SAINT LUCIA'S EXPERIENCE WITH PRIVATE SECTOR CLIMATE ADAPTATION

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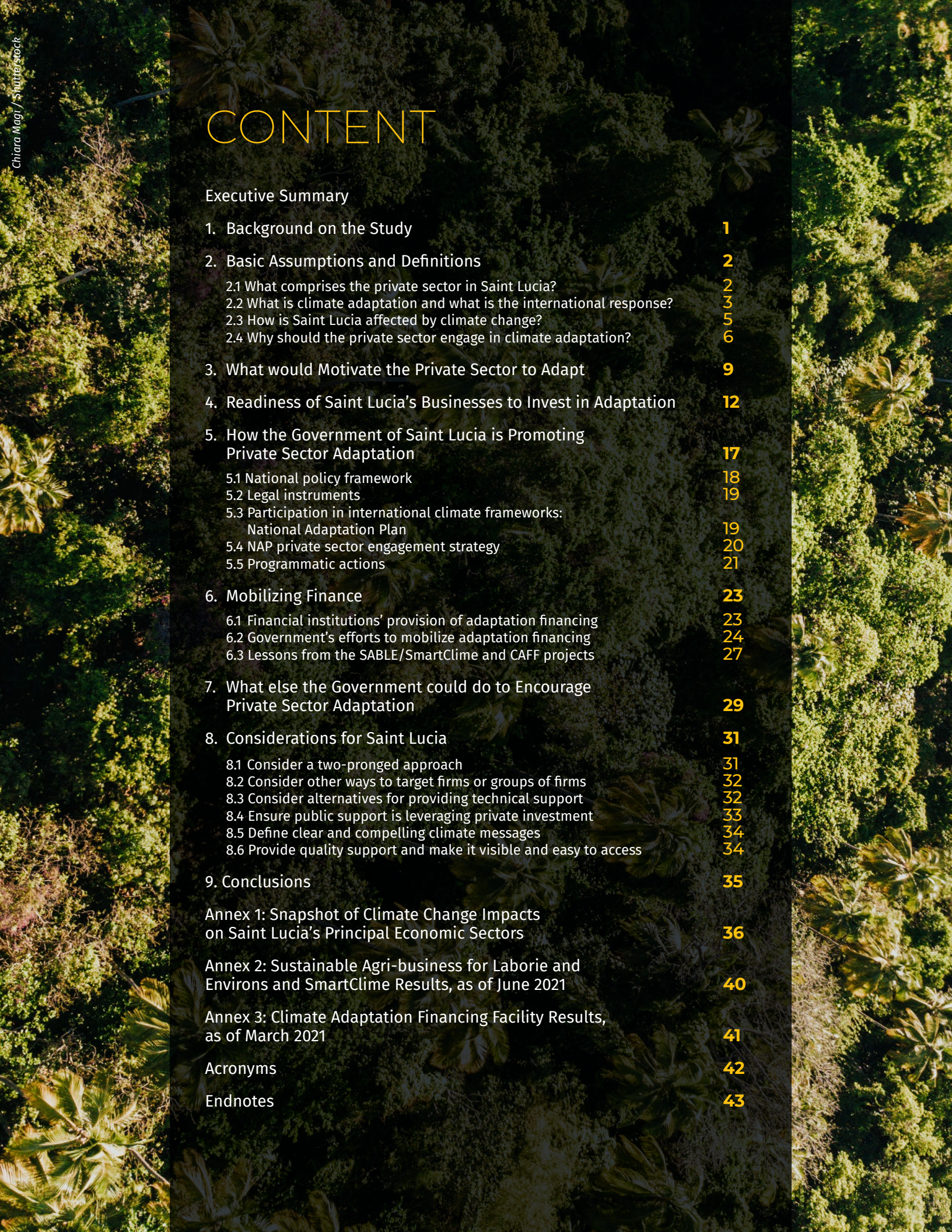

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EXECUTIVE SUMMARY

Saint Lucia has made a commendable effort over the past two decades to prepare for and adapt to the impacts of climate change on government operations and its citizenry. From the first *National Climate Change Policy and Adaptation Plan,* completed in 2003, to the *Climate Change Bill* pending approval today, the country has been a leader among Small Island Developing States (SIDS) in identifying and preparing for the myriad effects that climate change is having and expected to have in the future, as well as in building resilience.

"Sustainable development" is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Climate change has become a matter that no country can ignore precisely because it places sustainable development at grave risk. According to the International Panel on Climate Change (IPCC), the emergent risks to sustainable development from climate change include "losses of ecosystem services, challenges to land and water management, effects on human health, particular risks of severe harm and loss in certain vulnerable areas, increasing prices of food commodities on the global market, consequences for migration flows at particular times and places, increasing risks of flooding, risks of food insecurity, systemic risks to infrastructures from extreme events, loss of biodiversity, and risks for rural livelihoods."[1]

Adaptation is essentially the effort to counter and minimize the effects of climate change. It includes adjustments in the ecological, social, and economic systems in response to both actual and expected effects or impacts. According to the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC), this implies making changes in "processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change."[2] UNFCCC further proposes that success at adaptation and resilience-building depends not only on governments, "but also on the active and sustained engagement of stakeholders including national, regional, multilateral and international organizations, the public and private sectors, civil society and other relevant stakeholders."

In implementing its climate adaptation effort in recent years, Saint Lucia has been effective at engaging partners. The collaboration of local, regional, and international organizations is a critical reason why Saint Lucia's climate adaptation process has advanced as far as it has. The emphasis that Saint Lucia has put on collaboration also reflects its understanding that adapting to climate change goes well beyond investing in bricks and mortar.

One important partnership Saint Lucia has cultivated is with the Climate Investment Funds (CIF). This relationship led to Saint Lucia becoming one of the six countries participating in CIF's Caribbean Regional Pilot Program for Climate Resilience (PPCR). PPCR supports developing countries and regions in building their adaptation and resilience to the impacts of climate change. PPCR does this by helping governments integrate climate resilience into strategic development planning and by providing concessional and grant funding to put the plans into action and pilot innovative public- and private-sector solutions.

This summary report, *Saint Lucia's Experience with Private Sector Adaptation to Climate Change,* is the result of a study commissioned by CIF's Evaluation and Learning (E&L) Initiative. The Government of Saint Lucia (GOSL) requested the study to gain insights into the efforts to date of private firms in adapting to climate change and the impact of the government's initiatives aimed at encouraging private sector adaptation. Both CIF and GOSL believe that the findings could be relevant to other SIDS, especially those in the Caribbean region.

As stated in Saint Lucia's National Adaptation Plan (NAP), "The enormous challenge of addressing the expected impacts of climate change… depends on the engagement and effort of all levels of government, industry, and civil society, and as such, planning and implementing adaptation is a national endeavour."[3] This summary report shows that Saint Lucia has taken seriously the role of the private sector as a critical partner in the planning and implementation of its adaptation interventions to date, as evidenced by the government's efforts to help build the private sector's adaptation capacity.

The private sector in Saint Lucia consists of a relatively small number of formal and international firms that produce a significant share of the country's employment and economic activity, as well as thousands of small firms that collectively provide livelihoods to a large share of the population and, in many cases, participate in value chains with the larger firms.

Yet, according to the research gathered for the original study, the knowledge of climate change needs to be strengthened in Saint Lucia's private sector: less than half of the business managers polled understood what the impacts of climate change are expected to be. Thus, this report concludes that to fully engage both large and small businesses in the overall resilience-building endeavor, more targeted communications and outreach efforts are needed, and these must be carefully tailored to the needs and constraints of various types of businesses.

Innovation is an important aspect of adaptation. This report highlights several innovative adaptation projects that have been implemented in Saint Lucia to date, while pointing out the types of technical support and financial assistance that may be needed to encourage innovation and ensure the success of future private adaptation initiatives. To support these conclusions, the summary report analyzes two adaptation financing programs in Saint Lucia supported by CIF—the Climate Adaptation Financing Facility (CAFF) implemented by the Saint Lucia Development Bank (SLDB) and the Sustainable Agribusiness for Laborie and Environs (SABLE)/ SmartClime, implemented by the Laborie Cooperative Credit Union (LCCU). In extrapolating from these two experiences, the summary report points out that more effort is needed to mitigate the potential risks associated with adaptation lending so that more private finance can be mobilized for these purposes.

The report concludes with a series of considerations for the government of Saint Lucia. It suggests a "two-pronged approach" of outreach to the private sector, including an area-based approach for small firms. It proposes using value chains to analyze and address vulnerabilities in private sector operations. The report questions whether financial institutions are the best entities to provide technical advice to adaptation borrowers, or whether the country (or region) needs a technical center that can provide this support. The report also suggests that making government outreach efforts more effective requires additional resources, and that an "adaptation hub" could be an effective vehicle for making information on adaptation opportunities and technical support more accessible to the private sector. At the same time, the report urges the government to ensure that public support actually leverages private investment, since public resources to support private adaptation are extremely limited.

Countries vulnerable to the effects of climate change, especially SIDS, have been compelled to mobilize to manage its impacts. Some are doing so more effectively than others. Although it still has much work to do, Saint Lucia has definitely risen to the challenge.

The challenge is enormous, and time is of the essence. It is hoped that the findings and conclusions of this summary report assist GOSL first and foremost, and secondly other countries in the region, in their efforts to build resilience and the capacity to engage with and motivate the private sector. For the private sector actors, the report should provide evidence of how critical GOSL considers their engagement in climate adaptation. For Saint Lucia's partners, the report suggests new directions and areas for continued collaboration.

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1. BACKGROUND ON THE STUDY

The Climate Investment Funds (CIF) were established in 2008 to support transformational change toward low-carbon, climate-resilient development in the areas of clean technology, energy access, climate resilience, and sustainable forests in 72 developing and middle-income countries. Saint Lucia is one of the six countries participating in CIF's Caribbean Regional Pilot Program for Climate Resilience (PPCR). This has involved developing a country-led strategic program for integrating climate resilience in its long-term development planning and decision-making.

This summary report was commissioned by CIF's Evaluation and Learning (E&L) Initiative to capture lessons learned from the experience of the private sector in Saint Lucia in building resilience to climate change.[4] The Government of Saint Lucia (GOSL) requested this assessment to gain insights into the efforts to date of private firms in adapting to climate change and the extent of the reach of the government's initiatives targeted at encouraging private sector adaptation. The findings may also be relevant to other Small Island Developing States (SIDS), especially those in the Caribbean region.

It is important to point out that this summary report summarizes a more detailed study that investigates the impact of climate change on the private sector in Saint Lucia, the private sector's experience in building climate resilience, and the actions by GOSL to promote climate adaptation by the private sector.[5] It draws lessons from two of CIF's PPCR projects underway in Saint Lucia—the Sustainable Agribusiness for Laborie and Environs (SABLE)/SmartClime Project carried out by the Laborie Cooperative Credit Union (LCCU) and the Climate Adaptation Financing Facility (CAFF) implemented by the Saint Lucia Development Bank (SLDB). These projects share the objective of strengthening private sector climate adaptation.

Data collection and analysis for the original study took place between 2018 and 2019. This included key informant interviews with representatives of nine organizations, group discussions with 34 stakeholders, a telephone survey of 161 private firms, and an extensive review of secondary source materials.

In addition to summarizing the original assessment, this report includes recommendations to GOSL on strengthening the private sector's engagement in climate adaptation through targeted government communications and support. These recommendations take into consideration the significant efforts that GOSL is already making in this direction.

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2. BASIC ASSUMPTIONS AND DEFINITIONS

2.1 WHAT COMPRISES THE PRIVATE SECTOR IN SAINT LUCIA?

In this study, "the private sector" refers to both formal and informal businesses, large and small, including skilled tradespeople (e.g., plumbers, electricians, and building contractors) and sole proprietorships.

Micro and small businesses in Saint Lucia are categorized according to the *Micro and Small-Scale Business Enterprise Act, No. 19 of 1998 (amended 2001).* The most recent detailed private sector assessment (2009) indicated that of the 7,430 enterprises in Saint Lucia, 5,721 (77 percent) were microbusinesses with fewer than five employees, 1,635 (22 percent) were small businesses with between six and 50 employees, and only 74 (one percent) were large businesses with 51 or more employees, as shown in Table 1.[6] Of all the microbusinesses, 46 percent were considered informal.

Table 1:
BUSINESS CATEGORIES IN SAINT LUCIA

CATEGORY	EMPLOYMENT	ASSET BASE	SALES IN XCD[7]	2009 COUNT (SHARE)
Micro-business	Maximum of 5 persons	Less than XCD75,000	Less than XCD100,000	5,721 (77%)
Small business	Maximum of 50 persons	Less than XCD500,000	Less than XCD1,000,000	1,635 (22%)
Large business	Over 50 persons	Over XCD500,000	More than XCD1,000,000	74 (1%)
Total				**7,430 (100%)**

Source: Micro and Small-Scale Business Enterprise Act, No. 19 of 1998 (amended 2001) and Compete Caribbean (Inter-American Development Bank et al.), Private Sector Assessment of Saint Lucia.

A "typical" Saint Lucian business is on the lower end of the small business category.[8] It is nationally owned, has been in existence for 6–10 years, employs six individuals, and operates in the services sector. According to a study by the International Finance Corporation (IFC), using 2010 data, 71 percent of the country's registered firms were sole proprietorships, 19 percent privately-held limited liability companies, eight percent partnerships, and three percent limited partnerships.[9]

2.2 WHAT IS CLIMATE ADAPTATION AND WHAT IS THE INTERNATIONAL RESPONSE?

2.2.1 DEFINITION OF CLIMATE ADAPTATION

The Intergovernmental Panel on Climate Change (IPCC) defines climate adaptation as "...adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It [includes] changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change."[10]

IPCC also highlights the following: "Adaptive capacity in human systems varies considerably among regions, countries, and socioeconomic groups... [and]... is a function of wealth, technology, information, skills, infrastructure, institutions, equity, empowerment, and ability to spread risk... Enhancement of adaptive capacity is a necessary condition for reducing vulnerability, particularly for the most vulnerable regions, nations, and socioeconomic groups."[11]

Adaptation measures take both structural and non-structural forms. They range from strengthening existing buildings and infrastructure; to building new systems for purposes such as flood defense and water conservation; to improving communication systems, using drought-resistant crops, making adjustments to business operations, and establishing government policies.[12] GOSL has identified key adaptation actions for the country to include hazard mapping, early warning systems, and livelihood protection, as well as risk pooling and insurance programs at the regional level.[13]

Box 1:
UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC) PROTOCOLS FOR REPORTING NATIONAL MITIGATION AND ADAPTATION RESULTS

UNFCCC recognizes that certain climate mitigation interventions also contribute to adaptation and vice versa. Further, both mitigation (that is, greenhouse gas reduction) and adaptation interventions can produce "cobenefits", that is, contribute to larger development outcomes (such as improvements in air quality from the conversion to renewable energy sources). Nonetheless, most climate-related activities contribute principally to just one of the objectives.

The commitments and results from activities associated with climate mitigation and climate adaptation are guided by separate protocols within the UNFCCC framework. Mitigation commitments are made in the form of Nationally Determined Contributions (NDCs) under the Kyoto Protocol and the Paris Agreement. Adaptation plans are elaborated through the National Adaptation Plan (NAP) process that is part of the Cancun Adaptation Framework.

Source: UNFCCC, UNFCCC Process-and-meetings web site, https://unfccc.int/process-and-meetings - :0c4d2d14-7742-48fd-982e-d52b41b85bb0.

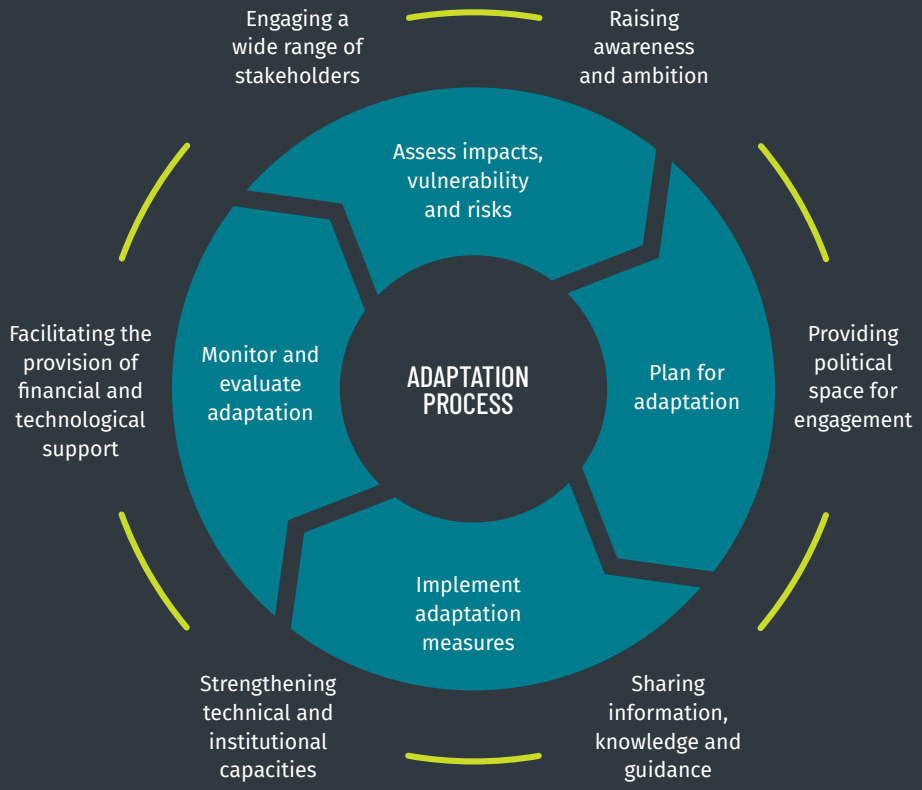
2.2.2 THE NATIONAL ADAPTATION PROCESS UNDER THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

Like most countries, Saint Lucia is a Party to the United Nations Framework Convention on Climate Change (UNFCCC).[14] Entering into force in 1994, the UNFCCC and its agreements and protocols have coordinated intergovernmental efforts to tackle the challenges posed by climate change. The objective of the Convention is "to stabilize greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system, in a time frame which allows ecosystems to adapt naturally and enables sustainable development." UNFCCC defines the term, "climate adaptation", identically to IPCC.

All Parties to UNFCCC report periodically through the National Communications process on greenhouse gas emissions, measures to mitigate and adapt to climate change, and any other information considered relevant to the achievement of the UNFCCC objectives. Saint Lucia submitted its *Third National Communication on Climate Change* to UNFCCC in August 2017.[15] In January 2021, Saint Lucia updated its Nationally Determined Contributions (NDCs) (under the Paris Agreement), of which adaptation is a major component.[16]

The Parties to UNFCCC have recognized that adaptation is a global challenge faced by all — with local, subnational, national, regional, and international dimensions. They also acknowledge adaptation as a key component of the long-term global response to climate change needed to protect people, livelihoods, and ecosystems. Figure 1 shows how UNFCCC envisions the adaptation process at the national level under the United Nations (UN) climate change regime.

Figure 1:
THE NATIONAL ADAPTATION PROCESS



Source: UNFCCC.

2.3 HOW IS SAINT LUCIA AFFECTED BY CLIMATE CHANGE?

Saint Lucia is highly vulnerable to the effects of climate change. This is due to its location along the north Atlantic hurricane corridor, small surface area, irregular topography, and reliance on tourism and agriculture—both of which are climate-sensitive subsectors. Saint Lucia's vulnerability is amplified by its high population density, concentration of infrastructure in coastal settlements, poor land use practices, chronic high unemployment levels, and reliance on imported food and fuel. See Annex 1 for a "Snapshot of Climate Change Impacts in Saint Lucia's Principal Economic Sectors".

A recent global comparison ranks Saint Lucia 21st among 180 countries for climate-related average losses as a percentage of gross domestic product (GDP) for the 2000–2019 period.[17]

Saint Lucia's Third *National Communication on Climate Change* presents various climate scenarios over different time horizons.[18] These scenarios predict increased temperatures of 2–3 degrees C, decreased year-round seasonal rainfall, and torrential rains and flooding occurring during the rainy season that will damage infrastructure—all before the end of the century. Digital terrain mapping models predict nearly half a meter (m) of sea level rise and a loss of land area in the coastal zone of 9.7 hectares (ha) before 2070. When storm surges generated by a Category 2 hurricane are added (2.47 m), the total land area likely to be inundated within the coastal zone is 357 ha (or nearly 2,000 ha for a Category 5 hurricane).

Globally, countries are already living the reality of climate change, particularly in SIDS, like Saint Lucia, where the impacts are more pronounced. Sea levels are rising, storms are increasing in intensity, droughts are more frequent, and ecosystem losses are undermining already fragile economies. All of this is hampering progress toward achieving both national development objectives and international commitments, such as the Sustainable Development Goals (SDGs).

Saint Lucia's *National Adaptation Plan (2018–28)* (NAP) references estimates of the cost of inaction on climate change in Saint Lucia at 12.1 percent of GDP by 2025, rising to 24.5 percent by 2050, and 49.1 percent by 2100.[19] Taking action to improve the island's capacity to anticipate, prepare for, adapt to, and recover from the effects of climate change is the only way to protect Saint Lucia's quality of life for future generations. As stated in all of Saint Lucia's key policy documents, the private sector has a central role to play in this process.

Box 2
SAINT LUCIA PROFILE

Location	14°1'N 60°59'W
Land mass	617 km² (238 sq. ml)
Population (2019)	179,995
Population density (2019)	292 per km² (756 per sq. ml)
GDP in current market prices (2019)	XCD5,731 million (USD2,123 million)
GDP per capita	XCD31,838 (USD11,792)
Principal economic sectors	Agriculture, forestry, and fishing (10%); Wholesale and retail trade (16%); Accommodation and food service (17%)
Climate	Tropical rainforest (Af)

2.4 WHY SHOULD THE PRIVATE SECTOR ENGAGE IN CLIMATE ADAPTATION?

Until recently, global discussions about climate adaptation have not been focused on the involvement of the formal private sector. The adaptation strategies of many governments have prioritized climate-proofing public infrastructure and ensuring the sustainability of government operations, along with paying attention to vulnerable groups, such as subsistence farmers and people settled in high-risk zones. The private sector has been referred to more as stakeholders that should be consulted with on government plans, than as actors that should implement their own adaptation solutions.

This view is changing: the need for the private sector to increase its commitment to climate adaptation is becoming a central tenet of adaptation planning. Some of the reasons for this development are explained below.

2.4.1 PRIVATE FIRMS OWN MORE CAPITAL STOCK THAN THE PUBLIC SECTOR

Private capital investment dwarfs that of the public sector in nearly all countries. In Saint Lucia, the private sector is estimated to own 72 percent of all existing capital stock (physical assets), including commercial and residential buildings, private infrastructure, and site improvements.[20]

The International Monetary Fund (IMF) calculates that annual capital investment increased significantly in Saint Lucia between 2014 and 2019 to XCD1.16 billion (USD430 million) in 2019, as displayed in Table 2. While public investment in transport and other public services creates the enabling environment for all economic activity, it still constitutes a small portion of all investment. The 2019 projection comprises XCD258 million (USD96 million) in public investment (22 percent) and XCD909 million (USD337 million) in private investment (78 percent).[21] The ratio of annual public to private investment activity has remained relatively constant over this period.[22]

Table 2:
SAINT LUCIA'S PUBLIC AND PRIVATE INVESTMENT, 2015–19 (MILLION)

INVESTMENT	2015	2016	2017	2018	2019 (PROJECTED)	2019 (SHARE)
Public	XCD188 (USD70)	XCD202 (USD75)	XCD270 (USD100)	XCD239 (USD89)	XCD258 (USD96)	22%
Private	XCD623 (USD231)	XCD740 (USD274)	XCD790 (USD294)	XCD856 (USD317)	XCD909 (USD337)	78%
Total	**XCD811 (USD300)**	**XCD942 (USD349)**	**XCD1,059 (USD393)**	**XCD1,095 (USD406)**	**XCD1,162 (USD432)**	**100%**

Source: IMF, 2018, St. Lucia: Climate Change Policy Assessment.

The 2019 projection also provides a baseline to which anticipated additional climate investment needs would be added. In its 2018 *Climate Change Policy Assessment,* IMF forecast that Saint Lucia will need to spend about one percent of its GDP per year on mitigation investments and an even larger amount on adaptation investments for the foreseeable future.[23] One percent of 2019 GDP is equivalent to about XCD50 million (USD19 million). The responsibility of protecting the country's existing and future capital stocks will generally fall on the owners of those assets, whether they are public or private entities. Thus, as the need for investments in adaptation increases, more of these expenditures can be expected to be made by the private sector.

2.4.2 THE PUBLIC AND PRIVATE SECTORS ARE INTERDEPENDENT

The private sector and GOSL have a shared interest in each other's commitment to climate adaptation.

First, private activities make it possible for the economy to function. Financial services and transportation, for example, are two key sectors on which the entire economy depends. In addition, the revenues of GOSL are largely a function of the private sector's economic activity. Therefore, the sustainability of the government and the national economy depend on private businesses being able to operate in the face of climate change, and the investments in adaptation that private firms are willing to make.

Second, the failure of the private sector to adapt creates contingent liabilities for the government, especially in the case of agricultural producers and small businesses lacking in traditional risk management tools, such as insurance.[24] Without other forms of support, governments worldwide become the insurers of last resort when these groups are confronted with climate shocks.

Third, public investments in climate adaptation protect the private sector. GOSL's XCD184 million (USD68) million Disaster Vulnerability Reduction Project (DVRP), for example, is climate-proofing roads and bridges, as well as improving drainage systems, which will help ensure the continuity of private business operations in the face of excessive rainfall and hurricanes. The private sector should, therefore, be concerned about when and where such public investments are made.

2.4.3 CLIMATE ADAPTATION CREATES BUSINESS OPPORTUNITIES

Climate change also creates opportunities for private firms to "green" their operations and diversify the products and services they offer. Within the tourism sector in Saint Lucia, for example, hotels have installed solar photovoltaic systems for lighting and heating water, made private investments in coastal defenses, and modified their insurance coverage to respond to climate risks.[25] In agriculture, Saint Lucian farmers are buying new insurance products, such as the Caribbean Catastrophe Risk Insurance Facility (CCRIF) Livelihood Protection Policy, and increasing their use of greenhouses, rainwater harvesting, drip irrigation, and drought-tolerant plants.[26] Even small firms are being encouraged to invest in preparing business continuity plans (BCPs). All these climate-adaptive measures create a demand for products and services that could potentially be developed, grown, or manufactured locally. Financial institutions could also benefit from increased investments in adaptation, as demonstrated by CAFF. Ultimately, according to IMF, both public funding and private financing will be necessary to provide the resources needed for the additional capital expenditures shown in its projections.[27]

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2.4.4 PUBLIC-PRIVATE DIALOGUE CAN IMPROVE ADAPTATION OUTCOMES

The impacts of climate change on the private sector will vary from one business type, region, and value chain to another.[28] A fish processor in Dennery will need to take different actions from a hotel owner in Soufrière. Consequently, adaptation interventions (whether supported by GOSL or with private sector funds) must be tailored to the unique characteristics of the company or the subsector and monitored to determine if they have had the desired impact. Effective support from GOSL, in turn, depends on receiving this type of feedback from the private sector.

While GOSL cannot assume the responsibility for private adaptation, it also cannot stand idly by. The challenge is to leverage the interdependence of the public and private sectors to identify common interests and work toward specific, shared adaptation goals that are beneficial to all.

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3. WHAT WOULD MOTIVATE THE PRIVATE SECTOR TO ADAPT

To frame the original research for this report, four "preconditions" considered to be necessary before a business owner would invest in climate change adaptation were proposed. These preconditions are used to assess where Saint Lucia's private sector stands in the adaptation process.

1 **Owners understand climate change and the related risks (or opportunities) for their companies.**

Having this information can motivate business owners to explore their adaptation options, but this information may need to be targeted to effectively reach specific companies or subsectors. For instance, certain agricultural producers contacted about CAFF did not realize that they were eligible, because they did not consider themselves to be "small businesses", that is, the target borrowers mentioned in CAFF marketing materials.[29]

2 **Owners are aware of successful climate adaptation strategies in similar businesses.**

Knowing what one's peers are doing to build climate resilience provides assurance that a climate adaptation strategy is relevant for a firm. Yet, gaining information on one's competitors can be a challenge, especially if their climate projects also give the company a competitive edge. Efforts may be needed to identify and disseminate successful adaptation strategies with transparency, both nationally and regionally.

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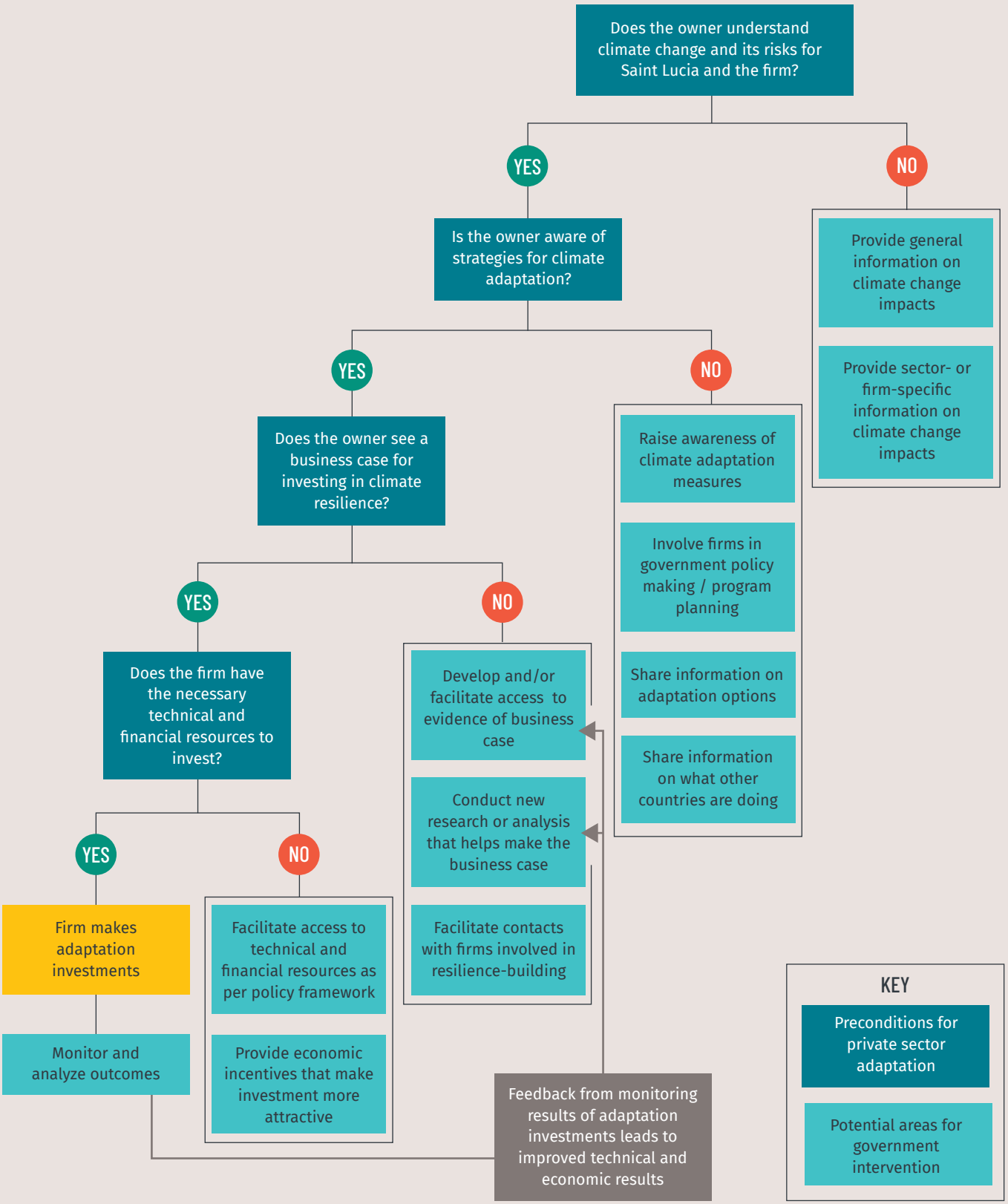
3 Owners are convinced of the business case for investing in adaptation.

Of all the preconditions, this one may be the most difficult to achieve. Although business owners may be convinced of the risks and understand what others are doing, they may still not be ready to make an investment whose return is uncertain or will be realized over too long a period of time. Understanding what constitutes a good private adaptation investment is a work in progress, even internationally, and the answer may be specific to the location or the firm. In certain situations, strategies may be needed to mitigate the risk of economic loss from private investments in adaptation (with subsidies or guarantees, for example), given the public benefits that could accrue.

4 Companies have access to technical and financial resources to design and implement adaptation projects.

Larger companies may gain access to assistance internally or from the private market when developing adaptation strategies and projects. But smaller companies are likely to need external support to assess project feasibility or to implement a project. In both cases, this support could include market research, design, marketing, training, or the financing of adaptation projects. Access to financing is often identified as the most important constraint on private adaptation investments. But as the experience from CAFF and SmartClime shows, the demand for financial support only arises once the other preconditions have been met. Figure 2 shows how the preconditions discussed in this section can lead to investment in adaptation and identifies potential government interventions to support private firms at each step of the adaptation process.

Figure 2:
PRECONDITIONS FOR PRIVATE ADAPTATION AND POTENTIAL GOVERNMENT RESPONSES



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4. READINESS OF SAINT LUCIA'S BUSINESSES TO INVEST IN ADAPTATION

Readiness to invest in adaptation is assessed in this section based on the data collected for the original study from a telephone survey of a random sample of registered businesses. Altogether, 194 individuals in 161 private firms were interviewed, of which 88 were in the management ranks and 106 were the staff of the businesses. The respondents were associated with both large and small businesses that were geographically dispersed throughout Saint Lucia.[30]

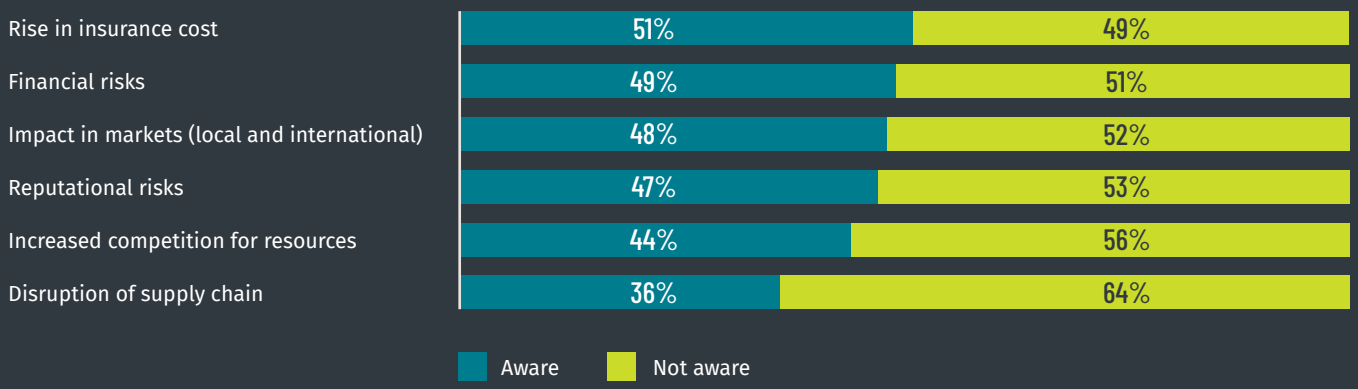
The survey probed the respondents' awareness of climate change and specific climate impacts. It also sought information about the investments made by their businesses in climate adaptation and mitigation along with any technical or financial assistance accessed.[31] While the sample was small, the responses provide insight into where private firms in Saint Lucia stand relative to the four preconditions explained in the previous section.

1 Do owners understand climate change and the related risks (or opportunities) for their companies?

Respondents showed a high level of awareness that climate change was occurring; however, their understanding of its specific effects was more limited:

- General awareness was higher among managers (85 percent) than staff (63 percent) and higher among larger businesses (82 percent) than smaller businesses (71 percent).
- When asked about their awareness of environmental impacts, such as sea-level rise, rising temperatures, and more severe hazard events, there was little variation among the groups. Only about 50 percent of the respondents reported being aware of any impact, even among the managers of larger businesses.

Figure 3:
MANAGERS' UNDERSTANDING OF CLIMATE IMPACTS ON THEIR BUSINESSES



- When managers were asked about the impacts of climate change on their businesses, they responded as shown in Figure 3. Among the impacts suggested to them, the respondents agreed most often that insurance costs had risen and least often that they experienced supply chain disruption. This is interesting because supply chain disruptions occur frequently after hurricanes in Saint Lucia.
- Almost no respondent could identify an opportunity that climate change would create for the businesses. This suggests that communications with the private sector about climate change adaptation may not be conveying the whole story.

Whether respondents in the telephone survey lacked information or were skeptical of the information they had received would merit further research. These results contrast with those of key informant interviews involving public and nongovernmental organizations (NGOs), where interviewees from these entities displayed a high level of knowledge of both the occurrence of climate change and its impacts.

2 Are owners aware of successful strategies for climate adaptation in similar businesses?

The survey data did not lend itself to answering this question. However, in interviews, the Chamber of Commerce and the Saint Lucia Hotel and Tourism Association (SLHTA) mentioned holding meetings where climate issues were discussed. SLDB staff also participate frequently in stakeholder meetings to explain CAFF and how borrowers are using its resources. It may be useful for GOSL to poll business owners over whether they have the necessary information from local, regional, or international sources about effective climate investments in their sectors. Owners of unregistered firms should be included if such a poll is conducted.

3 Are owners convinced of the business case for investing in climate resilience?

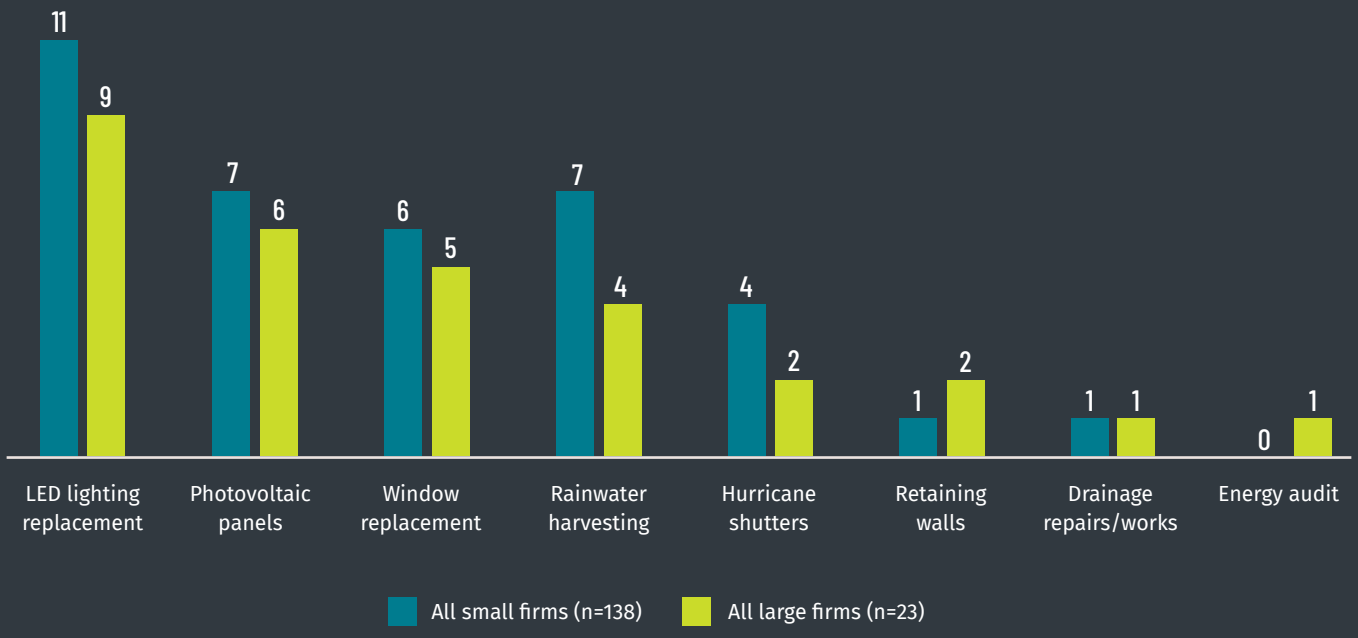
Rather than ask about the business case for adaptation, the managers were asked about the climate-related project interventions their firms had carried out. Among the 161 firms surveyed, 67 climate-related interventions were reported to have been implemented, as shown in Table 3.

Table 3:
REPORTED CLIMATE ADAPTATION/MITIGATION INTERVENTIONS, BY TYPE AND BUSINESS SIZE

TYPE OF INTERVENTION	ALL LARGE FIRMS (N=23)	ALL SMALL FIRMS (N=138)	TOTAL	PRINCIPAL BENEFIT
LED lighting replacement	9	11	20	Mitigation
Photovoltaic panels	6	7	13	Adaptation / mitigation
Window replacement	5	6	11	Adaptation / mitigation
Rainwater harvesting	4	7	11	Adaptation
Hurricane shutters	2	4	6	Adaptation
Retaining walls	2	1	3	Adaptation
Drainage repairs / works	1	1	2	Adaptation
Energy audit	1	0	1	Mitigation
Total	**30**	**37**	**67**	

As a group, small firms implemented more interventions than large firms in almost all categories, as shown in Figure 4. However, there were six times as many small firms surveyed (138) as large firms (23); so the likelihood is much higher that a large firm had implemented a climate-related project.

Figure 4:
DISTRIBUTION OF ADAPTATION OR MITIGATION INTERVENTIONS REPORTED BY FIRMS



Further, projects were concentrated in a small number of firms, as shown in Figure 5. Among large firms, 48 percent had implemented at least one intervention, while 21 percent had done three or more. In the case of small firms, 80 percent had not taken any measure against climate change and only seven percent had carried out more than one measure. The motivation of the surveyed firms would require more in-depth study, but the results suggest that there is considerable scope for increased action on the part of both large and small firms in Saint Lucia.

4 Do companies have access to technical and financial resources to develop and implement adaptation projects?

The survey asked whether respondents had received financial or technical support while carrying out their mitigation or adaptation activities. Out of the 161 firms surveyed, 76 instances of assistance were identified. The types of assistance are depicted in Figure 6.

NGOs, featured in 34 encounters, were the most common source of assistance.[32] In contrast, only 15 respondents mentioned interactions with GOSL. This suggests that NGOs have credibility with private firms on adaptation and mitigation matters.

Figure 5:
NUMBER OF CLIMATE ADAPTATION OR MITIGATION INTERVENTIONS, BY FIRM SIZE

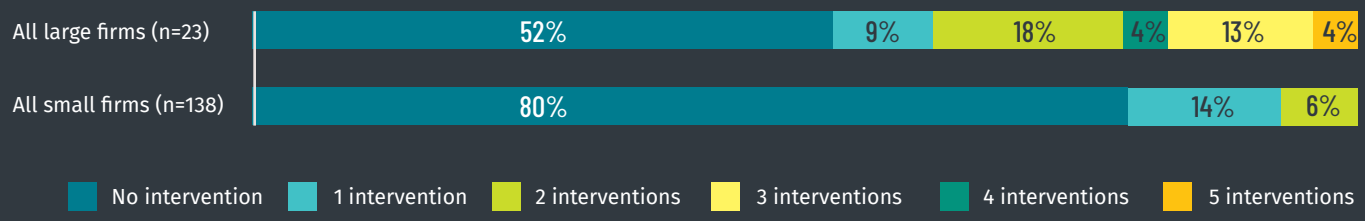


Figure 6:
BUSINESSES THAT HAD FINANCIAL OR TECHNICAL SUPPORT WITH AN ADAPTATION PROJECT

Both managers and staff were asked if they had heard of CAFF: if so, how they had heard of it; whether they had contacted SLDB for assistance; and what other financial institution they would consider as a potential source of adaptation finance.

Of the 194 respondents, 85 (44 percent) had heard of CAFF, nearly all through advertising. Of this group, only two percent (or one percent of the 194 respondents) had attempted to access CAFF, as displayed in Table 4.[33]

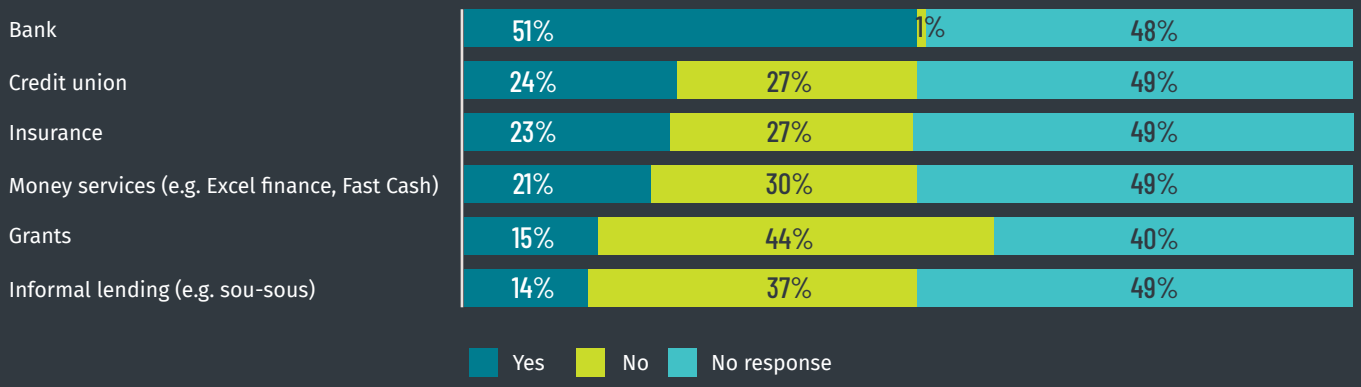
When asked where they would go for adaptation financing, Figure 7 shows that 51 percent of the respondents would go to a bank, followed by other financial institutions (credit union, insurance company, money service business (MSB), or sou-sou),[34] with 15 percent seeking a grant. Despite Saint Lucia's extremely high credit union membership penetration rate of 81 percent (as explained in Annex 1), this study found that almost as many respondents would use an MSB (21 percent) as a credit union (24 percent).

See Annex 1 for a "Snapshot of Climate Change Impacts in Saint Lucia's Principal Economic Sectors", including the financial sector.

Table 4:
RESPONDENTS' KNOWLEDGE OF THE CLIMATE ADAPTATION FINANCING FACILITY (CAFF)

Heard of CAFF? (194 respondents)	**YES**		**NO**
	85		**109**
	44%		56%
If yes, how? (85 respondents)	**YES**		**NO**
Advertising	98%		2%
Word of mouth	21%		79%
Personal research	0%		100%
Attempted to access CAFF? (85 respondents)	**YES**	**NO**	**NO RESPONSE**
	2	**71**	**12**
	2%	84%	14%

Figure 7:
WHERE RESPONDENTS WOULD GO FOR ADAPTATION FINANCING (194 RESPONDENTS)



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5. HOW THE GOVERNMENT OF SAINT LUCIA IS PROMOTING PRIVATE SECTOR ADAPTATION

GOSL approved the current *Saint Lucia Climate Change Adaptation Policy* (CCAP) in 2015.[35] In doing so, it defined a climate change adaptation agenda with three pillars: facilitation, implementation, and financing.

Facilitation comprises enabling activities, such as the enactment of laws and policies, capacity building, research, and information sharing. Implementation involves activities that directly contribute to the resilience of target groups, including the private sector. Financing covers not only lending operations and financial incentives, such as grants, but also fiscal regimes that facilitate climate financing.

Saint Lucia's Cabinet of Ministers established the National Climate Change Committee (NCCC) in 1998. NCCC comprises representatives of statutory, academic, public-, and private-sector bodies, although additional members can be invited when the need arises. As a multisectoral advisory body, NCCC supports and facilitates the implementation of climate change-related actions of interest nationally and for various sectors. In the following years, GOSL began developing a range of policy instruments to address key aspects of disaster risk management, climate mitigation, and climate adaptation.

5.1 NATIONAL POLICY FRAMEWORK

Saint Lucia's first *Sustainable Energy Plan* was completed in 2002. The first Climate Change Policy and Adaptation Plan was approved in 2003. Since then, GOSL has put in place a series of policies and plans to advance the national climate change agenda. This has included both new policies and updates to longstanding environmental policies in order to give them a stronger climate orientation. The key national policies, their year of adoption, and their purposes are presented in Table 5.

Table 5:
KEY NATIONAL POLICY INSTRUMENTS IN SAINT LUCIA RELEVANT TO CLIMATE CHANGE

POLICY INSTRUMENT	FINALIZED/ ADOPTED	OBJECTIVE
Sustainable Energy Plan	2002	Identify short- and medium-term renewable energy targets.
National Climate Change Policy and Adaptation Plan	2003	Put in place a framework to guide the legislative and policy work on sustainable development and climate change of governmental and non-governmental entities involved in Saint Lucia.
National Environment Policy (NEP) and National Environmental Management Strategy (NEMS)	2004, updated 2014	Provide (1) a broad framework for environmental management in Saint Lucia as well as establish links with policies and programs in all relevant sectors of economic and social development; and (2) precise directions and mechanisms for more effective policy implementation, the specific results expected, and the actions necessary to realize policy objectives.
National Water Policy	2004	Sustain economic growth, human development, and environmental sustainability by promoting and facilitating the use of freshwater resources in an efficient, sustainable, and equitable manner.
National Energy Policy	2010	Create an enabling environment, both regulatory and institutional, for the introduction of indigenous renewable energy to the national energy mix, thus achieving greater energy security and independence.
National Biodiversity Strategy and Action Plan	2014, updated 2020	Facilitate the integration of conservation and sustainable practices for integrating biological diversity in national development; Recognize climate change as having multi-sectoral impacts that must be addressed to stop the decline of biological diversity.
Revised Draft Environmental Management Act	2014, awaiting enactment	Allocate administrative, coordination, and management responsibilities for environmental management and related activities.
Climate Change Adaptation Policy (CCAP)	2015	Foster and guide the national process of addressing the short-, medium-, and long-term effects of climate change in a coordinated, holistic, and participatory manner in order to ensure that the quality of life of the people of Saint Lucia and the opportunities for sustainable development are not compromised.
National Land Policy	2018	Guide the use, management, development, and administration of land resources in Saint Lucia in order to optimize the contribution of land to sustainable development.
Climate Change Bill	2019 draft awaiting enactment	Will guide the strengthening of Saint Lucia's policy, legislative, and institutional frameworks, through the incorporation of measures associated with international conventions on climate change and other related matters, in order to mitigate and adapt to the impacts of climate change, reduce social and economic vulnerability, as well as build resilience.

For GOSL, CCAP is the preeminent policy document for understanding the country's approach to climate adaptation for the 2015–2022 period. It also provided a framework for the elaboration of NAP.

CCAP emphasizes the importance of private sector engagement, in stating the following goals: "Outcome 3: Increased capacities to design and implement climate adaptation projects across sectors" and "Strategic Objective 2: Strengthen institutional capacities to engage civil society and the private sector in adaptation efforts".

CCAP also proposes an ambitious set of activities, including launching a Private Sector Adaptation Initiative to engage the private sector; developing an education and information portal for public access to climate change information; creating a Climate Change Adaptation Trust Fund to better mobilize and harmonize adaptation resources; financing an incentives program to spur businesses to shift to more climate-proof investments; and using public-private partnerships (PPPs) to implement certain adaptation projects.[36]

Saint Lucia's climate policy framework is strong. However, in its 2017 *Third National Communication to UNFCCC,* GOSL identified two factors that undermine its effective implementation: (1) the lack of enforcement mechanisms for certain policies; and (2) weak collaboration in implementation, both within the government and between the government and other stakeholders.[37] Both factors are relevant when considering private sector engagement in climate adaptation.

5.2 LEGAL INSTRUMENTS

Until recently, Saint Lucia's approach had been to avoid passing new legislation to deal specifically with climate change, and instead, incorporate climate change considerations into the acts and regulations of relevant sectors, such as those corresponding to utilities regulation, fisheries, forestry, and tourism. However, a climate change bill has recently been drafted and is being prepared for legislative approval by the Office of the Attorney General.

5.3 PARTICIPATION IN INTERNATIONAL CLIMATE FRAMEWORKS: NATIONAL ADAPTATION PLAN

Saint Lucia has actively participated in the NAP process under UNFCCC, as described in Section II.B. While doing so, GOSL has benefited from the financial and technical support provided by PPCR.[38] Saint Lucia's NAP aims to enhance the national enabling environment for climate-related adaptation and risk reduction as well as accelerate the implementation of climate-adaptation and risk-reduction actions critical to safeguarding the country's social, economic, and environmental systems. NAP preparation is a progressive and iterative process that uses an approach intended to be country-driven, gender-sensitive, participatory, and transparent[39] (see Figure 1).

Saint Lucia's NAP identifies priority cross-sectoral and sectoral adaptation measures for eight key sectors or functions:[40] tourism; water; agriculture; fisheries; infrastructure and spatial planning; natural resource management (renamed resilient ecosystems—terrestrial, coastal, and marine); education; and health. For each of these sectors, sectoral adaptation strategy and action plans (SASAPs) have been or will be prepared.[41] Other key sectors will be identified over time.

In addition, the NAP planning process has produced plans and strategies that will guide the implementation of the NAP. These include:

- Monitoring and Evaluation Plan of the NAP Process (2018)[42]
- Climate Change Communications Strategy (2018)[43]
- Private Sector Engagement Strategy (PSES) (2020)[44]
- Climate Financing Strategy (2020)[45]
- Climate Change Research Policy and Strategy (2020)[46]


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5.4 NAP PRIVATE SECTOR ENGAGEMENT STRATEGY

Climate change is now a major risk for businesses in Saint Lucia. While the role of the private sector is discussed in the 2015 CCAP, the 2020 PSES acknowledges that "private sector engagement in climate change adaptation has only recently been recognized as a global imperative, as the scale of the climate challenge has become clearer, alongside the reality of scarce public resources."[47]

One objective of PSES is to facilitate greater awareness of the business case for resilience in the private sector (a topic that CCAP does not raise). It acknowledges that the economic argument is likely to be the strongest motivator: if businesses are to continue operating on the island, investments in adaptation and resilience will be critical.

PSES plans to achieve more extensive private sector engagement through:

- Educating businesses and sharing information with them;
- Ensuring business continuity and managing climate risks;
- Encouraging private sector involvement in climate adaptation strategies, including through NAP;
- Informing investment decisions in resilience-building;
- Facilitating insurance, finance, technological innovation, and development of new economic opportunities through climate-friendly products and services;
- Identifying opportunities for adaptation partnerships with the public sector through PPPs;
- Informing the development of public policy; and
- Promoting the key principles of corporate social responsibility.

More specifically, PSES is expected to be implemented through direct outreach to private sector actors and engagement with business associations and thematic groups. The PSES document acknowledges that private enterprises vary considerably in their capacity to engage with GOSL, for various reasons, including because many unregistered private sector enterprises are not members of any business association. This situation risks leaving smaller businesses out of the engagement process. The presence in Saint Lucia of many firms involved in foreign trade and foreign direct investment also calls for unique approaches to engagement.

PSES seeks a collaborative, holistic approach to private sector climate adaptation in Saint Lucia that is innovative, and at same time, based on regional and global best practices. The hope is that the implementation of PSES leads to new financing sources and investment products that are developed for and by the private sector, so as to enable the full incorporation of climate adaptation into business practices, supply chains, and investment decisions.

5.5 PROGRAMMATIC ACTIONS

Programs and projects are vehicles for supporting the Implementation pillar of the climate adaptation agenda (and for testing implementation approaches, in the case of pilot projects). They may also strengthen the Facilitation pillar by providing resources for planning, collaboration, and institutional reforms. In the case of the Financing pillar, they can offer loan or grant funding, or advice on incentive regimes. A single program or project may, in some cases, support all three pillars.

Saint Lucia's *Third National Communication on Climate Change,* submitted to UNFCCC in 2017, tallied the climate-related projects that had been implemented or were in implementation, including regional projects. The 2017 list, covering both climate adaptation and climate mitigation, includes nearly 70 projects and programs, some of which comprise multiple project activities. The list was updated with several additional projects before it was analyzed for this report.

The analysis of the project database led to several observations:

- Saint Lucia has successfully mobilized resources from a wide range of partners in its efforts to advance its climate agenda. These partners include bilateral and regional agencies, international financial institutions, and both national and international NGOs. As project costs were not available for all projects, the total value of this support could not be calculated. Many projects are small, but they range up to XCD183.6 (USD68) million in the case of DVRP.

- A significant number of projects are regional, carried out by organizations such as the Organisation of Eastern Caribbean States (OECS), the Caribbean Development Bank (CBD), and the Caribbean Community Climate Change Centre (CCCCC).

- The majority of projects have supported the Facilitation pillar of the climate agenda, followed by a smaller number that have offered both financing and technical assistance for implementation.

- More than half of the projects appear to be mitigation-related only; far fewer are adaptation-related only. Various projects, including a significant number focused on improving data collection for disaster risk management, support both outcomes.

- A small number of projects or programs have provided technical assistance and/or financing directly to private companies. These projects mostly support energy efficiency, agriculture, and fisheries. Interestingly, only three project descriptions mention hotels or tourism—the generators of the most employment on the island.

- Besides CAFF and SmartClime, no project was identified that targeted businesses in finance, services, or manufacturing.

The focus of the projects and programs of both GOSL and donors over the past several years has clearly been on establishing the institutional framework and facilitation capacity of GOSL. Investment projects, such as DVRP, which is funded by the World Bank and CIF's PPCR and implemented by GOSL, have financed resilient public infrastructure (e.g., roads, bridges, health clinics, and schools) and built government capacity.

Several projects underway in Saint Lucia benefit the private sector directly. Apart from CAFF and SmartClime, described in detail in Section VI, the two other projects described below provide indications of the range of interventions needed to support private sector adaptation:

- **COAST Insurance Program.** The Caribbean Oceans and Aquaculture Sustainability Facility (COAST) is a regional adaptation program that was launched in July 2019 in Saint Lucia and Grenada. It provides parametric insurance coverage to individuals in the fisheries industry, including crew members, boat owners, and fish vendors and processors, to help them adapt to severe weather events and recover more quickly from them.[48]

  COAST is a partnership between the United States Department of State, the World Bank, the Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC), and the Caribbean Regional Fisheries Mechanism (CRFM). Purchased by governments, COAST policies provide livelihood protection through microinsurance.[49] Payouts are made to the ministries of finance who in turn transfer funds to policyholders. CCRIF SPC has been providing insurance against tropical cyclones and earthquakes since 2007. In 2013, it added coverage for excess rainfall events.

  COAST insurance provides coverage for losses and direct damages to fishing vessels, fishing equipment, and fishing infrastructure from adverse weather events. To encourage the adoption of climate-smart fishery practices among beneficiary countries, those receiving support from CRFM must be implementing the Caribbean Community Common Fisheries Policy (CCCFP). As of 2019, 732 fisheries sector workers, including 44 women, were registered with COAST.[50]

- **Water is Life Program.** Rainfall is projected to decrease by as much as 53 percent in the Southern Caribbean by 2050.[51] More intense dry spells are also predicted. At the same time, climate change is affecting biodiversity in marine ecosystems and contributing to coastal land degradation. To confront these complex trends, GOSL took advantage of the Implementation of Adaptation Measures in Coastal Zones Project, part of the Special Programme on Adaptation to Climate Change (SPACC), to focus on the sustainability of water resources and supply in the Vieux Fort region.[52]

  The result was the "Water is Life" program. Its objective was to decrease the water demand of the Coconut Bay Beach Resort and Spa (CBBRAS) and lessen the impact of the resort on the surrounding coastal ecosystems. The project established a partnership among GOSL, CBBRAS, and the Pointe Sable Environmental Protection Area (PSEPA), with support provided by CCCCC and the Global Environmental Facility (GEF) (the project funder).

  At the time (2010), CBBRAS was the second-largest water consumer in the Vieux Fort area of the Saint Lucia Water and Sewerage Company (WASCO). The project installed a water conservation system to increase stormwater capture, storage, and reuse in swimming pool replenishment and allowed the recycling of treated effluent in groundskeeping.[53] The irrigation component alone was projected to reduce annual water demand from WASCO by 21 million liters annually.

Such interventions demonstrate how climate adaptation solutions can be unique to the sector, company, and location where the activities occur. They also show that a careful problem assessment, coupled with project preparation and design supported by experts, is often crucial for the adaptation process.


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6. MOBILIZING FINANCE

Investing to prevent damage from climate-related hazards has a greater economic and social return than spending on post-disaster recovery and reconstruction, as a growing body of economic and social analysis demonstrates. Yet mobilizing financing for investment in adaptation can be a challenge.

After major disasters worldwide, a significant amount of what should be private recovery and reconstruction costs falls on central governments, especially when those affected are small business owners, small agricultural producers, and homeowners. Therefore, reducing these contingent liabilities is an objective of many governments within their overall disaster risk financing strategy.

Because private investments in adaptation can benefit both the private party and the government, governments frequently take steps to make financing more readily available. The Financing pillar of Saint Lucia's CCAP lists various measures that will be taken, including mobilizing funding, creating a Climate Trust Fund, and establishing tax credits and other incentives.

6.1 FINANCIAL INSTITUTIONS' PROVISION OF ADAPTATION FINANCING

Commercial banks, credit unions, and other regulated financial institutions in Saint Lucia are probably already making loans for climate adaptation. Any loan that is financing building or site improvements that meet the local building code, water or energy conservation investments, or new business activities that respond to the demand for adaptation products or services could be considered an "adaptation loan". However, no bank identified in this analysis (aside from SLDB) appears to be advertising climate-related loans or publishing data on climate-related lending.

It is also possible that lenders are avoiding the inherent risks of climate-related lending. These risks include the difficulty of identifying the proper technical solution and building a business case

for the project (as discussed in Section III). Banks may not be equipped to evaluate projects that are addressing physical risks (flooding or erosion, for example). Further, this lending may not be profitable for the financial institution or banks may also be wary of putting themselves at a competitive disadvantage by having these types of loans in their portfolios.

Two trends that could increase the appeal of adaptation lending are emerging. The first is the use of insurance for climate-related projects for both individual borrowers and lenders at the portfolio level. The second is the movement to level the playing field among financial institutions by requiring the disclosure of climate-related portfolio risks using global standards, as recommended by the Task Force on Climate-Related Financial Disclosures.[54] These initiatives, which are likely to gain traction in the coming years, could improve market access to financing for adaptation projects. It may be useful for regulators to monitor adaptation-related lending in Saint Lucia and the Caribbean region in order to understand how the market is responding.

6.2 GOVERNMENT'S EFFORTS TO MOBILIZE ADAPTATION FINANCING

GOSL has undertaken two initiatives with funding partners over the past several years to make financing available to priority sectors in need of adaptation investments. The SmartClime loan facility (associated with the SABLE project) and CAFF (a component of DVRP) are providing credit to agricultural producers and other small businesses and homeowners for adaptation investments.

6.2.1 SUSTAINABLE AGRIBUSINESS FOR LABORIE AND ENVIRONS PROJECT AND SMARTCLIME LOAN FACILITY

The combined SABLE/SmartClime project is an XCD5.0 million (USD1.86 million) initiative that has sought to help farmers and fishers in the southern region of Saint Lucia transition from low-productivity fishing and farming to more entrepreneurial agribusiness operations, while improving their resilience to climate change.[55] The SmartClime component supported the establishment of a line of credit to expand farmers' and producers' access to financing for the adoption of climate-resilient practices. The SABLE component included: (1) the institutional strengthening of LCCU, the Black Bay Farmers and Consumers Co-operative (BBFCC), and the Laborie Fishers and Consumers Co-operative (LFCC); (2) training for producers; as well as (3) market development and production-enhancing activities for in-demand local products. LCCU was responsible for promoting and on-lending the loan facility resources. Key facts about the project are provided in Table 6. More detailed project results are shown in Annex 2.

Table 6:
SABLE AND SMARTCLIME KEY FACTS

Project implementer	Laborie Cooperative Credit Union (LCCU)[56]
Project sponsor	Multilateral Investment Fund (MIF)
Project partners	Inter-American Development Bank (IDB) Climate Change Division, PROADAPT, and the Climate Investment Funds (CIF)
Target sector / beneficiaries	Agriculture / Agricultural producers who are members of the Black Bay Farmers and Consumers Co-operative (BBFCC) and fisherfolk who are members of the Laborie Fishers and Consumers Co-operative (LFCC)
Funding sources	CIF's Pilot Program for Climate Resilience (PPCR), MIF, and PROADAPT
Funding amount and type	• XCD2,170,800 (USD804,000) loan to LCCU from CIF's PPCR (managed by MIF) to establish a line of credit for sub-loans to producers at 5% interest, repayable over seven years • XCD974,500 (USD360,940) in grants to LCCU for technical assistance • XCD1,867,000 (USD691,456) in counterpart cash and in-kind contributions
Project period	Preparations began in 2016. Contracts with LCCU for the loan and grants were signed in November and December 2017 for a three-year implementation period
Project activities	• Capacity building for BBFCC and LCCU • Training of farmers in climate-smart practices • Market assessment of products in high demand in the tourism sector and assessments of farms to create production schedules (the target products were cucumber, honeydew, cantaloupe, pineapple, sweet pepper, tomato, sweet potato, watermelon, and yam) • Development of new market channels • Credit for investments in increased production using climate-resilient practices • Access to parametric crop insurance

The program has had some significant accomplishments. For example, 145 producers received training and BBFCC producers experienced double-digit sales growth each year between 2017 and 2019. In addition, LCCU had its first BCP approved by its Board of Directors.

At the same time, the program has faced a range of challenges, such as:

- **Finding staffing with proper qualifications.** Hiring a project coordinator and finding consultants with the qualifications to conduct baseline studies was challenging, thereby causing delays at the program start-up.

- **Limited demand for loan funds.** In February 2020, XCD1.52 million (USD562,800) of the XCD2.2 million (USD804,000) loan were canceled. The agreed lending rate of five percent was higher than LCCU's normal rates of 4–4.5 percent, making the loan program unattractive to both LCCU and the producers.

- **Unstable insurance market.** Activities to connect producers to crop insurance could not be implemented when the company that was expected to provide parametric insurance ceased operations in Saint Lucia.

- **COVID-19 impacts.** The greatest challenge to the program was the arrival of COVID-19, which shut down most of the tourism sector, greatly reducing the demand for local produce. With many farmers attempting to sell their products in the local markets, prices fell; and a number of project farmers reverted to subsistence farming or ceased production altogether. As vaccination levels rise in Saint Lucia and tourists return, Saint Lucia's economy will recover, although it will take time for producers to regain lost ground. LCCU will use the remaining grant funds to assist farmers to restart production and provide technical assistance to support sales in the domestic market, as the tourism industry reopens.

6.2.2 SAINT LUCIA DISASTER VULNERABILITY REDUCTION PROJECT CLIMATE ADAPTATION FINANCING FACILITY

CAFF is a component of the Saint Lucia DVRP.[57] The objective of both is to reduce vulnerability to natural hazards and climate change impacts in Saint Lucia and increase long-term climate resilience by addressing risks associated with hydrometeorological events. CAFF addresses this objective by making affordable loans available to small businesses and homeowners to finance adaptation investments. Key facts about the project are shown in Table 7. Detailed results data from CAFF are shown in Annex 3, including early results from the Business Recovery Programme (BRP).[58]

CAFF's lending practices are based on the standard SLDB lending policies and practices as well as the CAFF Operations Manual. Loan terms are summarized in Table 8.

Table 7:
CLIMATE ADAPTATION FINANCING FACILITY KEY FACTS

Project implementer	Saint Lucia Development Bank (SLDB)
Project sponsor	Government of Saint Lucia Ministry of Finance
Project partners	World Bank and the Climate Investment Funds (CIF)
Target sector / beneficiaries	Homeowners and small businesses in agriculture, fisheries, tourism, services, and manufacturing
Funding sources	CIF's Pilot Program for Climate Resilience (PPCR)
Funding amount and type	• XCD13.5 million (USD5 million) was provided to the Government of Saint Lucia (GOSL) by the CIF's PPCR at 1/10% per annum, with a repayment term of 40 years • GOSL used the funds to establish a line of credit with SLDB at 0.25% per annum (0% for Business Recovery Programme loans), with a repayment term of 20 years and a three-year grace period on principal repayment • Funds are on-lent to sub-borrowers through an Adaptation Loan Facility, at rates ranging from 4.5–7.5%, as shown in Table 8
Project period	Originally 2016–2020, extended to 2021
Project activities	• Adaptation Loan Facility—XCD1.215 million (USD4.5 million) • Technical Assistance to SLDB for institutional strengthening—XCD1.35 million (USD0.5 million)

Table 8:
CLIMATE ADAPTATION FINANCING FACILITY LOAN TERMS[59]

	SECTOR		
	AGRICULTURE	**HOUSING**	**INDUSTRY / MANUFACTURING / TOURISM / SERVICES**
Loan limits	XCD2,700–100,000 (USD1,000–37,037)	XCD2,700–100,000 (USD1,000–37,037)	XCD2,700–150,000 (USD1,000–55,556)
Interest rates	5.5–7.5%	4.5–6.5%	4.5–7.5%
Maximum loan period	• Shorter of 10 years or the remaining term on loan from GOSL • Grace periods not to exceed the period of construction/drawdown of the loan	• Shorter of 7.5 years or the remaining term on loan from GOSL • Grace periods not to exceed the period of construction/drawdown of the loan	• Shorter of 10 years or the remaining term on loan from GOSL • Grace periods not to exceed the period of construction/drawdown of the loan

Source: SLDB.

As of March 2021, after nearly four years of operation, CAFF had approved 264 loans, amounting to XCD6.19 million (USD2.29 million) in total. By lending amount, housing made up 66 percent, agriculture five percent, while services, tourism, and manufacturing combined represented 29 percent. The average loan size for CAFF was XCD23,438 (USD8,681).

CAFF outcomes differed from original expectations in several ways:

- **More loan demand came from households than from businesses.** An early demand survey conducted during CAFF project preparation showed the presence of many home-based businesses among those surveyed, suggesting that microbusinesses in particular may be benefiting from housing loans. While this cannot be verified from the available information, the differences are stark: business lending represented less than five percent of all lending as of March 2021, compared to a target of 40 percent.

- **Loan sizes are significantly smaller than expected.** While the number of loans originated was well in line with projections, the average loan size during the first three years was approximately 30 percent of the original estimate (~XCD21,600 versus XCD67,500 or USD8,000 versus USD25,000).

- **Women borrowers have predominated.** The share of women borrowers exceeded 60 percent in some periods, surpassing the 20–25 percent target.

- **COVID-19 impacts.** In August 2020, an agreement was reached among the SLDB, GOSL, CIF, and World Bank to modify CAFF terms, in response to the COVID-19 pandemic, in order to launch BRP. The modifications provided for (1) the blending of grants with loans for COVID-affected enterprises that have good prospects of recovery from the economic effects of the pandemic; (2) the expansion of SLDB's ability to provide technical assistance to borrowers; (3) the provision of business continuity training to borrowers; and (4) zero-percent interest on the PPCR loan repayment to the GOSL. BRP was launched in November 2020.

In spite of these challenges, CAFF borrower repayment performance has exceeded 95 percent for most periods, although this figure may fall as the economic impact of COVID-19 continues to be felt.

6.3 LESSONS FROM THE SABLE/SMARTCLIME AND CAFF PROJECTS

The organizations involved in the SABLE/SmartClime project (GOSL, IDB, LCCU, BBFCC, and LFCC) and CAFF (GOSL, World Bank, and SLDB) have learned a number of lessons from implementing the two financing programs. These lessons can inform the design and implementation of other adaptation financing initiatives in Saint Lucia and elsewhere. Some of these lessons are summarized below.

- **Adaptation financing programs require help to generate demand.** Bankers cannot be expected to carry out all the activities needed to create private sector demand for adaptation financing. Activities, such as educating business owners about climate change, targeted outreach, as well as monitoring and disseminating results, need funding from the government or donors. Or if financial institutions are expected to lead these activities, they will need capacity and resources. Various solutions are possible. For example, IDB provided a separate technical assistance program (SABLE) that supported market development and assistance to producers.

- **Lending staff need technical capacity.** Adaptation is an emerging area of lending with unique characteristics and risks. Loan officers need a working understanding of climate change, mitigation and adaptation options, and risk management in a changing environment. They may also need guidance on how to evaluate projects and underwrite loans. Capacity building could potentially come from in-person or online training, supported by on-call advice from technical experts in relevant sectors.

- **Borrowers need help with project preparation and the borrowing process.** Before borrowing, potential borrowers not only have to identify an

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appropriate adaptation intervention, but they may also need to navigate the project permitting process, prepare a business plan and/or BCP (as both SLDB and LCCU require), or satisfy other lender requirements. While these project preparation activities can improve project quality and lower risks, they could discourage borrowers unless free or low-cost assistance is available. To overcome this problem, SLDB requested flexibility in using CAFF resources for the provision of technical assistance to borrowers. Also, SLDB has used consultants paid by the World Bank to prepare project "packages" that pre-define budgets and cash flow projections for certain investment types. Given the public benefits that can accrue from adaptation projects, and the technical issues these projects can raise, supplying grants or subsidies to cover loan transaction costs may well be justified.

- **Farmers and fishers are generally reluctant to borrow.** Agriculture and fisheries businesses in Saint Lucia confront not only climate change, but also economic headwinds that affect their willingness to borrow and invest, which include poor economies of scale, high input prices, and a lack of risk management tools, such as insurance and storage. During the first two years, CAFF did not make a single agriculture or fisheries loan. The SmartClime loan facility was discontinued due to a lack of demand from producers. Agriculture and fisheries businesses in Saint Lucia are receiving technical support with adaptation from a number of projects; whether it is sufficient to help them overcome the inherent limitations in these sectors is not known.[60] In the meantime, expecting individual small farmers and fishers to borrow for adaptation on commercial terms in significant numbers may not be realistic.

- **Not all adaptation projects are bankable.** The need for grant funding to accompany (or in some cases, replace) CAFF credit was identified early on by SLDB. Otherwise, it was felt that smaller and more marginal business owners, who also have adaptation needs, would not have access to funding. There are arguments in favor of grant funding for climate adaptation, especially for small businesses. But even grants should be invested in activities that provide a return to the business in increased resilience. More research is needed to understand which adaptation investments lead to resilience and the conditions under which loans, grants, or a combination of the two, is the right financing formula.

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7. WHAT ELSE THE GOVERNMENT COULD DO TO ENCOURAGE PRIVATE SECTOR ADAPTATION

As proposed earlier, four preconditions, presented in Figure 2, need to be met before a business owner will invest in climate change adaptation. These preconditions include: (1) owners understand climate change and the related risks (or opportunities) for their companies; (2) owners are aware of successful climate adaptation strategies in similar businesses; (3) owners are convinced of the business case for investing in adaptation; and (4) companies have access to the technical and financial resources to design and implement adaptation projects.

Figure 2 also pairs each precondition with proposed strategies that GOSL and governments in other SIDS can employ to encourage increased private sector investment in climate adaptation. For example, if a business owner does not understand the risks that climate change poses for his or her firm, GOSL could provide general or sector-specific information about climate change impacts. If the owner is aware of climate change, but is not knowledgeable about what firms like theirs are doing to adapt, GOSL could work with business associations or other organizations to encourage information sharing among firms within specific sectors or geographic locations. If the firm understands what could be done, but is not convinced by the business case, GOSL could collaborate with economists or identify international best practices to help the business owner find an affordable, sound adaptation approach. Lastly, GOSL can help ensure that businesses have access to the necessary technical and financial resources to design and implement the adaptation solution.

As mentioned previously, the relevant intervention depends on the particular firm or group of firms and the extent to which they have satisfied the proposed preconditions.

A number of these interventions are already underway or being planned in Saint Lucia and the Caribbean region. However, the overall effort seems to lack coherence and does not appear to be targeted to achieve maximum impact. For instance, in Saint Lucia

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there is no climate adaptation website, resource center, or annual event aimed at encouraging the private sector to undertake adaptation measures. The "roadmap" of four preconditions for private adaptation could serve as a useful framework for better organizing the collective effort that is currently underway in Saint Lucia, in order to ensure that it is more coordinated and ultimately more effective.

Assuming that this roadmap roughly conveys how private firms make climate adaptation investment decisions, an important conclusion is that the availability of financing provided or subsidized by the government, in and of itself, would not be sufficient to encourage the private sector to invest in climate adaptation measures. Rather, more effective interventions might be those that support conditions prior to the investment decision, that is, those that help owners assess the potential impact of climate change on their businesses, build their awareness of the strategies for adaptation and mitigation, and demonstrate the business case for investment in climate resilience. Financing is still important; in fact, knowing that grants or credit are available may motivate private actors to consider their adaptation options. But increasing financing alone may not significantly increase adaptation investment.

Figure 2 also shows how monitoring and reporting can provide the feedback loops that lead to more resilience over time. This is particularly the case when it comes to selecting among adaptation approaches and measuring results. Providing ready access to information on initiatives underway in particular sectors and their results may be an effective way to encourage target groups to engage in or expand their respective adaptation efforts. See Annex 1 for a "Snapshot of Climate Change Impacts in Saint Lucia's Principal Economic Sectors" for a description of how climate change is expected to affect specific sectors.


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8. CONSIDERATIONS FOR SAINT LUCIA

8.1 CONSIDER A TWO-PRONGED APPROACH

GOSL might consider employing a two-pronged approach to promoting private sector adaptation, that would include one effort focused on smaller firms and a second directed at larger firms. Such an approach could be an effective response to the different motivations and capacities of large and small firms to respond to climate change. It would also better reflect the differing motivations of government to support the two subgroups.

The motivation of larger firms to adapt—especially those with shareholders—is preserving their reputations and maintaining profitability. These firms may lay off staff or close operations as the climate degrades, but they are unlikely to expect government support. The government's motivation to encourage these firms to adapt is economic, that is, preserving middle-income jobs and the country's tax base.

On the other hand, micro- and small business owners are motivated by the desire to preserve their own livelihood and that of their few employees. Yet, these proprietors often have the government's social safety net to turn to when a hurricane leads to the closure of their businesses, as experiences from previous disasters have demonstrated. The government's motivation for helping small firms survive climate change is more social—to preserve the employment of lower-income residents and reduce its contingent liabilities such as the need for unplanned social expenditures.

Given these differences, distinct strategies, and therefore, possibly different lead agencies, may be needed to help these two groups navigate their respective adaptation pathways.

In the larger context of business continuity, some countries have tried a territorial (or area-based)

approach to be more effective in reaching small firms than an industry or one-on-one approach that works with larger firms.[61] While PSES mentions that smaller firms do not participate in business associations, it does not propose an alternative way to reach them. GOSL may consider reaching out to smaller firms via local governments or local disaster risk management committees. Working locally not only creates economies of scale for outreach costs, and possibly in adaptation investments, but also reduces the transaction costs for small business owners by bringing the information closer to their businesses. It could also improve targeting by focusing assistance in the regions of the country that are more exposed to particular hazards.

8.2 CONSIDER OTHER WAYS TO TARGET FIRMS OR GROUPS OF FIRMS

Because there is no single "private sector" to reach out to, either in Saint Lucia or in any other country, adaptation messages targeted at the private sector in general could mostly miss the mark. Finding effective channels for communication and engagement may mean understanding the subgroups and networks with which companies and entrepreneurs identify. This could be based on their business type or sector, but also where they operate, who their clients are, or from whom they buy inputs. Using business networks to encourage climate adaptation should be considered.

In some circles, supply and distribution networks (supply chains or value chains) are considered more effective for conveying climate adaptation messages than sectors.[62] This approach views the network of firms contributing to the production of a specific product or service (e.g., all the companies who deliver a tourist package) to be more relevant for encouraging resilience building than all the companies in a particular sector (i.e., tourism). Such networks have a shared interest that could motivate them to work together to preserve their collective livelihoods. This approach could also be effective for engaging certain groups of small firms.

8.3 CONSIDER ALTERNATIVES FOR PROVIDING TECHNICAL SUPPORT

Climate change may be man-made, but its impacts occur in nature. The prediction of these occurrences, as well as the design and financing of adaptation interventions to respond to them, requires technical inputs. Globally, planning investments to counter climate risks is an evolving science, and choosing the correct solution may require research and professional advice. The lack of quality technical input creates risks that discourage investment by firms and lending by financial institutions. This is not surprising: if the hazards are misunderstood or a project is improperly designed, the same hazard that the investor is trying to avoid could destroy the asset or worsen the original situation.

Financial institutions may not be the best entities to deliver technical support on adaptation project design. The financial institutions that implement CAFF and the SmartClime program were both given the responsibility of providing or mobilizing technical support. For SmartClime, this is part of the project design and budget. With CAFF, this role, often financed in a piecemeal fashion, has grown over time. Nonetheless, neither organization possessed the technical expertise internally to provide the necessary advice, especially for more complex projects.

Alternative strategies may be needed to provide advice that is technically sound, grounded in research, and consistent with sector strategies. While neither CCAP nor NAP anticipates creating a technical center to provide technical advice on private adaptation strategies, such an initiative—either national or regional and organized in collaboration with academic institutions—may be worth considering.


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8.4 ENSURE PUBLIC SUPPORT IS LEVERAGING PRIVATE INVESTMENT

Because it is unlikely that GOSL will have the resources required to finance more than a fraction of private adaptation needs, it should continue to take steps to facilitate private adaptation financing, especially for small firms. This is clearly articulated in CCAP. Efforts should also be made to reduce disincentives to invest by lowering private sector risk, increasing access to information, and reducing transaction costs. Making the building permitting process more efficient and transparent, for example, could increase compliance and improve the impact of adaptation investments. Solutions, such as the insurance products of CCRIF, demonstrate that regional interventions other than direct financing can create economies of scale that lead to higher private returns.

To get the most impact from its limited resources, GOSL should monitor which interventions actually leverage private investment. Public facilitation of adaptation financing—whether in the form of enabling reforms, credit, or grants—should not crowd out private investment; rather, it should increase both the demand for and supply of financing. Experimenting with different approaches, as has been done in establishing both SmartClime and CAFF, is also worthwhile as long as such pilot projects are objectively evaluated so that they can be improved upon and expanded. As more experience is gained internationally and analytical tools improve, the private adaptation financing market is growing and maturing. Saint Lucia's experience can thus provide valuable input into this effort.

8.5 DEFINE CLEAR AND COMPELLING CLIMATE MESSAGES

The messaging on climate change can influence how the private sector adapts. Yet, GOSL's adaptation policy documents tend to be abstract. For example, CCAP identifies three outcomes ("adaptation measures implemented, facilitated, and financed") that may speak to government officials, but are unlikely to motivate the average business owner. NAP establishes more specific outcomes, such as improved legal and regulatory frameworks, increased use of climate information, enhanced project implementation capacities, strengthened preparedness, and growth in adaptation funding. But none of these outcomes is actionable by business people, who are more concerned about damaged property and reduced demand for their goods and services.

If the survey results are representative, more than half of all private sector managers in Saint Lucia may not know the difference between climate adaptation and mitigation nor understand the impacts that climate change can have on their business. This suggests that more effective social communications on climate change are needed. Planning effective social communications requires expertise, and often, quality market and social research. Also, what matters in social communications is "not what is said, but what is heard." Given the technical nature of climate communications, assessing the impact of these messages may be particularly important.

Therefore, **GOSL might consider the following suggestions to improve the impact of its climate messages on the public's understanding of the consequences of climate change and the role of the private sector in addressing it.** First, state climate messages in language that is motivational and more targeted to the private sector. Consider preparing a "plain language summary" of any climate policy document before it is distributed. Test climate messages before they are disseminated and evaluate their impact afterwards to help ensure that they are producing the desired effect. Finally, whenever possible, social communications should be two-way so that recipients can actively engage, ask questions, and express their concerns.

8.6 PROVIDE QUALITY SUPPORT AND MAKE IT VISIBLE AND EASY TO ACCESS

The government agencies in Saint Lucia that need to interact and communicate with stakeholders on climate matters do not appear to have the necessary resources to do so. For some time, there has been no GOSL climate change website. Nor are there easily accessible social media interfaces on climate change for the private sector. This could make it difficult for firms to access technical and financial resources when they are available. Finding companies that are already applying adaptation technologies can also be a challenge, even though the logic of Figure 2 suggests that understanding what peer companies are doing can influence adaptation decision-making.

To support its private sector strategy, GOSL needs to create an information hub on climate adaptation. This site can provide candid assessments of past and ongoing projects, allowing lessons learned to be incorporated into new projects. It could also offer opportunities for private sector networking and a central location to share information on site visits and training opportunities. Members of the target audience should be consulted during the design of these interfaces.

The technical center on private sector climate resilience suggested earlier could be the home of such a hub. The center could also provide research and technical advice on adaptation and ensure that the technical assistance meets quality standards that are consistent with best practices. In some areas of development, such a hands-on approach by the government may not be necessary, but with regards to climate, time and resources are too precious to waste.

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9. CONCLUSIONS

Saint Lucia has made enormous strides in establishing a policy framework for an ambitious climate adaptation agenda. In fact, the country is often mentioned internationally as a leader in climate adaptation planning, particularly with respect to its participation in the National Adaptation Planning process. In carrying out these activities, GOSL has made a concerted effort to both recognize the private sector's role in climate adaptation and incorporate private actors into its planning activities.

As this report makes clear, the most critical role for the private sector now is not participating in policy making but undertaking interventions to ensure its own resilience and exploit business opportunities created by a changing climate. A corresponding priority in the GOSL adaptation agenda should be managing a shift toward the facilitation of private sector investments in climate adaptation and resilience solutions.

GOSL will need to define more specifically what this facilitation looks like, that is, what communications, technical support, research, financial support, and information exchanges are needed to motivate and empower private firms to adapt. Data on the private sector in Saint Lucia is seriously out of date. While the surveys and consultations conducted as part of this report provide some clues, they were limited in scope. GOSL could consider carrying out a detailed business survey that includes a focus on firms' knowledge of climate change and the motivation of businesses to integrate climate resilience objectives into their operations. Such a survey could improve the targeting of communications and outreach and provide a baseline for measuring the effectiveness of future private sector support activities.

Another priority should be to segment the private sector into business groups that can be effectively engaged. Although there is a vast number of informal microenterprises that may only be contributing minimally to the formal economy, they provide livelihoods and stability to many households, some of which are the most vulnerable in the country. These businesses deserve their own adaptation framework that is tailored to their particular needs, strengths, and limitations.

Nonetheless, Saint Lucia should be commended for the progress made to date on defining and implementing its climate adaptation agenda and recognizing the important role of the private sector. It will likely continue to be a leader among other SIDS and developing countries in general. The hope is that, through this report, CIF has provided insights that will make the next steps along this consequential path clearer and more beneficial for the private sector and all the people of Saint Lucia.

ANNEX 1: SNAPSHOT OF CLIMATE CHANGE IMPACTS ON SAINT LUCIA'S PRINCIPAL ECONOMIC SECTORS

The impacts of climate change on the private sector in Saint Lucia are often unique to the industry and economic activity. Similarly, the climate adaptation needs and opportunities can be unique to the sector and even to specific firms within the sector. This section presents brief descriptions of several key sectors and the impacts of climate change on them.

TOURISM

Saint Lucia's tourism choices are diverse, encompassing everything from intimate inns to major beachfront hotels and all-inclusive resorts. Its growing reputation as a honeymoon destination has contributed to a nearly 30 percent-increase in tourist arrivals over the past 10 years, reaching 1.275 million people in 2019, including cruise ship visitors.[63]

As the leading economic activity, tourism generates more than 40 percent of the country's gross domestic product (GDP) and nearly 63 percent of its jobs, according to the World Travel and Tourism Council (WTTC).[64] It is also the main source of foreign exchange earnings, comprising 81 percent of foreign trade.[65]

The number of enterprises involved in tourism is hard to measure. The Saint Lucia Hospitality and Tourism Association (SLHTA), with a membership of at least 240 businesses, identifies more than 20 subsectors that contribute to tourism, including hotels, tour operators, gift shops, and taxi services.[66]

The tourism sector is very vulnerable to climate-driven impacts, including coastal erosion, flooding, droughts, and tropical cyclones. Climate change can affect tourism through the closure of air and seaports, the destruction of properties, the loss of inputs and services, temperature and weather extremes, along with the degradation of tourist attractions. Adaptation strategies comprise strengthening physical structures; collaborating to ensure the continuity of value chains that supply critical inputs, such as food and fuel; installing and hardening alternative energy systems; as well as advocating for the protection of natural attractions, such as coral reefs and beaches.

AGRICULTURE AND FISHERIES

Agriculture. Saint Lucia's agriculture sector consists mostly of small-scale operations, with 9,972 holdings and an average farm size of 3.2 acres as of 2007.[67] At that time, farm size varied from less than 0.6 acres to just over 136 acres. Of all the holdings, 45 percent were less than one hectare (ha). The 2007 data also show that an estimated 30 percent of the holdings belonged to female farmers.

Approximately 16 percent of the country's land is cultivated, much of it using traditional rainfed production methods.[68] In 2019, agriculture, forestry, and fisheries together provided about 10 percent of all employment or about 8,200 jobs, slightly above the average number over the past decade. The sector's contribution to GDP has remained relatively constant in the past decade as well—at just under two percent or XCD115.3 million (USD42.7) in 2019.[69]

Agriculture suffers from exposure to worsening hurricanes, droughts, flooding, and landslides, brought about by climate change. Hurricane Tomas in 2010 caused agricultural losses and damage totaling XCD151.8 million (USD56.2 million).[70] The increasing presence of invasive pests and diseases is also attributed to climate change. As a result, farmers consider changing and unpredictable weather

systems to be the principal cause of economic vulnerability in their sector.[71]

Fisheries. Although the fisheries sector contributes less than one percent to Saint Lucia's GDP, it is considered to be an important source of the country's employment and is central to the country's cultural identity.[72] Saint Lucian fisheries employ traditional methods such as trolling, netting, pots, manually-operated gears, and long lines set from fiberglass pirogues and wooden canoes. Based on a 2013 census, there are 1,170 fishing households located throughout the country,[73] along with an estimated 150 fish vendors and processors in Saint Lucia.

According to the Fisheries Sectoral Adaptation Strategy and Action Plan (SASAP), Saint Lucian fisheries experienced a compound annual growth rate of 0.46 percent in total wild capture landings between 2012 and 2018 and a compound annual growth of 16 percent in aquaculture production between 2000 and 2015.[74] While the Ministry of Finance estimates that the value of total landings has increased slowly over the last decade, reaching XCD27.2 million (USD10.1 million) in 2019, the quantity of total landings had also been falling at a compound annual rate of 1.4 percent between 2012 and 2019.

The location of fisheries infrastructure on the coast makes the fisheries sector highly vulnerable to sea-level rises, including the loss of vessels and fishing gear from storms.[75] Other climate change-related impacts include the reduction in fishing days due to extreme weather events, the degradation of coral reefs and other fish breeding habitats, and changes in the migratory behavior of species due to warmer and more acidic waters.[76] Economically, the sector has been buffeted by the decreasing abundance of fish, as well as the costs associated with further travel and investments in fish-aggregating devices and other equipment needed to maintain catch rates.

CONSTRUCTION AND MANUFACTURING

Construction. The construction sector includes a few dozen larger registered construction and architectural firms, a small number of engineering firms, as well as myriad small-scale contractors and tradespeople. Construction produced about eight percent of Saint Lucia's employment and 3.6 percent of its GDP in 2019.[77] Private-sector construction, including tourism-related projects, provides the largest share of construction business for the sector, followed by public-infrastructure construction. Declines in construction activity in recent years are expected to be reversed, as several major public projects come online.[78]

While the construction sector benefits when construction activity increases following major weather events, contractors can also benefit from investments in climate adaptation and mitigation, such as conversion to green energy. Climate change will require updated design and construction methods to make buildings more resilient, which is likely to increase spending on individual projects. The disciplined enforcement of building codes, including for small projects, along with the promotion of new technologies, could benefit the construction sector by bolstering the demand for climate-related construction services.

Manufacturing. Saint Lucia's manufacturing sector is small. It generates only three percent of GDP and produces approximately five percent of all employment (4,261 jobs in 2019). Manufacturing enterprises are concentrated in the food and beverages, paper and paper board products, metal products, and chemicals subsectors. Manufacturing activities include the production of doors and windows, which are considered critical adaptation investments. In late 2019, one local firm also began producing water storage tanks—equipment that can help mitigate the impact of droughts.

The NAP process has not focused on manufacturing yet; however, it is not difficult to identify both threats and opportunities for the sector in a changing climate. First, as with any building owner, manufacturers will be subject to additional operating costs for cooling and investments in building re-enforcements. At the same time, the manufacturing sector will have opportunities to innovate and introduce new products to satisfy the demand for

both mitigation- and adaptation-related equipment, including water harvesting and storage, building retrofitting, and photovoltaic equipment, among others.

SERVICES

The services sector is by far the largest and most varied sector in Saint Lucia, comprising retail and wholesale services, financial services, transport services, communications and information services, professional services, government services, health, and education, among others. Depending on the subsectors included, the service sector may contribute up to 90 percent of the national GDP and 80 percent of employment (including up to 65 percent of the GDP attributed to tourism).[79]

The interdependence of service businesses and the dependence of the entire economy on them should make building their resilience to climate impacts a national priority. Depending on the subsector, vulnerabilities may be associated with damages to physical facilities, including storage and point-of-sale locations, along with interruptions in input markets, distribution networks, and communications. Business continuity for critical services, such as banking, telecommunications, transport, and health, should be a special concern.

There are no national climate adaptation initiatives focused on the services sector per se, but various subsectors have identified their specific risks and are working to mitigate them. The 2018 International Monetary Fund (IMF) climate report mentions an adaptation plan developed for tourism in 2015 under a Global Climate Change Alliance (GCCA) project with the Caribbean Community Climate Change Centre (CCCCC).[80] Those telecommunications companies, commercial banks, and accounting firms that have international affiliations are likely receiving guidance on business continuity measures and climate risk management from their parent companies.[81]

FINANCIAL SERVICES

Financial services in Saint Lucia are offered by international commercial banks, domestic commercial banks, credit unions, money services businesses (financial services businesses that provide small, fast loans to consumers), and microfinance institutions.

In January 2020, the commercial banking sector in Saint Lucia had XCD6.4 billion (USD2.4 billion) in assets, of which XCD3.5 billion (USD1.3 billion) were in loans and advances, according to the Eastern Caribbean Central Bank (ECCB).[82] Commercial banks lend for both personal and business purposes. Business lending by commercial banks declined from 64 percent of all lending in 2013 to 44 percent in 2019. Even so, commercial banks lend to nearly all sectors, with services, distribution, tourism, construction, and land development being their top five sectors. Agriculture and fisheries sectors are not prominent in commercial bank portfolios, however. In 2019, agriculture and fisheries made up less than 0.25 percent of all commercial bank lending.[83]

Domestic commercial banks, including the 1st National Bank, Bank of Saint Lucia, and Saint Lucia Development Bank (SLDB), originate almost 50 percent of all personal loans.[84]

The 16 credit unions associated with the Saint Lucia Credit Union League (SLCUL) had a combined membership of over 111,000 members in 2018—a number that has grown by 30 percent since 2013.[85] The 2018 penetration rate of 81 percent is well above the 65 percent average of Caribbean countries.[86] The combined assets of the credit unions reached XCD989 million (USD366 million), with lending reaching XCD797 million (USD295 million), in 2018.[87] Climate change is not mentioned on the League's website.

The Saint Lucia Mortgage Finance Limited (SLMFL) (under the National Insurance Corporation) lends for

the purchase, construction, and extension of homes. Its loan portfolio totaled XCD43.96 million (USD16.3 million) in 2017.[88] As in the case of SLCUL, climate change is not mentioned on the SLMFL website or its 2017 annual report.

Money services businesses (MSB) provide a range of financial services, including unsecured lending for business and personal use, to people at all income levels in Saint Lucia. According to the Financial Services Regulatory Agency (FSRA), MSB lending grew by 26 percent between 2017 and 2018 (the last year that data are available), hitting XCD99 million (USD37 million) in 2018.[89] Eight percent of lending in 2018 was for home improvement. As of 2018, seven MSB companies, including Axcel Finance, Capita Financing, Courts Finance, and Fast Cash, were in operation.

Financial institutions are important for climate resilience due to their critical role in supporting the continuity of other businesses during climate shocks and their lending capabilities that are essential for climate adaptation, mitigation, and reconstruction. They can also disseminate information to their clients about risk reduction and introduce lending conditions to promote good adaptation practices. Consequently, the clients of these institutions and GOSL should be concerned about their business continuity plans (BCPs) and risk mitigation strategies. Given their critical role, financial institutions should also be engaged in national climate finance policy discussions.

The degree to which financial institutions in Saint Lucia are prepared for climate shocks or are financing adaptation was not possible to determine due to a lack of information. The principal banking association for the region, the Caribbean Association of Banks (https://cab-inc.com/), does not yet appear to be supporting its member institutions to address climate issues, although its website does mention future training sessions on the topic.

ANNEX 2: SUSTAINABLE AGRI-BUSINESS FOR LABORIE AND ENVIRONS (SABLE) AND SMARTCLIME RESULTS, AS OF JUNE 2021

PROJECT OBJECTIVES	TARGETS				
RESULT INDICATORS	**BASELINE**	**YEAR 1 / 2017**	**YEAR 2 / 2018**	**YEAR 3 / 2019**	**TARGET**
Cumulative number of people who adopted climate-resilient practices or technologies	0	44	105	147	147
Actual	~	~	~	*135*	~
Number of women	~	~	~	~	50
Actual	~	~	~	*Not measured*	
Markets that emerged with the support of Multilateral Investment Fund (MIF)	0	6	10	13	13
Actual				*Not measured*	
Number of hectares (ha) of land treated sustainably	0	35	85	85	85
Actual				*Not measured*	
Black Bay Farmers and Consumers Cooperative (BBFCC) avg. annual sales growth	XCD2,160,000 (USD800,000)	75%	11%	10%	XCD4,725,000 (USD1,750,000)
Actual		*USD990,000 (24%)*	*USD1,220,000 (29%)*	*USD1,350,000 (16%)*	
Number of BBFC members	32 M / 5 W	72 M / 25 W	102 M / 40 W	142 M / 50 W	142 M / 50 W
Actual				*63 M/11 W*	
Number of people trained	32 M / 5 W	82 M / 30 W	112 M / 45 W	152 M / 55 W	152 M / 55 W
Actual				*145*	
Number of producers that gained access to green finance	0	78	114	154	154
Actual	~	~	~	*9 producers, XCD272,060 (USD100,763)*	~
Number of people who gained access to microinsurance products	0	78	114	154	154
Actual	*0*	*0*	*0*	*0*	*0*
Laborie Cooperative Credit Union's (LCCU) Business Continuity Plan approved by Board of Directors	~	~	1	~	1
Actual	~	~	~	*1*	~

Key: M=men, W=women

Source: Inter-American Development Bank (IDB).

ANNEX 3: CLIMATE ADAPTATION FINANCING FACILITY (CAFF) RESULTS, AS OF MARCH 2021

	RESULT INDICATORS	UNIT	BASELINE	CUMULATIVE VALUES					
				YEAR 1	YEAR 2 MAR 2018	YEAR 3 MAR 2019	YEAR 4 MAR 2020	YEAR 5 MAR 2021	FINAL
All CAFF lending [including the Business Recovery Programme (BRP)]									
1	CAFF funds disbursed in adaptation loans	Percentage	0%	0%	10%	30%	70%	80%	100%
	Actual		~	~	*5.71%*	*16%*	*27%*	*37%*	
2	Subloan borrowers (project beneficiaries)	Number	0	0	18	54	126	285	450
	Actual		~	~	*34*	*108*	*1832*	*249*	
3	Female subloan borrowers	Percentage	20%	NA	22%	23%	24%	25%	25%
	Actual		~	~	*50%*	*56%*	*57%*	*58%*	
4	Outstanding loans in good standing	Percentage	NA	NA	95%	95%	95%	75%	75%
	Actual		~	~	*100%*	*99%*	*97%*	*95%*	
5	Share of business loans	Percentage	40%	NA	40%	40%	40%	14%	16%
	Actual		~	~	*2.94%*	*1.85%*	*4.9%*	*4.4%*	
6	CAFF loans originated (approved)	Number	0	0	18	54	126	285	450
	Actual		~	~	*34*	*108*	*183*	*249*	
7	CAFF loans outstanding	Number	0	0	18	54	126	175	180
	Actual		~	~	*34*	*108*	*165*	*194*	
BRP only									
8	BRP share of approvals (period)	Percentage	~	~	~	~	~	28%	56%
	Actual		~	~	~	~	~	*8%*	
9	BRP loans approved (cumulative)	Number	~	~	~	~	~	40	70
	Actual		~	~	~	~	~	*11*	
10	BRP share of all loans (cumulative)	Percentage	~	~	~	~	~	14%	16%
	Actual		~	~	~	~	~	*4.4%*	
11	Grant funds % of total BRP loans (grants / loans)	Percentage	~	~	~	~	~	15%	15%
	Actual		~	~	~	~	~	*0.56%*	
Average loan size (USD)									
	Projected				25,000	25,000	25,000	25,000	25,000
	Actual (disbursed)				*7,557*	*6,667*	*6,639*	*6,295*	

Source: World Bank.

ACRONYMS

BBFCC	Black Bay Farmers and Consumers Co-operative
BCP	Business Continuity Plan
BRP	Business Recovery Programme
CAFF	Climate Adaptation Financing Facility
CBBRAS	Coconut Bay Beach Resort and Spa
CCAP	Saint Lucia Climate Change Adaptation Policy
CCCCC	Caribbean Community Climate Change Centre
CCCFP	Caribbean Community Common Fisheries Policy
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CIBC	Canadian Imperial Bank of Commerce
CIF	Climate Investment Funds
COAST	Caribbean Oceans and Aquaculture Sustainability Facility
CRFM	Caribbean Regional Fisheries Mechanism
DVRP	Disaster Vulnerability Reduction Project
E&L Initiative	Evaluation and Learning Initiative
ECCB	Eastern Caribbean Central Bank
FSRA	Financial Services Regulatory Agency
GCCA	Global Climate Change Alliance
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GOSL	Government of Saint Lucia
ha	hectare
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
LCCU	Laborie Cooperative Credit Union
LFCC	Laborie Fishers and Consumer Co-operative
M	meter
MIF	Multilateral Investment Fund
MSB	Money Services Business
NAP	National Adaptation Plan
NDCs	Nationally Determined Contributions
NEMS	National Environmental Management Strategy
NEP	National Environment Policy
NGO	Non-governmental Organization
OECS	Organisation of Eastern Caribbean States
PPCR	Pilot Program for Climate Resilience
PPP	Public-private Partnership
PSEPA	Point Sable Environmental Protection Area
PSES	Private Sector Engagement Strategy
SABLE	Sustainable Agribusiness for Laborie and Environs
SASAPs	Sectoral Adaptation Strategy and Action Plans
SDGs	Sustainable Development Goals
SIDS	Small Island Developing States
SLDB	Saint Lucia Development Bank
SLHTA	Saint Lucia Hotel and Tourism Association
SLCUL	Saint Lucia Credit Union League
SLMFL	Saint Lucia Mortgage Finance Limited
SPACC	Special Programme on Adaptation to Climate Change
SPC	Segregated Portfolio Company
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
WASCO	Water and Sewerage Company
WTTC	World Travel and Tourism Council
XCD	East Caribbean Dollar

ENDNOTES

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The Climate Investment Funds (CIF) was established in 2008 to mobilize resources and trigger investments for low carbon, climate resilient development in select middle and low income countries. 14 contributor countries have pledged over US$8.5 billion to the funds. To date CIF committed capital has generated an additional US$61 billion in co-financing for mitigation and adaptation interventions at an unprecedented scale in 72 recipient countries. CIF's large-scale, low-cost, long-term financing lowers the risk and cost of climate financing. It tests new business models, builds track records in unproven markets, and boosts investor confidence to unlock additional sources of finance. The CIF is one of the largest active climate finance mechanisms in the world.

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