Climate Adaptation and Protected Areas Initiative

Nature-Based Solutions Inventory for Belize

March 2026

What is the Nature-Based Solutions Inventory?

Belize has historically tended to rely on engineered, grey infrastructure solutions to address the considerable challenges that it faces due to climate change. However, an encouraging shift toward nature-based solutions (NbS), often led by civil society, has occurred in recent years. These NbS have been designed to not only respond to clear climate risks, but to also support the protection, restoration, and sustainable management of Belize's critical ecosystems and rich biodiversity.

This NbS Inventory is intended to showcase the variety of NbS projects (both completed and ongoing) that are being implemented across Belize's diverse ecosystems. These projects, implemented during the 2018–2025 period, represent commitments from the Belizean government, civil society organizations, and communities to place ecosystems and nature at the centre of their response to the climate and biodiversity crises, as well as to address increasing risks and vulnerabilities associated with a changing climate.

The inventory provides relevant information on a variety of NbS projects in Belize, including the NbS approach taken, the climate and biodiversity risks addressed, the intended beneficiaries, and the ecosystems targeted. It provides a useful compilation of NbS projects for the Belizean government, protected area managers, adaptation and conservation practitioners, civil society organizations, communities, and funders to help them understand the landscape of implementation in Belize and facilitate the further adoption and mainstreaming of NbS. It supports research into existing NbS efforts in different parts of Belize to understand gaps, avoid duplication of efforts, and facilitate partnership and collaboration. Furthermore, the inventory can be used to identify synergies with other objectives, such as biodiversity conservation, climate change adaptation and mitigation, human health, and water security, among others.

The inventory has been developed by the International Institute for Sustainable Development (IISD) under the Climate Adaptation and Protected Areas (CAPA) Initiative funded by Global Affairs Canada. The CAPA Initiative is implemented in Belize by the Wildlife Conservation Society. It was developed based on an extensive data collection process, which

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involved desk-based research, correspondence via email and phone with various organizations and government entities, meetings with representatives from non-governmental organizations (NGOs) and community-based organizations, and a validation session with key actors who were involved.

Who is the NbS Inventory for?

The inventory has been specifically designed to be utilized by actors working in or with an interest in NbS and ecosystem-based adaptation (EbA). These include, but are not limited to

- government agencies involved in policy development and implementation
- local authorities
- protected area managers
- Indigenous communities
- civil society organizations
- funding agencies (i.e., philanthropies, donor partners)
- academia

What are NbS?

NbS are "actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic, and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits" (United Nations Environment Assembly, 2022). Within the Inventory, the specific focus is on nature-based climate solutions—those actions designed to help people and communities mitigate and adapt to climate change and increase ecosystem resilience. They can also provide social co-benefits by recognizing and involving underrepresented groups as active agents of change within the implementation of NbS for adaptation.

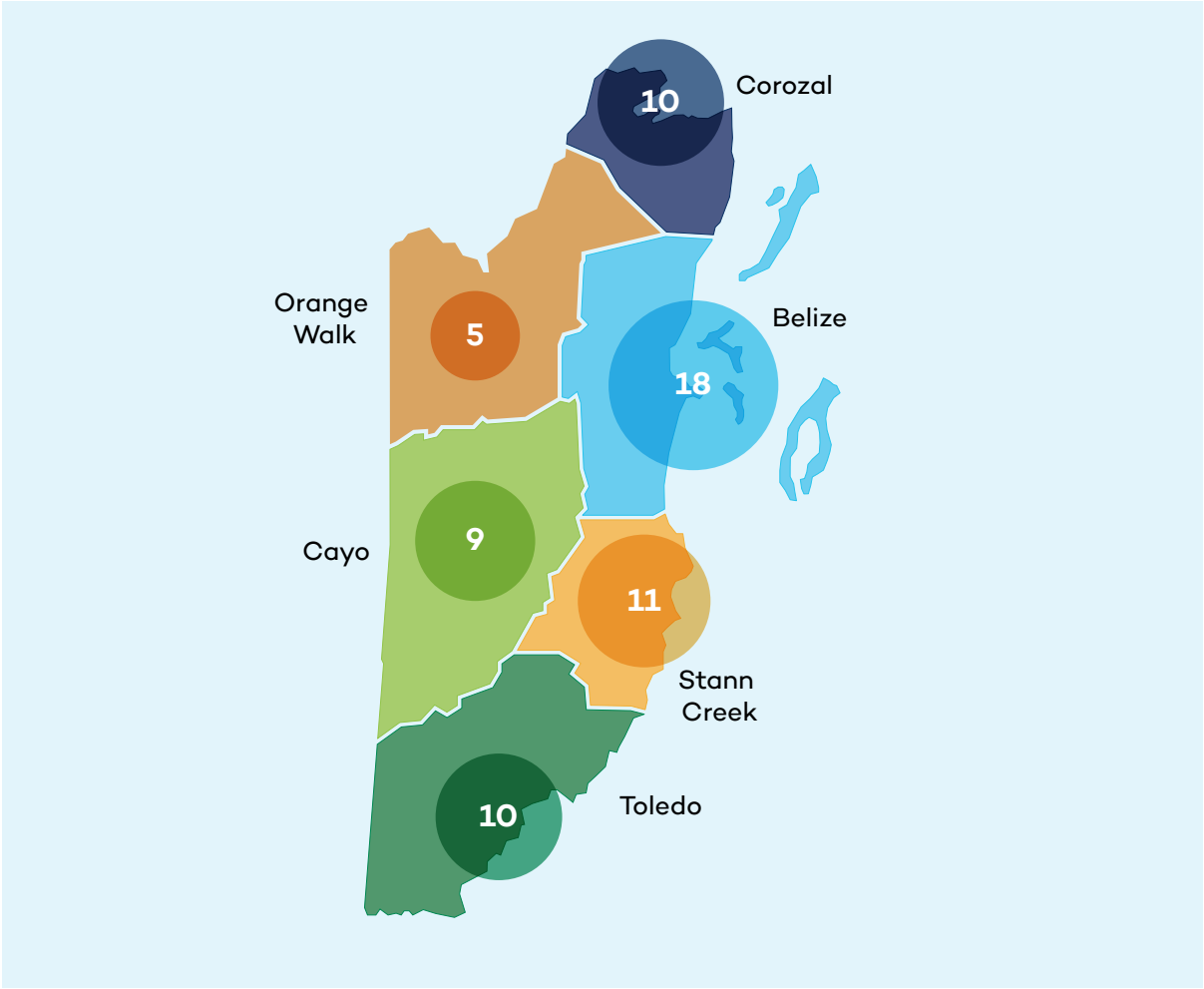
EbA in Belize

EbA actions, a subset of NbS, use "biodiversity and ecosystem services as part of an overall adaptation strategy to help people adapt to the adverse effects of climate change" (Convention on Biological Diversity, 2009). They include measures that protect, conserve, restore, sustainably use, and manage natural ecosystems with the aim of strengthening the resilience of communities and ecosystems to the impacts of climate change. They involve assessing how climate change will affect ecosystems and people of all genders and social backgrounds, and identifying how ecosystems could help address these impacts on people. EbA is synonymous with NbS for adaptation.

Why do NbS and EbA matter for Belize?

Belize boasts a wealth of biodiversity, including the Belize Barrier Reef Reserve System, which protects various ecosystems, including mangrove forests, coral reefs, and seagrass beds, and the Maya Forest Corridor, which is home to notable tropical species, such as jaguars, Baird's tapirs, and white-lipped peccaries. However, the country's flat, low-lying terrain, extensive coastline, and over 1,060 small islands exacerbate its vulnerability to a range of climate hazards, including sea level rise, ocean acidification, hurricanes, flooding, drought, and wildfires (Jang et al., 2025; Ministry of Sustainable Development, Climate Change, and Disaster Risk Management, 2021; National Climate Change Office, 2021). These hazards pose significant threats to Belize's population, environmental integrity, and socio-economic development. As Belize continues to face the impacts of climate change, implementing effective ecosystem-based adaptation strategies, including NbS and EbA, is essential to strengthen the resilience of the country's population, biodiversity, and ecosystems.

Figure 1. Distribution of NbS projects in Belize by district



Source: Authors.

What are we learning about NbS in Belize?

The NbS Inventory shows that NbS projects are being implemented in all districts across Belize, with an even distribution of projects across the Corozal, Stann Creek, and Toledo districts (10–11 projects per district) (see Figure 1). The district with the most projects is the Belize district (18 projects), while the district with the fewest projects is Orange Walk (five projects). The extensive and increasing number of NbS projects across the country can be attributed to several key enabling conditions, including increased domestic and international public financial support for NbS, leadership and initiative from civil society actors, and the integration of NbS into national plans and policies. For example, the Government of Belize has established a National Landscape Restoration Strategy, committed to piloting NbS projects in coastal and marine ecosystems through its third Nationally Determined Contribution (Government of Belize, 2025), and developed sectoral national adaptation plans focused on the water, coastal zone, and fisheries sectors with NbS and EbA as potential avenues for reducing climate risks. The main implementers of NbS in Belize are NGOs, community-based organizations, associations, and communities.

The types of NbS projects being implemented in Belize are diverse, ranging from reforestation, community-based fire management, and climate-smart agriculture in terrestrial areas to mangrove restoration and the expansion of protection areas in marine and coastal landscapes.

NbS Inventory

1	Enhancing the Resilience of Belize's Coastal Communities to Climate Change Impacts project		
Implementation entity	National Climate Change Office of the Government of Belize, Protected Areas Conservation Trust, and the Coastal Zone Management Authority and Institute (CZMAI)		
Project status	Ongoing (since 2024)		
Location	**Stann Creek District**: Dangriga, Hopkins		
Intended beneficiaries	Residents along the coast of Belize, especially in Dangriga and Hopkins		
Societal challenges addressed by NbS	Climate adaptation	Disaster risk reduction	
	Water security	Biodiversity degradation & loss	
Ecosystem(s) targeted	Beaches, mangrove forests, seagrass meadows, and coral reefs		
Ecosystem services enhanced	Enhanced natural barrier against storm surges, flood and erosion control, habitat for local species, and opportunities for tourism-related livelihoods.		
Description of NbS	This project is implementing sand renourishment to restore beaches in Dangriga and Hopkins, with the aim of restoring sedimentary balance in the coastal zone and strengthening natural defences against erosion and extreme weather events. The intervention is guided by bathymetric and sediment studies and complemented by geotube installation to promote the long-term stability of replenished beaches and their benefits. Complementary actions include developing monitoring programs for saltwater intrusion and beach erosion, implementing an early warning system for coastal communities, and promoting awareness and knowledge sharing on beach erosion and restoration. The project also supports capacity building for the implementation of the Integrated Coastal Zone Management Plan. This is a USD 4 million project funded by the Adaptation Fund.		
Climate risks addressed	By strengthening natural defences along the shoreline, the NbS addresses risks associated with an increased frequency and intensity of hurricanes and storms and sea level rise, including increased coastal flooding and erosion, property damage, death and injury to humans and wildlife, and economic losses for those working in natural resource-dependent industries, such as ecotourism and aquaculture.		

Biodiversity risks addressed	Biodiversity risks are addressed indirectly (not accounted for in the project design). By stabilizing beaches, the project helps protect coastal and marine habitats, such as seagrass beds and mangroves, which are threatened by sediment loss. Additionally, maintaining healthy beach and dune systems supports biodiversity linked to nesting areas.
Reference	https://www.adaptation-fund.org/project/enhancing-the-resilience-of-belizes-coastal-communities-to-climate-change-impacts/

2 Smart Coasts project

Implementation entity	World Wide Fund for Nature (WWF), Sarteneja Alliance for Conservation and Development (SACD), and the Southern Environmental Association
Project status	Completed (2018–2023)
Location	**Corozal District**: Sarteneja, Chunox, Copperbank, Consejo, Corozal town **Belize District**: Ambergris Caye, Caye Caulker **Stann Creek District**: Hopkins, Riversdale, Seine Bight, Placencia, Independence
Intended beneficiaries	Fishers, marine guides, and communities in the indicated areas
Societal challenges addressed by NbS	Climate adaptation Biodiversity degradation & loss Economic & social development
Ecosystem(s) targeted	Mangrove forests and coral reefs
Ecosystem services enhanced	Enhanced natural barrier against storm surges, habitat for local species, and income sources for local communities.
Description of NbS	The Smart Coasts project trained youth in five communities on mangrove restoration and helped to establish a "Mangrove Community Watchdog" program to protect and restore mangrove forests in Northern Belize. The project also supported capacity building, community outreach, and an education campaign on mangrove protection and restoration. Additionally, it contributed to the updating of the Placencia Lagoon Management Plan by integrating climate change considerations to ensure sustainable management of the area. Additional activities included coral restoration efforts, establishing and outplanting four coral nurseries in collaboration with the Hol Chan Marine Reserve, and providing training to support future community-based coral restoration projects.
Climate risks addressed	By restoring mangrove and coral reef ecosystems, the project addresses several climate risks associated with rising sea surface temperatures, sea level rise, ocean acidification, coastal flooding, and hurricanes. These interventions help reduce property damage, death and injury to humans, and economic losses in the tourism and fisheries sectors.
Biodiversity risks addressed	Mangrove forests and coral reefs are highly vulnerable to climate change and susceptible to degradation, particularly from development and tourism. By promoting the conservation, restoration, and sustainable management of these ecosystems, the project helps prevent mangrove loss, supports coral health, and protects the habitats of marine and coastal species.

Reference	https://wwflac.awsassets.panda.org/downloads/wwf_powering_nature_report.pdf https://www.wwfca.org/en/smartcoastsmar/ https://wwflac.awsassets.panda.org/downloads/corozal_bay.pdf https://wwflac.awsassets.panda.org/downloads/ambergris_caye.pdf

3 Building community resilience via transformative adaptation

Implementation entity	Protected Areas Conservation Trust
Project status	Ongoing (2023–2028)
Location	**Belize District**: Hattieville, Crooked Tree village **Corozal District**: Sarteneja **Cayo District**: Mopan and Macal River (starting in Benque Viejo and ending at Belize City)
Intended beneficiaries	Communities living in and around the Mopan and Macal rivers and select protected areas in Belize
Societal challenges addressed by NbS	Climate adaptation; Disaster risk reduction Food security; Water security Economic & social development; Biodiversity degradation & loss
Ecosystem(s) targeted	Forests and freshwater ecosystems
Ecosystem services enhanced	Water supply and source of food and income for target communities.
Description of NbS	The core NbS intervention of this project is the restoration of priority watersheds across Belize. This includes developing restoration strategies and carrying out pilot activities in riparian and catchment areas. These actions aim to improve freshwater quality and restore natural ecosystem functions that buffer communities against climate change impacts. Complementary measures include climate-smart food systems and nature-based enterprises that provide alternative livelihoods while reducing pressure on natural resources, and community-based disaster risk management that incorporates flood mitigation solutions. In addition, the project strengthens local capacities to access climate finance, promoting the long-term scaling and sustainability of the NbS. This is a USD 5 million project financed by the Adaptation Fund.
Climate risks addressed	By restoring riparian and catchment areas, the project addresses key climate risks associated with droughts and floods. These include reduced water availability and quality, infrastructural damage, and economic losses in the agriculture sector.
Biodiversity risks addressed	Forest ecosystems supporting the provision and regulation of fresh water in the selected watersheds are highly susceptible to wildfires, overexploitation, and degradation. Through restoration and community management, the project contributes to reducing these threats and preventing further biodiversity loss and habitat degradation.

Reference	https://www.pactbelize.org/building-community-resilience-via-transformative-adaptation/ https://www.adaptation-fund.org/project/building-community-resilience-via-transformative-adaptation-enhance-direct-access/

4 Marine Conservation and Climate Adaptation project

Implementation entity	Protected Areas Conservation Trust and the Ministry of Fisheries, Forestry, the Environment and Sustainable Development
Project status	Completed (2015–2020)
Location	**Belize District**: Belize City **Corozal District**: Copper Bank village, Chunox village, Consejo village, Corozal town, Sarteneja village **Stann Creek District**: Seine Bight village, Riversdale village, Hopkins, Dangriga, Placencia, Sittee River
Intended beneficiaries	Fishers, marine guides, and other users of marine resources located within Corozal Bay Wildlife Sanctuary, Turneffe Atoll Marine Reserve, and South Water Caye Marine Reserve
Societal challenges addressed by NbS	Climate adaptation; Food security Economic & social development; Biodiversity degradation & loss
Ecosystem(s) targeted	Coastal and marine ecosystems, including coral reefs and mangrove forests
Ecosystem services enhanced	Enhanced natural barrier against storm surges, carbon sequestration, habitat for marine species, and livelihood options for local communities.
Description of NbS	This project improved coral reef protection in Belize through the expansion of marine protected areas. In collaboration with NGO partners, the project increased the national coverage of marine protected areas from 13% to 22%, as well as no-take zones from 2% to 3.1%. The project also supported the update of forest regulations, reinforcing the protection of mangroves. Complementary activities included promoting alternative sustainable livelihood options for communities and raising awareness on the importance of reef health for climate resilience and human well-being. This project was funded by the Adaptation Fund.
Climate risks addressed	By expanding marine protected areas and reducing local stressors, the project enhances the capacity of coral reefs to withstand heat stress, ocean acidification, and extreme weather events. The protection of mangroves helps dissipate wave energy and stabilize shorelines, reducing communities' vulnerability to sea level rise and storms.

Biodiversity risks addressed	By expanding protected areas and no-take zones, the project reduces human pressures associated with habitat degradation and overfishing, allowing marine populations to recover and maintain ecological balance. The protection of mangroves, which serve as nursery grounds for juvenile fish and invertebrates, helps prevent biodiversity loss.
Reference	https://projects.worldbank.org/en/projects-operations/project-detail/P131408 https://fisheries.gov.bz/mccap/development/

5 Securing 96,000 hectares of the Selva Maya's tropical forest for protection and conservation

Implementation entity	Belize Maya Forest Trust (BMFT), with partners from the Bobolink Foundation, Cornell Lab of Ornithology, Cleary Gottlieb Steen & Hamilton LLP, Corozal Sustainable Future Initiative, International Tropical Conservation Fund, Gallon Jug Estate, Global Wildlife Conservation, Mass Audubon, Programme for Belize, Symphasis Foundation, The Nature Conservancy, The Rainforest Trust, University of Belize Environmental Research Institute, Wildlife Conservation Society, World Land Trust, and Wyss Foundation			
Project status	Completed (2021)			
Location	**Orange Walk District**: San Felipe, Blue Creek, Sylvester **Cayo District**: Los Tambos, La Gracia, Yalbac, Buena Vista, Spanish Lookout, Valley of Peace			
Intended beneficiaries	Local communities in and around the protected area			
Societal challenges addressed by NbS		Climate mitigation		Water security
		Climate adaptation		Biodiversity degradation & loss
Ecosystem(s) targeted	Forests and freshwater ecosystems			
Ecosystem services enhanced	Pollination, decomposition, water filtration, erosion and flood control, carbon sequestration, and climate regulation.			
Description of NbS	A total of 96,000 hectares of the Selva Maya's tropical forest in northwestern Belize were secured by the BMFT and its partners for permanent protection. This area, representing nearly one-tenth of the total land in Belize, contains some of the most biodiverse forests in the world. The BMFT now manages the area sustainably and has assumed responsibility for the Carbon Verra Standard project—a climate mitigation project started by the previous landowners.			

	The protection of these ecosystems provides multiple co-benefits for adaptation and biodiversity, including erosion and flood control, and the conservation of critical habitats for key species.  Source: The Nature Conservancy, 2021.
Climate risks addressed	By protecting a significant area of tropical forest, the local climate can regulate itself more effectively, and risks of drought, heat stress, and wildfires are reduced. The conserved forest cover also enhances water retention and prevents erosion and flooding. These functions safeguard water sources and agricultural productivity for surrounding communities.
Biodiversity risks addressed	By securing a large and connected forest landscape, the project mitigates biodiversity risks such as habitat fragmentation and degradation driven by land conversion, development, and climate change.
Reference	https://www.nature.org/en-us/what-we-do/our-insights/perspectives/protecting-belize-maya-forest-biodiversity-climate/

6	Regenerative agriculture and reforestation with communities in the Belize Maya Forest		
Implementation entity	BMFT		
Project status	Ongoing (since 2021)		
Location	**Orange Walk District**: San Felipe **Cayo District**: Selena, Yalbac, La Gracia, Buena Vista, Los Tambos, Valley of Peace		
Intended beneficiaries	Local communities living in and around the Belize Maya Forest		
Societal challenges addressed by NbS	Climate adaptation	Food security	
	Water security	Biodiversity degradation & loss	
	Economic & social development		
Ecosystem(s) targeted	Agricultural ecosystems and tropical rainforest		
Ecosystem services enhanced	Habitat for over 600 flora and fauna species and food and water supply for the target communities. It also improves soil fertility, water infiltration, and landscape connectivity between agricultural lands and forest ecosystems.		
Description of NbS	To strengthen the resilience of the Belize Maya Forest and its communities, the BMFT is implementing regenerative agriculture and reforestation initiatives with communities. Regenerative agriculture activities include the establishment of cover crop demonstration plots and agroforestry practices (Inga alley cropping) through the provision of seeds and training. Reforestation efforts focus on the planting of 4,000 fruit trees, complemented by passive natural regeneration within the reserve. The BMFT is also conducting water quality testing to address pollution concerns and community-based fire management training to reduce wildfire risks.		
Climate risks addressed	Through regenerative agriculture, reforestation, and fire management, the project reduces vulnerability to drought, flooding, and wildfires. The NbS enhance moisture retention, reduce heat stress on crops, stabilize yields under climate variability, and lower wildfire risk. These interventions also strengthen food security and livelihood resilience for farming communities.		
Biodiversity risks addressed	By promoting agroforestry systems and supporting natural forest regeneration, the project addresses risks of habitat loss, ecosystem fragmentation, and declines in native species. Reforestation creates habitat for wildlife, improves ecological connectivity, and reduces pressures on remaining forest areas.		

Reference	https://globalconservation.org/projects/greater-belize-maya-forest https://www.nature.org/en-us/what-we-do/our-insights/perspectives/protecting-belize-maya-forest-biodiversity-climate/

7	Strengthening coral reef resilience through science for adaptive management		
Implementation entity	CZMAI		
Project status	Ongoing		
Location	**Belize District**: Caye Caulker, San Pedro, Ambergris Caye, and the Turneffe Atoll Marine Reserve (TAMR)		
Intended beneficiaries	Local communities and users of the TAMR		
Societal challenges addressed by NbS	Climate mitigation	Disaster risk reduction	
	Climate adaptation	Biodiversity degradation & loss	
	Economic & social development		
Ecosystem(s) targeted	Coral reefs		
Ecosystem services enhanced	Carbon sequestration, enhanced natural barrier against storm surges, and habitat for marine species. It also supports fisheries productivity and tourism-based livelihoods that depend on healthy reef ecosystems.		
Description of NbS	Through partnerships with government agencies and researchers, the project strengthens the science-based adaptive management of coral reefs. It builds the capacity of protected areas staff to manage and interpret long-term coral reef monitoring datasets, improving understanding of site-specific ecological resilience. This evidence-based approach supports adaptive decision making and the design of effective restoration and conservation measures under changing climate conditions.		
Climate risks addressed	By strengthening reef monitoring and adaptive management, the project addresses climate risks linked to rising sea surface temperatures and the increasing intensity of tropical storms. Improved reef management enhances the capacity of corals to resist and recover from bleaching and disease, while maintaining their role in reducing storm surge impacts. These actions also help lower long-term climate-related economic risks for fisheries, aquaculture, and tourism.		
Biodiversity risks addressed	The project addresses biodiversity risks such as the degradation of coral reef ecosystems and population declines. By strengthening science-based decision making and adaptive management, it supports the conservation of coral reef biodiversity and critical marine habitats.		
Reference	https://www.coastalzonebelize.org/flagship-projects/ Source: Personal communication with Tara Scarborough, CZMAI.		

8 Enhancing reef health through a Ridge-to-Reef Program for improved watershed management and enhanced water quality monitoring in Belize

Implementation entity	CZMAI, Department of the Environment, the Belize Forest Department, the National Hydrological Service and the Belize Fisheries Department
Project status	Ongoing (2024–2025)
Location	**Stann Creek District**: Pomona, Steadfast, Alta Vista, Hummingbird, Placencia, Dangriga, Hopkins, Seine Bight, Riversdale, and Sittee River **Toledo**: Monkey River **Belize District**: Belize and Sibun rivers
Intended beneficiaries	Indicated communities
Societal challenges addressed by NbS	Climate mitigation; Disaster risk reduction Climate adaptation; Water security Economic & social development; Biodiversity degradation & loss
Ecosystem(s) targeted	Riparian forests, freshwater riverine ecosystems and marine ecosystems
Ecosystem services enhanced	Flood and erosion control, water filtration, carbon sequestration, climate regulation, and nutrient cycling.
Description of NbS	This project applies a ridge-to-reef approach that strengthens information generation to reduce land-based pressures on coral reefs and improve watershed resilience. It focuses on filling critical data gaps with the information needed to guide adaptive management and NbS design and implementation. The project validates restoration opportunities and generates applied information on saline intrusion and sediment transport to guide targeted watershed management actions that protect freshwater supplies and reduce downstream stress on reefs. The project also expands national riverine, coastal, and marine water quality monitoring to better understand nutrients, pollutants, and climate-related stressors affecting reef health. This improved information base supports coordinated, science-driven NbS implementation.
Climate risks addressed	By improving monitoring and guiding ridge-to-reef management actions, the project addresses risks of flooding, soil erosion, and saline intrusion. Reduced sediment and nutrient runoff also supports coral reef resilience to warming waters and storm impacts.

Biodiversity risks addressed	The project addresses biodiversity risks, such as habitat degradation, pollution, and disruption of ecological connectivity across freshwater and marine ecosystems. By strengthening understanding of stressors and informing targeted management actions, it supports the recovery of riverine and reef habitats.
Reference	https://www.coastalzonebelize.org/ridge-to-reef-project/ Source: Personal communication with Tara Scarborough, CZMAI.

9	Restoration of riparian forest in Monkey River		
Implementation entity	Central American Bank for Economic Integration, CZMAI, and Caribbean Community Climate Change Centre (CCCCC)		
Project status	Ongoing (2022–2026)		
Location	**Toledo District**: Monkey River		
Intended beneficiaries	Approximately 200 residents in Monkey River and 1,200 indirect beneficiaries in nearby communities		
Societal challenges addressed by NbS	Climate adaptation	Disaster risk reduction	
	Food security	Biodiversity degradation & loss	
	Economic & social development		
Ecosystem(s) targeted	Mangrove forests, estuaries, and agricultural ecosystems		
Ecosystem services enhanced	Food and income sources for target communities, erosion control, and protection against storm surges.		
Description of NbS	This project restores degraded riparian and coastal ecosystems in the Monkey River Delta through community-based reforestation and restoration. Using locally appropriate native species, 350 hectares of Monkey River riverbanks are being reforested, 5 hectares of mangroves are being replanted near the estuary, and 145 hectares of adjacent lands are being revegetated with agricultural crops such as bananas. A community plant nursery and seed collection system are also being established. In parallel, the project is building local capacity to implement and monitor restoration activities, strengthening long-term stewardship and sustainability. The intervention is financed by the Adaptation Fund.		
Climate risks addressed	By restoring riparian forests and mangroves, the project reduces vulnerability to flooding, storm surges, and erosion, which are associated with more frequent and intense storms. Improved vegetation cover stabilizes riverbanks, reduces sediment transport, protects agricultural lands, and lowers the risk of economic losses for local communities.		
Biodiversity risks addressed	The project addresses biodiversity risks associated with the degradation of riparian forests caused by logging and storm damage. Restoration activities reduce erosion and siltation, improving habitat quality for aquatic and terrestrial species.		
Reference	https://fifspubprd.azureedge.net/afdocuments/project/14811/14811_CABEI%20Proposal-Guatemala%20Honduras%20and%20Belize%202022-05-31%20final%20CLEAN_LOEs%20.pdf		

10	Increased protection of species in the Corozal Bay Wildlife Sanctuary		
Implementation entity	SACD		
Project status	Ongoing (2023–2025)		
Location	**Corozal District**: Sarteneja		
Intended beneficiaries	Traditional fishers in Sarteneja, members of the Sarteneja Tour Guide Association, and stakeholders of the Corozal Bay Wildlife Sanctuary (CBWS)		
Societal challenges addressed by NbS	Climate adaptation	Biodiversity degradation & loss	
	Economic & social development		
Ecosystem(s) targeted	Marine ecosystems		
Ecosystem services enhanced	Habitat for marine species and source of food and income for target communities.		
Description of NbS	Managed by SACD, the CBWS is a marine protected area that provides critical habitat for several marine species. These habitats are vital in supporting biodiversity and maintaining the success of community-based fishing and tourism livelihoods. SACD implements a range of activities to protect biodiversity in the CBWS and safeguard traditional livelihoods, including strengthening the management and sustainability of the CBWS's traditional beach trap fishery through the implementation of a sustainable fishery plan, regular patrols of the area, and collaborative and community-based monitoring of critical marine species. Monitoring and enforcement data are shared to inform adaptive management decisions for the CBWS. SACD also supports a Junior Mangrove Guardians initiative that educates and raises awareness among youth about the importance of ecosystems to foster generational environmental stewardship.		
Climate risks addressed	By strengthening the protection and management of marine protected areas, the project enhances ecological resilience to warming and extreme weather events, helping to maintain productivity and reduce the socio-economic vulnerability of fishers and tourism operators.		
Biodiversity risks addressed	The project addresses biodiversity risks such as habitat degradation and loss, species population declines, and unsustainable resource use driven by both climate change and human pressures. Through enhanced protection, monitoring, and community stewardship, it supports the long-term conservation of marine biodiversity within the sanctuary.		
Reference	https://belizefund.bz/projects/safeguarding-biodiversity-and-species-abundance-in-corozal-bay-wildlife-sanctuary/		

11	Protection and conservation of commercial species and fish spawning aggregation sites in Sapodilla Cayes Marine Reserve
Implementation entity	Toledo Institute for Development and Environment (TIDE)
Project status	Ongoing (2023–2026)
Location	**Stann Creek District**: Riversdale, Hopkins, Placencia **Toledo District**: Monkey River and Punta Negra
Intended beneficiaries	120 fishers, 40 marine guides, and 15 tour operators, who depend on natural resources within the Sapodilla Cayes Marine Reserve, as well as approximately 8,000 residents in the indicated communities
Societal challenges addressed by NbS	Climate adaptation; Food security; Economic & social development; Biodiversity degradation & loss
Ecosystem(s) targeted	Coral reefs, mangrove forests, and lagoons
Ecosystem services enhanced	Fisheries productivity, food and income sources for coastal communities.
Description of NbS	This project strengthens the protection of three legally recognized fish spawning aggregation (FSA) sites within the Sapodilla Cayes Marine Reserve, which are closed seasonally to replenish fish populations and maintain healthy reef fisheries. Activities include annual monitoring of key commercial species such as the Caribbean spiny lobster and queen conch, coordination with the Belize Marine Protected Areas Network on FSA management, and support for supplementary livelihood options, such as seaweed production to reduce pressure on reef fisheries. TIDE also engages local schools and the community college to raise awareness on marine conservation and provides a Fisher's Forum that enables dialogue between fisherfolk, TIDE, and the Belize Fisheries Department on fisheries management guidelines and policies. In addition, the project is supporting the legal designation of the Cayman Crown FSA site as a permanent no-take zone by 2025. This project is funded by the Belize Fund for a Sustainable Future.
Climate risks addressed	By protecting FSA sites and strengthening sustainable fisheries management, climate-related risks associated with rising sea surface temperatures and ocean acidification, such as shifts or declines in marine species populations, are mitigated. These measures help stabilize fish stocks under climate stress and reduce long-term risks to food security and livelihoods for fishing-dependent communities.

Biodiversity risks addressed	The project addresses biodiversity risks, such as declining fish stocks caused by overfishing and exacerbated by climate change. By protecting critical spawning habitats, strengthening seasonal closures, and supporting the recovery of commercial species, it enhances population replenishment, maintains genetic diversity, and supports the resilience of reef fisheries.
Reference	https://tidebelize.org/ https://belizefund.bz/projects/protection-and-conservation-of-commercial-species-and-fish-spawning-aggregation-sites-in-sapodilla-cayes-marine-reserve/

12	Building capacities in forest fire management among Indigenous Peoples and local communities
Implementation entity	TIDE
Project status	Completed
Location	**Toledo District**: Punta Negra, Monkey River, Golden Stream, Medina Bank, Cattle Landing, Bladen, San Pedro Columbia, Indian Creek, Big Falls
Intended beneficiaries	15 communities across the Toledo District
Societal challenges addressed by NbS	Climate adaptation; Disaster risk reduction; Biodiversity degradation & loss
Ecosystem(s) targeted	Tropical forests
Ecosystem services enhanced	Carbon sequestration, food and income source for community members.
Description of NbS	This project strengthened the capacity of Indigenous Peoples and local communities to participate effectively in forest fire management as an NbS for disaster risk reduction and climate resilience. A total of 81 community members received training on fire management. Following the training, three community fire management hubs were established, each equipped with six sets of firefighting equipment to support rapid and coordinated response. In addition, TIDE implemented a media campaign to raise awareness of community-based fire management in three local languages, strengthening local ownership of wildfire prevention and response. This project was funded by the Global Environmental Facility (GEF) Small Grants Programme.
Climate risks addressed	By strengthening community-based fire prevention and response, the project addresses the risk of increased wildfire frequency and intensity under hotter and drier conditions. Improved preparedness reduces risks to lives, forest resources, infrastructure, and livelihoods that depend on forest ecosystems.
Biodiversity risks addressed	The project addresses biodiversity risks, including habitat destruction, species mortality, and ecosystem degradation, caused by uncontrolled wildfires. By enhancing prevention and early response capacity, it supports the protection of forest habitats and the conservation of terrestrial biodiversity.
Reference	https://sgp.undp.org/spacial-itemid-projects-landing-page/spacial-itemid-project-search-results/spacial-itemid-project-detailpage.html?view=projectdetail&id=29730

13	Sustainable management of the Five Blues Lake National Park		
Implementation entity	Belize Enterprise for Sustainable Technology		
Project status	Completed (2022–2023)		
Location	**Cayo District**: St. Margaret Village		
Intended beneficiaries	Members of the Hummingbird Environmental Tour Guides Association and the St. Margaret Village community		
Societal challenges addressed by NbS	Climate adaptation	Biodiversity degradation & loss	
	Economic & social development		
Ecosystem(s) targeted	Tropical forest, freshwater ecosystems, and cave ecosystems		
Ecosystem services enhanced	Habitat for local species and an income source for community members.		
Description of NbS	This project sought to revitalize the Five Blues Lake National Park through protection and sustainable management measures, as well as infrastructure upgrades. Members of the community-based Hummingbird Environmental Tour Guides Association (HETA) were trained to sustainably manage the park and granted co-management status to protect its ecosystems. HETA's sustainable management efforts have supported the passive regeneration of the forest, in combination with upgrading trails and restoring road access to the park, which in turn has provided more opportunities to the community for income generation. As a result of improved governance and stewardship, the park has seen a noticeable decrease in deforestation and poaching. This project was funded by the GEF Small Grants Programme.		
Climate risks addressed	Changing precipitation patterns and increasing air temperatures have subjected Five Blues Lake National Park to prolonged periods of drought, putting stress on flora and fauna and depleting the park's supply of fresh water. Improved management has enhanced water retention, supported the recovery of freshwater supplies, and reduced climate stress on flora and fauna within the park.		
Biodiversity risks addressed	The project addresses long-term ecosystem degradation, habitat loss, and reduced wildlife populations that were caused by limited management capacity in the past and climate stress. Improved management has contributed to enhanced habitat protection and supported the recovery of ecological functions in the park.		
Reference	https://sgp.undp.org/spacial-itemid-projects-landing-page/spacial-itemid-project-search-results/spacial-itemid-project-detailpage.html?view=projectdetail&id=32278		

14	Strengthening the capacity of farmers and local communities to adapt to climate change in the Vaca Forest Reserve		
Implementation entity	Friends for Conservation & Development		
Project status	Completed		
Location	**Cayo District**: Arenal, San Jose Succotz, Benque Viejo del Carmen		
Intended beneficiaries	Farmers and communities surrounding the Vaca Forest Reserve		
Societal challenges addressed by NbS	Climate adaptation	Food security	
	Economic & social development	Biodiversity degradation & loss	
Ecosystem(s) targeted	Broadleaf forests, rivers, and agricultural ecosystems		
Ecosystem services enhanced	Habitat for local species, water supply and regulation, and food and income source for target communities.		
Description of NbS	This project worked in collaboration with local farmers and their communities to identify and implement climate adaptation measures. Core interventions included the reforestation of degraded riparian zones to stabilize riverbanks and protect water resources. Complementary actions focused on climate-resilient agriculture, including the establishment of improved irrigation systems, construction of crop cover structures to reduce heat and moisture stress, and capacity-building activities for men, women, and youth on sustainable forest resource use and beekeeping. The project was funded by the GEF Small Grants Programme.		
Climate risks addressed	By promoting reforestation and strengthening climate-resilient farming practices, the project addressed drought-related risks, including declining agricultural productivity and reduced water availability. These NbS can enhance soil moisture retention and water regulation, reducing vulnerability to prolonged dry periods.		
Biodiversity risks addressed	The project addresses biodiversity risks such as forest fragmentation, topsoil loss, and habitat degradation caused by unsustainable land use and climate stress. Through NbS, it improves ecological connectivity and reduces pressures on ecosystems.		
Reference	https://sgp.undp.org/spacial-itemid-projects-landing-page/spacial-itemid-project-search-results/spacial-itemid-project-detailpage.html?view=projectdetail&id=25687		

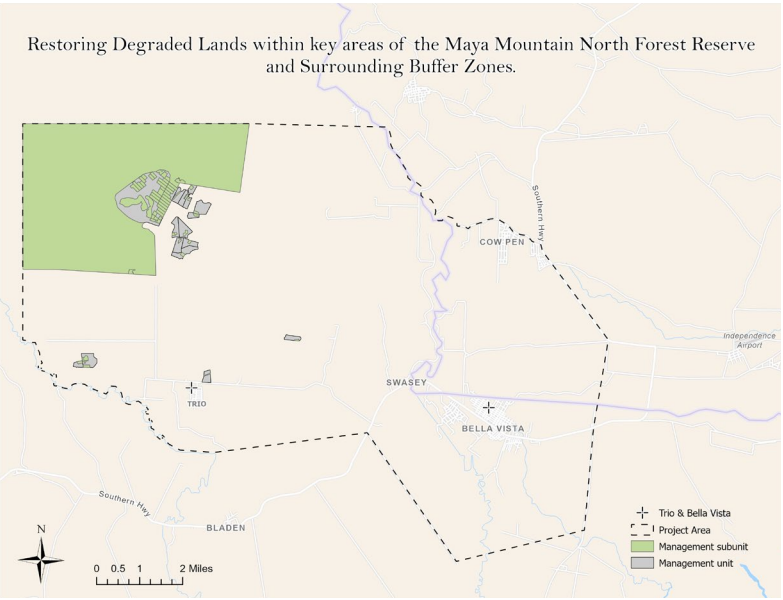
15	Empowering women and youth participation in a sustainable seaweed mariculture industry		
Implementation entity	Turneffe Atoll Sustainability Association		
Project status	Completed (2023)		
Location	**Stann Creek District**: Placencia		
Intended beneficiaries	Women, youth fishers and marine tour guides, and the surrounding community		
Societal challenges addressed by NbS	Climate adaptation	Food security	
	Economic & social development	Biodiversity degradation & loss	
Ecosystem(s) targeted	Marine ecosystems		
Ecosystem services enhanced	Food and income source for communities and habitat for marine species.		
Description of NbS	The project aimed to strengthen the participation of women and youth in sustainable seaweed mariculture as an NbS for livelihood diversification and ecosystem protection. Capacity-building sessions were delivered to members of the Belize Women's Seaweed Farmers Association to improve farm operations and enhance long-term climate resilience. The project also supported the expansion of seaweed farms as an alternative livelihood strategy. Youth fishers and marine tour guides were engaged to strengthen sustainable marine resource management practices. By promoting seaweed farming, the project reduced pressure on capture fisheries, supporting the recovery of populations and contributing indirectly to improved coral reef health.		
Climate risks addressed	By strengthening climate-resilient seaweed mariculture systems and diversifying coastal livelihoods, the project addressed climate risks associated with rising sea surface temperatures that threaten seaweed productivity and increase economic losses for marine-dependent communities.		
Biodiversity risks addressed	The project addressed the risk of declining marine species due to overfishing and climate stress. The expansion of seaweed farms provides structured habitat for juvenile fish and invertebrates and helps reduce fishing pressure, supporting the recovery of marine biodiversity and ecosystem functioning.		
Reference	https://sgp.undp.org/spacial-itemid-projects-landing-page/spacial-itemid-project-search-results/spacial-itemid-project-detailpage.html?view=projectdetail&id=29728		

16	Promoting biodiversity conservation through crop zoning and sustainable farming practices in Belize's Maya Golden Landscapes

Implementation entity	Ya'axché Conservation Trust			
Project status	Ongoing (2024–2027)			
Location	**Toledo District**: Bladen, Trio, San Jose, Aguacate, Big Falls, Golden Stream, Indian Creek, Medina Bank, Silver Creek, San Miguel			
Intended beneficiaries	Indicated communities, with a focus on farmers, women, and youth			
Societal challenges addressed by NbS		Climate adaptation		Food security
		Economic & social development		Biodiversity degradation & loss
Ecosystem(s) targeted	Broadleaf forests and agricultural ecosystems			
Ecosystem services enhanced	Food and water supply for target communities and an income source for cacao farmers.			
Description of NbS	This project applies a landscape-scale approach to balance biodiversity conservation with sustainable agricultural production in the Maya Golden Landscapes. It seeks to rezone Belize's Maya Golden Landscapes into three zones: a no-take zone, a cacao farming zone, and an annual crop zone, reducing land-use conflicts and protecting priority biodiversity areas. The rezoning included decisions of women, men, and youths. Women were also given the opportunity to have farming zones. The project will also strengthen farmers' knowledge of pest control and sustainable agricultural practices, reducing pressure on surrounding forest ecosystems and improving farm-level resilience. Furthermore, biodiversity will be monitored in the area through camera trapping in partnership with farmers who were trained in camera trapping operation and maintenance. This community-based monitoring system generates critical data to track wildlife populations and guide adaptive landscape management.			
Climate risks addressed	By protecting forests and promoting climate-resilient farming systems, the project addresses climate risks associated with drought and changing precipitation patterns, including increased wildfire susceptibility, heat and moisture stress on crops and wildlife, and water shortages. Forest conservation and improved farming practices enhance soil moisture retention, reduce fire risk, and stabilize food and water availability for communities.			

Biodiversity risks addressed	The project addresses biodiversity risks such as forest degradation, habitat loss, and wildlife population declines due to agricultural expansion, storm damage, and unsustainable land use. Through land-use zoning, sustainable farming, and community-based biodiversity monitoring, it reduces pressure on ecosystems and improves habitat connectivity.
Reference	Source: Personal communication with Marvin Vasquez, Ya'axché Conservation Trust.

17	Restoring degraded lands within key areas of the Maya Mountain North Forest Reserve and surrounding buffer zones		
Implementation entity	Ya'axché Conservation Trust		
Project status	Completed (2022–2023)		
Location	**Toledo District**: Trio, Bella Vista		
Intended beneficiaries	Farmers within the Maya Mountain North Forest Reserve		
Societal challenges addressed by NbS	Climate adaptation	Food security	
	Economic & social development	Biodiversity degradation & loss	
Ecosystem(s) targeted	Broadleaf forests and riverine ecosystems		
Ecosystem services enhanced	Food and income source for farming communities.		
Description of NbS	This project strengthened the capacity of 50 farmers in southern Belize to restore degraded lands and implement sustainable, forest-compatible production systems. Farmers were trained to identify approximately 70 species of native fruit and timber trees and apply sustainable cacao farming practices as an alternative to extractive land use. The project supported 24 farmers in establishing cacao farm plots using planting material from the Ya'axché Conservation Trust's nursery. In parallel, it promoted the propagation of seven endangered native timber species whose populations had been declining in the project area. Farmers received seedlings to establish agroforestry systems and implement on-farm and landscape-level restoration actions that contribute to biodiversity recovery and long-term ecosystem resilience.		



Source: Ya'axché Conservation Trust.

Climate risks addressed	By restoring forest cover and promoting agroforestry, the project addressed climate risks associated with changing precipitation patterns, such as prolonged drought and water and food shortages. Increased tree cover improves soil moisture retention, enhances local water regulation, and stabilizes agricultural productivity under climate variability.
Biodiversity risks addressed	The project addressed biodiversity risks, including deforestation and the decline of native species, through targeted restoration and the reintroduction of endangered forest species. These actions improve habitat quality, enhance ecological connectivity, and support the recovery of forest biodiversity within the reserve and its buffer zones.
Reference	Source: Personal communication with Marvin Vasquez, Ya'axché Conservation Trust.

18 Strengthening community agroforestry through cooperatives for resilient livelihoods

Implementation entity	Ya'axché Conservation Trust
Project status	Completed (2019–2022)
Location	**Toledo District**: San Jose, Aguacate
Intended beneficiaries:	Green Creek Farmers' Cooperative and Aguacate Conservation & Development Committee
Societal challenges addressed by NbS	Climate adaptation; Food security; Water security; Biodiversity degradation & loss; Economic & social development
Ecosystem(s) targeted	Broadleaf forests and agricultural ecosystems
Ecosystem services enhanced	Water supply, soil fertility, food and income source for farming households, and carbon sequestration.
Description of NbS	This project strengthened community-led agroforestry and sustainable land management through cacao-based production systems and participatory land-use zoning. Prior to this project, women were not able to get lands that were zoned for cacao-based production, but they were included in this process. Farmers cooperatives received training in climate-smart agroforestry practices, the restoration of degraded lands, and sustainable resource management, including women, men and youths. Additionally, 1,500 cacao saplings were distributed to help expand agroforestry plots with the inclusion of women and youth. These interventions reduce pressure on surrounding forests, improve soil and water regulation, enhance carbon sequestration, and support diversified, climate-resilient livelihoods.
Climate risks addressed	By increasing tree cover and improving soil and water management through agroforestry, the project addresses climate risks related to drought, flooding, and changing rainfall patterns. Agroforestry systems improve moisture retention, stabilize agricultural production, and strengthen community resilience to climate variability.
Biodiversity risks addressed	The project addressed biodiversity risks such as forest cover loss, habitat degradation, soil erosion, and wildlife population decline. Through agroforestry restoration and land-use zoning, it improved habitat connectivity, reduced pressure on remnant forests, and supported the recovery of native species.
Reference	Source: Personal communication with Marvin Vasquez, Ya'axché Conservation Trust.

19	Agroforestry, sustainable forestry, and reforestation in watersheds in the Toledo District		
Implementation entity	Sarstoon Temash Institute for Indigenous Management (SATIIM)		
Project status	Ongoing		
Location	**Toledo District**: Sunday Wood, Santa Teresa, Conejo, Crique Sarco, Graham Creek		
Intended beneficiaries	Indigenous Peoples and women's groups from the communities		
Societal challenges addressed by NbS	Climate adaptation	Food security	
	Water security	Biodiversity degradation & loss	
	Economic & social development		
Ecosystem(s) targeted	Broadleaf forests		
Ecosystem services enhanced	Source of timber and non-timber forest products, water regulation, and food and income source for target communities.		
Description of NbS	This initiative applies an NbS approach focused on watershed reforestation, sustainable forestry, and agroforestry across Indigenous territories in southern Belize. Key actions include the establishment of agroforestry demonstration plots, participatory farm management planning, and training in sustainable agroforestry practices, data collection, and GPS use to strengthen local land stewardship. The project places a strong emphasis on the engagement of women by supporting their participation in supplementary livelihoods, environmental monitoring, and resource management. This has strengthened household income, enhanced food security, and supported social and economic development. Implementation is led by SATIIM in collaboration with local Indigenous organizations, including Rax Mu Qi'che and the Conejo Community Forest Group, fostering Indigenous leadership, local ownership, and long-term sustainability of watershed restoration efforts.		
Climate risks addressed	By restoring forest cover and promoting sustainable agroforestry, the project addresses climate risks such as increased drought frequency and intensity, reduced soil moisture, and heightened wildfire risk. Improved vegetation cover enhances water retention and supports agricultural productivity and water security under a changing climate.		

Biodiversity risks addressed	Through watershed reforestation and sustainable forest management, the project reduces forest cover loss, improves habitat quality, and supports the conservation of native forest species and ecological functions.
Reference	Source: Personal communication with Maya Choc, SATIIM.

20	CAPA Initiative: Regeneration of degraded areas in the Maya Forest Corridor by planting native trees and opening firebreaks

Implementation entity	Wildlife Conservation Society (WCS) and IISD
Project status	Ongoing (2023–2026)
Location	**Belize District**: Mahogany Heights, La Democracia, Hattieville and Gracie Rock, Bermudian Landing, Scotland Halfmoon, Double Head Cabbage, Willows Bank, St. Paul's Bank, Rancho Dolores **Cayo District**: Cotton Tree, Franks Eddy
Intended beneficiaries	The Maya Forest Corridor (MFC) surrounding communities, inclusive of the Community Baboon Sanctuary
Societal challenges addressed by NbS	Climate mitigation; Disaster risk reduction Climate adaptation; Water security Biodiversity degradation & loss
Ecosystem(s) targeted	Broadleaf forests and freshwater ecosystems
Ecosystem services enhanced	Erosion and flood control, water filtration, topsoil retention, carbon storage, habitat for local species, and pollination.
Description of NbS	This CAPA Initiative supports the active regeneration of highly degraded areas within the MFC using native tree planting through nucleation techniques (Anderson group planting). A total of 10 hectares of degraded broadleaf forest has been restored using locally selected wildlings, with species chosen based on local tree community dynamics and ecological conditions. To reduce wildfire risk and protect restored areas, firebreaks were established and are being maintained around all regeneration plots. All planting transects also function as firebreaks, strengthening landscape-level fire prevention. Ongoing monitoring of regeneration plots is occurring to assess tree survival and growth rates to guide adaptive management and ensure long-term ecosystem recovery. This initiative is funded by Global Affairs Canada.
Climate risks addressed	Through forest regeneration and the establishment of firebreaks, the project addresses climate risks associated with rising air temperatures, increased wildfire frequency, drought, and flooding. Restored vegetation enhances soil retention, reduces erosion during intense rainfall, improves water regulation, and strengthens ecosystem resilience to climate extremes.

Biodiversity risks addressed	The project addresses forest degradation, habitat loss, and wildlife displacement. By restoring native tree cover, it improves habitat availability and connectivity for forest-dependent species, reduces soil erosion, and supports the recovery of ecological functions within the MFC.
Reference	https://www.iisd.org/capa/belize Source: Personal communication with Giselle Borland (IISD), Boris Arevalo (WCS), and Yahaira Urbina (WCS).

21	CAPA Initiative: Climate-smart agriculture practices and agroforestry systems in the Belize River Valley

Implementation entity	WCS and IISD			
Project status	Ongoing (2023–2026)			
Location	**Belize District**: St. Paul's Bank, Willows Bank, Isabella Bank, Lucky Strike			
Intended beneficiaries	Belize River Valley communities			
Societal challenges addressed by NbS	Climate adaptation		Disaster risk reduction	
	Food security		Biodiversity degradation & loss	
	Economic & social development			
Ecosystem(s) targeted	Agricultural and freshwater ecosystems			
Ecosystem services enhanced	Erosion and flood control, water filtration, topsoil retention, pollination, nutrient cycling, and food source for communities.			
Description of NbS	This CAPA Initiative promotes climate-smart regenerative agriculture and agroforestry systems in Belize River Valley communities to strengthen food security, climate resilience, and riverbank stability. Key NbS interventions include the establishment of regenerative home garden plots using cover structures (tropical greenhouses) that create protected microclimates. Four cover structures were constructed in collaboration with the Community Baboon Sanctuary in St. Paul's Bank, Willows Bank, and Isabella Bank. Continuous technical support is provided on planting, transplanting, integrated pest management, soil amendments, and the application of organic fertilizers. Capacity building included hands-on training in bokashi organic fertilizer production and cover structures management. In parallel, silvopastoral agroforestry systems were established along degraded riverbanks through the distribution of 75 fruit trees in Flowers Bank and Willows Bank, strengthening riverbank stabilization and on-farm tree cover. This initiative is funded by Global Affairs Canada.			
Climate risks addressed	By promoting protected crop production systems and riverbank agroforestry, the project addresses climate risks linked to changing precipitation patterns, such as drought, intense rainfall, and heat stress that affect crop yields and agricultural calendars. Improved tree cover and soil management enhance soil retention, reduce erosion and flood risk along riverbanks, and stabilize food production under climate variability.			

Biodiversity risks addressed	The project addresses biodiversity risks such as habitat degradation, riverbank erosion, and declining on-farm biodiversity. Agroforestry systems and tree planting along waterways improve habitat for birds and other wildlife, enhance landscape connectivity, and support ecosystem functions while reducing pressure on surrounding natural habitats.
Reference website	https://www.iisd.org/capa/belize Source: Personal communication with Giselle Borland (IISD), Boris Arevalo (WCS), and Damaris De La Rosa (WCS).

22	CAPA Initiative: Supplementary livelihoods for coastal communities
Implementation entity	WCS and IISD
Project status	Ongoing (2024–2026)
Location	**Corozal District**: Sarteneja **Belize District**: Belize City **Stann Creek District**: Dangriga, Hopkins, Riversdale, Seine Bight
Intended beneficiaries	WCS stakeholder communities. Cumulatively, 218 individuals participated in the meetings, including men, women, and youths.
Societal challenges addressed by NbS	Climate adaptation Biodiversity degradation & loss Economic & social development
Ecosystem(s) targeted	Coastal and marine ecosystems
Ecosystem services enhanced	Food and income source for target communities and habitat for local species.
Description of NbS	In this activity implemented under the CAPA Initiative, resilient livelihood options compatible with ecosystem conservation were identified and prioritized through a participatory process with local stakeholders. A tailored training plan was then implemented, including sessions on boat handling, tour guiding, diving certification, and sewing and crafting, benefiting 124 community members with a strong emphasis on women and vulnerable groups. Complementary investments have been aimed at strengthening seaweed farming as a nature-based, resilient livelihood, including support for value-added processing. Seaweed mariculture provides habitat for marine life, generates sustainable income, and supports the ecological health of coastal ecosystems. These actions diversify household income streams, build local capacity for environmentally compatible livelihoods, and reduce dependence on fisheries and pressure on coastal and marine ecosystems. This initiative is funded by Global Affairs Canada.
Climate risks addressed	By diversifying livelihoods, the project reduces fishing pressure on marine and coastal ecosystems, enabling them to maintain ecological health and strengthen their adaptive capacity to climate stressors such as rising temperatures and extreme weather events. Healthier ecosystems are better able to provide natural shoreline protection, storm surge buffering, and sustain fisheries that support local food security. Reduced dependence on fisheries also lowers households' socio-economic vulnerability to climate-driven shocks.

Biodiversity risks addressed	By promoting supplementary livelihoods, the project reduces harvest pressure on marine ecosystems and supports the conservation of vulnerable species. Seaweed farming also provides habitat structure for juvenile fish and invertebrates. Conservation-oriented tourism activities reinforce community stewardship and help maintain ecological integrity and biodiversity in marine and coastal habitats.
Reference	https://www.iisd.org/capa/belize Source: Personal communication with Giselle Borland (IISD) and Ralna Lewis (WCS).

23	CAPA Initiative: Experimental treatment plots for Stony Coral Tissue Loss Disease (SCTLD) in marine reserves		
Implementation entity	WCS and IISD		
Project status	Ongoing (2023–2026)		
Location	**Corozal District**: Sarteneja **Belize District**: Belize City **Stann Creek District**: Dangriga, Hopkins, Placencia		
Intended beneficiaries	Communities and users of the Glovers Reef Marine Reserve (GRMR) and South Water Caye Marine Reserve (SWCMR)		
Societal challenges addressed by NbS	Climate adaptation	Disaster risk reduction	
	Food security	Biodiversity degradation & loss	
Ecosystem(s) targeted	Coastal and marine ecosystems		
Ecosystem services enhanced	Natural storm surge buffering, habitat for marine species, and sustained food, income, and tourism livelihoods for target communities.		
Description of NbS	This NbS intervention involves applying an experimental treatment and systematically monitoring coral colonies to reduce the spread and ecological impacts of SCTLD within key marine reserves in Belize. Coral colonies in treatment plots are tagged and monitored to track live tissue cover, bleaching, and disease progression, generating scientific evidence to inform reef management and restoration responses. Following SCTLD monitoring, the initiative has transitioned into the Long-Term Atoll Monitoring Program, which conducts benthic surveys, assesses reef fish biomass, and measures conch population dynamics to evaluate ecological trends. Complementary monitoring of temperature, salinity, dissolved oxygen, turbidity, and pH using handheld instruments and temperature loggers enables early detection of climate stress thresholds and supports adaptive marine management. Together, these efforts provide essential data to guide restoration actions and inform adaptive management. This project is funded by Global Affairs Canada.		

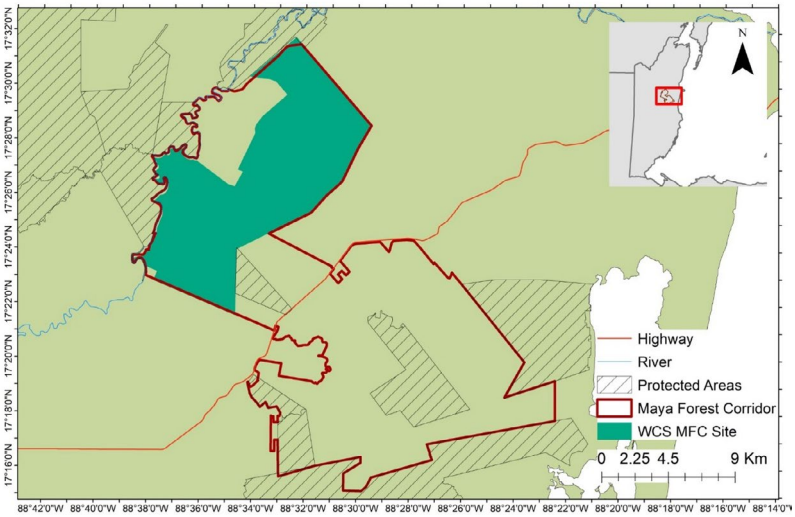
Climate risks addressed	SCTLD has intensified under warmer sea temperatures. By experimentally treating infected coral colonies and monitoring their response, the project generates valuable insights for restoration efforts that support coral health and resilience. Additionally, the monitoring of ecological indicators and climate parameters enhances the capacity to understand climate-driven bleaching, detect disease outbreaks, and inform management actions. Healthier reefs maintain their ability to buffer storm surge, support fisheries, and protect coastal livelihoods, reducing long-term socio-economic vulnerability.
Biodiversity risks addressed	SCTLD causes mortality of reef-building corals, leading to habitat loss, declines in key species, and reduced ecosystem productivity. By testing and monitoring treatment approaches, the project supports the conservation of coral colonies, slows biodiversity loss, and helps sustain ecological functions.
Reference	https://www.iisd.org/capa/belize Personal communication with Giselle Borland (IISD), Henry Brown (WCS), and Ralna Lewis (WCS).

24	CAPA Initiative: Early warning and immediate response to tropical cyclone impact on reefs
Implementation entity	WCS and IISD
Project status	Ongoing (2023–2026)
Location	**Corozal District**: Sarteneja **Belize District**: Belize City **Stann Creek District**: Dangriga, Hopkins, Seine Bight, Riversdale, Placencia
Intended beneficiaries	Communities and users of SWCMR and GRMR
Societal challenges addressed by NbS	Climate adaptation; Disaster risk reduction Biodiversity degradation & loss
Ecosystem(s) targeted	Coastal and marine ecosystems, including coral reefs
Ecosystem services enhanced	Enhanced natural barrier against storm surges and erosion control.
Description of NbS	This initiative builds local capacity for rapid reef response during and after tropical cyclone impacts. Community snorkelers and divers were trained as Reef First Response Brigades in GRMR and SWCMR, equipped with the knowledge and skills to enact an Early Warning and Immediate Response Protocol for coral reef damage, storm debris, sedimentation, and other disturbances. The brigades support preparedness, monitoring, and rapid action following extreme weather events, helping maintain reef structure and ecological function. This local monitoring and stewardship enhance early detection, improve post-storm restoration efficiency, and mitigate ecological degradation. To complement rapid response efforts, a parametric insurance policy was secured for GRMR and SWCMR, in partnership with MARFund. This financial instrument enables faster mobilization of funds following climate-related reef impacts, supporting immediate restoration activities and improving ecosystem resilience. This initiative is funded by Global Affairs Canada.
Climate risks addressed	Coral reefs in Belize are increasingly exposed to hurricanes that cause structural damage, sedimentation, and mortality. By training rapid response brigades, the project strengthens capacities to reduce impacts, accelerate recovery, and mitigate reef degradation. Healthy reefs retain their ability to buffer shorelines, protect coastal settlements, and sustain fisheries and tourism livelihoods in a changing climate.

Biodiversity risks addressed	Coral reefs affected by hurricanes are at high risk of habitat loss, reduced live coral cover, and cascading declines in fish and invertebrate populations. The rapid response protocols mitigate ecosystem damage, improve post-impact survival, and support the persistence of reef biodiversity.
Reference	https://www.iisd.org/capa/belize Source: Personal communication with Giselle Borland (IISD) and Ralna Lewis (WCS).

25 Securing and managing land for conservation in the MFC

Implementation entity	The MFC Trust and WCS			
Project status	Ongoing (since 2021)			
Location	**Belize District**: Mahogany Heights, La Democracia, Hattieville and Gracie Rock, Bermudian Landing, Scotland Halfmoon, Double Head Cabbage, Willows Bank, St. Paul's Bank, Rancho Dolores **Cayo District**: Cotton Tree, Franks Eddy			
Intended beneficiaries	The MFC surrounding communities			
Societal challenges addressed by NbS		Climate mitigation		Water security
		Climate adaptation		Biodiversity degradation & loss
Ecosystem(s) targeted	Broadleaf forests, pine savannas, and freshwater ecosystems			
Ecosystem services enhanced	Erosion and flood control, water filtration and regulation, topsoil retention, carbon sequestration, habitat for local species, and pollination.			
Description of NbS	This NbS secures and legally protects 29,941 acres within the MFC, a strategic ecological link between the Maya Mountains and the tri-national Maya Forest spanning Belize, Guatemala, and Mexico. The corridor safeguards one of the last remaining lowland connections for wide-ranging and endangered wildlife. Land protection prevents habitat loss and agricultural encroachment, while also maintaining ecosystem functions essential for biodiversity conservation and community well-being. Conservation measures include land acquisition, the establishment of a governance structure to ensure permanent protection, and the development of a collaborative management plan. The initiative contributes directly to climate adaptation and long-term water security by protecting riparian areas, strengthening soil stability, and maintaining forest cover that regulates water availability and enhances landscape-level resilience.			

	Led by a consortium of national and international organizations, protection of the corridor ensures permanent conservation under Belizean law and promotes inclusive stewardship and knowledge sharing with local communities.  Source: WCS, 2021.
Climate risks addressed	Forest protection strengthens the landscape's natural capacity to buffer intense rainfall, reduce flooding, and limit soil erosion, while enhancing water retention during prolonged droughts. By preventing forest fragmentation, the project lowers wildfire risk and limits associated ecological and economic losses. Healthy forest systems also maintain local water supply for communities, reducing vulnerability to climate-driven disruptions.
Biodiversity risks addressed	Without legal protection, the area faces significant risks from deforestation and habitat fragmentation due to agricultural expansion. These pressures threaten endangered and endemic species, such as the Central American River Turtle and the Yucatán Black Howler Monkey, and reduce genetic diversity due to isolated wildlife populations. Habitat connectivity secured through land protection sustains species movement, enhances reproductive viability, and maintains long-term ecological integrity.
Reference	https://www.rainforesttrust.org/urgent-projects/protecting-belizes-critical-maya-forest-corridor/ https://www.rewild.org/wild-about/maya-forest-corridor https://belize.wcs.org/en-us/Wild-Places/Maya-Forest-Corridor.aspx

26 Hurricane Lisa recovery and resilience building in the Community Baboon Sanctuary

Implementation entity	Community Baboon Sanctuary Women's Conservation Group (CBSWCG)
Project status	Ongoing (since 2022)
Location	**Belize District**: Bermudian Landing
Intended beneficiaries:	Women, youth, farmers, cattle ranchers, and households affected by Hurricane Lisa in the Belize River Valley area
Societal challenges addressed by NbS	Climate adaptation; Disaster risk reduction Human health; Food security Economic & social development; Biodiversity degradation & loss
Ecosystem(s) targeted	Riparian forests and freshwater ecosystems
Ecosystem services enhanced	Food and income for local households and habitat for wildlife.
Description of NbS	In 2022, Hurricane Lisa caused severe damage to forests, farms, and homes in the Belize River Valley and Community Baboon Sanctuary. This project focuses on ecosystem-based recovery and community resilience, combining forest restoration, fire management, and climate-smart agriculture. The CBSWCG coordinated the clearing and strategic removal of fallen trees to facilitate natural forest regeneration and reduce fuel loads, and constructed aerial bridges using natural materials to restore canopy connectivity for monkeys and other arboreal wildlife. To support food security and landscape recovery, the project provided fruit trees and vegetable seeds for home gardening to 58 households. Mahogany and Maya nut trees were also distributed as part of silvopastoral restoration, providing shade, fodder, and long-term tree cover in pastures. Farmers received training in climate-smart, agroecological practices to improve crop resilience to heat and variable rainfall. Given increasing wildfire risk, the project has also trained and equipped community fire wardens in basic fire management and created firebreaks to protect both farms and the forest. This project is funded by the GEF Small Grants Programme and implemented with support from the United Nations Development Programme (UNDP).

Climate risks addressed	The project addresses climate risks associated with more frequent and intense hurricanes and tropical storms, including damage to forests, crops, and homes. By restoring the tree cover, supporting home gardens, and promoting agroecological practices, it helps ensure food security in communities and reduces vulnerability to future storm impacts. The project also responds to wildfire risk, lowering the likelihood and severity of fires affecting forests, farms, and settlements.
Biodiversity risks addressed	Hurricanes and wildfires threaten habitats and can drive biodiversity loss. Promoting natural regeneration of riparian forests, replanting native trees, and installing aerial bridges helps to restore habitat structure and movement pathways for arboreal species; thus, helping sustain biodiversity in the Belize River Valley and Community Baboon Sanctuary.
Reference	https://howlermonkeybelize.org/

27 Restoration of riparian forest in critical areas of the Community Baboon Sanctuary

Implementation entity	CBSWCG			
Project status	Ongoing (2024–2025)			
Location	**Belize District**: St. Paul's Bank, Flowers Bank, Isabella Bank			
Intended beneficiaries	Community members, women, youth, students, farmers, and cattle ranchers in the Community Baboon Sanctuary stakeholder communities			
Societal challenges addressed by NbS		Climate adaptation		Disaster risk reduction
		Food security		Water security
		Economic & social development		Biodiversity degradation & loss
Ecosystem(s) targeted	Riparian forests			
Ecosystem services enhanced	Habitats for local species, erosion and flood control, water regulation, and food and income sources for target communities.			
Description of NbS	This NbS project integrates ecosystem restoration with sustainable land management and improved livelihoods for local farmers and cattle ranchers in the Belize River Valley. Three acres of critically degraded riparian areas are being restored in each of the three target communities to improve habitat connectivity and ecosystem health, benefiting Black Howler monkeys and other native wildlife. Over 2,200 trees, such as bamboo, willow, Inga bri-bri, Maya nut, and madre de cacao (Gliricidia sepium), have been planted as living fence posts. These species stabilize soils, provide shade, fodder, and microhabitats, and enhance biodiversity along field boundaries and riverbanks. The project also supports cattle ranchers in improving pasture quality and cattle health through the planting of high-protein grasses for enclosed grazing systems, coupled with training workshops on pasture management, agroforestry, and silvopastoral practices. This combination of riparian restoration and silvopastoral systems strengthens ecological resilience while supporting more sustainable, climate-resilient livelihoods. These activities are supported by the Innovation Fund sub-granting mechanism under the CAPA Initiative, implemented by IISD and WCS with funding from Global Affairs Canada.			

Climate risks addressed	The project addresses climate risks associated with changing precipitation patterns, including more frequent flooding from intense rainfall and prolonged dry periods, causing increased soil erosion and susceptibility to wildfires. Restoring riparian forests and establishing silvopastoral systems and living fences improve soil stability, reduce runoff, and enhance water retention, which helps buffer both heavy rains and dry spells.
Biodiversity risks addressed	Degraded riparian zones and eroded riverbanks threaten habitat quality, connectivity, and wildlife movement, contributing to biodiversity loss in the Community Baboon Sanctuary landscape. By planting native trees in eroded areas and establishing living fence posts to link habitat patches, the project reduces habitat fragmentation, supports natural regeneration, and helps conserve biodiversity along the Belize River Valley.
Reference	Source: Personal communication with Jessie Young (CBSWCG).

28 Climate-smart agriculture in the Community Baboon Sanctuary Landscape

Implementation entity	CBSWCG
Project status	Completed (2024–2025)
Location	**Belize District**: St. Paul's Bank, Willows Bank, Double Head Cabbage, Scotland Halfmoon, Bermudian Landing, Isabella Bank, Flowers Bank
Intended beneficiaries	Landowners, farmers, cattle ranchers, students, and other users of the forest and agricultural lands within the Community Baboon Sanctuary
Societal challenges addressed by NbS	Climate adaptation; Food security; Economic & social development; Biodiversity degradation & loss
Ecosystem(s) targeted	Riparian forest and agricultural ecosystems
Ecosystem services enhanced	Food and income source for local households, nutrient cycling, and water regulation.
Description of NbS	This project promotes the sustainable use of natural resources through the climate-smart management of agricultural landscapes. Central to the initiative is direct engagement with Community Baboon Sanctuary landowners and farmers to adopt practices that conserve ecosystems and improve local socio-economic conditions. A cover structure (tropical greenhouse) was constructed at Belize Rural High School and is managed by students and teachers. It produces vegetables and seedlings that are distributed through a local seedling bank, providing farmers with a reliable supply of vegetable seedlings and fostering youth involvement in sustainable agriculture. A tree nursery was established to provide a diverse range of useful plant species, including grafted and native fruit trees, hardwoods, riparian species for restoration, and trees for shade, fodder, and living fence posts. This supports both landscape restoration and more productive, resilient farming systems. To strengthen household food security, the project created mixed home gardens, primarily benefiting women. In addition, two pilot farms were developed to demonstrate sustainable and climate-resilient agricultural practices that other farmers can replicate. The initiative also prioritized capacity building. Training sessions and exchange visits covered climate-smart, organic, and regenerative agriculture, agroforestry techniques, and the management of cover structures, in close collaboration with the Ministry of Agriculture.

	This project is funded by the European Union's Development Smart Innovation through Research in Agriculture (DeSIRA) initiative partnering with WCS.
Climate risks addressed	The project addresses climate risks associated with changing precipitation patterns and rising temperatures, such as more frequent flooding and shifts in agricultural growing seasons. Climate-smart and regenerative practices, cover structures, and improved soil and water management help stabilize yields under variable rainfall and heat, reduce crop losses from extreme events, and support more reliable local food production.
Biodiversity risks addressed	Degraded forests and expanding agricultural areas threaten habitat quality and biodiversity in the Community Baboon Sanctuary landscape. By promoting regenerative agriculture, agroforestry, and the use of tree crops and living fences, the project improves soil health and productivity on existing farmland, reducing the need to clear additional forest for agricultural purposes. Tree planting and riparian species from the nursery also contribute to habitat restoration and connectivity in the wider landscape.
Reference	Completed by Ms. Jessie Young. This information is from the final report of CBSWCG/WCS/EU-DeSIRA, submitted to WCS.

29 Strengthening sustainable seaweed mariculture through farming, ecotourism, and marketing

Implementation entity	Belize Seaweed Women Farmers Association (BSWFA)
Project status	Ongoing (2024–2025)
Location	**Stann Creek District**: Placencia
Intended beneficiaries	Members and stakeholders of the BSWFA, the community of Placencia, and tour operators and guides
Societal challenges addressed by NbS	Climate adaptation; Food security; Economic & social development; Biodiversity degradation & loss
Ecosystem(s) targeted	Coastal and marine ecosystems
Ecosystem services enhanced	Food and income for target communities and habitat for marine species.
Description of NbS	This project aims to build a more resilient and sustainable seaweed mariculture industry by helping to foster gender equality, economic growth, and environmental sustainability in coastal communities. It promotes sustainable seaweed farming practices that enhance marine biodiversity, protect fish nurseries, and reduce reliance on overfishing. The regenerative nature of seaweed farming improves water quality, boosts biodiversity, and supports fish stocks, all while diversifying the economic base of coastal communities. Key activities include the establishment of a seaweed seed bank to enhance farm productivity and quality. The project also involves the maintenance of existing seaweed farms and the development of a seaweed farm tour site, creating new income opportunities by tapping into the area's tourism potential. To increase the market value of local production, the initiative supports the packaging and promotion of dried seaweed and value-added products, making them more competitive. In parallel, a public awareness campaign is being implemented with the aim of raising the profile of the seaweed industry and its benefits. These activities are supported by the Innovation Fund sub-granting mechanism under the CAPA Initiative, implemented by IISD and WCS with funding from Global Affairs Canada.
Climate risks addressed	By adjusting farming techniques and farm siting in response to climate-related changes, the project helps manage seaweed growth and productivity, which can be negatively affected by climate hazards such as rising sea temperatures and shifting rainfall patterns.

Biodiversity risks addressed	Seaweed farms help address biodiversity loss by providing habitat structure and nursery areas for juvenile fish and invertebrates, enhancing local species richness and supporting fish population recovery. By offering an alternative, nature-based livelihood, seaweed mariculture also reduces fishing pressure, contributing to ecosystem health and the conservation of marine biodiversity.
Reference	https://www.iisd.org/capa/belize Project report submitted by BSWFA to IISD.

30 Harnessing the herbivory potential of king crabs and creating alternative livelihoods for improved climate resilience in coral reefs

Implementation entity	Turneffe Atoll Sustainability Association and Healthy Reefs Initiative
Project status	Completed (2023–2024)
Location	**Corozal District**: Sarteneja **Belize District**: Belize City
Intended beneficiaries	Fishers within the Turneffe Atoll
Societal challenges addressed by NbS	Climate adaptation; Food security; Economic & social development; Biodiversity degradation & loss
Ecosystem(s) targeted	Coral reefs
Ecosystem services enhanced	Habitat for marine species and food and income source for target communities.
Description of NbS	This NbS project focuses on restoring functional herbivory, such as crab eating algae on coral reefs and creating alternative livelihood options for fishers. The project began with a pilot study, in collaboration with Fragments of Hope, to assess the herbivory potential of king crabs (their ability to consume macroalgae on coral reefs). Building on this, the project reared and outplanted king crabs in reef areas affected by macroalgal overgrowth. Excessive macroalgae, driven by declining herbivore populations and nutrient enrichment, can smother corals, reduce biodiversity, and undermine reef resilience. By enhancing populations of a strong algal grazer, the project aims to help rebalance reef dynamics, support coral recovery, and maintain ecosystem functions. In parallel, the initiative explored the feasibility of king crab aquaculture as an alternative livelihood. By involving fishers in crab rearing and husbandry, the project provides an economic opportunity that is compatible with reef conservation and has the potential to reduce fishing pressure on overexploited species.
Climate risks addressed	Climate change exacerbates coral stress and mortality, which, together with other local pressures, can lead to reef degradation and macroalgae dominance. By supporting coral health, the project helps maintain reef resilience to warming seas and other climate-related stressors. Healthier reefs are better able to support fisheries and tourism, reducing economic losses for fishers and tourism operators linked to coral decline.

Biodiversity risks addressed	The project addresses biodiversity risks such as the loss of herbivorous species and macroalgal overgrowth, which can displace corals and reduce habitat complexity. By rearing and outplanting king crabs, the initiative helps control macroalgae and supports coral recovery.
Reference	https://www.healthyreefs.org/en/proyect/king-crab-mariculture

31 Reef health monitoring and capacity building

Implementation entity	Healthy Reefs Initiative (HRI)
Project status	Ongoing (since 2018)
Location	**Toledo District**: Punta Gorda **Belize District**: Belize City **Orange Walk District**: Orange Walk town
Intended beneficiaries	Marine protected areas managers, resource users, NGOs, the government, and the general public
Societal challenges addressed by NbS	Climate adaptation; Disaster risk reduction; Food security; Biodiversity degradation & loss
Ecosystem(s) targeted	Coral reefs and mangrove forests
Ecosystem services enhanced	Habitat for marine species and enhanced natural barrier against storm surges.
Description of NbS	In collaboration with the Atlantic and Gulf Rapid Reef Assessment (AGRRA) programme, HRI conducts regional reef monitoring and capacity-building training every 2 years. Since 2018, 48 surveyors have been trained in Belize in AGRRA monitoring methods. The trainings equip partners from Belize, Guatemala, Honduras, and Mexico with standardized protocols to assess coral cover, algal dynamics, and fish communities, generating robust data to guide conservation and management of coral reef ecosystems. Monitoring data are managed through the Mesoamerican Reef Data Explorer (AGRRA data portal) and are synthesized into Mesoamerican Reef Health Report Cards, which provide evidence-based information to improve reef-related policies, legislation, management plans, and conservation actions across the region. Although primarily focused on coral reefs, the information and capacity developed through this initiative support broader ecosystem-based approaches, including marine ecosystem protection and restoration as part of integrated resilience strategies.
Climate risks addressed	By tracking coral condition, macroalgae, and fish biomass over time, the project helps researchers detect and understand climate-related risks such as increased coral bleaching and disease, shifts in marine species distributions, and declines in reef health. The resulting data inform management responses that reduce the climate vulnerability of reefs and dependent communities.

Biodiversity risks addressed	The project systematically assesses biodiversity risks by monitoring key indicators that reveal trends in habitat quality, pressures, and the status of key species groups. This supports targeted actions to address overfishing, algal overgrowth, and habitat degradation, and helps maintain biodiversity and the ecological functions of reefs and coastal ecosystems.
Reference	https://www.healthyreefs.org/en/proyect/reef-monitoring-and-capacity-building

32	Strengthening the capacity of fishing communities to participate in marine conservation and sustainable resource management

Implementation entity	Belize Audubon Society
Project status	Ongoing (since 2019)
Location	**Corozal District**: Copperbank, Chunox, Sarteneja
Intended beneficiaries	Men, women, and youth in the indicated communities, who are largely dependent on fishing livelihoods based in Lighthouse Reef Atoll
Societal challenges addressed by NbS	Climate adaptation Biodiversity degradation & loss Economic & social development
Ecosystem(s) targeted	Marine and coastal ecosystems
Ecosystem services enhanced	Food and income source for target communities.
Description of NbS	This initiative strengthens the capacity of fishing communities to actively participate in marine conservation and sustainable resource management. It uses education, awareness, and collaborative engagement to foster the stewardship of marine ecosystems and reduce fishing pressure in the Lighthouse Reef Atoll. Key actions include the development of a manual and sustainability plan for the Reef Protectors Program, which engaged seven youth leaders and trained six youth as Open Water divers, building local skills for monitoring, tourism, and conservation activities. A food vendors' workshop with 18 participants promoted more sustainable seafood choices and improved understanding of the links between fisheries, conservation, and livelihoods. Additional engagement activities included community sharing nights and environmental awareness sessions in schools that were focused on marine pollution and the phase-out of single-use plastics. Together, these efforts aim to build community support for marine conservation, explore alternative livelihood options, and gradually reduce pressure on fish stocks to allow their regeneration.
Climate risks addressed	Climate change can increase coral bleaching, disease, and result in shifts of marine species distributions, which directly affect fishers and tourism operators. By strengthening community understanding of these risks, promoting sustainable fishing practices, and encouraging the diversification of income sources, the project helps reduce vulnerability to climate-driven declines in reef health and associated economic losses.

Biodiversity risks addressed	The project addresses biodiversity risks such as declining fish stocks and habitat degradation driven by overfishing and tourism-related pressures. Through education, youth engagement, and promotion of more sustainable practices, it supports reduced extraction, improved compliance with conservation measures, and greater community buy-in for marine protected areas, helping maintain overall marine biodiversity.
Reference	https://belizeaudubon.org/projects/ Source: Personal communication with Dareece Chun.

33 Active restoration of critically endangered Caribbean coral species in Belize

Implementation entity	Fragments of Hope
Project status	Ongoing (since 2006)
Location	**Belize District**: San Pedro, Caye Caulker, Belize City **Stann Creek District**: Dangriga, Hopkins, Sittee River, Placencia, Seine Bight, Independence **Toledo District**: Monkey River
Intended beneficiaries	Residents of the indicated communities, especially users of marine resources such as fishers and tourism workers
Societal challenges addressed by NbS	Climate adaptation; Food security; Economic & social development; Biodiversity degradation & loss
Ecosystem(s) targeted	Coral reefs
Ecosystem services enhanced	Enhanced natural barrier against storm surges, habitat for marine species, and food and income source for target communities.
Description of NbS	Fragments of Hope leads long-term, community-based coral reef restoration in Belize, focusing on thermally tolerant, critically endangered coral species, primarily Acroporids, in shallow reef sites. Their work establishes and maintains coral nurseries and outplanting sites to restore degraded reefs and enhance reef structural complexity and function. To date, 28 coral nurseries have been established across Belize with support from multiple grants. The initiative includes routine workshops that train community members, including women and youth, in reef restoration techniques, monitoring, and good practices, with around 70 Belizeans trained so far. A restoration manual has also been developed to facilitate knowledge sharing and the replication of effective methods. By combining active restoration with local capacity building and advocacy for sustainable marine practices, the project strengthens both ecological resilience and community stewardship of coral reef ecosystems.
Climate risks addressed	Higher sea surface temperatures and ocean acidification have increased coral bleaching and disease, leading to reduced live coral cover and weakened reef structures. By restoring thermally tolerant corals and enhancing reef complexity, the project improves reef resilience to climate stressors and helps maintain their capacity to buffer storm surges, support fisheries, and sustain tourism.

Biodiversity risks addressed	The observed decline of reef-building species in Belize has reduced habitat availability, nursery areas, and food resources for many marine organisms, contributing to broader biodiversity loss and declining fish stocks. Through active coral restoration, the project supports the recovery of reef-associated fauna and maintains biodiversity and ecological functions.
Reference	https://fragmentsofhope.org/

34 Expansion of the Shipstern Conservation and Management Area in Northern Belize

Implementation entity	Corozal Sustainable Future Initiative (CSFI)
Project status	Ongoing (since 2018)
Location	**Corozal District**: Sarteneja, Chunox, Little Belize, Neuland, Fireburn **Orange Walk District**: Santa Martha, Carmelita **Belize District**: Crooked Tree
Intended beneficiaries	Residents of Sarteneja and surrounding communities in Corozal, Orange Walk, and Belize Districts, as well as rural and farming communities along the Northeastern Biological Corridor
Societal challenges addressed by NbS	Climate mitigation Water security Climate adaptation Biodiversity degradation & loss
Ecosystem(s) targeted	Tropical broadleaf forests (semi-deciduous and dry), freshwater wetlands, brackish lagoons, mangroves, riparian and creek systems, savanna and grassland patches, seasonally inundated forests, coastal scrub and dune vegetation, pine and lowland savannah, and open water systems
Ecosystem services enhanced	Regulation of water flow and quality, carbon storage and climate regulation, flood and drought mitigation, habitat for key species, pollination and natural pest control, food and income source for target communities.
Description of NbS	This project is a long-term effort to secure, connect, and manage a critical forest and wetland landscape in Northern Belize. The expansion of the Shipstern Conservation and Management Area forms part of the Northeastern Biological Corridor, linking the Freshwater Creek Forest Reserve with Crooked Tree Wildlife Sanctuary. The goal is to close an ecological gap and maintain connectivity across approximately 100,000 acres of forest, wetlands, and savannah. Core actions include the formal designation of new protected areas, restoration of degraded forest patches and fire-prone areas, and strategic acquisition of privately held land parcels. CSFI has also established a fire management unit with trained rangers and collaborates with surrounding communities on fire prevention and response.

	The initiative invests in community engagement and conflict-sensitive land-use planning. CSFI works with farmers and local leaders to address encroachment and unsustainable land uses through dialogue, support for sustainable practices, and inclusive governance structures. These approaches promote shared stewardship, reduce pressure on forests and wetlands, and align rural development with long-term conservation and climate resilience goals.
Climate risks addressed	The project addresses climate risks related to changing precipitation patterns, such as prolonged dry periods and increased susceptibility to wildfires, by actively managing landscapes and restoring forest cover. It also responds to drought risks by protecting watersheds, wetlands, and riparian systems that regulate water flow and recharge, improving local water security and climate resilience for rural communities.
Biodiversity risks addressed	The project addresses biodiversity risks such as habitat fragmentation, species isolation, and declining wildlife populations. By expanding protected areas and creating a connected corridor from Freshwater Creek to Crooked Tree Wildlife Sanctuary, it safeguards critical habitats, supports species migration and gene flow, and helps protect endangered and threatened species.
Reference	Source: Personal communication with Heron Moreno (CSFI).

35 Enhancing sustainable management and Indigenous stewardship of the Elijio Panti National Park

Implementation entity	Itzamna Society
Project status	Ongoing (since 2019)
Location	**Cayo District**: San Antonio, El Progreso Seven Miles, Cristo Rey
Intended beneficiaries	Residents of the communities that buffer Elijio Panti National Park
Societal challenges addressed by NbS	Climate adaptation; Food security; Economic & social development; Biodiversity degradation & loss
Ecosystem(s) targeted	Broadleaf and pine forest, savannah and river systems
Ecosystem services enhanced	Provision of non-timber forest products for traditional and medicinal use, food and water supply, and wildlife habitats.
Description of NbS	This project strengthens Indigenous-led stewardship and sustainable management of Elijio Panti National Park, a protected area named after the traditional healer, Elijio Panti. The Itzamna Society has implemented a range of actions to protect and restore the park's forests and cultural values, including the continued medicinal use of native plants. Key activities include capacity building and awareness raising for community members on forest protection, wildlife conservation, and sustainable resource use. The project has supported wildlife monitoring and reforestation efforts to promote the recovery of native species, including the endangered yellow-breasted falcon. Rangers have also cleared debris in fire-affected areas to facilitate natural regeneration. Following fires that affected an estimated 3,000 to 4,000 acres of the park in 2024, these NbS interventions are helping to stabilize ecosystems, reduce future fire risk, and safeguard both biodiversity and ecosystem services. The project emphasizes the importance of fostering local conservation attitudes and long-term commitment to the park's protection. This project was funded by the GEF Small Grants Programme.
Climate risks addressed	The park is increasingly affected by droughts and changing precipitation patterns, which heighten wildfire risk. By improving fire management, restoring forest cover, and supporting natural regeneration, the project reduces the likelihood and impact of wildfires and helps ecosystems better cope with water stress. This, in turn, protects water sources and reduces climate-related risks for surrounding communities.

Biodiversity risks addressed	Past periods without formal management have led to encroachment, deforestation, and biodiversity loss within the national park. The project has helped reduce forest cover loss and support the recovery of native species. The documented return of the endangered, yellow-breasted falcon illustrates how improved management and natural regeneration can restore habitat quality and strengthen biodiversity conservation.
Reference	https://www.epnp.org/the-story-of-the-park

36	Building local community capacity for food security and climate adaptation
Implementation entity	University of Belize Environmental Research Institute (UB-ERI)
Project status	Completed (2024)
Location	**Cayo District**: Harmonyville
Intended beneficiaries	Residents of Harmonyville
Societal challenges addressed by NbS	Climate adaptation; Disaster risk reduction; Food security; Biodiversity degradation & loss; Economic & social development
Ecosystem(s) targeted	Broadleaf and pine forest, savannah and river systems
Ecosystem services enhanced	Riparian forests
Description of NbS	UB-ERI supported the Maya Nut and Farmers Association to promote the Maya nut (Brosimum alicastrum) as a climate-resilient NbS for food security and adaptation. The initiative promoted the planting of Maya nut trees along riparian areas in Harmonyville to restore degraded creek banks. These trees helped stabilize streambanks, improve water quality, filter pollutants, and provide habitat and food for wildlife, linking livelihood benefits with ecosystem restoration. The project also provided infrastructure and hands-on training for processing Maya nut seeds into value-added products, such as flour and beverages, offering communities a nutritious food source that is more resilient to drought than other conventional crops. This strengthened local adaptive capacity by diversifying food options and income sources. This project was funded by the Irish Aid In-Country Micro-Projects Scheme.
Climate risks addressed	The project addresses climate risks related to drought, such as food insecurity, by promoting the Maya nut as a climate-smart crop that can be used for flour, drinks, and animal forage. Planting Maya nut trees along creeks also helps reduce erosion under more intense rainfall and runoff, supporting local water security and reducing vulnerability to climate change.
Biodiversity risks addressed	By planting Maya nut trees along creek banks and on farms, the project enhances habitat availability and food sources for wildlife, including primates that consume the Maya nut as a key food source. This contributes to riparian habitat restoration and raises awareness among farmers of the Maya nut's ecological importance, encouraging its conservation and wider use in agroforestry systems.
Reference	Source: Personal communication with Dr. Ivis Chan (UB-ERI).

37	Rio Bravo Conservation, Sustainable Management, and Climate Action Project		
Implementation entity	Programme for Belize		
Project status	Ongoing (since 1998)		
Location	**Orange Walk District**: San Felipe, August Pine Ridge, Indian Church, San Carlos, Indian Creek		
Intended beneficiaries	Mestizo communities in the southern Orange Walk District and other users of the Rio Bravo Conservation and Management Area (RBCMA)		
Societal challenges addressed by NbS	Climate mitigation	Disaster risk reduction	
	Biodiversity degradation & loss		
Ecosystem(s) targeted	Lowland broadleaf forest, pine savanna, freshwater ecosystems and wetlands		
Ecosystem services provided	Carbon sequestration and climate regulation, soil erosion control, water regulation, pollination, and habitat provision for wildlife.		
Ecosystem services	The Rio Bravo initiative is a long-term forest conservation and sustainable management project that protects approximately 250,000 acres of tropical moist forest in northwestern Belize that would otherwise face high pressure for agricultural land conversion. Managed under a human-and-biosphere reserve model, roughly 60% of the area is maintained as a strict preserve for nature-based tourism and non-extractive research, while the remaining 40% functions as a buffer zone where only sustainable activities that do not significantly harm biodiversity or ecosystem services and help finance reserve management are allowed. Within this framework, the Rio Bravo Climate Action Project focuses on climate mitigation and sustainable forest management. It secures additional high-risk forested lands through purchase and incorporation into the reserve, avoids deforestation and associated carbon emissions, and implements sustainable forest management and fire management, especially in pine savannas, to reduce wildfire risk. Complementary environmental education and outreach activities raise awareness among schools, communities, and the general public about the role of forests in climate regulation, biodiversity conservation, and sustainable development.		
Climate risks addressed	By preventing deforestation and managing forests sustainably, the project helps reduce drought and wildfire risk while protecting forest cover, soils, and water regulation functions.		

Biodiversity risks addressed	The project addresses biodiversity risks such as habitat loss, degradation, and species decline due to hunting and poaching. It helps conserve habitats for a variety of species, including around 80 mammals, such as the jaguar, jaguarundi, puma, ocelot, and margay, and approximately 390 resident and migratory bird species, including the endangered yellow-headed parrot, which is threatened by poaching and nest loss from logging and fires.
Reference	www.pfbelize.org

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CLIMATE ADAPTATION AND PROTECTED AREAS (CAPA) INITIATIVE

The Climate Adaptation and Protected Areas (CAPA) Initiative seeks to promote nature-based solutions (NbS) to strengthen climate resilience and protect biodiversity in and around protected areas and critical ecosystems. The CAPA Initiative, funded by Global Affairs Canada, will work with local communities, traditionally underrepresented groups, women's groups, and national and local authorities in Belize, Fiji, the Greater Virunga Landscape, and the Kavango–Zambezi Landscape to implement site-specific activities that respond to the risks, vulnerabilities, needs, and priorities of local communities and ecosystems, as identified through comprehensive assessments of the climate, gender, biodiversity, and conflict contexts. The CAPA Initiative is led by the International Institute for Sustainable Development (IISD), the Wildlife Conservation Society (WCS), and the World Wide Fund for Nature (WWF).

To learn more, visit https://www.iisd.org/capa.

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