FUNDING NATURAL CLIMATE SOLUTIONS

Understanding the needs, gaps, and potential sources of Natural climate solutions funding across several countries.

Natural climate solutions (NCS) are a vital tool in the fight against climate change. The protection, improved management, and restoration of ecosystems around the world can provide one-third of the mitigation needed avoid total climate catastrophe. NCS can also provide valuable co-benefits, such as enhancing biodiversity, improving water security, and improving local livelihoods. The science is clear, but unfortunately, significant funding gaps still impede the acceleration of NCS around the world.

Key Takeaways:

- Public funding is the largest overall driver of natural climate solutions (NCS).
- Across all priority countries, funding needed is around 20 times greater than current NCS funding available.
- Policy reforms, carbon markets, and nature-positive economies have the greatest potential to accelerate the implementation of NCS.

A global study by the Nature Conservancy (TNC) has identified funding opportunities for NCS in eight countries: Brazil, Colombia, China, Indonesia, Mexico, India, Australia, and Gabon. These countries were selected because they have high climate mitigation potential and current enabling conditions, such as governments that have already committed to NCS activities. The goal of the study was to research and define funding gaps and opportunities for NCS in each priority country and to map out existing or new funding mechanisms that could fill those gaps and allow each country to reach their full NCS climate mitigation potential. The results of the study should serve as a starting point to help practitioners, policymakers and the private sector make decisions to accelerate natural climate solutions implementation through new or more effective funding sources.

There has been unprecedented momentum behind both public and private funding sources for forest-based natural climate solutions. For example, The Glasgow Leaders' Declaration on Forests and Land Use, and the Global Forest Finance Pledge of US$12 billion for forest-related climate finance between 2021-2025. Despite this, the question of how to fund NCS at scale remains. At the project level, sufficient catalytic capital is often hard to find, and at a global level, studies suggest that we need $400 billion per year just to finance land-based pathways.

Methodology

The study began by defining five key funding buckets for NCS. These include: **(i) public finance** such as budget allocations, tax incentives, government funds, and public debt (including sustainability-linked sovereign debt, and debt for nature swaps); **(ii) international aid** including overseas development aid and REDD+ bilateral and multilateral finance (reducing emissions from deforestation and forest degradation) financing; **(iii) private finance** such as corporate supply chain initiatives, corporate finance, and microfinance; **(iv) environmental & carbon markets** including compliance and voluntary carbon markets and environmental markets; and **(v) philanthropy/donor funding** including funding from corporations, foundations, individuals, and large environmental NGOs.

Overview of study findings

Public funding is the largest overall funding source. It is the largest driver of NCS funding in 6 of 8 focus countries. Private funding and carbon markets are smaller but are expected to grow[1]. Assuming a global average cost of sequestration of $50.74/ton, **half the focus countries have <5% of NCS funding needed** (Brazil, Indonesia, Mexico, and Colombia). Overall estimates among the 8 countries tell us that **funding needed as a % of GDP is ~20x higher than current funding available.** Existing NCS funding programs often function below full potential. For example, Brazil's public funding programs such as Fundo Clima have low utilization rates of ~20%. NCS outcomes are often not met, highlighting the need to improve the effectiveness of current NCS funding sources.

In addition to increasing dedicated NCS funding flows, there is an **opportunity for governments to reform subsidies and form partnerships with key industry actors to implement more sustainable supply chains to accelerate NCS impact.** Redirecting even a small portion of these investments may be able to help countries mitigate NCS-harmful actions.

- Redirecting just 5-10% of subsidies would lead to meaningful flows of funding and lower future funding needs.

- Shifting industry investments to sustainable supply chains (at an incremental cost of ~5-10% of Cost of Goods Sold) can reduce NCS-negative activities and reduce restorative funding needed later.

Brazil

- **Opportunity:** National government has committed to zero deforestation by 2030 & promoted sustainable agriculture
- **NCS Mitigation Potential:** 1.58 gigatons carbon dioxide equivalents (CO2e)/year, primarily via avoided deforestation & reforestation
- **Relevant NDC[2]:** Reduce emissions 37% below 2005 levels

Colombia

- **Opportunity:** National government prioritizes climate actions and has pledged $200M/year for the Amazon
- **NCS Mitigation Potential:** 207 megatons CO2e/year, primarily via reforestation
- **Relevant NDC[2]:** Reduce emissions 51% below 2030 business-as-usual (BAU) scenario

China

- **Opportunity:** Growth of national government commitments to protecting forests is part of "building a beautiful China"
- **NCS Mitigation Potential:** 0.88-1.19 gigatons CO2e/year, primarily via reforestation & nutrient management
- **Relevant NDC[2]:** Reduce emissions / unit GDP 65% below 2005 levels & increase forest stock by 6 billion cubic meters vs. 2005 levels

Indonesia

- **Opportunity:** National government has committed to restoring 2 million hectares of peatlands; NCS a key part of NDC goal
- **NCS Mitigation Potential:** 1.30 gigatons CO2e/year, primarily via peatland actions & avoided forest conversion
- **Relevant NDC[2]:** Reduce emissions 32% below 2030 business-as-usual (BAU) scenario

Mexico

- **Opportunity:** National government has recently committed to net-zero deforestation & improving large NCS programs
- **NCS Mitigation Potential:** 237 megatons CO2e/year, primarily via reforestation
- **Relevant NDC[2]:** Reduce emissions 22% below 2030 business-as-usual (BAU) scenario

India

- **Opportunity:** National government focus on forestry gives opportunity for further acceleration of forest pathways
- **NCS Mitigation Potential:** 386 megatons CO2e/year, primarily via reforestation
- **Relevant NDC[2]:** Reduce emissions 45% below 2005 levels & create a 2.5-3 gigaton natural carbon sink by 2030

Australia

- **Opportunity:** National government prioritizes climate action, including key Nature-based Solutions (NbS) pillars (e.g., reforestation and improved forest management)
- **NCS Mitigation Potential:** 138 megatons CO2e/year, primarily via reforestation & forest management
- **Relevant NDC[2]:** Reduce emissions 43% below 2005 levels

Gabon

- **Opportunity:** Gabon is considered a high forest, low deforestation (HFLD) country and is in need of capital for forest conservation.
- **NCS Mitigation Potential:** 26 megatons CO2e/year, primarily via forest management
- **Relevant NDC[2]:** Remain a carbon-neutral country up to & beyond 2050

[1] While the global voluntary carbon market is currently $2B/year, several projections estimate a value of tens or hundreds of billions per year in the 2030s. Compliance markets could add additional finance.
[2] Nationally Determined Contribution (NDC): An emissions reduction and climate adaptation plan required of each country party to the Paris Agreement. NDCs are updated every five years.

Note: NCS reflects cost-effective potential
Source: Nature4Climate Atlas, UNFCCC

NCS Funding Opportunities

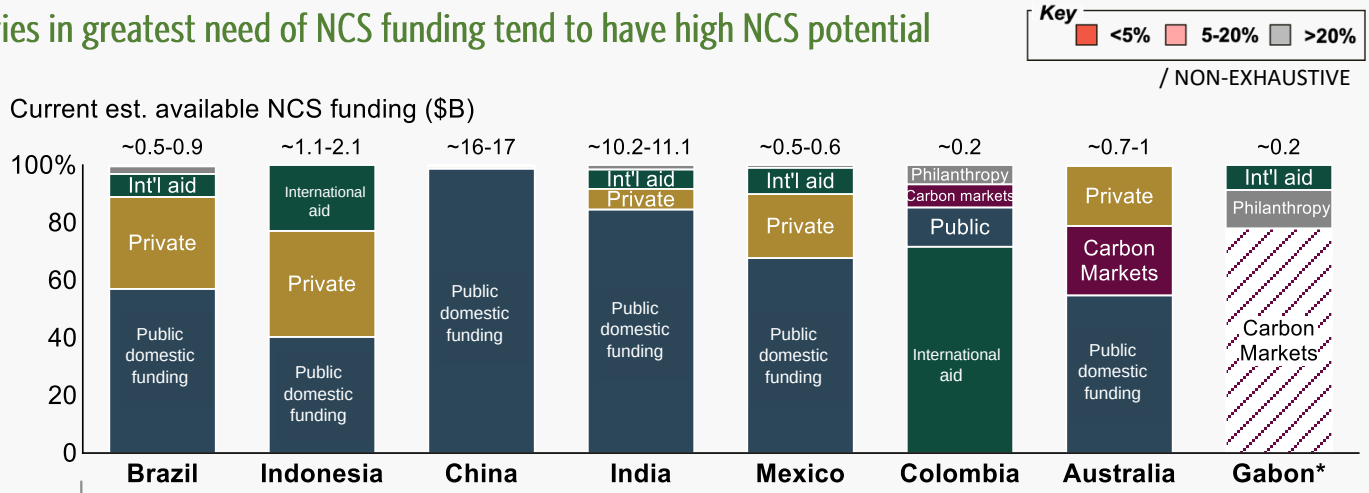
Through this study, we identified several NCS funding opportunities:

- Governments can undertake policy reforms to **improve the efficiency of domestic government funding**. This study found that while many countries have large public funding programs for NCS, they are not being efficiently allocated or utilized.
- As carbon markets continue to grow, governments should **leverage carbon markets as a future source of NCS funding**. Some countries are launching a carbon market for the first time, and there is opportunity for NGOs to support the government by providing best practices on carbon market design. In particular, clear rules around how voluntary carbon projects will fit into compliance systems at state and national levels are increasingly urgent.
- There is significant funding to be realized if countries can **find demand and create nature positive economies around sustainable timber and non-timber forest products.** This can also reduce deforestation pressures by providing alternatives to environmentally degrading economic development.
- Many local NCS projects in developing countries currently face barriers in accessing the growing amounts of available private finance because projects are too early-stage and are not "shovel-ready". There is opportunity for NGOs and government to **identify and unlock catalytic sources of funding/capital for early-stage NCS projects**.

Other countries can apply this research through a research prototype tool that we developed as part of this project. A data visualization tool with data for each country in this study will be made available in spring 2023.

With additional investment, The Nature Conservancy can use the results of this funding study, the science of where countries can invest most efficiently, our years of experience on the ground, and our policy know-how to advance opportunities for natural climate solutions implementation around the world.

Countries in greatest need of NCS funding tend to have high NCS potential



	Brazil	Indonesia	China	India	Mexico	Colombia	Australia	Gabon*
Cost–effective NCS Gigaton, Carbon Dioxide Equivalent (Gt CO2e/year)	1.58	1.30	0.88-1.19	0.39	0.24	0.21	0.14	0.03
NCS funding / Gross Domestic Product (GDP) (%)	~.03-.06%	~0.1-0.2%	~0.1%	~0.3%	~0.04%	~.06-.07%	~.04-.07%	~1.1-1.4%
NCS funding needed / GDP (%)	*~5%*	*~6%*	*~0.3%*	*~0.6%*	*~0.9%*	*~3%*	*0.5%*	*~7%*
Estimated funding / year needed *(based on weighted average cost of $50.74/ton)*	~$80B	~$66B	~$45-61B	~$20B	~$12B	~$11B	~$7B	~$1B
Funding Gap ($Billion/year) *(% of need met)*	**~$79-80B** *(~1%)*	**~$64-65B** *(~2-3%)*	**~$29-34B** *(~29-35%)*	**~$9B** *(~52-56%)*	**~$11B** *(~4-5%)*	**~$10B** *(~2%)*	**~$6B** *(~10-15%)*	**~$1B** *(~15-19%)*

Note: Estimates are based on a global average cost/ton of CO2 of $50.74; funding gap is likely over-estimated for developing countries and under-estimated for developed countries. *most of Gabon's NCS opportunity is to maintain existing forest stocks which is not reflected in these estimates. Source: Nature4Climate, TNC

For more information about this study, please contact ncs@tnc.org