

# Sectoral Recovery Capacity Assessment Report for Saint Vincent and the Grenadines' Agriculture Sector



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# Executive Summary

Saint Vincent and the Grenadines is highly exposed to the impacts of natural hazards, including hurricanes, tsunamis, landslides and volcanic eruptions and is currently recovering from the impacts of the COVID-19 pandemic and the La Soufrière volcano eruption in 2021. 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 Saint Vincent and the Grenadines to assess the capacity of the country's agriculture sector, inclusive of the fisheries and forestry subsectors, to plan, design, implement, monitor, and evaluate resilient and inclusive recovery projects. These sector and subsectors were selected as the priority for the SRCA by the Government of Saint Vincent and the Grenadines due to their economic importance, for socially and economically vulnerable populations and for their high exposure to natural hazard impacts. The assessment followed a consultative process facilitated by the Ministry of Agriculture, Fisheries, Forestry and Rural Development (MAFFRD) and the National Emergency Management Organisation (NEMO). 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 agriculture sector and the fish-

eries and forestry sub sectors in terms of 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 for investments by national and international agencies supporting recovery and other disaster risk management (DRM) and development efforts in Saint Vincent and the Grenadines (SVG). 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 the agriculture, fisheries and forestry sub sectors in SVG to plan, design and execute inclusive recovery projects in a timely, efficient, and effective manner is moderate. However, key results of a more detailed analysis indicate that the national DRM policy and legal framework, and some sectoral and sub-sectoral opportunities enable, to a certain extent, the implementation of recovery projects in the sub-sectors. But also that most recovery initiatives undertaken in the aftermath of the volcanic eruption have been based on the recommendations and projects of this event's Post Disaster Needs Assessment, which has become the main development strategy for the MAFFRD and guided and executed by central ministries and international organizations. This approach has unfortunately not contributed to building the required capacity for inclusive recovery in the sub-sectors assessed, where the level of knowledge and skills is insufficient for planning and implementing rapid and



effective recovery interventions. Creating, strengthening and sustaining resilient and inclusive recovery capacity within the MAFFRD is needed. This includes the capacity to mainstream gender and disability considerations, systematically use hazard and risk data and information into sectoral operations and conduct entire project cycle management activities. Improving the coordination and communication among the MAFFRD sub-sectors also has great potential to increase the efficiency of capacity building interventions and to ensure the needs of all sub-sectors are considered when prioritizing DRM and recovery actions.

The SRCA identified the following as crucial for building recovery capacity in Saint Vincent and the Grenadines' agriculture, fisheries and forestry:

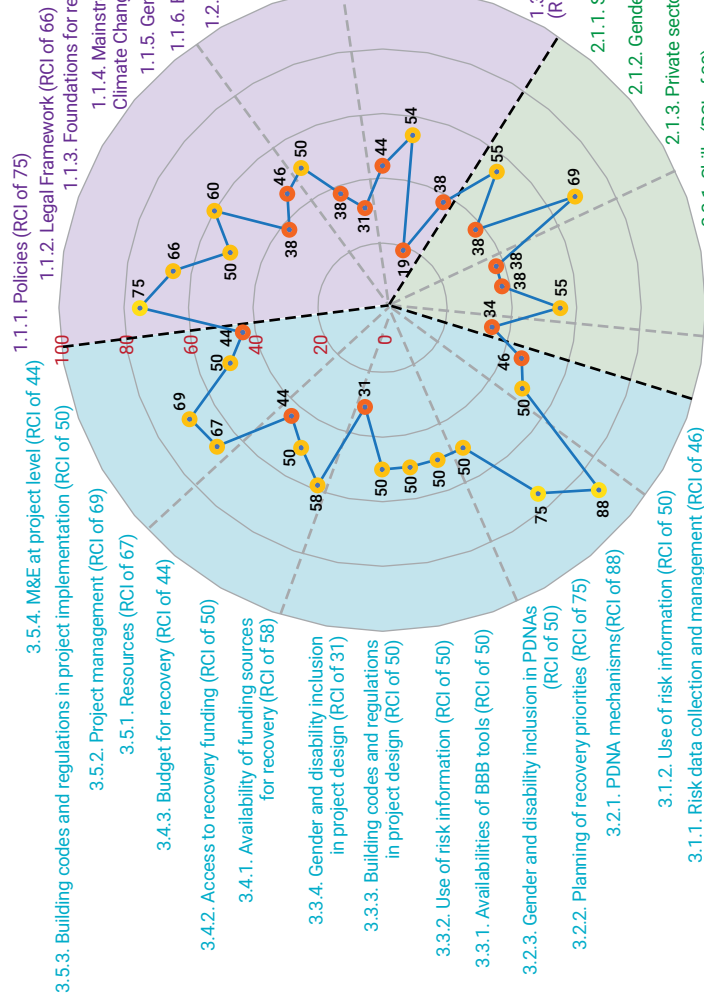
- » Ensure resilient and inclusive recovery considerations are integrated into ongoing and upcoming policy, strategic, and planning processes at the national, sectoral and sub-sectoral levels. Particularly important are: the completion of the National Disaster Management Policy, Strategy and Action Plan and the Comprehensive Disaster Management Country Work Program (2022-2026); the review of the National DRM legislation (including the National Emergency Act, 2006) and subsidiary legislations; the updating of building codes, guidelines and related enforcement regulations; the finalization of the working draft of Saint Vincent and the Grenadines' Agriculture, Forestry and Fisheries Concise Multi-hazard Disaster Management Plan; and the development of a Strategic Plan for Agriculture, Fisheries and Forestry, to guide development and recovery activities in the coming years, beyond the PDNA. The elaboration and review of these documents should ensure the integration of gender and disability considerations, as well as operative aspects of recovery beyond the earliest recovery phase. It is also critical that these processes are highly participatory, widely communicated and incorporate lessons learned from the volcano eruption recovery and the COVID-19 pandemic and set concrete prioritized actions for recovery and resilience building.
- » Develop an investment plan that prioritizes infrastructure projects of high relevance for the agriculture sector, particularly those promoting climate-resilient systems, including water supply, to support the continuity and operability of crop production after major adverse events.
- » Request donor support to fully develop a consolidated national data (including risk data) platform and information knowledge management system as well as mechanisms to ensure access to the system from rural or remote areas.
- » Assess Saint Vincent and the Grenadines' hydro-meteorological infrastructure and elaborate an investment plan for its modernization, acquisition of modern forecasting and climate services delivery technologies, and strengthening of early warning communication systems to ensure they reach the exposed and most vulnerable communities.
- » Create and finance a plan for software and hardware updating and maintenance at the MAFFRD.
- » Establish clear mechanisms for direct access to the existing Contingency Fund for the rapid recovery of the agriculture, fisheries and forestry subsectors when affected by disasters.
- » Include in the MAFFRD's budget an annual contingent recovery allocation and an allocation to support and incentivize disaster prevention measures.
- » Create new and enhance access to existing financial mechanisms for resilience and recovery, including insurance and microinsurance to cover farmers, fishers and other actors associated to agriculture, including those operating in the informal sector.
- » Develop a plan to finance software updating and maintenance at the MAFFRD to facilitate project management operations.
- » Raise awareness, at the strategic and operational levels, of the added value of acquiring and sustaining DRM and inclusive recovery capacity for the sector and subsector'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 MAFFRD and its subsectors through the recruitment of specialized staff in

**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**



**Component 2: Competencies**



areas specific to DRM and project management; the institutionalization of training in DRM, disaster cycle management, recovery and gender analysis and integration; establishing collaboration with academic institutions for the delivery of programs on project design and management, gender and DRM, tailored to the needs of the subsectors; and the improvement of public recruitment protocols, among other measures.

It is expected that the findings of this report and its recommendations will be taken into consideration and integrated in the design and implementation of development, DRM and recovery policy, strategic and planning documents of national, sectoral and sub sectoral relevance.

# Acronyms

<b>BBB</b>	Build Back Better
<b>CAP</b>	Conservancy Adaptation Project
<b>CDEMA</b>	Caribbean Disaster Emergency Management Agency
<b>CDM</b>	Comprehensive Disaster Management
<b>CRF</b>	Canada-Caribbean Resilience Facility
<b>DANA</b>	National Damage Assessment and Needs Analysis
<b>DRM</b>	Disaster Risk Management
<b>ECLAC</b>	Economic Commission for Latin America and the Caribbean
<b>EnGenDER</b>	Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean
<b>ENSO</b>	El Niño-Southern Oscillation
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>GDP</b>	Gross Domestic Product
<b>GFDRR</b>	Global Facility for Disaster Reduction and Recovery
<b>GHG</b>	Greenhouse Gas
<b>GSDS</b>	Green State Development Strategy
<b>IICA</b>	Inter-American Institute for Cooperation on Agriculture
<b>JICA</b>	Japan International Cooperation Agency
<b>LCDS</b>	Low Carbon Development Strategy
<b>M&amp;E</b>	Monitoring and Evaluation
<b>NEMS</b>	National Emergency Management System
<b>4NEOC</b>	National Emergency Operations Centre
<b>PAHO</b>	Pan American Organization
<b>PDNA</b>	Post-Disaster Needs Assessment
<b>PLWDs</b>	Persons Living with Disabilities
<b>RCI</b>	Recovery Capacity Index
<b>RCP</b>	Representative Concentration Pathway
<b>SRCA</b>	Sectoral Recovery Capacity Assessment
<b>SVG</b>	Saint Vincent and the Grenadines
<b>UN</b>	United Nations
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>USD</b>	United States Dollars
<b>XCD</b>	Eastern Caribbean Dollars

# Glossary of key terminology<sup>1</sup>

**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.

**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.

<sup>1</sup> 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 (SVG) and the assessment could be undertaken in other countries, depending on demand.

## 1.2 Assessing Sectoral Recovery Capacity in the Caribbean

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.



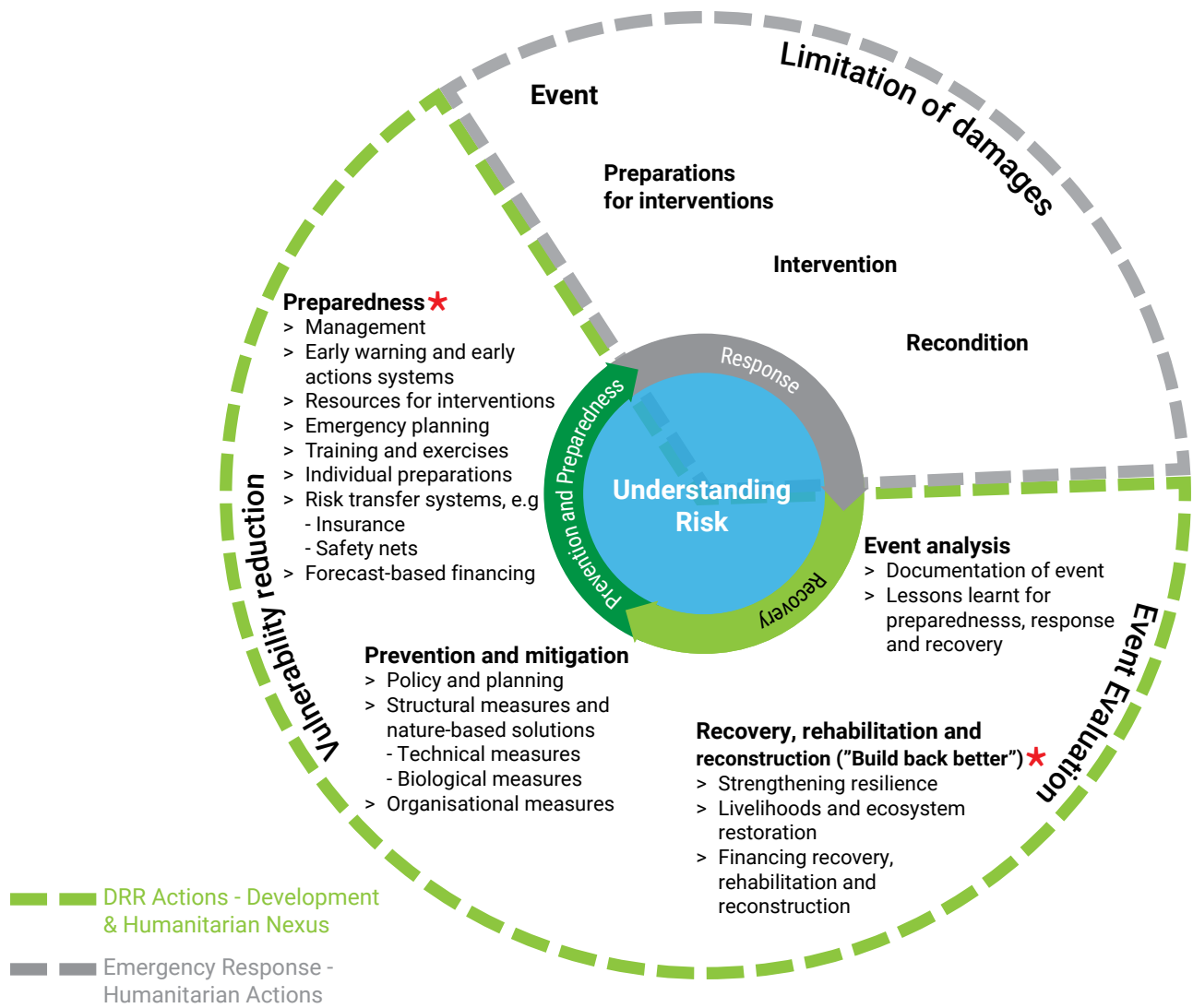
Results of the SRCA are expected to serve as planning instruments and benefit national governments, sectoral stakeholders, national DRM agencies, and CDEMA in their efforts to enable a rapid and effective recovery in the aftermath of disasters. Recommendations emerging from the assessment will also inform 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 Saint Vincent and the Grenadines has selected agriculture, forestry and fisheries in view of their 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 sea level rise, floods and droughts.

**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 Recovery Capacity Assessment for the agriculture sector and the forestry and fisheries subsectors in Saint Vincent and the Grenadines

The objectives of the SRCA are to:

- » Improve the understanding of the existing capacity of the Government of Saint Vincent and the Grenadines, its Ministry of Agriculture, Forestry, Fisheries and Rural Development, and other key stakeholders in the agriculture 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 Saint Vincent and the Grenadines' agriculture sector, and forestry and fisheries subsectors; and
- » Identify opportunities for investments to support Saint Vincent and the Grenadines' agriculture sector, forestry and fisheries subsectors, and institutions in overcoming recovery capacity gaps, weaknesses and limitations (e.g. 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 in person in October 2022 completed the SRCA questionnaire, 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.

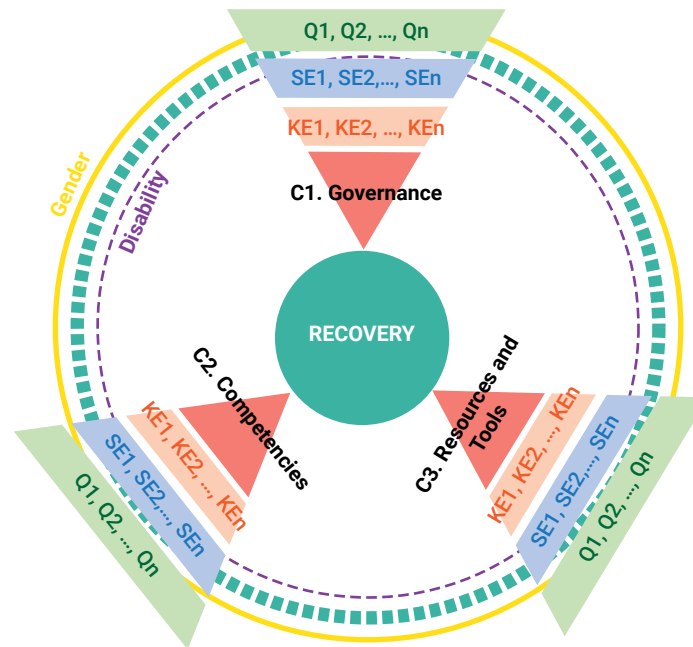


TABLE 1

### 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	<b>Absent integration</b> of recovery considerations across the sector due to specific limiting elements. <b>Low level of awareness and knowledge</b> about the importance and added value of recovery integration for sectoral development.
Basic or incipient integration 25–49	<b>Incipient integration</b> 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 <b>certain level of awareness and knowledge</b> about the importance and added value of recovery integration for sectoral development.
Moderated integration 50–74	<b>Evident integration</b> 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 <b>good level of awareness and knowledge</b> about the importance and added value of recovery integration for sectoral development exists.
Advanced integration 75–89	<b>Evident integration</b> 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 <b>high capacity to value the impact and contribution of recovery integration to the sector development</b> , and to programmatic efficiency and efficacy.
Full integration 90–100	<b>Integrating recovery considerations at all levels is a working principle</b> , 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.



CAPACITY BUILDING NEEDS

HIGH  
LOW

# 02

## The agriculture sector in Saint Vincent and the Grenadines



Despite a considerable decline in the last twenty years due to the loss of preferential trading arrangements for bananas, exposure to exotic diseases and invasive pests, and a series of destructive natural disasters, agriculture continues to represent an important foundation of the economy and remains crucial for livelihoods, especially in rural areas. In 2021 and 2020, it contributed 6.5 and 8.6 of GDP, respectively (WorldBank, 2022). It provides needed foreign exchange earnings, and employs around 10 percent of the labor force (World Bank, 2022). The sector is heavily export-driven, with a combination of several commodities produced for the regional and international markets, including banana and a variety of root and tuber crops (GoSVG, 2016). The livestock sub-sector is also relevant, despite being hindered by a series of externalities, including theft, excessive cost of commercial feed, limited land availability for grazing, and reduced access to capital (GoSVG, 2016). The majority of the country's livestock – sheep, goats, cattle, and pigs – is raised in small family holdings, with most of the products from the livestock industry being consumed in the local market.

Agriculture is predominantly practiced on Saint Vincent, with some subsistence farming on the larger Grenadines islands. There are some 8,000 farmers in the country, of which 90 percent are smallholders occupying less than five acres of land, and a significant share consists of landless farmers informally working on crown lands (FAO, 2017). The amount of land available to be developed for agriculture is limited and sectoral stakeholders are forced to compete with housing and other commercial interests, frequently ending up farming land that is not suitable for agriculture use and revert to hillside farming and other deficient practices, compounding vulnerability.

The fisheries sub-sector employs about 2,500 people and mirrors the agriculture sector in that it is predominantly small-scale and artisanal (GoSVG, 2016). Aquaculture activities are currently non-existent, despite being planned in the medium to long-run, and landing sites mostly require improved storage facilities, a cold chain, and upgraded fishing vessels and equipment (GoSVG, 2016). The resilience and sustainability of the fisheries sub-sector are negatively impacted by sever-

al issues, including deficient data collection systems, weak management and entrepreneurial capabilities among fisherfolks, weak enforcement of regulations, partial compliance with export standards, and the side effects of natural hazards (GoSVG, 2016).

The forest subsector is pivotal to the sustainable development of the country. The topography of the country is mountainous, and forests represent 73.2 per cent of total land, comprising four major subareas: the rainforest proper, elfin and montane woodlands, palm break forests, and mangrove forests (World Bank, 2022). Mangroves occupy about 50 hectares of land, primarily in Union Island, Mustique, and the south coast of Saint Vincent, and provide societal benefits for climate change adaptation and mitigation (GoSVG, 2016). The largest contiguous area of forest consists of 132 square kilometers located within the Saint Vincent's central mountain range encompassing the La Soufrière National Park and the proposed Kingstown Forest Reserve (GoSVG, 2016).

Forest areas support biodiversity, including populations of threatened species and comprise some critical watersheds crucial for freshwater production. However, they are increasingly subjected to development pressures, including for cannabis cultivation. Luckily, the Government appreciates the contribution of forest ecosystems to the national economy, wellbeing, and in the fight against climate change, and recognizes in particular the need to strengthen the institutional and legal frameworks contributing to sustainable forest management in the benefit of livelihoods.

## 2.1 Disasters and their impact on agriculture

SVG is exposed to multiple hazards, especially hurricanes, floods, landslides, and drought, and to a lesser extent and frequency volcanic eruptions, earthquakes, and tsunamis. It ranks 54 globally in terms of exposure to natural disasters, and is among the top three countries within the Caribbean Community (CARICOM) at relatively high mortality risk from two or more hazards (World Bank, 2010). Economic risk as a percentage of

GDP from two or more hazards is estimated at 41.6 percent and hazard events, particularly those of a hydrometeorological nature, constantly hamper productivity and national development prospects, and underscore the inherent vulnerabilities of the agriculture sector and the fisheries subsector (World Bank, 2010).

Geographically at the southern end of the Atlantic Hurricane Belt, the country is extremely vulnerable to hurricane force winds and related hazards, and every given year it has a nine percent probability to be impacted by a hurricane (CSU, 2022). As the agriculture and fisheries sectors continue to be disrupted by the impacts of these hazards, the government is forced to periodically divert human and financial resources from socio-economic growth and development activities into response, recovery, and rehabilitation efforts.

Heavy and protracted rains can result in extensive flooding, which can be highly damaging for the agriculture sector and threaten food security. For instance, the floods of 2013 and 2016 caused significant destruction to both crops and infrastructure (GoSVG, 2016 and GoSVG, 2014). Additionally, rains often cause landslides, a widespread hazard in SVG due to a combination of volcanic geomorphology and terrain, and inadequate sustainable land management (SLM) practices, especially on steep slopes (GoSVG, 2016 and GoSVG, 2014).

Drought represents an additional threat to the agriculture sector, as the whole Eastern Caribbean region is periodically influenced by the El Niño Southern Oscillation (ENSO) system. Particularly vulnerable to drought are the coastal regions of Saint Vincent as well as the Grenadine island chain, the latter depending largely on rainwater harvesting (GoSVG, 2016). In 2020, farmers endured XCD 16 million in losses as a result of the drought, and in 2009-2010, severe drought conditions were experienced, which imposed significant costs to the economy and disrupted Central Water and Sewage Authority systems and the agriculture sector, reportedly affecting 8.76 percent of GDP, 15.4 percent of employment, and reducing agricultural production by 20 percent (OHCHR, 2021).

Volcanic risk is also latent, as demonstrated by the series of La Soufrière explosive eruptions in the spring of 2021. The volcano has erupted approximately six to seven times in recorded history, with serious impacts to human life and agricultural livelihoods. The most recent event required the swift evacuation of the northern part of the island, home to critical agricultural assets, many of which suffered heavy damages and losses, quantified at XCD 634,654,692 (GoSVG, 2021). Especially concerning are the poorest agricultural communities living in the most hazardous volcanic zones. Depending on the entity and magnitude of eruptions, areas outside of the denominated Red Zone can be affected, and even neighboring countries. For instance, during the last eruption, volcanic ash and gas reached as far as Barbados, located 190 km away (U.S. DoS, 2021).

Tsunami risk is associated with the eruption of the submarine volcano Kick 'em Jenny, located off the northern coast of Grenada. Given the proximity of this underwater volcano to the Grenadines, the generation of a tsunami would require extremely rapid evacuation to reduce risk, underscoring the necessity of having effective early warning systems in place (GoSVG, 2016).

Seismic risk is low to moderate, due to the country's location along the Eastern rim of the Caribbean plate, and seismic activities are continuously recorded. In addition to earthquakes created by tectonic processes, volcanic earthquakes associated with eruptions of the La Soufrière volcano are also possible.

## 2.2 Climate change impacts on agriculture

The Caribbean region, consisting of mostly Small Island Developing States (SIDS), is globally one of the most vulnerable areas to the adverse impacts of climate change (IPCC, 2021). Projections for Saint Vincent and the Grenadines suggest an increase in both atmospheric and sea surface temperatures, an overall decrease in precipitation, a rise in sea level, the salinization of arable land and freshwater, and the prospect of hydrometeorological phenomena becoming both

more intense and more scattered (IPCC, 2021). This creates serious complications for agriculture and fisheries, as traditional agricultural practices are climate dependent and fish populations are directly and heavily affected by changes in atmospheric conditions.

Irrigation infrastructure, feeder roads, and farms already suffer recurrent damage and destruction from floodwaters, siltation, and high winds caused by storms. The agriculture sector is highly vulnerable to both hurricanes and droughts, and changes in precipitation patterns as well as extended dry spells have the potential of greatly upsetting the sector given its heavy reliance on rainfall for production (John, 2016). Other challenges, including inappropriate land use and unsustainable agricultural practices such as mono-cropping, have contributed to land degradation and soil erosion, amplifying the sector's vulnerability to climate change (GoSVG, 2015).

SVG's agricultural production is currently threatened by climate change's direct effects on crop and livestock viability, and the impact that changes in temperature and rain patterns have on agricultural yields and food security. The sector already suffers regularly from severe hurricane and drought damage and, as temperatures continue to rise, several crops will experience heat stress and increasingly lack the ideal climate conditions for maximizing yields (IICA, 2015).

Gradually, higher temperatures will affect crop growth and nutritional value, as well as multiply the number and types of pests, diseases, and other negative externalities. Changing rainfall intensity, duration, and occurrence will additionally alter the growing season and affect water availability, with growing storm intensities leading to higher flood risk during heavy rains as well as increased soil erosion. Changing rainfall patterns and rising temperatures are also set to lead to more severe drought episodes causing water stress, and water quality may also be reduced due to seasonal lack of water availability and salt-water intrusion due to excessive groundwater extraction (IICA, 2015).

Currently, the Government recognizes the costs of climate variability and change for disaster risk and

### Climate change projections for Saint Vincent and the Grenadines\*

- » Higher mean annual temperatures (0.63° to 1.06°C) by 2050.
- » Lower annual precipitation (200.40mm to 978.93mm) in 2050.
- » Warm spell duration from 115.15 days (median, 2022) to 336.69 (median, 2050).

\* Representative concentration pathway (RCP) 8.5 ensemble.  
Source: World Bank 2020.

considers building resilience and integrating DRM into sectors such as agriculture and fisheries a national priority and a paramount necessity to achieve sustainable development.

Figure 4 shows the areas affected by inland flooding for a 100-year return period. Coastal inundation scenario maps are presented in Annex 2.

## 2.3 Gender, agriculture, climate change and disasters

In line with global and regional trends, gender inequalities in SVG persist. According to the Caribbean Development Bank (CDB) (2015) and the Economic Commission for Latin America and the Caribbean (ECLAC) (2011), female-headed households (FHHs) in the country tend to be overrepresented among the poorest households and as such have lower resilience capacity and experience the negative consequences of natural disasters more sharply than male. Among other factors, female household heads are more likely to be unemployed than their male counterparts (CANARI, 2021).

Overall, vulnerable women tend to outnumber vulnerable men, and requests for public assistance are higher in women than men (UNDP, 2020). Additionally, women tend to rely more on remittances from abroad, although they have a higher level of entitlement to em-



FIGURE 4

### Inland flooding for a 100-year return period in Saint Vincent and the Grenadines



ployment-related insurance benefits from the National Insurance Scheme as 41.8 percent of women's employment is based on a written contract, compared to 31.6 percent for men (UNDP, 2020).

Women and men have asymmetric access to and control over assets and productive resources (CDB, 2015). Low access to assets and resources is reflected in the lack of entrepreneurship opportunities, as female-led businesses tend to have limited access to credit and less incidence of land ownership than men (CDB, 2015) despite the fact that 38.6 percent of total businesses are headed by women, a rate which is about twice the average for LAC and structural peers.

Women hold only 18 percent of seats in the national parliament of SVG, a rate much lower than the LAC average and that of structural peers. While this data reveals potential barriers limiting women's engagement in decision-making, it is positively noted that the Na-

tional Emergency Management Organization is headed by a female director.

According to UN Women (2021), the participation of women and men in specific sectors and throughout the value chains may determine their capacity to cope with natural hazards. In the fishing industry, women depend more on onshore activities related to fisheries and have multiple income streams such as selling fish and food, while men engage in sea-fishing, which may result in more limited coping capacity for the latter (UN Women, 2021). Likewise, women in agriculture tend to be involved in the entire value chain while men tend to concentrate in a few activities, namely planting and harvesting (UN Women, 2021). Despite this, women may experience the effects of occupational sex segregation, which greatly limits their cross-sectoral mobility compared to men.

Vincentian women appear more prepared for climate and disaster risks, are more conscious of climate

change, more involved in discussions on the issue and take immediate action upon hearing alerts (UN Women, 2021). This is based on social and traditional norms which shape the different ways in which women and men cope with shocks. Nevertheless, the Multi-Hazard Early Warning System (MHEWS) report for Saint Vincent and the Grenadines (CDEMA, 2018) highlights deficiencies in disaster risk knowledge related to the analysis and preparation of information for vulnerable groups and a communication gap evidenced by a lack of sufficiently targeted warning messages which cater to specific gender needs. This report subsequently informed the Communications Plan to support Saint Vincent and the Grenadines' Early Warning Systems (CDEMA, 2019) which outlines specific measures to ensure early warning system messages are targeted toward and address the specific needs of women, including older women. The plan is however limited by the absence of a monitoring framework.

## 2.4 Disability, agriculture, climate change and disasters

While official disaggregated disability data in Saint Vincent and the Grenadines is difficult to source, assuming disability prevalence is consistent with that of neighboring Caribbean countries, it is likely that up to 15 percent of the current population of 111,000 – around 16,650 people – live with some form of disability (CPA, 2018). Numbers tend to be slightly higher among females and increase as the population ages. Also, difficulties in physical mobility and impaired vision tend to be the most common functional disabilities and levels of psychosocial impairment are usually poorly understood and certainly underestimated.

The Government formally acceded to the UN Convention on the Rights of Persons with Disabilities (CRPD) and its Optional Protocol in October 2010. However, the government has not signed the Inter-American Convention on the Elimination of All Forms of Discrimination Against Persons with Disabilities (CIADDIS)

(Inter-American Convention on the Elimination of All Forms of Discrimination Against Persons with Disabilities, 1999), which is the first regional legal framework for the protection of the rights of persons with disabilities<sup>2</sup>, and there are few social protection mechanisms in support of the rights of persons with disabilities. The Constitution prohibits discrimination on the basis of sex, race, place of origin, political opinions, color, or creed, but makes no mention of persons with disabilities, and the country currently does not have an ombudsman or a human rights institution of any kind. A comprehensive draft national disability policy, which covers everything from human rights to health and employment and access to reasonable accommodation has been developed and drafted (GoSVG, 2014). However, the draft policy is outdated and there still exist several barriers to its implementation.

Saint Vincent and the Grenadines has a range of disability support organizations representing people with disabilities across the spectrum of physical, sensory, intellectual, and psychosocial disabilities, and provide them with a level of day-to-day support. The National Society of Persons with Disabilities is the cross-disability national umbrella organization advocating for human rights and promotes, among other things, the education, training, rehabilitation, and employment of persons with disabilities. It facilitates the integration of persons with disabilities into society and provides representation in national policy and planning forums. However, it appears to have little influence on the allocation of resources for persons with disabilities or national policy. While there is no data available relating to the employment of persons with disabilities in the agriculture sector and fisheries subsector, there is no legislation to support providing employment opportunities for persons with disabilities. Typically, persons with disabilities are over-represented among the poor and under-represented in the workforce generally. As a consequence, their resilience to both economic shocks and climate and other hazard-related disasters tends to be relatively low.

<sup>2</sup> While both the CRPD and the CIADDIS are international instruments designed for the protection of the rights of persons with disabilities, they differ in their respective understandings of disability.

# 03

## The Sectoral Recovery Capacity Assessment implementation process in Saint Vincent and the Grenadines

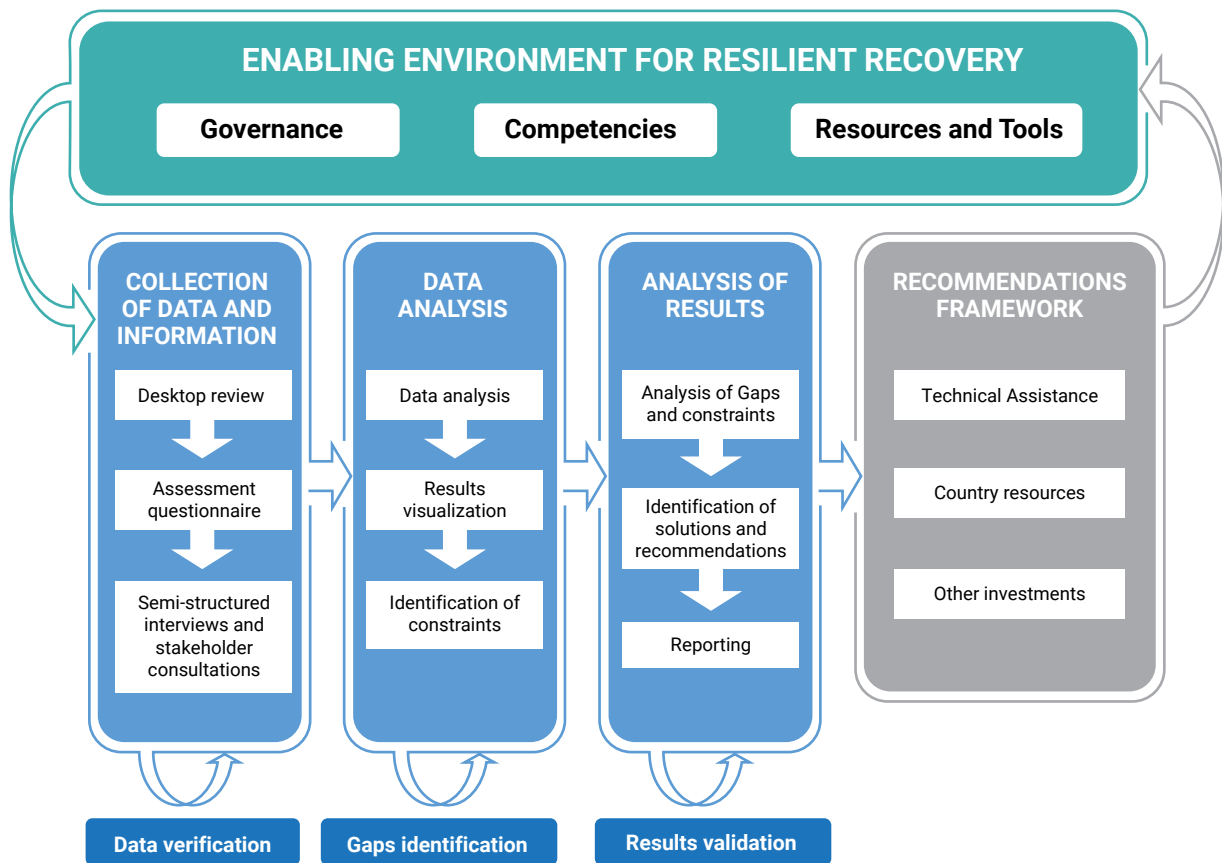


In SVG, the National Emergency Management Organisation (NEMO) bears the institutional responsibility for disaster management. NEMO works closely with and supports the work of ministries, line agencies and other actors in risk management at the national and sectoral level. The Sectoral Recovery Capacity Assessment has been implemented in SVG under the leadership of the Ministry of Agriculture, Forestry, Fisheries and Rural Development and NEMO. The implementation fol-

lowed the process presented in figure 5. The process started with a briefing to NEMO on the methodology and a desktop review. The Ministry of Agriculture, Forestry, Fisheries and Rural Development completed the assessment questionnaire and coordinated various interviews with government officials and a consultation in Kingstown, involving both private and public sector stakeholders, to confirm, complement and discuss the responses provided in the questionnaire.

**FIGURE 5**

**Diagrammatic representation of the assessment process**



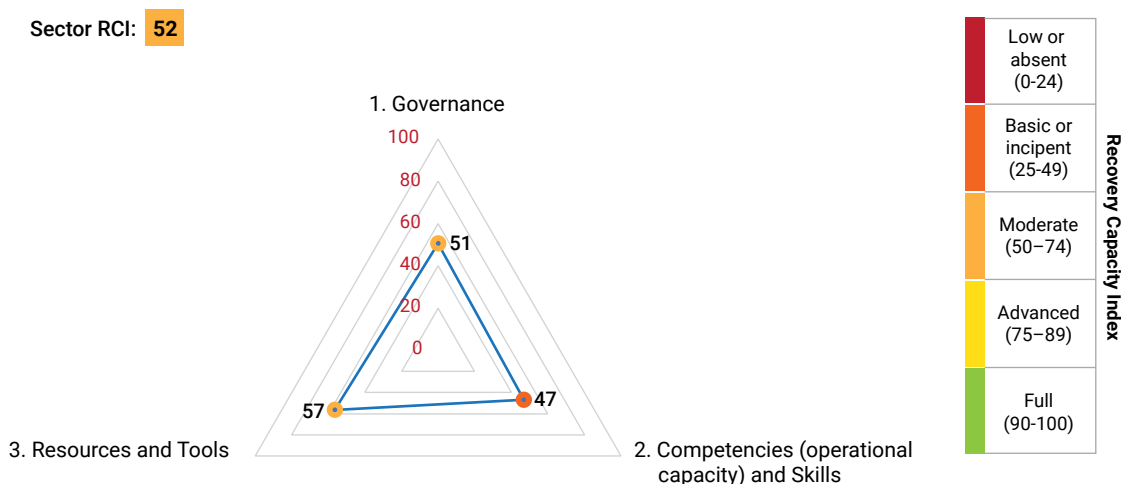
# 04 Results overview



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.



#### 4.1 General findings

The analyses conducted assessed the capacity of SVG's agriculture sector to plan, design and execute resilient and inclusive recovery projects in a timely, efficient, and effective manner as moderate, with a sector-level RCI of 52 (figure 6). The implementation of recovery projects is enabled, to a certain extent, by a moderate integration of recovery considerations into national and sectoral governance frameworks (RCI of 51), and by the resources and tools currently available for recovery (RCI of 57). However, resilient recovery is constrained by weaknesses in the Competencies component, particularly, in the knowledge and skills available within the sector for planning and implementing recovery projects (RCI of 47).

The above findings are supported by the analysis of results at the key element level (figure 7). However, it should be noted that while this more in-depth analysis suggests that a moderate capacity exists within the sector for planning and implementation of recovery project portfolio activities, which obtained RCI values of 78 and 58 respectively, these have been guided by central ministries and international organizations supporting the Government of Saint Vincent and the Grenadines in the recovery from La Soufrière volcano

eruption. Investments are therefore necessary to build sectoral and sub sectoral capacity to operationalize the enabling policy for recovery that is being constructed, ensuring that tools and resources are available. Knowledge and skills for the implementation of resilient agriculture, fisheries and forestry recovery projects also need to be created and sustained.

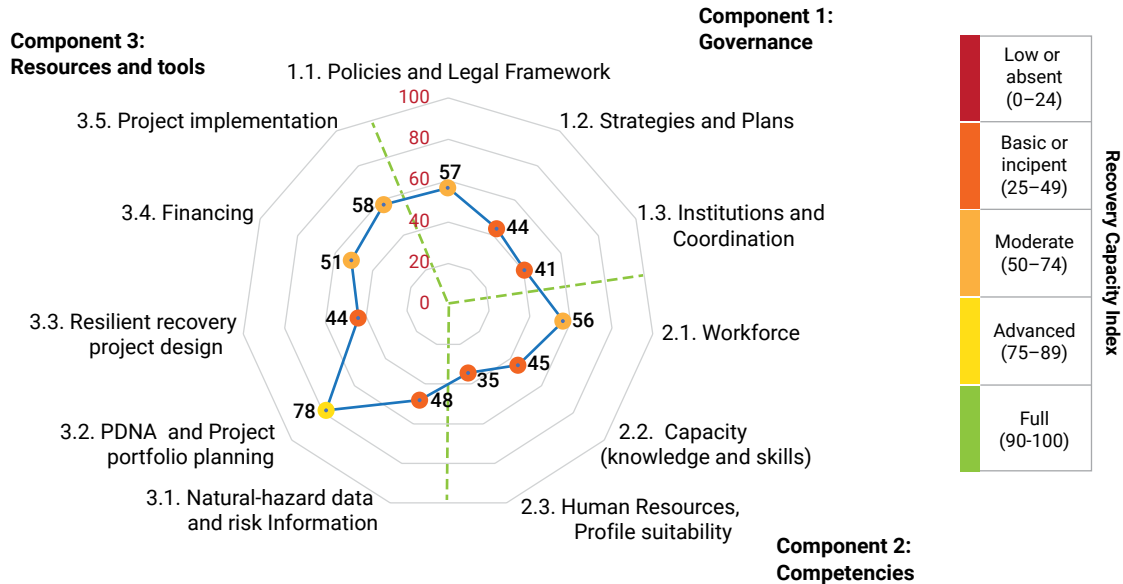
In general, capacity building interventions are required to:

- » Increase general DRM knowledge and basic DRM implementation capacity, with a focus on gender- and disability-inclusive recovery frameworks, across key actors in the agriculture, fisheries and forestry sub-sectors. This can strengthen and facilitate recovery planning before a catastrophic event and enable better communication on the topic within the MAFFRD and across government agencies.
- » Strengthen collaboration and communication between the Departments of the MAFFRD and between the MAFFRD and other key government institutions and streamline strategic and planning processes for development and DRM, including recovery to ensure all sub sectors are well represented in the prioritization of actions and projects and their DRM needs addressed.

**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.



- » Strengthen the generation 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 access to funding for DRM for agriculture, fisheries and forestry to support capacity building and disaster losses.
- » Strengthen gender- and disability-inclusive DRM and climate change integration in project design and implementation.

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, in Annex 2.

### 4.2 Findings for Governance

The capacity and enabling factors for recovery at the Governance level of the agriculture, fisheries and for-

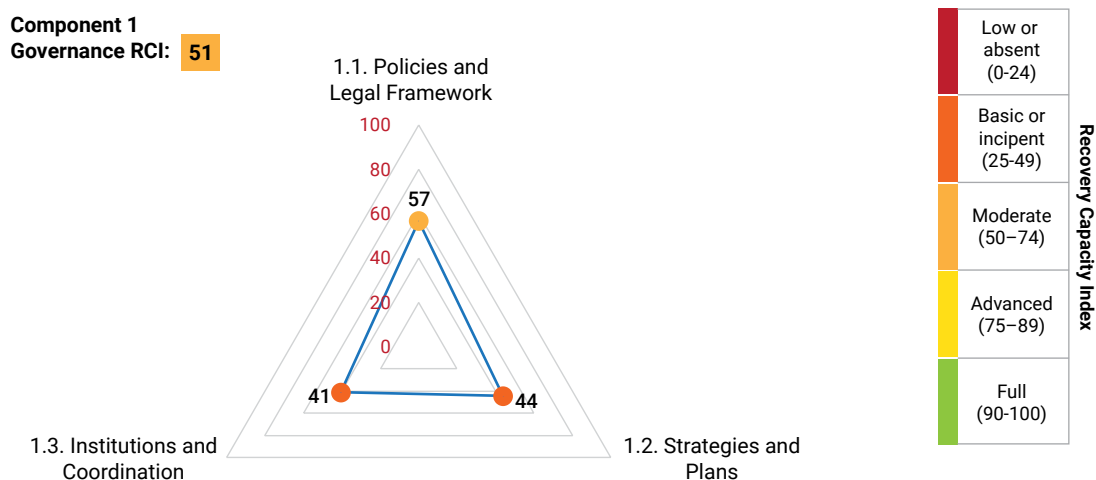
estry sector in SVG is assessed as moderate, with an RCI of 51 (figure 8). The national DRM policy and legal framework, and some sectoral opportunities, enable to a certain extent, the implementation of recovery projects (RCI of 57). However, this framework is currently outdated and, prior to the La Soufrière eruption, recovery was practically absent from national and sectoral development strategy and plans (RCI of 44). In the aftermath of the eruption, recovery became a national priority, and the recommendations and projects included in the Post Disaster Needs Assessment (PDNA) have been adopted in practice as recovery and development priorities by many sectors, including agriculture, fisheries and forestry.

The Government of Saint Vincent and the Grenadines is making efforts to update the national DRM policy, strategy and plans, as well as the corresponding legislation, ensuring the updated documents integrate the lessons from the COVID-19 pandemic and the volcano eruption, as well as the PDNA results. This review process offers an opportunity to revisit and make better known

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.



the roles and responsibilities of different national actors for improved DRM coordination. It is also critical to strengthen the capacity of the MAFFRD to coordinate recovery activities (RCI of 41), as currently there are no institutionalized mechanisms or tools to enable it, which leaves the subsectors planning and implementing recovery projects independently, with technical support from NEMO and financing from the Ministry of Finance, Economic Planning and Information and other sources. This has implications on the efficient and appropriate prioritization and implementation of recovery initiatives within the MAFFRD, and leaves some sub-sectors, particularly Forestry, with unmet recovery needs.

At the sub-element level (figure 9), the assessment supports the above findings but also highlights the very basic national and sectoral capacity to mainstream and operationalize gender and disability considerations in DRM – including recovery – policy and legislation and strategies and plans (RCI of 38 and 31 respectively), as well as in institutional portfolios and everyday operations (RCI of 38). Further, the assessment found that the application of building codes (for projects over 25,000 square feet), which include essential gender and disability considerations, is mainly restricted to major infrastructure projects, executed by

private contractors following strict ToRs, but that compliance with building regulations – for projects under 25,000 square feet – is a national challenge which the Physical Planning Department struggles to address in the multi-island state due to staff and budgeting constraints (RCI of 19).

Other important findings from the policy and legal framework enabling resilient recovery are the following:

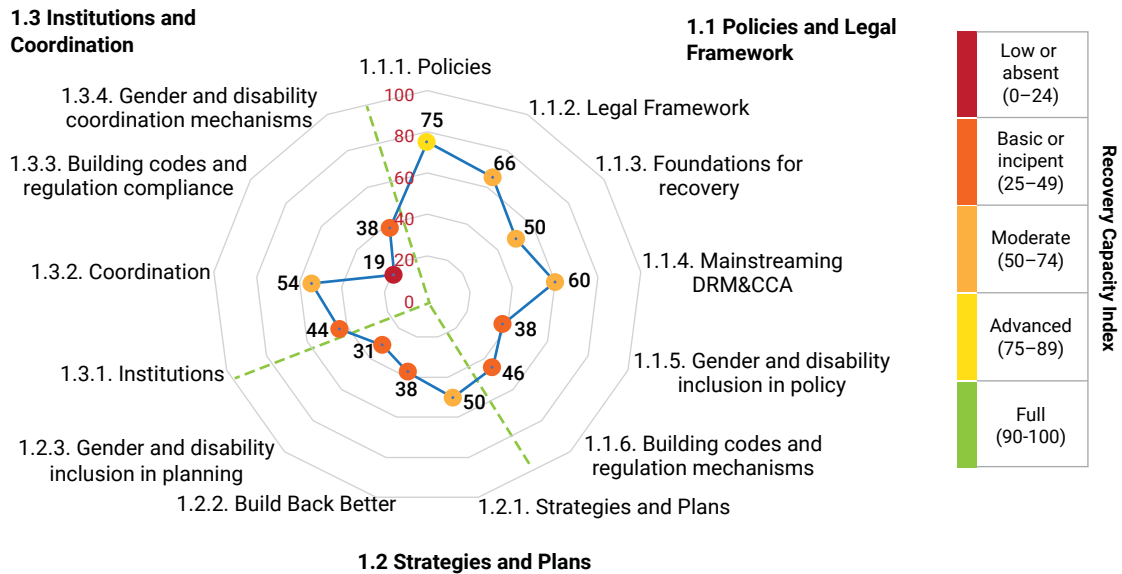
- » DRM and recovery policy in SVG are guided by the Saint Vincent and the Grenadines National Disaster Plan (2005) and in the Disaster Risk Reduction Country Document (2014), both of which include recovery considerations. However, the concept of recovery, and of better preparing to recover from disasters, has not been included in national development policy and strategy. For example, the National Economic and Social Development Plan (2013-2025) recognizes SVG's vulnerability to the impact of multiple hazards, includes "To enhance the capability of St. Vincent and the Grenadines to prepare effectively for, respond to and mitigate disasters" as a strategic objective and proposes key interventions for disaster preparedness and response, including the review of the National Di-



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.



saster Plan to integrate climate change considerations, but does not mention recovery.

- » Roles and responsibilities for DRM in the country are established in the National Emergency and Disaster Management Act, 2006, with the National Emergency Management Organisation (NEMO) acting as the central agency with responsibility for coordinating disaster management in the State. The National DRM governance structure consists of a National Emergency Council (NEC), a National Emergency Executive Committee (NEEC), a Secretariat and district disaster management Committees. The NEC, chaired by the Prime Minister, is the main policy and advisory body which assists in the preparation and review of the National Disaster Management Plan; establishes sub-committees, as required, and requests international disaster management-related assistance. The NEEC monitors the operation of all sub-committees, implements the NEC’s plans and policies and reports to the NEC. District disaster management commit-

tees develop and coordinate the implementation of district-level disaster management plans, ensuring they are consistent with the National Disaster Management Plan. Despite such clear national structure, the management and operationalization of DRM in the country tends to be centralized.

- » Despite clear specifications in the National Emergency and Disaster Management Act, 2006, the National Disaster Management Plan and the Act itself have not been revised in decades, largely due to budgeting constraints and the absence of an institutionalized mechanism for the regular updating of national policies and legislation. For similar reasons, the formulation and approval of a National Disaster Management Policy has been lagging, although a draft Policy was developed in 2014. Whilst the PDNA elaborated in 2021 is guiding recovery and development policy in various ministries, including the MAFFRD, updating the national and sectoral DRM framework and ensuring recovery is mainstreamed in upcoming development strat-

egies is necessary to ensure the country and sectors continue to focus on recovery and on building resilient recovery readiness after the PDNA expires.

- » Whilst the Fisheries Department issued in 2012 a Fisheries and Aquaculture Policy, there is no official national policies or strategies for agriculture or forestry in SVG. As a development strategy for its crop and livestock agriculture subsectors the MAFFRD is following the 2021 PDNA recommendations and projects and the CARICOM 25 by 25 Program, a program that seeks to reduce by 25 percent the food import bills in CARICOM countries by 2025. However, there is no specific policy, strategic or planning guidance for the development of the Forestry subsector and the Forestry Department is currently more engaged in watershed management issues, than in projects related to food security. Institutionalized mechanisms for coordination between subsectors are needed to avoid deeper policy and strategic fragmentation. In this regard, establishing a strong DRM framework that integrates and aligns the needs of all subsectors can help strengthen the efficiency of capacity building interventions for resilient recovery, and the efficacy of recovery actions within the MAFFRD.
- » With technical support from FAO, in 2016 the MAFFRD elaborated the Agriculture Risk Management Plan 2017-2025. This Plan sought to present an integrated approach for managing disaster risks within the agriculture and fisheries sectors, while maximizing opportunities for adaptation to climate change. However, the Plan was not adopted or implemented, and remains generally unknown within the MAFFRD, where the working draft of a new plan, the Saint Vincent and the Grenadines Agriculture, Forestry, Fisheries Concise Multi-hazard Disaster Management Plan is currently being finalized.

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

- » Elaboration of a medium and long-term National Disaster Management Policy, Strategy and Action Plan, aligned with the shorter-term Comprehensive Disaster Management Country Work Program (2022-2026) that CDEMA is currently supporting. It

is crucial that these documents are developed in an articulated manner and integrate operational aspects of resilient recovery, beyond the initial recovery phase. It is also crucial to ensure that gender and disability-specific needs are addressed across all phases of disaster management.

- » Finalization of the Saint Vincent and the Grenadines Agriculture, Forestry, Fisheries Concise Multi-hazard Disaster Management Plan, ensuring it includes operational measures for resilient and gender and disability inclusive recovery planning and implementation for all subsectors, including forestry. The Plan would benefit from integrating both, early and long-term recovery actions and from integrating the lessons learned thus far from the implementation of PDNA projects.
- » Development of a Strategic Plan for all subsectors managed by the MAFFRD to guide development and recovery activities beyond the PDNA in the coming years, strengthen coordination and avoid duplication.
- » Establishment of an effective process or mechanism for updating national and sectoral policies – including national development plans, – to integrate both gender- and disability-inclusive recovery considerations and elements for their operationalization and coordination at the sectoral level. This mechanism is currently lacking and needed.
- » With support from the OECS, update and enforce building codes and guidelines to enable Building-Back-Better in major and small sub sectoral recovery investments.
- » Raise awareness to the general public on the importance of building code and guidelines for disaster risk reduction and recovery through dedicated sensitization campaigns and, strengthen partnerships between lending institutions and the Physical Planning Department to advance compliance.
- » Integrate elements to operationalize the BBB approach in sectoral recovery policy, strategic and programmatic processes.

### 4.3 Findings for Competencies

The capacity and skills existing in SVG's agriculture, fisheries and forestry are basic and insufficient to de-

sign and implement gender-sensitive and disability-inclusive resilient recovery projects. This is indicated by the RCI of 47 obtained for the Competencies component (figure 10) and reflects that despite a moderate capacity of the MAFFRD workforce to conduct required sub-sectoral operations and projects (RCI of 56), the basic knowledge and skills of the agriculture, fisheries and forestry workforce limits the effective consideration and integration of DRM and recovery in relevant sectoral processes (RCI of 45) and the incipient recruitment of staff with required profiles, prevents public agencies in the subsectors from acquiring and maintaining the capacity needed (RCI of 34).

The results at the level of sub-elements support these findings (figure 11). In the aftermath of the La Soufrière eruption and other recent previous extreme disasters, the MAFFRD has been able to prepare recovery plans and implement various recovery projects (Proven competencies RCI of 55). However, these projects have been generally small, and many of the competencies needed for their prioritization, planning, design, funding and monitoring and evaluation resides in agencies external to the MAFFRD, including the Ministry of Finance and Economic Planning, NEMO and international organizations, such as FAO and IICA.

Due to the absence of permanent DRM and gender specialists and the low knowledge and skills in these areas of the MAFFRD permanent staff, as well as to shortages in the available equipment, software and data collection and storage systems, the workforce only has a moderate capacity to ensure their daily operations are risk-informed and inclusive (Workforce RCI of 55). The MAFFRD has found in the private sector a moderate capacity for the implementation of larger recovery projects in agriculture and fisheries; for smaller projects, and for projects in forestry, the Ministry turns to private consultants, including MAFFRD retirees, although their availability is limited (Private sector RCI of 69).

There is also a shortage of regular staff with the required knowledge of DRM methods and tools and gaps exist in the availability of staff trained in all aspects of the project management cycle. These issues, along with available opportunities abroad that attract qualified national individuals and a high staff turnover within the MAFFRD, prevent the experience and expertise gained from the implementation of recovery projects during previous disasters to remain in-house (Skills RCI of 38). This situation is aggravated by the fact that in many cases, financially larger projects are executed and supervised by external agencies – including

**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.

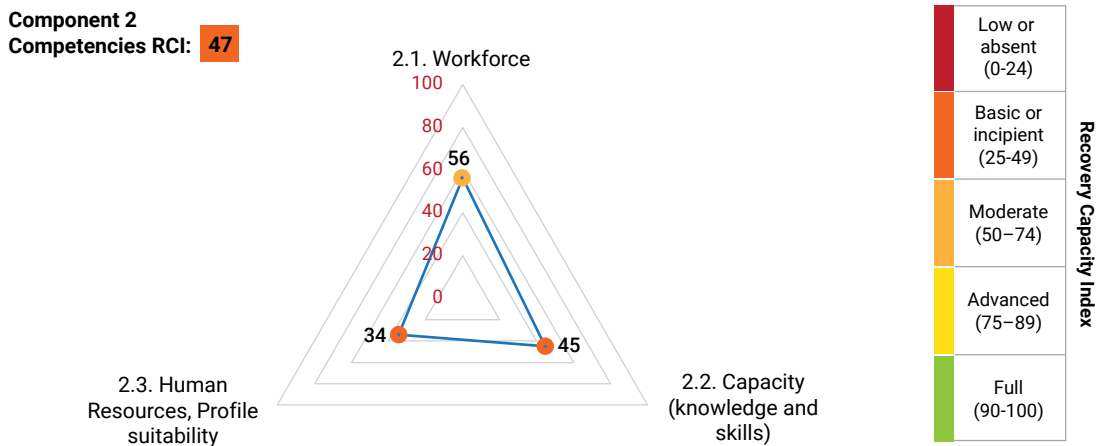
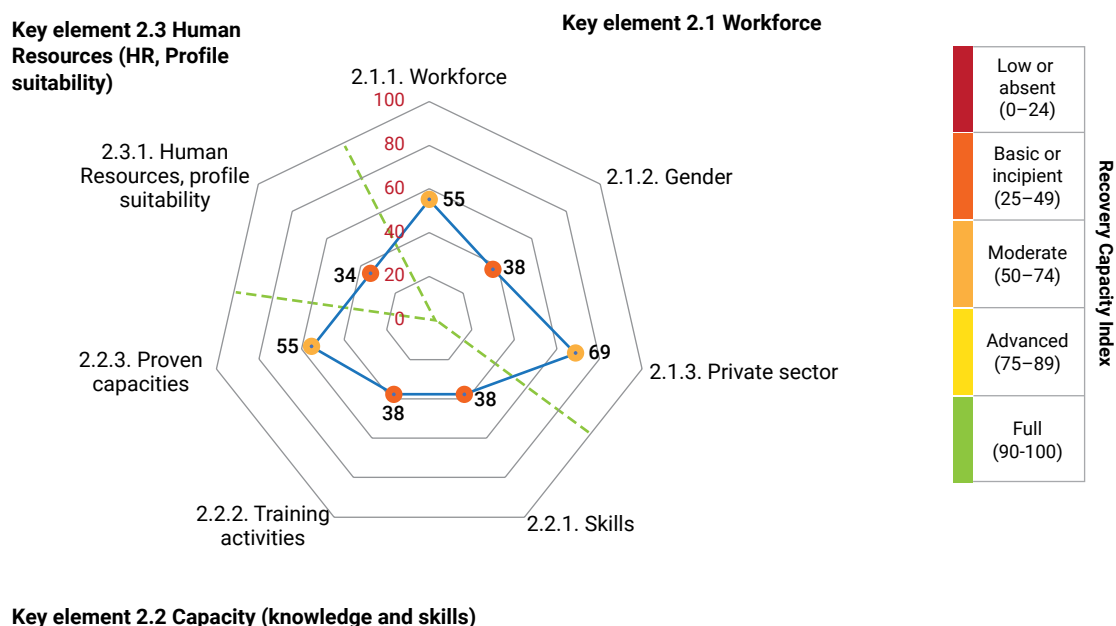


FIGURE 11

### 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.



partner international agencies, – neither leaving experience nor knowledge that builds capacity within sub sectoral institutions.

Training opportunities in DRM have been few and sporadic and, when available, the sub-sectoral agencies have faced difficulties in finding suitable candidates to use them (Training activities RCI of 38). Despite these difficulties, the agriculture, fisheries and forestry sub sectors are in urgent need of both training and recruitment in these areas, along with mechanisms to ensure long-term DRM and recovery knowledge creation, retaining and transfer within the sector.

Additional findings of the assessment of competencies include the following:

- » Building capacity of government agencies on DRM and recovery has not been part of the sector development agenda. At present, public recruitment protocols, such as ToRs, do not include a minimum DRM or gender integration knowledge in their criteria and public recruitment is under the mandate

of the Service Commissions Department, a public agency external to the MAFFRD. The Service Commissions Department recruits new public officers without placing major focus on sectoral demands for specific profiles, which limits the possibility of strengthening recovery competencies in agriculture, fisheries and forestry in a sustained manner.

- » Low availability of professionals or technical persons trained in forestry in SVG is a serious concern to the Department of Forestry as some of their current staff will soon retire.
- » There is need for a closer collaboration between the Ministry of National Mobilization and the MAFFRD, to unlock continuous training and sensitization opportunities for MAFFRD staff on gender and disability inclusion.
- » Capacity building on the Build-Back-Better approach is needed for staff of the Ministry of Transport and Works and for contractors supporting this ministry in major infrastructure projects. However, training on the BBB approach is not currently offered by any academic or technical institution in the country, nor there is an agenda or roadmap for

updating building codes and norms to integrate BBB considerations.

- » The agriculture, fisheries and forestry subsectors require more training in PDNA elaboration and more active participation in the prioritization of recovery projects as part of the PDNA process, to see their needs reflected and ensure none of the subsectors is left behind.

The need for building and strengthening competencies for resilient and inclusive recovery within the MAFFRD is recognized. Options to build the necessary knowledge and skills within public sub-sectoral agencies include the following:

- » Encourage donors to support provision of technical experts – secondments – in areas specific to DRM – specifically disaster cycle management and recovery – and gender and disability analysis and integration to cover urgent needs at the MAFFRD, work with and transfer knowledge to the staff of each of the sub sectoral agencies. International partners can as well offer more frequent opportunities for training and technology transfer, including through the institutionalization of a capacity building component within each support intervention. The private sector can also be encouraged to strengthen its DRM capacity, for example in BBB approaches, and to enable resilient and inclusive recovery through actions such as imports of improved crop varieties and developing insurance and microinsurance programs suitable to the country's agricultural context.
- » Integrate basic gender and DRM – including recovery – requirements in the general recruitment protocols of the Service Commissions Department.
- » Support NEMO, the Service Commissions Department and other public agencies in the creation of yearly disaster awareness workshops for agriculture, fisheries and forestry officers
- » With the support of the Services Commission Department, institutionalize and implement training of sectoral staff in DRM, disaster cycle management, and recovery and gender analysis and integration, to ensure the requisite knowledge and skills are developed and maintained.
- » Train MAFFRD staff in requisite tasks for the design, implementation and monitoring of resilient recovery projects. This includes training in: Data collection, and design of recovery projects based on PDNAs recommendations; economic assessment of disaster-related damages and losses; GIS and remote sensing; hazard mapping; hazard and risk data and information use; 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 – and in DRM and recovery communication and awareness raising skills.
- » Develop awareness-raising campaigns that are gender- and disability-informed, including events and materials to highlight the risks associated with climate change for farmers, fishers and forest users and provide recommendations for impact reduction.
- » Organize events for public officers on the importance of gender and disability inclusive recovery as a mechanism to strengthen resilient development efforts. Actively involve people with disabilities in these events.
- » Establish a formal and regular capacity building training program on disability inclusion, including information opportunities for people with disabilities in the subsectors, with the participation of agriculture, fisheries and forestry stakeholders.
- » Articulate regional and international existing capacity building opportunities with sectoral and sub sectoral needs by providing access to academic programs for SVG professionals in areas related to DRM, recovery – for example, state-of-the-art engineering techniques for resilient construction and other investments.

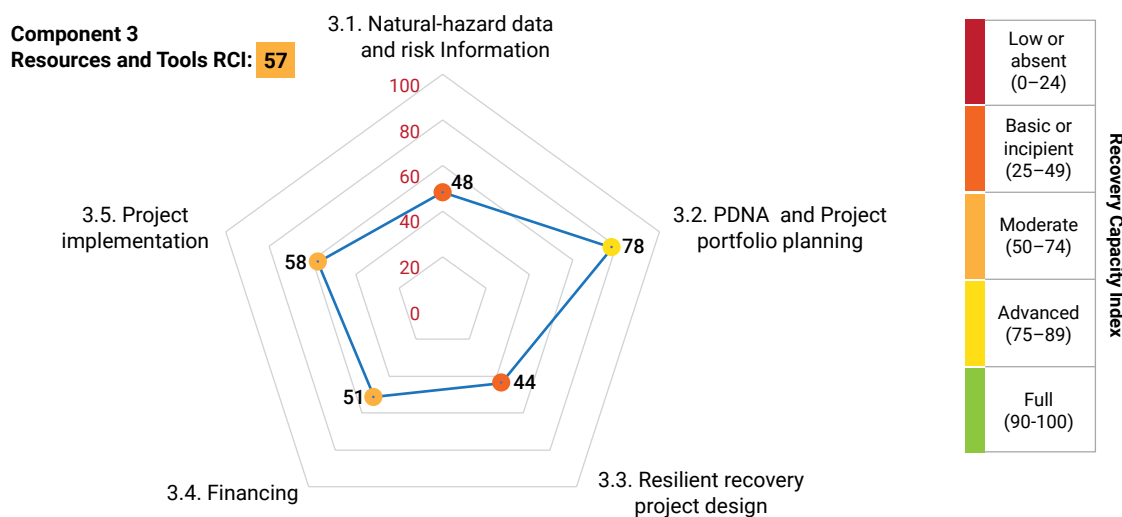
#### 4.4 Findings for Resources and Tools

The resources and tools available for resilient recovery in SVG's agriculture, fisheries and forestry are assessed as moderate, with an RCI of 54 (figure 12). Although recovery project implementation is moderate (RCI of 58); it is supported by the 2021 PDNA and its relevance for project portfolio planning at the

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.



national, sectoral and sub sectoral level (RCI of 78) and by the current capacity to access finance for recovery in the sub sectors (RCI of 51). However, such capacity is not concentrated in the MAFFRD or sectoral stakeholders, but rather in central ministries – for example, the Ministry of Finance and Economic Planning – and international organizations working in agriculture and fisheries mostly, which directly collaborate with the MAFFRD in the implementation of recovery projects in the sub-sectors. Three major factors affect the development of recovery capacity at the level of agriculture, fisheries and forestry. The first factor is the high level of centralization of recovery decisions beyond the MAFFRD; the second factor refers to limitations in the availability, generation, management and use of natural hazard and risk information (RCI of 48), specifically of functional and useful information to plan, design and implement risk-based projects and resilient recovery interventions in the subsectors. 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, including gender and disability disaggregated data. The third factor relates to the incipient level of adoption and use of resources and tools tailored for the systematic

and effective integration of resilience into the sector's day-to-day procedures and operations, including project design and implementation (RCI of 44).

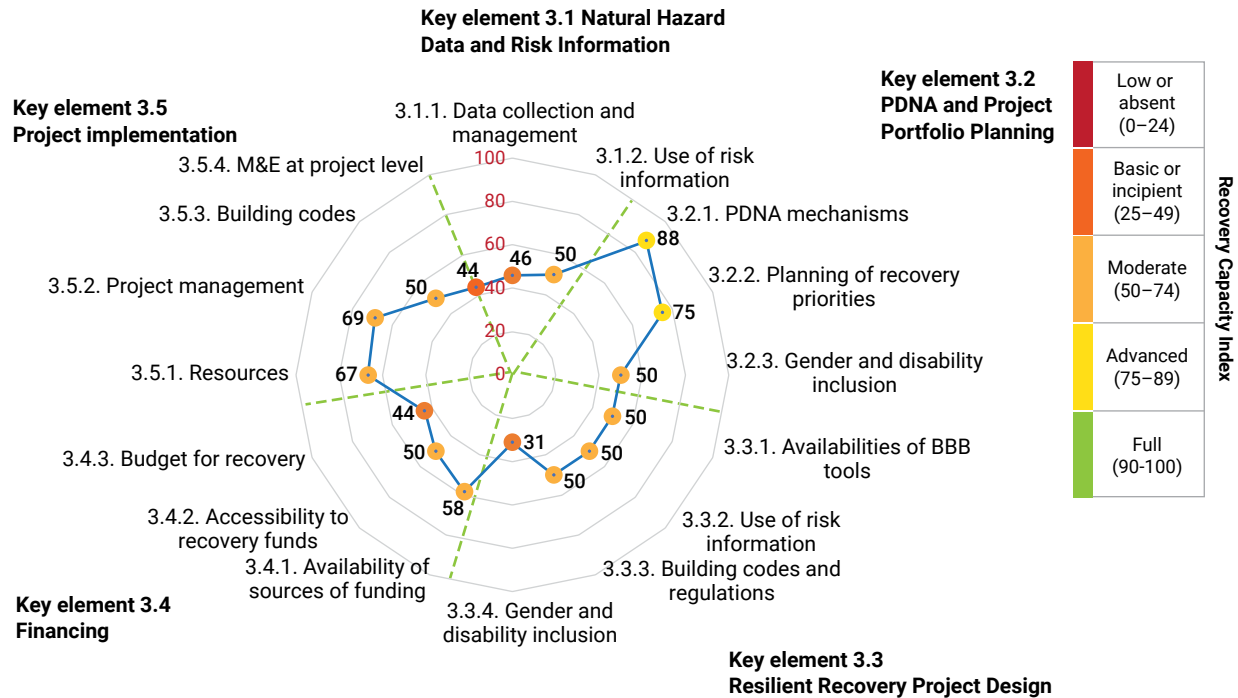
The results of the assessment at the sub-element level (figure 13) support these findings and additionally indicate that: a) the level of information about and access to recovery financing opportunities at the sub-sectors level is basic (RCI of 44) as procedures for institutionalizing resources for recovery into the annual budgets of the MAFFRD and the sub sectors, and for facilitating direct access to recovery funding after emergencies are practically missing; b) gender and disability integration into resilient project design are also incipient (RCI of 31); and c) the systematic use of M&E tools by the sub-sectoral agencies is incipient (RCI of 44), as M&E is conducted on a project basis following donor requirements or, for larger infrastructure projects happening in the sub-sectors, M&E is the responsibility of other ministries – for example the Ministry of Transport and Works or the Ministry of Finance and Economic Planning.

Detailed findings of the assessment include the following:

**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.



- » Efforts have been made to establish national mechanisms for the collection and management of baseline physical and geographic data. These efforts, including the GeoNode, an online platform for developing geospatial information systems and for deploying spatial data and infrastructures, have not been completed or brought the expected outcomes. Without effective data collection and storage protocols Government institutions, including the Physical Planning Department, often find that the data they need exists online, was collected by external agencies and published in peer reviewed journals the Government needs to pay for to gain access.
- » NEMO is responsible for collecting and managing hazard and risk data and information as well as for the elaboration of hazard maps. Hazard

maps exist for tsunamis, flashfloods, landslides, storm surges and volcanic eruptions, and are to be reviewed every five years or less on average but tend to be updated mainly in the aftermath of major catastrophic events. There are no multi-hazard maps, perceived by the MAFFRD as critical for recovery planning, and the hazard maps developed by NEMO are not available to the public or included in a single repository. There are also no risk information-sharing mechanisms in place, although government agencies can gain access to hazard maps by request. At the same time, certain hazard maps have been elaborated and used by agencies different to NEMO. For example, the Department of Forestry developed and uses bush fire maps and government stakeholders involved in the crop and livestock agriculture subsector have developed soil

maps and calculate erodibility based on slopes, which they use as a proxy for landslide vulnerability. The veterinary surveillance mechanisms of the MAFFRD has given officers a good knowledge of risk areas of animal disease and a few years ago the Ministry participated in the elaboration of biological risk maps, which are stored by the CARIVET Secretariat in Guadeloupe. Further, the Fisheries Department lacks hazard maps. Instead, it utilizes reports of vulnerable areas for action. In general, the hazard and risk mapping effort has been fragmented and conducted often at a scale that is too large to address sub sectoral needs. Without working and accessible data and information repositories, that enable the structured management of risk information, the existence or availability of some hazard maps has not necessarily translated into a culture of continuous risk-based decision making.

- » The 2021 PDNA was developed through the coordination of NEMO and the various sectors and sub-sectors. Although the methodology followed led to sectoral appropriation of and external funding for the PDNA recommendations and projects, sectoral stakeholders recognize that constraints in baseline data collection limited the reflection of local needs in the PDNA results. One example of this is the collection of farmer-level data, which was conducted with registered farmers, but omitted the relatively large number of farmers who have not yet registered in the MAFFRD system.
- » The 2021 PDNA did not collect gender-disaggregated data and has no information on disability. Although sub sectoral actors attempted to bring forward gender-disaggregated information for the operationalization of PDNA-related projects, it is necessary to ensure inclusion considerations are integrated in the PDNA methodology in the near future.
- » The application of building codes and the incorporation of the Build Back Better approach after disasters is primarily the responsibility of the Ministry of Transport and Works and of financial institutions, where relevant. Therefore, this capacity does not exist within the agencies in charge of the agriculture, fisheries and forestry subsectors.
- » The MAFFRD does not have a budget line earmarked for DRM activities or recovery. Recovery funding for the subsectors is tied to PDNA recommendations and projects and centralized at the level of the Ministry of Finance and Economic Planning. Whilst this supports a good coordination with donor agencies at the national level, a permanent allocation for DRM funding and a contingency fund for the MAFFRD are needed, as the sub-sectors it manages are always affected by extreme events. Some of the actors interviewed during the mission conducted for this assessment explained that, during the three months of La Soufrière volcanic effusive eruption, accessible DRM funding for the sub-sectors would have allowed rapid disaster preparedness actions and reduced losses, including the loss of pedigree sheep and goat livestock owned by the government for breeding and distributing to farmers. The officers in charge of livestock within the MAFFRD developed a plan for relocating these animals to a safe housing structure that needed to be built and organized all necessary logistics, but funding was unavailable for the construction of the housing structure. Water tanks could also have been bought to help farmers save their livestock which had to be left behind when evacuating in view of the imminent volcano eruption. Unfortunately, funding for this was also inaccessible. It was through their close collaboration with CARIVET that the public officers in charge of livestock obtained feed, molasses and some water harvesting elements for the rapid response to the emergency.
- » With an annual fiscal cost of disasters estimated at 1.4 percent of GDP, the Government of Saint Vincent and the Grenadines established a Contingency Fund before the COVID-19 pandemic and the volcanic eruption. This Fund constitutes an important step for the protection of public finance from major hazard impacts. It is expected that the Contingency Fund covers disaster fiscal costs up to 0.7 percent of GDP annually, and that the additional cost is covered through earmarked expenditure reserves to be included in the annual budget. The Fund is capitalized through a 1 percentage point raise in the standard VAT and a 1 percentage point raise in the VAT for tourism-related services as well



as by the introduction of a climate resilience hotel levy. However, a clear governance and operational framework has not been established for the Contingency Fund (IMF, 2019). Consequently, there are no clear mechanisms or protocols for the MAFFRD and the subsectors to access this Fund.

- » The creation of risk transfer and resilience-financing mechanisms, including insurance, microinsurance and concessionary financing tailored to the needs of farmers, fishers and other actors associated to agriculture value chains but operating in the informal sector is urgently required.

The assessment identified the following opportunities to strengthen the resources and tools available for recovery in SVG agriculture sector:

- » The inclusion of disaggregated gender and disability data collection in the planned National Agricultural Census.
- » To use the opportunities presented by new development projects, funded by international donors, to build through technical assistance, national and sectoral capacity to generate, manage and use hazard and risk information.
- » The inclusion of hazard and risk data required by investment projects in agriculture, fisheries and forestry, at an appropriate scale and usable formats, in Early Warning Systems and other relevant data, information and knowledge management initiatives currently being planned or under development at the national level. The recovery process from La Soufrière eruption represents an important opportunity to establish and institutionalize risk information management processes in SVG.
- » To embed elements of the DRM approach – hazards, risk assessments and measures – in all project management cycle protocols used in the subsectors. This is an important opportunity, in view of the ongoing recovery process from La Soufrière eruption
- » To include subsectoral DRM allocations in the budget construction and planning processes of the country and donors.
- » To increase the visibility of recovery financing options for the sector and build requisite capacity on access protocols and criteria.

- » Integrate the BBB approach as a requirement in the planning and design of national and sectoral strategies, plans and budgets, particularly those related to recovery.
- » Compliance with updated building codes should be integrated as a requisite for the design and implementation of development projects and other sectoral investments.
- » Create M&E systems that are complementary to donor M&E requirements by upgrading and strengthening the tools currently used for this purpose and integrating DRM, recovery and resilience indicators.
- » Use post-disaster project and investment planning as the best scenario to generate and use M&E systems to track the efficiency and effectiveness of projects along their entire cycle. The recovery process from La Soufrière eruption represents a perfect opportunity for building capacity on these aspects, using the lessons learned from the project planning stage and during implementation.

#### 4.5 Findings for the inclusion of gender and disability in recovery processes

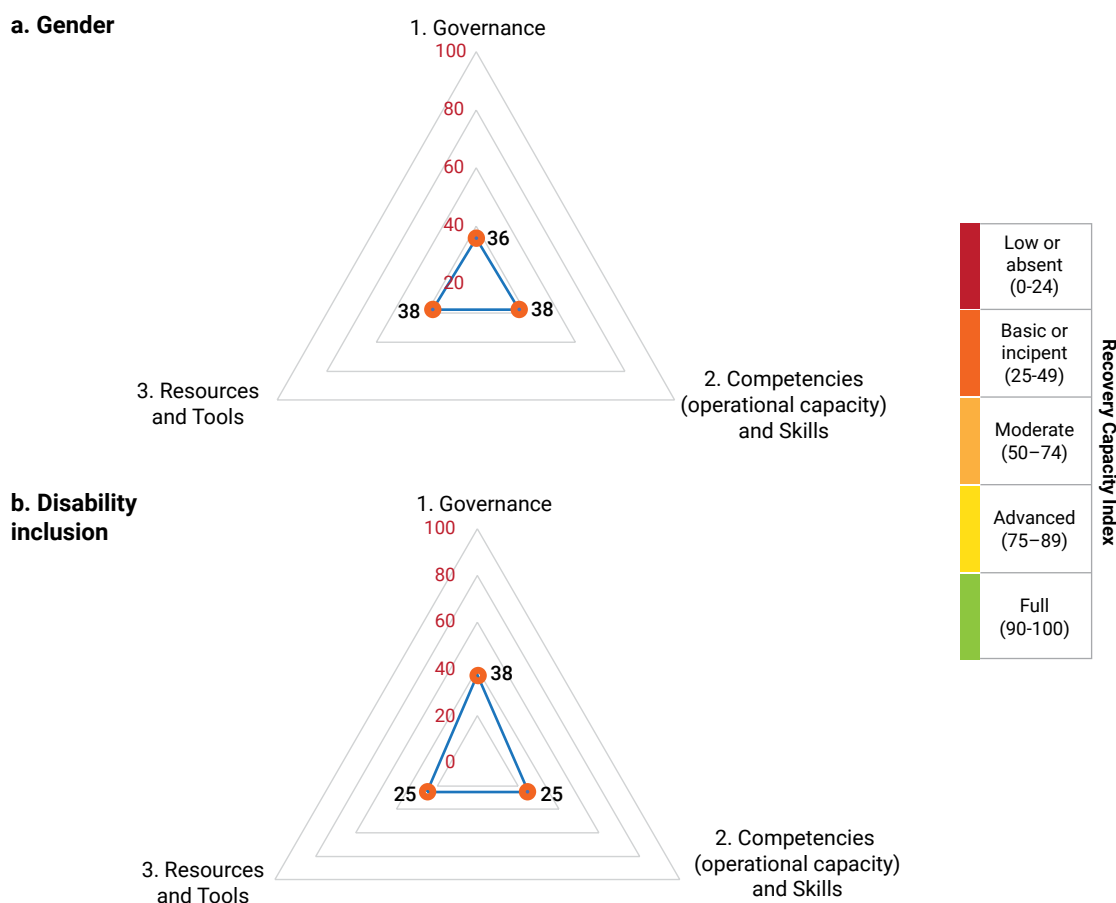
In general, the capacity of government agencies to integrate gender and disability considerations into the design and implementation of recovery projects is incipient. The needs of women, girls, men, boys and persons with disabilities have been only partially included in the DRM policy and legal framework, as shown by the RCI of 36 and 38, respectively (figure 14). Additionally, the sector's and subsectors' agencies lack the expertise required on a permanent basis for mainstreaming of gender and disability inclusion into the agencies' operations, including into strategic planning and project implementation processes (RCI of 38 and 25 respectively). The level of resources and tools available for integrating gender considerations into recovery processes was also assessed as incipient (RCI of 38), as were existing resources and tools for disability inclusion in recovery (RCI of 25).

A number of policies, legal frameworks, strategies and plans for DRM governance, on the national level, mention gender equality and the social inclusion of

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.



persons with disability and the indigenous groups as goals, however there are no specific actions, budget, institutional capacity, or M&E for implementation.

Several positive achievements in gender and disability inclusion are noted below:

- » Since the year 2000, the government has adopted various policies and plans addressing gender equality issues, women and girls' empowerment, and GBV, including the National Adaptation Plan (2019), the Revised National Biodiversity Strategy and Action Plan (2015–2020), the National Comprehensive Disaster Management (CDM) Policy (2014), the National Information and Communica-

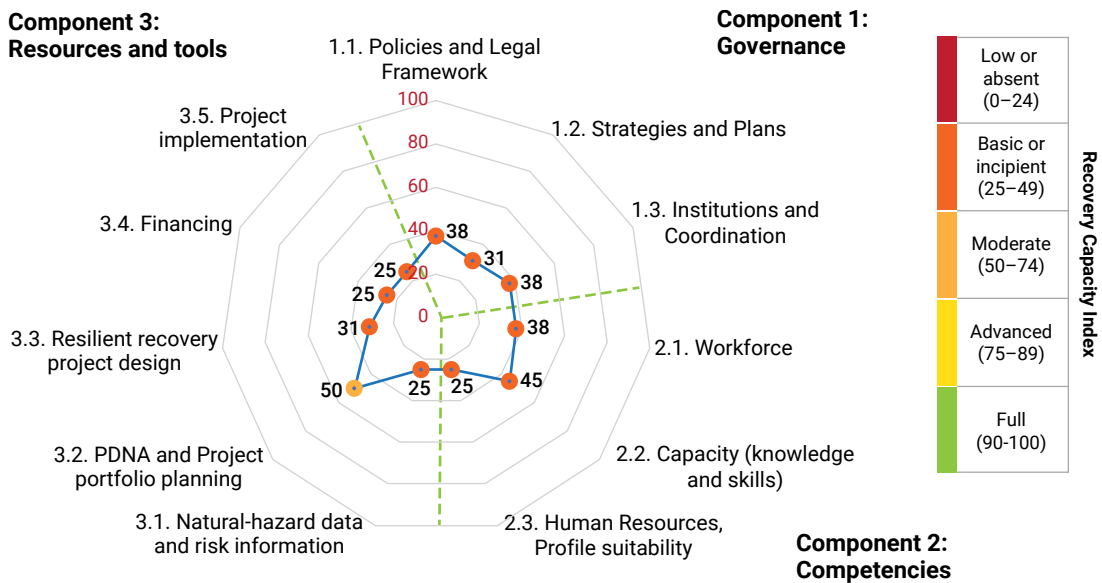
tion Technology Strategy and Action Plan (2010–2015), and the National Disaster Plan (2005).

- » Gender agencies, women's networks and youth groups are involved in DRM activities, and actively participated in the evacuation and recovery efforts during the recent La Soufrière volcanic eruptions.
- » Gender and disability information and analysis have been collected by international agencies as part of recent PDNA processes, and gender considerations have been repeatedly integrated in the PDNA.
- » The government is committed to disability-inclusive DRM and has developed policies and national standards that support accessibility of information and public infrastructure for persons with disabilities.

**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.



» There have emerged active organizations for persons with disabilities with a trusted presence in the communities and a direct working relationship with the government.

However, as outlined above, there are major shortcomings, including that currently:

- » A comprehensive gender policy and action plan and a gender perspective in many DRM national policies and programmatic plans are still lacked.
- » Gender and needs are not consistently integrated in the design of projects in the sector and subsectors.
- » Gender integration takes place mainly as a response to funding opportunities and donor requirements.
- » The basic needs of persons with disabilities are only partly integrated in project design and under specific project requirements, with the corresponding activities undertaken by expert international consultants, without developing local capacity.

Recommended ways forward include:

- » Recruit dedicated staff and adjusting HR processes to build and retain in-house capacity on gender and disability inclusion. At present, minimum knowledge of these issues is not included as requisite in public recruitment processes.
- » Integrate gender and disability inclusion in the enabling policy and legal framework for recovery.
- » Review data needs in greater depth to inform efforts to build sustainable capacity for data collection and analysis to allow meaningful understanding and tracking of progress on gender and disability.

# 05

## Recommendations



The following points summarize the recommendations of this assessment. They are made with the objective of building and strengthening the capacity of SVG's agriculture sector, inclusive of the fisheries and forestry subsectors, to prepare for the implementation of resilient and inclusive recovery projects, well before disasters strike. These recommendations respond to the capacity needs for recovery identified in this assessment, existing opportunities and recommendations made by the consulted stakeholders, as well as by sectoral experts, and gender and disability inclusion specialists. The complete set of recommendations, validated by national and sectoral stakeholders during a workshop conducted in Bridgetown on the 6 of October 2022 are detailed in Annex 2. These recommendations principally target central government ministries, the MAFFRD, NEMO, 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 of the National Disaster Management Policy, Strategy and Action Plan and the Comprehensive Disaster Management Country Work Program (2022-2026); the review of the National DRM legislation – including the National Emergency Act, 2006 – and subsidiary legislations; the updating of building codes, guidelines and enforcement regulations to enable Build Back Better in sectoral and sub sectoral recovery investments; the finalization of the working draft of SVG's Agriculture, Forestry and Fisheries Concise Multi-hazard Disaster Management Plan and the development of a Strategic Plan for Agriculture, Fisheries and Forestry, to guide development and recovery activities in the coming years, beyond the PDNA. The elaboration and review of these documents should ensure the integration of gender and disability considerations, as well as operative aspects of recovery beyond the earliest recovery phase.

### Physical investments:

#### a) Infrastructure

» Develop risk reduction interventions to help farm and agriculture facility owners, fishers and forest users climate-proof and protect key assets, including machinery, gear and other equipment, from extreme weather events.

#### b) Equipment, systems and financial resources:

- » Request donor support to fully develop a consolidated national data – including risk data – platform and information knowledge management system, as well as mechanisms to ensure access to the system from rural or remote areas.
  - > Invest in key data collection efforts, including agricultural censuses and periodic household surveys to develop a baseline that enables rapid damage assessment in the event of hazard impacts and supports the design and targeting of recovery operations.
- » Assess SVG's hydro-meteorological infrastructure and elaborate an investment plan for its update, acquisition of modern forecasting and climate services delivery technologies, and strengthening of early warning communication systems to ensure they reach the exposed and most vulnerable communities.
- » Develop and finance a plan for software updating and hardware modernization and maintenance at the MAFFRD.
- » Establish clear mechanisms for direct access to the existing Contingency Fund for the rapid recovery of the agriculture, fisheries and forestry subsectors when affected by disasters.
  - > Ensure legislation and procedures enable the rapid reallocation of annual budgets to support recovery efforts in the aftermath of both, major disasters and chronic small events which add burden to smallholder farmers overtime.
- » Include in the MAFFRD's budget an annual contingent recovery allocation and an allocation to support and incentivize disaster prevention measures.

- » Create new and enhance access to existing financial mechanisms for resilience and recovery, including insurance and microinsurance to cover farmers, fishers and other actors associated to agriculture, including those operating in the informal sector
- » Build and sustain the required knowledge and skills for the implementation of resilient and inclusive recovery projects in the MAFFRD and its subsectors through the recruitment of specialized staff in areas specific to DRM and project management; the institutionalization of training in DRM, disaster cycle management, recovery and gender analysis and integration; establishing collaboration with academic institutions for the delivery of programs on project design and management, gender and DRM, tailored to the needs of the subsectors; and the improvement of public recruitment protocols, among other measures.

### Capacity strengthening:

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

# 06 Conclusion



The analyses conducted in this assessment determined that the capacity of Saint Vincent and the Grenadines' agriculture sector to plan, design and execute resilient and inclusive recovery projects in a timely, efficient, and effective manner as moderate, with a sector-level RCI of 52. The implementation of recovery projects is enabled, to a certain extent, by a moderate integration of recovery considerations into national and sectoral governance frameworks (RCI of 51), and by the resources and tools currently available for recovery (RCI of 57). However, resilient recovery is constrained by weaknesses in the Competencies component, particularly, in the knowledge and skills available within the sector for planning and implementing recovery projects (RCI of 47).

## Governance

DRM and recovery policy in Saint Vincent and the Grenadines (SVG) are guided by the National Disaster Plan and the Disaster Risk Reduction Country Document, but the concept of recovery and better preparation for recovery has not been included in national development policy and strategy. The roles and responsibilities for DRM in SVG are established by the National Emergency and Disaster Management Act, 2006, with the National Emergency Management Organisation (NEMO) as the central agency for coordinating disaster management. However, DRM tends to be centralized in operationalization despite the established national structure. The National Disaster Management Plan and the Act itself have not been revised in decades due to budget constraints and the absence of institutionalized mechanisms for regular policy updates. The formulation and approval of a National Disaster Management Policy has also been lagging. There are no official national policies or strategies for agriculture or forestry in SVG, although the Ministry of Agriculture, Forestry, Fisheries, and Rural Development (MAFFRD) follows recommendations from the 2021 PDNA and the CARICOM 25 by 25 Program. However, there is a need for coordination between subsectors to avoid policy fragmentation. The MAFFRD elaborated an Agriculture Risk Management Plan in 2016 with technical support from FAO, but it was not adopted or implemented, and a new plan is currently being finalized. In conclusion, while SVG has

clear DRM and recovery policies and established roles and responsibilities, there is a need for better integration of recovery into national development policy and strategy, regular updates of DRM policies and legislation, coordination between subsectors, and implementation of agriculture and fisheries risk management plans. Strengthening the DRM framework and aligning the needs of all subsectors can enhance the capacity for resilient recovery in SVG.

## Competencies

Recovery considerations are not adequately integrated into national development policies and strategies. Although DRM and recovery policies are guided by national disaster plans and documents, the concept of recovery and better preparation for recovery from disasters is not included in national development policies and strategies. This lack of integration may hinder effective recovery efforts after disasters. The DRM governance structure in SVG tends to be centralized, despite established roles and responsibilities outlined in the National Emergency and Disaster Management Act. This may result in limited coordination and operationalization of DRM efforts at the district and sectoral levels, which could impact the efficiency and effectiveness of recovery actions. The absence of institutionalized mechanisms for regular updating of national policies and legislation, budget constraints, and delays in policy formulation and approval, have hindered the revision and updating of the National Disaster Management Plan and Policy in SVG. This may result in outdated plans and policies that may not fully address current and emerging disaster risks, including recovery considerations. There is a need for capacity building in DRM and recovery within government agencies, particularly in the agriculture, fisheries, and forestry sectors. Currently, public recruitment protocols and criteria do not prioritize DRM or gender integration knowledge, which may limit the development of recovery competencies among personnel. There is also a need for closer collaboration between different ministries and departments to ensure continuous training and sensitization opportunities, particularly on gender and disability inclusion. Low availability of professionals or technical persons



trained in forestry in SVG is a concern, as some of the current staff in the Department of Forestry will soon retire. This may result in a skills gap and hinder effective forestry management and recovery efforts in the future. Capacity building on the BBB approach is needed for staff of the Ministry of Transport and Works and contractors, as well as updating building codes and norms to integrate BBB considerations. Currently, there is a lack of training opportunities and an agenda for updating building codes and norms, which may affect the resilience of infrastructure projects to future disasters. The agriculture, fisheries, and forestry subsectors need more training in PDNA elaboration and active participation in the prioritization of recovery projects to ensure their needs are reflected and that none of the subsectors are left behind in the recovery process. In conclusion, there is a need for improved integration of recovery considerations into national policies and strategies, enhanced coordination and capacity building in DRM and recovery efforts at different levels, and closer collaboration among relevant ministries and departments. Addressing these issues can help strengthen the resilience of SVG's agriculture, fisheries, and forestry sectors, and ensure a more effective and inclusive recovery process after disasters.

## Resources and tools

The findings suggest that efforts to establish national mechanisms for the collection and management of baseline physical and geographic data, such as the GeoNode platform, have not been completed or brought to the expected outcomes. This lack of effective data collection and storage protocols has resulted in government institutions, including the Physical Planning Department, often having to rely on data collected by external agencies and published in peer-reviewed journals that require payment for access. Furthermore, the hazard and risk mapping effort has been fragmented and conducted at a scale that is often too large to address subsectoral needs. Hazard maps exist for various hazards, but they are not regularly updated and are not available to the public or included in a single repository. Risk information-sharing mechanisms are also lacking, although government agencies can gain

access to hazard maps by request. This has resulted in a lack of a culture of continuous risk-based decision making. The 2021 PDNA was developed with coordination from NEMO and various sectors and subsectors, but constraints in baseline data collection have limited the reflection of local needs in the PDNA results. Gender-disaggregated data and information on disability were not collected, and there is a need to integrate inclusion considerations in the PDNA methodology in the future. The application of building codes and the incorporation of the BBB approach after disasters are primarily the responsibility of other ministries and financial institutions, which results in a lack of capacity within the agriculture, fisheries, and forestry subsectors. The MAFFRD does not have a budget line earmarked for DRM activities or recovery, and recovery funding for the subsectors is tied to PDNA recommendations and projects, centralized at the Ministry of Finance and Economic Planning. This has resulted in a need for a permanent allocation of DRM funding and a contingency fund for the MAFFRD, as the subsectors it manages are always affected by extreme events. Although the Government of Saint Vincent and the Grenadines has established a Contingency Fund, there is a lack of clear governance and operational framework for the fund, resulting in a lack of mechanisms or protocols for its effective utilization. In summary, the findings highlight the need for improved data collection and storage protocols, updated hazard and risk mapping efforts, integration of inclusion considerations in PDNA methodology, capacity building for building codes and BBB approach, dedicated budget for DRM activities and recovery, and clear governance and operational framework for the Contingency Fund. Addressing these issues can help enhance disaster risk management and resilience in SVG.

This assessment calls for investments in resilient infrastructure to reduce disaster risks in Saint Vincent and the Grenadines' agriculture 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 Saint Vincent and the Grenadines' efforts to build resilience.

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# Annex 1.

## Specific recommendations to strengthen the capacity of Saint Vincent and the Grenadines' agriculture, forestry and fisheries for resilient and inclusive recovery

### **GOVERNANCE: Recommendations and potential actions to strengthen the policy and regulatory framework for gender-inclusive and climate-resilient recovery**

Recommendations	Actions
<p>Strengthen the enabling national and sectoral policy and regulatory environment for recovery</p>	<p>Facilitate the integration of climate resilience and gender- and disability-inclusive recovery considerations into the national and sectoral policy framework. Specifically:</p> <p><b>Complete and strengthen the national policy, legal, strategic and planning framework for comprehensive disaster management and resilient recovery.</b></p> <ul style="list-style-type: none"> <li>» Review and update the National Disaster Management Legislation as well as subsidiary legislations and regulations.</li> <li>» Complete and approve the National Disaster Management Policy, through a process that establishes a steering committee with representation of all sectors.</li> <li>» Develop a National Disaster Management Strategy and a long-term Action Plan.</li> <li>» Finalize the Country Work Program 2022-2026.</li> <li>» Integrate inclusive and climate resilient recovery considerations in the next National Economic and Social Development Plan, and ensure</li> <li>» Update building codes, guidelines and their regulatory framework to ensure compliance and enable Build-Back-Better in sectoral recovery investments</li> </ul> <p><b>Complete and strengthen the sectoral policy, legal, strategic and planning framework for recovery</b></p> <ul style="list-style-type: none"> <li>» Finalize the working draft of SVG's Agriculture, Forestry and Fisheries Concise Multi-hazard Disaster Management Plan ensuring it includes considerations for recovery beyond the earliest recovery phase, as well as gender and disability considerations. In addition to the hazards already included in this document, provisions should be made for biological and chemical hazards.</li> <li>» Develop a Strategic Plan for Agriculture, fisheries and forestry to guide development and recovery activities in the coming years, beyond the PDNA, improve coordination and avoid duplication.</li> </ul>

## 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 creating and sustaining DRM and recovery capacity for the sector's development</p>	<ul style="list-style-type: none"> <li>» Integrate basic gender and disaster management (including recovery) requirements in the general recruitment protocols of the Service Commission.</li> <li>» NEMO, the Service Commissions Department and other relevant agencies collaborate in the creation of yearly disaster awareness workshops for agriculture, fisheries and forestry officers.</li> <li>» Develop awareness-raising campaigns that are gender- and disability-informed, including events and materials to highlight the risks associated with climate change for farmers, fishers and forest users and provide recommendations for impact reduction. To ensure inclusion, the campaigns should be developed by the Ministry in collaboration with partner agencies (including NEMO) and in consultation/partnership with people with disabilities and facilitated to support their active participation.</li> <li>» Organize events for public officers on the importance of gender- and disability-inclusive recovery as a mechanism to strengthen resilient development efforts. Actively involve people with disabilities or their representatives in these events.</li> </ul>
<p>Build and sustain the required knowledge and skills for the implementation of gender-responsive and disability-inclusive climate-resilient recovery projects in the sector</p>	<ul style="list-style-type: none"> <li>» With the support of the Service Commission, and other national agencies, 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.</li> <li>» Recruit skilled staff specialized in areas specific to DRM, specifically, disaster cycle management and recovery and gender analysis and integration, to cover urgent gaps.</li> <li>» 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 by the Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry, and Labour. These should include basic experience on the use of DRM tools and methodologies and gender and disability analysis.</li> <li>» Create alliances with donor agencies and programs, to cover urgent capacity gaps through direct technical assistance (secondment) to the Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry, and Labour and NEMO, 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 and NEMO to effectively facilitate the building of DRM capacity across the sector's stakeholders.</li> <li>» Encourage private sector enterprises to strengthen their DRM capacity, for example through learning and applying BBB approaches, and to enable resilient and inclusive recovery through actions such as development of insurance and microinsurance programs suitable to the country's agricultural, forestry and fisheries context.</li> <li>» Establish a formal and regular capacity building training program on disability inclusion, including information on opportunities for people with disabilities in the various sectors, with the participation of agriculture, fisheries and forestry stakeholders.</li> </ul>

Recommendations	Actions
Build and sustain the required knowledge and skills for the implementation of gender-responsive and disability-inclusive climate-resilient recovery projects in the sector (cont.)	<ul style="list-style-type: none"> <li>» Train Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry, and Labour staff in requisite tasks for the design, implementation and monitoring of resilient recovery projects. This includes training in:               <ul style="list-style-type: none"> <li>&gt; Data collection, and design of recovery projects based on PDNAs recommendations.</li> <li>&gt; Economic assessment of disaster-related damages and losses.</li> <li>&gt; GIS and remote sensing.</li> <li>&gt; Hazard mapping.</li> <li>&gt; Hazard and risk data and information use</li> <li>&gt; Disaster prevention, preparedness, and response.</li> <li>&gt; BBB approaches, building codes, and other resilience norms.</li> <li>&gt; Disability inclusion</li> <li>&gt; Gender analysis and integration.</li> <li>&gt; Project Cycle Management (including M&amp;E).</li> <li>&gt; DRM and recovery communication and awareness raising skills.</li> </ul> </li> <li>» Articulate regional and international existing capacity building opportunities with sectoral needs by providing access to academic programs for SVG professionals in areas related to DRM, recovery (e.g. state-of-the-art engineering techniques for resilient construction and other investments).</li> <li>» Tailor national academic and vocational programs and other training opportunities to facilitate recovery in agriculture, fisheries and forestry. This may include creating and tailoring BBB trainings for local contractors working in agriculture, fisheries and forestry.</li> </ul>

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

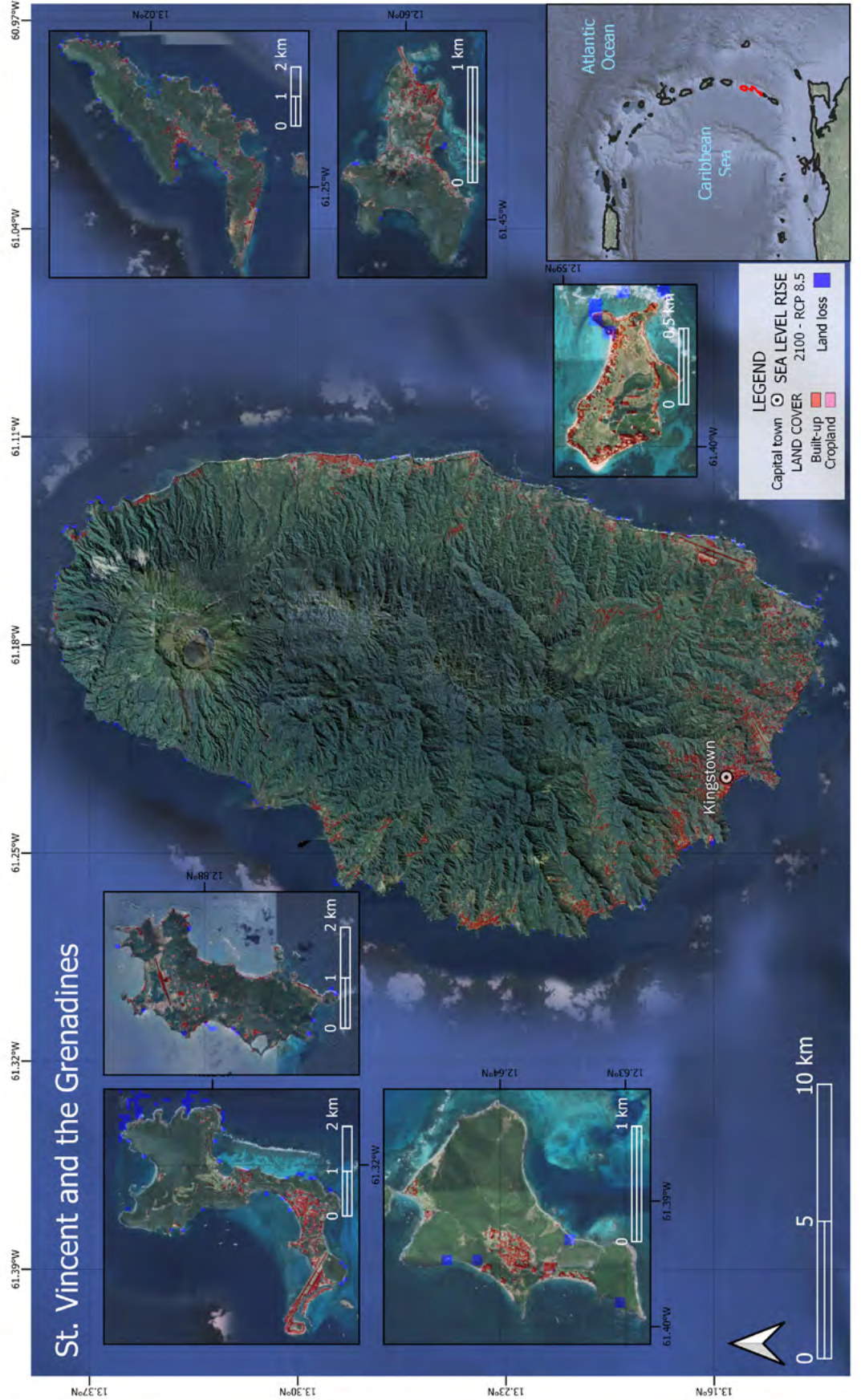
Recommendations	Actions
Strengthen the generation, management and use of recovery-relevant data	<ul style="list-style-type: none"> <li>» Invest in key data collection efforts, including agricultural censuses and periodic household surveys to develop a baseline that enables rapid damage assessment in the event of hazard impacts and supports the design and targeting of recovery operations. As a first step, update agriculture, fisheries and forestry baseline data (including stakeholder registration data), risk information and data, and information management protocols.</li> <li>» Develop natural and risk information tools to be used to guide project development in agriculture, fisheries and forestry.</li> <li>» Ensure hazard and risk maps created or updated by NEMO, Physical Planning, and partner organizations and agencies are available and accessible to sectoral and subsectoral stakeholders.</li> <li>» Develop a consolidated national data (including risk data) platform and information knowledge management system that is accessible by stakeholders including in rural and remote areas.</li> <li>» Assess SVG's hydro-meteorological infrastructure and elaborate an investment plan for its update, acquisition of modern forecasting and climate services delivery technologies.</li> <li>» Strengthening of early warning communication systems to ensure they reach the exposed and most vulnerable communities.</li> </ul>

Recommendations	Actions
Invest in protecting sectoral production and infrastructure from shocks	<ul style="list-style-type: none"> <li>» Develop risk reduction interventions to help farm and agriculture facility owners, fishers and forest users climate-proof and protect key assets ( including machinery, gear and other equipment) from hazard impacts.</li> </ul>
Ensure the necessary equipment and tools are available for recovery project management	<ul style="list-style-type: none"> <li>» Develop and finance a plan for software updating and hardware modernization and maintenance at the MAFFRD.</li> </ul>
Strengthen sectoral budgets for DRM and recovery	<ul style="list-style-type: none"> <li>» Simplify direct access to the existing Contingency Fund for the rapid recovery of the agriculture, fisheries and forestry subsectors when affected by disasters.</li> <li>» Include in the MAFFRD's budget an annual contingent recovery allocation and an allocation to support and incentivize disaster prevention measures.</li> <li>» Ensure legislation and procedures enable the rapid reallocation of annual budgets to support recovery efforts in the aftermath of both, major disasters and chronic small events which add burden to smallholder farmers overtime.</li> </ul>
Enhance resilience and recovery funding instruments for farmers, fisherfolk, forest users and SMEs	<ul style="list-style-type: none"> <li>» Create new and enhance access to existing financial mechanisms for resilience and recovery, including insurance and microinsurance to cover farmers, fishers and other actors associated to agriculture, including those operating in the informal sector</li> <li>» Create a database of international recovery funding opportunities for the agriculture, fisheries and forestry sub sectors.</li> </ul>

# Annex 2.

## Coastal inundation scenario maps for Saint Vincent and the Grenadines

a. Areas affected by sea level rise in Saint Vincent and the Grenadines by 2100 under a high climate change scenario (RCP 8.5)





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



# Annex 3.

## Sectoral Recovery Capacity Assessment Questionnaire

COMPONENT 1: GOVERNANCE			
Key elements	Sub elements	Questions	
<b>1.1 Policies and Legal Framework</b>	<b>1.1.1 Policies</b>	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?
	<b>1.1.2 Legal framework</b>	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?
	<b>1.1.3 Foundations for recovery</b>	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)
	<b>1.1.4 Mainstreaming DRM&amp;CCA</b>	12	Is climate resilience considered in the National disaster risk management policies and legal framework?

**COMPONENT 1: GOVERNANCE**

Key elements	Sub elements	Questions	
<b>1.1 Policies and Legal Framework (cont.)</b>		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?
		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?
	<b>1.1.5 Gender and disability inclusion</b>	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?
	<b>1.1.6 Building codes and regulations</b>	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.

COMPONENT 1: GOVERNANCE			
Key elements	Sub elements	Questions	
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)?
	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?
<b>Recommendations:</b> 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?

## COMPONENT 1: GOVERNANCE

Key elements	Sub elements	Questions	
1.3 Institutions and Coordination (cont.)	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?
<b>Recommendations:</b> 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?
<b>Recommendations:</b> What would you recommend to improve institutions and coordination issues?			

COMPONENT 2: COMPETENCIES			
Key elements	Sub elements	Questions	
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?
		56	Are there sufficient people with the technical capacity to implement PCM activities, with a climate resilience focus, in the sector? <b>NOTE:</b> 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.
	2.2.3 Proven capacity	57	Do technical persons in the sector have the capacity to translate PDNA results into actionable projects?
		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?
	<b>Recommendations:</b> What would you recommend to improve capacity (skills, training opportunities)?		

## COMPONENT 2: COMPETENCIES

Key elements	Sub elements	Questions	
<b>2.3 Human Resources (HR), Profile Suitability</b>	<b>2.3.1 Human resources (HR), profile suitability</b>	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	
<b>3.1 Natural hazard Data and Risk Information</b>	<b>3.1.1 Data collection and management</b>	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?
	<b>3.1.2 Use of risk information</b>	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?
<b>3.2 PDNA and Project Portfolio Planning</b>	<b>3.2.1 PDNA mechanisms</b>	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?

## COMPONENT 3: RESOURCES AND TOOLS

Key elements	Sub elements	Questions	
<b>3.2 PDNA and Project Portfolio Planning (cont.)</b>	<b>3.2.2 Planning of recovery priorities</b>	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?
	<b>3.2.3 Gender and disability inclusion</b>	79	Does the PDNA methodology require the collection of gender, age, and disability disaggregated data?
<b>Recommendations:</b> What would you recommend to improve PDNA and Project portfolio planning?			
<b>3.3 Resilient Recovery Project Design</b>	<b>3.3.1 Availability of BBB tools</b>	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?
	<b>3.3.2 Use of risk information</b>	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?
	<b>3.3.3 Building codes and regulations</b>	83	Are building codes and land use planning guidelines integrated into project design?
	<b>3.3.4 Gender and disability inclusion</b>	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?
<b>Recommendations:</b> What would you recommend to improve Resilient design of project?			
<b>3.4 Financing</b>	<b>3.4.1 Availability of funding sources</b>	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?



### COMPONENT 3: RESOURCES AND TOOLS

Key elements	Sub elements	Questions	
3.4 Financing (cont.)	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?
<b>Recommendations:</b> What would you recommend to improve access to financial mechanisms for recovery?			
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?
<b>Recommendations:</b> What would you recommend to improve project implementation?			



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