The Nature Conservancy

CARIBBEAN

2021 IMPACT REPORT

Dear Friends

The Nature Conservancy (TNC) in the Caribbean

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In a world inundated with daunting news, it feels especially meaningful to share how our work in the Caribbean made a difference in 2021. Even as communities everywhere continue to grapple with the pandemic, they also face an increasingly urgent need for climate action and better protection of nature. In the Caribbean, where lives and livelihoods depend on a thriving tourism sector and a healthy natural world, the converging challenges of the pandemic, biodiversity loss and climate change pose an existential risk to community well-being and prosperity.

Despite these challenges, we believe this is an important—and, in fact, hopeful—time for people and nature. The past year has shown that when people come together and collaborate toward a shared goal using solutions rooted in science, extraordinary things can happen. This approach has been at the core of The Nature Conservancy's work for decades, and it continues to drive our work forward now, when it is needed most.

It is more imperative than ever to safeguard the benefits that nature provides for our communities. As the image on the cover of this report reminds us, it is also vital to remember—and preserve—the joy that nature brings to our hearts. The smile of a child running along a beach, the sense of security a fishing community gains from using new technologies that ensure better fishery management, the relief a parent feels knowing that nearby shorelines are being strengthened against future storms—these and more are the reasons we protect nature in the Caribbean.

From speaking up for nature-based climate solutions at the United Nations' Climate Conference in Glasgow to building a state-of-the-art coral science lab in the Virgin Islands, we are incredibly grateful for all you have helped us accomplish during the past year. Our staff, partners and communities on the ground have propelled us toward our mission with remarkable perseverance. We remain steadfast in creating a brighter, more resilient Caribbean where biodiversity flourishes and people of all backgrounds and races benefit from smart, science-guided conservation. None of this would be possible without your unwavering support. Thank you for the trust you continue to place in us.

Dr. Rob Brumbaugh
Executive Director, TNC Caribbean

Michael J. Kowalski
Chairman, TNC Caribbean Board of Trustees

VISION

Working in 17 countries and territories, The Nature Conservancy is committed to securing lasting conservation outcomes and a bright future for the Caribbean by protecting the ocean and coasts, safeguarding the habitats that sustain people and wildlife, building resilience against the impacts of climate change, and empowering communities to manage their natural resources in ways that allow people and nature to thrive together.

COVER A boy smiles as he runs along a Caribbean beach. © Shane Gross ALL ILLUSTRATIONS © Creative Market OPPOSITE PAGE LEFT TO RIGHT Dr. Rob Brumbaugh; Michael J. Kowalski © TNC THIS PAGE A conservation practitioner in Haiti © Tim Calver; Bottlenose dolphins in The Bahamas © Shane Gross

WHERE WE WORK

17 COUNTRIES AND TERRITORIES

Ocean © iStockphoto

The Caribbean is home to

OVER 12K fish and other marine species

44 million people, 70% of whom live and work along coastlines

marine and coastal resources that sustain **50%** of all livelihoods in the region

12% of the world's mangroves

10% of the world's coral reefs

BY THE NUMBERS

ONE cutting-edge science lab launched at our Virgin Islands Coral Innovation Hub, where we are growing thousands of corals for large-scale reef restoration

$6.3 million

generated per year from whale and dolphin watching in three countries, as revealed by our Mapping Ocean Wealth initiative

5,036,000

acres of new protected area in The Bahamas, encompassing 174,000 acres of coral reef and 36,000 acres of mangroves

20

countries and territories benefiting from our region-wide maps for smarter ocean conservation

1,760

volunteer hours donated to advance our work on the ground

Caribbean beach © Paul A. Selvaggio;
Seahorse © iStockphoto

55,000

endangered green sea turtles hatched from 650 nests monitored and protected at our Jack and Isaac Bay Preserve

OVER 250

stories amplifying our important work in regional and global media outlets

OVER 70%

of commercial fishers in Puerto Rico using a free app designed by TNC to improve sustainability

114,900

acres of new protected area in Haiti, including essential marine and freshwater ecosystems

2,760

scientists and practitioners educated in remote sensing technologies and other novel conservation solutions

270,930

young corals outplanted or released into the ocean to help restore dying reefs

14.2 million

coral embryos grown, representing eight critical species, to accelerate and scale up reef restoration efforts throughout the region

SIX

peer-reviewed case studies published on our coral and coastal resilience work

1,366,000

acres of coral reef to benefit from BahamaReefs, a new TNC-led initiative supported by the Global Fund for Coral Reefs

A Healthy Ocean

We promote science-based marine and fishery management to protect biodiversity and livelihoods.

"The Nature Conservancy helped develop a robust marine protected areas system that is a triumph for people and nature in The Bahamas—providing a pillar of support for the country's natural environment and all those who depend on it. Even prior to COVID-19, many Bahamians were struggling from the economic fallout of Hurricane Dorian. When the pandemic hit, the cumulative impact on tourism and local economies was devastating. By providing science and expertise for improved management of natural resources, we are helping to accelerate sustainable economic recovery, grow the Bahamian blue economy, preserve livelihoods and safeguard communities."

Shenique Albury-Smith
Northern Caribbean Program Director, TNC Caribbean

OPPOSITE PAGE TOP TO BOTTOM Seahorse National Park in Eleuthera, The Bahamas, provides habitat for threatened seahorses; A spotted eagle ray swims through Bahamian waters. INSET Blacknose sharks gather in the newly protected Lost Blue Hole in New Providence, The Bahamas. © Shane Gross THIS PAGE A girl enjoys snorkeling, one of many ocean activities that draws visitors to the Caribbean. © iStockphoto; Coastal waters off Long Island, The Bahamas © Shane Gross INSET Shenique Albury-Smith © Anton Smith

Milestone Marine Win for an Iconic Archipelago

THE BAHAMAS

Through the longstanding support of TNC and local partners, the government of The Bahamas declared over 5 million acres of newly protected ocean and coastal environment. One of the most significant protection declarations in the history of the Caribbean, it establishes 34 new protected areas and expands five existing ones that are home to vital species, like queen conch and spiny lobster. It will help safeguard crucial habitats, including 174,000 acres of coral reef, 36,000 acres of mangroves and over 1.1 million acres of seagrass. Now, nearly 20 percent of the country's nearshore environment will benefit from measures that protect essential ecosystems while promoting sustainable ocean use.

For more than a decade, TNC has provided instrumental scientific research and worked closely with Bahamian communities to help the country reach this conservation turning point. To identify areas for protection, we partnered with the Bahamas National Trust, Bahamas Reef Environmental Educational Foundation and several government ministries. Combining community input with data from scientists and experts across 27 organizations, we helped design a comprehensive network of marine protected areas. This network incorporates factors like breeding sites for key species, habitats for endangered animals, areas of ecological or cultural significance, and popular tourism destinations.

One newly protected area, Seahorse National Park in Eleuthera, is home to a 45-foot-deep lagoon with the world's most concentrated population of lined seahorses (*Hippocampus erectus*). The species is classified as vulnerable, but the lagoon provides habitat for a population 10 times denser than the global average. Scientists believe this population is a unique subset of the species that is potentially on an evolutionary path to becoming a brand-new species. Another remarkable site now under protection is the Lost Blue Hole near New Providence. This underwater vertical cavern has an astounding depth of over 200 feet and shelters significant numbers of endangered sea turtles, sharks and rays.

This landmark conservation win would not have been possible without the support and perseverance of communities throughout The Bahamas. The new protected areas not only ensure a more resilient future for ecosystems in multiple parts of the archipelago but will support livelihoods and local economies for many generations of Bahamians. They will preserve food sources, sustain tens of thousands of ocean-dependent jobs and underpin the country's $204-million fishing sector and $5.2-billion tourism sector. These benefits are more important than ever as the country strives to recover from a drastic pandemic-induced decline in tourism and from 2019's Hurricane Dorian, which devastated communities in the Abacos and Grand Bahama.

We will continue to collaborate with local partners to implement effective marine management initiatives that benefit people and nature—helping to ensure a brighter future for this magnificent archipelago and all those who depend on its ocean, coasts and fisheries.

DIVE DEEPER
CaribbeanChallenge.tnc.org

Mapping the True Treasure of the Sea

DOMINICA, GRENADA, SAINT KITTS & NEVIS, SAINT LUCIA AND SAINT VINCENT & THE GRENADINES

Using a novel mapping tool, TNC scientists revealed that coral reefs and beaches generate over $400 million per year for these five island nations in the eastern Caribbean. Based on the TNC-led, award-winning Mapping Ocean Wealth initiative, the tool was created to quantify the dollar amount that ocean and coastal resources contribute to these economies through tourism and recreational activities. Other notable findings pinpointed where and what percentage of these resources are supporting livelihoods and communities.

Developed as part of the Caribbean Regional Oceanscape Project (CROP), the mapping tool combines artificial intelligence, high-resolution habitat maps and stakeholder input to produce remarkable and highly useful data. For example, whale and dolphin watching across just three countries generates $6.3 million per year, and beaches across all five countries attract half a million visitors per year. This is the first time these islands have had access to these powerful insights, which are being used to promote greater awareness and preservation of the benefits our ocean provides to communities. With the knowledge gained through this tool and other methods, the CROP is helping these countries build strong blue economies, where ocean-dependent economic growth is balanced with sustainable marine resource use.

DIVE DEEPER

maps.oceanwealth.org/oecs

Sperm whales and other marine life draw many visitors to the eastern Caribbean. © Romain Barats/TNC Photo Contest 2018 INSET TOP TO BOTTOM Beaches are vital for supporting Caribbean tourism. © Paul A. Selvaggio; Silversides thrive in protected waters in Saint Lucia. © Tim Calver

A Turning Point for Fisheries

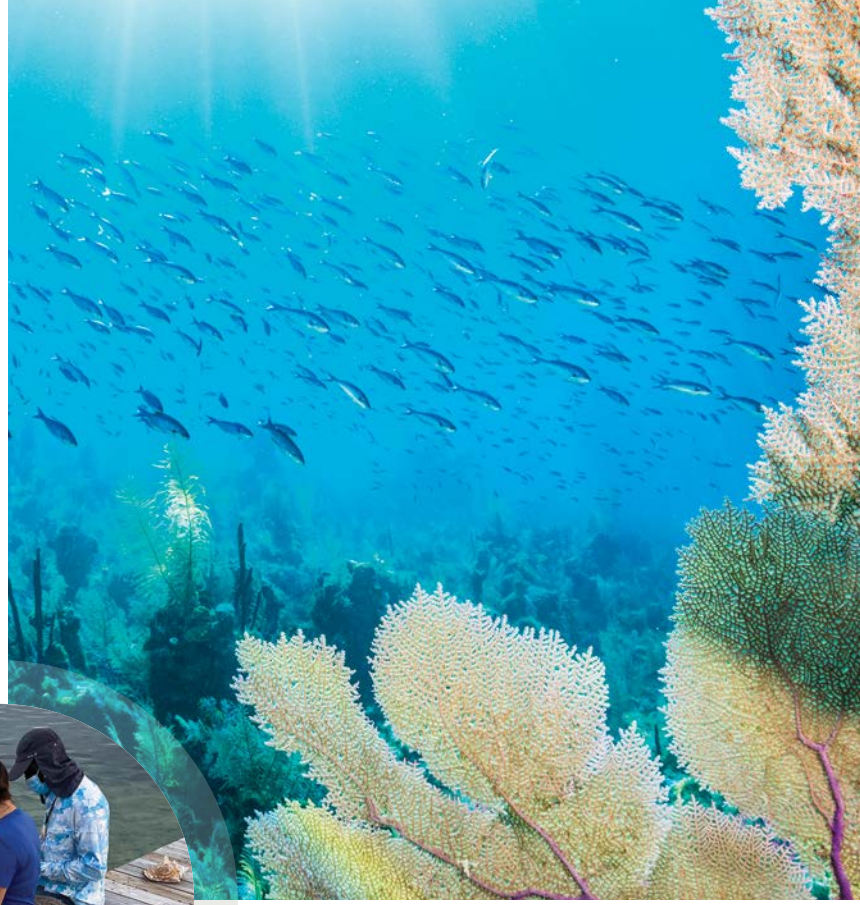
THE BAHAMAS

The government of The Bahamas passed groundbreaking legislation that will transform fishery sustainability for this archipelago, which encompasses over 100,000 square miles of ocean. Guided by TNC science, it addresses today's conservation challenges and will benefit thousands of livelihoods that rely on the country's fisheries, valued at over $200 million per year.

Fishery laws in The Bahamas had been outdated for decades, as the last major legislative reform was in 1977. The newly passed fisheries bill is a relevant and powerful tool for ensuring the long-term health of Bahamian waters. It establishes a National Fisheries Stakeholders Forum, sets aquaculture best practices, and requires reporting of fisheries data, universal fisher licensing and a management plan for each fishery species.

Going forward, we will advance our work with fishers, providing education and tools to help them comply with the new regulations while earning their livelihoods. We will also pilot a new app to help them more easily meet reporting requirements. The first-ever electronic reporting app piloted to support Bahamian fishers, it will foster sustainable ocean use while improving livelihoods by increasing fishers' access to buyers for their catch.

Queen conch is a staple fishery in The Bahamas that supports thousands of livelihoods. © Shane Gross



Innovative Investments in Our Ocean

THE BAHAMAS AND HAITI

TNC and partners are creating a brighter, bluer future by securing reliable, continuous funding for ocean conservation. In The Bahamas, we helped forge a partnership between the Bahamas Protected Areas Fund and the Caribbean Biodiversity Fund. These Funds were established through the support of TNC to promote effective, lasting ocean conservation and climate resilience solutions. Their partnership will empower the country to generate renewable funding for long-term marine management and to help islands still recovering from 2019's catastrophic Hurricane Dorian.

In Haiti, we facilitated an €11-million agreement to support the Haiti Biodiversity Fund, which was launched by TNC to protect the country's natural resources today and into the future. Through a partnership with the French Development Agency and the Caribbean Biodiversity Fund, this agreement will generate consistent conservation funding through sustainable finance mechanisms. This innovative approach will promote a healthier ocean and improve economic stability, particularly at a time when Haitian communities are still reeling from 2021's deadly earthquake and political unrest.

LEFT TO RIGHT A fisher makes his way through Baie de Fort Liberté in Haiti. © Tim Calver; Marine life thrives in protected waters in The Bahamas. © Shane Gross INSET TNC fisheries specialist Natalie Miaoulis introduces conch fisher Leroy Glinton to a new app TNC is piloting in The Bahamas to promote sustainable practices. © Iris Munroe

A Pivotal Plan for a Bluer Economy

BARBADOS

TNC scientists are developing a marine spatial plan for the 46 million acres of ocean that Barbadian communities depend on every day. The plan, created in partnership with the government of Barbados and the University of the West Indies, will guide the sustainable and equitable use of the country's entire marine environment. This can ensure a thriving blue economy, where sustainable use of ocean resources supports diversified economic growth and livelihoods while preserving healthy marine ecosystems.

In Barbados, where the ocean area is 430 times greater than the land mass, communities have an especially strong connection to the sea. Taking this into account, TNC is gathering valuable input from people whose livelihoods depend on the ocean, including those in the recreation, tourism and fishing sectors. Along with these stakeholder consultations, our scientists are evaluating extensive data to advance a plan that targets the unique economic and ecological needs of the country. In addition, we are helping the government establish a new funding framework that can support ongoing ocean conservation well into the future. This science-based, holistic approach provides a solid foundation of support as the country strives to significantly increase its marine protected area coverage in the coming years.

A new marine spatial plan in development for Barbados will benefit hundreds of thousands of people who depend directly and indirectly on ocean resources. © Steve Schill

Climate-Smart Islands

We develop nature-based solutions to safeguard coastal communities and help them prosper in a changing world.

"I've lived in Old Harbour Bay practically all my life. About 30 years ago, there was an abundance of fish, and people could make a decent livelihood. But hurricanes have uprooted the reefs. That's a big reason the fishing community has suffered. What The Nature Conservancy is doing is different from what I've seen before—looking underwater and at our shorelines not just to see what is gone but what is still there that can help us. It's important to learn where the reefs and mangroves are that we can bring back to life so there are more fish and stronger coasts."

Charles Moodie
Fisher, Old Harbour Bay, Jamaica

OPPOSITE PAGE Mangrove roots strengthen fragile coasts and provide habitat for fish. © Marjo Aho THIS PAGE Fringing reefs protect a beach in Grenada. © Marjo Aho; Healthy oceans are vital for future generations. © Shane Gross INSET Charles Moodie © TNC

Putting Nature to Work for Climate Readiness

DOMINICAN REPUBLIC, GRENADA AND JAMAICA

Joining conservation with disaster-risk reduction, TNC helped three vulnerable communities develop nature-based action plans for building climate resilience. This work is part of our Resilient Islands initiative—a partnership between TNC and the International Federation of the Red Cross and Red Crescent Societies that inspires community action for conservation and climate-smart, sustainable development.

The three communities—Miches, Dominican Republic; Grenville Bay, Grenada; and Old Harbour Bay, Jamaica—were identified using stakeholder input and an innovative mapping tool that reveals high-risk coastal sites and biodiversity hotspots that can help strengthen them. Working with each community, we created a suite of solutions to uniquely address vulnerabilities and improve climate change preparedness by putting natural assets to work.

For example, one solution in Miches involves giving farmers fruit trees to plant near the Yeguada River. This will provide a new crop to bolster livelihoods while reducing polluted runoff into the sea where it harms habitats that naturally protect coasts. In Old Harbour Bay, systems are being developed to better track fish catch, water quality and biodiversity, which will improve the health of corals and mangroves to enhance their protective benefits.

Together, these action plans can safeguard tens of thousands of people from hazards like flooding and hurricanes, while saving millions of dollars in damage to property, resources and infrastructure. This holistic approach is a model that can be scaled up and replicated throughout the Caribbean to ensure a safer, more resilient future for our coastal communities.

Resilient Islands is part of the International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative on the basis of a decision adopted by the German Bundestag.

DIVE DEEPER
ResilientIslands.tnc.org

Amplifying Our Work on a Global Stage

WORLDWIDE

TNC conservation experts played a key role at the 26th United Nations Climate Change Conference of the Parties (COP26) in Glasgow, Scotland, where they brought a spotlight to our nature-based approach to the climate crisis in the Caribbean. This event is the world's largest and most important platform for advancing climate action, bringing together leadership, organizations and businesses from almost every country around the globe.

Our teams in The Bahamas, Dominican Republic and Haiti served as trusted advisors to government delegations at COP26. Shenique Albury-Smith, director of our Northern Caribbean Program, was invited to Glasgow to join the Bahamian government in a presentation on building community resilience against catastrophic storms. She also joined the Global Fund for Coral Reefs in presenting our new BahamaReefs partnership, which promotes resilience through large-scale coral restoration.

Our Resilient Islands initiative, a collaboration with the International Federation of the Red Cross and Red Crescent Societies, was highlighted at COP26 in the Global Island Partnership's Bright Spots event series. Guest speaker Dr. Natainia Lummen, a TNC climate adaptation specialist in Jamaica, shared how Resilient Islands works with communities to improve coastal resilience, food security and livelihood stability.

COP26 resulted in the signing of the Glasgow Climate Pact, which will accelerate urgent climate action through stronger national commitments to the Paris Agreement. By amplifying our work during this decisive global gathering, we helped increase investment in proven climate solutions that prioritize nature to benefit communities everywhere.

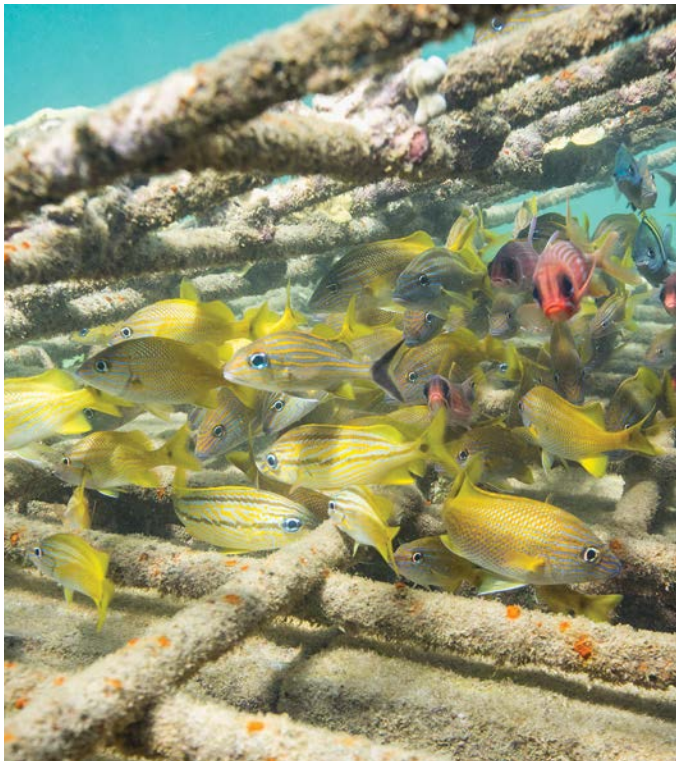
An eroded beach in Grenada © Marjo Aho INSET TOP TO BOTTOM Through our Resilient Islands initiative, TNC and the Jamaica Red Cross gather input on climate threats from community members in Old Harbour Bay, Jamaica. © Natainia Lummen/TNC; Families learn about the protective value of reefs and mangroves at a community event in Grenville Bay, Grenada. © T&R Communications

Ridge-to-Reef Resilience

GRENADA

To help at-risk coastal communities near Grenville Bay, TNC and partners launched the Living Edge initiative. These communities have grappled for years with more frequent and intense coastal flooding and erosion due to climate change, causing loss of critical infrastructure, threats to public safety and reduced access to the sea for fishers. Living Edge combines four unique but synergistic projects to build climate resilience where it is needed most, from forested hills that protect watersheds to coral reefs that safeguard beaches. These projects use nature-based solutions that are less costly and provide more community benefits than traditional 'gray' infrastructure interventions.

For example, through the At the Water's Edge project, we installed nearly 1,200 feet of engineered coral reef structure in Grenville Bay. Made from natural materials, the structure is designed to help restore fish populations and prevent beach erosion. As part of our Resilient Islands work, we are constructing eco-friendly lockers that protect fishers' gear during storms to help bolster livelihoods. Using advanced flood risk models in our Karayib Klima project, we are addressing activities in mountain watersheds that contribute to flooding downstream in Grenville Bay. This integrated, ridge-to-reef approach is a multi-year collaboration with local communities, allowing them to play an active role in smart climate preparedness.



LEFT TO RIGHT Through the Karayib Klima project in Grenada, TNC is helping banana farmer Atkinson Felix build a water catchment basin to reduce flood risks for downstream communities and provide water for crops. © Pink Reel; Part of the At the Water's Edge project in Grenada, an engineered reef protects beaches and provides fish habitat; Climate adaptation experts evaluate an engineered reef structure. © Tim Calver

Shoring Up Coasts to Reduce Risks

PUERTO RICO

Through our longstanding partnership with the National Oceanic and Atmospheric Administration (NOAA), TNC helped the territory's government establish its first Coral Reef Emergency Response Committee. The committee brings together over 15 local and federal agencies to tackle urgent threats to reefs that help protect the island's vulnerable coasts—from global threats like climate-related ocean warming to local threats like boat vessel impacts.

TNC and NOAA also hosted a highly attended online event for coastal resource decision-makers, which provided guidance on how to assess climate change threats and emphasized the value of shoreline habitats in protecting against them. By promoting the use of platforms like the Climate Central Risk Screening Tool, NOAA's Coastal Flood Exposure Mapper, and TNC and partners' Mapping Ocean Wealth Explorer, this event and similar learning opportunities help practitioners improve coastal habitats to reduce climate risks for communities.

From Disaster Recovery to Climate Resilience

THE BAHAMAS

TNC sought input from hundreds of fishers on Grand Bahama in the wake of 2019's devastating Hurricane Dorian, to help them return to their livelihoods in ways that better promote a healthy ocean and resilient future. One of the region's first in-depth assessments of fishers' needs after a hurricane, this initiative also provided important insights into the impacts of the COVID-19 pandemic on fisher livelihoods. Based on these learnings, we are supporting fishers in highly impacted areas of the island by replacing damaged gear with brand-new, more sustainable gear.

To help fishers and other communities build long-term climate resilience, we launched the Resilient Islands initiative with The Bahamas Red Cross. Already active in several Caribbean countries, Resilient Islands empowers communities to conserve and manage natural resources that provide climate-smart benefits, like strengthening coasts or bolstering livelihoods. This initiative will raise awareness, inform national policy and implement proven nature-based solutions to help communities build resilience against threats to their safety, livelihoods and economies.

OPPOSITE PAGE CLOCKWISE Mangroves in Haiti protect coasts and bolster fish populations. © Tim Calver; Catherin Cattafesta, a TNC climate adaptation specialist, plants mangrove seedlings in Miches, Dominican Republic. © CEBSE; Coral reefs protect coasts by absorbing destructive wave energy. © Shane Gross THIS PAGE Hurricane Maria destroyed mangroves in Cabo Rojo, Puerto Rico, leaving coasts more vulnerable. © Shane Gross INSET TOP TO BOTTOM Storms are more frequent and intense in the Caribbean due to climate change. © Andrea Iallorenzi /TNC Photo Contest 2019; A Bahamian fisher prepares his catch for market. © Shane Gross

DID YOU KNOW?

The carbon storage value of Caribbean mangroves is worth

$6.7

BILLION PER YEAR

Restoring coral reefs and mangroves in the Caribbean is

10 TO 100

TIMES LESS COSTLY

than installing artificial coastal defense structures

The Blue Guide to Coastal Resilience

from TNC and the U.S. Agency for International Development reveals the extraordinary value of nature for safeguarding against climate change.

DIVE DEEPER

natureprotects.org

Transformative Science

We advance cutting-edge tools and research for faster, smarter conservation and meaningful impact.

"Coastal community planning, marine disease abatement, invasive species research—it's been remarkable to see the diverse ways stakeholders have used our ocean and coastal habitat maps. The maps enhance governments' ability to manage natural resources at a time when it is vitally important to preserve them for future generations. Already, the maps are helping The Nature Conservancy and partners create marine spatial plans that balance human activities with ecosystem health. They are helping us invest in restoring coral reefs that can best survive in a changing climate. When combined with knowledge and input from local communities, these maps become an even more powerful tool for transforming ocean conservation throughout the Caribbean."

Valerie Pietsch McNulty
Spatial Ecologist, TNC Caribbean

OPPOSITE PAGE TOP TO BOTTOM Saint Lucia's Soufriere Marine Management Area, where TNC is using advanced data to identify ocean use zones; Scientists fly a drone over Dominica's Soufriere-Scott's Head Marine Reserve to assess hurricane impacts. © Steve Schill/TNC INSET Satellite data guided our region-wide habitat maps. © Planet THIS PAGE TNC lead scientist Steve Schill © Marjo Aho; Green sea turtle © Shane Gross INSET Valerie Pietsch McNulty © TNC

Mapping the Way to a Healthier Ocean and Brighter Future

TNC and partners released a groundbreaking tool for ocean conservation in 2020, using a novel suite of remote sensing technologies. Our Caribbean Marine Maps identified, for the first time ever, the location and status of all coral reefs, seagrass beds and other underwater oases of life throughout the region. In 2021, the maps were accessed via a public web portal by hundreds of government agencies, scientists, practitioners and educators to inform conservation across more than 20 island nations. In our own work, the maps were instrumental for carrying out multiple initiatives across the region. Below are some highlights of how we put them to use during just the first year since they were created.

REGION-WIDE

We completed climate refugia modeling for the entire Caribbean region to identify coral reefs that are most likely to be resilient in the face of climate change. This process integrated our mapping data with past and predicted future sea surface temperatures, historic hurricane patterns and coral larval migration patterns. The findings will help governments and organizations determine where investments in reef conservation will have the greatest long-term impact because those areas are naturally more adaptable to challenging conditions.

DOMINICA

Through first-of-its-kind research, we identified the impacts of a major hurricane on coastal and marine habitats at a national scale. Recognizing an unprecedented opportunity to examine hurricane impacts using high-caliber data, the government of Dominica commissioned a study of coral reefs and seagrass beds before and after Hurricane Maria, which ravaged the country in 2017. The findings will help the government allocate limited resources to protect areas that were not severely impacted and restore those that were, to improve resilience against future climate-related events.

SAINT LUCIA

The Soufriere Marine Management Area was established over two decades ago but lacked official boundaries and multi-use zoning demarcations, which made it difficult to carry out monitoring and protection efforts. Combining input from marine managers with our mapping data, we are identifying georeference points the government can use to legally define the area's boundaries, as well as zones for fishing, recreation, boat mooring and marine reserves. This will improve fishery management, protect key habitats, reduce ocean user conflict and support livelihoods.

SAINT VINCENT & THE GRENADINES

Evaluating 16 different criteria, we pinpointed optimal sites for sea moss aquaculture. This is an ongoing joint effort with the country's fisheries division to promote sustainable sea moss cultivation as an alternative or supplemental livelihood that can reduce fishing pressures on the ocean. Our marine maps are helping to identify areas with ideal water depth and sedimentation for sea moss farms that are also a safe distance away from corals, seagrass beds, sea turtle nesting sites and areas with a lot of tourism or recreation activity.

DOMINICAN REPUBLIC AND JAMAICA

To help vulnerable communities, we used our marine and coastal data to create models that assess high-risk, flood-prone areas. These models also identify the benefits of nearby resources, like mangroves and coral reefs, that protect shorelines and the people who live and work along them. This process is helping to inform nature-based community action plans for minimizing floods and other climate change hazards. It will also promote future investment in natural resources that improve climate resilience and disaster preparedness.

WORLDWIDE

To raise awareness about our Caribbean Marine Maps as a powerful ocean conservation tool, we created a learning resource that is available to anyone, anywhere in the world. This free online course was developed by TNC's Reef Resilience Network in partnership with leading science and philanthropic organizations, including National Geographic Society, Allen Coral Atlas, Arizona State University, The University of Queensland, Planet and Vulcan. Through easy-to-follow lessons, attendees learn how to use remote sensing technologies and products, including our mapping data, to make informed decisions for effective, long-term ocean conservation. Designed for a wide audience, from coral scientists to citizen scientists, the course is available in four languages and has had over 1,700 attendees from 128 countries so far.

DIVE DEEPER

nature.org/CoralMapping

Finding Blue Carbon Opportunities

THE BAHAMAS

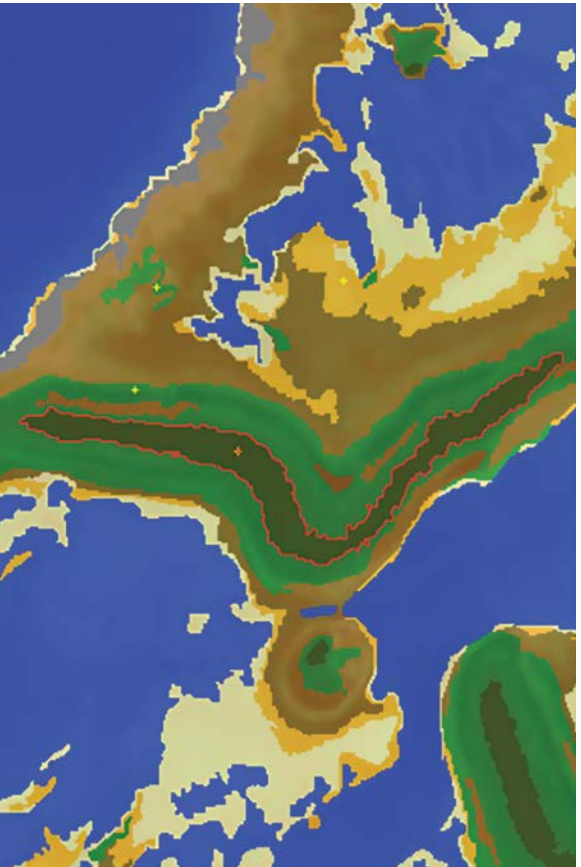
A new TNC study revealed that blue carbon, or carbon stored in coastal and marine ecosystems, has the capacity in The Bahamas to finance nature-based conservation while mitigating climate change. Our scientists used high-resolution satellite data to assess the current status of mangroves and the potential for restoration projects to support viable blue carbon credits. They found there is strong opportunity for a blue carbon initiative, through which stakeholders can invest in the conservation of carbon-sequestering habitats to offset their own carbon emissions. This could create a sustainable funding cycle where natural resources that reduce the impacts of climate change—as well as boost fish populations, defend coastlines and sustain livelihoods—are continuously protected and restored. TNC scientists are working with partners to pinpoint sites in The Bahamas with the highest blue carbon potential and guide the optimal design for a carbon offset initiative.

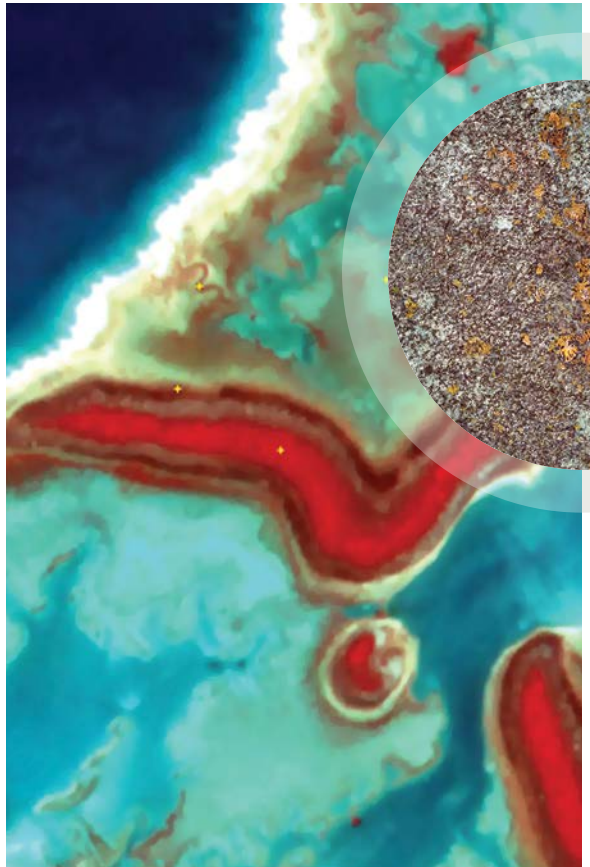
Smarter Technologies, Stronger Ecosystems

U.S. VIRGIN ISLANDS

TNC scientists combined machine-learning techniques and aerial imagery to identify critical coral species across more than 2,500 acres of ocean. Working in St. Croix's East End Marine Park—an area supported by TNC that is home to extensive, but vulnerable, coral reefs—they flew a state-of-the-art drone that captures high-resolution underwater images from the air. After creating a mosaic of thousands of these images, they developed machine-learning algorithms to understand these reef habitats at the species level. This work is important for creating a baseline to monitor changes and threats to reefs, including disease and hurricane impacts. Mapping individual coral species is also crucial for guiding more targeted, effective restoration efforts. It allows us to determine which species are in need of urgent restoration and which show signs of natural resilience, making them a key focus for protection in the fight against climate-related threats like ocean warming.

OPPOSITE PAGE TOP On St. Croix, U.S. Virgin Islands, a scientist uses a drone to gather extremely high-resolution imagery for identifying coral species. © George Raber BOTTOM In The Bahamas, scientists use Planet Dove satellite imagery (LEFT) to create highly detailed mangrove classifications (RIGHT) that help assess the potential for restoration and blue carbon offset initiatives. © Planet; Steve Schill/TNC INSET To support restoration efforts, scientists use a mosaic made up of thousands of drone-captured images (BOTTOM) to create a digital surface model (TOP) of a coral reef in St. Croix's East End Marine Park. © Steve Schill/TNC





DID YOU KNOW?

6,900

PEOPLE IN

142

COUNTRIES

have accessed our Caribbean Marine Maps to better understand how to help our coral reefs and ocean

1,800

PEOPLE IN 135 COUNTRIES

have visited our Caribbean Science Atlas for resources that inform smarter conservation

DIVE DEEPER

CaribbeanScienceAtlas.tnc.org

Thriving Coral Reefs

We innovate restoration and monitoring techniques that help save threatened corals and ensure healthy, diverse reefs.

"I am heartened to see The Nature Conservancy transform Estate Little Princess into a center for scientific discovery dedicated to coral reef and ocean conservation. This opens exciting opportunity for preserving the marine resources that sustain our communities. But it also opens an invaluable window into the history of this former sugar plantation, as the preserve supports excavations and research by the Society of Black Archaeologists. This work reveals important details about the lives of enslaved peoples who once labored on the plantation. Through new insights into their history and relationship with the natural world, we can better shape a more sustainable and just future for everyone."

Frandelle Gerard
TNC Caribbean Board of Trustees

OPPOSITE PAGE Aerial view of TNC's Coral Innovation Hub on St. Croix, U.S. Virgin Islands © MJS Visions THIS PAGE TNC coral manager Ximena Escovar-Fadul © Paul A. Selvaggio; Healthy elkhorn corals in Cuba © Ian Shive INSET Frandelle Gerard © TNC

New Lab Means New Hope for Coral Reefs

U.S. VIRGIN ISLANDS

TNC's brand-new coral science lab has opened its doors and is already shaping a brighter future for coral reefs in the Virgin Islands and beyond. Established at Estate Little Princess, our historic nature preserve on St. Croix, this state-of-the-art facility began as an ambitious vision over two years ago and now functions as the heart of our Virgin Islands Coral Innovation Hub. At the Hub, we are advancing techniques that can restore coral reefs on a larger scale than ever before and with greater long-term impact.

The lab includes a land-based nursery with 24 six-foot raceways, or specialized tanks, designed to incubate thousands of growing corals that can bring new life to dying reefs. These corals are created using cutting-edge reproduction methods that we continually test and improve to promote high survival rates and strong genetic diversity for more resilient reefs. Our scientists have already produced promising results in the lab, including the creation of millions of embryos of grooved brain corals (*Diploria labyrinthiformis*). This species is particularly vulnerable to Stony Coral Tissue Loss Disease, and many diseased colonies have been observed in St. Croix. Successfully reproducing the species in a controlled lab ensures that the growing corals are free of disease and can be used to restore damaged reefs once the disease has diminished.

The lab will also play a key role in one of the Hub's newly launched initiatives. Through a significant grant from the National Fish and Wildlife Foundation, TNC has embarked on one of the world's largest coral restoration projects—a multi-year program to strengthen coastlines within St. Croix's East End Marine Park by restoring 150 acres of reef area. Using critical reef-building and endangered species nurtured in the lab, this initiative will rebuild some of the Virgin Islands' most iconic reefs and fortify coasts to better protect communities against climate-related threats.

A Unique Opportunity to Help Coral Reefs

CUBA

TNC is working with the National Aquarium of Cuba to build the country's first coral restoration lab. This conservation opportunity came about through an unprecedented decision by the U.S. government to permit the export of specialized science equipment into Cuba. This means that TNC can now help provide key tools and technologies to those working to preserve the country's expansive coral reefs. About 36 percent of all reefs in the Caribbean are found in Cuba's waters. TNC studies have shown these reefs are essential for successful coral larval migration across the region and are highly resilient to the impacts of climate change. It is therefore crucial to preserve these ecosystems and learn from them in the global fight to save coral reefs. The new lab will serve as the foundation for Cuba's first government-led coral restoration program, helping to hone advanced techniques for large-scale impact.

All Hands on Deck to Save Diseased Corals

PUERTO RICO

Working with the territory's Department of Natural and Environmental Resources, TNC conducted Puerto Rico's first-ever training on urgent response measures for Stony Coral Tissue Loss Disease, which is rapidly killing Caribbean corals. Nearly 40 volunteers, including marine biologists and dive operators, learned how to identify the disease and apply experimental treatments that can potentially mitigate it. The volunteers created a plan to carry forward what they learned by 'adopting' coral reefs in their area for continued treatment and monitoring. The disease has been identified in multiple sites throughout the waters of Puerto Rico. It impacts several critical coral species and is considered one of the greatest threats to Caribbean reefs. With additional trainings already in the works, we plan to provide nearly 100 volunteers with knowledge and techniques that can help control the deadly disease, as scientists work toward eradicating it completely.

OPPOSITE PAGE CLOCKWISE Healthy coral reefs in the Caribbean need protection to ensure they continue to thrive. © Paul A. Selvaggio; A colony of endangered boulder star corals in the Virgin Islands shows signs of stress and bleaching. © MJS Visions; Boulder star corals grow in our new St. Croix coral lab to help this important species recover in the wild. © TNC THIS PAGE A coral reef in the Cayman Islands provides habitat for sea turtles and fish. © Glenn Ostle/TNC Photo Contest 2019 INSET TOP TO BOTTOM Corals thrive in Jardines de la Reina, a protected area in Cuba. © Ian Shive; Volunteers help carry out critical coral restoration efforts. © Jennifer Idol

DID YOU KNOW?

At our Virgin Islands Coral Innovation Hub,

TNC is investing in extensive nurseries dedicated to rearing healthy new corals.

Our facilities include:

24

LAND-BASED GROW TANKS

at our coral science lab

4,750

SQUARE FEET

of underwater nurseries

DIVE DEEPER

nature.org/CaribbeanCoral

Empowered Communities

We inspire tomorrow's conservationists, provide learning opportunities and forge partnerships to mobilize action today and into the future.

"We need to accelerate investments in nature to ensure that local communities thrive. The Nature Conservancy and our partners can play many different roles in this. We can bring science to policymakers to ensure they understand the critical fabric that nature provides to the tourism sector and livelihoods in the Caribbean. We can be conveners of international efforts that elevate what we're doing in the region and bring it to other parts of the world. We can also be risk-takers as we shape innovative finance solutions and scale them up. We don't have time to wait. We need to speak up and be bold to create change."

Jennifer Morris
Chief Executive Officer, TNC

OPPOSITE PAGE TOP TO BOTTOM The Nasdaq marquee in New York City's Times Square highlights our work on Earth Day. © TNC; Partnering with the tourism sector opens new opportunities to help nature and communities. © iStockphoto INSET Musician Aloe Blacc performs at TNC's Earth Day virtual event, where we reached new audiences and inspired young conservationists. © TNC THIS PAGE A coastal community in Saint Vincent & the Grenadines © Marjo Aho; A fisher in Saint Lucia © Tim Calver INSET Jennifer Morris © TNC

A New Platform for Conservation Innovation

WORLDWIDE

TNC played a fundamental role in the first-ever Caribbean Conservation Finance Congress, a virtual event in which conservation and finance trailblazers share sustainable solutions for reaching conservation targets. We were proud to sponsor the event, which was livestreamed to a global audience and co-hosted by the Caribbean Biodiversity Fund and Saint Lucia National Conservation Fund—and to have TNC CEO Jennifer Morris speak at the opening session. She provided insights on the economic value of nature, public–private investment opportunities and important synergies we can realize through cross-sector partnerships. By spotlighting our voice in this arena, we catalyze new ways of thinking about how to fund and sustain vital outcomes in the Caribbean and around the world.

Celebrating Nature by Sharing Our Work

WORLDWIDE

To engage and inspire broad audiences, TNC conservation experts shared stories of our work during livestreamed celebrations of nature. Francisco Núñez, director of our Central Caribbean Program, was featured in a video on significant global conservation outcomes during a United Nations event on World Oceans Day. He spoke about the powerful connection between island communities and the ocean, highlighting the importance of our coral reef and mangrove initiatives. Nealla Frederick, a TNC climate adaptation specialist in Grenada, helped bring nature to New York City on Earth Day when she was featured on the Nasdaq Tower in Times Square—providing a glimpse into our work for thousands of onlookers as TNC virtually rang the Nasdaq closing bell. Dr. Ashlee Lillis, a TNC coral manager in the U.S. Virgin Islands, was a guest speaker at Speak Up for Nature, a TNC-hosted Earth Day event featuring celebrity appearances and a special performance by music artist Aloe Blacc. By connecting with audiences in unique ways to introduce some of the faces behind our work, we raise awareness and galvanize support for nature in the Caribbean.

A Stronger Alliance for Nature and Tourism

REGION-WIDE

TNC renewed a partnership with the Caribbean Hotel and Tourism Association to help protect the natural resources that sustain the tourism sector and thousands of livelihoods. Launched two years ago, the partnership has now strengthened its efforts to promote responsible tourism and protect the region's declining ocean and coastal habitats. The expanded partnership will engage tourism-dependent businesses in ocean conservation, develop coral restoration guidelines specifically for the tourism sector, and provide education on sustainable tourism practices through an online resource center. By fostering a productive, harmonious connection between tourism and nature—particularly as the region strives to recover from the pandemic's economic fallout—this work will help ensure a more secure future for communities across the region.

DIVE DEEPER

nature.org/CaribbeanTourism

Inspiring Young Champions for Nature

GRENADA

TNC and the Grenada Red Cross Society engaged students from the Grenville Bay area in a fun, interactive learning experience about the power of nature to safeguard against climate change. The students, aged 5–12 years old, helped clean up a beach and learned how habitats like coral reefs and mangroves provide natural coastal protection and other climate resilience benefits. They also planted trees, composed nature-themed artwork and poems, and won prizes by showcasing what they learned. This outreach is part of our Resilient Islands initiative—a partnership between TNC and the International Federation of the Red Cross and Red Crescent Societies that empowers communities to build climate-smart resilience by prioritizing nature. Identified as highly vulnerable by TNC climate experts, the Grenville Bay area represents a key community for the country, where tomorrow's conservation leaders can spark meaningful change for people and nature.

DID YOU KNOW?

Community members in the Dominican Republic helped plant

37,000

NATIVE AND ENDEMIC TREES

ACROSS **388** ACRES OF LAND

This initiative—supported by TNC and partners' Yaque del Norte Water Fund—brought together volunteers from corporations and communities, including students, to reforest lands that protect freshwater sources.

YOU MAKE OUR WORK POSSIBLE

Every acre of ocean protected, every mile of coastline safeguarded and every community set on a path to a brighter future—**it all begins with you.**

"This pandemic has taught us that we are all connected to one another and to nature in a beautifully intricate and sometimes disquieting way. This means now, more than ever, we need to repair the inextricable but fragile link between people and our natural world. There are no borders that should divide us as we face global threats like climate change. This is why The Nature Conservancy seeks solutions that address local community needs but can also be scaled up and adapted broadly. We have an immense opportunity now to work collectively throughout the Caribbean, and around the world, to tackle our greatest conservation challenges."

Pirigua Bonetti de Santana
TNC Caribbean Board of Trustees

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nature.org/SupportCaribbean

Explore opportunities to give through stock or real estate.
nature.org/WaysOfGiving

Leave a legacy for generations to come.
nature.org/LegacyClub

To learn more about how you can support our work, please contact Jonah Cardillo, Caribbean Development Director, at jonah.cardillo@tnc.org.

OPPOSITE PAGE TOP TO BOTTOM Students in Grenada make conservation-themed drawings. © Pineapple Marketing and Communications; Community and corporate volunteers reforest watershed areas in the Dominican Republic. © Saul Abreu/Yaque del Norte Water Fund INSET Families take part in a community event to raise awareness about nature-based climate solutions. © T&R Communications THIS PAGE Aerial view of waters near St. Croix, U.S. Virgin Islands © MJS Visions INSET Pirigua Bonetti de Santana © Rubén Román

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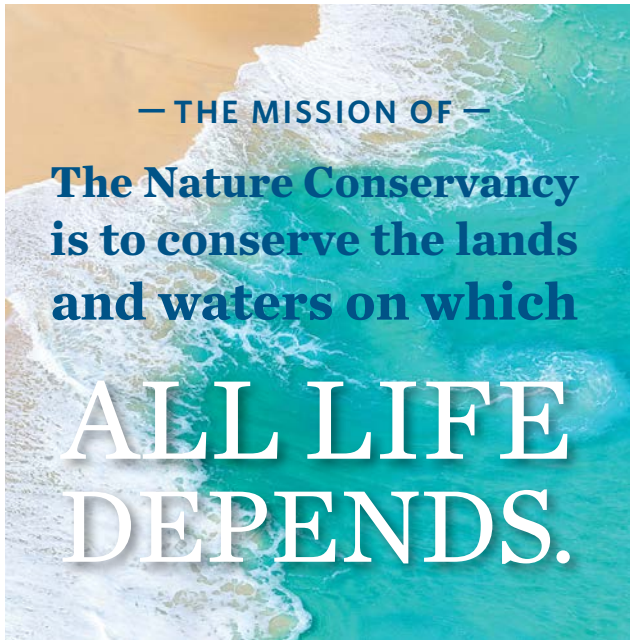

LEFT TO RIGHT Ocean © iStockphoto; An endangered green sea turtle in Eleuthera, The Bahamas © Shane Gross