## A Celebration of Community and Climate Action

A Dedication of the Soubise Climate-smart Fisher Facility

February 22, 2025





### **Executive Summary**

Nature plays a key role in addressing climate vulnerability of communities, particularly those along the coast. The collaborative and community-focused work in Grenville Bay over the past 15 years has been aimed at understanding how nature conservation and restoration can address vulnerability and help make communities more resilient.

Scientific analyses and community-led consultations conducted through an initiative called *"At the Waters Edge"* revealed that coral reef condition was a driver of a key issue affecting the long-term resilience of the communities surrounding Grenville Bay: coastal erosion and its impacts on coastal fishing infrastructure. Declining reef health led to decreasing reef height, increasing wave energy reaching the shore of Grenville Bay, and accelerating erosion. This is jeopardizing the economic and social wellbeing of local communities. Threats to reef health such as sedimentation and runoff from farms and other lands in the watershed require a holistic approach and community-led solutions. In the long run, ownership of solutions by the community is what makes conservation possible, effective, and durable: farmers taking steps to reduce runoff and erosion uphill; fishers engaging in coral restoration activities; and community members managing the mangrove and native plant nursery to support shoreline restoration initiatives.

Fisher Facility

Addressing some of the fundamental needs of the community, such as climate-smart infrastructure to support local fishers, is a key enabling condition for local ownership. And yet, the Fisher Facility is not just a critical piece of infrastructure that supports fishers and their families, it is emblematic of what is at stake-livelihoods and a local (national and regional) economy supported by nature, and communities that are resilient and prosperous in a world that is working to address a changing climate and biodiversity loss.

The Resilient Islands Initiative, funded by the German Government's International Climate Initiative, aimed to replicate and scale the approaches being taken in Grenada across multiple countries, including Jamaica and the Dominican Republic. As the genesis of this initiative, Grenville Bay offers a globally significant example of how a holistic approach involves nature-based solutions to problems that are both local and global in nature.



Learn More about the Resilient Islands Initiative

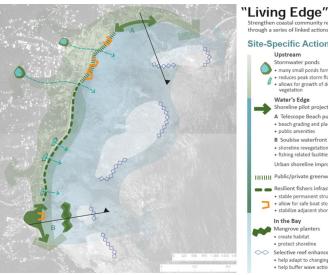
### **The Grenville Bay Area**

#### Grenada's Breadbasket

Nestled on the eastern shore of Grenada, the parish of St. Andrew is affectionately known as the nation's "breadbasket." This area encompasses the wider Grenville Bay Area (GBA), a coastal stretch that includes the communities of Telescope, Grenville, Soubise, and Marguis. GBA communities are home to diverse residents, including fishers, farmers, homemakers, teachers, police officers, and politicians. Community members share deep ties to both land and sea. These connections, ingrained in their DNA, enable them to recognize the subtle and significant environmental changes that have been reshaping their coastal home over the last few decades.

Surrounded by mountains to the west and the ocean to the east, the contiguous coastal communities of the GBA are grappling with the impacts of climate change-a challenge unfortunately not unique to their region. They face severe weather events, storm surges, sea level rise, and fluctuating rainfall patterns that reduce water access during dry periods and cause hillside erosion and flooding during heavy rains. These challenges are especially pronounced in low-lying coastal areas and contribute to the degradation of coral reefs. Consequently, the ripple effects of these impacts are felt by everyone, from farmers to fishers, across the entire ridge-to-reef gradient, affecting the well-being of families and communities.

The "At the Water's Edge" (AWE) project was initiated in response to these challenges. This community-centered initiative brought The Nature Conservancy (TNC) together with GBA communities to create a climateresilient and sustainable future. Building upon the existing Greater Grenville Area Plan developed by Grenada's Physical Planning Unit, the AWE project facilitated collaboration between government ministries, local NGOs (including the Grenada Red Cross Society and the Grenada Fund for Conservation), stakeholders, and, most importantly, the GBA communities. Together, they developed the "Living Edge Plan," a comprehensive suite of short, medium, and long-term strategies to reduce risks and vulnerabilities to climate change while enhancing resilience through the use of naturebased solutions.



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Selective reef enhancement · help adapt to changing condition: help buffer wave action for inner bay

through a series of linked actions and policies

Site-Specific Actions

Upstream

© Hunter Nichols

### The Living Edge Plan

#### Ridge-to-Reef Solutions Rooted in Nature

The *"Living Edge Plan"* adopted a ridge-to-reef approach with a portfolio of Nature-based Solutions (NbS) including:

#### **Farmland Water Retention:**

Retention ponds constructed on farms not only helped reduce the water flow and its velocity to low-lying areas during heavy downpours, but they also provided a source of water for use by farmers, during periods of decreased rainfall. The retention ponds were implemented with enhanced vegetation plantings along farm slopes, which provide benefits such as slope stabilization, water filtration and sediment retention, before the water enters the Grenville Bay.

#### **Coastal Revegetation:**

Mangroves and other coastal vegetation such as sea grapes, almonds and coconuts were planted along the shoreline in areas of high erosion, stabilizing and retaining soil, absorbing wave energy, and reducing coastal erosion.

#### **Shoreline Stabilization:**

A modular 30-meter hybrid reef was constructed on the northern end of Grenville Bay's fringing reef, using local labor and materials. The modular reef was designed to intercept waves offshore and provide structure to support marine life, including species that are important for local fisheries. Insights from monitoring this small-scale 'test reef' have been incorporated into the design of a full-scale 330-meter hybrid reef that would enhance local marine life, and provide wave-breaking function needed to reduce erosion on nearby shorelines.





Top to bottom: © Hunter Nichols; © Pink Reel

#### Capacity Building for Long-term Implementation:

A critical aspect of the approach to the Living Edge Plan is building community capacity to design and manage conservation work and take ownership of long-term solutions. Community members are managing a native plant nursery in Soubise and conducting shoreline restoration with mangroves and other native coastal plants. Fishers have been trained in cutting-edge coral propagation and restoration techniques and were certified in open-water SCUBA diving. Both fishers and community members have been trained in First Aid and Safety at Sea practices.

#### **Environmental Awareness:**

Schools are engaged in raising awareness of the role that nature plays in sustaining daily life. Students throughout Grenada have visited TNC and partner project sites to learn firsthand about local impacts of climate change, and to participate in restoration activities that are designed to address these issues, working side-by-side with community members.

#### Water Quality Remediation Plan:

Using maps, models and local knowledge to identify areas in the GBA prone to erosion and flooding during rainfall events, the community developed solutions that extended from ridge to reef to reduce runoff, and address water quality in Grenville Bay.

### A Climate-Smart Fisher Facility

As a core component of the Resilient Islands project in Grenada, the climate-smart fisher facility in the community of Soubise, embodies several core ideas in the *"Living Edge Plan"*.

As one stands on the facility's grounds and looks seaward, it is easy to see parts of the nearby fringing coral reef and hear the sound of waves breaking on the reef's crest. The reef is the first line of defense against waves that otherwise cause erosion and threaten onshore infrastructure and it is heavily dependent on good water quality. The facility's southern boundary is supported by green-grey infrastructure that not only stabilizes the land, but also helps to slow the rate of runoff and filter water entering the Grenville Bay. The seaward boundary of the Facility is also stabilized, providing an additional layer of protection to the shoreline, preventing sediment from washing into the bay.

By design, the facility addresses the need for a constant supply of fresh water-particularly during periods of drought-by harvesting and storing rainwater for onsite use. Solar energy is also captured to power the facility, simultaneously reducing both operational costs and climate emissions.

The facility's lockers will provide secure storage for fishers' gear including nets, engines and other tools. In addition to its nature-friendly design elements, the facility also addresses the needs of the fishing community by providing enhanced access to the sea and their livelihoods, and a livable green space for community gatherings.















### **A Foundation of Trust**

### Fifteen Years of Collaboration

Fifteen years ago, TNC and the Grenada Red Cross National Society began a collaboration to support the implementation of the *At the Water's Edge* (*AWE*) project in the communities around Grenville Bay. In 2014, TNC and the International Federation of Red Cross and Red Crescent societies (IFRC) exchanged letters of intent to expand this collaboration through the IFRC Americas Regional Office to assess the vulnerability of local communities and design adaptation strategies that would help reduce climate and disaster risks at a regional scale.

In 2017, TNC and the IFRC designed the Resilient Islands Initiative, a five-year multi-country project that expanded the AWE model to Jamaica and the Dominican Republic with support from the German government's International Climate Initiative (IKI). The project developed an innovative combination of tools, approaches and actions including a resource mobilization plan and policy advocacy capabilities to address key risks identified as threatening the ecosystems integrity and well-being of coastal communities. A key Resilient Islands activity for Grenada was the design and construction of the Soubise fisher facility, prioritized through the Grenville

community resilience plan developed by Grenville Bay Area communities with support from TNC and the Grenadian Red Cross.

Top to bottom: © José Furlan Pissol , © Pink Reel, © Hunter Nicols

In 2018, TNC and the IFRC substantiated their partnership through the execution of a global Memorandum of Understanding to advocate for and use nature-based solutions to protect vulnerable people, reduce suffering, and foster community and habitat resilience around the world.

> With a successful fifteen-year track record, the IFRC and TNC partnership has established a strong foundation of trust, collaboration, and tangible impact. Both organizations continue to leveraging their respective strengths and resources to drive significant positive change and contribute to a more resilient and sustainable future for communities in the Caribbean and around the world.

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The partnership between the Grenada Red Cross Society and The Nature Conservancy, which began with the successful 'At the Water's Edge' (AWE) project, has been a powerful example of how collaboration and community engagement can drive meaningful change. The success of AWE not only strengthened local resilience, but also laid the groundwork for the regional Resilient Island project. Together, we have shown that by working hand in hand with communities, we can build a future where both people and the environment thrive in harmony.

> Samantha G. Dickson President, Grenada Red Cross Society.



### **One Future** Together, We Find a Way

The community-driven nature-based solutions implemented throughout the years within the GBA, have had, and will continue to have significant impacts on the lives and livelihoods of community members now, and into the future.

Farmers have access to water to irrigate their crops year-round. Shorelines are stabilized, protecting homes and critical infrastructure, while providing livable community spaces for enjoyment by all. Reefs are being restored, providing the benefits of reduced wave energy reaching the shorelines, while enhancing biodiversity within the Grenville Bay and beyond. The structures built, the trainings provided, the environmental awareness raised, especially among the younger generation–Grenada's future fishers, teachers, leaders and environmental stewards–will continue to have longterm benefits for many years to come.

These communities now serve as an example for others to have a greater appreciation for nature, and the role it plays in enhancing their resilience, protecting their lives and livelihoods.



I have a love for the sea, because I grow up diving [and] swimming. My kids love to go swim, watch fish in the corals, so I know that from experience. I know the coral bring fish and without the coral there is no fish, ... Everybody supposed to play their part. If it's one coral you could plant. If it's one [small] lobster you have to throw back; whatsoever you could do; if it's one little fish you can let go free; whatsoever you could do, you do what you could do. It could result in positive vibes at the end.

> **Donald Henry** Fisher and Coral Gardener.

### **Championing Nature**

Voices From the Caribbean

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What is significant here in Grenada is that these are community-led solutions. TNC has a big role to play in bringing the science forward and identify solutions that are scalable, but it is the partnerships that really makes this work. I am inspired by the way TNC has laid the groundwork for the last fifteen years to make this possible. This situation in Grenada really shows the urgency we are facing in the Caribbean. It is really impactful for me. We can use nature... to navigate a climate crisis and to support biodiversity at the same time.

> Alicia Miñana Board Chair, Caribbean Division, The Nature Conservancy.

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Nature plays a significant role in sustainable development, especially for small island states. A healthy environment is essential for securing people's lives and their livelihoods in the Caribbean. The holistic approach adopted here in Grenville Bay is a model not just for the Caribbean, but also for all other small island states.

> Nicholas Brathwaite Trustee, Caribbean Division, The Nature Conservancy.



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### **Looking to the Horizon** Scaling Our Work Across the Region

The world is facing two interrelated and accelerating crises of biodiversity loss and a changing climate. These are affecting the health and well-being of people everywhere around the world, impacting our economies, and putting our future at risk. The reefs just offshore in Grenville Bay produce fish that support the local economy, and they are the first line of defense against the erosion caused by waves that would otherwise reach the shore. These reefs, and reefs like them across the Caribbean, are in decline, from stresses like water quality, fishing pressure and, of course, a changing climate.

These challenges are complex and there is no single solution. But as we see here in the communities surrounding Grenville Bay, there ARE solutions (plural) that can be drawn together to address these challenges, and help us ensure that our communities are sustained and prosperous, and the nature that we depend on is managed, restored, and protected in ways that provide long-term benefits for people.

Grenville Bay is a microcosm of the entire Caribbean, and the holistic community-led solutions outlined in "At the Waters Edge" and implemented through the Resilient Islands Initiative provide a model for what can be done across Grenada and across the Caribbean.



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### **Our Partners and Funders**

Supporting a World Where Nature and People Thrive

# Resilient Islands

The Soubise Fisher Facility was constructed under The Nature Conservancy's **Resilient Islands by Design Initiative** - 'Integrating Ecosystem and Community-based Approaches to Enhance Climate Change Adaptation in the Caribbean.'

A partnership between The Nature Conservancy (TNC); Government of Grenada; International Climate Initiative (IKI); The Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMU); International Federation of the Red Cross (IFRC); and the Grenada Red Cross Society (GRCS).



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- St. Andrew Development Organization (SADO)
- St. Andrew Leo Club
- Windward Islands Research and Education Foundation (WINDREF)

And most especially, to the fishers and communities of Telescope, Grenville, Soubise, and Marquis.



#### Protecting nature. Preserving life.

#### Learn More:

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#### To support our work, **please contact:**

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