

PLAYBOOK FOR CLIMATE FINANCE

Innovative strategies to finance a cooler, safer planet



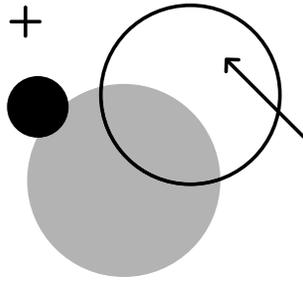


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Introduction

EVERY DAY, WE SEE THE TOLL CLIMATE CHANGE takes on our planet. It represents an immediate threat to economic security and prosperity, as well as the physical health of human and natural communities. But addressing climate change is an opportunity for innovation in all facets of human life—in how we provide food and goods for a growing population, provide clean and affordable energy for communities, design healthy and livable cities, conserve and protect terrestrial, freshwater and ocean habitats, and provide water security for future generations.

Many of the tools and resources we need to tackle climate change already exist, and human innovation keeps creating new possibilities. However, the window of opportunity is closing.

This is the critical decade to reduce risks of catastrophic climate change, major biodiversity loss and other environmental problems that are increasing human suffering. The COVID-19 pandemic has undoubtedly proven to be a setback, of course, creating a level of global system shock not witnessed since World War II. But the pandemic has also shown our collective vulnerability—and our collective capacity to mobilize rapidly and decisively against threats that have no regard for international borders, such as climate change. In fact, we've seen a surge of capital toward climate action over the past year, suggesting that while COVID has had widespread effects on our society, it has not served as a distraction from addressing the climate emergency.

The action we need will require paradigm shifts in how we produce energy and food, build infrastructure, use farm and forest land and transport people and products. The past year under pandemic restrictions has shown the potential transformative power of industry and government-wide actions, but we know that leveraging that potential for climate action will require more than just will and decisiveness.

The system-wide transformation needed to address the climate crisis will require substantial funding, but those actions will ultimately save much more money compared to business as usual. The Nature Conservancy (TNC) has been working for years to advance unique finance mechanisms that can help drive the planet-wide systems change we need. Building on the mechanisms described in our [Playbook for Climate Action](#), we are sharing our tools already available to help governments, companies and investors leverage financial solutions for large-scale climate action impact. The solutions described throughout the remainder of this report can be implemented in a variety of geographies and capacities to suit the needs of the user.

What is **CLIMATE FINANCE?**

THE CONCEPT OF “CLIMATE FINANCE” refers to local, national or transnational financing—drawn from public, private and alternative sources—that seeks to support mitigation and adaptation actions that will address climate change.

Climate finance models can represent investments from private banks, private equity investments, loans from development banks, or government grants; ideally this influx of money would become normalized across the world. Within the specialized context of the United Nations Framework Convention on Climate Change (UNFCCC), climate finance has a particular framing—a transfer of funding from developed nations to developing nations—that reflects the larger finance gap that exists in the Global South.

A key challenge currently is that this finance is hard to measure, and not subject to a common universal definition. As a result, tracking flows of climate finance remains subjective. However, recent research suggests loans make up the bulk of climate finance at 96 percent. In fact, by some estimates just 2.3 percent of commitments are grants. This highlights that finance institutions expect a return on their investments—and want proof of the possibility of a return before making a commitment.



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How Climate Finance IS TAKING SHAPE

A NUMBER OF INITIATIVES ARE UNDERWAY to monitor and track flows of international climate finance. Analysts at the [Climate Policy Initiative](#) have tracked public and private sector climate finance flows from a variety of sources on a yearly basis since 2011. Annual flows rose to US\$579¹ billion, on average, over the two-year period of 2017-2018, crossing the USD half-trillion mark for the first time—a \$116 billion (25 percent) increase from 2015-2016. The rise reflects steady increases in financing across nearly all types of investors.

Indeed, a September 2021 [report from the Coalition for Private Investment in Conservation](#) suggests that conservation finance—a broad category that includes climate finance—is a rapidly growing sector of investment opportunity. The report concludes that:

- Investors’ awareness of conservation finance opportunities has progressed markedly in the past five years, contributing to the surge in interest in conservation finance that seeks a return on investment
- 70 percent of surveyed investors are planning substantially higher investments in conservation (an increase of over 10 percent) in 2021 compared to 2020. Project developers are also seeking more funding for conservation projects, aiming to raise 85 percent more in 2021 than they did in 2020
- 92 percent of the investments analyzed were linked to market-rate rather than concessionary returns—implying that conservation deals are increasingly more attractive financially

Yet even while climate finance has reached record levels, action still falls far short of what is needed to approach a carbon-neutral future. Estimates of the investment required to achieve the low-carbon transition range from \$1.6 trillion to \$3.8 trillion annually between 2016 and 2050 for supply-side energy system investments alone ([IPCC 2018](#)), while the Global Commission on Adaptation ([GCA 2019](#)) estimates adaptation costs of \$180 billion annually from 2020 to 2030 will be needed to protect vulnerable communities from the impacts of the climate change.

There is a need for a tectonic shift beyond “climate finance as usual.” Annual investment must multiply, and rapidly, to achieve globally agreed climate goals and initiate a truly systemic transition across global, regional, and national economies.

¹All monetary figures in this report are expressed in U.S. dollars (\$).



EASTERN GHATS, INDIA © Abbie Traylor-Smith/Panos



SINGAPORE © Ashden

HOW WE DO IT

TNC HAS A STRONG HISTORY of creating and executing investments aimed at delivering conservation results and financial returns for investors in a wide variety of geographies and sectors around the world. Our [NatureVest](#) program sources and structures investments that support TNC's mission, raises capital from investors looking to generate both financial returns and conservation outcomes, and shares our experience with the investment and conservation communities to accelerate the growth of the conservation investing marketplace, especially focusing on climate action. Here are just a few of the ways TNC is utilizing financial tools towards our climate mitigation and adaptation goals, by driving innovative deals and saving key ecosystems that provide high-quality carbon sequestration potential.

Carbon Markets & Offsets



RHODE ISLAND, UNITED STATES © Michael Denning

PURSUIT OF A LOW-CARBON FUTURE requires ambitious commitments right now that include concrete actions to reduce emissions—even if some low-carbon alternatives are still being developed. Enter carbon pricing: perhaps one of the most effective mechanisms available to encourage decarbonization across all sectors. Businesses that integrate a price on carbon into day-to-day decisions will prioritize low-carbon approaches over carbon-intensive (and thus higher-priced) approaches.

At present, businesses can either adopt a climate commitment voluntarily or have one mandated through government policies, such as a cap-and-trade scheme, carbon market or carbon tax. Market systems that correspond with these government mandates are known as compliance markets, and they can send clear and predictable signals to participants because they are established through legal frameworks that can mandate action over a set period of time.

Currently, there are more than 60 carbon pricing programs in the world and draft legislation for other major emitters is under discussion, including in the United States. Already, the Regional Greenhouse Gas Initiative in the northeast and mid-Atlantic United States has successfully driven emissions from the power sector down 40 percent in the region, and those states are now hoping to implement a similar regional approach for transportation sector emissions, known as the Transportation and Climate Initiative.

While the design of all of these markets are continually being improved as regulators and legislators learn and adapt, some of the more mature

Economists across the political spectrum generally agree on the easiest and cheapest way to reduce greenhouse gas emissions—putting a price on carbon.

markets are now showing signs of sending meaningful price signals into the economy—for example the European Union emissions trading scheme, currently the world’s largest, has had [a market price of over \\$50 per ton of carbon equivalent \(tCO₂e\)](#) for much of 2021. And because they are established by governments and often cover whole sectors of the economy, compliance markets could deliver an even greater level of scale than voluntary corporate commitments.

Voluntary carbon commitments and the voluntary carbon markets, however, can be adopted and implemented much faster than compliance markets. The voluntary carbon market has seen rapid growth in recent years, driven in part by the growing chorus of net-zero commitments made by companies around the world. A recent survey by the Taskforce on Scaling Voluntary Carbon Markets—an initiative led by the Institute of International Finance—estimated that the voluntary market has an opportunity to grow 15-fold in order to fund up to [1 gigaton of additional emissions reductions](#) per year by 2030.

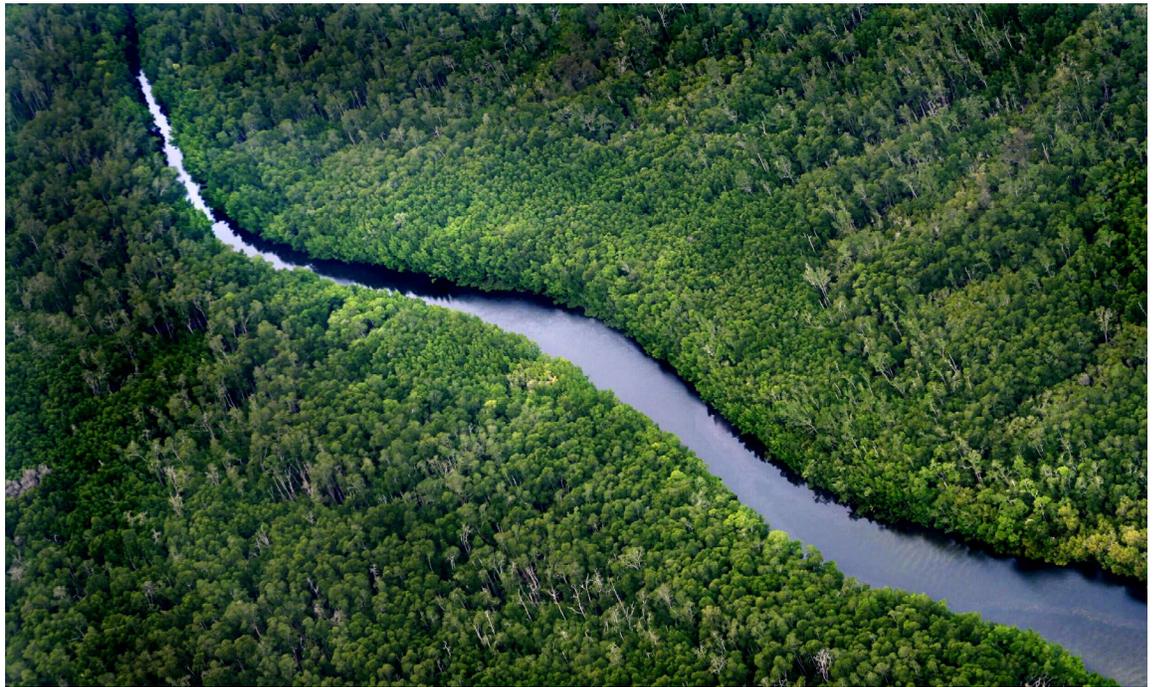
Both compliance and voluntary markets must balance the need for immediate action with a lack of immediate solutions, especially for some hard-to-decarbonize sectors. Thus, many of these approaches often allow for some role of carbon offsets. While some sectors might take longer to decarbonize, an often-overlooked set of solutions stem from nature. Natural landscapes actively sequester carbon from the atmosphere, but often economic incentives lead the owners or managers of these lands to develop them, releasing that carbon into the atmosphere. Carbon offsetting allows companies who are looking to compensate for or “offset” emissions

CARBON MARKETS & OFFSETS

they can't easily reduce to buy carbon credits that in turn financially compensate land managers for protecting or restoring these landscapes that might otherwise have been degraded without the market intervention.

These nature-based solutions can offer some of the most cost-effective strategies in the climate playbook, provided they're deployed in concert with broader government policies to improve land use, a transition to renewable energy, clean transport, and the fiscal reform of fossil fuel subsidies. As TNC's [Financing Nature report](#) notes, it's impossible to put a price on the natural world, but we know how much it will cost to save it—and we have the policy and finance learnings to unlock the required funding. •

BORNEO, INDONESIA © Michael Denning



Impact Investment



TENNESSEE, UNITED STATES © Byron Jorjorian

IMPACT INVESTMENTS are investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return. Impact investments can be made in both emerging and developed markets and target a range of returns from below market to market rate, depending on investors' strategic goals.

The growing impact investment market provides capital to address the world's most pressing challenges in sectors such as sustainable agriculture, renewable energy, conservation, microfinance, and affordable and accessible basic services including housing, healthcare, and education.

One example in the climate space from TNC closed in mid-2019. Cumberland Forest is structured as a \$130 million, closed-end private investment fund that seeks to generate competitive risk-adjusted financial returns for its investors with revenues from sustainable timber harvesting, carbon capture and recreational leases. At the same time, the fund seeks to achieve specific conservation and climate outcomes identified by TNC's decades of donor-funded scientific research and forestry expertise.

Prior to the formation of the fund, TNC's philanthropically supported staff scientists had identified the U.S. Central Appalachian region as one of the most significant biodiversity hotspots in North America and an important refuge for numerous species adapting to climate change. TNC has also identified the potential for conservation, restoration and improved land management actions on a global scale to increase carbon storage or

IMPACT INVESTMENT



TENNESSEE, UNITED STATES © Byron Jorjorian

avoid greenhouse gas emissions. These natural climate solutions (NCS), when deployed alongside innovations in clean energy and other efforts to decarbonize the world's economies, offer some of our best options to address climate change.

With this scientific analysis providing clear impact goals, TNC identified the properties that would ultimately make up Cumberland Forest's more than 250,000 acres (100,000 hectares) of forestland. To fund a purchase of this size, however, TNC needed to look beyond the traditional funding sources of philanthropy and grants.

TNC's NatureVest team then worked with state and global colleagues to develop an innovative private equity-style fund structure where TNC, a 501c3 non-profit, is the fund manager and owns the general partner. The fund raised more than \$70 million in equity from 27 investors (including TNC) and \$40 million in debt (approximately \$20 million from a Virginia state agency and \$20 million from the Doris Duke Charitable Foundation) and used an installment sale structure to re-invest \$20 million of carbon offset sales proceeds towards the purchase price.

In connection with the \$20 million of debt from Virginia's Clean Water Revolving Loan Fund, the fund secured permanent protection on nearly 23,000 acres (9,300 hectares) under an open space easement held by the Virginia Department of Forestry. The largest conservation easement in the state's history, it helps protect the Clinch River, a globally important river for biodiversity, in particular freshwater mussels. This demonstrates

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While forestry has been an established investment class since the 1980s, the industry is only now coming to grips with the climate-related risks—and opportunities—that are shifting practices toward building long-term, sustainable value. Cumberland Forest is one example intended to demonstrate the business and economic benefits of climate-smart forest management strategies, which can further accelerate adoption across the \$106-billion North American global timberland investment market and elsewhere around the world. [According to the U.S. Environmental Protection Agency \(EPA\)](#), the State Clean Water Revolving Funds in the US alone have total assets of \$72 billion that could be effectively deployed for climate finance as demonstrated in the Cumberland Forest Project.

Another more recent example is a first-of-its-kind agreement between TNC and the BTG Pactual Timberland Investment Group (TIG), one of the world's largest timberland investment managers, to leverage the potential of sustainably managed forests across the United States to address both biodiversity loss and climate change. The initiative will seek to enhance climate and conservation outcomes on more than \$850 million out of TIG's \$4 billion global timberland portfolio.

TNC will serve as Conservation Advisor on nearly 530 thousand acres managed by TIG across 11 U.S. states (an area more than 35 times the size of Manhattan or Bahrain). TIG and TNC will seek to establish science-based targets with the goal of delivering on-the-ground climate and conservation outcomes at scale.

The collaboration involves core timberland assets in the US South, Pacific Northwest, and states adjacent to the Great Lakes, and includes large areas which TNC has identified as having high conservation value. In addition, TIG and TNC are assessing a wide range of conservation opportunities, including supporting habitat restoration and connectivity and generating high-quality carbon offsets through improved forest management. •

Blue Bonds for Conservation



SEYCHELLES © Jason Houston

BLUE BONDS FOR CONSERVATION are an opportunity for island and coastal nations to reinvest in their natural resources by refinancing their national debt in a way that secures funding for conservation and climate adaptation work that also benefits their economies.

Climate change, compounded with other threats like pollution and overfishing, has put the ocean in a dire state, and that in turn has endangered coastal communities. Increasingly severe storms and ocean acidity are pushing coral reefs to the brink of extinction, and the loss of those reefs and other coastal habitats such as wetlands, mangroves and

shellfish reefs leaves coastal communities more vulnerable to the impacts of storms and rising sea levels. For many island and coastal nations, these are matters of life and death.

Leaders of these nations want to protect ocean habitats—and the benefits these habitats provide to their nations—but too often they are struggling to manage their countries' debt and unable to invest in the conservation efforts that would make their environments and economies more sustainable and resilient.

This is where Blue Bonds come in. A country's government commits to protect at least 30 percent of their near-shore ocean areas, including coral

BLUE BONDS FOR CONSERVATION

TNC is working to create marine protected areas and sustainability plans that would benefit more than 40 million people and conserve 15 percent more of the world's oceans than are currently protected.

reefs, mangroves and other important habitats for climate resilience, and engage in ongoing conservation work such as improving fisheries management and reducing pollution.

Next, organizations such as TNC leverage public grants and commercial capital to restructure the nation's sovereign debt, leading to lower interest rates and longer repayment periods. A portion of those savings fund the new marine protected areas (MPAs) and the conservation activities to which the country has committed.

We've already seen the debt conversion model that Blue Bonds are based on can produce conservation outcomes. In 2016, the Republic of Seychelles worked with TNC to restructure part of its national debt, writing off almost \$22 million in exchange for implementing ocean conservation measures. Since signing the deal, the Seychelles has progressed from protecting 0.04 percent to 30 percent of its national waters, covering 158,000 square miles (410,000 square kilometers) of ocean—an area larger than Germany.

Now, TNC is working to take this model to at least 20 more countries in the next five years, creating MPAs and sustainability plans that would benefit more than 40 million people and conserve 15 percent more of the world's oceans than are currently protected. This effort has the potential to protect up to 1.5 million square miles of the world's most biodiversity-critical ocean habitats and secure \$1.6 billion for ocean conservation. •

SEYCHELLES © Jason Houston



Insuring Natural Infrastructure



PUERTO MORELOS, MEXICO © Jennifer Adler

ACROSS THE WORLD, an estimated 840 million people live with the risk of coastal flooding, and the health of their economies is directly related to the health of their coastal ecosystems. Natural systems like coral reefs, beaches and wetlands are often the first line of defense against storms—a healthy coral reef can reduce up to 97 percent of a wave’s energy before it hits the shore—as well as a source of economic activity through fishing, tourism and other industries. Insurance for natural infrastructure can help protect these crucial ecosystems and the people who depend on them.

This is especially important considering that coral reefs can themselves be damaged by severe storms—especially those already weakened by pollution, disease, overfishing and bleaching—greatly reducing the protection they offer for coastal communities.

A test case for this mechanism has been developed in the Mexican state of Quintana Roo. In 2005, Mexico’s Caribbean coast was struck by two hurricanes, causing \$8 billion in damages and closing hotels and other businesses in Cancún long enough to cause further economic impact. But some hotels and beaches in Puerto Morelos suffered less damage than other areas in the state. Further analysis pointed to an important connection—Puerto Morelos was protected by an intact stretch of the Mesoamerican coral reef system.

INSURING NATURAL INFRASTRUCTURE



QUINTANA ROO, MEXICO © Kashfi Halford



PUERTO MORELOS, MEXICO © Jennifer Adler

This insight helped lead to the development of The Coastal Zone Management Trust, via collaboration between the state government of Quintana Roo, TNC and partners in the science community.

The trust fund is designed to receive funds from various sources to be used for the maintenance of the reef and beaches along the states coastline. The trust has since 2019 purchased the insurance policy on an annual basis. It is triggered if wind speeds over 96 knots are recorded in a given area along the entire coast of Quintana Roo. In 2020, Hurricane Delta caused the policy to payout. This is the first time that private sector funding will cover the costs of reef repair after damage sustained by a hurricane. In the immediate aftermath of Delta trained teams, or Reef Brigades as they are locally known, made a major effort to clear debris from the reef and collected and reattached over 13,000 pieces of broken coral and stabilized another 2,000 larger coral colonies. The insurance precedes are now being used to restore damaged areas of the reef to aid in its long-term recovery.

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This first-of-its-kind, innovative funding system will help protect a \$10 billion tourism industry; improve climate resilience and bolster the region's economy; encourage conservation of a valuable natural asset; and create the model for a scalable new market for the insurance industry—a model which could be applied to other regions, risks and ecosystems across the planet. TNC is currently exploring opportunities to take the concept to the Pacific as well as investigating its applicability to mangrove ecosystems. As climate change leads to more and stronger storms around the world, funding for these nature-based climate adaptation strategies will only grow more important. •

Leveraging Multilateral Funding Sources



BRAZIL © João Ramid

MULTILATERAL DEVELOPMENT BANKS play a critical role in building capacity and driving innovation across many different types of climate solutions at a transformational level. The most prominent global funding mechanisms, such as the Green Climate Fund (GCF) and Forest Carbon Partnership Facility (FCPF), are using billions of U.S. dollars in public funding to improve countries' capacity to deliver climate action—namely, by scaling up nature-based solutions by encouraging responsible investment; delivering investment efficiently through voluntary and compliance markets; developing new markets; and encouraging public and private collaboration for resilient, low-carbon development.

The Green Climate Fund is building programs to help countries reduce emissions and increase resilience at great scales. To date, the GCF has committed more than \$6.2 billion in funding to more than 100 countries, empowering climate action in developing countries. Grants allocated include funding to tackle forest degradation, mitigate flooding and soil erosion in Nepal, foster solar development in Egypt, and enhance carbon sequestration in Kyrgyzstan.

The FCPF, meanwhile, is working with 47 developing nations to help implement national and jurisdictional REDD+ programs with social safeguards and monitoring, reporting and verification (MRV) systems.

Future public financing should, where possible, utilize existing structures and mechanisms to enable, incentivize and reward climate action.

In Ghana, for instance, the FCPF will reward community efforts to reduce emissions from deforestation and forest degradation, while aiming to reduce carbon emissions by at least 10 million tons of carbon dioxide by 2025. It will also encourage climate-smart cocoa production on almost 6 million hectares of the West Africa Guinean Forest, a key biodiversity hotspot.

Future public financing should, where possible, utilize these existing structures and mechanisms to enable, incentivize and reward climate action. Public investment deployed in this way can help de-risk NCS projects in particular, making them more attractive for private financing. •



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TAJKISTAN © Matt Horspool/TNC Photo Contest 2021



INDIA © Martin Wright/Ashden

Conclusion

CONFRONTING CLIMATE CHANGE will require a complete overhaul of our energy, food and transit systems, not mention an increased focus on critical climate adaptation solutions—and someone is going to have to pay the necessary costs to catalyze action and deliver more substantial financial savings for the future. The mechanisms described in this report are scalable in a number of situations and geographies, but it's up to leaders in the public and private sector to make those initial investments. Taking that leap will require courage and vision. But the dividends we all will earn—in greater economic and environmental sustainability and healthier, safer communities—are too great to leave on the table.

It's up to our leaders as well as every single one of us to decide whether we allow this era to be defined by inaction and frustration, leading to devastating impacts, or whether it's a springboard to a better world.



Questions? Collaboration? Get in touch with us at media@tnc.org or visit [nature.org/climate](https://www.nature.org/climate)

The Nature Conservancy is a global conservation organization dedicated to conserving the lands and waters on which all life depends. Guided by science, we create innovative, on-the-ground solutions to our world's toughest challenges so that nature and people can thrive together. We are tackling climate change, conserving lands, waters and oceans at an unprecedented scale, providing food and water sustainably and helping make cities more sustainable. Working in 76 countries and territories: 37 by direct conservation impact and 39 through partners, we use a collaborative approach that engages local communities, governments, the private sector, and other partners. The Nature Conservancy has offices in all 50 states and in 35 countries and territories worldwide.