National Climate Change Strategy and Implementation Plan of Saint Vincent and the Grenadines

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Ministry of Finance, Economic Planning, Sustainable Development & Information Technology
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Foreword

[Foreword by Minister to be added]

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Acronyms and Abbreviations

AF	Adaptation Fund
CANARI	Caribbean Natural Resources Institute
CARICOM	Caribbean Community
CCA	Climate Change Adaptation
CCCCC	Caribbean Community Climate Change Centre
CCORAL	Caribbean Climate Online Risk and Adaptation Tool
CDEMA	Caribbean Disaster Emergency Management Agency
CSO	Civil Society Organisation
CWSA	Central Water and Sewage Agency
EIA	Environmental Impact Assessment
EPSDD	Economic Planning and Sustainable Development Division
DRR	Disaster Risk Reduction
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse Gas
GoSVG	Government of Saint Vincent and the Grenadines
IICA	InterAmerican Institute for Cooperation on Agriculture
IPCC	Intergovernmental Panel on Climate Change
MARPOL	International Convention for the Prevention of Pollution from Ships
M&E	Monitoring and Evaluation
MEA	Multilateral Environmental Agreements
NAMA	Nationally Appropriate Mitigation Action
NAP	National Adaptation Plan
NDA	National Designated Authority
NDC	Nationally Determined Contribution (to the reduction of greenhouse gas emissions under the UNFCCC Paris Agreement)
NBSAP	National Biodiversity Strategy and Action Plan
NESDP	National Economic and Social Development Plan
OECS	Organisation of Eastern Caribbean States
SDGs	Sustainable Development Goals
SDU	Sustainable Development Unit
SIDS	Small Island Developing States
SVG	Saint Vincent and the Grenadines
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

1. Introduction

The N*ational Climate Change Strategy and Implementation Plan of Saint Vincent and the Grenadines* (SVG) provides guidance on priorities and appropriate measures for adaptation and mitigation to reduce vulnerability to the impacts from climate change and build resilience over the long term in SVG.

The *Strategy and Implementation Plan* aims to operationalise the policy directives and specific adaptation and mitigation objectives outlined in the National Climate Change Policy (2019, draft). It identifies specific actions that must be undertaken to achieve the objectives outlined under each priority area for climate change adaptation, mitigation and key cross cutting issues, and the relevant lead and supporting stakeholders responsible for executing actions. This includes specific actions across twelve thematic areas for climate change adaptation, six thematic areas for climate change mitigation and five cross-cutting areas as outlined in the policy framework. It also recognises the institutional framework and arrangements for coordination and implementation of the climate change response as stipulated in the *National Climate Change Policy*, and outlines mechanisms for resource mobilisation and monitoring and evaluation (M&E). The Strategy covers the period 2020-2030.

The *Strategy and Implementation Plan* was designed using a participatory approach to gain input and recommendations from diverse stakeholders, including government agencies, civil society organisations, local communities and resource user groups such as farmers and fisherfolk, and the private sector. This input was facilitated via three rounds of national consultations, community meetings and key stakeholder interviews. The *Strategy and Implementation Plan* also draws on adaptation and mitigation priorities and strategies identified in existing sectoral policies and plans developed through wider consultation processes. As such, it serves as an umbrella document that builds on existing information, institutions and capacities for implementing climate resilient development and seeks to maximise impact given resource constraints.

2. Climate Change Policy Framework for Saint Vincent and the Grenadines

The *National Climate Change Policy* lays out a framework for an integrated and coordinated response that engages all stakeholders in collaborative actions for adaptation (via building resilience to negative impacts) and mitigation (via low carbon development) in SVG. It provides a shared vision, goal and guiding principles for this climate change response. It identifies clear and realistic objectives for priority areas related to adaptation, mitigation and cross-cutting issues such as capacity building, information management and investment.

The overall vison, goal and the main objective under each priority area for adaptation and mitigation and cross-cutting areas in the *National Climate Change Policy* are outlined in Figure 1.

Figure 1. Summary Framework for the National Climate Change Policy

<table>
<tr><td colspan="4">Vision: A sustainable and thriving Vincentian society, economy and environment where all citizens are able to achieve a high level of well-being and quality of life through low carbon, resilient development.</td></tr>
<tr><td colspan="4">Goal: To achieve low carbon, resilient development using an integrated, cross-sectoral and inclusive approach to climate change adaptation and mitigation.</td></tr>
<tr><td colspan="2">Adaptation</td><td colspan="2">Mitigation</td></tr>
<tr><td colspan="2">Adaptation objective: To reduce vulnerability to the impacts of climate change in SVG through building adaptive capacity and resilience, especially among the most vulnerable populations.</td><td colspan="2">Mitigation objective: To set SVG on a low carbon and resilient development pathway through reducing net greenhouse gas emissions and enhancing carbon sinks.</td></tr>
<tr><td colspan="2">Key areas for adaptation</td><td colspan="2">Key areas for mitigation</td></tr>
<tr><td>1. Agriculture (crops and livestock)</td><td>Objective: To promote climate smart and sustainable crop and livestock agriculture for food security and resilient livelihoods.</td><td rowspan="2">1. Energy</td><td rowspan="2">Objective: To promote the adoption of renewable energy and energy efficiency measures for low carbon and sustainable growth.</td></tr>
<tr><td>2. Coastal and marine zone</td><td>Objective: To ensure the productivity and resilience of the coastal and marine zone through conservation, sustainable resource use and integrated adaptation and disaster risk reduction.</td></tr>
<tr><td>3. Education</td><td>Objective: To build resilience to climate change and disasters in the education sector and ensure the health and safety of students and staff and continuity in operations.</td><td rowspan="2">2. Forests and carbon sinks</td><td rowspan="2">Objective: To enhance the role of forests and other natural ecosystems as carbon sinks in SVG through conservation and sustainable use and management.</td></tr>
<tr><td>4. Energy</td><td>Objective: To enhance the resilience of the energy sector to climate change and disasters and promote energy security.</td></tr>
<tr><td>5. Finance and banking</td><td>Objective: To ensure business continuity and build resilience to climate change and disasters in the financial and banking sector.</td><td rowspan="2">3. Maritime affairs</td><td rowspan="2">Objective: To enable a sustainable, low carbon maritime transport system through the adoption of energy efficiency and resilience building measures.</td></tr>
<tr><td>6. Fisheries and aquaculture</td><td>Objective: To promote climate smart and sustainable management of fisheries and aquaculture for food</td></tr>
</table>

	security and resilient livelihoods and marine ecosystems.		
7. Forest and terrestrial ecosystems	*Objective:* To ensure the health and productivity of forest and terrestrial ecosystems and build their resilience and ability to provide ecosystem services for adaptation and disaster risk reduction.	**4. Tourism**	*Objective:* To promote low carbon and sustainable growth within the tourism sector through the adoption of renewable energy, energy efficiency and sustainable building practices.
8. Human health	*Objective:* To reduce vulnerability to the adverse impacts of climate variability and climate change on human health and well-being through improved preparedness and response.		
9. Settlements, infrastructure & physical development	*Objective:* To promote sustainable physical development and green infrastructure to build resilience.	**5. Transport**	*Objective:* To enable a sustainable, low carbon transport system through the adoption of renewable energy, energy efficiency and resilience building measures.
10. Tourism	*Objective:* To create a sustainable and thriving tourism sector and build ecological and socio-economic resilience to climate change.		
11. Water	*Objective:* To ensure a safe, reliable and sustainable supply of water to the population and efficient use of water resources to build resilience.	**6. Waste management**	*Objective:* To reduce greenhouse gas emissions through sustainable waste management.
12. Waste management	Objective: To enable integrated waste management for a resilient, safe and healthy population and environment.		

Cross-cutting areas				
1. Capacity building and engagement of stakeholders	**2. Information management, research and monitoring**	**3. Intersectoral coordination**	**4. Integration of disaster risk management and national security**	**5. Investment and economic planning**
Objective: To build the capacity of all stakeholders, and adopt participatory and bottom up approaches, to effectively plan for and respond to climate change.	*Objective:* To ensure a comprehensive system of information management, research and monitoring and evaluation to inform climate change decision-making.	*Objective:* To establish institutional mechanisms and sectoral linkages to enable information sharing, coordination and joint implementation for an effective response to climate change.	*Objective:* To ensure the health, safety and security of all residents and visitors through an integrated approach to climate change, disaster risk management and national security.	*Objective:* To reduce the economic impacts of climate change and leverage opportunities through effective planning and investment for low carbon, climate resilient development.

3. Priority areas and actions

Specific actions and activities are identified below to implement each of the objectives and sub-objectives for the twelve priority areas for adaptation, six priority areas for mitigation and five cross-cutting areas within the *National Climate Change Policy*. The timeframe for implementation of these activities is short term (1-3 years), medium term (4-6 years) and long term (7+ years). Lead and supporting government agencies and other stakeholders responsible for implementation of each of the activities are identified.

The specific actions identified in tables in sections below are drawn from the:

- National Adaptation Plan (NAP)
- Nationally Determined Contribution (NDC)
- Reference documents for each sector in SVG, including existing sectoral adaptation plans and nationally appropriate mitigation actions (NAMAs), sectoral policies and strategies and vulnerability assessments
- Climate Change Issues Paper: Towards the development of a Climate Change Policy, Strategy and Implementation Plan for SVG, outlining recommended actions and strategies and potential challenges to be addressed for identified priority sectors
- Findings of participatory consultations and interviews held with stakeholders in the various sectors and communities in SVG

3.1 Adaptation

In responding to climate change, SVG will prioritise adaptation measures as a means of urgently addressing its high vulnerability and low ecological, social and economic resilience to climate change as outlined in the *National Climate Change Policy*.

Adaptation objective: To reduce vulnerability to the impacts of climate change in SVG through building adaptive capacity and resilience, especially among the most vulnerable populations.

To achieve the adaptation objective, and national development goals, the priority areas outlined below will be targeted:

1. Agriculture (Crops and Livestock)
2. Coastal and marine zone
3. Education
4. Energy
5. Finance and banking
6. Fisheries and aquaculture
7. Forest and terrestrial ecosystems
8. Human health
9. Settlements, infrastructure and physical development
10. Tourism
11. Water
12. Waste Management

3.1.1 Agriculture (Crops and Livestock)

Agriculture (Crops and Livestock)			
Objective: To promote climate smart and sustainable crop and livestock agriculture for food security and resilient livelihoods.			
Sub-objectives[1]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To review and strengthen institutional, policy and legal frameworks for agricultural reform and for adaptation to changing climatic conditions	a. Strengthen the Policy, Planning and Administrative Support Services team with dedicated climate change staff to engage in the coordination, information collection, management and sharing, implementation and monitoring and evaluation (M&E) of the processes and outputs of the National Adaptation Plan for Agriculture (NAP-Ag)	Short term	**Lead:** **Department of Agriculture,** Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour **Partners:** Sustainable Development Unit (SDU), Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology; Fisheries Division and Forestry Department, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour; Ministry of Health; National Emergency Management Organisation (NEMO); CWSA; Local government authorities; Physical Planning Department; Meteorological Services; Grenadines Affairs; Chamber of Commerce; agri-businesses; small holder farmers and their organisations; Richmond Vale Academy; Invest SVG;
	b. Using a participatory approach, develop and implement a M&E framework[2] with appropriate provisions for sector data collection and reporting	Short-Long term	
	c. Update the Agricultural Policy Framework and Strategic Plan 2012-2018 and the Agricultural Ordinance 1951[3] and ensure that climate change considerations are reflected	Medium term	
	d. Create incentives for the implementation of climate smart agriculture[4], including subsidies and tax breaks	Medium term	
	e. Develop and enforce legislation and supporting regulations promoting use of climate and environmentally friendly fertilizers	Medium-Long term	
	f. Work with other national partners and stakeholders to identify areas of the legal and regulatory framework, including gaps or conflicts, which undermine climate change decision making and actions, and undertake amendments or revisions to the framework to address these challenges including: - revision of the regulatory framework to include/address sector relevant issues as compensation, zoning, conservation measures and enforcement and mandatory protection gear; and - exploring synergies in CCA among agriculture and the other sectors	Medium term	
2. To develop a long-term research programme on climate change	a. Conduct regular agricultural data collection, and update and maintain the National Agricultural Marketing Information System (NAMIS) to support decision-making and M&E of the NAP-Ag	Short term	

[1] Agriculture (Crops & Livestock): Sub-objectives are aligned with those identified in the Agriculture Policy Framework and Strategic Plan (2012-2018), NAP and NAP – Agriculture.
[2] NAP-Ag indicates M&E should be performed annually and contribute to the MRV provisions defined under the UNFCCC. The MRV of the NAP-Ag will be completed in the scope of the MRV system of the overarching NAP and to build on existing systems. The frequency of the monitoring shall be at least annual, with the production of a report.
[3] See http://ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=87943&p_country=VCT&p_count=81&p_classification=22.01&p_classcount=7
[4] Climate-smart agriculture is an approach that helps to guide actions needed to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate. It aims to tackle three main objectives: sustainably increasing agricultural productivity and incomes; adapting and building resilience to climate change; and reducing and/or removing greenhouse gas emissions, where possible. Source: http://www.fao.org/climate-smart-agriculture/en/

Agriculture (Crops and Livestock)			
Objective: To promote climate smart and sustainable crop and livestock agriculture for food security and resilient livelihoods.			
Sub-objectives[1]	**Activities**	**Timeframe**	**Lead agency and key partners**
impacts and adaptation options focused on crops and livestock	b. Develop an agriculture-specific climate change research programme, including research on climate change impacts and adaptation measures for the crop and livestock sector, and expand research and development (R&D) related to climate smart agricultural practices and technologies	Medium-Long term	Windward Islands Farmers Association (WINFA); Caribbean Agricultural Research and Development Institute (CARDI); Caribbean Catastrophe Risk Insurance Facility (CCRIF); Caribbean Institute for Meteorology and Hydrology (CIMH) Food and Agriculture Organization of the United Nations (FAO); Inter-American Institute for Cooperation on Agriculture (IICA); Organisation of Eastern Caribbean States (OECS) Commission; Technical Mission of the Republic of China (Taiwan); University of the West Indies (UWI)
	c. Develop research facilities and technical resources for in situ seed-bank and tissue-culture centres for the preservation of plant genetic information	Medium-Long term	
3. To build the capacity of farmers to plan and implement climate smart practices, and strengthen farmer organisations to effectively engage in decision-making and resource management	a. Conduct education and awareness with farmers on climate change impacts and risks especially in hazard-prone areas, including capturing and sharing local knowledge on impacts and current and past practices to address risks	Short term	
	b. Build the technical and organisational capacity within farmer organisations and farmers for climate smart agriculture and strengthen them to effectively engage in decision-making and resource management through training, technical support and demonstration projects	Short term	
	c. Develop a micro-financing scheme for small scale farmers for agri-business development and implementing climate smart practices	Short term	
	d. Conduct wider sensitisation of other sectoral stakeholders (e.g. water, energy, physical planning etc.) and the public on climate change impacts on the agriculture sector	Short-Medium term	
	e. Develop strategies to encourage youth involvement in crop and livestock agriculture including via the promotion of agriculture as a career and strengthening agricultural education in the schools via tailored courses, school gardens and youth agriculture apprenticeship programmes	Short-Medium term	
4. To improve early warning systems and response mechanisms for agricultural risk and disaster management	a. Based on agro-ecological zones, establish agro-meteorological stations and early warning system for key hazards, including drought, severe rainfall events, floods and hurricanes, to enable effective disaster preparedness and response within small-scale farming	Short term	
	b. Sustain SVG participation in the Caribbean Climate Outlook Forums (CariCOF) to enhance access to capacity building/training and knowledge sharing on forecasting and climate early warning information services and products, including those tailored for the agricultural sector e.g. Agro-Met Bulletins	Short term	

Agriculture (Crops and Livestock)			
Objective: To promote climate smart and sustainable crop and livestock agriculture for food security and resilient livelihoods.			
Sub-objectives[1]	**Activities**	**Timeframe**	**Lead agency and key partners**
	c. Improve climate information services including localized climate forecasts[5] to support informed responses for small scale farming, and an effective system for dissemination of forecasted weather patterns for farmers/fishers	Short-Medium term	
	d. Promote emergency readiness and response via dissemination of vulnerability maps for the sector and training of crop/livestock farmers in early warning systems, including role in monitoring and reporting, early warning triggers, warning levels and responses	Short-Medium term	
	e. Build the technical and organisational capacity of agricultural extension services to support agricultural risk and disaster management and expand the agriculture extension service especially to highly vulnerable individuals and communities.	Short-Medium term	
	f. Establish satellite warehouses to stock food, animal feed, water and other emergency supplies and improve the accessibility and distribution of disaster relief, particularly in the Grenadines islands.	Short-Medium-term	
	g. Enhance the crop and livestock insurance mechanisms and compensation schemes (e.g. using the Windward Islands Crop Insurance [WINCROP] model), and educate farmers as to the benefits of participating in these schemes	Short-Medium-term	
5. To implement appropriate soil and water management practices on farms to reduce impacts from extreme weather like droughts, floods and landslides	a. Develop and implement an integrated programme for soil and water conservation, including: - Enhanced soil/water conservation via use of dryland farming techniques, reducing tillage to lessen water loss, incorporating manures and compost and planting cover crops to increase soil organic matter to improve water retention, improving drainage and strengthening overall farm design to avoid soil loss and gullying. - Improving water use efficiency and management through increasing rainwater harvesting for storage and irrigation purposes; expanding the allocation of groundwater recharge areas across the islands to support irrigation programmes; and utilising marginal water resources and wastewater	Short-Medium term	

[5] For example, localised forecasts for SVG which take into consideration micro-climates and other localised conditions in the country e.g. poor drainage, low elevation etc. and make distinction in probability of rain or other expected weather across various areas/municipalities

Agriculture (Crops and Livestock)			
Objective: To promote climate smart and sustainable crop and livestock agriculture for food security and resilient livelihoods.			
Sub-objectives[1]	**Activities**	**Timeframe**	**Lead agency and key partners**
6. To identify and test climate smart agricultural practices and technologies for scale up	a. Promote the use of established low regret[6] climate smart practices and technologies for crop and livestock production through demonstration projects and small grants, including use of climate friendly fertilisers and utilising waste products from farms and fisheries processing centres as organic fertilisers and for waste-to-energy	Short term	
	b. Identify and develop stress tolerant varieties for which there is a ready market and implement adaptive farming measures (e.g. increase variety of crops, explore use of genetically modified organisms, practice mixed farming using a combination of tree crops and vegetable/root crops, hydroponics and aquaponics).	Short-Medium term	
	c. Identify and implement measures to help livestock cope with increased heat stress (e.g. provision of shade houses in pastures, enhanced nutrition and feeding programme and a programme to breed animals with a greater ability to withstand higher temperatures)	Short-Medium term	
	d. Identify and implement adaptive measures to control pests such as integrated pest management systems and seasonal planting of crops that provide substrate for some pests, and develop a monitoring and response system for pests, disease and invasive species	Short-Medium term	
7. To promote ecosystem-based approaches[7] for adaptation and disaster risk reduction in the agriculture sector	a. Examine feasibility and implement agro-forestry and integrated crop-livestock-forestry systems where appropriate, through educational outreach and training programmes for farmers and the relevant supporting agencies	Short-medium term	
	b. Identify and test new and innovative solutions to support ecosystem-based adaptation and disaster risk reduction in the agricultural sector including measures for sustainably managing, conserving and restoring natural resources such as soil and water sources critical to agriculture, to strengthen the resilience of agricultural dependent livelihoods	Medium term	
8. To promote sustainable land management to protect key agricultural lands and supporting	a. Develop guidelines and conduct outreach for crop and livestock farmers on disposal of solid waste, grey and black water for enhanced water and waste management	Short term	

[6] Low regret approaches include adaptation [and mitigation] measures which will produce low cost and effective climate change solutions, as well as economic, social and environmental benefits

[7] Ecosystem based approaches are nature-based approaches that uses biodiversity and ecosystem services to help people adapt to the adverse effects of climate change. They have emerged as a promising strategy to increase the resilience of ecosystems and support sustainable livelihoods, especially in small island contexts. See https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-05-en.pdf

Agriculture (Crops and Livestock)			
Objective: To promote climate smart and sustainable crop and livestock agriculture for food security and resilient livelihoods.			
Sub-objectives[1]	**Activities**	**Timeframe**	**Lead agency and key partners**
ecosystem services, such as soil and water protection, pollination and nutrient cycling, with the involvement of rural communities and the wider society	b. Coordinate with the Lands and Surveys and Physical Planning Departments to safeguard key agricultural lands (state and privately owned) and ensure sustainable land use via implementation of the National Physical Development Plan and zoning laws, institutionalisation of a Land Use Authority and maintenance of a GIS-based land use database system.	Short-Medium term	
	c. Coordinate with the Central Water and Sewage Authority (CWSA) and Forestry Department to develop and implement integrated watershed management plans with inputs from rural communities and farmers, which includes a mix of sustainable land practices (e.g. livestock production, forest restoration, and organic and conservation agriculture)	Short-Medium term	
	d. Work with and support agricultural communities and other stakeholders to develop and implement projects based around sustainable livelihood opportunities, including small-scale, community-based agro-forestry, agro-tourism and watershed and habitat management and rehabilitation	Short-Medium term	

3.1.2 Coastal and marine zone

Coastal and marine zone			
Objective: To ensure the productivity and resilience of the coastal and marine zone through conservation, sustainable resource use and integrated adaptation and disaster risk reduction.			
Sub-objectives[8]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To update and enforce legislation and regulations related to the coastal and marine zone to enable adaptation, disaster risk reduction and sustainable physical development	a. Undertake comprehensive review of the legal and regulatory framework related to the coastal and marine zone, identify gaps or conflicts which undermine climate change decision-making and actions, and undertake amendments or revisions to the existing framework to address these challenges	Short term	**Lead:** **Maritime Administration, Ministry of National Security, Air and Seaport Development; National Parks, Rivers and Beaches Authority; SDU; Sustainable Grenadines Inc. (SusGren)** **Partners:**
	b. Conduct a comprehensive assessment of coastal and marine ecosystems, including modelling and hazard mapping, to identify the key climate change impacts and vulnerabilities and use results to inform coastal and marine governance, including the Integrated Coastal Zone Management Plan and National Ocean Policy and Strategic Action Plan	Short term	

[8] Coastal and marine zone: Sub-objectives are aligned with the NAP, National Ocean Policy (2019) and National Biodiversity Strategy and Action Plan (2017).

Coastal and marine zone			
Objective: To ensure the productivity and resilience of the coastal and marine zone through conservation, sustainable resource use and integrated adaptation and disaster risk reduction.			
Sub-objectives[8]	**Activities**	**Timeframe**	**Lead agency and key partners**
	c. Develop and enforce more comprehensive legislation on sand mining, including updating the Sand Mining Act to address current gaps,	Short term	CWSA; Fisheries Division, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour; Ministry of Finance, Economic Planning, Sustainable Development and Information Technology; Ministry of Legal Affairs; Ministry of Tourism; Ministry of Transport, Works, Urban Development and Local Government; Meteorological Services; NEMO; Physical Planning; Grenadines Affairs; Saint Vincent and the Grenadines (SVG) National Trust; National Fisherfolk Cooperative and other fisherfolk organisations; Richmond Vale Academy; community-based environmental organisations; tourism and recreation tour operators; shipping agencies; ferry services; local oil/fuel suppliers; Chamber of Commerce, Hotel and Tourism Association, Invest SVG; The Mustique Company; Saint Vincent and the Grenadines Conservation Fund (SVGCF) ; Saint Vincent and the Grenadines Environmental Fund (SVGEF); CANARI; Caribbean Regional Fisheries Mechanism (CRFM); Caribbean Network of Fisherfolk Organisations (CNFO); OECS Commission; UWI; UNDP-GEF Small Grants Programme; Flora & Fauna
	d. Update and enforce laws and regulations related to physical planning and development in coastal areas, including building codes, standards and effluent and storm water regulations	Short-Medium term	
	e. Develop an Integrated Coastal Zone Management Plan for improved management of coastal areas including multiple use zones e.g. designated spaces for bathing beaches, fishing and anchoring of yachts in nearshore areas	Medium term	
2. To strengthen institutional arrangements for effective coordination and collaboration across the 29 government agencies with roles and responsibilities for coastal and marine zone management and development	a. Strengthen public-private partnerships in the sustainable use and management of ocean resources and co-management arrangements with civil society and local communities	Short-Medium term	
	b. Operationalise the National Ocean Governance Committee to ensure effective multi-sectoral coordination and implementation of the Integrated Coastal Zone Management Plan and National Ocean Policy and Strategic Action Plan	Short-Long term	
	c. Establish a Coastal Zone Management Unit for coordination and collaboration across the 29 government agencies with roles and responsibilities for the coastal and marine zone	Medium-Long term	
3. To climate proof coastal infrastructure to prevent further damage and degradation using ecosystem-based solutions, and revetments and sea walls where necessary	a. Maintain or increase natural coastal defences through identifying and implementing green infrastructure solutions, including conservation and restoration of coral reefs, seagrass beds, mangroves, littoral coastal vegetation and sand dunes in at risk areas to reduce erosion and flooding.	Short-Medium term	
	b. Assess feasibility of coastal engineering measures such as revetments and sea walls and implement measures where appropriate in identified target areas to reduce coastal erosion and flooding	Short-Medium term	
	c. Conduct research and promote piloting of new technologies for climate proofing of coastal infrastructure e.g. use of green and grey infrastructure including concrete tetrapods and geofabric[9]	Medium-Long term	

[9] Geofabric or geotextiles are permeable fabrics which, when used in association with soil, have the ability to separate, filter, reinforce, protect, or drain.

Coastal and marine zone			
Objective: To ensure the productivity and resilience of the coastal and marine zone through conservation, sustainable resource use and integrated adaptation and disaster risk reduction.			
Sub-objectives[8]	**Activities**	**Timeframe**	**Lead agency and key partners**
4. To build technical and organisational capacity, including enhancing awareness, access to resources and action for effective coastal and marine resource management within government, civil society and the private sector	a. Conduct awareness raising on vulnerability to climate change and disasters in the coastal and marine zone, and advocacy to mobilise resources and action for effective coastal and marine resource management	Short-Long term	International; International Union for Conservation of Nature (IUCN)
	b. Strengthen organisational capacity to support effective coastal and marine adaptation projects/programmes via training of technical staff in global best practices in financing and resource mobilisation, project management and reporting	Short-Medium term	
	c. To identify gaps in technical capacity for management of the coastal and marine zone and related activities, and conduct ongoing capacity building of relevant stakeholders in new principles, approaches and technologies (e.g. in coastal inundation/storm surge modelling, ecosystem-based management and valuation, marine spatial planning and participatory management of coastal and marine areas)	Short-Long term	
5. To establish and maintain coastal and marine systematic observation, research and information management systems to guide decision-making and development of coastal, shoreline and marine management plans	a. Improve early warning systems (EWS) including providing forecasts of coastal and marine conditions for the safety of inhabitants in coastal areas and for the efficiency of maritime operations.	Short-Medium term	
	b. Develop and implement mechanisms for monitoring changing sea levels, currents and sedimentation patterns, ocean acidification and influxes of sargassum and invasive species, to guide decision-making and development of coastal, shoreline and marine management plans	Medium-Long term	
	c. Develop and maintain databases/clearinghouse for assessment and management of the coastal and marine zone	Medium-Long term	
	d. Establish and conduct a long-term programme for regular assessments, research and monitoring of the state of the coastal and marine environment	Medium-Long term	
	e. Engage in partnerships and cooperation for coastal and marine scientific research and data collection relevant to SVG and the wider Caribbean region and for technology transfer	Medium-Long term	
	a. Manage ecosystems, and relevant species, to reduce other threats that weaken their resilience, including through addressing the spread of invasive species (e.g. Lionfish), environmental degradation and unsustainable resource use	Short-Long term	

Coastal and marine zone			
Objective: To ensure the productivity and resilience of the coastal and marine zone through conservation, sustainable resource use and integrated adaptation and disaster risk reduction.			
Sub-objectives[8]	**Activities**	**Timeframe**	**Lead agency and key partners**
6. To adopt integrated, ecosystem-based approaches[10] that take into account the range of uses of coastal and marine resources	b. Implement ecosystem-based management approaches, including ecosystem approach to fisheries, integrated coastal zone management and marine spatial planning, through capacity building of relevant government, civil society and private sector stakeholders and pilot/demonstration projects	Medium-Long term	
7. To strengthen the system of protected areas, including coastal and marine ecosystems, for effective conservation and sustainable use and building resilience to multiple stressors	a. Establish a comprehensive system of ecologically representative and well-connected protected areas, including coastal and marine ecosystems	Medium-Long term	
	b. Establish a sustainable financing mechanism to support management of coastal and marine protected areas	Medium-Long term	

3.1.3 Education

Education			
Objective: To build resilience to climate change and disasters in the education sector and ensure the health and safety of students and staff and continuity in operations.			
Sub-objectives[11]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To mainstream climate change adaptation and disaster risk reduction considerations into educational policies and plans	a. Conduct a comprehensive assessment to identify the key climate change impacts and vulnerabilities for the education sector and use results to inform development of a National School Safety Policy and Business Continuity Plans	Short term	**Lead:** **Ministry of Education** **Partners:**
	b. Conduct comprehensive review and ensure climate change and disaster risk reduction considerations are integrated in education sector policies, planning and operations[12], including from a gender lens where applicable	Short term	

[10] See the Voluntary Guidelines for the Design and Effective Implementation of Ecosystem-Based Approaches to Climate Change Adaptation and Disaster Risk Reduction under the Convention of Biological Diversity: https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-05-en.pdf

[11] Education: Sub-objectives are aligned with the NAP, NESDP and national Comprehensive Disaster Management Policy.

[12] This activity is directly aligned with CDEMA's Model Safe Schools Programme (MSSP) and National Safe Schools Programme Committees being implemented in six of the CDEMA's Participating States, including SVG.

Education			
Objective: To build resilience to climate change and disasters in the education sector and ensure the health and safety of students and staff and continuity in operations.			
Sub-objectives[11]	**Activities**	**Timeframe**	**Lead agency and key partners**
	c. Develop a National School Safety Policy[13] which is socially and gender inclusive, to provide guidelines for specific protocols and procedures which must be followed, before, during and after a crisis	Short-Medium term	SDU; NEMO; Grenadines Affairs; All Saints University; American University, Bethel Bible College of the Caribbean; Richmond Vale Academy; SVG Community College; SVG National Centre for Technological Innovation (NCTI); SVG Teachers' Union; SVG National Trust; teachers; students; SVG emergency services (Fire and Police); SVG Red Cross; District Disaster Committees; Local government councils; YMCA/YWCA; Caribbean Community Climate Change Centre (CCCCC); Caribbean Disaster Emergency Management Agency (CDEMA); OECS Commission; United Nations Educational, Scientific and Cultural Organization (UNESCO)
	d. Develop and implement a business continuity programme for the education sector (e.g. in case of extended use of schools for shelter or extended closure due to damage), including training and support for preparation of Business Continuity Plans (BCPs) for key institutions including state-owned primary and secondary schools, vocational schools and tertiary institutions including campuses for the University of the West Indies and US-based universities	Short-Medium term	
2. To advance knowledge, skills and education related to climate change, its impacts and potential responses through development of a curriculum for primary, secondary, vocational and tertiary level schools and demonstration projects	a. Support ongoing integration of climate change and disaster risk reduction in national curriculum development for both informal and formal educational institutions via training of teachers and senior education officials and development of courses, modules and teaching materials	Short-Medium term	
	b. Formulate and implement a R&D plan in collaboration with national and regional educational and research institutions, including UWI, for continued research and innovation to address identified needs, including on climate change impacts and use and dissemination of relevant adaptation technologies focusing on priority sectors	Medium-Long term	
3. To enable a coordinated and effective response for climate change adaptation and disaster risk management in schools through awareness raising, training and drills on key vulnerabilities and relevant adaptation and disaster preparedness and response measures for administrators, teachers, students and other stakeholders in the education sector	a. Conduct and engage administrators, teachers, students and other stakeholders in the education sector in awareness campaigns on climate change and disasters, preparedness and longer-term adaptation actions	Short-Medium term	
	b. Conduct vulnerability assessments and develop individual school emergency readiness/action plans for reducing vulnerabilities identified (including recommended procedures for various emergencies and sport and outdoor activities, identification of schools' emergency wardens and other key roles and responsibilities and identification of suitable warning systems e.g. bells, horns etc.), that are integrated with BCPs	Short-Medium term	
	c. Conduct regular drills to test plans developed and update as needed	Short-Medium term	

[13] This activity is directly aligned with CDEMA's Model Safe Schools Programme (MSSP) and National Safe Schools Programme Committees being implemented in six of the CDEMA's Participating States, including SVG.

Education			
Objective: To build resilience to climate change and disasters in the education sector and ensure the health and safety of students and staff and continuity in operations.			
Sub-objectives[11]	**Activities**	**Timeframe**	**Lead agency and key partners**
4. To integrate climate proofing considerations in the construction of new infrastructure and retrofitting of existing infrastructure within the education sector, especially for school buildings earmarked as emergency shelters	a. Conduct safety inspections of schools, especially those functioning as shelters and in highly vulnerable areas, on at least an annual basis.	Short-Long term	
	b. Climate proof schools, particularly those in vulnerable areas on the coastline and in flood zones, including retrofitting of existing buildings (e.g. hurricane straps, reinforcing doors and windows, etc.) and implement additional resilience building measures such as installation of solar panels and rainwater harvesting.	Short-Medium term	

3.1.4 Energy

Energy			
Objective: To enhance the resilience of the energy sector to climate change and disasters and promote energy security.			
Sub-objectives[14]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To assess the vulnerability of the energy supply and distribution infrastructure to climate change and related disasters and identify priority measures to reduce these vulnerabilities	a. Conduct a risk and vulnerability assessment of the energy sector, including of supply and distribution infrastructure and linkages/impacts on key interconnected sectors such as telecommunications, transport and water, and identify priority measures to reduce these vulnerabilities	Short term	**Lead:** **Energy Unit, Ministry of National Security and Saint Vincent Electricity Services (VINLEC)** **Partners:** SDU and Ministry of Finance, Economic Planning, Sustainable Development and Information Technology; Lands and Surveys; Physical Planning; CWSA; NEMO; Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour; Ministry of Education; Ministry of Tourism; Grenadines Affairs; SVG Chamber of Commerce; independent energy producers; Bank of Saint Vincent and
2. To mainstream climate change adaptation and disaster risk reduction considerations into policies, legislation and regulations for the energy sector	a. Improve institutional arrangements that govern the energy sector, including via strengthening staff capacity to deal with energy policy issues, information management and sharing and enhancing participation of the private sector in decision-making and investments for climate change adaptation and disaster risk reduction	Short-Medium term	
	b. Update the National Energy Policy (2009) and National Energy Action Plan (2010) and ensure climate change adaptation and disaster risk reduction is integrated	Medium term	
	c. Assess the laws, regulations and policies governing the energy sector, including the relevant institutions and their authority, to identify opportunities for climate change considerations to be reflected and revise them accordingly	Medium-Long term	

[14] Energy: Sub-objectives are aligned with those identified in the NAP, the National Energy Policy and Action Plan and NESDP.

Energy			
Objective: To enhance the resilience of the energy sector to climate change and disasters and promote energy security.			
Sub-objectives[14]	**Activities**	**Timeframe**	**Lead agency and key partners**
3. To diversify energy sources and promote the use of renewable energy technologies to enable an affordable, decentralised and secure energy supply, including wind, solar photovoltaic, solar hot water and geothermal energy	a. Develop and implement innovative financing mechanisms to promote renewable energy technologies in the commercial and residential sectors, as well as all schools, including duty free concessions for installation of solar water heaters and improved battery storage specifically for the Grenadines	Short term	the Grenadines; Invest SVG; SVG Bureau of Standards; Government information services; Richmond Vale Academy and other community based organisations; media; OECS Commission
	b. Scale up the development of geothermal resources for electricity generation on St. Vincent based on current demonstration projects	Short-Medium term	
	c. Implement a programme for the installation of grid-connected wind and PV power systems to encourage independent power producers to generate electricity from renewable sources.	Medium-Long term	
4. To promote energy efficiency among key energy consumers through adoption of standards and guidelines for energy efficiency, conduct of energy audits and provision of fiscal incentives to implement energy efficiency and green building measures	a. Implement education and awareness programmes to promote efficient energy use across all sectors of the economy	Short term	
	b. Set energy performance standards for importation and sales of major energy consuming equipment and appliances (used by residential and commercial sectors)	Short term	
	c. Develop and enforce standards and guidelines for the construction of energy efficient and green buildings	Short-Medium term	
	d. Promote energy audits for key energy consuming sectors, including domestic households, industry, hotels and restaurants and public buildings, to improve understanding of energy consumption patterns and inform the design of appropriate energy efficiency measures	Short-Medium term	
	e. Develop a suite of fiscal incentives to support energy efficiency technologies, including partnerships with financial institutions to promote investment in energy efficient appliances and implementation of rebate system for installation and importation of solar infrastructure and duty concessions	Medium term	
5. To integrate climate proofing considerations into the construction of new infrastructure and retrofitting of existing infrastructure for energy supply and distribution	a. Conduct feasibility studies of energy supply and distribution infrastructure designs to resist higher hurricane intensity (e.g. 120mph winds)	Short term	
	b. Identify and evaluate options for climate proofing energy supply and distribution infrastructure, including possibilities of relocating vulnerable utilities and placing all utilities in new developments underground (except in areas prone to flooding, sea level rise and storm surge)	Short term	
	c. Identify and adopt risk insurance schemes to cover energy sector infrastructure	Short-Medium term	

3.1.5 Finance and banking

Finance and banking			
Objective: To ensure business continuity and build resilience to climate change and disasters in the financial and banking sector.			
Sub-objectives[15]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To assess fiscal vulnerabilities and the costs and benefits of climate change impacts for financial and banking services and identify potential measures for adaptation and disaster risk reduction.	a. Conduct an assessment of fiscal vulnerabilities related to climate change and best practices and potential measures for adaptation and disaster risk reduction for the finance and banking sector, including a cost-benefit analysis of various impacts and measures	Short term	**Lead:** **Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology** **Partner:** Energy Unit and NEMO, Ministry of National Security; Physical Planning Department; Ministry of Legal Affairs; Ministry of Transport, Works, Urban Development and Local Government; Ministry of Tourism, Sports & Culture; Grenadines Affairs; National Telecommunications Regulatory Commission; Chamber of Commerce; Bank of Saint Vincent and the Grenadines; Credit Unions/Credit Union League; Insurance Association and the Insurance Institute of St. Vincent and the Grenadines; Invest SVG; CCRIF; Government information services; media; OECS Commission
2. To mainstream climate change adaptation and disaster risk reduction considerations into legislation, regulations, policies and plans for the financial and banking services.	a. Conduct a comprehensive review of the finance and banking legal and regulatory framework to identify gaps or conflicts which undermine decision-making relevant to climate change and disaster risk reduction and undertake amendments or revisions to the existing framework to address these challenges.	Short term	
	b. Develop a business continuity plan for the finance and banking sector taking climate change and disaster risk considerations into account and addressing redundancy, flexibility and diversity of sector operations	Short term	
3. To enhance education and awareness among shareholders, suppliers, employees and other stakeholders including clients about fiscal vulnerabilities and mobilise for adaptation actions	a. Develop and implement an awareness and advocacy campaign on vulnerability of the finance and banking sector to climate change and disasters and need for mobilising action and resources for adaptation and reducing risk	Short-Long term	
4. To provide innovative financial products and services to support climate smart practices and build resilience to climate change and disasters	a. Collaborate with financial and banking institutions to develop and provide new and innovative financial products and services, including for investment and insurance, to support adaptation, mitigation and resilience building measures	Short-medium term	
5. To integrate climate proofing considerations into the construction of new infrastructure and retrofitting of existing infrastructure within the financial and banking sector	b. Identify critical facilities and infrastructure for the financial and banking sector	Short-Medium term	
	c. Identify and implement suitable climate proofing measures for new infrastructure and retrofitting of existing infrastructure,	Short-Medium term	

[15] Finance and banking: Sub-objectives are aligned with the NAP and NESDP

Finance and banking			
Objective: To ensure business continuity and build resilience to climate change and disasters in the financial and banking sector.			
Sub-objectives[15]	**Activities**	**Timeframe**	**Lead agency and key partners**
	particularly telecommunications and electricity supply as key supporting services.		

3.1.6 Fisheries and aquaculture

Fisheries and aquaculture			
Objective: To promote climate smart and sustainable management of fisheries and aquaculture for food security and resilient livelihoods and marine ecosystems.			
Sub-objectives[16]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To review and strengthen the policy and legal framework for fisheries governance to mainstream climate change adaptation and disaster risk management	a. Strengthen institutional capacity for integrated fisheries and aquaculture development and create synergies with other key sectors including environmental protection, agriculture and tourism, including organizational strengthening of the Fisheries Division and National Ocean Governance Committee	Short-Medium term	**Lead:** **Fisheries Division, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour** **Partners:** SDU; Department of Agriculture; Physical planning; Maritime Affairs, Ministry of Health; Ministry of National Security; National Parks, Rivers and Beaches Authority; NEMO; National Fisherfolk Cooperative and local fisherfolk organisations; fisherfolk; aquaculturists; fish processing plant operators; divers and dive operators; insurance providers; SusGren; community-based environmental organisations; CANARI; CCRIF; CRFM, CNFO; OECS Commission; FAO;
	b. Revise the Fisheries Act of 1989 and regulations, and implement the Fisheries and Aquaculture Policy and Action Plan (2019), to mainstream climate change adaptation and disaster risk management	Medium term	
2. To develop a long term research and monitoring programme on climate change impacts and adaptation options for commercial fisheries and aquaculture	a. Update climate change vulnerability assessments for the fisheries and aquaculture sector including assessments on commercial fisheries, and develop a sectoral adaptation plan	Short term	
	b. Develop and implement a system to improve collection of national fisheries statistics and information management and sharing, including a resourcing plan, to support decision-making for fisheries and aquaculture	Short-Medium term	
	c. Develop a long term research and monitoring programme on: - commercial fisheries, including climate change impacts and adaptation options related to ocean acidification, sargassum influxes and shifts in ocean currents, temperature and salinity regimes that affect fish distribution and migration - aquaculture, including seaweed farming and other forms of mariculture, with a focus on assessing and reducing impacts on	Medium-Long term	

[16] Fisheries and aquaculture: Sub-objectives, are aligned with those identified in the Agriculture Policy Framework and Strategic Plan (2012-2018), Fisheries and Aquaculture Policy and Action Plan (2019) and NAP.

Fisheries and aquaculture			
Objective: To promote climate smart and sustainable management of fisheries and aquaculture for food security and resilient livelihoods and marine ecosystems.			
Sub-objectives[16]	**Activities**	**Timeframe**	**Lead agency and key partners**
	freshwater resources and associated biodiversity and ecosystem services		Western Central Atlantic Fishery Commission (WECAFC); International Commission for the Conservation of Atlantic Tunas (ICCAT); IUCN; Japan International Cooperation Agency; UWI
3. To build the capacity of fisherfolk and aquaculturists through education and awareness on climate change impacts, training and access to micro-financing for development of climate smart practices and alternative livelihoods and strengthening fisherfolk organisations to effectively engage in decision-making and resource management	a. Develop and conduct education and awareness campaign with fisherfolk and aquaculturists on climate change impacts and vulnerabilities and options for adaptation and building resilience of the sector	Short term	
	b. Conduct organisational strengthening of fisherfolk organisations, including via training in business development and fundraising, for improved governance and enhanced capacity to effectively coordinate and engage in decision-making and resource management	Short-Medium term	
	c. Develop and conduct training on climate smart practices and small business and alternative livelihood development and provide opportunities for fisherfolk and aquaculturists to access micro-financing to support these actions	Short-Medium term	
4. To improve early warning systems and response mechanisms for disaster risk management, including via safety at sea training, insurance schemes and social protection funds for fisherfolk	a. Conduct safety at sea training for fishers and divers, provide early warning information (e.g. on weather forecast and sea rescue), and promote access to safety and communications equipment and services (e.g. early warning mobile apps, radios, life vests and broadcast messaging service[17] for notifying at risk communities)	Short-Medium term	
	b. Identify location of safe harbours where boats can be temporarily stored and build resilient boat and gear storage facilities	Short-Medium term	
	c. Investigate and adopt risk transfer mechanisms, specifically insurance schemes for fisherfolk and other social protection funds (e.g. pensions, disability grants)	Medium term	
5. To identify and test climate smart practices and technologies to address reduction in	a. Adopt climate smart FADs and define, implement and enforce a FAD management plan and relevant regulations to avoid overexploitation and enhance effectiveness	Short term	

[17] Noted in consultation that legislation is first needed to support this

Fisheries and aquaculture			
Objective: To promote climate smart and sustainable management of fisheries and aquaculture for food security and resilient livelihoods and marine ecosystems.			
Sub-objectives[16]	**Activities**	**Timeframe**	**Lead agency and key partners**
fishing days and income generation due to extreme weather, rough seas and other climate change impacts	b. Promote aquaculture and seamoss farming as a means of diversifying livelihoods and explore value added products	Medium term	
	c. Conduct research to identify and pilot additional climate smart initiatives relevant for the fisheries and aquaculture	Short-Long-term	
6. To promote sustainable management of fisheries and supporting ecosystems and an ecosystem approach to fisheries for adaptation and disaster risk management, in collaboration with coastal and fishing communities	a. Implement management measures to protect nesting beaches for turtles, including regulating access, beach sand mining, lighting and vehicle use and construction on beaches	Short term	
	b. Develop and adopt local fisheries management plans for key fisheries, including lobster, conch and coastal and offshore pelagics and conduct ongoing monitoring and review of the plans.	Short-Medium term	
	c. Implement sustainable fisheries management measures including: - Conducting ongoing mapping and stock assessment of resources, especially of important species of fish, lobster and conch - Implementing restrictions including licensing schemes, closed seasons, quotas or bans for particular species	Short-Medium term	
	d. Promote and implement an ecosystem approach to fisheries to integrate adaptation and disaster risk reduction through capacity building of relevant government, civil society and private sector stakeholders, demonstration projects and identifying appropriate financing mechansims	Short-Medium term	
	e. Strengthen the network of marine protected/managed areas, including review of the current network, gap analysis and integrating the protection and management of fisheries and supporting ecosystems such as coral reefs, mangroves and seagrass beds	Medium-Long term	

3.1.7 Forest and terrestrial resources

Forest and terrestrial resources			
Objective: To ensure the health and productivity of forest and terrestrial ecosystems and build their resilience and ability to provide ecosystem services for adaptation and disaster risk reduction.			
Sub-objectives[18]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To review and strengthen the legal and policy framework for forest management and sustainable land management to integrate adaptation and disaster risk reduction considerations.	a. Review the forestry sector's legal and policy framework and other complementary environmental policies and strategies to identify gaps and ensure coherence and mainstreaming of climate change adaptation and disaster risk reduction considerations	Short term	**Lead:** **Forestry Department, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour** **Partners:** SDU; Department of Agriculture; Lands and Surveys Department; Physical Planning Department; Meteorological Services; CWSA, VINLEC, Ministry of Tourism; National Parks, Rivers and Beaches Authority; NEMO; Community Development Division; forest-based enterprises; farmers and their organisations; Chamber of Commerce; local banks/financing institutions; Richmond Vale Academy; SVG National Trust; SVGCF; SVGEF; WINAD; CANARI; CIMH; Eastern Caribbean Institute of Agriculture and Forestry (ECIAF); OECS Commission; FAO; UWI, UNDP-GEF Small Grants Programme; Flora & Fauna International; IUCN
	b. Update the Forest Resource Conservation Act of 1992, National Forest Resources Conservation Plan (1994-2003) and National Parks, Rivers and Beaches Authority Act of 2002 to integrate adaptation and disaster risk reduction considerations	Short term	
	c. Develop a National Forest Policy to integrate adaptation and disaster risk reduction considerations and include mechanisms for increasing community participation in sector management and resilience building.	Medium term	
2. To build the capacity of forest managers and resource users for climate resilient and sustainable forest resource management	a. Conduct a capacity assessment of forest managers and resource users to identify key gaps and develop and implement a capacity building programme on climate resilient and sustainable forest management, focusing on ecosystem-based approaches to adaptation and disaster risk reduction	Short-Medium term	
3. To establish a baseline and a comprehensive research and monitoring programme to assess the status, health and climate change vulnerability of species, habitats and ecosystem services within forests and other terrestrial ecosystems to support adaptation as well as conservation and sustainable management.	a. Conduct a baseline survey to assess the status, health and impacts of climate change on species, habitats and ecosystem services within forests and other terrestrial ecosystems, including carrying capacity studies and ecosystem services valuation	Short term	
	b. Develop and maintain a database for assessment and management of forest and other terrestrial ecosystems and their resources, including baseline data and establishment of GIS based inventories	Medium-Long-term	
	c. Develop and implement a comprehensive research and monitoring programme to assess climate change impacts and adaptation solutions for the forestry sector via strategic partnerships with national and regional academic and research institutions, including UWI	Medium-Long-term	
4. To strengthen and enhance the resilience of forest-based enterprises and livelihoods through education and awareness on climate change impacts and training	a. Conduct awareness raising and education on importance of forests to national development, climate change impacts and vulnerabilities and options for adaptation and building resilience of the forestry sector, targeting stakeholders involved in forest-based enterprises and livelihoods and wider public	Short term	

[18] Forest and terrestrial resources: Sub-objectives are aligned with the NAP and National Biodiversity Strategy and Action Plan.

Forest and terrestrial resources			
Objective: To ensure the health and productivity of forest and terrestrial ecosystems and build their resilience and ability to provide ecosystem services for adaptation and disaster risk reduction.			
Sub-objectives[18]	**Activities**	**Timeframe**	**Lead agency and key partners**
and access to micro-finance for small business development and climate proofing of their enterprises.	b. Design and conduct training on small business development and climate proofing of forest based enterprises and provide opportunities to access micro-financing to support work in these areas	Short-Medium term	
5. To implement programmes of afforestation, reforestation and agro-forestry to address forest loss and degradation, enhance the resilience of forests and related ecosystems and provide other co-benefits	a. Promote community-based and ecosystem-based adaptation and DRR initiatives focused on forests and other terrestrial ecosystems and users to enhance resilience and reduce disaster risk at the community level	Short term	
	b. Develop and implement a programme focused on promoting environmentally sustainable harvesting of forest products, targeting forest resource managers and resource users such as forest-based enterprises and local communities	Short-Medium term	
	c. Develop and implement forest rehabilitation and restoration programme, including afforestation, reforestation and agro-forestry to enhance overall forest resilience and provision of ecosystem services and other co-benefits	Short-Long term	
6. To strengthen the system of protected areas, including forest and terrestrial ecosystems, for effective conservation and sustainable use and building resilience to multiple stressors.	a. Establish a sustainable financing mechanism to support protected area management, including forest and protected areas	Short-Medium term	
	b. Strengthen the existing system to support ecologically representative and well-connected protected areas, including forest and terrestrial ecosystems, through implementation of the Protected Areas Systems Plan and capacity building of forest managers and resource users for participatory management of protected areas	Medium-Long term	
7. To promote sustainable land use planning and management, including via a land management plan, updating zoning laws and institutionalisation of a Land Use Authority.	a. Coordinate with the Lands and Surveys and Physical Planning Departments to ensure the protection of key forested lands and sustainable use of land resources via implementation of the National Physical Development Plan and zoning laws, institutionalisation of a land use management mechanism, and maintenance of a GIS-based land cover and use database system	Medium term	

3.1.8 Human health

Human health			
Objective: To reduce vulnerability to the adverse impacts of climate variability and climate change on human health through improved preparedness and response.			
Sub-objectives[19]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To mainstream climate change and disaster risk reduction and management considerations into health sector planning and programmes, with emphasis on vulnerable populations	a. Conduct a vulnerability assessment to identify the key climate change impacts and vulnerabilities for the health sector and potential measures to adapt and build resilience	Short term	**Lead:** **Ministry of Health, Wellness and Environment** **Partners:** CWSA and Solid Waste Management Unit (SWMU); Energy Unit; SDU and Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology; Ministry of National Mobilisation, Social Development, Family, Gender Affairs, Persons with Disabilities and Youth; Ministry of Transport, Works, Urban Development and Local Government; Ministry of Tourism; Meteorological Services; NEMO; Physical Planning Department; Local government authorities; Government information services; SVG Bureau of Standards; VINLEC; health service providers; hotel and tour operators; media; CARPHA; CIMH; OECS Commission; Pan American/World Health Organization (PAHO/WHO); UWI
	b. Develop a sectoral adaptation plan, emphasizing specific measures for vulnerable populations such as the disabled, elderly, pregnant women and youth	Short term	
	c. Conduct a capacity assessment of key gaps including with respect to human, technical and financial resources, and develop and implement a capacity building programme, including complementary funding/resourcing plan for health sector stakeholders on public health responses to climate change, with a focus on the health and well-being of vulnerable populations and new emerging diseases	Short-Medium term	
	d. Conduct comprehensive review of legal, regulatory and policy framework for the health sector and update relevant legislation, policies and plans to ensure integration of climate change and disaster risk reduction considerations	Medium-Long term	
2. To develop and implement a climate change and health education and promotion campaign for both citizens and visitors	a. Develop and implement a climate change and health education and promotion campaign for both citizens and visitors, with a focus on climate change impacts and preventative measures, in collaboration with other key sectoral partners (e.g. water, waste management and tourism)	Short-Medium term	
3. To establish and maintain a climate-linked health early warning system so that citizens and visitors can take the necessary precautions in their day-to-day activities	a. Develop a health early warning system that draws upon climate information services provided by the Meteorological Office and other relevant sectors and institutions that collect/provide information for forecasting and decision making	Short term	
	b. Develop a communication strategy and protocols for effective packaging and dissemination of health early warnings, including guidance on recommended actions	Short term	

[19] Human health: Sub-objectives are aligned with the NAP.

Human health			
Objective: To reduce vulnerability to the adverse impacts of climate variability and climate change on human health through improved preparedness and response.			
Sub-objectives[19]	**Activities**	**Timeframe**	**Lead agency and key partners**
	c. Develop a surveillance and coordination mechanism (e.g. Climate and Health Early Warning and Response Working Group) between relevant ministries and government departments, health service providers, academia and the media to collect data, foster research and enable effective information dissemination and action based on climate information and health early warnings.	Short term	
	d. Improve access to tailored climate information and information services among key public health agencies and service providers, including specific climate health bulletins and longer-term climate outlooks, through knowledge exchange and partnerships at regional level (e.g. with CIMH)	Short-Medium term	
4. To establish a robust vector control programme with surveillance for vector borne diseases that are climate sensitive, including dengue, chikungunya and zika, and strengthening of local vector-control units for effective disease prevention and response	a. Conduct a capacity assessment to identify key gaps and develop and implement a capacity building programme for the Vector Control Unit and other relevant Health Units to enhance surveillance for vector borne diseases and disease prevention and response.	Short-Medium term	
	b. Develop and implement a robust inspection programme with the requisite human resources and access to tools/equipment, identification of stringent inspection schedules and supported by GIS location mapping of (known or suspected) vector locations to inform planning and action	Short-Medium term	
5. To enhance existing water quality monitoring programmes to take into account floods, droughts and waste disposal and accidental leakage into water bodies, and surveillance and response mechanisms for water borne diseases	a. Review existing water quality monitoring programmes to take into account floods, drought, waste disposal and accidental leakage into water bodies, and conduct capacity building of inspection technicians to better understand and link impact of climate hazards on water resources, in partnership with CWSA and local government.	Short-Medium term	
	b. Improve surveillance and identify appropriate response mechanisms for dealing with water borne diseases, including identifying measures for early detection and warning, and instituting coordination mechanisms for sharing information and taking action	Short term	

Human health			
Objective: To reduce vulnerability to the adverse impacts of climate variability and climate change on human health through improved preparedness and response.			
Sub-objectives[19]	**Activities**	**Timeframe**	**Lead agency and key partners**
6. To introduce improved, climate resilient water and sewage treatment systems for residential and commercial use to reduce health risks from poor hygiene and sanitation	a. Develop guidance and protocols in partnership with CWSA, local government and other key stakeholders on the planning of new sewage treatment infrastructure to reduce health risks via designs that integrate renewable energy technologies, can withstand climate hazards or are located away from high hazard areas	Short term	
7. To conduct research to link the epidemiology of diseases with climate data and projections for SVG to enhance understanding of climate change impacts on human health.	a. Develop and implement a long-term research programme in partnership with national and regional health bodies and academia on the epidemiology of diseases and linkages with climate observations and trends for SVG to enhance understanding of climate change impacts on human health.	Medium-Long term	
	b. Enhance collection and dissemination of peer reviewed data to support research in partnership with the Caribbean Public Health Agency (CARPHA) via a Caribbean data clearinghouse that includes temporal, environmental and climatological data	Medium-Long term	
8. To improve access to health services via provision of community health services and mobile health clinics with trained staff and equipment to perform primary health care	a. Provide community health services and mobile health clinics, especially in areas highly vulnerable to climate hazards and disasters	Short term	
	b. Conduct climate proofing of health facilities and other infrastructure to ensure sustained and reliable access to health services, including retrofitting of physical structures, investing in green infrastructure, increasing water storage capacity to face droughts and installing source generators and solar PV to power critical operations	Short-Medium term	
	c. Scale up the pilot programme on development of small resilient hospitals and national green hospital[20] for overall disaster resilience and water and energy management improvements	Medium-Long term	

[20] The SMART Health Care Facilities in the Eastern Caribbean Project is underway, wherein smart hospitals are being rendered resilient and energy-efficient with support from DFID. Not all health facilities were covered under this project.

3.1.9 Settlements, infrastructure and physical development

Settlements, infrastructure and physical development			
Objective: To promote sustainable physical development and green infrastructure to build resilience.			
Sub-objectives[21]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To strengthen and harmonise policies, legislation and regulations concerning physical development and land use zoning to enable integrated adaptation and disaster risk reduction, sustainable land management and enhanced energy, food and water security	a. Update and finalise the National Physical Development Plan to integrate climate change and disaster risk reduction considerations and seek to harmonise physical development planning with other strategies for enhanced energy, food and water security, conservation and sustainable land management	Short term	**Lead:** **Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning and Ministry of Transport, Works, Urban Development and Local Government** **Partners:** CWSA; Energy Unit; SDU, Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology; Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour; Ministry of National Mobilisation, Social Development, Family, Gender Affairs, Persons with Disabilities and Youth; Ministry of Tourism; National Parks, Rivers and Beaches Authority; Meteorological Services; NEMO; Local government authorities; Government information services; SVG Bureau of Standards; SVG National Trust; VINLEC; building contractors and construction companies; land developers; private landowners
	b. Review and strengthen enabling legislation, regulations and policies concerning physical development and land use planning and zoning to ensure coherence and identify and address conflicts or gaps related to mainstreaming of climate change adaptation and disaster risk reduction	Short-Medium term	
	c. Promote sustainable use of land resources to build resilience including via adopting the National Land Policy, institutionalisation of a Land use management mechanism and enhancing organisational capacity to develop, implement and monitor sustainable land use practices	Medium term	
	d. Develop a National Resilient Infrastructure Plan to facilitate an integrated and multisectoral approach for retrofitting existing infrastructure and building new infrastructure that is resilient to climate change and disasters, integrating green infrastructure solutions wherever possible, in collaboration with relevant government agencies, civil society and the private sector	Medium term	
2. To adopt a more robust process for planning and development controls to reduce risks of climate change impacts on new infrastructural projects	a. Revise and enforce building codes and standards to reduce climate change and disaster risks, including from more intense hurricanes, on the commercial, residential and public sectors in line with international and regional best practices for engineering	Short-Medium term	

[21] Settlements, infrastructure and physical development: Sub-objectives are aligned with those identified in the NAP and National Physical Development Plan: Methodological Framework Report (2013)

	b. Conduct capacity building to support improved application and enforcement of updated building codes and standards among developers and building contractors in the commercial, residential and public sectors	Short-Medium term	
	c. Promote effective use of environmental and social impact assessments (ESIAs) including via strengthening legislation governing ESIAs to ensure that climate change risks are considered during project approval process and are integrated into any environmental management plan	Medium term	
	d. Strengthen the land information and registry system to support land administration and management and interagency sharing of information, including integration with the proposed National Spatial Data Management system	Medium term	
3. To integrate green infrastructure and climate proofing considerations into the design of new physical infrastructure, particularly emergency response structures, and encourage businesses and home owners to retro-fit existing buildings and other infrastructure through fiscal incentives	a. Promote retrofitting of existing buildings by businesses and home owners through use of tax breaks and other fiscal incentives	Short-Long term	
	b. Integrate green infrstrastructure and climate-proofing considerations in the design of new physical infrastructure, particularly critical facilities and infrastructure in each sector	Short-Medium term	
4. To promote adoption of ecosystem-based management, including a "ridge-to-reef" approach, to reduce the impacts of coastal erosion, flooding and excessive run-off and siltation on coastal settlements and infrastructure	a. Promote adoption of a landscape or "ridge-to-reef" approach for spatial and land use planning and management to reduce the impacts of soil erosion, excessive run-off and siltation on coastal settlements and infrastructure and increase protected area management effectiveness	Short-Medium term	
5. To conduct hazard and risk assessments in highly vulnerable locations to inform and develop early warning systems and local adaptation and disaster plans	a. Conduct hazard and risk assessments in highly vulnerable locations (e.g. on low lying coasts and steep hillsides), including modelling and mapping, to determine priorities for action to inform early warning systems and local adaptation and disaster plans	Short term	
6. To enable relocation of settlements inland from vulnerable coastal areas, where deemed necessary, with the active involvement of the affected communities in planning and decision-making	a. From hazard and risk assessments, identify high risk settlements and promote relocation of settlements from unsafe coastal locations, with active involvement and consultation of the affected communities in planning and decision-making	Medium-Long term	

3.1.10 Tourism

Tourism			
Objective: To create a sustainable and thriving tourism sector and build ecological and socio-economic resilience to climate change in SVG.			
Sub-objectives[22]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To enhance the institutional and regulatory framework for coordinated and effective management of the overall tourism product and enable climate change adaptation and disaster risk reduction	a. To develop a Tourism Master Plan and Tourism Strategy, which includes clear priorities for mainstreaming climate change and actions for climate change adaptation and risk reduction for the tourism sector	Short term	**Lead:** **Ministry of Tourism; SVG Tourism Authority and National Parks, Rivers and Beaches Authority** **Partners:** CWSA; Energy Unit; Grenadines Affairs; SDU, Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology; Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour; Ministry of Health, Wellness and the Environment; Ministry of Transport, Works, Urban Development and Local Government; Physical Planning Department; Meteorological Services; NEMO; VINLEC; Chamber of Commerce; Invest SVG; Hotel and Tourism Association; Bequia Tourism Association; hotel and guesthouse owners; dive and tour operators; yachties; cruise ship agents; farmers and their organisations; fisherfolk and their organisations; The
	b. Establish a mechanism for enhancing cross-sectoral coordination between tourism and other interrelated sectors, including agriculture, energy, health physical planning, transport, waste management and water, for sustainable and resilient tourism in SVG	Short term	
	c. Revise concession policies to encourage a sustainable and climate smart approach to tourism development, with a focus on incentives offered to tourism industry and service providers	Short-Medium term	
	d. Undertake an institutional capacity assessment and institutional strengthening to address gaps within the National Parks, Rivers and Beaches Authority and SVG Tourism Authority to support climate change adaptation and disaster risk reduction and a sustainable tourism product	Short-Medium term	
	e. Revise and enforce building codes and standards for tourism related infrastructure in collaboration with Physical Planning, CWSA and the Energy Unit to enable more effective adaptation and disaster risk reduction and sustainable resource management	Short-Medium term	
2. To identify and enhance awareness of the key climate change impacts and vulnerabilities and appropriate adaptation measures for the tourism sector, and develop a sectoral adaptation plan	a. Develop and implement an awareness campaign on climate change impacts on the tourism sector, with focus on cross-cutting impacts on water resources, energy, waste and health issues related to climate change, and need for integrated management strategies and solutions	Short term	
	b. Conduct a comprehensive assessment to identify the key climate change impacts and vulnerabilities for the tourism sector in Saint Vincent and in the Grenadines islands	Short-Medium term	

[22] Tourism: Sub-objectives are aligned with those identified in the NAP and NESDP

Tourism			
Objective: To create a sustainable and thriving tourism sector and build ecological and socio-economic resilience to climate change in SVG.			
Sub-objectives[22]	**Activities**	**Timeframe**	**Lead agency and key partners**
	c. Develop a sectoral adaptation plan for tourism with appropriate adaptation measures for Saint Vincent and the Grenadines Islands separately	Short-Medium term	Mustique Company; SVG National Trust; SusGren; community-based tourism and environmental organisations; WINAD; CANARI; Caribbean Tourism Organization; OECS Commission; UWI
3. To diversify the tourism product across SVG through greater emphasis on agro-tourism, heritage tourism and eco-tourism in close collaboration with the private sector, including hotel, dive and tour operators	a. Provide fiscal incentives, including low interest loans, subsidies and other tax concessions, to improve access to finance for implementing sustainable tourism development projects across SVG	Short-Medium term	
	b. Diversify the tourism product through greater emphasis on heritage, agro- and eco-tourism to supplement beach tourism (e.g. via promotion of niche or small group tourism that fits well into the carrying capacity of the island amenity sites, use of local services and products, and regional tourism tied to cultural and island specific events)	Medium-Long term	
4. To climate proof tourism related assets and infrastructure (e.g. hotels, guesthouses and beaches) using revetments, sea walls and ecosystem-based solutions, including conservation and restoration of coral reefs, forests and mangroves that act as natural defences	a. Develop and implement priority solutions for climate proofing tourism related assets, including ecosystem-based and green infrastructure solutions (e.g. mangrove and reef restoration and artificial reefs for coastal protection)	Short-Medium term	
	b. Implement incentives for properties/tourism related assets to be able to climate proof their establishments e.g. concessions for climate proofing materials and installing renewable energy systems.	Short-Medium term	
	c. Identify and test appropriate solutions for addressing sargassum influxes and coastal erosion and flooding as key threats to tourism operations and related infrastructure	Short-Medium term	
5. To promote the adoption of integrated water resource management strategies among hotel and tour operators through education and awareness, concessions and other fiscal incentives	a. Promote rainwater harvesting programme for the tourism sector, targeting hotels and guesthouses, and provide requisite capacity building to support implementation	Short term	
	b. Promote use of renewable energy to power desalination and wastewater treatment plants servicing the tourism sector, particularly in the Grenadines	Short-Medium term	
	c. Introduce concessions and other fiscal incentives to help reduce inefficient water use e.g. wastage and high consumption, and encourage sustainable water use by hotels, guesthouses, tour operators and other tourism establishments	Short-Medium term	

Tourism			
Objective: To create a sustainable and thriving tourism sector and build ecological and socio-economic resilience to climate change in SVG.			
Sub-objectives[22]	**Activities**	**Timeframe**	**Lead agency and key partners**
6. To promote renewable energy and energy efficiency within the tourism sector for enhanced energy security and co-benefits related to climate change mitigation, disaster risk reduction and environmental health	a. Scale up renewable energy and energy efficiency programmes in the tourism sector, targeting hotels and guesthouses, via providing fiscal incentives for the import of energy-efficient appliances	Short-Medium term	

3.1.11 Water

Water			
Objective: To ensure a safe, reliable and sustainable supply of water to the population of SVG and efficient use of water resources to build resilience.			
Sub-objectives[23]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To strengthen the policy and legal framework for integrated water resources management and mainstreaming of climate change adaptation	a. Enforce legislation to reduce deforestation and inappropriate land and agricultural practices in water catchment areas and promote integrated watershed management to enhance water security	Short term	**Lead:** **The Central Water and Sewerage Authority (CWSA) and Forestry Department and Department of Agriculture, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour** **Partners:** Energy Unit; Grenadines Affairs; Fisheries Division; SDU, Ministry of Finance, Economic Planning,
	b. Review Environmental and Social Impact Assessments (ESIAs) to include water management issues and integrate ESIAs in national and sectoral development processes	Short term	
	c. Formulate a National Water Policy and Integrated Water Management Plan, including climate change adaptation considerations, and formally adopt the Water Safety Plan	Short-Medium term	
	d. Update relevant water resources legislation, in particular the Central Water and Sewerage Act (No. 17 of 1991), to better incorporate integrated water resource management and adaptation considerations	Short term	

[23] Water: Sub-objectives are aligned with those identified in the NAP, NAP - Water Sector and draft Water Safety Plan for SVG

	e. Update relevant standards for water infrastructure operations for efficient use and improve management of water resources including: - Establishing effluent standards - Revising building codes for integrating water and energy efficiency and for supporting installation of rainwater harvesting systems in commercial, residential and public sector buildings - Improved management of septic tanks to avoid overflowing during flooding events	Short- term	Sustainable Development, and Information Technology; Ministry of Health, Wellness and the Environment**;** Ministry of Transport, Works, Urban Development and Local Government; Physical Planning Department; Meteorological Services; Ministry of Tourism; National Parks, Rivers and Beaches Authority; Public Health Department; National Irrigation Unit; NEMO; VINLEC; Chamber of Commerce; Hotel and Tourism Association; Pesticides Control Board; Bureau of Standards; Chamber of Commerce; hotel and guesthouse owners; dive and tour operators; farmers and their organisations; fisherfolk and their organisations; SVG National Trust; Richmond Vale Academy; The Mustique Company; CIMH; OECS Commission; UWI
2. To enhance institutional arrangements for water resources management via creation of a National Water Resources Management Agency to serve as an independent regulatory agency	a. Create a National Water Resources Management Agency to serve as an independent regulatory agency, with CWSA overseeing water supply and distribution systems, to improve governance for integrated water resource management	Medium-Long term	
3. To formalise the national hydro-meteorological data management system and improve data collection and sharing within the existing system managed by CWSA in collaboration with the Meteorological Office	a. Formalise the national hydro-meteorological data management system including the role of the national hydrometeorological services in maintenance of a central data repository and procedures for data collection and timely dissemination	Short term	
	b. Improve flood and drought monitoring and early warning systems, through the installation of necessary equipment and measures (e.g. streamflow gauges, river profiling) and modelling, to permit real-time information transmission and inform water resources management.	Short-Medium term	
	c. Strengthen the Meteorological Services' and other relevant sectoral teams to operate new stations and perform flood modelling and drought prediction to inform planning and decision-making for water resources management	Short-Medium term	
4. To emphasise demand side management for efficient water use, including through adjustments in water pricing, the development of water user groups and uptake of water conservation technologies	a. Design and implement incentives for water use efficiency and conservation, including concessions for the use of water saving devices for households and expanding rainwater harvesting and storage and wastewater reuse (e.g. in landscaping activities), particularly in the Grenadines.	Short term	
	b. Design and implement awareness campaigns on water resources and the impacts of climate change, including on value of water conservation, watershed protection and sustainable agricultural and forestry practices, water-borne and vector-borne disease risks; and promote the Grenadines as a model for water management in SVG	Short term	

	c. Introduce subsidies for water systems such as solar desalination plants in the Grenadines islands[24]	Short-Medium term	
5. To improve water security by upgrading the water infrastructure network, exploring and developing groundwater resources and utilising technological innovations to provide additional water supplies, particularly for the agricultural and tourism sectors	a. Increase water storage capacity of the Central Water and Sewerage Authority and improvement in the network to ensure minimum disruption to the water supply in the event of disaster in Saint Vincent.	Short-Medium term	
	b. Promote start-ups that can pilot and invest in new innovations (e.g. solar powered, reverse osmosis desalination plants and other water supply and efficiency technologies) for the agricultural and tourism sectors	Short-Medium term	
	c. Explore and develop groundwater resources to provide additional supplies in St. Vincent, where feasible, including deep water aquifers resilient to drought, saltwater intrusion and the impacts of land development	Medium-Long term	
6. To protect key water catchments and groundwater resources through upgrading and enforcing land use zoning and regulations for development and pollution and sewage management, promoting green infrastructure and watershed management in collaboration with the agricultural and forestry sectors and rural communities	a. Upgrade and enforce land use zoning and regulations for development and pollution and sewage management	Short-Medium term	
	b. Designate and manage water protection areas under the provisions of the CWSA Act, Section 21[25] in collaboration with the agricultural and forestry sectors and rural communities	Short-Medium term	
	c. Reduce water pollution by implementing measures to better manage solid and liquid waste, including improving the management of agricultural chemical inputs and import and storage systems for dangerous chemicals)	Short-Medium term	
7. To enhance existing water quality monitoring programmes for improved pollution management, sanitation, hygiene and water safety, taking into account the range of water sources	a. Increase surveillance of water-borne pathogens in collaboration with the Ministry of Health, Wellness and the Environment	Short term	
	b. Strengthen the existing water monitoring programme, covering the range of water resources from groundwater, residential and communal rainwater tanks and desalination plants, in collaboration with the Ministry of Health, Wellness and the Environment	Short-Medium term	
8. To enhance the water supply system through improved harnessing and distribution systems and promotion of renewable energy and energy	a. Invest in upgrading and climate proofing water distribution infrastructure to ensure efficient water use and reduce losses from leakages and weather-related damage	Short-Medium term	

[24] For example, improved subsidies will allow 1 gallon of water to be produced for 2 cents at the desalination plant in Bequia island in the Grenadines.

[25] Noted in the National Parks and Protected Areas System Plan 2009-2014; the CWSA Act Section 21 authorises the Minister to set aside protected areas to address water supply needs.

efficiency to provide a decentralised and secure energy supply for water supply and distribution	b. Promote the use of renewable energy sources, such as wind and solar PV, to produce water thereby reducing vulnerability to electricity outages and the cost of water	Short-Medium term	
9. To enhance disaster risk reduction and response mechanisms for access to safe drinking water, hygiene and sanitation	a. Conduct risk assessment of utility assets (both water supply and sewage/wastewater treatment) to climate hazards, based on historical information and climate change projections	Short term	
	b. Develop disaster response plans for access to safe drinking water, hygiene and sanitation	Short term	
	c. Climate proof water supply infrastructure (e.g. utilising climate resilient materials and relocation of pipelines to less vulnerable areas) to reduce damage and loss from climate hazards	Medium-Long term	
	d. Invest in insurance for key water infrastructure	Medium-Long term	

3.1.12 Waste Management

Waste Management			
Objective: To enable integrated waste management for a resilient, safe and healthy population and environment.			
Sub-objectives[26]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To implement an integrated waste management regime which considers a 'reduce, reuse, recycle' approach[27]	a. Conduct a comprehensive assessment of vulnerability to climate change impacts and develop a sectoral plan to address adaptation and disaster risk reduction	Short term	**Lead:** **CSWA – Solid Waste Management Unit and Water Resources Management Unit** **Partners:** Energy Unit; Grenadines Affairs; SDU, Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology; Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry
	b. Develop and implement an education and awareness campaign in coordination with other key bodies on climate change impacts and need for integrated waste management strategies	Short – Long term	
	c. Develop and implement an integrated waste management system, which includes alternate methods of landfilling and disposal of white goods and encouraging waste recycling and reduction through banning Styrofoam and single use plastics	Short-Long term	
2. To build technical and organisational capacity, particularly in the Solid Waste Management Unit	a. Conduct capacity assessment of the Solid Waste Management Unit and service providers for implementing integrated waste management in SVG	Short term	

[26] Waste management: Sub-objectives are aligned with those in the National Adaptation Plan and NESDP

[27] UNEP 2010. Natural Environmental Summary (NES) St. Vincent & the Grenadines.

Waste Management			
Objective: To enable integrated waste management for a resilient, safe and healthy population and environment.			
Sub-objectives[26]	**Activities**	**Timeframe**	**Lead agency and key partners**
(SWMU) and service providers, for integrated waste management	b. Build technical and organisational capacity of the Solid Waste Management Unit (SWMU) and service providers for integrated waste management, including new technologies and methods for waste reduction, recycling, landfilling and other forms of waste disposal, as well as in disaster waste management	Medium-Long term	& Labour; Ministry of Health, Wellness and the Environment**;** **Ministry of Education;** Ministry of Transport, Works, Urban Development and Local Government; NEMO; Physical Planning Department; Local government authorities; VINLEC; Hotel and Tourism Association; hotel and guesthouse owners; tour operators; farmers and their organisations; fisherfolk and their organisations; landfill/waste service providers; The Mustique Company; CDEMA; PAHO; UWI
3. To climate proof sewage and solid waste treatment facilities and reduce disruptions in a disaster event	a. Develop a business continuity plan identifying measures for reducing disruptions in operations of sewage and solid waste treatment facilities in a disaster event.	Short term	
	b. Climate proof sewage and solid waste treatment facilities to ensure continuity of operations, including through adoption of wastewater recycling, upgrading of drainage and storage for overflows and renewable energy technologies to provide decentralized power.	Short-Medium term	
4. To conduct research and pilot initiatives related to disaster waste management, including identifying temporary waste collection/disposal sites and removing and safely disposing of large amounts of debris post-disaster	a. Promote research and piloting of initiatives on disaster waste management, including identification of temporary waste collection/disposal sites and removal or safe disposal of post disaster debris	Short-Medium term	
	b. Develop and implement guidelines for post-disaster debris management	Medium-Long term	
5. To develop a strategy and response mechanism for hazardous waste management in a disaster event	a. Develop and implement hazardous waste management strategy and protocols for operationalising the strategy in a disaster event	Medium-long term	

3.2 Mitigation

While SVG's contribution to global greenhouse gases is insignificant, it will seek to minimise its greenhouse gas emissions as part of its commitment to low carbon and climate resilient development and use opportunities to enhance the functioning of its natural ecosystems as carbon sinks as outlined in the *National Climate Change Policy*.

Mitigation objective: To set SVG on a low carbon and resilient development pathway through reducing net greenhouse gas emissions and enhancing carbon sinks.

To achieve the mitigation objective, and related sustainable development goals, the following priority areas outlined below will be targeted:

1. Energy
2. Forests and carbon sinks
3. Maritime affairs
4. Tourism
5. Transport
6. Waste management

3.2.1 Energy

Energy			
Objective: To promote the adoption of renewable energy and energy efficiency measures for low carbon and sustainable growth.			
Sub-objectives[28]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To enhance the institutional arrangements for implementation and monitoring of climate change mitigation measures for energy production and supply	a. Update and obtain formal approval of the draft National Energy Policy (2016) and National Energy Action Plan to reflect commitments in the NDC	Short term	**Lead: Energy Unit, Ministry of National Security and VINLEC** **Partners:** SDU and Ministry of Finance, Economic Planning, Sustainable Development and Information Technology; Lands and Surveys; Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour; Ministry of Tourism; Lands and Surveys Department and Physical Planning Department, Ministry of Transport, Works, Urban Development and Local Government; Grenadines Affairs; Government information services; Invest SVG; SVG Bureau of Standards; Chamber of Commerce; Hotel and Tourism Association; independent energy producers; Richmond Vale
	b. Establish partnerships with international and regional agencies and academic institutions engaged in research on renewable energy production, storage and distribution to promote innovation and learning from best practices	Short-Medium term	
2. To build capacity within the public and private sector for design and implementation of renewable energy and energy efficiency technologies for climate change mitigation and energy security	a. Promote private sector engagement and investment in design and implementation of renewable energy and energy efficiency technologies for climate change mitigation and energy security, including via assessing and implementing mechanisms to promote a market driven industry	Short-Medium term	
	b. Strengthen the capacity of the Energy Unit and VINLEC to provide an affordable, reliable and climate resilient supply of electricity utilising renewable energy sources and support an evolving range of services required by the renewable energy market, including via training on renewable energy and energy efficiency technologies	Medium term	
3. To promote the use of renewable energy and related low carbon technologies	a. Develop and implement an education and awareness campaign promoting renewable energy technologies, targeting the commercial and residential sectors	Short term	
	b. Establish renewable energy targets for specific sectors in line with the NDC	Short term	
	c. Develop and implement a programme to scale up the installation of grid-connected solar photovoltaic and wind power systems and use of biogas by independent power producers across SVG, including farmers, hotels and industrial plants, through training, demonstration projects and fiscal incentives	Short-Medium term	
	d. Scale up the installation of microgrid systems integrating solar PV, wind power and battery storage in the Grenadines islands, including through public-private partnerships and technology transfer	Medium term	

[28] Energy [Mitigation]: Sub-objectives are aligned with those identified in SVG's NDC, National Energy Policy and Action Plan and the NESDP

Energy			
Objective: To promote the adoption of renewable energy and energy efficiency measures for low carbon and sustainable growth.			
Sub-objectives[28]	**Activities**	**Timeframe**	**Lead agency and key partners**
	e. Identify and implement innovative financing mechanisms, including tax concessions, that encourage installation of solar hot water heaters in the commercial and residential sector especially in the Grenadines islands	Short-Medium term	Academy; financial and banking institutions; hotels and tour operators; The Mustique Company; media; CCCCC; OECS Commission; UWI
	f. Scale up the development of geothermal resources for electricity generation on Saint Vincent based on current demonstration projects	Medium-Long term	
4. To enhance energy efficiency	a. Develop and implement an education and awareness programme to promote energy conservation and efficiency across all sectors of the economy and in all schools	Short term	
	b. Promote energy audits for energy consumers, including homeowners, hotels, industrial plants and public buildings, to improve understanding of energy consumption patterns and inform the design of appropriate energy efficiency measures	Short term	
	c. Develop and improve enforcement of energy efficiency standards and guidelines for: - construction of energy efficient buildings, which can be integrated into the national building codes - importation and sales of major energy consuming equipment and appliances used in the residential and commercial sectors	Short-Medium term	
	d. Promote the adoption of energy efficiency measures by homeowners, hotels, industrial plants and public buildings through demonstration projects and fiscal incentives, including tax concessions	Short-Medium term	

3.2.2 Forests and carbon sinks

Forests and carbon sinks			
Objective: To enhance the role of forests and other natural ecosystems as carbon sinks in SVG through conservation and sustainable use.			
Sub-objectives[29]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To strengthen the institutional and legal framework governing ecosystem management to promote conservation and sustainable use of key ecosystems, including tropical forests,	a. Review SVG's responsibilities under relevant international agreements and establish appropriate regulatory and financial mechanisms to ensure that such responsibilities are implemented effectively	Short-Medium term	**Lead:** **Forestry Department, Ministry of Agriculture, Forestry, Fisheries,**

[29] Forests and carbon sinks: Sub-objectives are aligned with the NDC and National Biodiversity Strategy and Action Plan

Forests and carbon sinks			
Objective: To enhance the role of forests and other natural ecosystems as carbon sinks in SVG through conservation and sustainable use.			
Sub-objectives[29]	**Activities**	**Timeframe**	**Lead agency and key partners**
coastal wetlands and mangroves, and seagrass beds, through participatory processes that engage government, civil society and private sector stakeholders	b. Update and implement the Forest Resource Conservation Act of 1992 and National Forest Resources Conservation Plan (1994-2003) to promote sustainable use and reduce forest cover removal and destruction of vegetation, especially in protected areas	Medium term	**Rural Transformation, Industry and Labour** **Partners:** Department of Agriculture; Energy Unit; Lands and Surveys Department; Physical Planning Department; Local government authorities; SDU and Ministry of Finance, Economic Planning, Sustainable Development and Information Technology; Ministry of Tourism; National Parks, Rivers and Beaches Authority; NEMO; forest-based enterprises; farmers and their organisations; Chamber of Commerce; SVG National Trust; SVGCF; SVGEF; SusGren; Richmond Vale Academy; Small Business Association; The Mustique Company; WINAD; CANARI; ECIAF; OECS Commission; FAO; UWI
	c. Update the National Biodiversity Strategy and Action Plan (NBSAP) and other relevant environmental strategies/plans to promote and enhance role of forests and natural ecosystems as carbon sinks through conservation and sustainable use	Medium term	
2. To explore the potential for carbon sequestration through expanding forests and terrestrial ecosystems, including coastal wetlands and mangroves, through afforestation, reforestation and ecosystem restoration and rehabilitation	a. Map priority areas where terrestrial and coastal ecosystems can act as 'carbon sinks' and identify measures for rehabilitation or restoration of these areas, taking into consideration additional co-benefits in resilience building	Short term	
	b. Conserve and restore coastal sand dunes and wetlands, mangroves and seagrass beds to support carbon sequestration and build coastal ecosystem resilience	Short-Medium term	
	c. Conserve and restore forests and other terrestrial ecosystems as carbon sinks to harness mitigation potential	Short-Medium term	
	d. Establish green roofs and corridors in urban centres, including Kingstown	Medium term	
3. To assess, identify and promote economic opportunities for mutually reinforcing conservation strategies, including non-extractive resource activities and the development of markets for sustainable use of non-timber forest products and marine resources	a. Assess the potential for developing and strengthening small enterprises based on the sustainable use of ecosystem goods and services	Short term	
	b. Develop and implement a strategy to catalyse and support sustainable natural resource-based enterprises, including mechanisms for small and medium-sized business development such as financial services and business skills development	Short-Medium term	
	c. Engage resource users, including farmers, fisherfolk and natural resource-based enterprises, in valuation of natural ecosystems and their services, assessment of the impacts of their activities and developing and implementing sustainable use plans	Medium term	

3.2.3 Maritime affairs

Maritime affairs			
Objective: To enable a sustainable, low carbon maritime transport system through the adoption of energy efficiency and resilience building measures.			
Sub-objectives[30]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To mainstream climate change considerations into maritime affairs, including via updating and implementing relevant policies, legislation and regulations	a. Implement relevant policies, legislation and regulations, including the National Ocean Policy and the Shipping and Marine Pollution Act, which incorporates the Annex VI regulations on preventing air pollution and GHG emissions from ships under the International Convention for the Prevention of Pollution from Ships (MARPOL)	Short-Medium term	**Lead:** **Maritime Administration, Ministry of National Security, Air and Sea Port Development** **Partners:** Coast Guard; Energy Unit; Grenadines Affairs; Ministry of Transport, Works, Urban Development and Local Government; Ministry of Finance, Economic Planning, Sustainable Development and Information Technology and SDU; Ministry of Tourism; NEMO; Port Authority; Government information service; Chamber of Commerce; Hotel and Tourism Association; Sol, Rubis and other fuel and oil suppliers/importers; ferry and shipping companies; fisherfolk and their organisations; water taxi and tour operators; yachties; media; OECS Commission; UWI
	b. Build capacity to strengthen monitoring, surveillance and enforcement systems for the maritime sector to meet relevant national emission targets, including coordinating the use of existing resources, procuring the necessary equipment and training personnel within the relevant agencies	Short-Medium term	
	c. Establish and maintain appropriate GHG inventories and other databases to support mainstreaming climate change considerations in sector policy and practice	Medium-Long term	
2. To reduce the fuel consumption of ships by providing guidance to shipping industry and public on fuel consumption rates and best practices in managing fuel consumption and incentivising the use of more fuel-efficient technologies	a. Develop guidance for the shipping industry, local fuel importers and public on fuel consumption rates for various boat models and engines	Short term	
	b. Implement an education and awareness campaign on best practices in managing fuel consumption and use of fuel-efficient technologies for ships	Short -Long term	
	c. Introduce concessions to encourage the importation of low emission fuel	Short term	
	d. Conduct feasibility studies and, where feasible, introduce alternative fuels and emission treatment options such as scrubbers	Short-Medium term	
3. To upgrade maritime infrastructure through investment, preventive maintenance and establishing formal requirements for infrastructure design to enhance service life and disaster resilience[31]	a. Assess design of critical facilities, assets and infrastructure and establish formal requirements for infrastructure design to reduce carbon footprint and enhance service life and disaster resilience (e.g. survives storm surge from Category 5 hurricane)	Short-Medium term	
	b. Upgrade and maintain maritime assets and infrastructure to reduce their carbon footprint (e.g. via proper maintenance of engines and optimising fuel consumption rates) and enhance service life and disaster resilience	Medium-Long term	

[30] Maritime affairs: Sub-objectives are aligned with those identified in SVG's NDC, National Energy Policy and Action Plan and the National Ocean Policy

[31] Government of St Vincent and The Grenadines (GoSVG). 2013. Rapid Damage and Loss Assessment (DaLA) December 24-25, 2013, Floods. https://reliefweb.int/sites/reliefweb.int/files/resources/SVG_Rapid_DaLA_Report.pdf

3.2.4 Tourism

Tourism			
Objective: To promote low carbon and sustainable growth within the tourism sector in SVG through the adoption of renewable energy, energy efficiency and sustainable building practices.			
Sub-objectives[32]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To integrate climate change mitigation considerations into the institutional and regulatory framework for the tourism sector	a. To develop a Tourism Master Plan and Tourism Strategy to incorporate provisions for climate change mitigation including via addressing energy, transport and waste management as key contributing activities to greenhouse gas emissions in the tourism sector	Short term	**Lead:** **Ministry of Tourism and SVG Tourism Authority** **Partners:** Energy Unit, Airports Authority and Maritime Administration, Ministry of National Security; Grenadines Affairs; Government information services; SDU, Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology; Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour; Ministry of Transport, Works, Urban Development and Local Government; National Parks, Rivers and Beaches Authority; Physical Planning Department; SVG Bureau of Standards; VINLEC; Chamber of Commerce; Invest SVG; Hotel and Tourism Association; Bequia Tourism Association; hotel and guesthouse owners; dive and tour operators; yachties; cruise
	b. Review, update and enforce building codes and standards for tourism-related operations which contribute to reducing emissions	Short-Medium term	
2. To conduct a comprehensive assessment of greenhouse gas emissions and identify appropriate mitigation measures for the tourism sector	a. Conduct a comprehensive assessment of greenhouse gas emissions from tourism related transport, buildings and operations as part of national greenhouse gas inventory, and identify appropriate mitigation measures for the tourism sector	Short-Medium term	
3. To increase the adoption of renewable energy and energy efficiency measures within the tourism sector for enhanced energy security and climate change mitigation	a. Develop best practice guidelines on renewable energy and energy efficiency measures for the tourism sector targeted at improving contributions to climate change mitigation	Short term	
	b. Develop and implement a programme to support sector uptake of renewable energy and energy efficiency measures including via concessions and other fiscal incentives	Short-Medium term	
	c. Deploy small-scale solar, wind and hydro-electric power systems and desalination and waste treatment plants powered by renewable energy, especially in the Grenadines	Short-Medium term	
4. To promote sustainable building practices among hotels and other tourism-based enterprises in constructing new building and facilities and retrofitting existing ones through education and awareness, concessions and other fiscal incentives	a. Develop and implement education and awareness campaign targeting hotels and other tourism-related enterprises on sustainable building practices, including reducing construction waste, using environmentally-friendly materials and maintaining natural vegetation and other green infrastructure	Short term	
	b. Introduce concessions and other fiscal incentives to encourage and support sustainable building practices by hotels and other tourism-related enterprises	Short-Medium term	

[32] Tourism: sub-objectives for mitigation are aligned with those identified in the NDC and NESDP.

Tourism			
Objective: To promote low carbon and sustainable growth within the tourism sector in SVG through the adoption of renewable energy, energy efficiency and sustainable building practices.			
Sub-objectives[32]	**Activities**	**Timeframe**	**Lead agency and key partners**
	c. Engage hotels in reducing carbon footprint via investing in green/smart buildings, including cool roofs	Medium-Long term	ship agents; farmers and their organisations involved in agro-tourism; media; The Mustique Company; SVG National Trust; SusGren; community based tourism and environmental organisations; WINAD; CANARI; Caribbean Tourism Organization; OECS Commission; UWI

3.2.5 Transport

Transport			
Objective: To enable a sustainable, low carbon transport system through the adoption of renewable energy, energy efficiency and resilience building measures.			
Sub-objectives[33]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To formally adopt and implement the NAMA for Transport for a coordinated and effective response to climate change mitigation	a. Adopt and implement the NAMA for Transport	Short term	**Lead:** **Ministry of Transport, Works, Urban Development and Local Government** **Partners:** Energy Unit and Airports Authority, Ministry of National Security; Grenadines Affairs; Government information services; SDU and Ministry of Finance, Economic
	b. Develop a resource mobilisation and financing strategy to support implementation of measures outlined in the NAMA	Short term	
2. To reduce the fuel consumption of motor vehicles via providing guidance to public on fuel consumption rates for frequently imported car models, revising the car taxation system and incentivising the use of more fuel-efficient technologies for motor vehicles	a. Develop fuel consumption guidelines for different vehicles commonly imported to SVG to provide guidance to public.	Short term	
	b. Promote regular motor vehicle maintenance (e.g. annually) to avoid unnecessary emissions and limit fuel consumption to the lowest possible level	Short-Medium term	
	c. Review the fuel tax and environmental levy on imported second-hand vehicles and subsidies to assess whether effectively promoting fuel efficiency and identify and implement other fiscal incentives to stimulate the use of more efficient vehicles	Medium term	

[33] Transport: Sub-objectives are aligned with those identified in SVG's NDC, NAMA for Transport, and the National Energy Policy and Action Plan

Transport			
Objective: To enable a sustainable, low carbon transport system through the adoption of renewable energy, energy efficiency and resilience building measures.			
Sub-objectives[33]	**Activities**	**Timeframe**	**Lead agency and key partners**
3. To scale up the use of hybrid and electric vehicles in SVG, and explore options for use of biofuels in vehicles based on a national production chain, as part of a low carbon transport system	a. Review and assess options for use of biofuels in motor vehicles based on a national production chain	Short term	Planning, Sustainable Development, and Information Technology; Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour; Ministry of Tourism; Land and Surveys Department; Physical Planning Department; National Omnibuses Association (NOBA); SVG Bureau of Standards; VINLEC; private car owners; tour operators; farmers and their organisations; WINAD; OECS Commission; UWI
	b. Conduct a feasibility assessment on introducing electric vehicles in SVG and pilot use of electric vehicles and solar carports as part of the government's fleet	Short-Medium term	
4. To promote sustainable transport measures that increase ridership on public transport and improve road conditions and traffic management	a. Provide incentives for increased use of the public transport system, particularly public buses, as alternative to individual vehicle use, including revision of fare system, speed limits and improved passenger safety, reliability and comfort	Short term	
	b. Improve maintenance of roads to ensure safe conditions and implement traffic management measures to avoid congestion and improve transport system efficiency	Short-Medium term	
	c. Prepare and implement a comprehensive Public Transport Master Plan as part of the long-term transport strategy to curb energy consumption in this sector including rush-hour regulations, staggered business hours, and access and use of heavy load vehicles during rush hours	Medium-Long term	
5. To improve air and land-based transport infrastructure through investment, preventive maintenance and establishing formal requirements for new infrastructure design with respect to expected service life and disaster resilience requirements[34]	a. Conduct assessment of air and land-based transport infrastructure to: - identify and prioritise areas for preventative maintenance and upgrading - establish formal requirements for new infrastructure design to reduce carbon footprint and enhance service life and disaster resilience - identify innovative financing mechanisms	Short-Medium term	
	b. Undertake preventative maintenance and upgrading of air and land-based transport infrastructure to reduce carbon footprint and enhance service life and disaster resilience	Medium-Long term	

3.2.6 Waste Management

[34] Government of St Vincent and The Grenadines (GoSVG). 2013. Rapid Damage and Loss Assessment (DaLA) December 24-25, 2013, Floods. https://reliefweb.int/sites/reliefweb.int/files/resources/SVG_Rapid_DaLA_Report.pdf

Waste Management			
Objective: To reduce greenhouse gas emissions through sustainable waste management.			
Sub-objectives[35]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To reduce GHG emissions, and other air pollution, through integrated waste management that uses a 'reduce, reuse, recycle' approach[36]	a. Reduce use of fossil-fuel derived plastics through banning Styrofoam and single use plastics and incentivising alternatives to plastics	Short term	**Lead:** **CWSA - Solid Waste Management Unit** **Partners:** Energy Unit; Grenadines Affairs; Government information services; SDU and Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology; Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour; Ministry of Health, Wellness and the Environment; Physical Planning Department; Local government authorities; SVG Bureau of Standards; VINLEC; Hotel and Tourism Association; hotel and guesthouse owners; tour operators; farmers, aquaculturists and their organisations; landfill/waste service providers; The Mustique Company; CARPHA; OECS Commission; PAHO; UWI
	b. Conduct public campaigns to raise awareness and mobilise action on integrated waste management that uses a 'reduce, reuse, recycle' approach	Short term	
	c. Promote and develop recycling processes and facilities for solid waste and wastewater	Short-Medium term	
	d. Assess and implement alternate methods of landfilling, waste incineration and alternate uses for scrap materials (metals, used tyres, etc.) where feasible	Short-Medium term	
	e. Promote adoption of renewable energy and energy efficient technologies for sewage and wastewater treatment plants	Short-Medium term	
	f. Reduce refrigerant gases (e.g. HFCs and HFCFCs) through adopting relevant controls and standards for phase out of these gases	Medium-Long term	
2. To implement a composting programme for the commercial sector to address GHG emissions, targeting the tourism, agriculture and other key sectors that produce and utilise organic waste	a. Establish a central composting facility targeting tourism, agriculture and other key sectors that produce and utilise organic waste, to help reduce GHG emissions	Medium-Long term	
3. To conduct research and pilot initiatives related to waste-to-energy technologies that can be used on both a small and large scale	a. Develop and implement research programme on sustainable waste management	Medium-Long term	
	b. Develop and pilot initiatives related to waste-to-energy technologies that can be used on both a small scale (e.g. biodigesters to produce energy on farms) and large scale (e.g. biogas from landfill)	Medium-Long term	

[35] Waste Management: Sub-objectives are aligned with those identified in SVG's NDC, the National Energy Policy and Action Plan and NESDP

[36] UNEP 2010. Natural Environmental Summary (NES) St. Vincent & the Grenadines.

3.3 Cross-cutting areas

Five key cross-cutting areas are identified which are critical to the achievement of the goal and directives of the *SVG Climate Change Policy.* Execution of actions under these areas will support the implementation of the objectives identified under both the priority areas for adaptation and mitigation.

1. Capacity building and engagement of stakeholders
2. Information management, research and monitoring
3. Intersectoral coordination
4. Integration of disaster risk management and national security
5. Investment and economic planning

3.3.1 Capacity building and engagement of stakeholders

Capacity building and engagement of stakeholders			
Objective: To build the capacity of all stakeholders, and adopt participatory and bottom up approaches, to effectively plan for and respond to climate change in SVG.			
Sub-objectives[37]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To assess the human and technical resource capacity needs for climate change adaptation and mitigation across government agencies and key partners in civil society and the private sector and develop a capacity building programme to effectively respond to the identified needs	a. Conduct assessment of human and technical resource capacity needs across government agencies and key partners in civil society and the private sector for implementation of the National Climate Change Policy and Strategy and Implementation Plan	Short term	**<u>Lead:</u> SDU, Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology** **<u>Partners:</u>** CWSA; Energy Unit, Maritime Administration and NEMO, Ministry of National Security; Grenadines Affairs; Government information services; Departments of Agriculture and Forestry and Fisheries Division, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour; Ministry of Education; Ministry of Health, Wellness and the Environment; Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning; Ministry of Tourism; Local government authorities; SVG Bureau of Standards; VINLEC;
	b. Develop and implement capacity building programmes to address priority needs, particularly in specialised areas required for implementation of objectives in the National Climate Change Policy and Strategy and Implementation Plan[38]	Medium-Long term	
2. To develop and implement an integrated and sustained climate change education and awareness campaign, targeting schools, key resource users (e.g. farmers, fisherfolk, hotel and tour operators) and the wider public	a. Develop a communications plan[39] to guide development of the national climate change awareness and education campaign and identify communication products and pathways tailored for different target audiences	Short term	
	b. Develop and implement sustained climate change education and awareness campaigns including: - Development and dissemination of climate change education material - partnering with and using media (broadcast, print, radio and social media) and influencers to change behaviour in target groups - leveraging private sector sponsorship to co-finance the campaigns	Short-Medium term	
3. To enhance mechanisms for participatory, inclusive and transparent planning and decision-making processes that engage government, civil society and	a. Conduct stakeholder identification and develop stakeholder engagement strategy to support capacity building and participatory, inclusive and transparent decision making	Short term	

[37] These sub-objectives are aligned with those identified in the NAP, NDC and NESDP

[38] This may involve performance of a National Capacity Self-Assessment and revalidation and prioritization of the comprehensive national capacity building plan elaborated in the scope of the NAP preparation

[39] The NAP refers to development and implementation of a comprehensive national climate change public awareness plan.

Capacity building and engagement of stakeholders			
Objective: To build the capacity of all stakeholders, and adopt participatory and bottom up approaches, to effectively plan for and respond to climate change in SVG.			
Sub-objectives[37]	**Activities**	**Timeframe**	**Lead agency and key partners**
the private sector in the climate change response, including at the national and local levels	b. Develop and maintain an online inventory of civil society and private sector stakeholders relevant to climate change adaptation and mitigation to facilitate capacity building and intersectoral collaboration	Short-Medium term	Chamber of Commerce; Hotel and Tourism Association; hotel and guesthouse owners; yachties; dive, water taxi and tour operators; farmers and their organisations; fisherfolk and their organisations; cruise ship agents; National Fisherfolk Cooperative; financial and banking institutions; Invest SVG; SVG National Trust; SusGren; The Mustique Company; media; CANARI; CARPHA; CCCCC; CDEMA; Caribbean Tourism Organisation; WINAD; OECS Commission; FAO; UWI
4. To document and share best practices and innovations in engaging civil society and private sector in climate change adaptation and mitigation for scale up and replication	a. Identify, document and showcase best practices and innovations in adaptation and mitigation in SVG[40] for knowledge mobilisation and replication	Short term	
5. To enable public-private partnerships to facilitate information sharing, training, financing and deployment of innovative technologies and practices to support climate change responses	a. Develop memoranda of understanding (MOUs) between public and private sector organisations to support implementation of objectives in the National Climate Change Policy and Strategy and Implementation Plan	Short-Medium term	
	b. Identify and implement private-partnerships and other financing mechanisms to support deployment of innovative climate smart technologies and practices	Medium term	

[40] For example, best practices and innovations by SusGren and The Mustique Company in coral reef and mangrove restoration, waste management and using solar powered desalination plants.

3.3.2 Information management, research and monitoring

Information management, research and monitoring			
Objective: To ensure a comprehensive system of information management, research and M&E to inform climate change decision-making.			
Sub-objectives[41]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To develop climate modelling and systematic observation, research and monitoring systems to determine climate change trends and patterns and inform assessments of current and potential impacts in SVG	a. Establish memoranda of understanding (MOUs) and other strategic partnerships among academia, CSOs and the public and private sector for systematic observations, modelling of climate change, research and M&E	Short term	**Lead: SDU, Ministry of Finance, Economic Planning, Sustainable Development and Information Technology and Meteorological Services** **Partners:** CWSA; Energy Unit, Maritime Administration and NEMO, Ministry of National Security; Grenadines Affairs; Government information services; Departments of Agriculture and Forestry and Fisheries Division, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour; Ministry of Health, Wellness and the Environment; GIS – Physical Planning, Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning; Ministry of Education; Ministry of Tourism; Local government authorities; VINLEC; Chamber of Commerce; Hotel and Tourism Association; farmers and their organisations; fisherfolk and their organisations; hotel and tour operators; private
	b. Upgrade or invest in necessary equipment and tools in various technical departments conducting research and monitoring on climate change, including computers, vehicles upgrades, and ensuring access to high speed internet.	Short-term	
	c. Conduct climate modelling and other research and monitoring of climate parameters to improve understanding of climate change and its current and potential impacts on priority sectors to inform planning and decision-making	Short-Medium term	
	d. Formulate a research plan with priority areas including focus on the sectors for which there is limited data and information on impacts, vulnerability and adaptation responses (e.g. ocean and marine biodiversity and ecosystem-based adaptation), and potential funding streams to facilitate research in priority areas	Short-Medium term	
2. To conduct vulnerability and capacity assessments to identify the key climate change impacts and vulnerabilities for each of the priority sectors and appropriate measures	a. Conduct vulnerability and capacity assessments to identify the key climate change impacts and vulnerabilities for each of the priority sectors and appropriate measures, including collection of local/indigenous knowledge and gender-disaggregated information.	Short-term	
3. To establish a research and development programme for climate smart technologies and practices relevant for various sectors	a. Identify an appropriate institution with responsibilities for management and coordination of climate change research and knowledge management	Short term	
	b. Establish and implement a research and development programme in collaboration with national and regional agencies and academic institutions for climate smart technologies and practices relevant for various sectors and industries, including agriculture, fisheries, energy efficiency and renewable energy, preservation of historical sites, water and soil conservation and waste management.	Medium-Long term	

[41] Sub-objectives are aligned with those identified in the NAP and NDC

Information management, research and monitoring			
Objective: To ensure a comprehensive system of information management, research and M&E to inform climate change decision-making.			
Sub-objectives[41]	**Activities**	**Timeframe**	**Lead agency and key partners**
	c. Develop strategies to encourage and incentivise innovation and research, including innovation prizes, research grants and external sponsorship, and host annual symposiums and conferences to share research results and best practices	Medium term	landowners; SVG National Trust; SusGren; The Mustique Company; CANARI; CARPHA; CCCCC; CDEMA; CIMH; Caribbean Tourism Organisation; WINAD; OECS Commission; ECIAF; FAO; UWI
4. To enhance decision support tools for effective and integrated climate change planning and decision-making by government, civil society and the private sector	a. Conduct needs assessment on decision support tools for implementation of objectives of the Climate Change Policy, including elaboration of a comprehensive Technology Needs Assessment	Short term	
	b. Build capacity in Geographical Information Systems (GIS) and invest in GIS tools and development of spatial databases[42] to link to/support the clearinghouse for climate-related data.	Short term	
5. To establish a national information management system for sharing climate change related data and information across sectors and various stakeholders to support effective decision-making implementation over the long term	a. Develop procedures to ensure coordination in data collection, analysis and sharing as part of national information management system	Short term	
	b. Develop and implement a national information management system to store and share climate change related data and information, and appropriate decision-making tools, across sectors and various stakeholders	Medium-Long term	
	c. Ensure ease of access to climate-related information including via: - Creation of a public, open access website that facilitates easy and free access to non-sensitive information - Annual production and reporting of climate and related statistics	Medium-Long term Short-term	

3.3.3 Intersectoral coordination

[42] The NAP refers to design of a National Spatial Data Management System

Intersectoral coordination			
Objective: To establish institutional mechanisms and sectoral linkages to enable information sharing, coordination and joint implementation for an effective response to climate change.			
Sub-objectives[43]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To operationalise a national coordinating mechanism comprised of the key implementing agencies for climate change adaptation and mitigation and relevant civil society and private sector representatives across the various sectors	a. Establish and operationalise a national coordinating mechanism, including a Technical Advisory Committee on Climate Change (TACCC), comprised of the key implementing agencies for climate change adaptation and mitigation and relevant civil society and private sector representatives across the various sectors in St. Vincent and the Grenadines Islands	Short term	**Lead: SDU, Ministry of Finance, Economic Planning, Sustainable Development and Information Technology** **Partners:** CWSA; Energy Unit, Maritime Administration and NEMO, Ministry of National Security; Grenadines Affairs; Departments of Agriculture and Forestry and Fisheries Division, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour; Ministry of Education; Ministry of Health, Wellness and the Environment; Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning Ministry of Tourism; Ministry of Legal Affairs; Meteorological Services; VINLEC; Chamber of Commerce; Hotel and Tourism Association; National Fisherfolk Cooperative; SVG National Trust; SusGren; community based environmental and tourism organisations; The
2. To increase the human resources and institutional capacity within the EPSDD in the Ministry of Finance, Economic Planning, Sustainable Development and Information Technology to effectively serve as the TACCC secretariat and enable a coordinated, multi-sectoral response to climate change	a. Conduct an institutional capacity assessment and identify conflicts, barriers, gaps and opportunities for implementation of the National Climate Change Policy, Strategy and Implementation Plan	Short term	
	b. Increase the human resources and institutional capacity within the EPSDD in the Ministry of Finance, Economic Planning, Sustainable Development and Information Technology to effectively serve as the TACCC secretariat	Short-Medium term	
3. To designate climate change focal points in the relevant GoSVG ministries and agencies with clear roles and responsibilities for climate change, including supporting the TACCC	a. Identify and designate focal points in the relevant GoSVG ministries and agencies and for key civil society organisations and the private sector	Short term	
	b. Establish clear roles and responsibilities for sectoral focal points/Ministries, including through terms of reference, to support the TACCC to monitor implementation of sectoral vulnerability and risk assessments, and measures for adaptation and mitigation, and mobilise climate financing	Short term	
4. To create a database of all ongoing climate change programmes and projects in SVG to enhance coordination and avoid duplication of efforts and integrate into a national information management system	a. Develop and maintain a database of all ongoing climate change programmes and projects in SVG to enhance coordination and avoid duplication of efforts and integrate into the national information management system	Short term	

[43] Sub-objectives are aligned with those identified in the NAP and NDC

Intersectoral coordination			
Objective: To establish institutional mechanisms and sectoral linkages to enable information sharing, coordination and joint implementation for an effective response to climate change.			
Sub-objectives[43]	**Activities**	**Timeframe**	**Lead agency and key partners**
5. To establish systems and procedures for mainstreaming climate change, including in budgeting and procurement systems and development planning in GoSVG ministries and agencies	a. Conduct assessment of budgeting and procurement systems to identify recommended actions and entry points for mainstreaming climate change considerations	Short term	Mustique Company; WINAD, media
	b. Develop and implement systems and procedures for coordination between the SDU, other lead sectoral agencies and Financial Planning Unit to mainstream climate change into budgeting, procurement and development planning	Short-Medium term	
6. To review and update the policy and legal framework to enable an integrated and multi-sectoral approach to climate change adaptation and mitigation across SVG	a. Review and update the policy and legal framework to enable an integrated and multi-sectoral approach to climate change adaptation and mitigation across SVG, including development of relevant climate change legislation and regulatory regime	Medium term	

3.3.4 Integration of disaster risk management and national security

Integration of disaster risk management and national security			
Objective: To ensure the health, safety and security of Vincentian residents and visitors through an integrated approach to climate change, disaster risk management and national security.			
Sub-objectives[44]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To enhance the institutional and legal framework for an integrated and coordinated approach to climate change, disaster risk management and national security	a. Review and update SVG's Comprehensive Disaster Management (CDM) Policy and current legislation to address existing and emerging hazards, climate change and related hazards/disasters and national security concerns	Short term	**Lead: NEMO and Ministry of National Security** **Partners:** CWSA; Energy Unit, Maritime Administration and NEMO, Ministry of National Security; Grenadines Affairs; Government information services; Departments of
	b. Strengthen institutional arrangements and networks for coordination of disaster risk management across community to national levels, including the National Emergency Management Organisation (NEMO), National Emergency Council, the District and Community Disaster Committees and the National Emergency Operations Centre	Short-Medium term	

[44] Sub-objectives are aligned with those identified in SVG's Comprehensive Disaster Management Policy (2014), NAP and NDC

Integration of disaster risk management and national security			
Objective: To ensure the health, safety and security of Vincentian residents and visitors through an integrated approach to climate change, disaster risk management and national security.			
Sub-objectives[44]	**Activities**	**Timeframe**	**Lead agency and key partners**
2. To establish and maintain early warning systems for key climate related hazards to enable effective disaster preparedness and response, with a focus on vulnerable communities and sectors.	a. Review and assess effectiveness of existing early warning systems in SVG and improve to ensure that systems integrate and respond efficiently to risks from climate change	Short term	Agriculture and Forestry and Fisheries Division, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour; Ministry of Education; Ministry of Health, Wellness and the Environment; Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning Ministry of Tourism; Ministry of Legal Affairs; Meteorological Services; VINLEC; Chamber of Commerce; Hotel and Tourism Association; National Fisherfolk Cooperative; District Disaster Committees; SVG Red Cross; emergency service providers – Fire and Police; media; WINAD; CCRIF; CDEMA; CIMH; Basic Needs Trust Fund (BNTF)
	b. Establish a national early warning mechanism including community level mechanisms applicable to both locals and visitors, to identify and publicise early warning information sources, triggers, early warning messages and response procedures for key climate related hazards, including droughts, floods, heatwaves, hurricanes and storm surge	Short term	
	c. Increase public awareness for disaster preparedness and response, including through social media platforms and mobile service providers for early warning and hazard/disaster notifications and leverage the Emergency Communication Network	Short term	
3. To update risk and vulnerability assessments and maps for natural hazards on an ongoing basis, including droughts, floods, heatwaves, hurricanes and storm surge that are climate related, to support evidence-based decision making	a. Conduct/ update risk and vulnerability assessments and hazard mapping in areas vulnerable to climate change and natural disasters to support early warning, forecasting and action planning	Short-Medium term	
4. To establish a national, standardised process for monitoring and reporting on the impacts of climate related hazards across sectors and identifying priority actions to avert, minimise and address loss and damage in SVG	a. Establish a national, standardised process for monitoring and reporting on the impacts of climate related hazards across sectors which feeds into a Damage and Loss Assessment (DALA) process and used to identify priority actions to avert, minimise and address loss and damage from climate related hazards in SVG	Short term	
5. To integrate relevant data, maps and vulnerability and impact assessment reports on natural hazards, including climate related hazards, into the national information management system to enable knowledge sharing and effective decision-making for disaster risk management and related security concerns	a. Develop and implement a stakeholder coordination mechanism and procedures to integrate relevant data, maps and vulnerability and impact assessment reports on natural hazards, including climate related hazards, into the national information management system	Short- Medium term	

Integration of disaster risk management and national security			
Objective: To ensure the health, safety and security of Vincentian residents and visitors through an integrated approach to climate change, disaster risk management and national security.			
Sub-objectives[44]	**Activities**	**Timeframe**	**Lead agency and key partners**
6. To promote CDM approach that addresses all aspects of disaster risk management in an integrated manner through investment in capacity building and implementation of best practices within government, civil society and the private sector	a. Conduct capacity building across government, civil society and the private sector, including emergency personnel, to apply CDM approach, including for resource mobilisation and building collaborative partnerships for participatory management of disasters	Short term	
	b. Implement the national CDM Policy to enhance preparedness, risk reduction, response, and recovery to climate-related hazards, including monitoring and evaluation of key targets	Medium-Long term	

3.3.5 Investment and economic planning

Investment and economic planning			
Objective: To reduce the economic impacts of climate change and leverage opportunities through effective planning and investment for low carbon, climate resilient development.			
Sub-objectives[45]	**Activities**	**Timeframe**	**Lead agency and key partners**
1. To build capacity for assessment of the costs and benefits of climate change impacts for economic development and potential opportunities for investment and application of screening tools for development planning among GoSVG ministries and agencies	a. Conduct capacity needs assessment to identify key gaps and develop and implement capacity building for GoSVG ministries and agencies to improve assessment of economic impacts of climate change and planning and investment for low carbon, climate resilient development	Short-Medium term	**Lead: Ministry of Finance, Economic Planning, Sustainable Development and Information Technology** **Partners:** CWSA; Energy Unit, Maritime Administration and NEMO, Ministry of National Security; Grenadines Affairs; Departments of Agriculture and
2. To mainstream climate change considerations into the annual development of budgets for all GoSVG ministries and reporting on annual performance by Permanent Secretaries, including specific	a. Develop a national guide with recommendations[46] targeting Permanent Secretaries and Heads of line ministries and agencies to mainstream CCA into planning and budgeting, including entry points for budget review and directives aligned with key multi-year and annual planning and budgeting	Short term	

[45] Sub-objectives are aligned with those identified in the NAP, NDC and NESDP

[46] The SVG NAP indicates the guide should address gender issues and application of environmental and social safeguards, and aim to support the integration of CCA into the next NESDP and sectoral planning instruments

Investment and economic planning			
Objective: To reduce the economic impacts of climate change and leverage opportunities through effective planning and investment for low carbon, climate resilient development.			
Sub-objectives[45]	**Activities**	**Timeframe**	**Lead agency and key partners**
adaptation, mitigation and resilience building initiatives	b. Participate in Climate Action Peer Exchange (CAPE)[47] forum for peer learning, knowledge sharing, and mutual advisory support to help support climate informed fiscal and budgeting processes	Short term	Forestry and Fisheries Division, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour; Ministry of Education; Ministry of Health, Wellness and the Environment; Ministry of Housing, Informal Human Settlements, Land and Surveys and Physical Planning; Ministry of Tourism; Bureau of Standards; Invest SVG; Chamber of Commerce; Hotel and Tourism Association; National Fisherfolk Cooperative; financial and banking institutions; SVG National Trust; SVGCF; SVGEF; SusGren; The Mustique Company; WINAD; CCCCC; Caribbean Development Bank; CCRIF; Economic Commission of Latin America and the Caribbean (ECLAC); OECS Commission; UNDP-GEF Small Grants Programme
	c. Develop and test a sectoral planning and budgeting tool to mainstream adaptation and mitigation considerations	Medium term	
3. To mobilise available climate finance for climate change project development and implementation with the involvement of government, civil society and private sector actors	a. Develop resource mobilisation plans including domestic and international sources of financing and capacity and technology needs to address the portfolio of adaptation and mitigation actions for the priority sectors identified	Short term	
	b. Develop an investment portfolio for the Adaptation Fund and Green Climate Fund, including the elaboration of feasibility studies and project concept notes aligned with the NAP, NDC and NESDP and sectoral strategies and plans	Short-Medium term	
4. To promote private sector actions and investment to support climate change adaptation and mitigation, including through use of fiscal measures such as concessions, subsidies and levies and public-private partnerships	a. Conduct awareness raising with private sector on climate change issues focusing on the benefits of improving environmental performance such as increased competitiveness and reduced costs and exposure to risks	Short term	
	b. Develop public-private partnerships to harness skills and experience to address climate-related issues, such as through dialogues and policy discussions as well as through more formalised co-financing partnerships or other mechanisms	Medium term	
	c. Collaborate with private sector to develop concessions, subsidies and levies, which are in keeping with objectives in the National Climate Change Policy	Short-Medium term	
5. To integrate a system for tracking investments in climate change adaptation and mitigation and their economic, environmental and social impacts into	a. Undertake Climate Public Expenditure and Institutional Review (CPEIR) to measure and track public finance and look at gaps in the budgeting system	Short-Medium term	

[47] https://www.cape4financeministry.org/ CAPE is forum for bringing together ministers and senior technical specialists from finance ministries across the world and other international experts, to discuss the fiscal challenges involved in implementing NDCs.

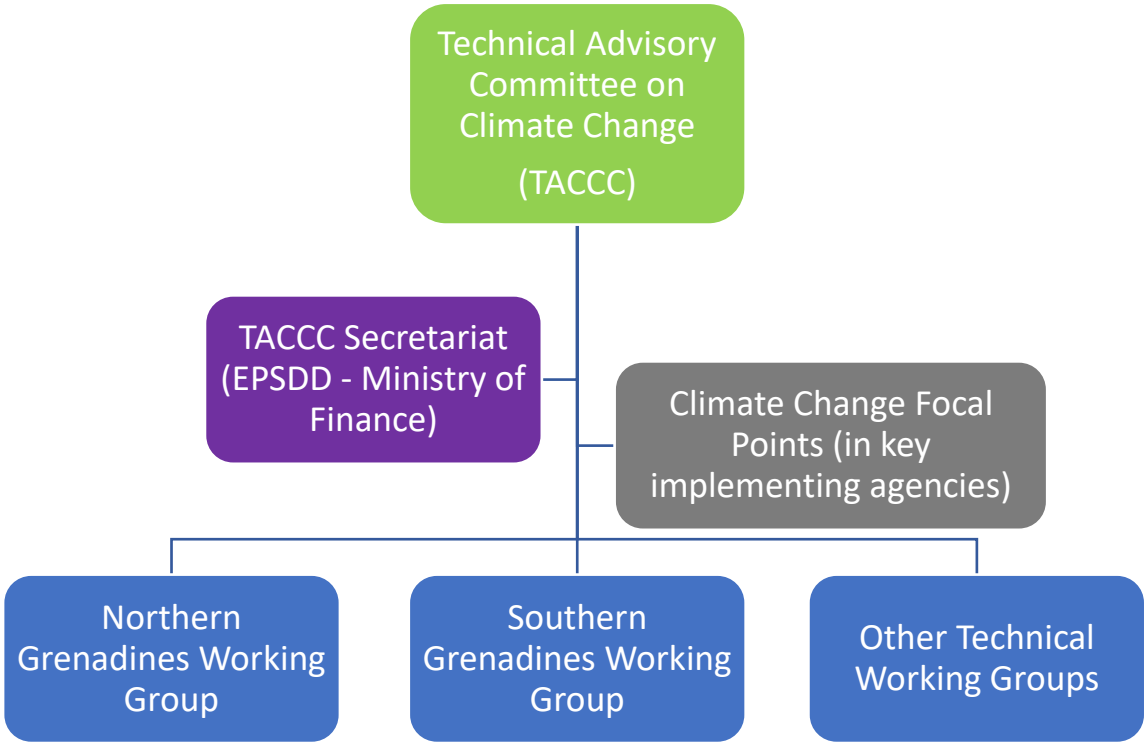
Investment and economic planning			
Objective: To reduce the economic impacts of climate change and leverage opportunities through effective planning and investment for low carbon, climate resilient development.			
Sub-objectives[45]	**Activities**	**Timeframe**	**Lead agency and key partners**
the national monitoring, evaluation and reporting on climate change	b. Conduct Private Climate Expenditure Review (PCER) to help monitor and track private sector climate finance flows		
	c. Set climate change budget lines for the priority sectors identified for adaptation and mitigation and integrate climate change tagging[48] as part of the tracking of climate-related expenditures in the public accounts		
	d. Monitor and report on climate support (including financing, capacity building and technology) from domestic and international sources		

[48] See https://www.climatefinance-developmenteffectiveness.org/topic/climate-budget-tagging-cbt

4. Implementation arrangements

The institutional arrangements for implementation, monitoring and evaluation as detailed in the *National Climate Change Policy* are outlined in Figure 2 below.

Figure 2. Proposed institutional arrangements for implementing the National Climate Change Policy, Strategy and Implementation Plan



A Technical Advisory Committee on Climate Change (TACCC) will be established as a broadly representative advisory body, inclusive of Climate Change Focal Points appointed from the relevant GoSVG ministries and agencies and members of private sector and civil society, to provide strategic guidance and oversight for implementation of the *National Climate Change Policy*.

The EPSDD in the Ministry of Finance, Economic Planning, Sustainable Development and Information Technology will serve as the Secretariat for the TACCC and have overall responsibility for coordinating actual implementation of the *National Climate Change Policy*. This includes cross-sectoral coordination, information gathering and mobilisation of stakeholders[49] for implementation/delivery and monitoring of activities as outlined in this Strategy, toward meeting the Policy objectives.

[49] Stakeholders include government (line ministries and agencies) and local government (town and village councils), civil society organisations (CSOs), private sector (registered corporations and small and micro enterprises), academic and research institutions, regional and international multilateral agencies and Media (broadcast, print and social media).

Thematic working groups which include members from government, civil society and the private sector will be convened by the TACCC to further coordinate and facilitate action where there is deemed to be specific technical need or special concern. Presently it is proposed a Northern Grenadines Working Group be convened to coordinate climate change actions in Bequia and Mustique Islands and a Southern Grenadines Working Group to coordinate actions in Canouan, Mayreau, Palm, Petit St. Vincent and Union Islands.

5. Resource mobilisation

The potential costs of climate change adaptation and mitigation are significant, and the GoSVG will be required to mobilise the requisite resources for actions to build adaptive capacity and resilience and enable low carbon growth as identified in this *Strategy and Implementation Plan*. Options for scaling up of existing funding sources as well as access to new funding sources at the domestic, regional and international levels are outlined below.

5.1 Mobilising domestic resources

In mobilising domestic resources, the GoSVG will focus on leveraging direct budgetary support to mainstream climate change into key sectors of the economy as well as on extra-budgetary support through discretionary funds, debt for climate swaps and public-private partnerships. This includes a recognition that existing expenditure on economic growth, infrastructure and good governance can be structured to foster climate resilient development, rather than requiring a reallocation of resources away from critical development needs. This restructuring of public expenditure can mobilise a significant level of domestic resources, which ca be further augmented with funding from regional and international sources.

Climate Budget Tagging

"Climate Budget Tagging" (CBT) is a climate finance tool to mainstream climate change in the national budget system in order to mitigate the economic, social and environmental impacts of climate change[50]. CBT provides comprehensive data on climate related expenditures which allows Governments to make informed decisions and prioritise climate investments. CBT allows Governments to identify, classify, weigh and mark climate-relevant expenditures in the fiscal budget system. It also allows Governments to estimate, monitor and track these expenditures within the existing fiscal budget system. CBT also enables policy-makers to incorporate climate change considerations in project design of capital investment projects while also providing screening criteria for these projects to ensure that climate change considerations are incorporated.

The following measures will be implemented to allow for mainstreaming of climate change in the national budget:

- setting a climate change budget line in the national fiscal budget to guide budget submissions by line ministries and enable systematic allocation and monitoring of public funds for adaptation and mitigation;
- screening capital investment projects to ensure climate change issues are addressed; and

[50] Bain, N., Nguyen, L. and K. Boboyan. 2019. Climate Change – knowing what you spend: A guidance note for Governments to track climate finance in their budgets. United Nations Development Programme. Available at: https://www.undp.org/content/dam/undp/library/planet/climate-change/RBAP-DG-2019-Climate-Budget-Tagging-Guidance-Note.pdf

- tracking expenditures on climate (for example using budget tagging) and maintaining financial records to support accountability and transparency.

Climate Resilience Levy

The Climate Resilience Levy[51], which was established in June 2018, supports a Contingency Fund to address climate related and other natural disasters. The levy is currently placed on visitors staying at hotels, guesthouses and short-term rentals. However, this can be expanded to include a levy on a wider range of activities, including airport arrivals/departures, cruise ship visitors and yacht berthings[52]. These levies can be used to generate revenue, disincentivise behaviour that contributes to greenhouse gas emissions or increases vulnerability to climate change and better incorporate the environmental costs of greenhouse gas emitting activities in priority economic sectors.

The funds from these levies can be used to support a broader suite of climate resilience activities, including proactive measures for adaptation and disaster risk reduction and mitigation measures, through specific funding windows under the Contingency Fund, which was established in 2017 to protect public finances from the impact of climate change and natural disasters. Currently, a governance and operational framework for the Contingency Fund has not been formalised or legislated which can support climate resilience[53]. Legislation on the governance and operational framework for the Contingency Fund is recommended. This would outline financing mechanisms under the Fund such as a mix of grants, concessionary loans, guarantees and other innovative mechanisms, criteria for eligible parties who can access the fund including public sector agencies, CSOs and private enterprises and screening criteria for projects or activities which are eligible to be funded. Accountability and transparency mechanisms for the Fund would also need to be outlined.

Green bonds

The GoSVG and private sector enterprises can utilise green bonds to raise funds specifically for programmes and projects that have positive environmental or climate mitigation and/or adaptation benefits such as clean energy, sustainable transport, land use and green buildings. These bonds are typically asset-linked and backed by the issuers balance sheet as in other types of bonds. The following table outlines the different types of green bonds which can developed by the GoSVG. However, green bonds have some additional transaction costs since issuers must engage in tracking, monitoring and reporting on the use of the funds. Green bonds can be placed on the local or global market to attract investment.

[51] Climate Resilient Levy charged to all transient visitors in visitor accommodation premises (US$8 per room per night).

[52] The International Monetary Fund (IMF) estimates that, based on the $3 EC levy per night per room for visitors staying up to 30 nights in SVG, the rate of capitalisation of the fund at 0.5% of GDP from 2018 onwards will fall short of what is needed annually to cover the costs of damage due to climate-related disasters and of climate proofing infrastructure and DRR. The levy will therefore need to be targeted at a wider range of activites. See International Monetary Fund (IMF), 2017. St. Vincent and the Grenadines IMF Country Report No. 17/400. https://www.imf.org/en/Publications/CR/Issues/2017/12/21/St-45509

[53] International Monetary Fund (IMF). 2019. St. Vincent and the Grenadines 2018 Article IV Consultantions – Press Release, Staff Report and Statement by the Executive Director for St. Vincent and the Grenadines. Available at: http://finance.gov.vc/finance/images/PDF/IMF_SVG_2018_Article_IV_Consultation_Staff_Report_and_Statement_by_the_Executive_Director.pdf

Types of green bonds (Source: Climate Bonds Initiative, 2018)[54]

Type	*Proceeds raised by bond sale are*	*Debt recourse*	*Example*
"Use of Proceeds" Bond	Earmarked for green projects	Recourse to the issuer: same credit rating applies as issuer's other bonds	EIB "Climate Awareness Bond" (backed by EIB); Barclays Green Bond
"Use of Proceeds" Revenue Bond or ABS	Earmarked for or refinances green projects	Revenue streams from the issuers though fees, taxes etc are collateral for the debt	Hawaii State (backed by fee on electricity bills of the state utilities)
Project Bond	Ring-fenced for the specific underlying green project(s)	Recourse is only to the project's assets and balance sheet	Invenergy Wind Farm (backed by Invenergy Campo Palomas wind farm)
Securitisation (ABS) Bond	Refinance portfolios of green projects or proceeds are earmarked for green projects	Recourse is to a group of projects that have been grouped together (e.g. solar leases or green mortgages)	Tesla Energy (backed by residential solar leases); Obvion (backed by green mortgages)
Covered Bond	Earmarked for eligible projects included in the covered pool	Recourse to the issuer and, if the issuer is unable to repay the bond, to the covered pool	Berlin Hyp green Pfandbrief; Sparebank 1 Bolligkredit green covered bond
Loan	Earmarked for eligible projects or secured on eligible assets	Full recourse to the borrower(s) in the case of unsecured loans. Recourse to the collateral in the case of secured loans, but may also feature limited recourse to the borrower(s).	MEP Werke, Ivanhoe Cambridge and Natixis Assurances (DUO), OVG
Other debt instruments	Earmarked for eligible projects		Convertible Bonds or Notes, Schuldschein, Commercial Paper, Sukuk, Debentures

The green bond market is growing rapidly especially in emerging markets with a cumulative US$580 billion sold from 2010-2018 globally[55] and projected to continue to increase. Although no climate-linked green bonds have been issued by Caribbean governments as yet[56].

Public-private partnerships

Public-private partnerships are increasingly being used to finance investment in public infrastructure, particularly for roads, ports and energy and water supplies. SVG is already using this modality to finance the La Soufriere geothermal energy project with a capacity of 10-15 MW[57]. Other

[54] See https://www.climatebonds.net/market/explaining-green-bonds

[55] Bloomberg New Energy Finance. 2018. State of Clean Energy Investment Report. https://about.bnef.com/clean-energy-investment/ and https://www.bloomberg.com/news/articles/2019-03-24/what-are-green-bonds-and-how-green-is-green-quicktake

[56] ECLAC. 2017. The rise of green bonds: Financing for development in Latin America and the Caribbean, October 2017. https://repositorio.cepal.org/bitstream/handle/11362/42230/1/S1700985_en.pdf

[57] The La Soufriere geothermal project is being implemented through a public-private partnership between the GoSVG, Light and Power Holdings and Reykjavik Geothermal with a concessional loan of 15,000,000 USD from

opportunities for investment in renewable energy technologies, green infrastructure and climate proofing existing infrastructure such as roads, bridges and air and sea ports will need to be explored. The identification of opportunities should be informed by the work of Caribbean Development Bank and Economic Commission for Latin America and the Caribbean (ECLAC), which have reviewed the positive and negative lessons to be learned from Caribbean experiences and provided guidelines for successful public-private partnerships[58].

Social and impact investing

Social and impact investing, and associated capital markets and crowd funding platforms, offer alternative mechanisms for financing adaptation, mitigation and other resilience building activities through engagement of the Vincentian population resident in SVG and the diaspora. The Jamaica Stock Exchange has pioneered an innovative model, establishing the Jamaica Social Investment Exchange (JSIX) and Jamaica Impact Investment Exchange (JIIX) to support the not for profit sector and social and green enterprises to address critical environmental and socio-economic problems through the re-investment of profits using effective and ethical business practices[59].

Other forms of private sector investment

Private sector investment in climate change adaptation and mitigation will be incentivised by a policy and fiscal regime in SVG that enhances the likelihood of profits and minimises the risks of losses. The GoSVG can support investor decision-making with information on the risk profiles they face, as well as re-balance incentives away from enterprises which are high emitters or reinforce vulnerabilities through their activities toward those whose activities support adaptation and mitigation. This will be particularly relevant for investment in tourism and commercial agricultural production. Restructuring the taxation system is one key tool as both local and foreign investors respond to tax concessions of one form or another (e.g. on income, import duties, equipment and inputs etc.). All beneficiaries from incentives should be required to submit reports on the risks that they face in their respective sector, so that the local and first-hand information can flow directly into the preparation of updated risk profiles.

5.2 Mobilising regional and international resources

Regional and international sources are currently a key source of climate financing in SVG, including bilateral financing from donor countries and multilateral funds such as the Adaptation Fund (AF), Green Climate Fund (GCF) and Global Environment Facility (GEF). Other international sources of financing include debt for climate swaps and private investments (recognising that these are often stimulated by public financing).

Bi-lateral and multi-lateral financing

Public sector agencies and CSOs in SVG has benefitted from a range of bi-lateral climate financing that targets Caribbean SIDS, including through the European Union Global Climate Change Alliance Plus Initiative, Germany's International Climate Initiative, the Japan-Caribbean Climate Change Partnership and the United States Agency for International Development's Climate Change Adaptation Program. Building strategic partnerships with these bi-lateral donors and regional financial intermediaries, including the CCCCC, Caribbean Development Bank and Organisation for Eastern Caribbean States (OECS), can help leverage continued financing through these avenues.

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the Abu Dhabi Fund for Development. The project is expected to be completed in 2023 and generate 10-15 MW of electric power.

[58] Caribbean Development Bank. 2014. Public-Private Partnerships in the Caribbean: Building on Early Lessons, May 2014, https://www.ceintelligence.com/files/documents/Public-Private-Partnerships-in-the-Caribbean.pdf

[59] See https://www.jamstockex.com/what-is-the-jamaica-social-stock-exchange/

Substantial climate financing is also increasingly available through multi-lateral development banks, including the Inter-American Development Bank and World Bank, and funds, including the AF, GCF and GEF. In particular, the two newest funds, AF and GCF, offer significant opportunities to access financing for adaptation and mitigation. However, it must be noted that the distribution of international climate finance is currently skewed towards the Asia and Pacific region, with the Caribbean SIDS unable to secure the desired level of finance for climate change mitigation and adaptation[60]. Strategic partnerships with regional and international agencies that are accredited as intermediaries and executing entities to the AF, GCF and GEF can help to further leverage financing through these funds.

Adaptation Fund (AF)
Officially launched in 2007, the AF finances concrete adaptation projects and programmes aimed at helping developing countries to address the impacts of climate change. It was set up under the Kyoto Protocol of the UNFCCC. It recently launched its Medium Term Strategy for 2018-2022 that focuses on three key areas:

1. Action - To support the design and implementation of high quality adaptation projects and programmes showcasing appropriate best practices
2. Innovation – To support the development and sharing of innovative adaptation practices, tools and technologies for scale up and replication
3. Learning – To support learning and sharing about adaptation finance and action

The AF also mainstreams four cross-cutting themes across its work, including empowering the most vulnerable communities; advancing gender equality; strengthening long-term institutional and technical capacity for effective adaptation; and building complementarity with other climate finance mechanisms.

AF has a $100 million annual target at present, with the majority of resources reserved for concrete actions under strategic focus 1 (Action) and 2 (Innovation). SVG can access up to a total of US$10 million for adaptation projects/programmes under the Fund, plus additional support through its readiness programme for national implementing entities. Potential projects for SVG could include specific actions identified under the priority sectors for adaptation, including agriculture, coastal and marine zone, forests, water, settlements and infrastructure, and tourism.

To facilitate access to the AF, a focal point will need to be established and coordinate efforts within SVG. Strategic partnerships also need to be established with regional and international agencies that are accredited as executing entities to the AF, including the Caribbean Development Bank, United Nations Development Programme, United Nations Environment and World Bank.

Green Climate Fund (GCF)
The GCF, which was launched in 2014, supports developing countries to undertake adaptation and mitigation and promotes a shift to low emission and climate resilient development. It has disbursed over US$ 5.2 billion globally, with Caribbean SIDS receiving approximately US$ 150 million for approved projects so far.

Under its new Strategic Plan 2020-2023, GCF will focus on four key areas: built environment; energy; land-use, forests and ecosystems; and livelihoods. It will also focus on the cross-cutting issues of: transformational planning and programming; catalysing innovation; mobilising investments at scale; and knowledge exchange and replication. It also has a readiness support programme which provides

[60] Oliver, P., Clark, A., Meattle, C. and B. Buchner. 2018. Global Climate Finance: An Updated View 2018. Available at : https://climatepolicyinitiative.org/publication/global-climate-finance-an-updated-view-2018/

up to US$ 1 million per year for eligible countries such as SVG for capacity building and technical assistance.

GCF has also established special facilities including the Private Sector Facility and GEEREF NeXt[61] targeting developing countries including SVG and other Caribbean countries. The Private Sector Facility provides financing to private sector enterprises and encourages them to co-invest and support renewable energy and climate resilience projects. The GEEREF NeXt is structured as a fund of funds, with the aim of being a first investor (anchor investor) in renewable energy and energy efficiency investment funds, and encouraging other investors to co-invest.

SVG has the potential to access from US$ 10-200 million in financing from GCF for a range of activities under its priority sectors for adaptation and mitigation, including agriculture and fisheries, coastal and marine zone, forests, energy, health, transport, tourism, settlements and infrastructure, and water. To realise access to the GCF, government, civil society and private sector stakeholders can build on current readiness activities, including strengthening of the National Designated Authority/ Focal Point within the EPSDD, Ministry of Finance, Economic Planning, Sustainable Development and Information Technology and development of a strategic investment framework including a pipeline of projects for GCF funding. Strategic partnerships also need to be leveraged with regional and international agencies that are accredited as executing entities to GCF, including the CCCCC, Caribbean Development Bank, Food and Agriculture Organization of the United Nations, United Nations Development Programme and United Nations Environment Programme.

Debt for Climate Swaps

With a fairly high level of debt at 74%[62] of GDP, of which 50%[63] is external debt, SVG is not well positioned to access this type of financing on its own. A cooperative approach to debt for climate swaps is a more viable option for SVG, including partnering with ECLAC on its regional initiative. ECLAC is pursuing a programme of debt for climate adaptation swaps for the Caribbean[64] through leveraging resources from GCF to write down Caribbean public debt from multilateral and bilateral lenders, and to buy back debt from private creditors at a steep discount. With the newly found fiscal space, Caribbean governments would then make payments into a Caribbean Resilience Fund. This fund is expected to provide financing for investment in climate resilience, green growth and structural transformation in the economies of the region.[65]

Foreign Direct Investment

Foreign direct investment offers an additional source of financing for climate change adaptation, mitigation and resilience building activities in SVG. Key investment sectors include agro-processing, financial services including insurance, renewable energy and tourism. Foreign direct investment will require scaling up or enhancing mechanisms for attracting investment, such as Invest SVG, and a policy and fiscal regime in SVG that enhances the likelihood of profits and minimises the risks of

[61] Green Climate Fund (GCF). 2018. Geeref Next Project Page. Available at: https://www.greenclimate.fund/projects/FP038

[62] See Countryeconomy.com, St. Vincent and the Grenadines National Debt, https://countryeconomy.com/national-debt/saint-vincent-the-grenadines

[63] CDB. 2013. Public Sector Debt in The Caribbean: An Agenda for Reduction and Sustainability. https://www.caribank.org/publications-and-resources/resource-library/thematic-papers/study-public-sector-debt-caribbean-agenda-reduction-and-sustainability

[64] ECLAC Proposal on Debt for Climate Adaptation Swaps: a Strategy for Growth and Economic Transformation of Caribbean Economies, November 2017 https://www.cepal.org/sites/default/files/news/files/nydbetreliefcaribbeannovember2017.pdf

[65] ECLAC's Proposal on Debt for Climate Adaptation Swaps: a Strategy for Growth and Economic Transformation of Caribbean Economies, November 2017 https://www.cepal.org/sites/default/files/news/files/nydbetreliefcaribbeannovember2017.pdf

losses. As noted above, restructuring the taxation system is one key tool as foreign investors will respond to tax concessions (e.g. on income, import duties, equipment and inputs etc.).

5.3 Strengthening capacity to access climate finance

To support resource mobilisation and implementation of the *Strategy and Implementation Plan*, a mix of national, regional and international financial intermediaries will be identified with capacity to access resources, blend and combine finance, manage funds, deliver finance, and monitor and report on the use of funds. Building the capacity of national intermediaries will be a priority and, where regional or intermediaries are used, mechanisms will be put in place to ensure country ownership and inclusive decision-making that engages the public and private sector and civil society.

Suitable national intermediaries in addition to the Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology will be identified, such as:

- Other line ministries and agencies that will deliver climate change adaptation and mitigation to achieve the objectives of this *Strategy* via their allocated sector budgets and project support.
- National CSOs, such as the SVG National Trust and SusGren, and private sector organisations that play a role in accessing and implementing sector and project support.

Suitable regional and international intermediaries will be further identified, and relationships developed to facilitate access to and management of financing, including:

- Regional intermediaries to support access to climate financing, including those accredited for direct access of multi-lateral funds like AF, GCF and GEF such as CCCCC and the Caribbean Development Bank.
- Bi-lateral agencies to support access to bi-lateral financing.
- International and regional CSOs, such as CANARI and The Nature Conservancy, to support access to international and regional project financing.

In particular, strengthening the role and capacity of civil society and the private sector to leverage funding for climate resilient and low carbon activities is key. The EPSDD and TACCC should seek to leverage readiness support from various sources, including the AF and GCF, to build the capacity of CSOs and private sector enterprises in SVG for proposal development and delivery and reporting of climate finance projects. This will enhance direct access to climate financing to support on the ground actions and a bottom up approach to climate change.

6. Monitoring, evaluation and review

Monitoring and evaluation (M&E) is key to ensure effective implementation of the *Strategy and Implementation Plan*, and that there is full transparency and accountability in the overall process. It enables stakeholder to track progress and assess the impact of the specific activities for adaptation, mitigation and cross-cutting areas identified in the Strategy and Implementation Plan. It also documents experiences and lessons learned and facilitates identification of best practices and key gaps and needs that must be addressed to improve implementation and ensure an effective response to climate change.

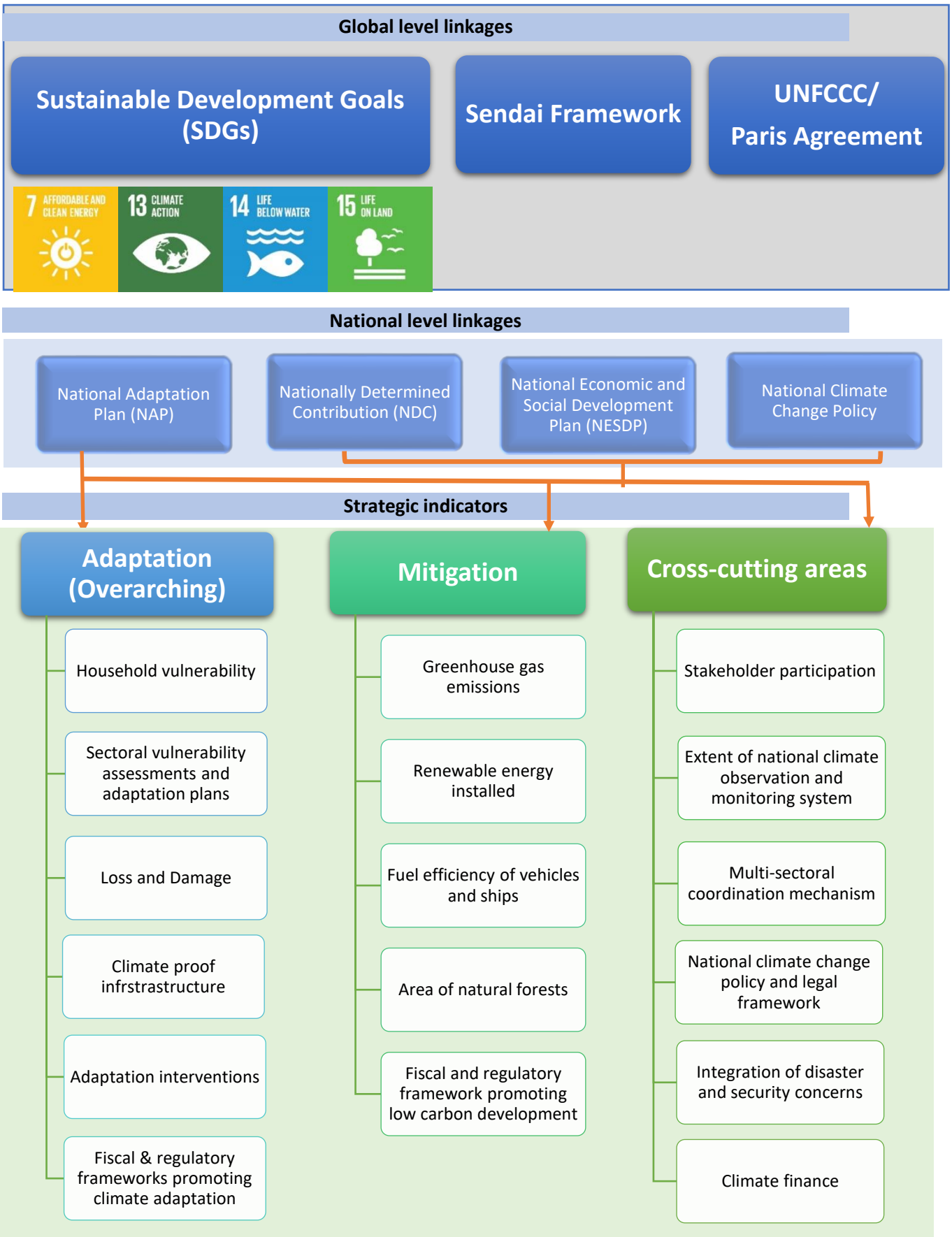
The following table outlines a framework for M&E including strategic indicators, targets and metrics focused on both the implementation ***process*** and ***outcomes***. The process indicators and targets track how activities have been carried out in terms of the level of stakeholder participation, human and institutional capacity for coordination and decision-making, information sharing and learning and ability to mobilise resources. In particular, they track activities under the five cross-cutting areas in

the *Strategy and Implementation Plan*. The outcome indicators and targets track the changes and results from carrying out activities, such as reduced vulnerability, improved livelihoods and ecosystem health and increased energy efficiency. These focus on results within the priority sectors for adaptation and mitigation in the *Strategy and Implementation Plan*.

The M&E framework is designed to be practical, flexible and able to be integrated with other existing M&E frameworks for SVG (see Figure 3), including the monitoring, reporting and verification (MRV) system being developed to support implementation of the NDC. M&E for the NAP, NESDP and sectoral policies and plans should also feed data into this framework. This integration should reduce the burden for data collection and reporting for M&E across all these various policies and plans.

The M&E framework is further aligned with regional and international priorities, and applicable targets and indicators, to enable reporting of SVG's progress in meeting its commitments. This includes international commitments related to the United Nations Framework Convention on Climate Change (UNFCCC), Sustainable Development Goals (SDGs) and Sendai Framework for Disaster Risk Reduction (SFDRR). The M&E framework will also consider regional priorities and targets, including under the Regional Climate Change Strategic Framework and its Implementation Plan for Development Resilient to Climate Change and the Comprehensive Disaster Management Strategy 2014-2024.

Figure 3. Schematic of M&E Framework and Global and National Linkages



Strategic indicator	Tells us…	Target	Metric	Desired direction of change	Alignment with global and national targets
Adaptation (overarching)					
Household vulnerability	How many households exposed to and impacted by climate related hazards (e.g. drought, floods, storms and storm surge)	% of households affected by climate related hazards in 2025 remains same in relation to baseline	Number and type of households affected by climate related hazards		SDG 13 (target 13.1), NESDP Goal 4 (objective 4.5)
Sectoral vulnerability assessments and adaptation plans	Whether vulnerability assessments are being implemented in priority sectors to inform climate change adaptation planning and decision making	At least 25% increase in number of sectoral vulnerability assessments and adaptation plans in relation to baseline	Number sectoral vulnerability assessments and adaptation plans		SDG 13 (target 13.2), NAP - Strategic Action 8
Loss and damage	What is the impact and cost of climate related hazards in terms of property damage and loss of assets	% loss of GDP from climate related hazards in 2025 remains same in relation to 2015 baseline	% loss of GDP from climate related hazards		UNFCCC Paris Agreement; NESDP Goal 4 (objective 4.5)
Climate proof infrastructure	How well is public infrastructure able to withstand climate related hazards	No more than 25% of critical infrastructure, including airport, ports, roads and bridges, affected by climate related hazards annually	% of critical public infrastructure (airports, ports, main roads and bridges) affected by floods and storms		NESDP Goal 4 (objective 4.5 and 4.10)
Adaptation interventions	How the impacts of climate related hazards are being addressed to reduce vulnerability and build resilience	At least one adaptation measure successfully piloted for each sector by 2025	Number of demonstration/pilot sites for adaptation measures by sector		SDG 13 (target 13.1), NESDP Goal 4 (objective 4.10), NAP – Strategic Action 9
Fiscal and regulatory frameworks	Whether there are appropriate fiscal measures, legislation and regulations	At least two new fiscal and regulatory frameworks enacted by 2025 to	Number and type of fiscal measures (taxes, subsidies, concessions)		SDG 13 (target 13.2), NESDP Goal 4 (objective

Strategic indicator	Tells us…	Target	Metric	Desired direction of change	Alignment with global and national targets
promoting climate adaptation	in place for climate adaptation	promote climate adaptation	and related regulations enacted at national level		4.10), NAP - Strategic Action 1
Adaptation (by sector)					
Agriculture					
Agriculture early warning system (EWS)	How well EWS are being developed and implemented to reduce climate impacts and speed up responses by agriculture stakeholders	Agriculture EWS established by 2022, with at least 25% of farmers having access to EWS information	Number of farmers registered for EWS mobile apps or other information services	↑	NESDP Goal 4 (objective 4.10)
Climate resilient agricultural practices	Whether climate resilient agricultural practices, including ecosystem-based adaptation, being implemented by crop and livestock farmers	At least 500 crop and livestock farmers utilising climate resilient practices by 2025	Number, gender and type of registered farmers participating in training and projects involving climate resilient practices	↑	NESDP Goal 1 (objective 1.2) and Goal 4 (objective 4.10), NAP – Strategic Action 9
Coastal and marine zone					
Green infrastructure	Whether green infrastructure, including ecosystem-based solutions, is being utilised to protect and prevent further damage and degradation of key coastal and marine areas	At least 25% of coastal infrastructure projects have integrated green infrastructure solutions by 2025	Number of approved public infrastructure projects in coastal zone integrating green infrastructure	↑	SDG 14 (target 14.2), NESDP Goal 4 (objective 4.7)
Area of coastal and marine ecosystems under protection	Whether coastal and marine ecosystems, which are critical as natural defence against climate hazards and for livelihoods and wellbeing, are sustainably	At least 10% of coastal and marine ecosystems under protection by 2020 to provide natural defense to climate related hazards	Hectares/km^2 of coastal and marine ecosystems designated as protected areas	↑	SDG 14 (target 14.5), NESDP Goal 4 (objective 4.7)

Strategic indicator	Tells us…	Target	Metric	Desired direction of change	Alignment with global and national targets
	managed and protected to ensure their resilience				
Education					
Climate change curriculum development	How well climate change is incorporated into formal and informal education curricula at all levels, including for advancing knowledge, skills and education related to climate change, its impacts and potential responses	Climate change curriculum developed and being implemented for all primary, secondary, vocational and tertiary level schools by 2025	Number of schools with climate change in curriculum		SDG 13 (target 13.3), NESDP Goal 4 (objective 4.10), NAP - Strategic Action 4
School readiness	Whether schools are well-equipped to deal with climate impacts and related disasters, including through awareness, planning and practical actions to climate proof infrastructure and help adapt to climate change	At least 50% of all schools develop and implement climate change and disaster readiness programmes by 2025	Number of schools participating in CDEMA Model Safe School Programme[66]		SDG 13 (target 13.1)
		At least 50% of schools used as disaster shelters are climate proofed by 2025	Number of schools used as disaster shelters that are climate proof (e.g. installation of hurricane straps, reinforcing doors and windows, outfitted with back up power supply)		SDG 13 (target 13.1)
Energy					

[66] SVG is a participant in the CDEMA Model Safe School Programme https://www.cdema.org/index.php?option=com_content&view=article&id=1779:cdema-launches-model-safe-school-programme-in-the-caribbean-a-inaugural-meeting-of-national-safe-schools-programme-committees&catid=35:press-releases

Strategic indicator	Tells us…	Target	Metric	Desired direction of change	Alignment with global and national targets
Energy supply and distribution	Whether adequate measures being taken to avoid or reduce disruptions to critical infrastructure due to climate related hazards and ensure safe and reliable energy supply and distribution	No more than 25% of critical energy infrastructure affected by climate related hazards annually	% electricity grids and sub-stations affected by floods, landslides and storms		NESDP Goal 4 (objective 4.9)
Finance and banking					
Business continuity	Whether measures are being undertaken for business continuity in the banking and finance sector, to reduce disruptions from climate extremes and related disasters	No more than 25% of banking/finance infrastructure physically affected by climate related hazards or experiencing extended service disruptions annually	Number of banks/financial institutions physically affected or experiencing extended interruptions in services to clients due to impacts from floods and storms		NESDP Goal 4 (objective 4.10)
Fisheries and Aquaculture					
Early warning and response mechanisms	Whether EWS and response mechanisms, which are critical to reduce damage and losses from climate change and related hazards, are being developed and used to inform responses by fisherfolk and other stakeholders	At least 500 fisherfolk have access to EWS information by 2025	Number of fisherfolk registered for EWS mobile apps, radios and other information services		NESDP Goal 4 (objective 4.10)
Climate resilient practices	Whether climate resilient practices are being adopted to reduce vulnerability of	At least 25% fisherfolk trained and utilising	Number of registered fisherfolk participating in training and projects		NESDP Goal 1 (objective 1.2) and Goal 4

Strategic indicator	Tells us…	Target	Metric	Desired direction of change	Alignment with global and national targets
	fisherfolk and contribute to sustainable livelihoods	climate resilient practices by 2025	related to climate resilient practices		(objective 4.10), NAP – Strategic Action 9
Livelihood diversification	Whether livelihoods diversification is being pursued as a means to reduce risk of those engaged in climate sensitive livelihoods such as fishing	At least 25% of registered fishers have alternate or additional source of income by 2025	Number of registered fishers involved in alternative livelihoods including aquaculture and seamoss farming	↑	NESDP Goal 4 (objective 4.7)
Forest and terrestrial resources					
Climate proofing forest-based enterprises and livelihoods	Whether measures are being taken to increase adaptive capacity and improve overall resilience of forest-based enterprises and livelihoods to climate related hazards	At least 100 forest-based enterprises benefit from climate proofing, and micro-financing to support this work, by 2025	Number of forest-based enterprises climate proofed	↑	SDG 13 (target 13.1), NESDP Goal 4 (objective 4.7)
Integrating ecosystem based or landscape approaches to management	Whether forest and other terrestrial resources are sustainably managed using an ecosystem-based or landscape approach to reduce loss and degradation and provide critical ecosystem services, including flood regulation and freshwater provision	At least 10% of forests being managed sustainably using ecosystem-based or landscape approach in 2025	Hectares/Km^2 of forest under sustainable management practices (e.g. including agroforestry or integrated crop-livestock-forestry systems)	↑	SDG 15 (target 15.2), NESDP Goal 4 (objective 4.7)
Human health					

Strategic indicator	Tells us…	Target	Metric	Desired direction of change	Alignment with global and national targets
Climate-linked health early warning system (EWS)	Whether a climate-linked health EWS is established and used as a tool for planning and decision making	Climate health EWS established by 2025, with at least 50% health institutions accessing and using information for decision-making	Climate-linked health EWS established, and number of health institutions sharing early warning information on climate related health issues (e.g. heat stress, mosquito borne diseases)		SDG 3 (target 3.D), NESDP Goal 4 (objective 4.5 and 4.10)
Accessibility and reliability of health services	Whether there is sustained and reliable access by residents and visitors to health services, especially in areas highly vulnerable to climate hazards and disasters,	At least 25% increase in number of climate proofed and green health facilities by 2025 in relation to baseline	Number of health facilities or hospitals approved under SMART Health Care Facilities in the Eastern Caribbean Project		SDG 3 (target 3.8), NESDP Goal 4 (objective 4.5)
Settlements, infrastructure and physical development					
Green infrastructure and buildings	Whether green infrastructure solutions are being employed in new physical developments and human settlements, and design of new critical infrastructure to combat the impacts of climate change and help people adapt to adverse effects	At least 25% of public sector buildings, including new or retrofitted building, integrate green infrastructure in the design	Number of approved public sector buildings integrating green infrastructure		NESDP Goal 4 (objective 4.10)
Planning and development controls	Whether strategic land use planning, particularly development planning and control, is being used as	At least 25% of new planning and development approvals incorporate	Number of new approvals which incorporate climate		NESDP Goal 4 (objective 4.10)

Strategic indicator	Tells us…	Target	Metric	Desired direction of change	Alignment with global and national targets
	critical tool for adapting to climate change and related hazards	climate change and disaster risk requirements	change and disaster risk requirements		
Tourism					
Green infrastructure and building practices	Whether steps being taken to green tourism related assets including using ecosystem-based and green infrastructure solutions (e.g. mangrove and reef restoration and artificial reefs for coastal protection) and green building practices	At least 25% increase in green tourism assets and facilities (e.g. hotels, guesthouses and beaches) by 2025 in relation to baseline	Number of tourism assets and facilities utilising green infrastructure or green building practices		NESDP Goal 4 (objective 4.10)
Tourism product diversification	Whether actions being taken to make existing tourism products sustainable in the face of climate change or reduce dependence on climate sensitive tourism products	At least 1 new sustainable tourism product developed and piloted by 2025, which is not highly climate sensitive	Number of new sustainable tourism products developed and piloted (e.g. cultural tourism)		NESDP Goal 1 (objective 1.3)
Water					
Water supply and security	Whether steps being taken to ensure water security for the population, including via access to reliable water supply in the face of drought and other climate related hazards	At least 25% improvement in reliability of water supply by 2025 in relation to baseline	% total population with access to clean, safe pipe borne water supply		SDG 6 (target 6.1), NESDP Goal 4 (objective 4.6)

Strategic indicator	Tells us…	Target	Metric	Desired direction of change	Alignment with global and national targets
Water use efficiency and conservation	Whether water efficiency and conservation measures being undertaken in order to adapt to the increasing risk of water shortages as a result of climate variability and change	Average volume of water used per household or commercial/government building unit decreased in 2025 in relation to baseline	Average volume of water per household or commercial/government building unit		SDG 6 (target 6.4), NESDP Goal 4 (objective 4.6)
Waste management					
Post disaster waste collection and disposal	Whether considerations are being given for disaster waste management, including identification of temporary waste collection sites and removal or safe disposal of post disaster debris	Number of assigned waste collection and disposal sites for disaster waste increased in 2025 above the baseline	Number of assigned waste collection and disposal sites for disaster waste		SDG 13 (target 13.1), NESDP Goal 4 (objective 4.8)
Mitigation					
Greenhouse gas emissions	How much greenhouse gas emissions, which contribute to global climate change, are produced across SVG	22% reduction in greenhouse gas emissions by 2025 compared to the business as usual scenario	Metric tonnes of carbon dioxide equivalents		UNFCCC Paris Agreement; NDC target
Renewable energy installed	How many installations of renewable energy (hydroelectric, solar, geothermal) which provide alternative low-emission energy sources	At least 50% of the annual electricity supply is from renewable energy sources by 2025	Megawatts (MW) of renewable energy		SDG 7 (target 7.2), NESDP Goal 4 (objective 4.9)
Fuel efficiency of vehicles and ships	How efficiently do vehicles and ships use fuels, such as diesel and gasoline, which	At least 50% of newly registered vehicles and ships have fuel	Litres of fuel per km		SDG 7 (target 7.3), NESDP Goal

Strategic indicator	Tells us…	Target	Metric	Desired direction of change	Alignment with global and national targets
	contribute to greenhouse gas emissions	consumption rating below the national average			4 (objective 4.2 and 4.9)
Area of natural forests	What is the extent of forests that can sequester carbon dioxide from the atmosphere and serve as 'carbon sinks'	Area of forest in 2025 remains same or increased in relation to the baseline	Hectares/Km^2 of forests designated as protected areas Hectares/Km^2 of forest restored	– / ↑	SDG 15 (target 15.1), NESDP Goal 4 (objective 4.1 and 4.7)
Fiscal and regulatory framework promoting low carbon development	Whether there are appropriate fiscal measures, legislation and regulations in place to promote low carbon development	At least two new fiscal and regulatory frameworks enacted by 2025 for renewable energy and energy/fuel efficiency	Number and type of fiscal measures (taxes, subsidies, concessions) and related regulations enacted at national level	↑	SDG 13 (target 13.2), NESDP Goal 4 (objective 4.9)
Cross-cutting areas					
Stakeholder participation	How effectively are stakeholders being engaged in climate change planning and implementation	At least 25% of stakeholders engaged are women and from civil society and the private sector by 2025	Number, gender and type of stakeholders participating in planning and implementation processes	↑	NESDP Goal 4 (objective 4.10), NAP - Strategic Action 1
Extent of national climate observation and monitoring system	How effectively are climate change hazards and their impacts being monitored to inform decision-making	At least 25% increase in the number of hydrometeorological stations, tide/sea level gauges and research sites by 2025 within system	Number of stations, tide/sea level gauges and research sites within system	↑	NESDP Goal 4 (objective 4.10), NAP - Strategic Action 3
Multi-sectoral coordination mechanism	How is climate change response being coordinated and implemented to enable	Multi-sectoral coordination mechanism established and active at national level by 2025	Number of meetings per year of multi-sectoral coordination mechanism	↑	NESDP Goal 4 (objective 4.10), NAP - Strategic Action 1

Strategic indicator	Tells us…	Target	Metric	Desired direction of change	Alignment with global and national targets
	a cross-sectoral and inclusive approach				
National climate change policy and legal framework	Whether there are appropriate national policies, plans and legislation in place to enable climate change response	Climate Change Policy, Climate Change Strategy and Implementation Plan and National Adaptation Plan formally approved and operationalised by 2020; Climate change legislation enacted by 2025	Number of climate change policies, plans and legislation enacted at national level		SDG 13 (target 13.2), NESDP Goal 4 (objective 4.10), NAP - Strategic Action 2
Integration of disaster and security concerns	How effectively are disaster risk management and national security concerns being integrated into climate change and wider development efforts	At least five local or sectoral plans updated to include disaster risk and national security concerns by 2025	Number of local development plans or sectoral plans integrating disaster and security concerns		SDG 13 (target 13.2), NESDP Goal 4 (objective 4.5)
Climate finance	How much, and what type of, financing is being mobilised to support climate change projects/programmes	At least US$ 50 million secured and being invested by 2025	$ value and type of financing available for adaptation, mitigation or cross-cutting projects/programmes		SDG 13 (13.A and 13.B), NAP – Strategic Action 7

To facilitate M&E, the TACCC and EPSDD will be responsible for the following activities, in collaboration with all other relevant stakeholders to:

- ensure that M&E of implementation of the *National Climate Change Policy*, Strategy *and Implementation Plan* is continuous and informs adaptive management by implementing agencies and organisations;
- conduct annual reviews of the *Strategy and Implementation Plan* and a comprehensive review of the overarching *National Climate Change Policy* every five years, with effective engagement of stakeholders in the process; and
- revise or develop a new *Strategy and Implementation Plan*, including the M&E framework, following five-year review of the *Policy* as needed.

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