well as in all government plans and policies. Within the CREAD, a major capital projects unit will be responsible for the implementation and supervision of large infrastructural projects of the government that relate to climate resilient construction.
- » The Dominica Climate Resilience and Recovery Plan 2020–2030 (CRRP) is the roadmap to operationalize the NRDS. It is based on three pillars—Climate Resilient Systems, Prudent Disaster Risk Management Systems, and Effective Disaster Response and Recovery), expanded into six results areas. Activities and projects within these areas will be conducted to achieve the CRRP’s 20 specific targets by 2030. The CRRP prioritizes 10 ‘high impact’ initiatives for implementation, but also includes the profiles of additional projects that support its goals, including a project to build the resilience of the tourism sector. Whilst the CRRP mentions the intention of mainstreaming gender and vulnerability considerations into its initiatives; this is not systematically manifested in the specific actions or their outputs.
- » The NRDS calls for the elaboration and implementation of a national action plan and strategy on Disaster Risk Reduction (2018–2022) to strengthen the national disaster management system, including its coordination mechanism and legal framework. The Government of Dominica has progressed in this aspect, elaborating draft comprehensive disaster management legislation. However, this Bill was prepared before the COVID-19 emergency and needs to be updated to include considerations for pandemics prior to its submission to Cabinet. There is no evidence of progress in the formulation of the national action plan and strategy on disaster risk reduction (DRR), which has not been specifically included in the CRRP, and to date the level of inclusion of gender and disability considerations into the draft DRM legislation is unclear.
- » Since its establishment, the CREAD has become an important mechanism to ensure the updating and integration of climate resilience, including recovery considerations into national and sectoral policies, strategies, and plans, including the Dominica Tourism Master Plan 2020–2030. However, the country still lacks an effective institutionalized process to deliver timely updated legal frameworks.
- » In alignment with the NRDS, the Ministry of Tourism updated the National Tourism Strategy of Dominica and issued the Dominica Tourism Master Plan 2020–2030, which offers a comprehensive approach to the sector’s development, and has at

its core disaster recovery and environmental preservation, to deliver the “nature island” brand promise. These documents recognize the contribution tourism can make to national recovery and to the links and importance of building resilience in other sectors to realize Dominica’s tourism potential. Despite their focus on recovery and resilience, these are sectoral development documents and do not represent a formal sectoral recovery policy that institutionalizes roles, responsibilities, and the delivery of recovery specific strategies and plans postdisaster.

- » The Strategy and Master Plan call for more stringent land use planning and for the enforcement of building codes—which exist for Dominica—were revised after Hurricane Maria but suffer from weak compliance owing to the government’s human resource shortages and budgetary constraints. Further, the Dominica Tourism Master Plan and the stakeholders consulted for this assessment also request an evidence-based approach be used in the process of updating of building codes, particularly in coastal areas to climate proof investments from sea level rise and other shocks. The Master Plan recommends the formulation, adoption and implementation of an environmental policy for Dominica.
 - > The government has made rapid progress in strengthening its postdisaster financing framework. It approved a disaster risk financing strategy in 2022 that includes the mobilization of multiple instruments and programs for improved disaster risk management. It also approved the domestic sale of a parametric insurance product for hurricane risk. Also in 2022, Dominica obtained the approval of a USD 20 million DRM development policy credit (DPC) with a catastrophe deferred drawdown option (Cat DDO) from the World Bank. This concessional credit supports the implementation of the strategy and the development of the policy basis and ability to mobilize and optimize the pool of complementary financial instruments that address disaster and climate risk. These are all very recent developments that need to be operationalized.

Opportunities identified for strengthening recovery capacity at the governance level include:

- » Finalizing and approving the Comprehensive Disaster Legislation that has been drafted, ensuring it contains clear inclusive and resilient recovery considerations, and formalizes roles and responsibilities at the national and sectoral levels.
- » Strengthening the national disaster management framework through the formulation, approval, and implementation of the national action plan and strategy on DRR contemplated in the NRDS, inclusive of a results-based management framework for DRM that includes all sectors.
- » Elaborating a recovery policy for the tourism sector, with clear roles and responsibilities for public and private institutions and mandating the development of contingency plans for private stakeholders involved in the industry. These documents will facilitate the development and implementation of resilient recovery investments, following a BBB approach and applying building codes.
- » Preparing and implementing the Resilient Dominica Physical Plan that is included in the CRRP. This includes an assessment of infrastructure and infrastructure needs, as well as issuing the standards required for the resilience of infrastructure that is critical to the tourism sector.
- » Updating building codes and the design guidelines for the tourism industry to reduce the vulnerability of new tourism developments, particularly along the coast, to the impacts of flooding and sea level rise and elaborating a national environmental policy to help protect infrastructure from climate hazards using natural buffers. The environmental policy is key to the sustainability of ecotourism in Dominica, the nature island.
- » Strengthening the collaboration and direct engagement of gender specialists and people with disabilities or their representatives in NEPO and the CREAD. This will facilitate integrating both gender and disability inclusive recovery considerations in the review and sectoral policies, and in all relevant development projects, including those on tourism.
- » Raising awareness among government institutions, the private sector, NGOs, and other actors on:

- > The need to prioritize the preparation of recovery plans and strategies at all levels of the sector (from government to private enterprises),
 - > The need to coordinate the preparation of recovery plans and strategies between public and private actors,
 - > The critical role each of them plays on the recovery process of the tourism sector in the aftermath of disasters.
- » Accelerating the operationalization of the disaster risk financing strategy to ensure Dominica has the necessary financial resources to fund preparedness, response, and recovery interventions.

4.3 Findings for Competencies

The capacity and skills existing in Dominica’s tourism sector are basic and insufficient to design and implement gender-sensitive and disability-inclusive resilient recovery projects, as indicated by the RCI of 38 obtained for the Competencies component (figure 10). This is due to: (i) institutional limitations in the workforce composition (RCI of 38); (ii) the basic knowledge and skills of the workforce to integrate and implement

risk, gender and disability considerations into sectoral project design (RCI of 38); (iii) the incipient capacity of the public agencies working in the sector to recruit and sustain human resources with the required profiles, added to the availability of work opportunities abroad which attract qualified individuals (RCI of 38).

The results at the level of sub-elements support these findings (figure 11) and identify major capacity limitations in sectoral government institutions and private enterprises associated to the tourism industry for the competencies assessed. These limitations refer to: (i) an inadequate number of trained staff for the sector’s operations and the lack of DRM specialists and gender and disability inclusion specialists who can ensure projects are risk informed and inclusive (Workforce RCI of 45, Gender RCI of 25); (ii) the absence of other technical officers at the Ministry of Tourism with the required knowledge of DRM methods and tools (including a basic use of hazard maps), or with the expertise needed to implement resilient recovery projects (Skills RCI of 25); and (iii) the basic level of technical capacity within the ministry for the implementation of project cycle management (PCM) activities, particularly monitoring and evaluation, budgeting and financing tasks, as well as for the elaboration of quality Terms

FIGURE 10

Recovery Capacity Index for the key elements of Component 2: Workforce, Capacity (knowledge and skills) and Human Resources, Profile suitability.
Capacity levels are indicated by colored dots.

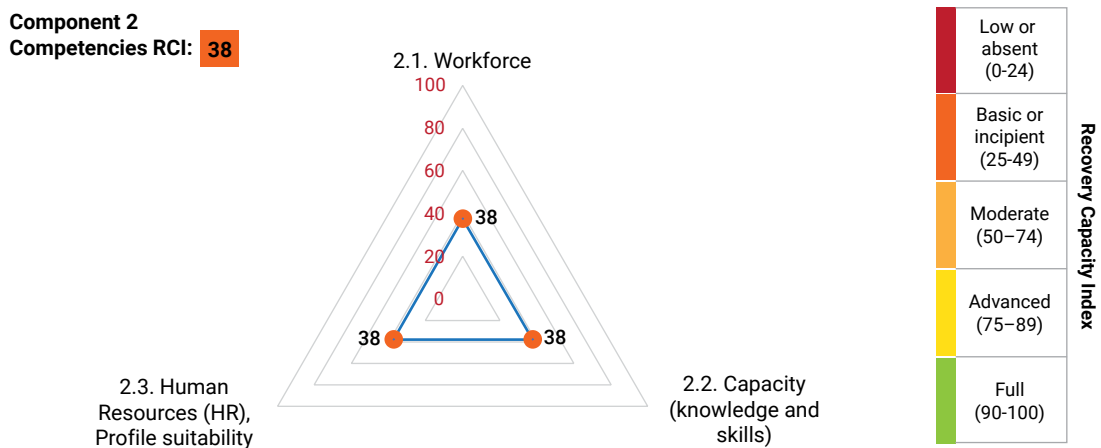
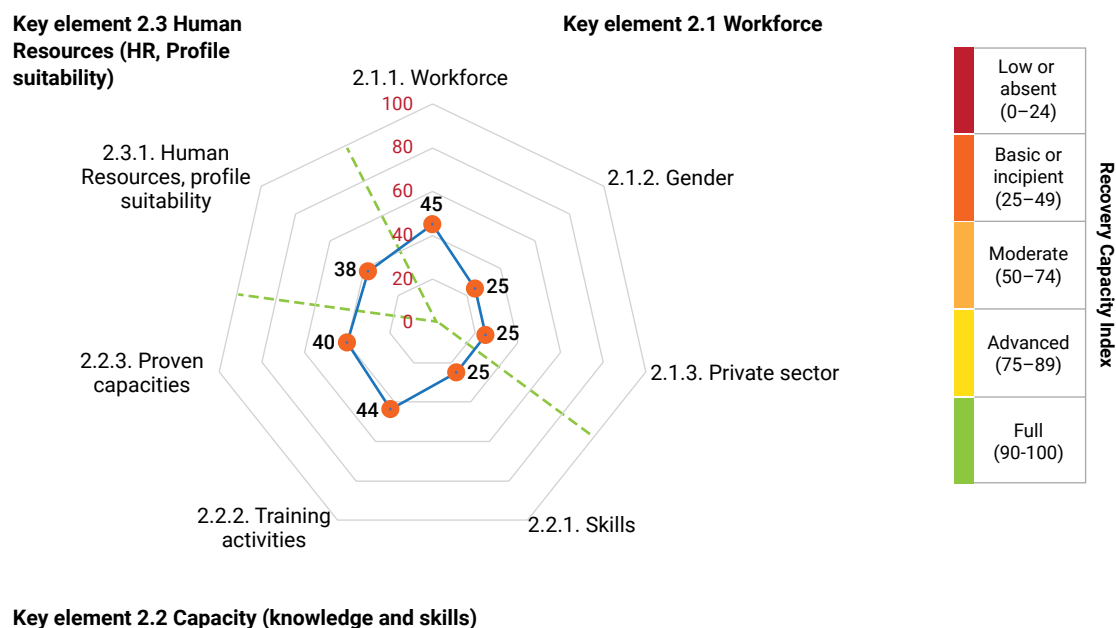


FIGURE 11

Recovery Capacity Index for the sub elements of Component 2: Workforce; Gender; Private sector; Skills; Training activities; Proven capacities; and Human Resources, profile suitability.

Capacity levels are indicated by colored dots.



of Reference (ToRs), needed for the effective planning and implementation of recovery projects (Proven capacities RCI of 40). For practically all areas assessed, the recruitment of staff with the needed profiles as well as training and other capacity building opportunities are urgently needed, along with mechanisms to ensure long term DRM and inclusive recovery knowledge transfer within the sector.

The assessment of competencies indicates the following:

- » Dominica faces shortage of tourism professionals and opportunities for their training and development because of a lack of a dedicated training institution.
- » Few public servants working in the sector have knowledge and experience required to identify, plan, design, implement, and oversee resilient recovery projects.
- » Government officers associated with the Ministry of Tourism do not have the necessary expertise

and knowledge of DRM methods and tools, such as disaster risk assessments and the use of georeferenced information systems. Technical persons working in the sector lack a basic understanding of DRM or DRM tools, including hazard maps. However, they have gained experience in the elaboration of PDNAs—after Hurricane Maria—and, advanced to a certain extent their capacity to translate PDNA results into actionable projects that include risk mitigation and other resilience measures.

- » The number of qualified contractors that can support the Ministry of Tourism in their recovery efforts on a regular basis is low. For large reconstruction efforts, the government has received international assistance on a project basis.
- » Building capacity of government agencies on DRM and recovery has been sporadic and not part of the tourism sector development agenda. Public recruitment protocols, such as ToRs, do not include knowledge on DRM, gender, or disability inclusion, which limits the likelihood of improving the competencies required for recovery in a sustained man-

ner. Although DRM, gender, and disability inclusion figure high in the new national and sectoral policy, strategies, and plans, these documents were elaborated with external assistance and their implementation depends on the creation of national and sectoral capacities.

- » General and specialized knowledge and skills in DRM and particularly in inclusive recovery are needed both in private enterprises and government institutions associated to the tourism industry. Specific areas where capacity building interventions are required include:
 - > Hazard and risk map use.
 - > Geographic Information Systems (GIS), modeling, and scenario planning.
 - > Gender mainstreaming: The Ministry of Tourism lacks gender specialists working on a permanent basis. As well, gender considerations included in new policy and planning documents for the sector lack specifications for their implementation. Training on gender mainstreaming for the ministry's staff and the recruitment of gender specialists is therefore needed.
 - > Disability inclusion: The Ministry of Tourism is not equipped with staff trained in disability inclusion. This training is required for all government agencies involved in recovery as well as for private contractors and enterprises to ensure recovery and development in general better addresses the needs and taps into the potential—including for employment and as guests—of persons living with disabilities.
 - > Project cycle management skills: Training all Ministry of Tourism staff in PCM concepts and tools, including monitoring and evaluation can improve their potential to design and effectively implement resilient recovery projects.
 - > DRM and recovery communication and awareness raising skills are additional skills needed.

Identified opportunities to build the necessary knowledge and skills include the following:

- » Integration of basic DRM, gender, and disability inclusion concepts in existing training programs for tourism operators and youth. This includes the

short-term tourism training delivered by the Discover Dominica Authority, and the training on tourism delivered by the Dominica State College.

- » Implementation of DRM training activities included in the Dominica Tourism Master Plan 2020–2030. This includes training that can be provided in collaboration with the Tourism and Hospitality Training Institute, which concentrates its activities on the immediate and long term needs of the industry and on increasing opportunities in tourism for the youth. This institute, in collaboration with the ODM and the Ministry of Tourism, can potentially establish regular training programs to educate tourism operators on disaster preparedness, immediate response and recovery.
- » Establishment, with international technical support, and within the Government of Dominica, of continuous DRM, gender and disability inclusion and project management trainings for public servants. An opportunity for this is provided by the NRDS request for the development of a DRM plan for the Ministry of Education and Human Resource Development that includes training activities for government institutions.
- » Development of key training materials on gender and disability inclusion, to be offered on a regular basis, or made available online to project officers and operators working in the tourism industry.
- » Creation—with support from national contractors' associations—of resilient infrastructure and BBB trainings for local contractors working in the tourism industry. This would include raising awareness on all necessary accessibility compliance considerations and further promote compliance with building codes.
- » Design and implementation of awareness raising campaigns on hazards, impacts, and risks targeting tourism sector stakeholders, to strengthen their capacity to effectively manage disaster risks.
- » Request donors to provide technical experts to cover knowledge gaps and workforce constraints, through secondments, and to offer both technical and financial assistance for capacity building programs.

4.4 Findings for Resources and Tools

The resources and tools available for resilient recovery in Dominica's tourism sector are assessed as moderate, with an RCI of 52 (figure 12). At the national and sectoral levels progress has been made in the integration of PDNA results and recommendations into recovery planning. Yet, the systematic consideration of risks in sectoral processes faces limitations in terms of the availability, generation, access to, and use of natural hazard and risk information (RCI of 32). This specifically concerns functional, up-to-date, and useful information to plan, design, and implement risk-based projects and resilient investments, including recovery interventions. This encompasses data and information that are of high quality and systematically collected or generated, at a frequency and scale that can be used for investments and projects in tourism, including gender and disability disaggregated data.

The analysis of RCI values at the sub element level support these results (figure 13) as well as highlight major weaknesses in the use of risk information in decision making in the tourism sector (RCI of 25) and therefore in recovery action (RCI of 25) and the inadequate

consideration of building codes and regulations (RCI of 25) in the design of tourism projects. Gender and disability considerations were fully integrated in the Hurricane Maria PDNA, following all best practices and international standards (RCI of 100). However, the sector has only an incipient capacity to mainstream gender and disability inclusion into its daily operations and in the design of its projects (RCI of 44). This situation reflects the international expertise that was involved in the elaboration of the PDNA which contrasts with the capacity gaps that remain at the sectoral level. The analysis at the sub element level also identified as important constraints to plan and implement inclusive and resilient recovery projects (i) the low level of consideration of building codes and design guidelines in the tourism industry (RCI of 46) and (ii) the absence of an allocation for DRM and recovery in the annual budget of the ministry (RCI of 25).

Detailed findings of the assessment include the following:

- » Natural hazard data and risk information exists but project officers and other tourism stakeholders consulted do not use or know how to access this

FIGURE 12

Recovery Capacity Index for the key elements of Component 3: Natural hazard data and risk information, PDNA and Project portfolio planning, Resilient recovery project design, Financing, and Project implementation. Capacity levels are indicated by colored dots.

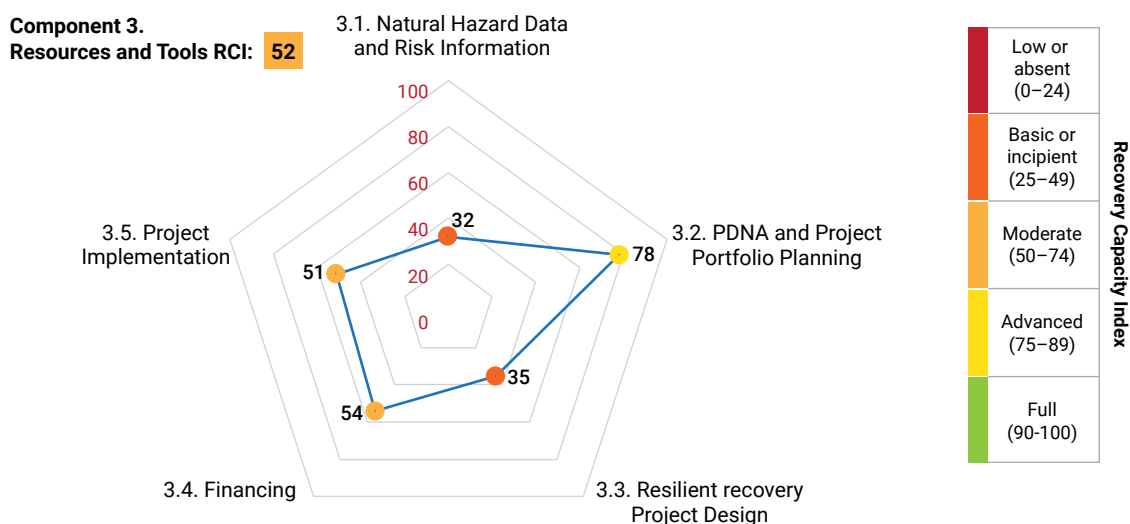
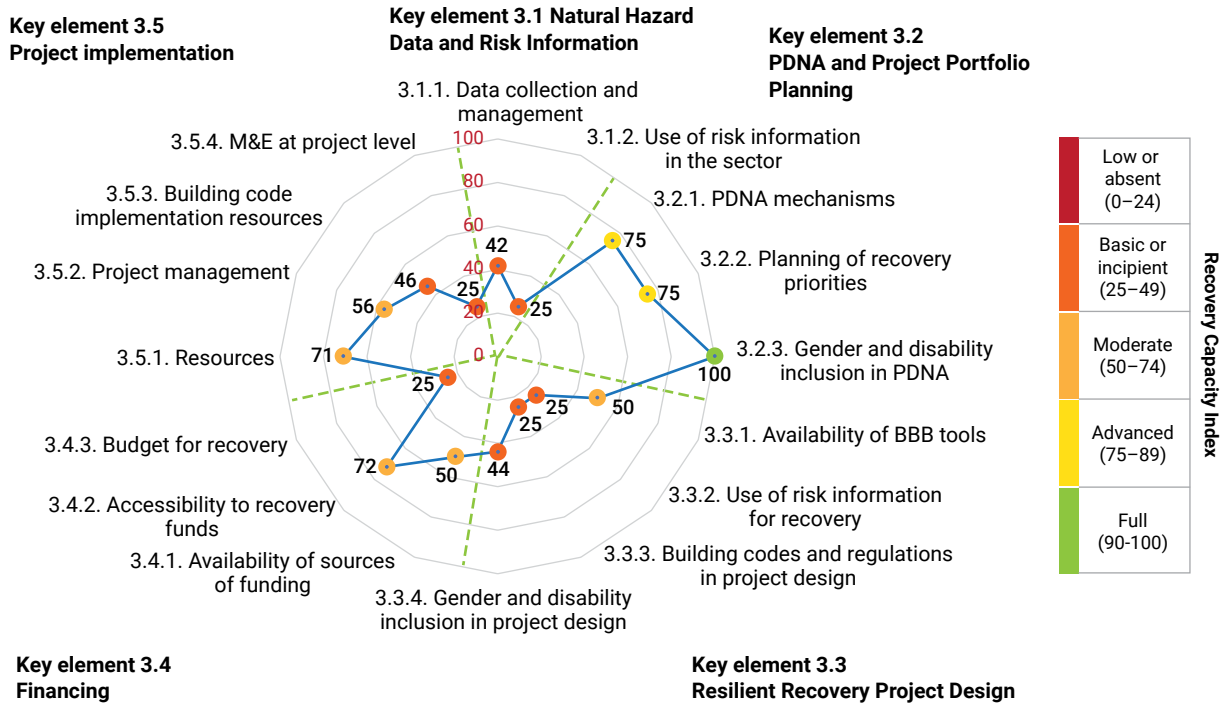


FIGURE 13

Recovery Capacity Index for the sub elements of the key elements of Component 3: Data collection and management, Use of risk information in the sector, PDNA mechanisms, Planning of recovery priorities, Gender and disability inclusion in PDNA, Availability of BBB tools, Use of risk information for recovery, Building codes and regulations in project design, Gender and disability inclusion in project design, Availability of sources of funding, Accessibility to recovery funds, Budget for recovery, Resources, Project management, Building code implementation resources and M&E at project level.

Capacity levels are indicated by colored dots.



information. This occurs partly because the information is fragmented among government offices and because procedures for information access and sharing have not yet been developed.

- » DomiNode is Dominica’s public geographic information system (GIS) repository. It includes information on flood and slope failure events but needs to continue being updated with data and information on other hazards.
- » Plans exist to create a GIS unit at the Central Statistics Office that will be charged with the updating of hazard maps, which are prepared by the Physical Planning Division or through independent grant-funded projects.
- » An information platform should be created that is of simple access and where risk information in-

cluding main hazard, and multihazard maps are accessible in simple formats to inform sectoral actors about the risks associated with their investments. This platform would require data quality and consistency control systems.

- » Demographic data that are disaggregated according to gender, age, type and degree of disability, education, employment or economic status, and geographic location are needed yet unavailable in interoperable databases but may be collected through the national census and in or to support a range of specific projects. The country also lacks a national register of people living with disabilities.
- » Due to budgetary and skill constraints, the government does not have all necessary tools to ensure project designs incorporate the BBB approach— for

example, software, checklists and cost–benefit analysis for resilience measures—nor has training on these tools been conducted.

- » Building codes, guidelines for construction in the tourism sector, and land use planning have little influence in the design of tourism projects. This occurs partly due to budgeting and staffing constraints at the Physical Planning Division, which regulates compliance and partly because they are outdated and raising awareness on their importance for reducing losses as well as training on their application have been insufficient.
- » Investments needed to climate proof critical infrastructure, which is essential for the tourism sector, including investments in retrofitting and upgrading transport, energy, and water infrastructure, have been reviewed in the NRDS. While reconstruction after Hurricane Maria has advanced, particularly in major infrastructure projects, some recurrent risk reduction interventions are needed, such as river dredging and the reinforcement of riverbanks to reduce flood risks. The NRDS also includes, as an annex, a series of interventions in infrastructure planned for reducing risks and promote long term economic growth, including through the development of the tourism sector.
- » It is unclear whether government or financial institutions conduct a risk analysis during the process of approval of loans for tourism construction or renovation projects, as this practice requires up-to-date and good quality risk data and information, which are still mostly unavailable.
- » The Ministry of Tourism depends on the Ministry of Finance and Investment, the CREAD and other external actors to access DRM and recovery funding as it does not have an earmarked budget line for these costs. Sectoral public recovery funding procedures are unclear to stakeholders, although they are aware that international funding sources for recovery interventions are available when required. However, they have not yet identified these sources and it is also unclear to them how to access these funds directly.
- » At the private sector level, recovery is funded by the enterprises' own resources. This is a major challenge for SMEs and individuals who depend

on bank loans or insurance proceeds for reconstruction and restoration of activities and even more for microenterprises that cannot access insurance, as beyond physical damages, tourism enterprise owners also lose revenue from decreased sales. In Dominica, a survey of firms involved in tourism showed that a third of the firms interviewed had not yet returned to pre-Hurricane Irma income levels, three years after the disaster. The simultaneous public and private nature of the tourism industry and of recovery efforts represents a challenge for the monitoring and evaluation of recovery, its efficiency, and effectiveness. Strengthened coordination and recording of DRM and recovery related data by all actors in the sector are needed to understand progress and build capacity at all levels, as no single entity oversees the entire cycle of recovery project portfolio management.

The assessment identified the following opportunities to strengthen the resources and tools available for recovery in Dominica's tourism sector:

- » Use the opportunities presented by the NRDS and CRRP to build through technical assistance, national and sectoral capacity to use, manage, and generate baseline information as well as hazard and risk information relevant to the sector. This includes opportunities to:
 - > Conduct risk assessments at the national and local levels;
 - > Develop vulnerability, hazard, and multihazard maps
 - > Record, analyze, and disseminate information on disaster losses
 - > Improve existing data for further assessment, monitoring and early warning
 - > Build capacity on the use of baseline information as well as hazard and risk data on project design, implementation, and monitoring and evaluation
 - > Create simple and understandable information on disaster risk to tourism stakeholders.
- » Use the revision of the National Land Use Policy as an opportunity to generate risk maps and information on high risk areas for housing and tourism

development and to build capacity on their use. This process, as stated in the CRRP will offer the opportunity to establish clear roles for the generation and management of risk information and will include training and the development of standards and guidelines to prepare hazard, vulnerability, and risk studies.

- » Ensure the ongoing review of the building codes for Dominica include climate and inclusive DRM measures, including measures related to reducing sea level rise impacts. Similar operational considerations should be included in the revision of the Design Guidelines in the Tourism Industry.

- » Embed elements of the socially inclusive DRM approach based on CDEMA’s CDM framework—hazards, risk assessments, and measures—in all project management cycle protocols used in the sector.

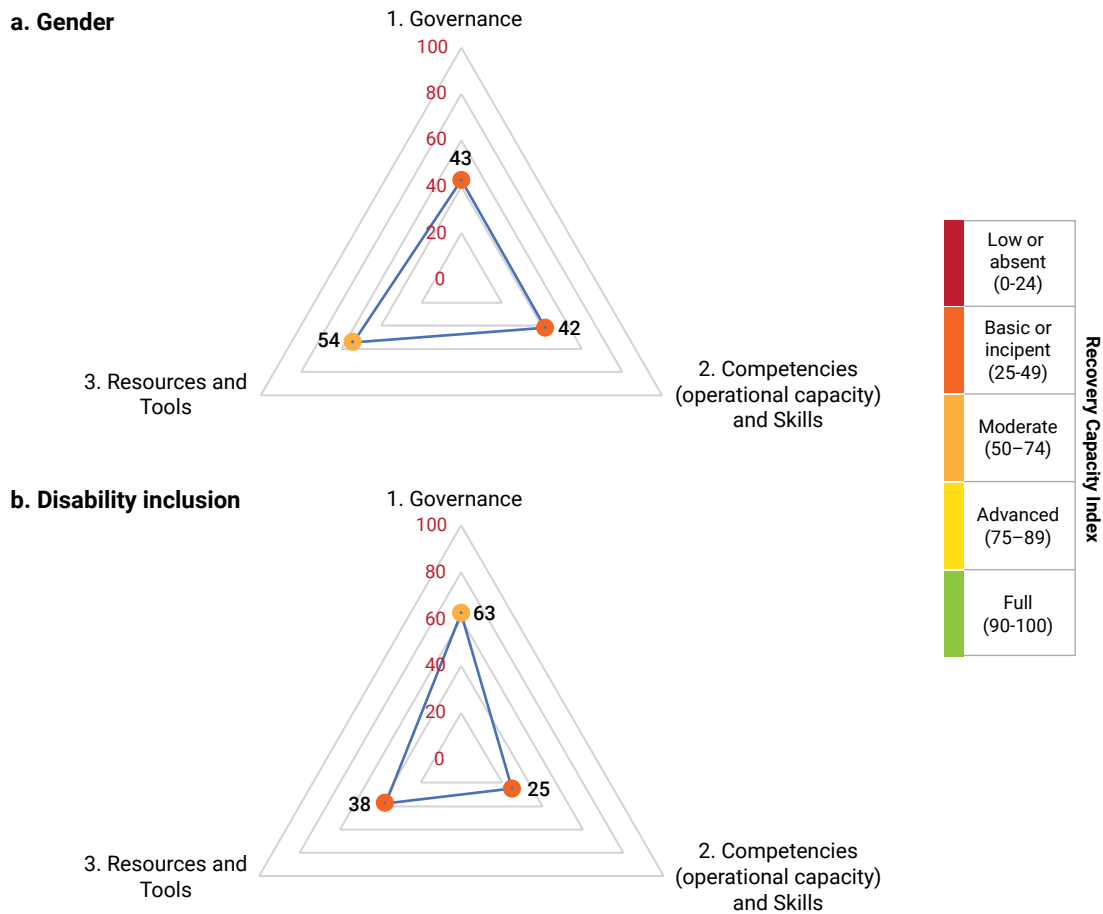
- » Increase the visibility of recovery financing options for the sector and build requisite capacity on access protocols and criteria.

- » Include sectoral DRM allocations in the budget construction and planning processes of the country and donors and ensure legislation and procedures enable rapid budget re-allocation to support recovery efforts.

FIGURE 14

Recovery Capacity Indexes for a. Gender and b. Disability inclusion at the level of the components assessed: Governance, Competencies (operational capacity) and Skills, and Resources and Tools.

Capacity levels are indicated by colored dots.



4.5 Findings for the Inclusion of Gender and Disability in Recovery Processes

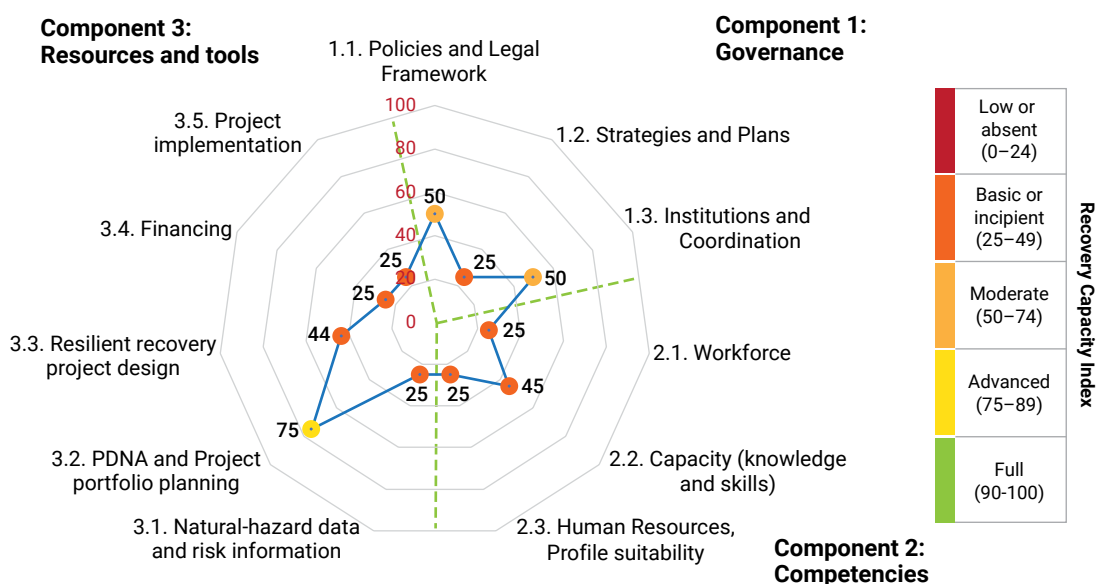
In general, the capacity of government agencies to integrate gender and disability considerations into the design and implementation of recovery projects is incipient. The needs of women, girls, men, boys, and PwD have been included directly and indirectly in the DRM policy and legal framework, as shown by the RCI of 43 and 63, respectively (figure 14). However, the public and private institutions involved in tourism lack the expertise required on a permanent basis for mainstreaming gender and disability inclusion into their operations, including into strategic planning and project implementation processes (RCI of 42 and 25 respectively). The level of resources and tools available for integrating gender considerations and disability inclusion into recovery processes is basic. A more detailed assessment of these results is provided by the analysis of gender and disability integration at the level of key elements (figure 15).

The engagement of gender agencies and youth groups in DRM activities led and coordinated by ODM is weak and based on sporadic participation in committees established for making DRM decisions – around policy and operations – often late in the process and not well facilitated. People with disabilities were not represented in the PDNA process after Hurricane Maria. While it would be expected that the engagement of these organizations and groups in national and sectoral processes strengthens during the implementation of the NRDS, evidence of this is already occurring is lacking.

Gender and disability are not consistently included in public or private tourism projects. This is largely explained by the lack of knowledge and expertise in the mainstreaming of these areas at the level of the Ministry of Tourism, as well as by the lack of mechanisms to mandate their inclusion or to operationalize existing policy and strategic directives. When gender and dis-

FIGURE 15

Recovery Capacity Index for Gender and Disability inclusion in recovery processes at the level of the key elements assessed: Policies and legal framework; Strategies and plans; Institutions and coordination; Workforce; Capacity (Knowledge and skills); Human resources, profile suitability; Natural hazard data and risk information; PDNA and project portfolio planning; Resilient recovery project design; Financing; and Project implementation. Capacity levels are indicated by colored dots.



ability inclusion take place, it is mainly as a response to funding opportunities and donor requirements.

Recommendations

A series of steps are needed to ensure that recovery efforts are likely to be gender and disability inclusive.

- » Develop explicit operational guidance in policy and legal frameworks to ensure gender and disability inclusion are systematically considered.
- » Recruit dedicated staff with the requisite skills on gender and disability inclusion and integrating these issues in public HR protocols and processes to build and retain in-house capacity.
- » Elaborate guidance for staff, and training in gender and disability inclusion with a focus on DRM and recovery.
- » Collect robust disaggregated gender and disability data and storing it in managed and accessible databases.
- » Enable a more direct engagement of people with disabilities or their representatives with the tourism sector in planning for recovery projects and BBB.
- » Support the inclusion of people with disabilities in tourist industry recovery efforts through increasing access to employment opportunities and support for establishing SMEs.
- » Create a disability policy and an integrated disability inclusion action plan.
- » Create a national registry for people living with disabilities and using these data in national and sectoral decisions.

05

Recommendations



The following points summarize the recommendations of this assessment, which are detailed in Annex 1. They are made with the objective of building and strengthening the capacity of Dominica's tourism sector to prepare for the implementation of resilient and inclusive recovery projects well before disasters strike. The recommendations respond to the capacity needs for recovery identified in SRCA, existing opportunities, and recommendations made by the consulted stakeholders, as well as by sectoral experts, and gender- and disability-inclusion specialists. These recommendations principally target central government ministries, the Ministry of Tourism, ODM, CREAD, CDEMA, and donor agencies involved in DRM and resilience building processes in the country.

Policy and strategic recommendations:

- » Strengthen the enabling national and sectoral policy and regulatory environment for recovery through the completion and approval of the Comprehensive Disaster Legislation and the National Action Plan and Strategy on Disaster Risk Reduction contemplated in the NRDS, the elaboration of a recovery policy for the tourism sector and a national environmental policy as well as, through the preparation and implementation of the Resilient Dominica Physical Plan and the updating of building codes and design guidelines for the tourism industry. All these documents should ensure the integration of operational aspects for DRM, gender and disability inclusion.

Physical investments:

a) Infrastructure

- » Reduce the vulnerability of critical infrastructure to climate change and weather extremes to lower the risk of disruptions that affect Dominica and the tourism sector and invest in new climate resilient infrastructure to support national development. This can be achieved by supporting the new investments and policies that CREAD and the government ministries are identifying and costed.

- » Encourage owners of hotels and other tourism facilities to retrofit assets exposed to climate change by creating a technical assistance plan with a range of risk reduction interventions, including improved guttering and drainage, and increasing septic tank volumes to compensate for flooding. The technical assistance plan should be accompanied by a suit of interventions to encourage owners to invest. These could include cost-benefit analysis to show positive rates of return on investments; reduced insurance rates; tax reductions or subsidies to co-finance the investments that strengthen resilience in the sector.

b) Equipment, systems, and financial resources

- » Strengthen the generation, management, and use of baseline information as well as risk and recovery relevant data and information by completing the update of the DomiNode, and through the construction of a platform that provides simple and useful risk information to stakeholders in the tourism sector.
- » Strengthen sectoral budgets for DRM and recovery by including a contingent annual recovery allocation in the Ministry of Tourism's budget.
- » Enhance resilience and recovery funding instruments for micro, small, and medium enterprises in tourism by improving the availability of and access to financial mechanisms for resilience and recovery—including insurance and micro insurance—and creating a database of international recovery funding opportunities for tourism.
- » Create a plan to finance software updating and maintenance at the Ministry of Tourism to facilitate project management operations.

Capacity strengthening:

- » Raise awareness, at the strategic and operational levels, of the added value of acquiring and sustaining DRM, gender, and disability inclusion mainstreaming capacity for the sector's development. This can be achieved through well-designed, awareness raising campaigns and events for public officers.

- » Build and sustain the required knowledge and skills for the implementation of resilient and inclusive recovery projects in the sector through the recruitment of specialized staff in areas specific to DRM, the institutionalization of training in DRM, gender, and disability inclusion for public and private sectoral stakeholders, and the improvement of public recruitment protocols, among other measures.
- » Request donors that future PDNA development processes become an opportunity for training and building capacity of national technical staff.

06 Conclusion



The analyses conducted in this assessment indicated that the capacity of Dominica's tourism sector to implement resilient and inclusive projects in a timely, efficient, and effective manner is basic or incipient, with a sector-level RCI of 49. The implementation of recovery projects in the sector is enabled, at a moderate level, by the advances Dominica has made in the transformation of its national and sectoral development policy, strategies, legal and governance frameworks in the aftermath of Hurricane Maria (RCI of 54); and by the resources and tools available for recovery (RCI of 52). However, incipient competencies, operational capacity and skills for planning, implementing and monitoring recovery projects at the level of the Ministry of Tourism and private actors involved in the industry limit the implementation of the recovery (RCI of 38).

Governance

The Dominica Climate Resilience and Recovery Plan 2020–2030 (CRRP) serves as the roadmap for operationalizing the NRDS and includes specific targets to be achieved by 2030. However, it must systematically mainstream gender and vulnerability considerations into the CRRP initiatives. The NRDS also calls for the elaboration and implementation of a National Action Plan and Strategy on Disaster Risk Reduction, but progress in this area is unclear, and the level of inclusion of gender and disability considerations in the draft legislation is unknown. Despite the focus on recovery and resilience in sectoral development documents such as the Dominica Tourism Master Plan 2020–2030, a formal sectoral recovery policy is needed to institutionalize roles, responsibilities, and strategies for postdisaster recovery. The enforcement of building codes and land use planning also suffers from human resource shortages and budgetary constraints, leading to weak compliance. Overall, better coordination, integration of gender and vulnerability considerations, and enforcement of policies and plans are essential to strengthen disaster management and build resilience in Dominica.

Competencies

Significant gaps in tourism professionals' capacity and expertise in Dominica, as well as within government agencies associated with the Ministry of Tourism. The government faces a shortage of trained professionals in DRM methods and tools, including hazard and risk mapping, GIS, modeling, and scenario planning. The shortage is compounded by a lack of gender and disability inclusion expertise in the tourism sector, with no permanent gender or disability specialists working at the Ministry of Tourism. Furthermore, capacity building efforts on DRM and recovery have been sporadic and not integrated into the tourism sector development agenda. Recruitment protocols and terms of reference (ToRs) for public servants do not prioritize knowledge of DRM, gender, or disability inclusion, which hinders sustained improvement of competencies for recovery efforts. While national and sectoral policies and plans highlight the importance of DRM, gender, and disability inclusion, their implementation depends on the creation of relevant capacities within the country. Specific areas requiring capacity building interventions include hazard and risk map use, GIS, modeling, and scenario planning to address these challenges. Gender mainstreaming and disability inclusion training for Ministry of Tourism staff as well as government agencies involved in recovery and private contractors and enterprises, is necessary to ensure inclusive recovery and tap into the potential of persons with disabilities. Project cycle management (PCM) skills, including monitoring and evaluation, should also be improved to enhance the design and implementation of resilient recovery projects. Additionally, DRM and recovery communication and awareness raising skills need to be enhanced to effectively communicate with stakeholders and raise awareness about DRM initiatives. To sum up, it is clear that capacity building and training in DRM, gender mainstreaming, disability inclusion, PCM, and communication skills within the tourism sector in Dominica are sorely needed. These efforts should be integrated into the tourism sector development agenda and recruitment protocols and supported by national and sectoral policies and plans to ensure sustainable and inclusive recovery and development in the face of disasters.

Resources and tools

Several challenges are also present in the resources and tools related to natural hazard data and risk information, as well as in the implementation of DRM measures in the tourism sector. These challenges include fragmentation of information among government offices, lack of awareness and training on accessing and using hazard data, outdated building codes and guidelines, limited access to funding for DRM and recovery efforts, and insufficient coordination and monitoring of recovery projects. One key issue is the lack of awareness and access to natural hazard data and risk information by project officers and tourism stakeholders. Procedures for information access and sharing have not been developed. This highlights the need for a centralized and easily accessible information platform that provides simple formats of risk information, including hazard maps, to inform sectoral actors about the risks associated with their investments.

Data quality and consistency control systems should also be in place to ensure the reliability of the information. Another challenge is the lack of disaggregated demographic data, such as gender, age, disability, education, employment or economic status, and geographic location, which is important for understanding the vulnerability and resilience of different groups in the tourism sector. These data can be collected through national census and other specific projects and can help in designing targeted DRM measures and interventions. Capacity building and resources are requisite factors to ensure that DRM measures are incorporated in project designs in the tourism sector. Due to budgetary and skill constraints, the government does not have all the necessary tools and training to implement a BBB approach, which includes using software, checklists, and cost–benefit analysis for resilience measures.

Upgrading critical infrastructure, such as transport, energy, and water infrastructure, to climate proof standards is also needed to reduce risks and promote long-term economic growth. Funding for DRM and recovery efforts is an additional challenge, at the government and private sector level. Although funding sources are available for recovery interventions, accessing these funds directly and coordinating recovery efforts are unclear to many stakeholders. SMEs, microenterprises, and individuals dependent on bank loans or insurance proceeds face challenges in funding reconstruction and restoration of their tourism activities, leading to prolonged recovery periods and decreased revenue.

Lastly, coordination and monitoring of DRM and recovery related data need to be strengthened by all actors in the tourism sector. No single government entity oversees the entire cycle of recovery project portfolio management, and this hinders the efficient and effective monitoring and evaluation of recovery efforts. In conclusion, the findings highlight the need for improved access to natural hazard data and risk information, capacity building for DRM measures, updated building codes and guidelines, targeted funding for DRM and recovery efforts, and strengthened coordination and monitoring of recovery projects in Dominica's tourism sector. Addressing these challenges will be crucial for enhancing the resilience of the tourism sector to natural hazards and ensuring sustainable tourism development in the future.

This assessment calls for investments in resilient infrastructure to reduce disaster risks in Dominica's tourism sector in the face of increasingly frequent extreme events and the impacts of climate change, including rising sea levels. It is expected that the results and recommendations made in this report will be taken into consideration and implemented by national and international agencies supporting Dominica's efforts to build resilience.

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Annex 1.

Specific recommendations to strengthen the capacity of Dominica's Tourism sector for resilient and inclusive recovery

GOVERNANCE: Recommendations and potential actions to strengthen the policy and regulatory framework for resilient and inclusive recovery.

Recommendations	Actions
Strengthen the enabling national and sectoral policy and regulatory environment for recovery	<p>Facilitate the integration of climate resilience and gender- and disability-inclusive recovery considerations into the national and sectoral policy framework. Specifically:</p> <ul style="list-style-type: none"> » Finalize and approve the Comprehensive Disaster Legislation that has been drafted, ensuring it contains clear inclusive and resilient-recovery considerations, and formalizes roles and responsibilities at the national and sectoral levels. » Formulate, approve and implement the National Action Plan and Strategy on Disaster Risk Reduction contemplated in the NRDS, inclusive of a results-based management framework for DRM that includes all sectors. » Elaborate a recovery policy for the tourism sector, with clear roles and responsibilities for public and private institutions and mandating the development of contingency plans for private stakeholders involved in the industry. » Elaborate a national environmental policy to help protect infrastructure from climate hazards using natural buffers. The environmental policy is key to the sustainability of ecotourism in Dominica, the nature island. <p>Establish mechanisms that support the operationalization of recovery enabling policies. Specifically:</p> <ul style="list-style-type: none"> » Prepare the Resilient Dominica Physical Plan that is included in the CRRP. This includes an assessment of infrastructure and infrastructure needs, as well as issuing the standards required for the resilience of infrastructure that is critical to the tourism sector. » Update building codes and the design guidelines for the tourism industry to reduce the vulnerability of new tourism developments, particularly along the coast, to the impacts of flooding and sea level rise. » Operationalize the Disaster Risk Financing Strategy to ensure Dominica has the necessary financial resources to fund preparedness, response, and recovery interventions. » Provide incentives to facilitate the inclusion of persons with disabilities as owner operators of SMEs in the sector.

COMPETENCIES: Recommendations and potential actions to build the required competencies (knowledge and skills) required for resilient and inclusive recovery.

Recommendations	Actions
<p>Raise awareness, at the strategic and operational levels, of the added value of acquiring and sustaining DRM and recovery capacity for the sector's development</p>	<ul style="list-style-type: none"> » Develop awareness-raising campaigns that are gender- and disability-informed, including events and materials to highlight the risks associated with climate change on the tourism sector and provide recommendations for impact reduction. To ensure inclusion, the campaigns should be developed in consultation or partnership with persons living with disabilities (PwD) and facilitated to support their active participation. » Organize events for public officers on the importance of gender- and disability-inclusive recovery as a mechanism to strengthen resilient development efforts, placing specific focus on the need to integrate risk and recovery considerations in policies, strategies, plans, programs, and projects to reduce losses and damages from disaster events. Actively involve PwDs or their representatives in these events.
<p>Build and sustain the required knowledge and skills for the implementation of resilient and inclusive recovery projects in the sector</p>	<ul style="list-style-type: none"> » Institutionalize and implement training of sectoral staff in DRM, disaster cycle management and recovery and gender analysis and integration, to ensure requisite knowledge and skills are developed and sustained. An opportunity for this can be its inclusion in the DRM plan for the Ministry of Education and Human Resource Development, that is yet to be developed. » Recruit skilled staff specialized in areas specific to DRM, specifically, disaster cycle management and recovery and gender and disability analysis and integration, to cover urgent gaps. » Include in public recruitment protocols specific requirements to ensure new staff can systematically and sustainably cover the limitations in knowledge and skills that affect the planning and execution of recovery projects. These should include basic experience on the use of DRM tools and methodologies and gender and disability analysis. » Create alliances with donor agencies and programs, to cover urgent capacity gaps through direct technical assistance to the Ministry of Tourism, as well as to fund training programs for sectoral staff in the areas required and to support the institutionalization of DRM capacity building in the public sector. Donor funding could largely contribute to strengthening the capacity of the Ministry of Tourism to effectively facilitate the building of DRM capacity across private sector enterprises in the industry. » Request donors that future PDNA development processes become an opportunity for training and building capacity of national technical staff. » Integrate basic DRM, gender and disability inclusion, and low-impact tourism concepts in existing training programs for tourism operators and youth. This includes the short term tourism training delivered by the Discover Dominica Authority, and the training on tourism delivered by the Dominica State College. » Implement the DRM-related training activities included in the Dominica Tourism Master Plan 2020-2030. This includes training that can be provided in collaboration with the Tourism and Hospitality Training Institute. Explore with this Institute a collaboration with the ODM and the Ministry of Tourism, for the establishment of regular training programs to educate tourism operators on disaster preparedness, immediate response and recovery. » Develop of key training materials on gender and disability inclusion, to be offered on a regular basis, or made available online to project officers and operators working in the tourism industry.

Recommendations	Actions
Build and sustain the required knowledge and skills for the implementation of resilient and inclusive recovery projects in the sector (cont.)	<ul style="list-style-type: none"> » Create, with support from national contractors' associations, training on resilient infrastructure and BBB trainings for local contractors working in the tourism industry. This would include raising awareness on all necessary accessibility compliance considerations for persons with disabilities and further promote compliance with building codes. » Train public and private staff working in the tourism industry in requisite tasks for the implementation of resilient recovery projects. This includes training in: <ul style="list-style-type: none"> > GIS and remote sensing. > Hazard and risk maps use and hazard mapping > Disaster prevention, preparedness, and response > BBB approaches, building codes, and other resilience norms > Disability inclusion > Gender analysis and integration > Project cycle management (including M&E) > DRM and recovery communication and awareness raising skills.

RESOURCES AND TOOLS: Recommendations and potential actions to ensure the sector has the resources and tools required to undertake resilient and inclusive recovery projects.

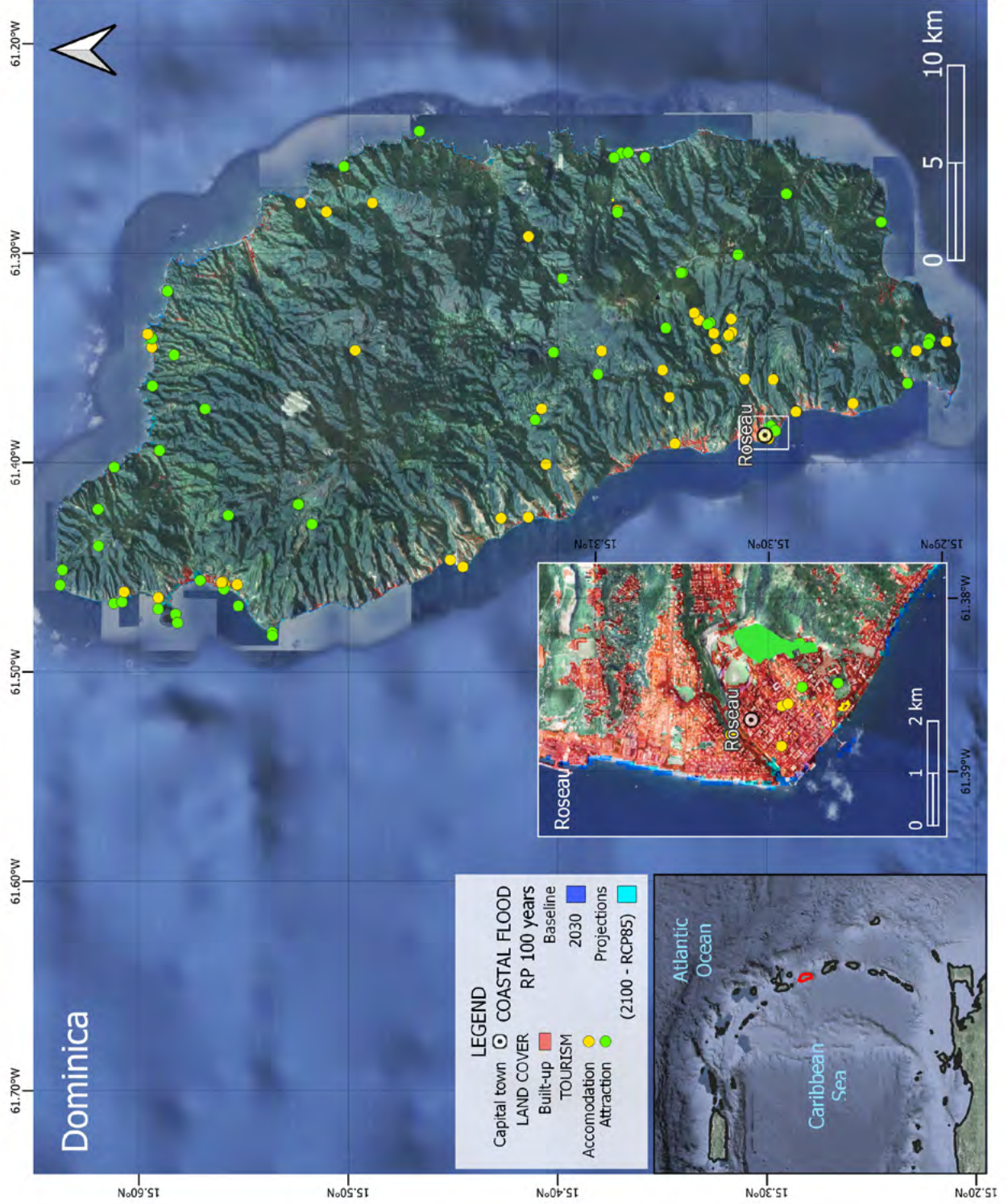
Recommendations	Actions
Strengthen the generation, management and use of risk and recovery-relevant data	<ul style="list-style-type: none"> » Continue updating DomiNode with data and information on multiple hazards, to generate multi-hazard maps for the country. » Support the creation of the GIS unit at the Central Statistics Office. » Create an information platform or portal that is of simple access and where risk information including main hazard, and multi-hazard maps are accessible in simple formats to inform sectoral actors about the risks associated with their investments. This platform would require data quality and consistency control systems. » Request technical assistance to generate and manage baseline data as well as DRM relevant data and risk information. This includes technical assistance to: <ul style="list-style-type: none"> > Conduct risk assessments at the national and local levels > Develop vulnerability; hazard and multi-hazard maps > Record, analyze and disseminate information on disaster losses > Improve existing data for further assessment, monitoring and early warnings > Build capacity on the use of baseline information as well as hazard and risk data on project design, implementation and monitoring and evaluation > Create simple and understandable information on disaster risk to tourism stakeholders. » Establish clear roles for the generation and management of risk information, and develop standards, guidelines, and training for the preparation of hazard, vulnerability, and risk studies. The revision of the National Land Use Policy is an opportunity to achieve this. » Ensure the next national census includes disaggregated according to gender, age, type and degree of disability, education, employment or economic status, and geographic location. » Create a national registry for people living with disabilities. » Collaborate with financial institutions to ensure risk analysis are conducted in the process of approval of loans for tourism construction or renovation projects.

Recommendations	Actions
Invest in protecting infrastructure from shocks	<ul style="list-style-type: none"> » Support the CREAD in the identification and funding of priority infrastructure projects for risk reduction and economic growth of the tourism sector. » Encourage hotel and other tourism facility owners to retrofit assets exposed to climate variability and change by creating a technical assistance plan on a range of risk reduction interventions, including improved guttering or drainage and increasing septic tank volumes to compensate for flooding. The technical assistance plan should be accompanied by a suit of interventions to encourage owners to invest. These could include cost-benefit analysis to show positive rates of return on investments; reduced insurance rates; tax reductions or subsidies to co-finance the investments that strengthen resilience in the sector.
Ensure the necessary equipment and tools are available for recovery project management	<ul style="list-style-type: none"> » Create and finance a plan for software updating and maintenance at the Ministry of Tourism.
Strengthen sectoral budgets for DRM and recovery	<ul style="list-style-type: none"> » Increase the visibility of recovery financing options for the sector and build requisite capacity on access protocols and criteria. » Include sectoral DRM allocations in the budget construction and planning processes of the country and donors. » Review legislation and procedures to ensure they enable rapid annual public budget re-allocation to support recovery efforts.
Enhance resilience and recovery funding instruments for SMEs in tourism	<ul style="list-style-type: none"> » Improve access to existing financing mechanisms for resilience building and recovery. This includes extending insurance coverage to micro and small enterprises involved in the tourism sector. » Create a database of international recovery funding opportunities for the tourism sector.

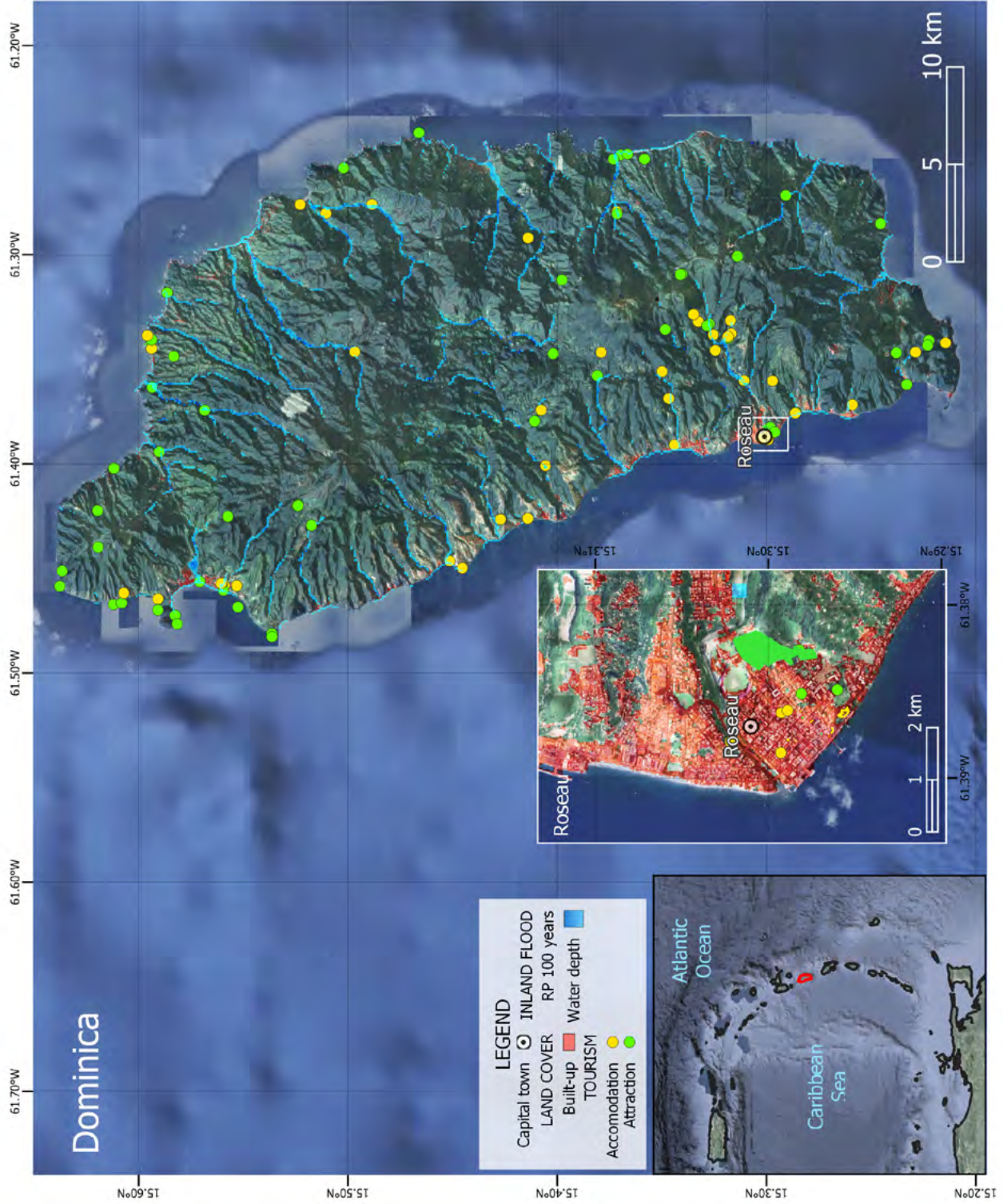
Annex 2.

Inundation scenario maps for Dominica

a. Coastal flooding scenarios for a 100-year return period and for a high-level climate change scenario (RCP 8.5) by 2100



b. Inland flooding for a 100-year return period



Annex 3.

Sectoral Recovery Capacity Assessment Questionnaire

COMPONENT 1: GOVERNANCE			
Key elements	Sub elements	Questions	
1.1 Policies and Legal Framework	1.1.1 Policies	1	Is there a National Disaster Risk Management (DRM) policy?
		2	Are institutional mandates clearly defined in the existing DRM policy?
		3	Does the main sectoral development policy integrate recovery considerations when addressing DRM and CCA?
		4	Is there an effective process to update recovery considerations into national/sectoral policies?
	1.1.2 Legal framework	5	Is there a national disaster risk management (DRM) legal framework?
		6	Is there an effective institutionalized process to deliver timely updated legal frameworks?
		7	Are institutional mandates clearly defined in the existing DRM legal framework?
		8	Are recovery considerations integrated in the main sectoral laws and regulations that address DRM and CCA?
	1.1.3 Foundations for recovery	9	Do the national DRM policies and legal framework include preparedness (risk management ex ante) and Recovery (disaster management ex post) considerations?
		10	Does the government have a clear vision for recovery? (for example, national/centralized; sectoral/decentralized, focused on a specific sector, focused on building back better)?
		11	Does any policy, law, regulation, program or project at the national or sectoral level addresses the possibility of dealing with the impacts of more than one hazard at a time (e.g., COVID-19 and hurricane season)?
	1.1.4 Mainstreaming DRM&CCA	12	Is climate resilience considered in the National disaster risk management policies and legal framework?
		13	Does the sector participate in the elaboration of DRM or recovery policies and legal framework?
		14	Do all, the private sector, academia, NGOs, local communities, and parastatal organizations, participate in the elaboration of DRM policies or legal frameworks?

COMPONENT 1: GOVERNANCE			
Key elements	Sub elements	Questions	
1.1 Policies and Legal Framework (cont.)	1.1.4 Mainstreaming DRM&CCA (cont.)	15	Do the DRM policies and legal frameworks require sectoral ministries to formulate and implement sectoral resilient recovery plans?
		16	Have DRM protocols been adapted to integrate pandemic-related (e.g., COVID-19) considerations in recovery operations?
	1.1.5 Gender and disability inclusion	17	Do the recovery policies take into account gender (men and women, and boys and girls) capacities and their different recovery needs?
		18	Do the recovery laws and regulations take into account gender (men and women, and boys and girls) capacities and their different recovery needs?
		19	Do the recovery laws and regulations take into account the needs of persons with disabilities?
		20	Are there laws mandating that recovery efforts benefit men and women, and boys and girls equitably?
	1.1.6 Building codes and regulations	21	Do most of the sector's constructions conform with building codes regulations?
		22	Does the government have a review and evaluation process for its building codes regulations which includes climate change considerations?
		23	Are mechanisms for regulating compliance with building codes in place?
	Recommendations: What would you recommend to improve the integration of recovery factors into sectoral policies and legal frameworks.		
1.2 Strategies and Plans	1.2.1 Strategies and plans	24	Does the sector have a recovery strategy?
		25	Has the sector developed recovery plans?
		26	Are the sectoral recovery strategies and plans aligned with national development objectives?
		27	Is there an effective institutionalized process to deliver timely updated recovery strategies and/or plans at the sector level?
		28	Are there financing mechanisms for recovery in place (e.g., recovery funds)?

COMPONENT 1: GOVERNANCE			
Key elements	Sub elements	Questions	
1.2 Strategies and Plans (cont.)	1.2.2 Building back better (BBB)	29	Do the recovery strategies and plans include provisions for integrating measures that build resilience?
	1.2.3 Gender and disability inclusion	30	Are the outputs of the recovery strategies and plans affordable and inclusive for the sector beneficiaries?
		31	Do the recovery plans take into account gender (men and women, and boys and girls) capacities and gender-differentiated recovery needs?
Recommendations: What would you recommend to improve issues related to recovery strategies and plans?			
1.3 Institutions and Coordination	1.3.1 Institutions	32	Is the development of recovery plans at the sector level led by one or more institutions with authority and autonomy?
		33	Are the roles and responsibilities to implement the recovery plans clearly defined within the sector?
	1.3.2 Coordination	34	Is there a coordination mechanism (formal or informal) between sectors to implement the national recovery plan?
		35	Does the sector coordinate recovery activities with the National Disaster Management Office?
		36	Are concrete activities being coordinated between the sector and the National Disaster Management agency?
		37	Is there any coordination between the sector and CDEMA during the recovery process?
	1.3.3 Building codes and regulations	38	Are there, within the legal framework of the country, stakeholders who are responsible, accountable, and liable for assuring compliance with building-related legislation?
		39	Is there a sufficient budget approved for enforcing building codes?
	1.3.4 Gender and disability inclusion	40	Are there mechanisms in place for the coordination of recovery between the DRM agencies, gender agencies and women's networks?
Recommendations: What would you recommend to improve institutional coordination issues?			

COMPONENT 2: COMPETENCIES			
Key elements	Sub elements	Questions	
2.1 Workforce	2.1.1 Workforce	41	Are there sufficient technical persons working in the sector?
		42	Are there sufficient DRM specialists for the needs of the sector?
		43	Are all projects being implemented in the sector overseen by at least one DRM specialist?
		44	Is there sufficient staff to implement the sector's current portfolio?
		45	Do technical teams have the necessary working conditions to fulfil their tasks (e.g., connectivity, equipment, software)?
	2.1.2 Gender	46	Is there a sufficient number of gender specialists to fill the needs of the sector?
	2.1.3 Private sector	47	Does the sector have an adequate number of qualified implementing contractors based in the country?
		48	Are international contractors in charge of implementing only a minimum proportion of the recovery projects in the sector each year?
Recommendations: What would you recommend to improve institutions and coordination issues?			
2.2 Capacity (knowledge and skills)	2.2.1 Skills	49	Are there sufficient national professionals to fill all the sector's demands?
		50	Are there sufficient professionals in the sector with expertise to implement resilient recovery projects?
		51	Are there sufficient national experts in the sector with knowledge of DRM methods and tools such as integrating hazard risks, geo-referenced information management systems (GIS, remote sensing)?
	2.2.2 Training activities	52	Are there frequent opportunities to enhance the technical skills that ensure resilient reconstruction of infrastructure/buildings?
		53	Do all genders have the same opportunities for DRM training?
		54	Are technical persons trained on gender responsiveness and disability inclusion?
		55	Is there a mentoring and advising program/process for building back better?

COMPONENT 2: COMPETENCIES			
Key elements	Sub elements	Questions	
2.2 Capacity (knowledge and skills) (cont.)	2.2.2 Training activities (cont.)	56	Are there sufficient people with the technical capacity to implement PCM activities, with a climate resilience focus, in the sector? NOTE: PCM includes, at least the following activities: management of sector portfolio; execution of PFM procedures; project management; M&E; mainstreaming climate and disaster resilience into projects; coordinating recovery activities with other relevant sectors; performing quality control projects and inspections of building codes compliance during and after design and construction of buildings and infrastructure.
		57	Do technical persons in the sector have the capacity to translate PDNA results into actionable projects?
	2.2.3 Proven capacity	58	Do technical persons in the sector understand the basics of DRM and are able to use hazard maps?
		59	Can technical persons in the sector produce recovery plans that are aligned with the existing legislation, policies, and strategies?
		60	Do the technical persons have the knowledge and necessary training to formulate quality ToRs for projects implementation?
Recommendations: What would you recommend to improve capacity (skills, training opportunities)?			
2.3 Human Resources (HR), Profile Suitability	2.3.1 Human resources (HR), profile suitability	61	Is there an HR recruitment plan that includes recovery activities?
		62	Does the sectoral hiring process follow the recruitment plan?
		63	Are there ToRs for recovery-related positions?
		64	Is there an employee induction process?
Recommendations: What would you recommend to improve human resources, profile suitability?			

COMPONENT 3: RESOURCES AND TOOLS			
Key elements	Sub elements	Questions	
3.1 Natural hazard Data and Risk Information	3.1.1 Data collection and management	65	Are there mechanisms in place for the collection and management of natural hazard data and risk information?
		66	Is there a national and sectoral online repository for risk data and information?
		67	Is the existing risk data and information accessible to technical people in the sector?
	3.1.2 Use of risk information	68	Does the sector use multihazard risk maps?
		69	Are hazard maps regularly updated?
		70	Does the sector share multihazard risk maps?
		71	Is a participatory approach used in the development and preparation of hazard maps?
3.2 PDNA and Project Portfolio Planning	3.2.1 PDNA mechanisms	72	Is there a PDNA including specific methodologies and plans for recovery in the sector?
		73	Is there an efficient and effective PDNA coordination mechanism?
		74	Are there focal points with clear roles and responsibilities assigned within the sector to carry out a PDNA?
		75	Have “lessons learned” from postdisaster assessments and DANAs been integrated into PDNA planning or used to adjust the methodology after previous disasters?
	3.2.2 Planning of recovery priorities	76	Have the results of the PDNA been used for recovery purposes and development across institutions and sectors?
		77	Does the government have criteria to define the priority sectors for recovery support?
		78	Has the government used the results of PDNA to prioritize recovery projects?
	3.2.3 Gender and disability inclusion	79	Does the PDNA methodology require the collection of gender, age, and disability disaggregated data?
	Recommendations: What would you recommend to improve PDNA and Project portfolio planning?		

COMPONENT 3: RESOURCES AND TOOLS

Key elements	Sub elements	Questions	
3.3 Resilient Recovery Project Design	3.3.1 Availability of BBB tools	80	Does the sector have the necessary tools (e.g., best practice, software, check lists, cost benefit analysis for resilience measures available to ensure project designs incorporate the Build Back Better approach?
	3.3.2 Use of risk information	81	Do the sectors use risk information to design resilient recovery projects?
		82	Is risk information available and accessible, at the required resolution and geographic coverage for sectoral project planning and implementation?
	3.3.3 Building codes and regulations	83	Are building codes and land use planning guidelines integrated into project design?
	3.3.4 Gender and disability inclusion	84	Do project designs take into account gender-based needs?
85		Do project designs take into account the basic needs for the conditions of persons with disabilities?	
Recommendations: What would you recommend to improve Resilient design of project?			
3.4 Financing	3.4.1 Availability of funding sources	86	Are there identified and accessible funding sources for recovery interventions in the sector (e.g., National MDB, bilateral, others)?
		87	Are the mechanisms for accessing funding for recovery actions clear and widely known to people working in the sector?
		88	Has the government used international funding for recovery in the past?
	3.4.2 Access to recovery funding	89	Is it easy to access to recovery funding?
		90	Do the eligibility criteria for recovery funding reflect the PDNA results for the most affected sectors?
		91	Is the disbursement of international funding for recovery rapid?
		92	Is the recovery funding process fast (from application by the government to disbursement)?
	3.4.3 Budget for recovery	93	Does the sector's budget have a line item earmarked for recovery?
		94	Does the sector have a sufficient actual or estimated annual budget for recovery?
	Recommendations: What would you recommend to improve access to financial mechanisms for recovery?		

COMPONENT 3: RESOURCES AND TOOLS			
Key elements	Sub elements	Questions	
3.5 Project Implementation	3.5.1 Resources	95	Does the sector have an inventory of qualified implementing contractors relevant for the sector's operations?
		96	Is there sufficient material for construction available to implement recovery projects?
		97	Does the sector or the government have the necessary equipment to implement large recovery projects?
	3.5.2 Project management	98	Does the sector (or reconstruction projects) have access to and use project management tools?
		99	In general, does the expenditures of project activities in the sector follow the original planning?
	3.5.3 Building codes	100	Do the construction materials used in recovery projects meet accreditation standards (e.g., strength, testing, quality)?
		101	Does the sector have the resources and tools to comply with building codes?
		102	Does the regulatory body have the resources and tools to enforce compliance with building codes?
	3.5.4 M&E at project level	103	Does the sector have in place and actively use a monitoring and evaluation (M&E) system for projects?
		104	Have the most common M&E recommendations been used to improve project planning and implementation across the sector?
	Recommendations: What would you recommend to improve project implementation?		



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