
How Caribbean countries can leverage nature to finance clean energy

Experts agree that climate change mitigation will ultimately require removing carbon from the atmosphere to the tune of a [billion tons](#) of CO₂ per year in only a few decades. “After 2050, removals will need to reach 10 billion tons of CO₂ per year to begin [chipping away](#) at the emissions already accumulated in our atmosphere” (Carbon 180). Investing in carbon removal now provides tangible climate benefits while also helping build the industry and driving down the cost of carbon removal solutions in the future.

Voluntary carbon markets represent a creative new source of capital that Caribbean countries could harness to achieve key development and clean energy goals. Producing carbon credits for these markets is particularly suited to Caribbean nations for three reasons: (1) Caribbean ecosystems are often highly effective at drawing down carbon, (2) the development of nature-based carbon sequestration projects, such as reforestation, will build resilience for islands uniquely vulnerable to the effects of climate change, and (3) these projects also have the potential to create jobs and improve livelihoods. If designed and implemented effectively, Caribbean carbon markets could be powerful examples of how to reduce reliance on international aid and sustain durable renewable energy assets in an environmentally just and context-driven way.

An introduction to carbon markets

Carbon markets turn the act of reducing carbon emissions into a commodity. Every carbon credit represents one ton of carbon either removed or avoided. Typically, developers set up a project that avoids, reduces, or removes emissions. Once the project is verified, developers can sell carbon credits to organizations or governments seeking to meet emissions targets.

Carbon marketplaces can be divided into two main market types: voluntary markets and legally mandated or compliance markets. The latter are much larger in terms of transactions than the former and typically operate on a regional basis. That said, this memo focuses on voluntary markets given their recent growth and upside potential. Voluntary carbon markets present potential for a multi-billion dollar industry. Stripe, a leading technology company, [listed the prices](#) it paid per ton for different offsets, for example, \$75 per ton for an ocean-based solution to sequester CO₂ in limestone. Stripe’s prices at the time were on the higher end of [the spectrum](#); the range for carbon credit pricing can be as low as \$10 per ton removed to as much as a few hundred dollars per ton.

Private sector interest in high-quality and reliable removals has grown tremendously across industries and geographies in recent years. Stripe currently leads a consortium committing to purchase almost \$1 billion in carbon removal credits by 2030. Many corporate buyers are pivoting towards buying verified offsets, and the demand has started outstripping supply, forcing carbon credit buyers into even more expensive projects.

Caribbean islands could be key to filling that gap. “Scaled-up voluntary carbon markets would facilitate the [mobilization of capital to the Global South](#), where there is the most potential for economical nature-based emissions-reduction projects.” The vast majority of potential carbon removal projects include nature-based approaches like reforestation, afforestation, wetland restoration, blue carbon, and agricultural soil carbon sequestration, all of which present opportunities for credits in the Caribbean.

Why this could work in Caribbean islands

Nature-based projects could be hugely beneficial, not just by providing environmental resilience and income for individuals and groups, but also by leveraging carbon credit proceeds to fund renewable energy development. We know from [the work showcased at COP26](#) that Caribbean islands are uniquely vulnerable to the effects of climate change – but restoring natural ecosystems can help. For example, extreme weather events like hurricanes can be buffered by coastal mangrove restoration.

As carbon credit prices continue to skyrocket, investors stand to gain from the early and below-market purchases of high-quality removal credits and potentially the pricing of biodiversity benefits as well.

Carbon markets in the Caribbean could offer corporate buyers the three factors they typically prioritize:

- **Additionality:** They want their purchases to be additional, meaning that absent their involvement, the projects would not move forward.
- **Quality:** They want high-quality carbon credits that meet verified standards and can prove their additionality. The Caribbean, given its vast areas of preserved natural ecosystems, has the opportunity to generate a true high-quality credit supply.
- **Aesthetics:** Corporate buyers also want visually appealing projects they can advertise and celebrate. The Caribbean’s natural beauty presents a perfect stomping ground for amazing PR that just so happens to also remove a meaningful amount of carbon.

Potential obstacles to implementation

There have been [no historical or current carbon removal projects](#) in the Caribbean. This is not from a lack of potential or community predisposition to environmental stewardship, but rather from a lack of an established carbon market and pathways to investment. [Per a recent regional workshop](#), national governments have not even begun analyzing the potential of carbon credits.

There are risks associated with any nature-based removal project. For instance, CO₂ injected into rock is unlikely to accidentally get released, but a forestry project carries the risk of wildfires, pests, and lightning, not to mention illegal logging – releasing sequestered carbon back into the atmosphere. Caribbean islands could face litigation risk and/or risk losing the project investment without anything to show for it.

Every project differs in terms of location, risk of reversal, leakage, durability, and overall quality, whether it’s protecting a forest, helping farmers transition to regenerative agricultural practices, or investing in one of several carbon removal technologies. One might also worry

about land ownership and the potential to actually do this work. For instance, if a tree-planting project is commissioned on leased land that is sold and then repurposed shortly thereafter, then those trees would be lost and the project would cease to generate credits. But even with these risks, the opportunity is still great.

Leveraging carbon markets to fund renewable energy projects

Carbon markets in other geographies have demonstrated their ability to help reduce a community's dependence on fossil fuels, grow clean energy markets, and improve livelihoods. In the Caribbean, there are two potential models for carbon markets to support clean energy finance.

- **Direct finance model:** A company can directly fund a clean energy asset (e.g., a wind farm, solar install, or biodigester) in order to receive a credit and offset their own emissions. For instance, Total Energies purchased [biodigesters](#) in rural India to offset its travel-related carbon emissions. These biodigesters transform animal and plant waste into cooking gas, which lessens the need for cooking fuel, reduces deforestation, and frees people's time to do other work.
- **Indirect finance model:** A Caribbean government or local developer may earmark the revenue from the sale of credits to subsidize clean energy projects, smart grids, batteries, and even measuring, reporting, and verification (MRV) tech. In addition, the carbon market would enable greater access to capital. For example, securitization of carbon removal and forward purchases would allow local companies to borrow against these credits, therefore increasing access to capital to finance clean energy projects. This approach could also incentivize against extractive industries.

Call to Action

Carbon markets are a triple win: a win for Caribbean islands, a win for offtakers who already understand the benefits of carbon credits, and a win for the environment. Not only do nature-based carbon credits provide a way to restore the environment from the impacts of climate change and extractive economic activity, but countries could also leverage their proceeds for renewable energy development. Establishing carbon markets in the Caribbean is not only an opportunity to empower these nations to build environmental and social resilience, but also to leverage the region's natural ecosystems for change. Leaders serious about building a green and sustainable foundation for economic development should consider the power of carbon markets to provide a durable and reliable revenue stream for clean energy.

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