

PROGRESS ON THE NEW YORK DECLARATION ON FORESTS

Taking stock of national climate action for forests

Goal 7 Progress Report
October 2021



NEW YORK DECLARATION ON FORESTS
PROGRESS ASSESSMENT

forestdeclaration.org

Contents

Acknowledgments	3
1. Introduction	4
2. How ambitious are countries in their national climate pledges for forests?	7
3. How much finance are governments investing in forest climate goals?	13
4. Have governments made progress in advancing forest climate goals?	19
Strategy 1. Strengthening forest and land use governance	
Strategy 2. Recognizing and securing the rights of Indigenous Peoples and Local Communities	
Strategy 3. Aligning incentives with forest climate goals	
Strategy 4. Promoting multistakeholder collaboration as part of jurisdictional approaches	
Strategy 5. Ensuring robust forest monitoring and accounting	
Strategy 6. Expanding demand-side measures of governments that import forest-risk commodities	
5. What can governments do to mitigate climate change through forests? Ways forward.	45
Bibliography	53

This report belongs to the public domain.

Users are welcome to download, save, or distribute this report electronically or in any other format. A digital copy of this report, along with progress assessments on all goals of the New York Declaration on Forests, are available at www.forestdeclaration.org.

Please use the following citation:

NYDF Assessment Partners. (2021). Taking stock of national climate action for forests. Climate Focus (coordinator and editor). Accessible at www.forestdeclaration.org.

Acknowledgments

Authors:

Franziska Haupt and Sanggeet Mithra Manirajah, with contributions from Haseeb Bakhtary, Darragh Conway, Amy Duchelle, David Landholm, Imogen Long, Erin D. Matson, Swetha Peteru, and Pham Thu Thuy.

We are also grateful to the numerous other individuals and organizations who provided their time and expertise, in many different ways, to the development and improvement of this work:

Naikoa Aguilar-Amuchastegui, Juan Carlos Altamirano, Paola Boniello, Michael Brady, Maria Brockhaus, Madeline Craig, Kevin Currey, Federico De Lorenzo, Jana Elbrecht, Helen Finlay, Alain Frechette, Taiji Fujisaki, Matthew Gallagher, Lloyd Gamble, David Gibbs, Chloe Ginsburg, Torbjørn Gjefsen, Leticia Guimaraes, Barbara Hermann, Swati Hingorani, Alison Hoare, Michael Hüttner, Andrea Johnson, Kiryssa Kasprzyk, Gabrielle Kissinger, David Kroeker-Maus, Eric Lambin, Anne Larson, Matteo Lattanzi, Breanna Lujan, Robert Maher, Christopher Martius, Manuelita Montaña, Till Neeff, Pablo Pacheco, Clea Paz, Blanca Racionero Gomez, Stephanie Roe, Leah Samberg, Brad Schallert, Fabian Schmidt, Charlotte Streck, Emma Thomson, Kimberly Todd, Ricardo Ulate, Chisa Umemiya, Adriana Vidal, Marius von Essen, Brittany Williams, Michael Wolosin, and Makino Yamanoshita

This project is supported by the Climate and Land Use Alliance (CLUA), the Good Energies Foundation, and the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) on the basis of a decision adopted by the German Bundestag via the NYDF Global Platform.

About the NYDF Progress Assessment: This report was researched and authored by the New York Declaration on Forests Assessment Partners and coordinated by Climate Focus. It is a collaborative effort that relies on the contributions of countless individuals and organizations.

The NYDF Assessment Partners include: CDP, Center for International Forestry Research (CIFOR), Chatham House, Clean Cooking Alliance, Climate Focus, Conservation International (CI), Environmental Defense Fund (EDF), Fauna & Flora International, Forest Foundation Philippines, Forest Trends, Global Canopy, Institute for Global Environmental Strategies (IGES), Instituto de Manejo e Certificação Florestal e Agrícola (Imaflora), The Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT), International Union for Conservation of Nature (IUCN), Levin Sources, National Wildlife Federation (NWF), Overseas Development Institute (ODI), Rainforest Alliance, Rights and Resources Initiative (RRI), Stockholm Environment Institute (SEI), The Nature Conservancy (TNC), The Sustainability Consortium (TSC), Woodwell Climate Research Center, World Resources Institute (WRI), World Wildlife Fund (WWF-US), Yiaku Laikipiak Trust, and the Zoological Society of London's (ZSL) Sustainability Policy Transparency Toolkit (SPOTT) initiative.

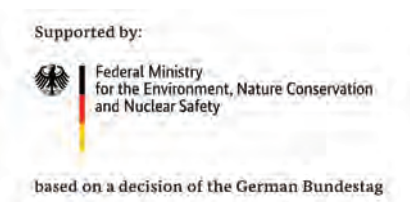
Chatham House staff were contributors to this report. Chatham House, the Royal Institute of International Affairs, is an independent policy institute based in London. The institute's mission is to help build a sustainably secure, prosperous and just world. Chatham House does not express opinions of its own. The opinions expressed in this publication are the responsibility of the authors.

We would also like to thank the Burness team for their support with media relations.

Design and figures: Imaginary Office

Copy editor: Emily Steadman

Date of publication: October 2021



1. Introduction

The New York Declaration on Forests is a voluntary and non-binding international commitment to protect and restore global forests. It offers a reference point for the state of forests globally, and tropical forests, in particular.

Over 200 governments, multinational companies, groups representing Indigenous Peoples and local communities, and non-governmental organizations have endorsed the New York Declaration on Forests (NYDF). They have committed to achieve its ambitious targets to end natural forest loss and to restore forests. The 10 goals of the declaration (**Box 1.1**) set milestones to maintain and increase forest cover (Goals 1 and 5), target specific drivers of forest loss (Goals 2, 3, and 4), elevate forests into the international climate and sustainable development agenda (Goals 6 and 7), and ensure adequate finance (Goals 8 and 9) and forest governance (Goal 10) to enable the protection, restoration and sustainable management of forests.

Goal 7 of the declaration has been achieved: The Paris Agreement solidified the importance of forests in the international climate agenda. By reference, it integrates the complete forest-related framework as previously defined by and under the United Nations Framework Convention on Climate Change.¹

Goal 7 of the NYDF calls for endorsers to “agree in 2015 to reduce emissions from deforestation and forest degradation as part of a post-2020 global climate agreement, in accordance with internationally agreed rules and consistent with the goal of not exceeding 2° Celsius warming.” In 2015, 196 Parties to the United Nations Framework Convention on Climate Change (UNFCCC) adopted the Paris Agreement, an international treaty with the goal to limit global warming to below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. With Article 5, the Paris Agreement includes an explicit call to all developing and developed countries to conserve and enhance forests and, by reference, anchors the legal framework for Reducing Emissions from Deforestation and forest Degradation (REDD+) and for land use generally (**Box 1.2**).

BOX 1.1.

The ten goals of the NYDF



Goal 1: At least halve the rate of loss of natural forests globally by 2020 and strive to end natural forest loss by 2030.



Goal 2: Support and help meet the private-sector goal of eliminating deforestation from the production of agricultural commodities such as palm oil, soy, paper, and beef products by no later than 2020, recognizing that many companies have even more ambitious targets.



Goal 3: Significantly reduce deforestation derived from other economic sectors by 2020.



Goal 4: Support alternatives to deforestation driven by basic needs (such as subsistence farming and reliance on woodfuel for energy) in ways that alleviate poverty and promote sustainable and equitable development.



Goal 5: Restore 150 million hectares of degraded landscapes and forestlands by 2020 and significantly increase the rate of global restoration thereafter, which would restore at least an additional 200 million hectares by 2030.



Goal 6: Include ambitious, quantitative forest conservation and restoration targets for 2030 in the post-2015 global development framework, as part of new international sustainable development goals.



Goal 7: Agree in 2015 to reduce emissions from deforestation and forest degradation as part of a post-2020 global climate agreement, in accordance with internationally agreed rules and consistent with the goal of not exceeding 2 degrees Celsius warming.



Goal 8: Provide support for the development and implementation of strategies to reduce forest emissions.



Goal 9: Reward countries and jurisdictions that, by taking action, reduce forest emissions – particularly through public policies to scale-up payments for verified emission reductions and private-sector sourcing of commodities.



Goal 10: Strengthen forest governance, transparency, and the rule of law, while also empowering communities and recognizing the rights of indigenous peoples, especially those pertaining to their lands and resources.

This report presents the 2021 NYDF Progress Assessment of progress made by governments in reducing forest emissions, summarizing broad trends, good practices and lessons learned.

The climate crisis presents one of the most urgent challenges to humanity. Forests play an essential role in fighting this crisis, yet they face massive destruction in many parts of the world. We therefore consider it timely to take stock of government efforts to protect, restore and sustainably manage forests for climate change mitigation.

The assessment was conducted by the NYDF Assessment Partners, an independent civil society network of 28 research organizations and think tanks that monitors collective progress towards the NYDF goals. This coalition develops and revises goal-specific assessment frameworks and coordinates information gathering, analysis, and the presentation of findings. Each year, the NYDF Progress Assessment monitors progress towards all goals in a collective and iterative process while focusing on a specific goal or set of goals every year (forestdeclaration.org).

This report is largely based on a compilation and synthesis of previous NYDF Assessment reports and publications by NYDF Assessment Partners, complemented by an additional literature review. It offers recommendations for governments of forest countries and consumer countries that import forest-risk commodities and it seeks to inform donors on strategic investment opportunities.

The report is divided into the following chapters:

- Introduction (**Chapter 1**)
- How ambitious are countries in their national climate pledges for forests? (**Chapter 2**)
- How much finance are governments investing in forest climate goals? (**Chapter 3**)
- Have governments made progress in advancing forest climate goals? (**Chapter 4**)
- What can governments do to mitigate climate change through forests? Ways forward. (**Chapter 5**)

Details on the methodology and data limitations can be found in the report Annex.

BOX 1.2. The Paris Agreement and forests

With the Paris Agreement, its Parties established a binding obligation for countries to communicate the actions they will take to reduce greenhouse emissions. One hundred ninety-two Parties have submitted nationally determined contributions (NDCs) to formulate their ambitions, most of them making reference to forests. One hundred seventeen Parties have submitted a new or updated version.² Starting in 2024, countries will also report transparently on actions taken and progress in climate change mitigation, adaptation measures, and support provided or received, guided by the Enhanced Transparency Framework. The information will feed into the Global Stocktake of collective progress.

While the Paris Agreement calls for action by all Parties to conserve and enhance sinks and reservoirs of greenhouse gases, Article 5 of the Paris Agreement provides a specific legal framework for actions by or in support of developing countries. It refers to the Warsaw Framework and other relevant decisions that together provide a complete legal framework for forest mitigation efforts. Article 5.3 says:

“Parties are encouraged to take action to implement and support, including through results-based payments, the existing framework as set out in related guidance and decisions already agreed under the Convention for policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests, while reaffirming the importance of incentivizing, as appropriate, non-carbon benefits associated with such approaches.”

Several other Articles of the Paris Agreement are relevant for forests. Article 6 provides a framework for collaborative efforts, which in principle also covers forest mitigation. While it is still unclear if forests will be eligible under a new sustainable development mechanism (Article 6.4), Parties may use other collaborative approaches, such as direct bilateral collaboration (Article 6.2), or non-market-based approaches (Article 6.8) for forest mitigation efforts. In addition, two articles call for an increase and shift in finance, which is also relevant for forests and sectors that drive deforestation or forest degradation: Article 2.1c establishes a commitment for “making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development”, and Article 9 calls for developed countries to provide financial support to developing countries and to “continue to take the lead in mobilizing climate finance from a variety of sources”.

2. How ambitious are countries in their national climate pledges for forests?

Scope

This chapter reviews the ambition of governments' nationally determined contributions (NDCs) to reduce forest emissions consistent with the Paris Agreement. We summarize the overall climate mitigation offered by forests globally. We then showcase three activities that provide the largest share of economic mitigation potential (Figure 2.1) within the forest sector—reduced deforestation, improved forest management, and afforestation/reforestation—and their distribution at the country-level. For reduced deforestation and afforestation/reforestation, we are limited to data on tropical countries. To assess the ambition of countries' pledges, we narrow our analysis to a subset of 32 countries with the largest economic mitigation potential across the activities. We review these countries' latest NDC submissions as of August 2021 for quantitative forest targets and compare them to their potential. Findings do not represent global progress of NDCs, they indicate ambition of a select group of countries to date.

There are several limitations to our analysis. There is limited data on country-level forest mitigation potential. Furthermore, there are wide ranges of mitigation potential from forest measures and interventions owing to different methodologies used. For economic mitigation potential estimates, we are limited to the specific carbon prices published in the literature. See the report Annex for detailed calculation details, assumptions, and data limitations.

Forests play an indispensable role in regulating the global climate and reaching the Paris Agreement’s goal of limiting global warming to 1.5–2°C.

Forests are a fundamental component of global climate mitigation. Land-use change, including deforestation and degradation, account for about 10–12 percent of global emissions.^{3,4} Yet forests continue to be a significant natural carbon sink; between 2001 and 2020, forests provided a net removal of up to 7.35 Gigatons CO₂ (GtCO₂) per year from the atmosphere.^{5,6}

A range of activities from the land use sector—reducing deforestation, afforestation and reforestation^a, and improved forest management—can additionally increase the amount of carbon that is absorbed by and stored in forested lands. Recent estimates show that these three activities alone can help achieve between 2.7–15.6 GtCO₂ per year globally.^{7–9} (Figure 2.1).

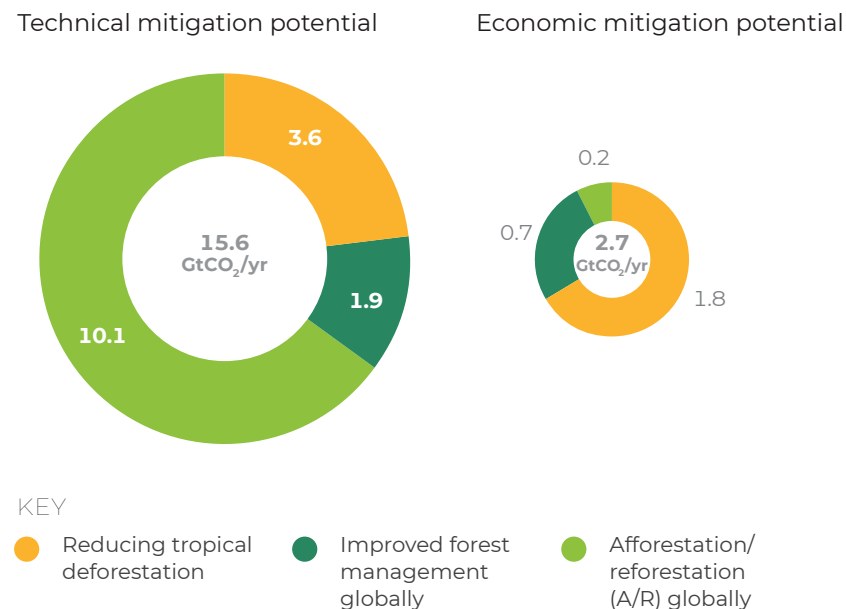
There is a large opportunity to harness the mitigation potential of forests by avoiding emissions from conversion and restoring and enhancing forest carbon sink capacities. A large portion of forests’ mitigation potential could be realized in tropical regions, although there is also substantial potential for carbon sink enhancement in the non-tropics (Figure 2.2).

Emissions trends for forests are heading in the wrong direction. Countries will need to introduce dramatic shifts to realize the full mitigation potential of forests.¹⁰

So far, countries are still far from realizing the mitigation potential offered by forests. Despite political will, public and private efforts have not made progress towards reducing emissions from forest loss, the activity with the largest potential. After the NYDF was endorsed in 2014, tropical primary forest loss has generally increased, with 4.2 million hectares lost in 2020. Similarly, current rates of annual tree cover gain are insufficient. Efforts will need to be accelerated by at least five-fold by 2030 and three-fold by 2050¹⁰ to ensure that reduced deforestation and restoration contributes its share to achieving the Paris temperature goal. Additionally, dramatic shifts are required in food production, agriculture, and land use to achieve these potentials.

^a Though restoration covers a broader set of activities that improve forest landscapes, we consider restoration under afforestation/reforestation.

Figure 2.1. Technical and economic mitigation potential of the main forest climate mitigation options globally*



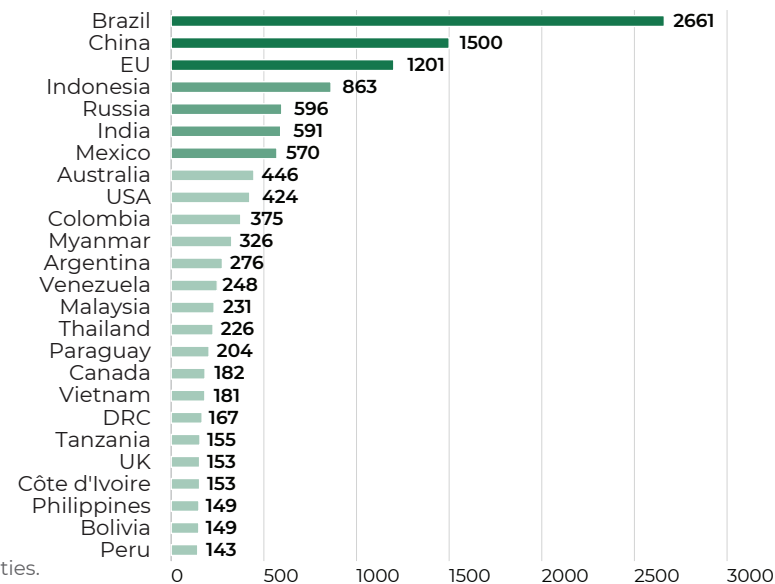
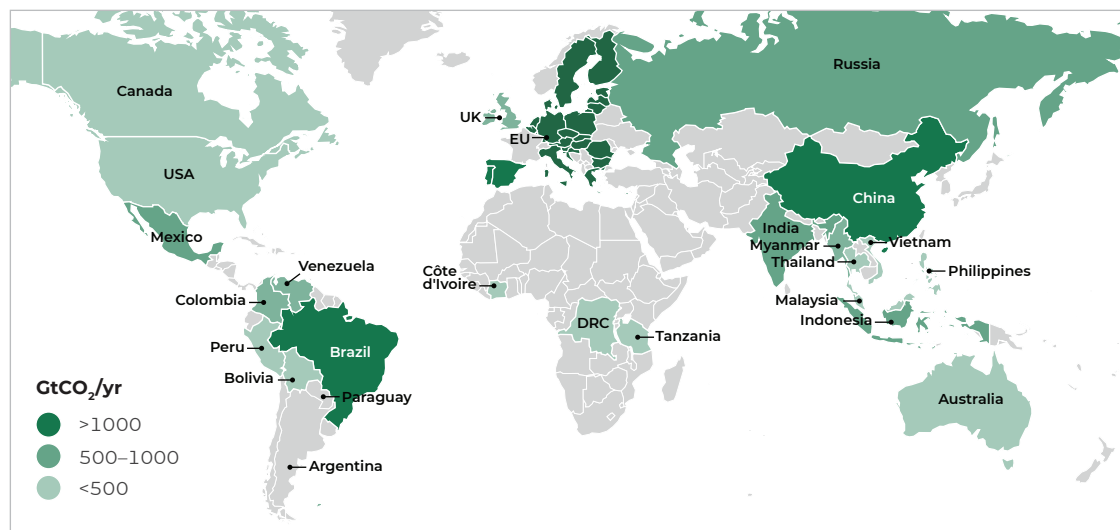
Sources: Technical mitigation potential is based on the maximum mitigation potential of forest activities from Griscom et al. (2017), Supplementary Information Table S1. Pathways included are avoided forest conversion, reforestation, natural forest management, and improved plantations. Economic potential for reducing tropical mitigation and A/R is from Busch et al. (2019) while economic mitigation potential for improved forest management is from Austin et al. (2020). These latter estimates are based on carbon prices of USD 20–50 per ton of CO₂.

These estimates are indicative and based on studies which may combine estimates from several sources, reflecting different methodologies that may not lend direct comparison or addition. Figures should therefore be viewed with caution, but provide an indication of the sector’s scale of contribution.

* Technical mitigation potential is defined as the maximum mitigation potential that can be delivered by current technologies while meeting human needs for food and fiber. Economic mitigation potential refers to the potential constrained by carbon price, based on an assumed social price of carbon. Economic potentials represent public willingness to pay and provide an indication of near-term feasibility to reduce emissions and enhance sequestration, therefore are more relevant for policy making and national plans. While other factors (political, structural, social) affect feasibility, to our knowledge there is no data on mitigation potential that considers these factors.

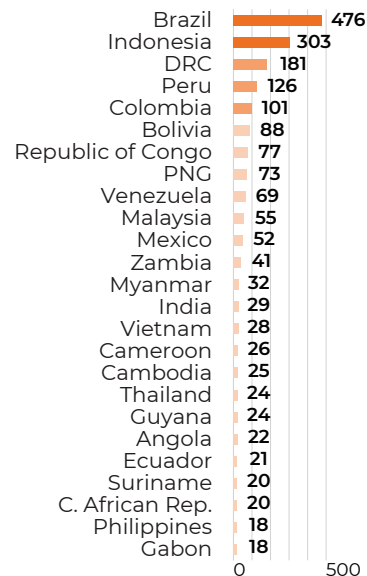
Figure 2.2. Technical and economic mitigation potential of key forest interventions for top 25 countries with highest mitigation potentials (MtCO₂ per year)

Technical Mitigation Potential



Source: Roe et al. (2019) SI Table 4, based on data from Griscom et al. (2017), country-level estimates for the three activities.

Economic Mitigation Potential



Source: Austin et al. (2020) and Busch et al. (2019), country-level estimates for the three activities.

Nationally determined contributions (NDCs) of countries provide an indication of their climate ambition. In a sign of progress, most countries recognize the potential of forests in their recent NDC submissions.

The years leading up to 2030 have been heralded as a pivotal and decisive period in achieving the Paris Agreement's goals of limiting warming within the 1.5–2°C target. Where historical trends illustrate the scale of transformation required to meet the Paris Agreement goals, countries' NDCs communicate the contributions that are expected to be made at the national level. These contributions will indicate where countries stand collectively in reaching the emissions reductions, and whether they are at the pace and scale necessary.

The large majority of countries have recognized the important role of forests in their NDCs. As of 1 May, 2021, 47 out of 55 countries that submitted enhanced or updated NDCs to the UNFCCC mention forests.¹¹ Twenty-six of these also specify quantitative targets for mitigation, for example, greenhouse gas (GHG) emission reductions, while others set less specific, qualitative targets or include the sector in their economy-wide targets.¹¹

Many NDCs assessed do not provide forest-related mitigation targets; targets that do exist and are quantified are often not ambitious enough.

Figure 2.3 shows a comparison of potential and the quantifiable NDC ambition for the three mitigation activities of high-potential countries (32 countries total). While this only represents a small share of all NDCs submitted, this group of countries offer 82 percent of total mitigation potential from reducing deforestation, 68 percent for improve forest management and 66 percent for afforestation/reforestation.^{8,9}

Only ten countries provide quantitative targets in Megatons of CO₂ (MtCO₂). For instance, of the top five countries with the highest economic mitigation potential for reducing deforestation in our sample (Brazil, Indonesia, Democratic Republic of the Congo (DRC), Peru, and Colombia), only Indonesia and Colombia have a quantitative target in MtCO₂. Other countries have adopted qualitative or economy-wide targets, which we are unable to assess.

Our analysis of NDCs^b that set quantitative targets indicates that they fall short of forests' economic mitigation potential. In our sample of the 32 high-potential countries, the share of combined NDC targets for forests is 50 percent (292 MtCO₂/year) of the economic mitigation potential.^c Excluding India's large target for afforestation/reforestation,^d the share of combined targets represents just 16 percent of potential.

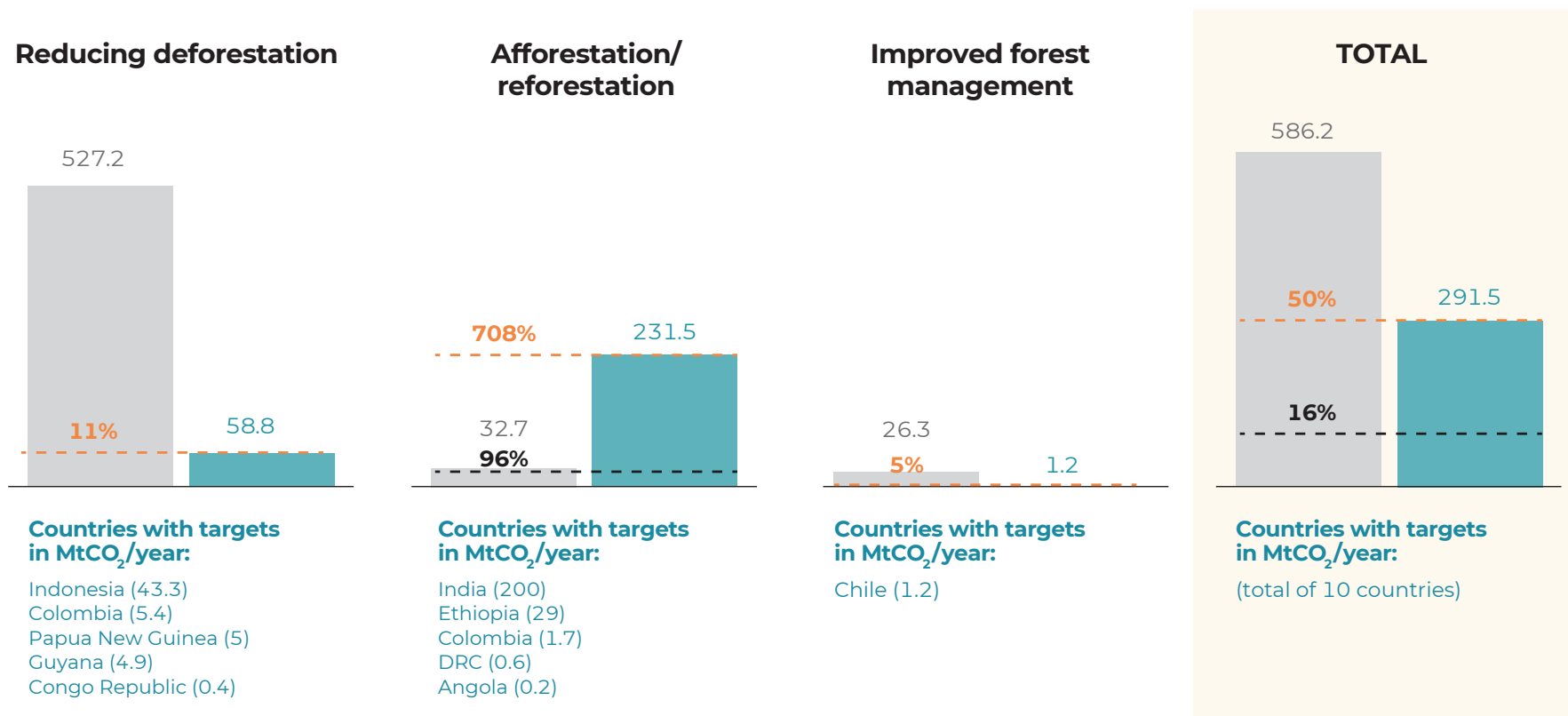
A significant number of country targets are conditional on international climate finance, highlighting the need for continued support to forest countries. Recently, a few countries have increased their unconditional NDC targets.

Our assessment of the 32 high-potential countries finds that, of those that provide quantitative targets for forest activities, a quarter of countries give specific targets conditional on international financial support. Ten percent of forest targets referenced as tons of CO₂ are conditional, while nearly 38 percent of targets expressed in hectares of land are conditional. These broad findings are consistent with previous assessments of NDCs; out of 40 NDCs examined, over one third of countries provide explicit cost estimates for proposed climate-linked forest activities, most of which are conditional on international climate finance.¹²

Notably, between the first and subsequent NDC submission, Indonesia, Vietnam, and Peru^e have increased their unconditional emissions reduction targets, which reflect countries' willingness to leverage domestic resources.

- b For the three forest activities, we analyzed NDC targets of the top 15 countries with the largest economic mitigation potential for each activity respectively. In total, we reviewed the NDC documents of 32 countries; some countries appeared more than once as a high potential country across the three forest activities. We focused our analysis on those countries with quantitative mitigation targets in MtCO₂ (10 out of 32) and compared their targets to their economic mitigation potential for different activities. See Annex for details.
- c We summed up the 10 countries' economic mitigation potentials to provide a total combined economic mitigation potential. We then calculated the share by comparing the collective quantitative NDC targets to the combined economic mitigation potential.
- d India's target for afforestation/reforestation is 30 times higher than its estimated cost-effective mitigation potential in tCO₂ based on Busch et al. (2019).
- e Indonesia increased its unconditional emission reductions from 26% to 29%, Vietnam from 8% to 9%, and Peru from 20% to 30%, relative to business-as-usual (BAU) scenarios.

Figure 2.3. Comparison of the economic mitigation potential of high-potential countries and their collective NDC targets for three forest-climate activities*



KEY

- Economic mitigation potential of countries with targets (MtCO₂/year)
- Collective NDC target of countries (MtCO₂/year)
- Share of country targets compared to mitigation potential
- Share of country targets compared to mitigation potential (excluding India's target)

Sources: Country-level economic mitigation potential of reduced deforestation and improved forest management are based on Busch et al. (2019) on a carbon price of USD 20/tCO₂, while potential for afforestation/reforestation is based on Austin et al. (2020) on a carbon price of USD 20–50/tCO₂. Economic potential indicates near-term feasibility and is more relevant for policy than technical mitigation potential. NDC target estimates are based on NYDF Assessment calculations and focuses on only targets in tons of CO₂ (tCO₂). See Annex for full list of high potential countries per activity and other calculation details.

*This analysis does represent NDC progress globally; it is focused on the top 15 countries within each forest intervention category and only on quantitative targets available. However, it gives an indication of ambition, recognizing that other countries may have more ambitious forest climate targets that have not been considered here.

Some NDCs acknowledge the role of Indigenous Peoples and local communities (IPLCs) as vital custodians of forest lands and other ecosystems. However, it is unclear how governments will involve IPLCs in NDC implementation, and whether IPLC rights will be strengthened.

IPLCs are critical to forest conservation, biodiversity protection, and maintaining forest carbon fluxes. IPLC land makes up 42 percent of all global land that is in good ecological condition.¹³ There is growing acknowledgment of the need to recognize and protect the rights of IPLCs, their critical role in forest management, restoration and protection, and the importance of indigenous traditional knowledge. A forthcoming assessment finds that IPLC lands are net carbon sinks and can play a key role in meeting NDC objectives in Peru, Brazil, Mexico and Colombia.¹⁴

Of the 32 high potential countries assessed, half of the NDCs mention fully or partially IPLCs' role in protecting and managing natural ecosystems. In some NDCs, IPLCs' role is mentioned prominently (e.g., Colombia). A handful of countries analyzed with IPLC presence (e.g., DRC, Canada, Malaysia, and the United States) only vaguely reference IPLCs or not at all.^f

The ambition of NDCs examined for this analysis does not reflect the full mitigation potential of forests. However, the NYDF Assessment is unable to comprehensively assess the full ambition because of lack of detail in NDC documents.

Some countries' NDCs may not reflect their true ambition; some may have plans for reducing emissions from deforestation and forest degradation (REDD+) or other domestic policies related to forest climate mitigation that are not mentioned or quantified in their NDCs. Similarly, some countries may have included forests in their economy-wide targets but not set separate GHG and non-GHG targets. More detail or references to other documents needs to be provided in NDCs, both on targets for the forest sector and how these are to be achieved. This is essential to enable monitoring of both ambition and implementation, to gauge the effectiveness of government approaches and actions in meeting national and global targets for mitigating climate change.

f See Annex for details.

3. How much finance are governments investing in forest climate goals?

Scope

This chapter estimates the finance need for forest climate goals and assesses the public finance flows towards relevant activities in developing countries. We estimate the “green” finance earmarked for and flowing to protect, enhance, and restore forests internationally and domestically in developing countries. We then compare this to the “grey” finance currently flowing to sectors that may be driving deforestation. We compare these estimates with the global investments needed to protect, restore and manage forests. Industrialized countries with forests also invest in forest mitigation domestically; however, to our knowledge, there are no systematic databases or assessments of these investments.

Our analysis was constrained by several barriers and limitations. Heterogenous finance needs across countries and the varied scope of activities across sources complicate comparisons of different estimates. Moreover, finance flows to forests remain difficult to accurately quantify due to poor transparency as well as the lack of global standards for tracking climate-related mitigation finance. Data gaps are also prevalent for many driver sectors; our estimates on grey financing focus on some drivers of deforestation (i.e., agriculture) but exclude other driver activities, such as infrastructure development and extractives. Where estimates do exist, they vary widely, based on different approaches, methodologies, and uncertainties, making it challenging to compare or aggregate them. Reporting on implementation or impact of financial support is even more scarce.

Governments have committed an average of USD 2.4 billion per year for forest climate goals, as both international and domestic investments.⁹ Forest countries have been pulling the weight by directing significant domestic finance for REDD+ implementation and bearing the costs.

Since 2010, we estimate international and domestic public commitments of USD 24.5 billion, on average USD 2.4 billion per year for activities to mitigate climate change through forests. At the international level, USD 7.7 billion in international development finance has been committed to forest mitigation programs and activities around the world.¹⁵ Just over USD 6.7 billion in international finance has been committed by multilateral climate funds and bilateral donors in the context of REDD+.¹⁶ Of this funding, most (USD 4.6 billion) went into results-based payments to reward countries for emissions reductions while the remainder (USD 1.8 billion) was earmarked for readiness and implementation. Domestically, forest country governments have committed USD 10.1 billion for activities under their REDD+ plans, although it is unclear to what extent these funds have been disbursed.¹⁷

REDD+ country governments—both at national and subnational level—have been bridging the gap in international REDD+ funding by channeling resources towards implementing their REDD+ plans, and in some cases, bearing the additional costs of implementation. For some, the resources countries have invested themselves have been higher than the financing they have received for REDD+.¹⁸ For instance, the Ecuadorian government provided more than three times the amount committed in international REDD+ funding in the 2009–2014 period.¹⁹ Subnational governments, in particular, have been bearing the burden of implementation costs with limited financial support.²⁰ Countries' contribution to implementation is not systematically documented and assessed, making it challenging to estimate the full scale of financing being channeled by REDD+ countries.

⁹ This is an average estimate, based on the 2010–19 timeframe. See Annex for details and sources.

Disbursements of results-based payments for REDD+ remain slow, with only a few countries receiving finance. For many, upfront support will be a necessary bridge to put in place effective and functioning institutions to address the complex problem of deforestation.

Although funds have been made available for REDD preparation and readiness, only half of funds pledged (USD 1.8 billion) have been disbursed (USD 0.9 billion) since 2010. The situation is similar with results-based payments (**Box 3.1**). Only a few countries have received results-based finance for emissions reductions. The Green Climate Fund (GCF) has made payments to six countries, totaling almost USD 500 million and 101 MtCO₂ in emission reductions, and has approved payments for two additional countries.²¹ The average payment is approximately USD 5 per avoided ton of CO₂, with most funding received by countries in Latin America. The Forest Carbon Partnership Facility's (FCPF) Carbon Fund has signed sale agreements with four countries (Ghana, Mozambique, Chile and the Democratic Republic of Congo) for a total of USD 181 million, but no payments have been made for emissions reductions yet.²²

In September 2021, the Government of Indonesia terminated the 2010 results-based payment agreement with the Government of Norway, which would involve funding of up to USD 1 billion for reduced emissions from lowered deforestation.²¹⁵ The Indonesian government cites the “lack of concrete progress” in delivering payments for reductions that were achieved in 2016 and 2017.²¹⁴ This termination has important lessons for other international funding organizations and donor countries engaged in results-based payment agreements. As tropical forest countries come under more economic and financial pressure in the wake of the COVID-19 pandemic, governments may prioritize efforts towards domestic needs, instead of pursuing international payments that are slow to arrive.^{216, 217}

Besides strong political will, additional financial support will be needed to help countries achieve emission reductions and address the complex problem of deforestation, while also complying with different donor requirements. With few exceptions (e.g., the Forest Investment Program), programs provide limited resources for the necessary up-front investments in activities, which is a key barrier for many countries.²³ The recent Declaration of the Commission of Central African Forests (COMIFAC) Member States for

the forests of the Congo Basin, together with the German government, seeks to mobilize funding for the implementation of NDCs towards forest protection.²⁴

Growing demand for carbon credits can provide a source of funding to support the development of jurisdictional REDD+ programs and to catalyze implementation and results at scale. Adequate levels of ambition, integrity, and strategic alignment are essential for this funding to contribute to the goals of the Paris Agreement.

The last few years have seen an unprecedented demand for nature-based carbon credits generated by project activities. The value and volume of forest carbon finance mobilized through carbon markets has soared significantly in comparison to finance raised for efforts in other non-forest and land use mitigation sectors, from a total value of just over USD 50 million in 2017 to USD 159 million in 2019.^{25, 26} Rising private sector demand for forest carbon credits, as companies increasingly seek to augment their abatement strategies, remains an important opportunity for private investment in forest mitigation.

While project-based credits are still more widely available, jurisdictional-scale REDD+ programs are finally coming to market under offerings like the LEAF Coalition. This creates opportunities for convergence in support of national ambition for forest climate goals, but risks of misalignment remain between projects and the jurisdictions under which they sit. It is therefore increasingly urgent that pathways for programmatic and accounting alignment, including nesting methodologies, are refined and tested.

Carbon pricing schemes^h have also recently emerged as an important policy tool for countries to reduce GHG emissions. Revenues from these programs also provide a potential source of funding for forest mitigation activities, especially for countries where deforestation and rural development are key issues. In Colombia, for example, the government decided to dedicate its

h Carbon pricing refers to initiatives that put an explicit price on GHG emissions, that is, price as a value per ton of CO₂ equivalent (tCO₂e). There are two main approaches to price emissions: the first is an emissions trading system which is a market-based mechanism, while the second is a carbon tax.

carbon tax revenue to sustainable rural development in post-conflict areas, which includes forest activities.²⁷

To realize the mitigation potential of forests, governments need to massively increase their domestic investments and donor governments need to scale up their international support. Current flows are a miniscule fraction (0.5–5 percent) of what is needed.

A lot more funding will be needed to realize forests' mitigation potential. Estimates of finance needed to protect, restore and enhance forests globally range from USD 45 to 460 billion per year.^{i, 28–30} For developing countries, the GCF estimates that USD 151–192 billion^j is required annually to achieve the full potential of adaptation and mitigation options in the forest and land use sector.³¹ Despite this large variation, it is clear that current international and domestic funding of on average USD 2.4 billion per year only covers a fraction of the need: 0.5–5 percent (**Figure 3.1**).

Financing towards securing Indigenous Peoples and local communities' (IPLC) tenure rights is far from the scale needed.

IPLCs' ability to effectively protect and sustainably use forests depends on secure rights and tenure of their customary lands. The Rights and Resources Initiative (RRI) estimates that the operational costs for medium- and national-scale projects in 24 countries to map, delimit, and title Indigenous and community lands is approximately USD 8 billion.³² Based on these calculations, operational costs to secure IPLC tenure rights range, on average, between USD 0.19 and USD 2.77 per ton of CO₂.

Yet, IPLC groups and initiatives receive little financial support. A recent report by Rainforest Foundation Norway found that in the 2011–2020 period, projects advancing IPLC empowerment and forest management^k received USD 2.7 billion (USD 270 million per year), less than one percent of the official development assistance for climate change mitigation and adaptation over

i See Annex for details on calculations.

j This range is higher than the lower bound of the global estimate because it considers a broader set of forest activities (includes sustainable forest and land use).

k Projects included initiatives around strengthening IPLC internal governance, territorial mapping, land tenure recognition, forest conservation area planning, silviculture, and forest monitoring capabilities, among others.

the same period.³³ Only 11 percent of the USD 2.7 billion was directed to projects that specifically advance tenure reform and security.

Much of the funding that is disbursed may not even reach IPLC organizations directly—most donor funding flows through large intermediaries or programs, due to fiduciary requirements and in some cases, low administrative capacities of IPLC organizations. More than half the funding for IPLC tenure and forest management went through multilateral institutions. Only 17 percent of the USD 2.7 billion went to projects that included the name of an IPLC organization in the project description, amounting to USD 46.3 million per year on average.³³

Countries also need to invest in the “greening” of “grey” financing that influences forests, shifting funds away from activities that drive deforestation to those that protect and enhance forests.

Investments in forests (“green¹ investments”) remain miniscule compared to the massive “grey” flows into sectors and activities that can potentially drive forest loss. Through investing in agricultural subsidies or infrastructure development, governments may knowingly or unknowingly incentivize activities that drive deforestation and forest degradation. For example, Brazil and Indonesia provided more than USD 40 billion in subsidies to just four deforestation-driving commodities, compared to only about USD 346 million in REDD+ financing received by these countries over the same period.³⁴ We estimate domestic grey financing in the form of government spending for agriculture and forestry in countries with significant deforestation is estimated at USD 135 billion since 2010 (see Figure 3.1).³⁵

In comparison to the large source of grey finance, “greening” of funds and other sustainable investments in conservation or sustainable forest use appear to have little priority in national climate pledges. A 2019 review of 40 NDCs found no mention of fiscal policy reforms of existing finance flows to agricultural production, nor other publicly funded programs that influence the drivers of deforestation.¹² No single NDC articulates plans for reviewing existing fiscal incentives that may work against NDC and forest climate goals (Strategy 3).

In the case of developing countries, international donors strongly influence the development priorities of national policy making. Since 2010, international development donors have channeled USD 39.6 billion to the agriculture sector—the largest driver of forest loss—in countries with high levels of deforestation.³⁶ While development aid commonly applies safeguards to mitigate environmental or social harm, it can still have a negative impact on forests.³⁷

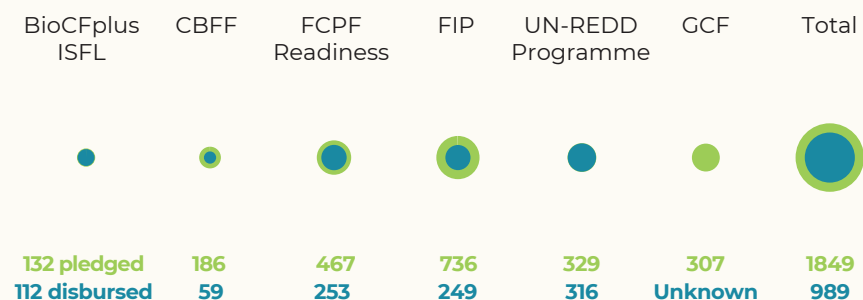
1 Green finance is defined as finance that is aligned with objectives for the conservation, protection, or sustainable use of forests—what we refer to as “forest and climate goals.” Grey finance is defined as finance that has no stated objective to positively effect forests but has potential to negatively impact forests. The impact—whether positive or negative—depends on the context, as well as the design and implementation of these activities. In the context of this assessment, we consider finance for agricultural activities as grey finance. See the NYDF Goal 8 Update for more details.

BOX 3.1.

Commitments and disbursements of REDD+ readiness and results-based finance (2010–2021), in million USD

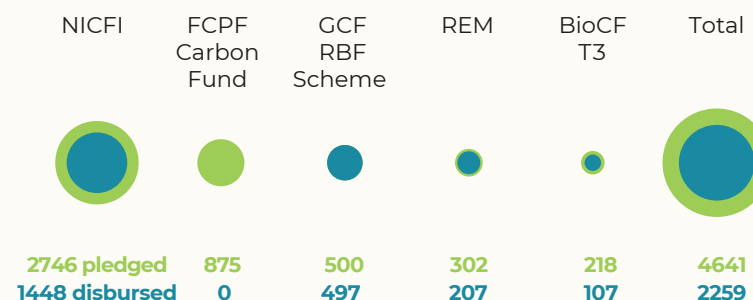
Several bi- and multilateral initiatives have been providers of results-based funding, which include the Forest Carbon Partnership Facility (FCPF), Norway's International Climate and Forest Initiative (NICFI), the Green Climate Fund (GCF), the REDD Early Movers (REM) Program, and the BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL). Recently, there has been a new development of an international public-private partnership called the Lowering Emissions by Accelerating Forest Finance (LEAF) Coalition which seeks to mobilize up to USD 1 billion in results-based payments for forest countries.

International REDD+ Readiness and implementation finance, in million USD (cumulative since 2010)



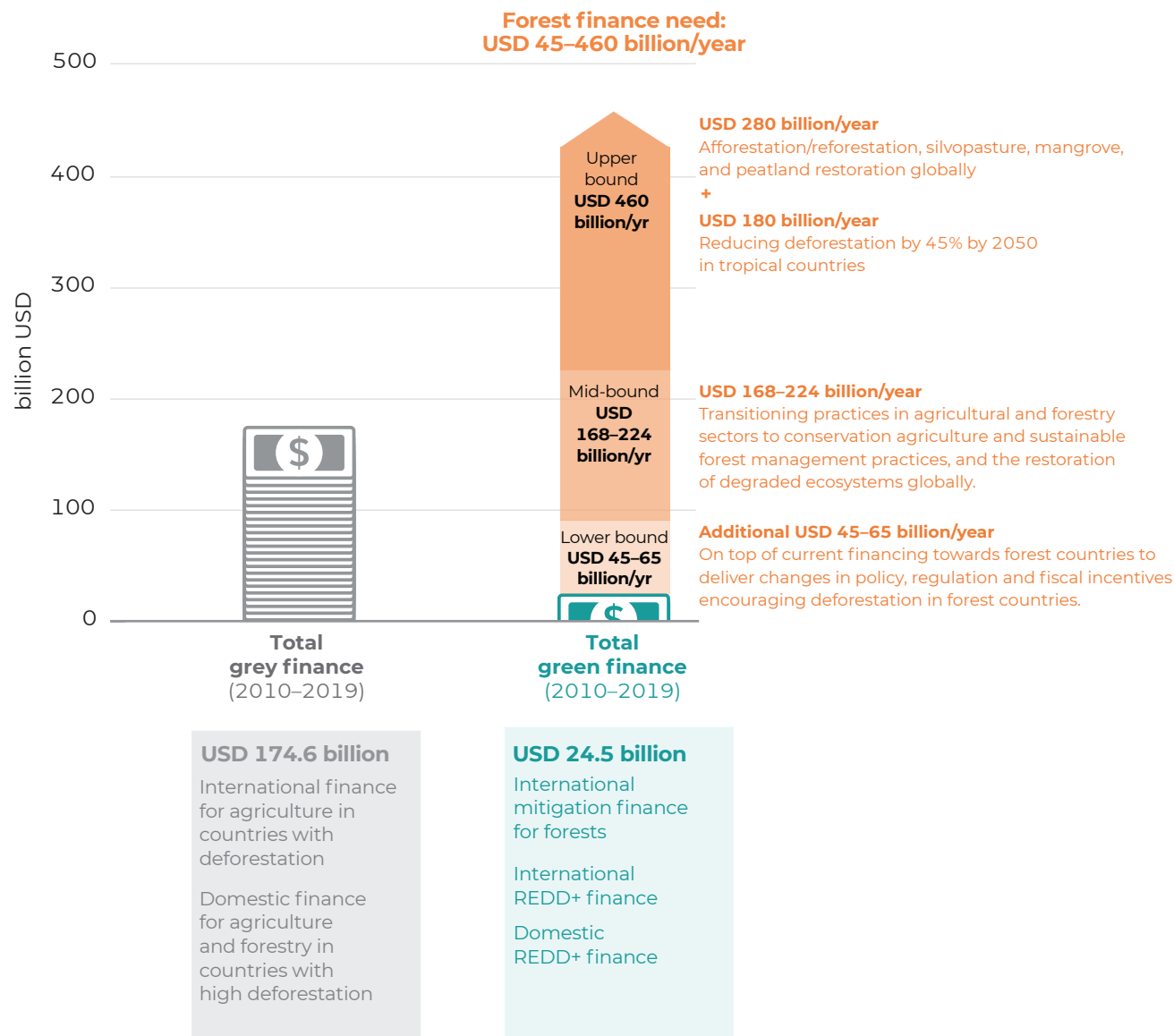
These numbers are an update to the NYDF Goal 9 Assessment Update (2020). Pledges for some of the of the initiatives differ slightly from previous year's assessment due to changes in projects/ commitments that could not be implemented.

International REDD+ Results-based finance, in million USD (cumulative since 2010)



Sources: Based on data obtained from personal communications with NICFI and REM; and GCF's REDD+ Results-Based Payment Pilot, BioCarbon Fund ISFL, and FCPF Carbon Fund commitments retrieved from official websites.

Figure 3.1. Grey and green finance compared to finance need for forest protection, restoration, and improved forest management



4. Have governments made progress in advancing forest climate goals?

Scope

A global assessment of progress made towards forest mitigation targets under the Paris Agreement will only be conducted in 2024 when countries—for the first time—submit information on the implementation of their NDCs under the Enhanced Transparency Framework to inform the Global Stocktake. We therefore analyze governments' existing domestic policies and efforts to protect, enhance, and restore forests for mitigation purposes, many of which have been ongoing for at least a decade.

Our assessment is biased toward developing countries, for which REDD+ provides a common framework for actions to reduce forest emissions. We begin with a broad overview of progress in advancing REDD+ in tropical forest countries. Recognizing that there are different policy tools to implement forest climate goals, we then assess government efforts across six strategies. We provide examples of domestic forest policies by developed countries, yet our analysis is severely constrained by the lack of systematic reviews and assessments. We also assess a number of demand-side policies, where consumer countries have begun to address their global deforestation footprint.

In the following sub-sections, we assess in more detail how governments have advanced climate change mitigation by effectively protecting and enhancing forests along the following six strategies:

- Strengthening forest and land use governance
- Recognizing and securing the rights of Indigenous Peoples and Local Communities (IPLCs)
- Aligning incentives with forest climate goals
- Promoting multistakeholder collaboration as part of jurisdictional approaches
- Ensuring robust forest monitoring and accounting
- Expanding demand-side measures of governments that import forest-risk commodities

We provide an overview of broad trends of progress (or lack thereof), and compile lessons on the opportunities and gaps. In Chapter 5, we provide recommendations for each strategy.

Advancing REDD+ programs in developing countries

REDD+ provides policy makers of developing countries with a framework for national (or subnational) climate action in the forest sector. The Warsaw Framework for REDD+, the Cancun REDD+ safeguards, and a number of other UNFCCC decisions provide high-level guidance for governments on how to achieve emissions reductions and access results-based finance. Complemented by the requirements and guidelines of several donor initiatives and standards, these frameworks guide countries in developing the systems needed for monitoring, accounting, and reporting emission reductions, while also safeguarding initiatives' social and environmental benefits as well as their equal and fair distribution. At the same time, they guide countries in setting up the coordination bodies for REDD+ programs and developing policies that address drivers of deforestation and forest degradation.

Dozens of developing countries have made progress in designing and implementing REDD+ programs. While there is clear evidence that these efforts have led to positive changes in government policies,³⁸ we lack systematic information about their implementation.

In many countries, REDD+ has helped to place forests—and their sustainable use and protection—on national policy agendas.³⁹ More than 50 countries have developed national REDD+ strategies and programs. With donor support, governments have assessed the drivers of deforestation and forest degradation, set up relevant institutions for coordination and collaboration, built forest monitoring capacities, and established systems for environmental and social safeguards. National REDD+ efforts have also led to policy changes; for example, prompting the formalization of Indigenous Peoples and local communities' (IPLCs) land rights, new reforms of forest laws and regulations, and the creation of new participatory mechanisms.^{38–40} We discuss progress on these strategies in more detail in subsequent sections.

However, some of these policies may just exist on paper, and there is no systematic information on whether they are implemented. Moreover, some progress has been temporary (**Box 4.1.1**), with governments backtracking or stalling policy developments following political changes.⁴⁰

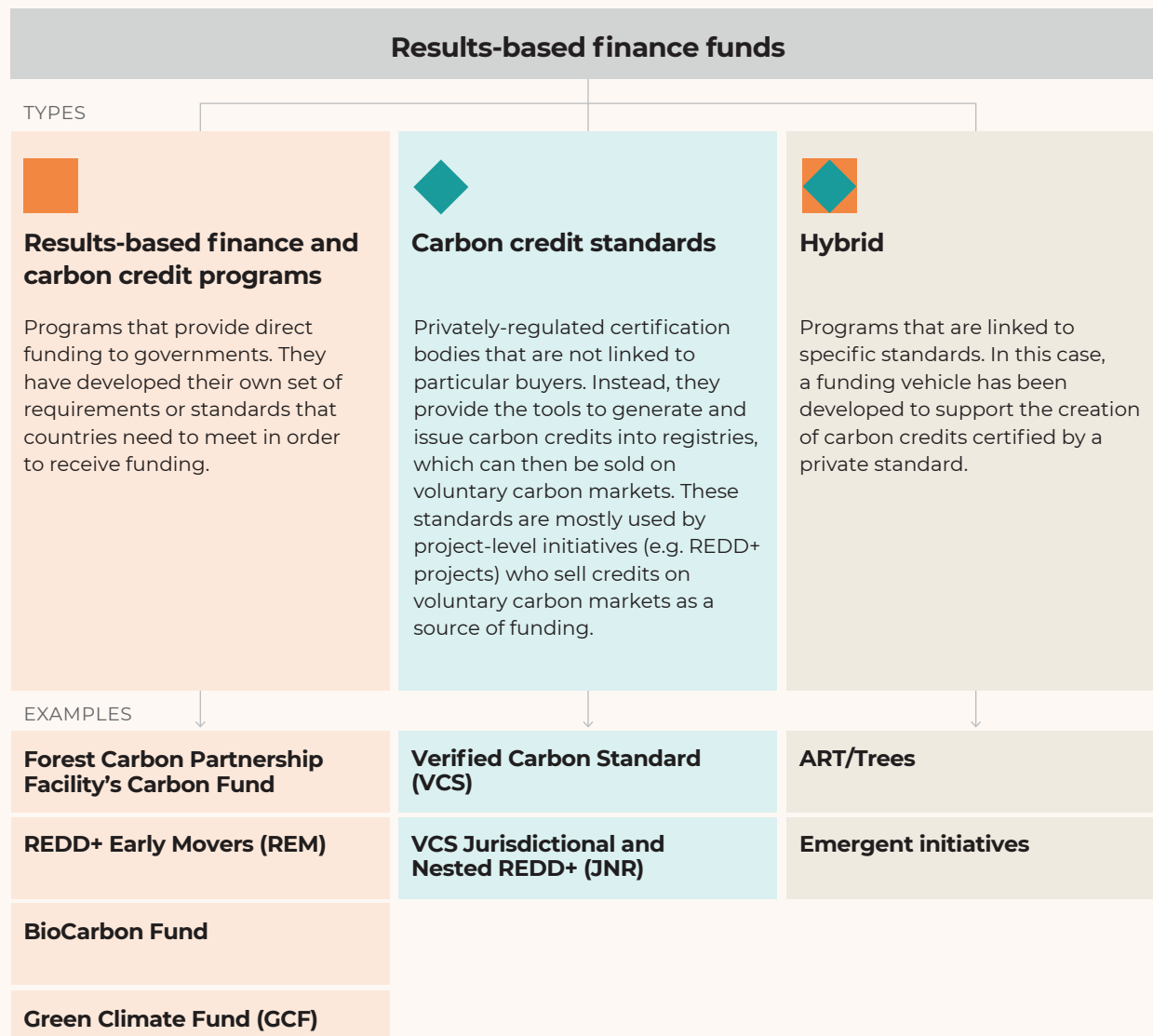
Most REDD+ initiatives are still a long way from stopping tropical deforestation and many have yet to move from a preparatory “readiness” stage to accessing results-based finance. Worryingly, governments are behind in initiating the bold sectoral reforms needed to incentivize the sustainable use and protection of forest, and disincentivize their destruction.³⁹

Most countries are not achieving REDD+ mitigation yet, or at least not at the hoped-for scale. Meeting donors' requirements has been challenging and activities to reduce forest sector emissions have proven to be more complex than expected. As a result, creating REDD+ programs has taken many years, and only a few countries have received payments for results. About half of the committed REDD+ results-based finance remains to be disbursed (**see Box 3.1**), although spending has accelerated over the past two years. Furthermore, the multitude of standards and program requirements (**Figure 4.1**) and the emergence of new programs with overlapping program requirements creates confusion and additional burden for forest countries.

In many countries, REDD+ is implemented outside of existing policy frameworks, and fails to be integrated into relevant sectoral policies,⁴⁰ despite the creation of mechanisms for multistakeholder coordination. Many REDD+ programs still occupy a small niche—both in funding and political attention—and few changes are made to sectoral policies that govern drivers of deforestation, such as agriculture, infrastructure, trade, and extractive industries. Policies in these sectors often fail to integrate forest concerns or, where they do, are often inconsistently implemented.

Figure 4.1. Overview of results-based finance standards and programs

Initiatives for results-based REDD+ finance share the goal of supporting forest mitigation activities and policies. Some channel funding to governments, others also support smaller-scale initiatives. We categorize these initiatives into three broad groups.



Characteristics of results-based forest finance

There are features that are broadly similar across the different initiatives for results-based forest and REDD+ finance. Although the exact requirements of the results-based initiatives vary, most require **at least**:

- ✓ The establishment of a **forest emissions reference level/ forest reference levels** to estimate emission reductions as a result of a REDD+ program, which are independently verified through a **MRV** system. This is done at the country, jurisdictional, or nested project level and establishes a projection of counterfactual emissions against which changes of forest emissions are measured.
- ✓ The adoption of **REDD+ safeguard policies** to ensure programs do not cause environmental or social harm.
- ✓ **Risks of reversal are addressed**, and means to address them are developed, if and when they occur.
- ✓ Consideration of **leakage**, which is the increase of greenhouse gas emissions outside of the boundaries of a project or program that can be attributed to the project or program itself. Purchase programs also require the development of a **"benefit sharing plan"** that ensures the due participation of local actors and IPLCs in REDD+ results-based finance.
- ✓ Explanations on how **carbon rights** are interpreted and reflected in the benefit sharing plan.

In pursuit of environmental and social integrity, a number of standards and programs have evolved in recent years, that set different requirements for results-based REDD+ payments. It can be challenging for forest countries to comply with multiple and evolving requirements that may not always be appropriate for their context.

To operationalize results-based finance, REDD+ donors have developed program requirements and standards that are additional to UNFCCC decisions (see Figure 4.1). Since the launch of the World Bank's Forest Carbon Partnership Facility (FCPF) in 2007, a number of REDD+ funds and financing programs have emerged. In addition, carbon market standards have adjusted their requirements to enable jurisdictional crediting and "nesting" of projects (e.g., Verra's Jurisdictional and Nested REDD+ (JNR) Framework) and dedicated REDD+ standards have been launched (e.g., Architecture for REDD+ Transactions' The REDD+ Environmental Excellence Standard, ART/TREES).

Some results-based finance and carbon credit purchase programs have defined their own requirements for the generation and monitoring, reporting and verification (MRV) of emission reductions (e.g., the FCPF carbon fund or REM), while at least one standard is closely linked to a purchase vehicle (e.g., ART/TREES to Emergent). Private carbon market standards formulate rules that allow the generation of market-quality REDD+ credits.

Standards and programs are—with the exception of the GCF—not the result of multilateral negotiations, and in some cases subject to frequent changes by donors. As a result, REDD+ countries face a multitude of standards, program requirements, price offers, and donor expectations. Different standards have sometimes taken different approaches for ensuring the environmental and social integrity of REDD+ programs, for example, in the setting of safeguards, reference levels and systems for the monitoring, reporting and verification of emission reductions.

STRATEGY 1.

Strengthening forest and land use governance

Achieving national forest goals requires robust governance systems that enable policies and laws to be effectively designed and implemented. Good forest governance^m includes coherent and effective laws governing forests and land use; strong institutions; checks and balances that ensure these laws are respected; and systems to ensure transparency and inclusivity in policy making and implementation.^{41,42} Ideally, they also have systems in place to monitor how laws and policies are being implemented, enabling them to adapt and respond to challenges as they arise.

Robust forest governance is essential for ending deforestation and enabling governments to align development and environmental objectives. Where governance is weak, even the best-intentioned policies will have little to no effect. Moreover, poor governance breeds a lack of respect for the law, leading to a vicious cycle in which actors habitually disregard laws and regulations.

Overall, the shortcomings of governance systems for forests are perhaps best indicated by the widespread prevalence of illegality. At least 69 percent of tropical forest conversion for commercial agriculture—the leading driver of deforestation—in the 2013–2019 period was illegal.

A recent study⁴³ by Forest Trends assessed the extent to which commercial agricultural conversion violated relevant national laws, in particular those governing licensingⁿ and forest clearance.^o It found that 69 percent of this conversion (31.7 million hectares), an area comparable to the size of Norway, was in clear violation of the law. This number is likely to be an underestimation due to the lack of evidence in some countries—illegality

m There is no commonly accepted definition of the term "forest governance," but attempts to measure it invariably incorporate assessments of transparency, the rule of law, certainty of land tenure, and the control of corruption, among others. See sources for further details.

n Examples of breaches of licensing laws include failures to obtain permits or permission from landowners, failure to conduct environmental impact assessments, corrupt and fraudulent authorizations

o Examples of breaches of forest clearance laws include overharvesting, harvesting outside of boundaries, and tax evasion.

rates were highest in countries with the most complete data. Worryingly, this represents an increase of 28 percent on the share of commodity-driven deforestation that was estimated to be illegal in the 2000–2012 period, indicating governments are not only failing to address illegal deforestation, but are allowing it to increase relatively unchecked. While it was not possible to estimate the share of illegal deforestation linked to export markets globally, much of it is linked to internationally traded commodities; for instance, 81 percent of conversion for palm oil in Indonesia was illegal.

Widespread illegality is facilitated by weak enforcement in tropical forest countries, but challenges also abound in higher-income countries. While enforcement has improved in some countries, much of this has recently been reversed.

The agencies tasked with tackling illegal deforestation are often chronically underfunded, particularly in developing countries. A 2019 survey of 7000 forest and wildlife rangers across 28 developing countries found that they are frequently underpaid and not provided with adequate training and resources, despite typically working in adverse conditions.⁴⁴ Most also believe that those caught engaging in illegal activity are treated too lightly by prosecutors and judges. In Brazil—one of the tropical forest countries with the most advanced enforcement capabilities—enforcement agencies have had their actions impeded and their budgets cut (see Box 4.1.1). Similarly, in Mexico, the current administration has made drastic budget cuts to the Forestry Administration (CONAFOR), leading to it letting go of up to 70 percent of its staff in 2019.⁴⁵

Enforcement challenges also persist in some high-income countries. In Romania, flaws in the national SUMAL tracking system made checks on the legality of timber products in the supply chain impossible, facilitating the emergence of an organized forest crime ring. The government sought to respond to this crime by establishing a police task force to investigate and, in 2020, drafted a law to establish the DIIM, an agency specifically focused on investigating environmental crimes in Romania.⁴⁶ Similarly, in Russia, a lack of proper monitoring and enforcement has allowed widespread illegal logging in the Irkutsk region to continue despite local court orders.⁴⁷

While there has been progress in improving enforcement, some of these gains have been reversed in recent years. For example, the slowdown of

deforestation in the Brazilian Amazon after 2004 was accompanied by an increase in the budgets allocated to enforcement agencies and conservation programs; however, as noted above, these have recently been cut.⁴⁸

Corruption is endemic in many forest areas, further undermining enforcement efforts and facilitating illegal activity.

This corruption can range from forest ranges accepting small “fees” to allow communities to access protected forests to sophisticated schemes involving organized crime groups and government officials at the highest levels. While many countries have put anti-corruption agencies in place and introduced penalties for the government officials, private companies, and individuals involved, the agencies often lack the teeth needed to serve as an effective deterrent. For instance, the scope of Malaysia’s anti-corruption unit is limited to investigation rather than prosecution. Indonesia’s anti-corruption unit has more power and is effective in the cases it takes, but it can only take on a fraction of potential cases due to limited (and recently decreasing) resources.⁴⁹ Reporting corruption also carries major risks. Almost 60 percent of forest and wildlife rangers surveyed in 2019 said they would fear for their safety if they reported a colleague for corrupt behavior.⁴⁴

Unclear and overlapping legal frameworks often create ambiguity that makes compliance difficult and enables illegality and corruption to flourish.

Unclear, overlapping, and inconsistent laws are a common feature of legal frameworks governing forests and land use, particularly in developing countries. Officials and private actors may thus face challenges in following the law even where they want to. Clarifying these frameworks has thus been a central element of initiatives seeking to ensure sustainable sourcing of forest-risk commodities. There has been some progress in this regard, particularly in countries that have developed Timber Legality Assurance Systems (TLAS) under the EU’s Forest Law Enforcement, Governance and Trade (FLEGT) initiative (Strategy 6). For example, the development of Vietnam’s TLAS involved the consolidation of legislation, streamlining and simplification of regulations, and clarification of forest land use rights.⁵⁰

However, there have been challenges with these systems, including their limited scope⁵¹ and on-the-ground implementation differing from what is defined “on paper”.⁵² In many cases, actors purposefully exploit loopholes or use ambiguities to cover illegal activities. In Russia, for instance, loggers have taken advantage of loopholes that allow for “sanitary felling” to avoid the spread of disease and pests to log trees in spite of prohibitions.⁴⁷ Similarly, in Indonesia, overlapping mandates of central and provincial government authorities in issuing permits for agricultural development has reportedly facilitated corruption.⁵³

Some countries have made progress in strengthening forest governance frameworks and policies.⁵⁴ Others have weakened their legal and institutional frameworks, by amending, revising, or introducing policies that reduce and undermine forest protection resulting in a reversal of previous progress.

A 2018 assessment of nine major tropical forest countries showed that many governments had made some advancements in strengthening their forest governance over the previous five years, although progress varies widely. For example, all countries assessed have improved coherence between strategies focused on illegal logging and those on deforestation and climate change,⁴⁹ and all also identify illegal logging as a priority in national REDD+ strategies. However, few have comprehensive plans in place to tackle illegal logging and deforestation. In Southern China, policies adopted since 2000 have been credited with increasing forest cover and sequestering carbon.⁵⁵

In contrast, a recent study found that in all of the five countries with the world’s largest areas of tropical forest—Brazil, Colombia, the Democratic Republic of the Congo (DRC), Indonesia, and Peru—governments have responded to the COVID-19 pandemic to roll back social and environmental laws, regulations, and safeguards.⁵⁶ These include amendments weakening environmental and social safeguards in the DRC and impact assessments, land use and public consultation in Indonesia, and suspending requirements for companies to prepare environmental and social monitoring reports in Peru. In Brazil, major gains in reducing deforestation rates up until 2012 have since been undone, partially due to successive governments rolling back protections and providing amnesty for illegal squatters.

BOX 4.1.1.

Brazil’s history of success, but weakening of forest governance in the last decade

Past reductions in deforestation in the Amazon have been put at risk by lax enforcement, a lack of promised incentives for forest protection, and an administration that is antagonistic toward forest protection and Indigenous rights. The Brazilian Amazon has long been hailed as a success story in global forest conservation. Between 2004 and 2012, the deforestation rate dropped by 84 percent, all while soy and beef production increased. Though market forces played a role, strengthened enforcement capacity and smart conservation policies—including blocking credit to actors engaged in illegal deforestation—drove the trend.⁷² Despite the positive results, Brazil received results-based payments for less than 1 percent of reductions, which has weakened political will. Deforestation rates have increased in recent years, with 2020 showing the highest rate of loss since 2008.⁷² However, deforestation has remained below pre-2005 levels.⁷³

A confluence of factors can explain this surge in forest loss. A 2012 amendment to the Brazilian Forest Code reduced the area of legal reserves required on rural private properties, putting more than 15 million hectares of forest in the Amazon at risk, as well as granting amnesty to those who cleared land before 2008.⁷⁴ A bill proposed in 2020 would provide similar amnesty to squatters who illegally deforested up to 2,500 hectares of land within government-controlled reserves between 2011 and 2019.⁷⁵ Imazon, the Amazon Institute of People and the Environment, estimates that if the bill is passed it could incentivize a new cycle of deforestation as land grabbers expect to again be granted amnesty in the future, potentially resulting in 1.6 million hectares of land being cleared by 2027.⁷⁶

Deregulation and the weakening of enforcement efforts, coupled with anti-environmental rhetoric by the current administration and road infrastructure development, may also be driving increased speculative behavior.⁷⁷ The federal government cut the budget for environmental enforcement by 27.4 percent in 2021,⁷⁸ while fines for environmental crimes in the Amazon Basin dropped by 42 percent in 2019 despite increasing (mostly illegal) deforestation. Meanwhile, the Ministry of Defense has impeded operations by the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA) to investigate illegal mining in indigenous territories.⁷⁹

Most governments require environmental and social impact assessments (ESIAs) before approving development projects in sectors that drive deforestation; for example, mining and infrastructure. Yet, their implementation is weak. In many countries, policies do not give priority to avoiding forest loss, nor do they consider the full range of direct, indirect, and cumulative impacts.³⁷

For example, in Asia and the Pacific region, most countries adopted requirements for conducting ESIs and preparing environmental management plans before the start of mining exploration and extraction projects.⁵⁷ These policies, however, often fail to consider the indirect impact of the mine, such as infrastructural developments and population settlements that may result in deforestation.⁵⁸ In Malaysia, for instance, where ESIs are a legal requirement for infrastructure projects, the process is limited to potential local impacts within a limited spatial scale, and does not require identification of indirect risks related to roads.⁵⁹ In Indonesia, for geothermal exploration, a lighter form of environmental planning and mitigation and monitoring plan is required, even though exploration also requires forest clearing and extensive road construction.⁶⁰

Furthermore, in most countries, ESIs are not required for mining and infrastructure developments until a company applies for a license to operate.⁶¹ In such cases, the environmental assessments are much less effective in influencing decision-making by licensing authorities and lead to less effective controls to mitigate environmental harm.⁶²

Progress in improving transparency has also been mixed. While many countries have adopted laws that give citizens the right to access forest-related information, we found few examples of governments that released data proactively or developed systems that made information available to the broader public.

The implementation of Voluntary Partnership Agreements (VPA)^p developed under the EU's Forest Law Enforcement, Governance and Trade (FLEGT)

^p FLEGT VPAs are bilateral trade agreements between the EU and timber-producing countries to prevent the trade of illegal timber. VPAs are customized agreements that determine what legal timber means and how legality will be monitored and verified in each country of export.

initiative has contributed positively to increasing transparency and accountability.⁶³ In Ghana and Indonesia, more information has become available on request and some information is more regularly published that is relevant to forest stakeholders. For example, Ghana's Timber Transparency Portal, launched in 2018, contains key information of the Legality Assurance System (GhLAS) of the country, and also functions as a due diligence tool for the private sector. In Indonesia, the OneMap Policy Geoportal, aimed at resolving conflicts and clarifying land holdings among stakeholders, has integrated 84 of 85 thematic maps into one base map (**Box 4.1.3**).

There has been progress in increasing the participation of non-governmental stakeholders in decision-making in some countries. Nevertheless, overall progress in enabling and broadening participation remains slow.

For instance, in Peru, consultation processes on the Framework Law for Climate Change (2020) have seen Indigenous Peoples organizations secure important wins, including the establishment of an Indigenous Climate Platform by the law.⁶⁴ Similarly, negotiations on the development of a new Forest Code for the Republic of the Congo saw civil society and the government working closely together, helping to improve relations and ensure the law reflected key civil society priorities such as strengthening community rights.⁶⁵ And a recent study in Ghana and Cameroon indicates that increased transparency and participation have helped to improve accountability of government and the private sector.⁶⁶

Participation processes are often limited in scope and may not be accessible to all communities. For instance, public engagement in sustainable forest management in Canada tends to favor well-educated Caucasian men and is less accessible to women and Indigenous peoples.⁶⁷ Similarly, a recent study in Indonesia found that specific measures to address existing social imbalances in community forest management tend to be dominated by households with higher social standing.⁶⁸ The Nepalese government has been reluctant to expand its successful community forest program to lowland regions where forests have high commercial value.⁶⁹ Organizations participating in the implementation of forest laws also face challenges. Independent monitors play a crucial role in implementing the Indonesian timber legality assurance system (SVLK); however, they are hindered in

accessing data and in ensuring the continuity of monitoring efforts due to lack of funding.⁷⁰

Countries in Latin America and the Caribbean, meanwhile, reached an important landmark in addressing transparency and participation by adopting the Escazu Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean in 2018, but have been slow to ratify the agreement.^{q,71}

q As of August 2021, only half of the 24 countries that signed the agreement have ratified it.

Common policy and legal instruments to influence forest outcomes

There is a suite of policy and legal instruments that governments use to influence forest and non-forest land use. These include, but are not limited to, protected areas, land use planning, titling and land tenure, and moratoria. Other instruments, for example, fiscal policies, are covered elsewhere (**Strategy 3**). Some important advancements have been made by some forest countries, with mixed outcomes elsewhere.



Integrated land use planning

To ensure that sustainable development and forest protection and conservation go hand-in-hand, an integrated approach to land use planning and implementation is required. Most forest countries do have land use plans and regulations. However, the question is whether—and how—governments reconcile land uses and priorities that are not always compatible. Integrated land use planning necessarily considers these competing objectives and strives towards a more coherent planning of activities within a territory that takes into account sustainable development; in particular, social needs, livelihoods, and environmental protection. In addition, multisector and stakeholder collaboration (**Strategy 4**) are central to effective integrated land use planning.

Some countries have adopted land use regulation and spatial zoning to balance conservation and development at both national and sub-national levels, for example in Southeast Asia and the Amazon.⁸⁰ In Vietnam, the Law on Planning 2017 provides a clear principle on land use planning across national and sub-national levels that harmonizes cross-sectoral planning and priorities (**Box 4.1.2**).⁸¹ In Colombia, the territorial zoning regulation calls for the zoning of forestry reserves in the Amazon region.⁸⁰

Improved land-use planning is a central challenge for the Congo Basin countries. Recognizing this, the Central African Forest Initiative (CAFI) is targeting support in this area in the DRC, Gabon, and the Central African Republic.⁸² In DRC, as a result, a new land use planning policy was adopted in January 2020.⁸² CAFI is also funding six flagship Integrated Rural Development Programs in the country both to address the drivers of deforestation and promote adaptation strategies.⁸³

BOX 4.1.2.

Progress in integrating REDD+ objectives in national land use planning in Vietnam

Insufficient and inadequate land-use planning and, consequently, poor land-use management, are the key drivers for deforestation and forest degradation in the country. Since 2008, the government has aimed to address these drivers by refining its legal framework to integrate key components of REDD+ into existing laws and policies. For example, grievance redress mechanisms have been integrated into the Land Law, in addition to enforcing Free Prior Inform and Consent (FPIC) and participatory mechanisms in land use planning.^{84–88} In addition, REDD+ objectives have been integrated into the Forest Protection and Development Plan (2011–2020) at all levels of governance; at the subnational level, local REDD+ Action Plans have been added into the Provincial Socio-Economic Development Plan.⁸⁸

In a major effort to streamline land use regulations, the government has been consolidating around 25 laws and thousands of plans into one unified Planning Law.⁸⁷ With support from donors, Vietnam has put significant effort into addressing inconsistent land-use classification standards and forest definitions.⁸⁹

Despite a strong political commitment and initial efforts towards REDD+ and sustainable land use planning, much work still needs to be done and monitored to ensure well-intended policies translate well in practice.⁹⁰ Effective integrated land use requires a strong political commitment, sufficient budget and human resources, adequate monitoring evaluation, and law enforcement for forest land allocation.⁹¹ It also requires acknowledging and addressing pre-existing conflicts over forests and power relations underpinning forest management,⁹² as well as implementing proper FPIC processes.^{84, 88, 89, 92}



Land titling and tenure

Clear and uncontested land tenure are essential for forest stewardship and investment in sustainable landscapes. Where forest tenure rights are weak, unclear, or absent, deforestation is more likely to occur.⁹³ Seventy-five percent of countries implementing REDD+ cite land tenure as an underlying cause of deforestation.¹⁰¹ Some of the issues around insecure and unclear land tenure include overlapping rights and the absence of accurate, transparent, and updated spatial maps of titles, concessions, and land activities. Consequently, landholders may seek to strengthen their claim to untitled land by clearing forest and using the land “productively”. Indigenous peoples, local communities, and smallholders are often targets of land-grabbing or speculation, which is more likely to take place on communal lands given their lack of legal recognition. Furthermore, weak or absent land rights limit access to credit and remove incentives for long-term investment in sustainable land management practices.⁹⁴

A 2018 assessment of nine forest countries finds that while many countries have laws requiring demarcation of land ownership both on the ground and in publicly accessible maps, few have achieved this in practice for most of their forest or other rural land. Similarly, while many countries have systems in place for resolving land conflicts, these systems often have important deficiencies that hinder their effectiveness. Clear and transparent land tenure is only one part of addressing deforestation; it is also crucial to recognize and secure IPLCs’ customary land rights over their forest lands **(Strategy 2)**.

BOX 4.1.3.

Transparency and open data help clarify land tenure—example from Indonesia

The oft-cited example of a policy to address unclear land tenure is Indonesia's One Map Policy Geoportal. Launched in 2018, the initiative was a step towards addressing disputes and overlapping land claims resulting from inconsistent demarcation of land from different state institutions.⁹⁵

The policy aims to create one integrated map hosted on a geoportal database, harmonizing data across 19 ministries and government agencies. Through this process, the government has found that 40 percent of the country's land mass is disputed.⁹⁶

This effort is an important step in identifying the scale of overlapping tenure. However, there is concern among civil society and IPLCs around the inclusion of traditional customary land, which has historically been excluded in government geospatial planning documents, the main dataset of this integrated map. The current lack of transparency is worrying; the One Map Policy geoportal is only fully accessible to key government ministers and departments. Strengthening the One Map Policy by incorporating participatory maps that cover customary lands and forests and providing public access to the map will be an important step towards reducing the threat of land grabbing and conversion.⁹⁷



Moratoria

Several major forest countries have declared moratoria on some form of logging or concessions in forest areas. Though moratoria are blunt, hard-handed measures, when properly designed and implemented, they can be very effective in halting deforestation. This is especially true where unclear and conflicting laws make it difficult to ensure commercial concessions do not result in deforestation. For instance, high-level support for a logging moratorium in Lao PDR has helped strengthen enforcement efforts (**Box 4.1.4**).

BOX 4.1.4.

Moratoria has been effective in halting deforestation, but poor implementation and policy reversal can hinder progress made—examples from Indonesia, Lao PDR, and the Democratic Republic of the Congo.

Indonesia saw its lowest rates of deforestation in 2020 since monitoring began three decades earlier. Much of this success is attributed to the government's policies, such as the moratoria on new palm oil plantations.⁹⁸ While weak enforcement of the 2011 moratorium on primary forest and peatland concessions undermined its effectiveness,⁹⁹ the additional 2016 moratorium on peatland drainage has found greater success. This may partially be due to the 2016 moratorium being issued by the President rather than the Ministry of Forestry, and immediately followed up by a series of implementing regulations.¹⁰⁰ Since the moratorium took effect, the rate of tree cover loss in protected primary forests decreased by 88 percent relative to 2016.¹⁰¹ A third moratorium has just been issued in September 2018, preventing the allocation of new palm oil concessions in national government land for three years.¹⁰³

In Lao PDR, executive support from the Prime Minister has led to the partial success of a timber export moratorium. The moratorium has reduced illegal trade, with a significant drop in the exports of sawn logs from Lao PDR to Vietnam in 2016, after the introduction of the rule.¹⁰³ However, concerns around the implementation of the moratorium remain,¹⁰⁴ as large-scale logging may continue through legislative loopholes. Despite enforcement efforts, illegal logging remains an issue of concern. In 2020, inspection authorities seized 290 tons of illegal timber and closed numerous wood-processing plants that did not follow the rules of the moratorium.¹⁰⁵

The DRC has had a moratorium on new logging concessions since 2002, covering about 70 million hectares of forest lands.¹⁰⁶ However, the current administration is considering to lift the moratorium and expand timber concessions, with a potential to emit an extra 35 million tons of carbon per year.¹⁰⁷



Protected areas

Governments have designated almost 18 percent of global forests as protected areas. Yet more than 32 percent of protected areas in the world, including Indigenous territories, are under intense human pressure.¹⁰⁸

Where properly enforced, this status can limit forest conversion and degradation, while contributing to the natural regeneration and enhancement of forest carbon stocks. In 2020, more than 726 million hectares of forests fall within protected areas worldwide, with South America having the highest share of its forests (31%) in protected areas.³⁷ Designated protection is an important signal and widely used tool for the conservation and sustainable use of forests.

Since 2002, however, more than eight million hectares of tropical primary forests in protected areas were lost globally, reducing protected forest areas by 2.2 percent.¹⁰⁹ Forests under the protection status are not necessarily off-limits to development. The level of protection differs across forest countries, as does the ease with which countries can reduce this level. In recent years, for example, some governments have argued in favor of national strategic interest or security to justify mining, agriculture, or infrastructure projects and the necessary legal reforms to subject protected areas to downgrading, downsizing, or degazettement^r (so-called PADDD events).¹¹⁰

r PADDD refers to the decrease of legal restrictions that define the number, magnitude and extent of human activities in a protected area (downgrading), the decrease of the size of a protected area due to excision of land/sea area through a legal boundary change (downsizing), or the loss of the legal protection of an entire area (degazettement).

Protected areas are most effective when managed in collaboration with IPLCs. IPLCs customarily own and manage half of the world's land and a large share of protected areas overlap with indigenous lands. The failure to respect Indigenous rights in protected areas can lead to human rights abuses, including killings and evictions, loss of livelihoods, and extended conflicts.¹¹¹ Research in the Peruvian Amazon also indicates that indigenous territories have lower deforestation rates than protected areas with similar conditions.¹¹² Indeed, Indigenous people are often better equipped to manage forests than governments.¹¹¹ In this context, the recognition of IPLCs' rights to their territories (**Strategy 2**) and to self-determined governance over their customary land is critical, which may include areas for conservation. Co-managed and indigenous-managed protected areas are likely to be both fairer and more effective than those managed entirely by governments.

These instruments are not exhaustive, and are most effective when implemented in tandem with the other strategies in this report (see **Strategy 2** and **Strategy 3**).

STRATEGY 2.

Recognizing and securing the rights of Indigenous Peoples and local communities

Indigenous Peoples and local communities (IPLCs) have long served as custodians and guardians of forests, the carbon stocks they contain, and the ecosystem services they provide. About half of the planet's land is managed communally by Indigenous Peoples, Afro-descendant Peoples, and local communities.¹¹³ Research in recent years points to a clear finding—compared to other forest lands, IPLC-managed forest territories have lower deforestation and forest degradation, as well as improved environmental conditions. In Latin America and the Caribbean, Indigenous territories in almost every country have had lower deforestation rates than other forest areas.¹¹⁴ A recent assessment finds that Indigenous and tribal forest lands in four countries in Latin America were disproportionately net carbon sinks in the 2001–2020 period.¹⁴

Indigenous and forest community lands hold over three quarters of the planet's remaining biodiversity.¹¹⁵ They also generate important socio-economic and environmental services that are valuable at the local and global scales. Forest loss and degradation have immediate, life-threatening impacts on Indigenous and forest-dependent communities who rely on customary land for their livelihoods and as an integral dimension of their identity, culture, and worldview.

When Indigenous peoples and forest communities' rights over their customary lands are recognized and secured by laws, policies and state institutions, we see positive outcomes for forests and natural ecosystems. Recognizing and securing the rights of IPLCs over their customary lands is an essential imperative, not only for forest and climate goals but also to secure the sustainable livelihoods for 200 million IPLCs who live within and depend on tropical forests globally.¹¹⁶

Based on the NYDF Assessment of Goal 10, this strategy focuses particularly on governments' progress in advancing and securing IPLC rights over their customary forest lands as an imperative first step towards broader efforts and initiatives towards mobilizing and empowering IPLCs.

At least half of IPLC-held lands and territories globally have yet to be legally recognized by governments.¹¹³

Across 42 countries representing half the world's land area, the area of community lands lacking legal recognition by national governments represents at least 1,488 million hectares—an area nearly twice the size of Australia or more than four times the size of India.¹¹³ Africa is the region with the largest proportion of unrecognized IPLC lands and territories. While Asia has a higher share of legally recognized IPLC lands, the vast majority are found in China; if China is excluded, close to 94 percent of land held by IPLCs in Asia is not legally recognized.¹¹³ Although there have been recent setbacks and threats of rollback in Latin America, the extent of lands recognized as owned by or designated for IPLCs is largest in Latin America.

In key forest countries, legal frameworks for recognizing IPLC rights and mechanisms are in place. Implementation and security of these rights, however, is lagging and weak.

Between 2002 and 2017, the number of countries with legal frameworks establishing forest communities as rightsholders increased from 40 to 54, out of 58 studied.¹¹⁸ However, the enforcement and implementation of frameworks have been slower to scale. A 2021 assessment of 29 forest countries found that most had adequate (59%) or somewhat adequate (38%) legal frameworks for rights recognition. Fewer countries had adequate national government willingness (34%) or somewhat adequate willingness (45%) to implement these legal frameworks. Government capacity is also a limiting factor, with only two of 29 countries (7%) assessed as having adequate capacity to implement tenure reforms.¹¹⁹ In Latin America, for example, the governments of Argentina, Colombia, Honduras, Nicaragua, and Peru have all adopted legal regimes that recognize the rights of IPLCs to their lands, but many communities have yet to receive their titles.¹²⁰

While some governments may recognize IPLCs' rights in national legislation and policies, the security of these rights—that is, the confidence that rights will be upheld and enforced—is still limited. Colombia (**Box 4.2.1**) has been at the forefront in IPLC rights-recognition, though implementation and enforcement remains wanting. An assessment of 11 subnational tropical forest jurisdictions in Brazil, Mexico, and Peru shows that IPLC rights are recognized but, in practice, not implemented nor secured. Barriers

include complex procedures for land titling and registration; insufficient funding and capacity to secure rights provided for in the law; and failure to keep clear, spatially-explicit, and publicly-available data on tenure and structural violence.¹²¹

Few IPLCs can confidently count on free, prior, and informed consent (FPIC) mechanisms to ensure their consent and decision-making over their customary lands.

Of 60 countries for which laws relevant to timber extraction were examined, only 16 countries' laws included requirements for companies to obtain FPIC of local communities.¹⁰¹ In some countries such as Peru and Bolivia, FPIC is defined to only require *consultation* with communities, as opposed to *consent*. In countries that have recognized FPIC in their laws,¹²² it often applies only to Indigenous communities, though how this limitation is applied in practice varies across countries.¹²³ In countries that limit FPIC to Indigenous peoples in this way, other local communities that do not identify or are not recognized as indigenous may be vulnerable to investors or project developers infringing on their territory. Furthermore, many laws requiring FPIC lack regulations or guidelines, which can hinder implementation; this and other weaknesses often lead to such laws not being respected.

In Canada, courts have held that Indigenous Peoples should be consulted "in good faith" about developments on their lands.¹²⁴ Projects should also accommodate communities when there are impacts on Indigenous Peoples' rights. While the government has committed to providing meaningful consultation for Indigenous Peoples communities, this is not equivalent to consent.¹²⁵ IPLC consultation was also only formalized in 2016, when Canada recognized the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). However, debate remains as to whether the principles are sufficiently addressed in the country's legal frameworks.

Where they have been enshrined, FPIC has been crucial for communities to contest, and in some cases, halt development on IPLC lands.

IPLCs and civil society groups have long utilized the courts as a tool to enforce FPIC requirements.¹²⁶ Belize's Supreme Court cited FPIC requirements for Mayan communities in its 2007 order to cease granting extraction and hydroelectric permits.¹²⁷ When a mega hydroelectric project in Costa Rica advanced without fulfilling FPIC requirements, the United Nations Special Rapporteur for Indigenous Rights weighed in, naming FPIC as essential.¹²⁸ In 2016, the Supreme Court annulled the authorization for the project.¹²⁹ In Peru, a court determined in 2017 that Indigenous lands occupied by IPLCs in voluntary isolation must be excluded from an oil exploration project.¹³⁰

Recent environmental rollbacks and systematic suppression of rights in key forest countries weaken existing protection for IPLCs.¹³¹

The security of IPLC rights is undermined by recent rollbacks in environmental and human rights protections. Though widespread globally, this has been particularly pronounced in Brazil, where legislative protections for Indigenous groups have been threatened under the current administration.¹³² The administration has loosened environmental controls, weakened the government body responsible for protecting Indigenous lands (Fundação Nacional do Índio, FUNAI), and introduced a set of economic initiatives that impinge on Indigenous Peoples' constitutional rights.¹³³ And in Peru, institutional weaknesses in the Ministry of Culture undermine efforts to enforce the legal framework and timelines for formalizing Indigenous Reserves, revealing the conflicts between different state institutions that push back against social and environmental protections for Indigenous Peoples.³⁷

Worrisome trends of violence against Indigenous leaders and environmental defenders continue with impunity globally.

The nominal protection Indigenous groups have on paper is often not reflected in dynamics on the ground. Recent years have seen escalating violence against environmental defenders, further limiting the accountability of companies and governments.¹³⁴ Despite only comprising five percent of the world's population, Indigenous peoples have been targeted in over a third of all fatal attacks against land or environmental defenders between 2015 and 2019.¹³⁴ 2019 was a record year with 212 land and environmental defenders killed globally; more than two thirds of murders took place in Latin America. States have increasingly responded with systematic and deliberate suppression of IPLC and grassroots environmentalists, and justify their actions through legal mechanisms such as penal laws and anti-terrorist legislations.^{126, 135}

BOX 4.2.1.

Colombia's legal recognition of IPLCs and nature are strong foundations for recognition, but rights need to be enforced and protected against threats.

The Colombian government has been ahead of the global curve in supporting IPLC rights. The 1991 Constitution explicitly establishes legal protections and regulatory frameworks that safeguard land tenure¹³⁶, which has yielded positive results. IPLC ownership rights accounting for 75 percent of the Colombian Amazon have been secured.¹³⁷ Overall, nearly one third of the country's territory is under the protection of IPLCs¹³⁶, of which 89.3 percent is forested.¹³⁸ While these data are promising, the legacy of the country's generational internal conflict, and the peace agreement which ended the hostilities, have systematically harmed IPLCs. Among other impacts, the conflict has resulted in environmental degradation from the fighting and the land conversion to illicit cash crops.¹³⁹ Moreover, the cessation of fighting has inadvertently created fertile conditions for land-grabbing and resource exploitation, leading to high deforestation rates.^{140, 141} Worryingly, Colombia has one of the highest number of killings of IPLCs and environmental defenders in the world, much of this taking place with impunity.¹³⁴

Colombian jurisprudence has endowed natural ecosystems with legal legitimacy,¹⁴² and when combined with norms around IPLC participation, this pioneering environmental ethic has the potential to further enhance the security of Indigenous and Afro-Colombian land ownership. Compared to neighboring countries, Colombia ranks below average on metrics of public participation in lawmaking, political leadership accountability, rights of environmental defenders, and citizen access to justice.¹⁴³ This suggests that the norms regarding bottom-up governance are not yet adequately established and that the jurisprudence has prioritized ecosystems while overlooking the people who rely on those landscapes.

While legal acknowledgment of nature is an important foundation, public budget priorities do not seem to reinforce these rights. Governments in the region spend an average of USD 23 per capita on the environment, while Colombia spends a mere USD 4.61 per capita.¹⁴³ Closing this finance gap could strengthen the rights of environmental defenders, increase the public's participation in natural resource policymaking, and create legal synergies between the rights of nature and the rights of IPLCs.

STRATEGY 3.

Aligning incentives with forest mitigation goals

Flows of public finance and fiscal policy have a strong influence on how forests and resources are managed. In most countries, economic development planning and fiscal policies^s at best neglect to account for the economic, social, and environmental value of maintaining intact forest; at worst, they directly contradict countries' forest conservation or sustainability goals.¹⁴⁴ For example, agricultural subsidies are often designed in a way that encourages land use conversion from forests to farmland.¹⁴⁵ Support programs aimed at smallholder farmers or artisanal and small-scale miners similarly aim to increase productivity, but the increased profitability of their operations may then incentivize these actors to expand into bordering forest areas.

However, economic planning and policy does not need to conflict with forest goals. Development and economic policy explicitly aligned with environmental objectives can on net be more lucrative. It can yield higher revenues for the state and higher incomes for rural populations than policies that ignore forests' value.¹⁴⁴ In terms of public expenditures for rural development, investments to increase productivity (for example, of smallholder farming or small-scale mining) can pay off in sustainable economic growth and secure livelihoods when paired with investments in education, infrastructure, and securing community land rights.

The 2020 NYDF Assessment of Goals 3 and 4³⁷ outlines the key dimensions of development policy and programming that can align livelihoods with forest protection, conceptualized as the PRIME framework (**Figure 4.3.1**).^t Similarly, when fiscal mechanisms like taxes account for the social cost of environmental damage, they can increase state revenues while promoting social and environmental welfare.¹⁴⁴

s Policies regarding government revenues and expenditures, such as taxes and public budgets.

t The NYDF Goal 3 & 4 Assessment (2020) builds on the PRIME framework, based on Shyamsundar et al. (2020), which outlines the five interrelated dimensions that cover the necessary incentives and enabling conditions for reducing both deforestation and poverty. In this section we highlight the incentives part of the PRIME dimensions; the enabling conditions elements are covered in strategies 1 and 2.

Governments' development plans and fiscal policies act as incentives that signal actors to engage in certain practices. These incentives, depending on their direction, can encourage very different behaviors: land sparing or forest clearing; formal or informal production; or sustainable or unsustainable production intensification. Existing policies and programs are already providing incentives one way or the other.¹⁴⁴ Aligning these policies and programs with environmental, social, and human rights objectives is crucial for governments to meet their forest and climate pledges while ensuring secure livelihoods for rural and forest-dependent populations.

Direct finance for forest protection and sustainable management and environmental taxes are far outweighed by subsidies for sectors that can drive deforestation. A few countries have begun introducing new finance mechanisms to incentivize forest protection.

As discussed in **Chapter 2**, grey funding far outweighs green investments that promote sustainable forest use and climate mitigation goals. New "green" finance flows through mechanisms such as payments for ecosystem services (PES) and REDD+ can only do so much when fighting environmentally harmful agricultural subsidies and taxes. Instead, shifting these fiscal incentives to promote forest protection and sustainable management can be revenue-neutral or positive for governments.¹⁴⁴ Some countries have initiated fiscal reforms to re-direct these incentives. For example, the EU Common Agricultural Policy was reformed in 2001 to enable subsidy payments for cropland with tree cover, whereas previously, payments were purely based on crop surface area.¹⁴⁷ After the peat fires of 2015, Indonesia reformed its fossil fuel subsidies and instituted a new tax on peatland use.³⁴

A number of countries have implemented or are exploring ecological fiscal transfers (EFTs) as a mechanism for shifting government-to-government financial flows.¹⁴⁸ EFTs work by making a portion of the money that one government sends another—national to local payments, for example—dependent on environmental actions or indicators. For example, in Brazil, 18 state governments pay municipalities based on the size of their protected areas and Indigenous territories or other ecological indicators. In 2020, USD 23 billion was paid through EFTs across five countries, up from about USD 9 billion in 2014—but still only about 0.5 percent of total intergovernmental fiscal transfers.¹⁴⁸ EFTs have so far succeeded in increasing the number and

Figure 4.3.1. Dimensions of the PRIME Framework



SMALL-SCALE AGRICULTURE



FOREST USE



ARTISANAL AND SMALL-SCALE MINING

	SMALL-SCALE AGRICULTURE	FOREST USE	ARTISANAL AND SMALL-SCALE MINING
P	Productivity Provide extension services to boost yields and increase resilience, such as through climate-smart agriculture and agroforestry	Improve management of natural forests to ensure sustainable extraction of biomass for fuelwood and non-timber forest products	Enhance technology to increase mineral recovery per ton of material and reduce mercury use
R	Rights Secure land rights for smallholders to enable certainty and reduce land grabbing	Secure community rights to forest resources to lower risks and promote longer term investments	Secure mineral access rights for small-scale miners and local communities' land rights
I	Investments in institutions, infrastructure, and public services		
	Ensure access to affordable credit	Invest in rural connectivity through roads, electricity, health care, and education	Formalize small-scale mining sector and strengthen miners' associations
M	Markets		
	Encourage farmer cooperatives to reduce transaction costs	Legalize and regulate informal markets	Increase reach of responsible and fair trade mining certification schemes
E	Ecosystem services		
	Incentivize forest protection and sustainable use through conservation payments	Promote nature-based tourism	Distribute benefits from protected areas (e.g. jobs, tourism revenues) to local communities

Source: NYDF Assessment Partners (2020), based on Shyamsundar, P., Ahlroth, S., Kristjanson, P. & Onder, S. Supporting pathways to prosperity in forest landscapes—A PRIME framework. World Dev. 125, 104622 (2020).

scope of protected areas in Brazil and Portugal and reducing pollution in China, and the mechanism has been formalized as part of India's national climate financing.

Current forestry revenue schemes used by governments in developing countries may inadvertently encourage forest degradation or deforestation or provide insufficient incentive for forest protection.

For example, area fees^u are a common revenue instrument used by governments in the timber sector. However, as a fixed cost regardless of output, area fees may encourage firms to over-intensify production on a fixed area rather than harvest at sustainable levels. Instead, output-based charges may help mitigate these incentives and encourage sustainable practices.¹⁴⁹

Many governments also set taxes and fees too low to account for the environmental externalities of production and encourage efficient resource use. For instance, it is estimated that only between three and 30 percent of the potential economic rent from timber is collected by governments.¹⁴⁴ Indonesia collects about USD 272 million annually in forest sector fees, 70 percent of which comes from a fee schedule that does not consider market prices and has remained unchanged since 1999.¹⁵⁰ The states of Pahang and Terengganu in Malaysia are estimated to collect, on average, 10 percent of timber value.¹⁵¹

Even when fees are due to be paid, governments often fail to collect them or do not properly use the revenues they have collected.¹⁵² Tropical forest countries may collect only 20 percent or less of the forest-sector revenue they are owed.¹⁵³ According to one estimate, Indonesian authorities only collected 52 percent of potential timber royalty revenues.¹⁵⁴ Weak governance is caught in a negative cycle where it impedes the collection of revenues, and is then reinforced by those lost revenues, since they cannot be reinvested into enforcement and retaining good staff.¹⁵² However, some countries are improving the collection and use of forest revenues. For example, in Ghana, reforms to the system of Social Responsibility Agreements—which entitle local communities to payments from logging companies—have increased transparency and improved disbursements to communities.⁶⁶

^u An area fee is a revenue-generating mechanism based on the area harvested, as opposed to fees based on output. Area fees are easy to administer and provide up-front revenues.

A growing body of work¹⁴⁴ is increasing the understanding that fiscal policy can promote net benefits for forests and the economy; however, we cannot yet fully assess government progress in this area due to a lack of systematic information.

Many governments of developing countries provide support to subsistence and smallholder farmers through programs intended to increase food security, spur agricultural development, and reduce poverty. Their impact on forest is, however, unclear.

Several countries, including Indonesia and Cameroon, are promoting intensification and permanent forms of cultivation where extensive agriculture systems such as shifting cultivation are prevalent.¹⁵⁵ Similarly, Brazil operates several incentive programs targeted at smallholder and improved practices, in particular, the rural credit program.¹⁵⁶ Ghana and Côte d'Ivoire provide extension services to cocoa farmers supporting their capacities to increase productivity and income.^{157,158} These programs usually aim to increase productivity through intensification^v or improved growing practices, but they rarely have explicit forest goals.

While increases in productivity can provide higher incomes for small-scale actors like farmers and artisanal and small-scale miners, without safeguards these programs can increase risks for forests. Intensification of production does not by itself lead to land sparing.¹⁴⁵ Instead, by increasing profitability, intensification can actually incentivize expansion into new forest areas, whether clearing new cropland or opening new mine sites. For example, in a survey commissioned by the NYDF Assessment, in Ghana and Côte d'Ivoire, cocoa farmers who attended trainings increased production by an average of 16 and 33 percent, respectively. However, 80.2 and 69.8 percent of these farmers still named farm expansion as their top investment priority.¹⁵⁹ Productivity interventions therefore need to be coupled with investments in institutions and public services to address other contributors to systemic poverty, as well as targeted economic policies to disincentivize forest expansion as a strategy to increase incomes.^{29,145}

^v Here intensification refers to increased use of labor or capital to raise yields per unit of land.

Common policy instruments to support community livelihoods while conserving forests

There are several policy instruments that governments use to incentivize environmental and livelihood protection in rural communities. These instruments invest in one or several of the PRIME dimensions. These include community forestry, PES schemes, benefit-sharing mechanisms used for REDD+ initiatives, support for rural businesses, and technical and extension services for producers, among others. Here we highlight two of these instruments and provide examples.



Community forestry or community forest management

Community or social forestry^w has gained traction in forest countries as a poverty alleviation mechanism in rural and forest communities.¹⁶⁰ Policies to support implementation of this approach that are imposed top-down—without the full inclusion, consent, and engagement of local communities—are less effective.¹⁶¹

Community forestry programs in Indonesia, Guatemala, the Congo Basin, Nepal (**Box 4.3.1**), and Mexico offer useful lessons.³⁷ In addition to building the necessary institutions, successful interventions by governments and civil society were also invested in other PRIME dimensions, such as productivity (e.g., supporting forestry enterprises), institutions (e.g., forestry planning), and market access (e.g., certification), and were supported through consistent funding. These schemes have yielded results in both poverty alleviation and forest conservation where governments, in collaboration with civil society, were able to involve local communities and carefully assess community needs and capacities. Furthermore, institutional structures that assure secure tenure and rights are also important in these areas where, generally, access to forests is open, and government administration is weak.

The design and inconsistent implementation of top-down community forest management policies limits their effectiveness. In Indonesia, the top-down

w We use community or social forestry and community forest management interchangeably to refer policies, schemes and initiatives that devolve rights to communities, support local livelihoods, alleviation of poverty and the conservation or sustainable management of forests.

Social Forestry Policy comes with state-imposed restrictions on forest use and access, which has created incompatibilities with communities' diverse local governance practices and exacerbated contestations and conflicts.¹⁶² In Cameroon, the first country in Central Africa to introduce statutory community forestry, the number of community forests advanced steadily from 1997 to 2011. However, since then, the pace has stagnated despite increasing demand, and many communities have failed to obtain new forests or manage their existing ones without NGO support. Despite stated efforts to streamline the process, seemingly willful administrative delays have prevented new applications and annual license renewals from being processed, and communities have little recourse to overcome these barriers.¹⁶³

BOX 4.3.1.

Community forestry in Nepal sees progress; longer-term investments and larger areas can improve outcomes

Nepal has a longstanding community forest management program, established in the 1970s. By 2009, a quarter of the country's forests were managed directly by one third of the population. A study has found that placing forests under community control has led to reduced deforestation and poverty in Nepal and increases the likelihood of both positive environmental and socio-economic outcomes.¹⁶⁴ Forest users have gained control of their forest resources and are in the process of improving their livelihoods while building climate resilience. However, impacts on forests are poorer in areas where poverty rates are higher, suggesting poorer areas may require additional support to minimize trade-offs between socioeconomic and environmental outcomes. Large community forests that have been established for longer are also associated with positive socioeconomic and environmental outcomes. These results indicate that greater benefits may result from longer-term investments and larger areas committed to community management.

Initiatives in the Terai Arc Landscape in the Terai and Chitwan Annapurna Landscape by CARE-WWF promote the dual-goal of conservation and community livelihoods. The former landscape is inhabited by the highest surviving population of Bengal tigers and second largest density of greater one-horned rhinoceros in the world, while the latter contains valuable high habitat diversity watersheds, but climate vulnerability and poverty rates are high.



Payments for ecosystem services (PES)

PES schemes have gained traction, with an estimated 550 programs worldwide. Annual financial flows through PES schemes tripled from about USD 12 billion in the 2008–2009 period to over USD 36 billion in 2015–2016.¹⁶⁵ The majority of these payments went to watershed PES programs, but about one fourth of payments supported forest and land-use PES. Several cases in Brazil, Costa Rica, Mexico, and Vietnam point to the success of forest-based PES.¹⁶⁶ For example, the Floresta+ Carbono is a recently-launched PES program by the Ministry of Environment of Brazil. The program aims to generate alternative income for communities living in the Amazon and other biomes. While still new, it is a promising development, given the success of the preceding PES scheme, Bolsa Floresta, a program initiated in the Amazon in 2008, covering 9,600 households and more than 10 million hectares of forest.¹⁶⁷

An analysis by CIFOR of 226 REDD projects demonstrated that PES schemes offer a direct and flexible model for incentivizing forest protection while providing additional income for local communities. In Cat Tien National Park, Vietnam (**Box 4.3.2**), for example, PES has helped to almost quadruple (by a factor of 3.64) the area of forests allocated for community and household compared to prior PES and contributes up to 74 percent of total household income.¹⁶⁸ Yet, issues with securing land tenure and sustaining payments for the long term have led to PES schemes still being underutilized.¹⁶⁹

BOX 4.3.2.

Vietnam's Payments for Forest Environmental Services (PFES) Program

The national program contributed 28.1 percent of total forestry sector investment in 2019 and 26.4 percent in 2020 up to November. Total PFES revenue is also equal to 95.6 percent of total state budget allocated to forestry sector and paying for forest protection contracts of more than 45 percent of Vietnam's entire forest area.¹⁷⁰ In the 2011–2020 period, PFES generated USD 3.94 billion, and 21 percent of this revenue was used to pay individual households and local communities (mostly ethnic people) for their forest protection activities.

Despite this overall financial success, environmental and social outcomes are mixed, mostly due to land tenure context. For example, in the Northern region of Vietnam, where people are allocated less than one hectare of forest, PFES payment contributed less than one percent,¹⁷¹ yet PFES can contribute up to 74 percent of household income in the Southern region where people have at least 30 hectares of allocated forests.¹⁶⁸

STRATEGY 4.

Promoting multistakeholder collaboration as part of jurisdictional approaches

The problem of deforestation can only be addressed if forest and other sustainability goals are aligned across different sectors and stakeholders. To influence land use decisions, governments not only need to bridge ministries and agencies where their mandates intersect, but also collaborate with IPLCs, local producers, and private and civil society actors. In addition, governments need to ensure coordination of all sectors that—intentionally or unintentionally—drive deforestation. Engaging the agriculture industry (the largest deforestation driver) needs to be complemented with reaching other economically powerful sectors such as finance, mining, and infrastructure, as well as coordinating food security and poverty reduction programs that influence land and resource use. Such an integrated and multi-dimensional approach will be crucial to the whole-of-society transformation required as part of low-emissions development strategies.^{x,172} It is also at the heart of the Sustainable Development Goals and Goal 6 of the NYDF.

Several models for multistakeholder and multisector initiatives have emerged in the last decades, both at the national and subnational levels. These collaborations are a fundamental component of jurisdictional approaches,^y which facilitate strategic alignment between initiatives, sectors, and market incentives within a jurisdiction.^{173,174} They include public-private partnerships and civil society collaborations, commodity certifications, place-based sourcing agreements, REDD+ programs, and other jurisdictional sustainability initiatives.

Governments can foster multistakeholder collaboration using their convening power, as well as policy and planning roles from municipal to national levels. They can offer tools for communication and information sharing, and ensure that consultation and collaboration become integral to public

x Parties to the UNFCCC submit their low-GHG emissions development strategies, also known as “long-term strategies” as a mechanism that connects the short-term targets in their NDCs to the longer-term objectives of the Paris Agreement.

y Jurisdictional approaches to sustainability seek to protect forests, reduce emissions, and improve livelihoods across political or administrative boundaries, such as countries, states, provinces, and districts, through an integrated land management that works across scales and sectors.

policies’ design, implementation, and accountability. As natural resources become scarcer, governments are increasingly called to play a mediating role in reconciling the contradictory interests and power imbalances between actors.¹⁷⁵

Multistakeholder platforms, often created in the context of jurisdictional or landscape initiatives, are expanding in many developing countries. Some have demonstrated success around reducing deforestation, although progress varies across territories.

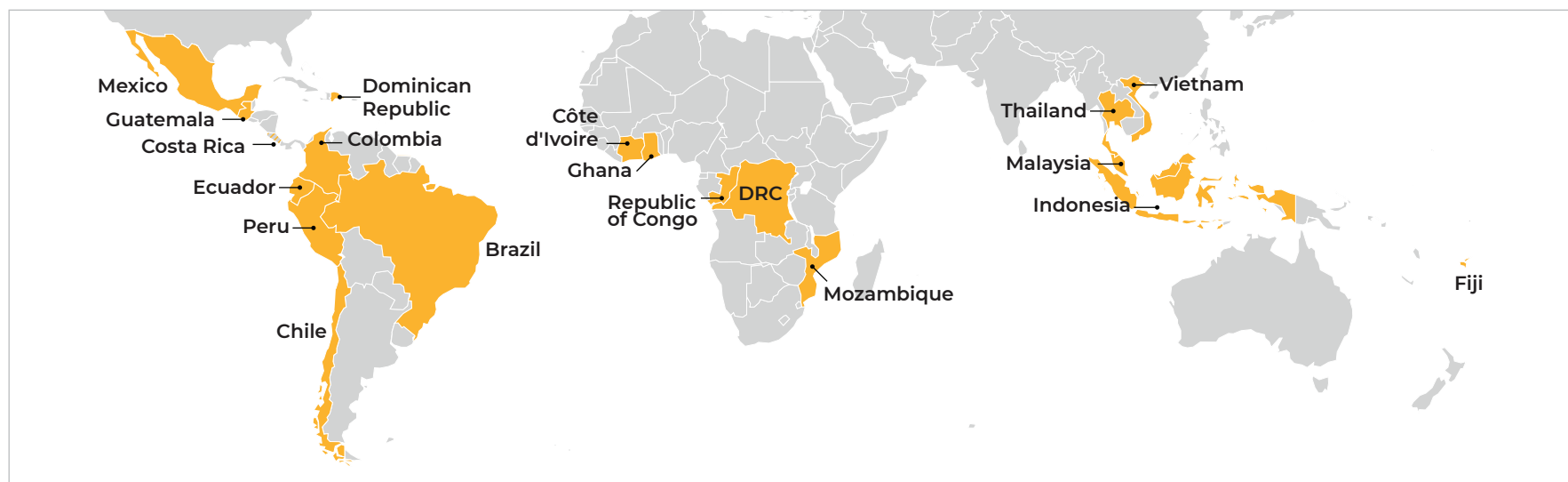
Multistakeholder collaboration at jurisdictional scales has gained important traction in the context of forest goals over the last decade. Out of 80 initiatives at the jurisdictional or landscape level, 25 have formalized their collaboration by consciously designing and clearly specifying the roles between actors involved.¹⁷⁶ Some initiatives have a specific intervention focus, such as the sustainable production of commodities or conservation of carbon stocks or reducing deforestation. Others have a combination of goals, encompassing both environmental and socio-economic (**Figure 4.4.1**).

Most of these initiatives are still nascent; therefore, it is too early to fully assess their success in reducing deforestation. A 2018 study, examining 39 subnational territories committed to jurisdictional approaches as part of REDD+ and low emissions development, found that half had reduced deforestation below the forest reference levels between 2013 and 2018.¹⁷⁴ These territories also have a high share (80% on average) of remaining forest cover. Nevertheless, this success is not uniform across jurisdictions, with some experiencing high levels of deforestation compared to the country’s forest reference level.

These initiatives in developing, mostly tropical, countries have made important progress in establishing institutional frameworks for collaboration, though structural issues limit effective involvement of IPLCs.

Across the jurisdictional initiatives studied,¹⁷⁴ nearly all have formal commitments to reduce deforestation or accelerate forest recovery and are developing institutional frameworks for integrated strategies. More than half were found to have an intermediate level of progress across criteria evaluated, and only one jurisdiction (Acre, Brazil) had advanced progress. In these

Figure 4.4.1. Map of 25 jurisdictional multistakeholder initiatives for improving sustainable resource use in forest landscapes



Initiatives:

Yucatán Peninsula Sustainability Agreement (ASPI 2030), **Yucatán, Mexico**

Emissions reduction through the strengthening of forest governance in vulnerable communities, **Guatemala**

Sustainable cocoa production in the Dominican Republic, **Dominican Republic**

National Initiative for Sustainable Pineapple Production (INSP), **Costa Rica**

Cocoa, Forests and Peace Initiative, **Colombia**

Interinstitutional Committee for Sustainable Palm Oil, **Ecuador**

National Coffee Action Plan, **Peru**

Green Municipalities Program, Pará, **Brazil**

Municipal Pact for the End of Illegal Deforestation, **São Félix do Xingu, Brazil**

State System of Incentives for Environmental Services (SISA), **Acre, Brazil**

Produce, Conserve, and Include (PCI), **Mato Grosso, Brazil**

REDD+ Reductions Program Temperate Forest Jurisdictions, **Temperate Forest Jurisdictions, Chile**

Emissions Reduction Program, **Tai National Park, Côte d'Ivoire**

Cocoa and Forest Initiative, **Côte d'Ivoire**

Cocoa and Forest Initiative, **Ghana**

Emissions Reductions Program, **Sangha-Likouala, Republic of the Congo**

Emission Reductions Program, **Maï-Ndombe, Democratic Republic of the Congo**

Integrated Landscape Management Program, **Zambézia, Mozambique**

Initiative for Sustainable Landscape Approach, **Lâm Đông and Đak Lak, Vietnam**

Nan Sandbox, **Thailand**

Sabah 100% Roundtable Sustainable Palm Oil (RSPO) by 2025, **Sabah, Malaysia**

Indonesian Sustainable Palm Oil Forum (FoKSBI), **Indonesia**

Eco-Region Alliance, South **Sumatra, Indonesia**

Jurisdictional Emission Reductions Program, **East Kalimantan, Indonesia**

Reducing Emissions and Enhancing Livelihoods, **Fiji**

Source: Reproduced from Essen, M. von & Lambin, E. F. Jurisdictional approaches to sustainable resource use. *Front. Ecol. Environ.* 19, 159–167 (2021).

jurisdictions, key elements such as land use planning and multistakeholder governance had made more progress, while the development of monitoring and reporting systems, support for sustainable agriculture, and financing had made less progress.

Similar to their national counterparts, with some exceptions, subnational governments still struggle to address issues around land rights, including customary rights (**Strategy 2**). Though the rights of Indigenous people and local communities are often recognized in national legal frameworks, implementation and protection of these rights vary by subnational jurisdiction.¹²¹ Challenges remain in formalizing the inclusion and fair representation of local land users, in particular of IPLCs,¹²¹ and building on their informal institutions, practices, and social capital.^{177,178} Consequently, this limits communities' effective and meaningful inclusion in decision-making and participation in multistakeholder initiatives. Without IPLCs involvement, jurisdictional initiatives risk imposing top-down decisions, such as for land management, that are driven by elites or foreign interest, therefore undermining true stakeholder collaboration.¹⁷⁶

Public-private jurisdictional partnerships are increasingly being declared across commodity-producing regions; however, many partners have yet to follow through by formalizing their collaboration.

Governments and private-sector actors are coming together to work towards low-emission rural development across producing regions, either at the national or subnational level.¹⁷⁹ Such partnerships can range from preferential sourcing agreements to technical assistance, investments, capacity building, and financing of sustainability programs. Some are based on a single jurisdiction, which allows for better tailoring of policies to suit the specific jurisdictions. Examples of single jurisdiction partnerships include Jurisdictional Approach to Certification in Seruyan district, Central Kalimantan, Indonesia (district-level), Sabah, Malaysia (state-level), Ecuador (national-level).¹⁷⁹ In some cases, private-sector actors have also been driving the formation of coalitions covering multiple countries and subnational states. For example, the World Cocoa Foundation's Cocoa and Forests Initiative in Ghana and Côte d'Ivoire, the Coalition for Sustainable Production in Peru, and the Siak-Pelalawan Landscape Programme in Riau, Indonesia.

Formalizing these partnerships through agreements, clarification of responsibilities, and articulating joint targets are important milestones needed to drive action beyond promises. Among the 39 subnational territories mentioned earlier,¹⁷⁴ there are many cases of declared partnerships and commitments between governments and private-sector partners, but only a few have formal agreements specifying each partner's roles and contributions. Examples include formal partnerships in Acre, West Kalimantan, East Kalimantan (**Box 4.4.1**), Mato Grosso (with individual counties), and Central Kalimantan (with individual districts).

While jurisdictional programs are intended to address the multiple drivers and levers of decision-making that impact sustainability, many governments have struggled to coordinate effectively across key government entities, sectors, or relevant stakeholders.

An analysis of subnational REDD+ initiatives in Brazil, Peru, Indonesia, Tanzania, and Vietnam finds that stakeholders driving jurisdictional programs perceive issues around land use, trade, tenure, and investment as significantly more challenging than proponents of project-based interventions.¹⁸⁰ A major reason is that jurisdictional approaches encompass a wider range of complex land management issues than project-level activities. Land use planning and tenure, in comparison to other policy areas, presents particularly sticky governance challenges in harmonizing sometimes contradictory interests and agendas held by different ministries and agencies. Consequently, REDD+ policies and strategies that are aligned with forest goals are often confined to forests and environment ministers and sectors, while powerful economic sectors continue their business-as-usual operations that lead to forest loss.^{37,177,178}

Bilateral trade agreements towards legal timber trade have helped foster multistakeholder collaboration in developing countries.

The European Union's Voluntary Partnership Agreements (VPAs) (**Strategy 6**) have changed the negotiating and policymaking landscape in timber producing countries that have a high risk of illegality.¹⁸¹ Its process is built around a participatory, deliberative approach that is inherently multi-stakeholder, which has aimed to support countries where forest governance is

weak.¹⁸² Through the VPAs, national and local organizations in the countries concerned have had a voice in decisions that affect their environment and livelihoods. National civil society has been at the forefront of negotiations, conversing with subnational governments in an inclusive decision-making process to achieve legally binding outcomes. An evaluation of the first 11 years found improved forest governance and equitable solutions with particular success in engaging a diverse range of national stakeholders.¹⁸³ In the intervening time since 2014, further progress has been seen with a move towards deliberative democracy and clarifications in timber laws across the world.¹⁸⁴

BOX 4.4.1.

Subnational governments driving multistakeholder collaboration in jurisdictional initiatives in East Kalimantan¹⁰⁰

The province of East Kalimantan, Indonesia has been a site for jurisdictional approaches driven by provincial and district governments to control land use change dynamics in the region. REDD+ Working Groups were set up at the provincial level and in Berau district, the third largest in the province with more than half of its land area covered by commercial concessions. These were motivated by Indonesia's hosting of the UN climate change summit in Bali. In addition, the Governor at the time established a Provincial Council on Climate Change (DDPI), a multistakeholder forum to coordinate program activities. The efforts continued over 10 years, with commitments across sectors and stakeholder groups translated into a Green Growth Compact, and later evolved into a site for piloting results-based payments with the FCPF Carbon Fund. Dozens of government agencies, civil society organizations, and the private sector have contributed to this process.

STRATEGY 5.

Ensure robust forest monitoring and accounting

Decisions informed by robust and reliable data and analysis are deemed to produce better outcomes.¹⁸⁵ Among other benefits, forest monitoring systems can provide essential information for the planning, implementation, and evaluation of policies. Data and analysis give information about the state of the health of forests and their ecosystem services, enabling the detection of illegal activities, providing important feedback on forest management decisions, land use planning, and law enforcement.

Forest monitoring systems have also been an important source of information for greenhouse gas inventories and reporting of emissions and removals, as well as emission reductions under the UNFCCC, the Kyoto Protocol and the Paris Agreement. For many years, parties have been reporting on forestry and land use activities in their National Communications, while some developing countries have also been reporting on their REDD+ activities following the requirements set by the Warsaw Framework. Key elements of robust carbon accounting include setting a baseline or reference level, the benchmark against which emissions or removals are measured to qualify for results-based payments. This is primarily to ensure that any emission reductions are “additional” and lead to real climate benefit.

Most national governments already have strong and robust forest monitoring systems in place. Many governments in developing countries have greatly increased their capacities in recent years, often in the context of REDD+, and incorporate forest monitoring data into decision-making.¹⁸⁶

The number of countries with strong systems has doubled from 2005, from 48 to 102 countries, evident in the quality and timeliness of data used and the combined use of remote sensing and forest inventory.¹⁸⁶ Improvements have been attributed to technical and financial assistance by various multi-lateral or bilateral initiatives,¹⁸⁶ accessibility of monitoring tools and data,¹⁸⁷ and innovation in monitoring technologies.¹⁸⁸

Various programs (e.g., Germany, Norway, UN-REDD, FAO, WWF Forest and Climate, the Silva Carbon program, the Global Forest Observations Initiative) have supported countries in setting up these systems. While such support

has effectively enabled improvements in recent years, the financial sustainability of these monitoring systems is at risk as few governments have allocated sufficient funding or government staff for monitoring institutions.¹⁸⁹

Evidence from 38 developing countries suggests that many governments also integrate the findings from forest monitoring into their policy making.¹⁸⁹ Governments are using systems to inform decisions, design instruments, and evaluate outcomes. Yet, there are still gaps in translating these findings into policy implementation and only a small number of assessed countries provide these findings in a way that is accessible and relevant for policy makers.¹⁸⁹ An in-depth review of four case examples where countries successfully reduced deforestation indicated that in all cases, forest monitoring was a key enabler of policy progress.¹⁹⁰

The last decade has also seen important progress in the creation of reference levels for REDD+. Data quality in REDD+ reporting under the UNFCCC has greatly improved over the last years, but significant gaps remain.¹⁹¹

Sixty-nine governments have submitted forest reference levels to the UNFCCC following the Warsaw Framework requirements, often with the objective to qualify for results-based REDD+ finance. Fifty-three completed a technical assessment by the UNFCCC, assessing to what extent information is transparent, complete and in accordance with the modalities agreed by the Parties.²¹⁸ In addition, many countries have submitted forest reference levels and/or estimates of emission reductions to comply with specific donor requirements, frequently requiring verification audits (see Figure 4.1).

Not only do carbon accounting choices (approach to reference level setting, to addressing non-permanence risks, etc.) determine emission reduction estimates, these estimates always come with a level of inherent statistical uncertainty. This uncertainty can lead to over- or underestimations of emission reductions at a country level and, therefore, the quantity of results-based payments that governments can receive.¹⁹² The choice of methods for addressing this uncertainty, by discounting a certain number of emission reductions, can thus have important ramifications. Requirements for addressing uncertainty vary widely, potentially leading to different estimates

of credible emission reductions and, consequently, varied levels of results-based payments.¹⁹²

Many NDCs do not provide sufficient information on how they will monitor emission reductions from forests¹⁹³ or how they align REDD+ monitoring, reporting and verification (MRV) with national greenhouse gas inventories that will inform the global stocktake.

Many countries that have set up forest monitoring systems for REDD+ have yet to integrate these systems in their NDCs while addressing discrepancies in methods, scope and scale. The Enhanced Transparency Framework of the Paris Agreement requires setting up national systems for MRV to allow systematic data collection and progress tracking toward NDC targets. This is also relevant for forests. Systems developed in the context of REDD+ may be used to fulfill transparency requirements; however, some alignment is required.¹⁹³ For example, many countries currently report only the “most significant” emission source and omit other potentially significant sources, often forest degradation or regrowth.¹⁹³

An analysis conducted in 2020 also found that only 20 out of 67 NDCs that explicitly mention REDD+ or are developing REDD+ programs also refer to the respective MRV systems and capacities.¹⁹⁴ Costa Rica’s NDC, for example, states that the government will “continue with improvements in metrics [in the AFOLU sectors], deriving verifiable information through pilot actions such as (...) the National REDD+ Strategy” to ensure methodological consistency. Other NDCs state that the development of MRV systems is conditional upon support.¹⁹⁴

STRATEGY 6.

Expanding demand-side measures of governments that import forest-risk commodities

Deforestation is fueled in part by growing demand for commodities,¹⁹⁵ and the role of consumer country governments cannot be ignored. In 2017, the international trade of agricultural products was associated with 1.3 million hectares of tropical deforestation.¹⁹⁶ More recent estimates reveal that between 2013 and 2019, more than 31 percent of agricultural commodities linked to all deforestation were exported from 23 countries.⁴³ The share of exported commodities linked to illegal agricultural conversion varies—it is at least one-fifth and, in some cases, close to the total share, depending on the commodity and country of origin.⁴³ Robust legislation and policies in countries that are major importers of deforestation and degradation-risk commodities are an important complement to efforts in producer countries.

Most demand-side regulations have focused on limiting illegal timber imports, though in recent years, attention and action have moved to commodities beyond timber. Demand-side policies include laws and regulations prohibiting imports of deforestation commodities, due diligence requirements, and public procurement policies.

Support for producer-country efforts to strengthen their forest and land-use governance are important complementary measures. In the timber sector, the negotiation and implementation of VPAs with the EU have proven a useful framework for prioritizing such support.

The EU's Voluntary Partnership Agreements (VPAs) have helped strengthen forest governance in partner countries and reduce illegal logging. Import restrictions have toughened enforcement of timber regulations.

EU Timber Regulations as part of the FLEGT Action Plan have helped improve operators' due diligence processes and provided important precedents for national-level enforcement of illegal timber imports.¹⁹⁷ Legally-binding trade agreements between the EU and producers, VPAs have been central to implementing FLEGT to address illegal logging in forest countries. Six partner countries have signed VPAs and are currently developing

implementation frameworks and systems. Nine countries are in negotiations, while 11 countries have expressed interest to participate.

A 2020 CIFOR evaluation of VPAs found that the implementation of these bilateral agreements has contributed to a decrease in illegal logging rates; greater inclusion of local communities, women, and youth in decision making; and more coherent legal and regulatory frameworks for timber production in Ghana, Cameroon, and Indonesia.⁶³ Sanctions in these countries for forest crimes have also become stronger and more likely to be enforced than before VPA implementation. Despite these advancements, efforts to reduce corruption in the forest sector—which has been a driver of illegality¹⁰¹—have not seen significant impact.

While the US Lacey Act is a long-standing legislation that seeks to limit the import of illegal timber, the law has only led to the investigation of three companies, despite clear information on illegal timber reaching the U.S.⁸⁰

Major industrial countries have recently introduced due diligence requirements to limit illegal timber imports. In some jurisdictions, these include other deforestation-risk commodities.

Promisingly, there has been a growing trend to restrict imports of illegal timber in the last year among major industrial countries, which also extends to forest-risk commodities other than timber. A major consumer of forest-based commodities, the European Union following a public consultation in 2020, is expected to present a legislation proposal on deforestation and forest degradation associated with production of commodities such as palm oil, rubber, soy, cocoa, coffee, rubber, and cattle imported into the EU market. However, the resolution does not cover mining and infrastructure development, a major driver of deforestation.³⁷

Action is also being taken by individual EU member states. In June 2021, the German government passed the German Supply Chain act for medium- to large-sized companies, requiring them to implement due diligence in line with international human rights and environmental standards.¹⁹⁸ While civil society has recognized this as a first step, there are weaknesses to the law that limit its effectiveness.¹⁹⁹ In France, the government adopted the Duty of Vigilance law, which requires companies to implement due diligence policies to avoid environmental damage in their supply chains.²⁰⁰ Currently, the law faces a litmus test: Amazonian Indigenous communities are suing

Casino, a major French retailer, for driving deforestation. The issue came to light when Casino was exposed for not having due diligence policies on cattle production in Colombia.²¹² The suit will determine to what extent companies can be held liable for deforestation in the remote segments of their supply chains.

The UK government passed a new due diligence law in May 2021 requiring large businesses to minimize the sourcing of forest-risk commodities linked to illegal deforestation, as defined in national laws.²⁰¹ It is a timely step—UK tropical timber imports increased by 20 percent in the first quarter of 2021.²⁰² However, unless it widens its scope by addressing legal deforestation and conversion in producer countries, and covers all commodities associated with deforestation and land conversion, the law risks being ineffective.²⁰³

Leading subnational-level action, the state of California passed the Deforestation-Free Procurement Act in June 2021, calling on companies to have policies that prevent boreal and tropical deforestation and guarantee FPIC of Indigenous communities.²⁰⁴

To avoid unsustainable commodities finding markets, action from all large consumer countries—including emerging economies—will be needed. China, one of the largest importers in the world, is following suit and recently made important changes to its law. We are unaware of similar initiatives by other emerging economies.

Introduced in July 2020, China's amendment to its Forest Law bans the buying, processing, and transporting of illegally sourced timber. As the world's largest importer of legal and illegal timber, if this law is enforced effectively, it will be a major step to help to fight the illegal logging trade.²¹³ While clarifying regulations on implementation are yet to be in place, the law is expected to decrease China's illegal wood imports, and could have significant ramifications in producer countries.

Public procurement is a critical step some consumer and producer countries are taking to create demand for legal forest commodities.

Public procurement is increasingly being recognized as a strategic tool to address sustainable development and environmental protection, both in producer and consumer countries.^{205,206} A number of governments in Africa and Latin America have taken important steps to introduce public procurement policies to promote the supply and demand of legal timber.²⁰⁷

In Cameroon, three ministries joined forces and issued a policy which requires the use of legally sourced timber in public tenders. Similar efforts are ongoing in Colombia, where the National Federation of Timber Industries (FEDEMADERAS) has drafted a responsible public procurement policy to be considered by the government. In addition to its due diligence law, the French government released a procurement guide to 130,000 public purchasers in 2020 to begin its Strategy to Combat Illegal Deforestation, which aims to halt deforestation resulting from commodity production by 2030.²⁰⁸

5. What can governments do to enhance climate change mitigation through forests? Ways forward.

Scope

Forests are an opportunity for climate change mitigation that countries cannot afford to miss. The NYDF Assessment Partners call on governments to radically shift gears to realize forests' mitigation potential globally. There is no silver bullet – multiple strategies that work complementarily are required to protect, restore and sustainably manage forests.

In addition to clarifying and increasing their ambition and aligning investment flows with forest and climate goals, we provide recommendations for the six strategies that governments need to implement:

- Strengthening forest and land use governance
- Recognizing and securing the rights of Indigenous Peoples and local communities
- Aligning incentives with forest climate goals
- Promoting multistakeholder collaboration as part of jurisdictional approaches
- Ensuring robust forest monitoring and accounting
- Expanding demand-side measures of governments that import forest-risk commodities

Goal 7 of the New York Declaration on Forests (NYDF) has been achieved: the Paris Agreement has confirmed forests' important role in the international climate agenda. It is still too early to assess the progress of NDCs, as countries only report their progress under the Paris Agreement in a few years from now. In the meantime, we take stock of governments' existing domestic efforts and policies, and offer recommendations on what governments can do to accelerate outcomes.

There are promising examples where deforestation rates have declined, and where necessary policies and institutions have been put in place. However, efforts have been insufficient in addressing the complex problem of deforestation and unsustainable land use. Governments have yet to deliver on their goals to limit global warming; emissions trends for all sectors, including forests, are heading in the wrong direction. Despite their essential role and potential, forests are under massive threat worldwide.

We found many indications of governments' progress: for example, more than 50 reducing emissions from deforestation and forest degradation (REDD+) programs operate at national scale; more than 100 national governments have strong and robust forest monitoring systems; dozens of initiatives for multistakeholder collaboration involve governments at national or subnational level; and some of the largest consumers of forest-risk commodities have initiated or established legislation to limit and control the import of deforestation.

Nevertheless, these and other initiatives have been insufficient in addressing the powerful drivers of forest loss and unsustainable land use. Forest mitigation goals are fundamentally at odds with an economic system that assumes infinite production and consumption. Fueled by burgeoning demand, forests are exploited as a reservoir of natural resources, for agricultural land and/or minerals and metals. Strong economic and political forces—both global and domestic—incentivize forests' exploitation and conversion at unprecedented scales. The richer populations in the Global North, as well as new elites and middle classes in emerging economies, benefit from the flow of commodities out of forests that externalizes environmental and social costs. The groups most affected by the damage—poor populations

and vulnerable local communities—are pushed further into the forest or to urbanizing human settlements with a lack of alternative options for local economic development.³⁷

As a result, the world is still far from protecting, restoring and sustainably managing forests. The sustained reductions in forest loss needed to achieve the 2030 NYDF target would be unprecedented and are highly unlikely in the near-term. All assessment indicators show either insufficient progress towards ending forest loss and associated greenhouse gas (GHG) emissions by 2030 or that we are moving further from the targets.²⁰⁹ Similarly, current rates of annual tree cover gain are insufficient.

The NYDF Assessment Partners call on governments to enhance and clarify their ambition, to align investments with forest climate goals, and to recognize and promote forests as an essential climate solution.

AMBITION

What can governments do to increase and clarify their ambition?

Most governments that have communicated their ambitions under the Paris Agreement (nationally determined contributions, NDCs) mention forests. Nevertheless, many do not provide quantitative forest-related mitigation targets. Targets that are quantified are not ambitious enough, and some are also conditional on international finance.

All countries with forest climate goals need to:

- Support capacity building for NDC focal points to raise forests' profile as a climate solution within national policy arenas.
- Support research to identify the feasible mitigation potential of different forest-based mitigation activities in country, taking into account global spatial data as well as national, context-specific data.
- Make the involvement of Indigenous Peoples and local communities (IPLCs) central to setting goals and priorities for forest activities.

Developing and developed countries can pursue and pilot partnerships for bilateral and/or non-market cooperation to accelerate forest-based mitigation under Articles 6.2 and 6.8 of the Paris Agreement.

FINANCE

How can governments increase their investments to realize forest climate goals?

To realize forests' mitigation potential, governments need to massively increase their domestic investments and international support. Current finance flows are only a minuscule fraction of what is needed. Governments also need to invest in the "greening" of "grey" financing that is negatively impacting forests. This may involve channeling existing financial streams towards shifting deforestation-driver activities from forested to non-forested land and supporting sustainable practices, such as climate-smart and regenerative agriculture.

All countries with forest climate goals need to:

- In line with Article 2.1c of the Paris Agreement, assess the domestic and international forest impact of fiscal policies. Take further action to "green" grey finance: reform subsidies to provide benefits for forests and other sustainable development goals, and include environmental and social safeguards for all subsidies.
- Require financial, public- and private-sector actors to disclose the forest risks and benefits of their investments, such as infrastructure, mining developments, and the production of forest-risk commodities. This includes investments abroad.
- Mobilize private-sector funding to scale up efforts to achieve national forest goals in line with the Paris Agreement, leveraging the growing interest in carbon markets, carbon pricing mechanisms, and other sustainable investments in conservation or sustainable forest use. Ensure the environmental and social integrity of these activities.
- Consider the use of border measures for carbon to generate revenues to invest in forest mitigation goals.

Developing and developed countries, in partnership, can:

- In line with Article 9 of the Paris Agreement, developed countries need to pursue their obligations to provide financial resources to assist developing countries, including for forest climate goals.
- Develop financing plans for conditional NDC targets of developing countries and specify concrete commitments for international support by developed countries.
- Initiate a dialogue between donor initiatives for results-based REDD+ finance and forest countries to harmonize and simplify requirements, and make them more applicable to individual country contexts.
- Develop additional mechanisms to complement results-based finance with support for up-front investments for the implementation of REDD+ programs.

IMPLEMENTATION

How can governments advance their efforts to protect and enhance forests?

Forest goals and strategies need to be front and center of policy-making processes that are inclusive and transparent, involving different stakeholder groups, and spanning sectors and government levels. Upholding forest goals in policy making does not mean all deforestation can or should be stopped. It means that forests' contributions and services for current and future generations are carefully valued and regenerated. Any loss needs to be justified by other sustainable development benefits.

Governments carry significant influence in setting priorities for policies that influence forests. By establishing spatial and macro-economic plans, they set national development pathways. Taking into account the full picture of how land is used throughout the country, governments can make strategic decisions that achieve multiple goals. For example, governments may conserve a certain area of primary forests, while managing other forested areas for uses considered essential for sustainable development—not only to benefit a small elite. Policy makers can also consider redirecting large developments (e.g., infrastructure, agriculture, mining) to non-forested areas or set specific requirements that minimize harm.

To support this process long term and overcome political volatilities, governments need to establish constituencies that support sustainable development and forest mitigation goals.^{39,91} To achieve this, governments need to empower civil society, smallholders, and, in particular, Indigenous Peoples and local communities (IPLCs), who have traditionally protected and valued forests. Governments need to ensure their participation and involvement in decision-making about their customary forest lands and livelihoods. Governments can also actively contribute to a more positive narrative around forest protection and enhancement by emphasizing and promoting the economic, cultural, and social benefits.³⁹

There is no silver bullet—multiple strategies that work complementarily are required to protect, restore and sustainably manage forests. Governments need to embrace a combination of the strategies in this report, ensuring the necessary enabling conditions while providing incentives as well as disincentives to those that influence the use of forests, land, and resources. The following section provides detailed recommendations under each strategy.

Strategies for governments



STRATEGY 1.

Strengthening forest and land use governance

Robust forest and land use governance are essential for combating illegal deforestation and conversion, as well as aligning development and environmental objectives. Strong and sustained governance will have a positive impact on the implementation and enforcement of forest conservation, restoration, and management policies.

All countries with forest climate goals need to:

- Address weaknesses in legal frameworks for forests and land use. This may require clarifying unclear and overlapping laws, regulations, and institutional mandates, and streamlining legal frameworks in the forest and non-forest sectors.
- Invest in public agencies to ensure they are able to implement the law; for example, implementing land titling processes to recognize land rights and resolve tenure conflicts.
- Provide adequate resources and mandates to enforcement agencies and anti-corruption agencies to combat illegal forest and land use.
- Enhance participation in decision-making and benefit-sharing on forest and land use, ensuring participatory processes are accessible to all groups, particularly to women, IPLCs, and others that have typically been excluded.
- Increase transparency and checks and balances to combat corruption in the land and forest sector. This may require limiting government officials' discretion in approving concessions and adopting robust rules to avoid conflicts of interest.
- Consider all natural ecosystems affected by commodities that risk driving forest and habitat conversion, in legislation and market-based policies and commitments.
- Address regulatory weaknesses and ensure the proper implementation of environmental and social impact assessments for developments that influence forests, considering all direct, indirect, and cumulative negative impacts on forests, and prioritizing their avoidance (e.g., from mining and forestry).
- Halt and undo rollbacks to environmental and social protections adopted in the wake of COVID-19, carefully assessing their long-term implications for sustainable development and forests.



STRATEGY 2.

Recognizing and securing the rights of Indigenous Peoples and local communities (IPLCs)

Despite their essential role for the protection, restoration and sustainable management of forests, IPLCs are disproportionately affected by deforestation, threatening their home, livelihoods, and cultural and spiritual wellbeing. Investments in securing the rights of currently unrecognized communal lands could protect more forest areas and their ecosystem services—including carbon sequestration.

All countries with forest climate goals need to:

- Make the recognition and security of community and IPLC land rights and tenure central to the national climate change mitigation strategy and implementation.
- Protect communal IPLC lands by enforcing these rights through the implementation of monitoring mechanisms, cracking down on illegal activities, and taking action against perpetrators of violence against communities.
- Establish legislation and laws that enhance the protection of IPLC lands and give power to communities to decide over and manage their forests sustainably. This may require reforms in some countries or introducing new laws in others.
- Dismantle existing laws that undermine, weaken, or threaten IPLC rights and replace with supportive rules and policies.
- Prioritize customary land registration and titling by initiating processes where they are absent or by scaling up where they have begun.
- Streamline processes for inclusion, by mandating and enforcing processes of free, prior and informed consent (FPIC) on all communal and customary lands.
- Channel funding and resources at both domestic and international levels towards scaling-up IPLC land recognition and security globally.



STRATEGY 3.

Aligning incentives with forest climate goals

Flows of public finance, fiscal policy, and broader development policies have a strong influence on how forests and resources are managed. Economic planning and policy do not need to conflict with forest goals; aligning existing instruments to incentivize sustainable forest use and protection, while promoting livelihoods, can advance sustainable development goals.

All countries with forest climate goals need to:

- Harness fiscal policy as a tool to creatively and cost-effectively promote sustainable forest use rather than driving forest destruction.
- Evaluate the environmental and social impacts of fiscal incentives in sectors driving deforestation such as agriculture, mining or infrastructure and adjust incentives to promote forest and sustainable development goals.
- Improve the management of land-use sector revenues to ensure they are being collected and disseminated as legally required. This may require clamping down on corruption and increasing investment to strengthen financial management systems.
- Pair productivity support programs for small-scale farmers and miners with investments in enabling conditions and targeted economic incentives to ensure improved livelihoods without increased forest conversion.
- Reduce structural barriers to community forest management and other community-led economic activities. This may require reforming legal frameworks, investing in capacity strengthening of associations, and enabling market access.
- Expand payments for ecosystem services schemes, backed by secure land tenure and capacity building, to reach smallholder actors and generate long-term funding for sustainable forest management.
- Invest in technical and financial support for community forestry and social programs to encourage improved local livelihoods and sustainable forest enterprises.



STRATEGY 4.

Promoting multistakeholder collaboration as part of jurisdictional approaches

To address the drivers of deforestation and promote forest mitigation activities, governments need to drive a transition away from business-as-usual decision-making and practices. This spans sectoral and national development policies and all actors that impact forest and land use. Participatory and inclusive coordination and collaboration across sectors and stakeholders are needed to overcome the fundamental differences in interests and power.

All countries with forest mitigation goals need to:

- Promote collaborative, participatory, and inclusive multistakeholder forums and dialogues. Bringing stakeholders to the table—such as IPLC groups, which may be excluded from decision-making—is a necessary first step. These forums need to build on existing informal institutions, including traditional leadership roles, local practices around resource management, and social capital.¹⁷⁷
- Involve and grant a strong voice to civil society actors in decision-making processes to address power imbalances and bring localized needs and perspectives to the fore. Multistakeholder forums will be ineffective, and reproduce unequal power differences, when entrenched, dominant, business-as-usual interests convene them.
- Include subnational government in sustainable development dialogue and implementing national forest strategies.
- Institutionalize initiatives and programs such as partnerships and multi-stakeholder platforms to make them less dependent on changing administrations and political will.
- Support local collaboration and knowledge-sharing networks to strengthen local institutions and their ability to participate effectively in national and international decision-making processes.



STRATEGY 5.

Ensuring robust forest monitoring and accounting

Many forest countries have made significant progress in building their forest monitoring systems and in creating reference levels for results-based REDD+. Further efforts are needed to improve methodologies and increase transparency, as well as to align REDD+ monitoring and accounting systems with national GHG inventories that are part of the Enhanced Transparency Framework. This will feed into the Global Stocktake process.

All countries with forest mitigation goals need to:

- Pursue South-South exchanges to share experiences of countries that have started integrating their REDD+ monitoring systems with national GHG inventories.
- Provide additional technical support for enhancing monitoring methodologies and capacities, including for different local contexts such as highly biodiverse and heterogenous forests.
- Provide financial support and capacity building for forest monitoring systems, including for their alignment with national GHG inventories and requirements by the Enhanced Transparency Framework, and for enabling participation of local communities, in particular, Indigenous peoples.
- Ensure that the systems and data (including through public-private partnerships) are transparent, aligned with, and reinforcing national priorities and systems.
- Support local research and empower civil society organizations and communities to act as a watchdog of monitoring systems.



STRATEGY 6.

Expanding demand-side measures of governments that import forest-risk commodities

Efforts to avoid unsustainable and illegal forest-linked commodities from finding markets need to be scaled up. Governments—both producer and importer countries—can play a central role in creating the demand for legal and deforestation-free commodities and products.

Consumer countries, including those that consume domestic and imported forest-risk commodities need to:

- Consider their shared responsibility and interest in advancing forest mitigation goals abroad. This may require assessing their global forest footprints in NDCs and setting out the processes for reducing them. For example, they can align their trade policies and ensure effective enforcement of import regulations aimed at reducing deforestation in commodities.
- Set requirements that restrict the entry of products that have caused deforestation. Due diligence requirements enacted in major consumer countries are a step in the right direction; the enforcement and implementation of these measures need to be accelerated.
- Introduce public procurement policies that restrict the inclusion of illegal and deforestation-risk commodities in public purchases.
- Improve transparency throughout the supply chain of forest-risk commodities through forest monitoring and open, accessible data on forest concessions. This may require increasing and sustaining the transparency of the forest sector to phase out corruption in the long term.
- Expand bilateral agreements between producer and buyer countries across all deforestation-risk products. This may include the use of border measures for carbon to internalize the costs of deforestation and ensure that negative impacts on smallholders and poor countries are minimized.
- Align free trade agreements with the Paris Agreement goals. This may include the setting of strong and binding provisions for imported emissions, and require safeguards for all investments and trade activities.
- Collaborate with governments of producer countries to strengthen national law enforcement.

Bibliography

1. Climate Focus. Forests and Land Use in the Paris Agreement: Climate Focus Brief on the Paris Agreement. (2015).
2. UNFCCC. NDC Registry. <https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>.
3. IPCC. *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. <https://www.ipcc.ch/report/ar5/syr/> (2014).
4. IPCC. *Summary for Policymakers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*. <https://www.ipcc.ch/srccl/chapter/summary-for-policymakers/> (2019).
5. Hansen, M. C. et al. High-Resolution Global Maps of 21st-Century Forest Cover Change. *Science* **342**, 850 (2013).
6. Harris, N. L. et al. Global maps of twenty-first century forest carbon fluxes. *Nat. Clim. Change* **11**, 234–240 (2021).
7. Griscom, B. W. et al. Natural climate solutions. *Proc. Natl. Acad. Sci. U. S. A.* **114**, 11645–11650 (2017).
8. Busch, J. et al. Potential for low-cost carbon dioxide removal through tropical reforestation. *Nat. Clim. Change* **9**, 436–466 (2019).
9. Austin, K. G. et al. The economic costs of planting, preserving, and managing the world's forests to mitigate climate change. *Nat. Commun.* **11**, 5946 (2020).
10. Lebling, K. et al. State of Climate Action. (2021).
11. Bakhtary, H., Haupt, F. & Elbrecht, J. *NDCs - A force for nature? 3rd Edition - Enhanced NDCs*. https://climatefocus.com/sites/default/files/wwf_uk_ndcs_a_force_for_nature_3rd_edition_0.pdf (2021).
12. Kissinger, G., Gupta, A., Mulder, I. & Unterstell, N. Climate financing needs in the land sector under the Paris Agreement: An assessment of developing country perspectives. *Land Use Policy* **83**, 256–269 (2019).
13. WWF et al. *The State of Indigenous Peoples' and Local Communities' Lands and Territories: A technical review of the state of Indigenous Peoples' and Local Communities' lands, their contributions to global biodiversity conservation and ecosystem services, the pressures they face, and recommendations for actions*. https://wwfint.awsassets.panda.org/downloads/report_the_state_of_the_indigenous_peoples_and_local_communities_lands_and_territor.pdf (2021).
14. WRI & Climate Focus. *Forthcoming research by World Resources Institute (WRI) and Climate Focus*. (2021).
15. Mitigation finance for forestry in all countries: Climate Focus compilation of bilateral and multilateral climate mitigation-related development finance flows to all countries (cumulative 2010–19). OECD DAC External Development Finance Statistics: Climate change.
16. International REDD+ finance: Climate Focus compilation of REDD+ readiness and implementation finance commitments (cumulative since 2010)—Data obtained directly from contacts, from publicly available reports, or from Climate Funds Update. Includes commitments from NICFI, FCPF, GCF, FIP, ISFL, UN-REDD, REDD Early Movers, CBFF.
17. Domestic REDD+ finance from government investment plans of 16 REDD+ countries. Climate Focus analysis of FCPF EPRDs (the 16 countries that budgeted for government expenditures). Note that investment plans cover different timeframes.
18. Atmadja, S., Arwida, S. D., Martius, C. & Pham, T. T. Financing REDD+: A transaction among equals, or an uneven playing field? *CIFOR* <https://www.cifor.org/knowledge/publication/7063/> (2018).
19. Silva-Chavez, G., Schaap, B. & Breitfeller, J. *REDD+ Finance Flows 2009-2014 Trends and Lessons Learned in REDD+ Countries*. https://redd.unfccc.int/uploads/2194_1_redd_2B_finance_flows_2009-2014.pdf (2015).
20. Luttrell, C., E.O., S., R., A., A.D., E. & M.F., E. *Who will bear the cost of REDD+? Evidence from subnational REDD+ initiatives*. (Center for International Forestry Research (CIFOR), 2016). doi:10.17528/cifor/006169.
21. Green Climate Fund. REDD+ Results-based Payments Pilot. *Green Climate Fund* <https://www.greenclimate.fund/redd> (2021).
22. FCPF. 2020 Annual Report. https://www.forestcarbonpartnership.org/system/files/documents/FCPF%202020%20Annual%20Report_Web_update.pdf (2020).
23. WWF Ideas for the FACT Dialogue. (2021).
24. Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ). Entwicklungsminister Müller fordert New Deal für Waldschutz. *Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung* <https://www.bmz.de/de/aktuelles/entwicklungs-minister-mueller-fordert-new-deal-fuer-waldschutz-92358> (2021).
25. NYDF Assessment Partners. *Goals 8 and 9 Assessment Report: Finance for Forests*. 54 https://forestdeclaration.org/images/uploads/resource/2017_NYDF_Goal8-9-Assessment_Full.pdf (2017).
26. State of the Voluntary Carbon Markets 2020. *Forest Trends* <https://www.forest-trends.org/publications/state-of-the-voluntary-carbon-markets-2020-2/> (2020).
27. Ministerio del Ambiente y Desarrollo Sostenible Colombia. 5% del impuesto al carbono se destina a perpetuidad para Herencia Colombia | Ministerio de Ambiente y Desarrollo Sostenible. <https://www.minambiente.gov.co/index.php/noticias-minambiente/3827-5-del-impuesto-al-carbono-se-destina-a-perpetuidad-para-herencia-colombia> (2018).
28. Benson, S., Gilks, H. & Gent, D. Nature for Net Zero: consultation document on the need to raise corporate ambition towards naturebased net-zero emissions. (2020).
29. NYDF Assessment Partners. Goal 8 assessment: Providing finance for forest action. (2020).

30. Environment, U. N. State of Finance for Nature. *UNEP - UN Environment Programme* <http://www.unep.org/resources/state-finance-nature> (2021).
31. Dumas-Johansen, M., Martius, C. & Dooley, K. GCF Sector Guide: Forest and Land Use. (2021).
32. Rights and Resources Initiative. *Scaling-Up the Recognition of IP and Community Land Rights Opportunities-Costs and Climate Implications Final*. <https://rightsandresources.org/wp-content/uploads/2021/03/Scaling-Up-the-Recognition-of-IP-and-Community-Land-Rights-Opportunities-Costs-and-Climate-Implications-Final.pdf> (2021).
33. Rainforest Foundation Norway. *Falling short: Donor funding for Indigenous Peoples and local communities to secure tenure rights and manage forests in tropical countries (2011–2020)*. <https://www.regnskog.no/en/news/falling-short> (2021).
34. McFarland, W. & Whitley, S. *Subsidies to key commodities driving forest loss*. <https://odi.org/en/publications/subsidies-to-key-commodities-driving-forest-loss/>.
35. Domestic finance for agriculture and forestry in deforestation countries. Climate Focus compilation of FAOSTAT data on government expenditure for the agriculture and forestry sectors (cumulative 2010-19. No more recent data available).
36. International finance for agriculture in deforestation countries: Climate Focus analysis of development finance commitments retrieved from the OECD Creditor Reporting System database. Cumulative 2010-2019.
37. NYDF Assessment Partners. *Balancing forests and development. Addressing infrastructure and extractive industries, promoting sustainable livelihoods*. 110 <https://forestdeclaration.org/images/uploads/resource/2020NYDFReport.pdf> (2020).
38. Lee, D. & Pistorius, T. The Impacts of International REDD+ Finance. 44 (2015).
39. Angelsen, A. *et al.* Conclusions: Lessons for the path to a transformational REDD+. *CIFOR* <https://www.cifor.org/knowledge/publication/7076/> (2018).
40. Korhonen-Kurki, K. *et al.* What drives policy change for REDD+? A qualitative comparative analysis of the interplay between institutional and policy arena factors. *Clim. Policy* **19**, 315–328 (2019).
41. Davis, C., Williams, L., Lupberger, S. & Daviet, F. Assessing Forest Governance: The Governance of Forests Initiative Indicator Framework. (2013).
42. Kishor, N. & Rosenbaum, K. *Assessing and monitoring forest governance: a user's guide to a diagnostic tool*. (2012).
43. Dummett, C. & Blundell, A. *Illicit harvest, complicit goods: The state of illegal deforestation for agriculture*. 81 (2021).
44. Belecky, M., Singh, R. & Moreto, W. Life on the Frontline 2019 - A global survey of the working conditions of rangers. (2019).
45. Hodgdon, B., Davis, A. & Martí, M. Climate Action Solutions: opportunities through rights-based forestry and territorial management An analysis of the Nationally Determined Contributions (NDCs) of Mesoamerican countries. https://www.prisma.org.sv/wp-content/uploads/2020/01/climate_action_solutions.pdf (2019).
46. Romania Insider. Romania to have special agency tasked with investigating environmental crimes, including illegal logging. <http://www.romania-insider.com/dna-forests-bill-adopted-romania> (2020).
47. Earthsight. Ikea's House of Horrors. <https://www.earthsight.org.uk/ikeahouseofhorrors> (2021).
48. Tacconi, L., Rodrigues, R. J. & Maryudi, A. Law enforcement and deforestation: Lessons for Indonesia from Brazil. *For. Policy Econ.* **108**, 101943 (2019).
49. Chatham House & Climate Focus. *Strengthening Forest Governance Frameworks: Progress in Nine Major Tropical Forest Countries. Goal 10: A Closer Look*. 7 (2019).
50. EU FLEGT. Vietnam-EU Voluntary Partnership Agreement | FLEGT. <https://www.euflegt.efi.int/q-and-a-vietnam> (2020).
51. Fern. Vietnam timber legality Decree's silences are as worrisome as its shrinking scope. *Fern* <https://www.fern.org/publications-insight/vietnam-timber-legality-decrees-silences-are-as-worrisome-as-its-shrinking-scope-2250/> (2020).
52. Arts, B., Heukels, B. & Turnhout, E. Tracing timber legality in practice: The case of Ghana and the EU. *For. Policy Econ.* **130**, 102532 (2021).
53. Gellert, P. K. & Andiko. The Quest for Legal Certainty and the Reorganization of Power: Struggles over Forest Law, Permits, and Rights in Indonesia. *J. Asian Stud.* **74**, 639–666 (2015).
54. NYDF Assessment Partners. Goal 10 assessment: Strengthening governance and empowering communities. (2020).
55. Tong, X. *et al.* Forest management in southern China generates short term extensive carbon sequestration. *Nat. Commun.* **11**, 129 (2020).
56. Dil, S., Ewell, C. & Wherry, A. Rolling Back Social and Environmental Safeguards - Global Report. <https://www.forestpeoples.org/sites/default/files/documents/Rolling%20Back%20Social%20and%20Environmental%20Safeguards%20-%20Global%20Report%20ENGLISH%20FINAL.pdf> (2021).
57. UNEP & UNDP. *Managing Mining for Sustainable Development | United Nations Development Programme*. (2018).
58. World Bank, Howard, P., Knox, J. & Jenner, N. *Forest-Smart Mining: Identifying Factors Associated with the Impacts of Large-Scale Mining on Forests*. <https://openknowledge.worldbank.org/handle/10986/32025> (2019).
59. Alamgir, M., Campbell, M. J., Sloan, S. & Phin, W. E. *Road risks and environmental impact assessments in Malaysian road infrastructure projects*. (2018).
60. Meijaard, E. *et al.* *Rapid Environmental and Social Assessment of Geothermal Power Development in Conservation Forest Areas of Indonesia*. https://www.profor.info/sites/profor.info/files/PROFOR_Geothermal%20Indonesia%20Report%20-%20August%202019_0.pdf (2019).
61. Caripis, L. *Combatting corruption in mining approvals: Assessing the risks in 18 resource-rich countries*. (Transparency International, 2017).
62. Mckillop, J. & Brown, A. L. Linking project appraisal and development: the performance of eia in large-scale mining projects. *J. Environ. Assess. Policy Manag.* **01**, 407–428 (1999).

63. Cerutti, P. O. *et al.* Collecting Evidence of FLEGT-VPA Impacts for Improved FLEGT Communication. *CIFOR* <https://www.cifor.org/knowledge/publication/7566/> (2020).
64. Forest Peoples Programme. Peru to establish world's first indigenous climate platform. *Forest Peoples Programme (FPP)* <https://www.forestpeoples.org/en/node/50445> (2019).
65. Millar, M. Forest Voices: 'The new Forest Code is a law to be proud of.' *Forest Governance and Legality* <https://forestgovernance.chathamhouse.org/publications/forest-voices-the-new-forest-code-is-a-law-to-be-proud-of> (2021).
66. Hoare, A. *et al.* *Forest sector accountability in Cameroon and Ghana exploring the impact of transparency and participation.* (2020).
67. Egunyu, F. *et al.* Public engagement in forest governance in Canada: whose values are being represented anyway? *Can. J. For. Res.* **50**, 1152–1159 (2020).
68. Friedman, R. *et al.* Analyzing procedural equity in government-led community-based forest management. *Ecol. Soc.* **25**, (2020).
69. Joshi, O., Parajuli, R., Kharel, G., Poudyal, N. C. & Taylor, E. Stakeholder opinions on scientific forest management policy implementation in Nepal. *PLOS ONE* **13**, e0203106 (2018).
70. Independent Forest Monitoring & Independent Forest Monitoring Network/ JPIK. Assessing Compliance of Forest Timber Product Utilization and Trade Permit Holders. https://drive.google.com/file/d/1NTH6YAZbjnVIBP9EKksqfesen80ufwoE/view?usp=embed_facebook (2020).
71. United Nations. CHAPTER XXVII Environment: 18. Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazu Agreement). (2018).
72. Fearnside, P. Business as Usual: A Resurgence of Deforestation in the Brazilian Amazon. *Yale E360* <https://e360.yale.edu/features/business-as-usual-a-resurgence-of-deforestation-in-the-brazilian-amazon> (2017).
73. Schwartzman, S. *et al.* Environmental integrity of emissions reductions depends on scale and systemic changes, not sector of origin. *Environ. Res. Lett.* **16**, 091001 (2021).
74. Freitas, F. L. M. *et al.* Potential increase of legal deforestation in Brazilian Amazon after Forest Act revision. *Nat. Sustain.* **1**, 665–670 (2018).
75. Silva, Z. *Projeto de Lei.* (2020).
76. Brito, B. & Barreto, P. Nota técnica sobre Medida Provisória nº 910/2019. (2020).
77. Miranda, J., Börner, J., Kalkuhl, M. & Soares-Filho, B. Land speculation and conservation policy leakage in Brazil. *Environ. Res. Lett.* **14**, 045006 (2019).
78. Werneck, F., Sordi, J., Araújo, S. & Angelo, C. "Pushing the whole lot through" The second year of environmental havoc under Brazil's Jair Bolsonaro. (2021).
79. Human Rights Watch. Brazil: Remove Miners from Indigenous Amazon Territory. *Brazil: Remove Miners from Indigenous Amazon Territory* <https://www.hrw.org/news/2021/04/12/brazil-remove-miners-indigenous-amazon-territory> (2021).
80. Pacheco, P., Mo, K., Dudley, N., Shapiro, A., Aguilar-Amuchastegui, N., Ling, P.Y., & Anderson, C. and Marx, A. *Deforestation fronts: Drivers and responses in a changing world.* https://c402277.ssl.cf1.rackcdn.com/publications/1420/files/original/Deforestation_fronts_-_drivers_and_responses_in_a_changing_world_-_full_report_%281%29.pdf?1610810475 (2021).
81. The National Assembly, the Socialist Republic of Vietnam. Law on Planning: Law No. 21/2017/QH14. (2017).
82. Central African Forest Initiative (CAFI). Optimal Land Use Planning: Our Results. *Central African Forests Initiative (CAFRI)* <https://www.cafi.org/content/cafi/en/home/our-work/our-results/land-use-planning.html> (2020).
83. CAFI. Our portfolio. *Central African Forests Initiative* <https://www.cafi.org/content/cafi/en/home/our-work/our-portfolio.html> (2020).
84. Pham, T. *et al.* Adapting Free, Prior, and Informed Consent (FPIC) to Local Contexts in REDD+: Lessons from Three Experiments in Vietnam. *Forests* **6**, 2405–2423 (2015).
85. REDD+ Vietnam. CERDA: Pilot model of capacity building for ethnic minority community's readiness for Program of Reducing Emission from Forest Degradation and Deforestation in Vo Ngai district, Thai Nguyen province.
86. REDD+ Vietnam. CERDA: Strengthening the active participation of ethnic minority women for REDD+, Climate change and Sustainable development in Vietnam.
87. Hicks, C. Realising the landscape approach through REDD+ planning. (2018).
88. Ministry of Agriculture and Rural Development. Participatory self-assessment of the REDD+ readiness package in Vietnam.
89. Dahal, G. R. *et al.* Improving Policies, Processes and Practices of Forest and Forestland Allocation in Viet Nam. (2017).
90. Pham, T. T., Ngo, H. C., Dao, T. L. C., Hoang, T. L. & Moeliono, M. Participation and influence of REDD+ actors in Vietnam, 2011–2019. *Glob. Environ. Change* **68**, 102249 (2021).
91. Duchelle, A. E. *et al.* *Forest-based climate mitigation: Lessons from REDD+ Implementation.* 32 (2019).
92. Hoang, C., Satyal, P. & Corbera, E. 'This is my garden': justice claims and struggles over forests in Vietnam's REDD+. *Clim. Policy* **19**, S23–S35 (2019).
93. Robinson, B. E., Holland, M. B. & Naughton-Treves, L. Does secure land tenure save forests? A meta-analysis of the relationship between land tenure and tropical deforestation. *Glob. Environ. Change* **29**, 281–293 (2014).
94. *Reforming forest tenure: issues, principles and process.* (FAO, 2011).
95. Umali, T. Completion of One Map Policy targeted for end of 2020. *OpenGov Asia* <https://www.opengovasia.com/completion-of-one-map-policy-targeted-for-end-of-2020/> (2020).
96. The Jakarta Post. Concerns of transparency, inclusivity raised as One Map nears completion. *The Jakarta Post* <https://www.thejakartapost.com/news/2020/09/04/concerns-of-transparency-inclusivity-raised-as-one-map-nears-completion.html> (2020).

97. Samadhi, N. One Map Removing Overlapping Land | WRI Indonesia. *WRI Indonesia* <https://wri-indonesia.org/en/blog/one-map-removing-overlapping-land> (2019).
98. Jong, H. N. Deforestation in Indonesia hits record low, but experts fear a rebound. *Mongabay Environmental News* <https://news.mongabay.com/2021/03/2021-deforestation-in-indonesia-hits-record-low-but-experts-fear-a-rebound/> (2021).
99. Chen, B., Kennedy, C. M. & Xu, B. Effective moratoria on land acquisitions reduce tropical deforestation: evidence from Indonesia. *Environ. Res. Lett.* **14**, 044009 (2019).
100. Seymour, F. J., Aurora, L. & Arif, J. The Jurisdictional Approach in Indonesia: Incentives, Actions, and Facilitating Connections. *Front. For. Glob. Change* **3**, 503326 (2020).
101. NYDF Assessment Partners. *Goal 10 Assessment Report: Improving Governance to Protect Forests. Empowering People and Communities, Strengthening Laws and Institutions*. 76 https://forestdeclaration.org/images/uploads/resource/2018_Goal10_FocusReport_Full.pdf (2018).
102. Greenpeace. Time for a ban on deforestation for palm oil, not a moratorium, says Greenpeace. *Greenpeace International* <https://www.greenpeace.org/international/press-release/18595/time-for-a-ban-on-deforestation-for-palm-oil-not-a-moratorium-says-greenpeace> (2018).
103. Flint, C. *Country Report: Laos*. https://www.rinya.maff.go.jp/j/riyou/goho/jouhou/pdf/h30/H30report_nettaib_10.pdf.
104. Radio Free Asia Lao Service. New Lao Prime Minister Issues Ban on Timber Exports. <https://www.rfa.org/english/news/laos/new-lao-prime-minister-issues-ban-on-timber-exports-05172016152448.html> (2017).
105. The Star. Laos: Illegal logging remains a big issue despite PM's order. <https://www.thestar.com.my/aseanplus/aseanplus-news/2021/02/08/laos-illegal-logging-remains-a-big-issue-despite-pms-order> (2021).
106. Mupko, A. Advocates raise alarm over proposal to reopen DRC forests to loggers. *Mongabay Environmental News* (2021).
107. Global Witness. DRC forests: Total Systems Failure. *Global Witness* <https://en/campaigns/forests/total-systems-failure/> (2018).
108. Jones, K. R. *et al.* One-third of global protected land is under intense human pressure. *Science* **360**, 788–791 (2018).
109. Global Forest Watch (GFW). Global Forest Watch. *Global Forest Watch* <https://www.globalforestwatch.org/dashboards/global> (2020).
110. Mascia, M. B. & Pailler, S. Protected area downgrading, downsizing, and degazettement (PADDD) and its conservation implications: PADDD and its implications. *Conserv. Lett.* **4**, 9–20 (2011).
111. Tauli-Corpuz, V., Alcorn, J., Molnar, A., Healy, C. & Barrow, E. Cornered by PAs: Adopting rights-based approaches to enable cost-effective conservation and climate action. *World Dev.* **130**, 104923 (2020).
112. Schleicher, J., Peres, C. A., Amano, T., Lactayo, W. & Leader-Williams, N. Conservation performance of different conservation governance regimes in the Peruvian Amazon. *Sci. Rep.* **7**, 11318 (2017).
113. RRI. *Estimated area of land and territories of Indigenous Peoples, local communities and Afro-descendants where their rights are not recognized*. <https://rightsandresources.org/publication/estimate-of-the-area-of-land-and-territories-of-indigenous-peoples-local-communities-and-afro-descendants-where-their-rights-have-not-been-recognized/> (2020).
114. FAO and FILAC. *Forest governance by indigenous and tribal peoples. An opportunity for climate action in Latin America and the Caribbean*. (FAO, 2021). doi:10.4060/cb2953en.
115. IPBES. Summary for policymakers of the global assessment report on biodiversity and ecosystem services. <https://www.ipbes.net/document-library-catalogue/summary-policy-makers-global-assessment-report-biodiversity-ecosystem> (2019).
116. Chao, S. Forest Peoples: Numbers Across World. https://www.forestpeoples.org/sites/fpp/files/publication/2012/05/forest-peoples-numbers-across-world-final_0.pdf (2012).
117. Rights and Resources Initiative (RRI). *Estimated area of land and territories of Indigenous Peoples, local communities and Afro-descendants where their rights are not recognized*. <https://rightsandresources.org/publication/estimate-of-the-area-of-land-and-territories-of-indigenous-peoples-local-communities-and-afro-descendants-where-their-rights-have-not-been-recognized/> (2020).
118. Rights and Resources Initiative (RRI). *At a crossroads: consequential trends in recognition of community-based forest tenure from 2002-2017*. 223–248 https://rightsandresources.org/wp-content/uploads/2019/03/At-A-Crossroads_RRI_Nov-2018.pdf (2018).
119. Rights and Resources Institute (RRI). *The Opportunity Framework: Identifying Opportunities to Invest in Securing Collective Tenure Rights in the Forest Areas of Low- and Middle-Income Countries*. <https://rightsandresources.org/wp-content/uploads/2020/09/Opp-Framework-Final.pdf> (2020).
120. Segura Warnholtz, G., Molnar, A. A. & Ahuja, N. Forest communities in control: are governments and donors prepared to help them thrive? *Int. For. Rev.* **22**, 17–28 (2020).
121. DiGiano, M., Stickler, C. & David, O. How Can Jurisdictional Approaches to Sustainability Protect and Enhance the Rights and Livelihoods of Indigenous Peoples and Local Communities? *Front. For. Glob. Change* **3**, 40 (2020).
122. Tamang, P. An Overview of the principle of Free, Prior and Informed Consent and Indigenous Peoples in International and Domestic Law and Practices. *Aust. Indig. Law Report.* **9**, 111–116 (2005).
123. Magno & Gatmaytan. Free Prior and Informed Consent in the Philippines Regulations and Realities. <https://s3.amazonaws.com/oxfam-us/www/static/media/files/fpic-in-the-philippines-september-2013.pdf> (2013).
124. Skene, J. *Cutting It Close: How Unsustainable Logging in Canada's Boreal Forest Threatens Indigenous Rights, Wildlife, and the Global Climate*. <https://www.nrdc.org/sites/default/files/cutting-it-close-logging-canadas-boreal-report.pdf> (2018).
125. FSC Canada. Free, Prior and Informed Consent Guidance. (2019).

126. Rasch, E. D. Citizens, Criminalization and Violence in Natural Resource Conflicts in Latin America. *Eur. Rev. Lat. Am. Caribb. Stud. Rev. Eur. Estud. Latinoam. Caribe* 131–142 (2017).
127. MRG welcomes Supreme Court decision upholding Maya land rights in Belize, but deplores Government decision to appeal. *Minority Rights Group* <https://minorityrights.org/2010/08/20/mrg-welcomes-supreme-court-decision-upholding-maya-land-rights-in-belize-but-deplores-government-decision-to-appeal/> (2010).
128. UNSRIP. *La situación de los pueblos indígenas afectados por el proyecto hidroeléctrico El Diquís en Costa Rica, 2011—JAMES ANAYA*. <http://unsr.jamesanaya.org/?p=505> (2011).
129. Feoli, L. The Policy and Institutional Effects of Contentious Politics in Costa Rica's Energy Sector. *Eur. Rev. Lat. Am. Caribb. Stud. Rev. Eur. Estud. Latinoam. Caribe* 75–102 (2018).
130. Reuters. Peru Supreme Court rules against Newmont in dispute over gold mine. *Reuters* (2017).
131. Forest Peoples Programme. *Rolling back social and environmental safeguards in the time of COVID-19*. <https://www.forestpeoples.org/en/rolling-back-safeguards/global> (2021).
132. Câmara dos Deputados Federais. MEDIDA PROVISÓRIA Nº 870, DE 1º DE JANEIRO DE 2019. https://www.camara.leg.br/proposicoesWeb/prop_mostrarti?ntegracaoId=node01dvw94amfh8fjpuynoaf1utn6800292.node0?codteor=1703891&filename=MPV+870/2019 (2019).
133. Vaz, A. Pueblos Indígenas en Aislamiento en la Amazonía y Gran Chaco. <https://www.landislife.org/wp-content/uploads/2019/10/Land-is-life-25-septiembre-2019.pdf> (2019).
134. Global Witness. *Defending Tomorrow: The climate crisis and threats against land and environmental defenders*. <https://www.globalwitness.org/en/campaigns/environmental-activists/defending-tomorrow/> (2020).
135. Delina, L. L. Indigenous environmental defenders and the legacy of Macling Dulag: Anti-dam dissent, assassinations, and protests in the making of Philippine energyscape. *Energy Res. Soc. Sci.* **65**, 101463 (2020).
136. Herrera Arango, J. *Collective land tenure in Colombia: Data and trends*. (Center for International Forestry Research (CIFOR), 2018). doi:10.17528/cifor/006877.
137. UN Environment. Religious and indigenous leaders join forces on initiative to end tropical deforestation in Colombia. *UN Environment* <http://www.unep.org/news-and-stories/press-release/religious-and-indigenous-leaders-join-forces-initiative-end-tropical> (2018).
138. The Amazon Conservation Team. Legalization of Indigenous Territories in Colombia. <https://www.amazonteam.org/maps/colombia-land-rights/en/index.html>.
139. Pereira, R. The Environment and Indigenous People in the Context of the Armed Conflict and Peacebuilding Process in Colombia: Implications for the Special Jurisdiction for Peace and International Criminal Justice. *CAPAZ Policy Brief 2021-2*.
140. Clerici, N. et al. Deforestation in Colombian protected areas increased during post-conflict periods. *Sci. Rep.* **10**, 4971 (2020).
141. Prem, M., Saavedra, S. & Vargas, J. F. End-of-conflict deforestation: Evidence from Colombia's peace agreement - ScienceDirect. (2020).
142. Macpherson, E., Ventura, J. T. & Ospina, F. C. Constitutional Law, Ecosystems, and Indigenous Peoples in Colombia: Biocultural Rights and Legal Subjects. *Transnatl. Environ. Law* **9**, 521–540 (2020).
143. Pinheiro, M. V., Sanchez, L. R., Long, S. C. & Ponce Alejandro. *Environmental Governance Indicators for Latin America & the Caribbean*. <https://publications.iadb.org/publications/english/document/Environmental-Governance-Indicators-for-Latin-America--the-Caribbean.pdf> (2020).
144. Heine, D., Batmanian, G. & Hayde, E. Executive Summary. in *Designing fiscal instruments for sustainable forests* (The World Bank, 2021).
145. Gautam, M., Hayde, E. & Yixin, Z. Agriculture, subsidies, and forests. in *Designing fiscal instruments for sustainable forests 248–290* (The World Bank, 2021).
146. Shyamsundar, P., Ahlroth, S., Kristjanson, P. & Onder, S. Supporting pathways to prosperity in forest landscapes—A PRIME framework. *World Dev.* **125**, 104622 (2020).
147. Buttoud, G. Special Issue: Emerging economic mechanisms for global forest governance. *For. Policy Econ.* **18**, 1–52 (2012).
148. Busch, J. et al. A global review of ecological fiscal transfers. *Nat. Sustain.* 1–10 (2021) doi:10.1038/s41893-021-00728-0.
149. Matheson, T. Designing Forestry Taxes to Promote Conservation. in *Designing Fiscal Instruments for Sustainable Forests* (The World Bank, 2021).
150. KPK. *Preventing State Losses in Indonesia's Forestry Sector An Analysis of Non-tax Forest Revenue Collection and Timber Product Administration*. <https://acch.kpk.go.id/images/tema/litbang/pengkajian/pdf/Executive-Summary-Preventing-State-Loss.pdf> (2015).
151. Ghani, A. N. A. & Othman, M. S. H. *Forest pricing policy in Malaysia*. (2003).
152. Verhoeven, M., Magrath, W., Robbins, A. & Kallaur, E. Mobilizing and Managing Public Forestry Revenue. (2019).
153. Van Hensbergen, B. Forest Concessions—Past Present and Future. *For. Inst. Work. Pap.* **36**, 76 (2016).
154. Mumbunan, S. & Wahyudi, R. Revenue loss from legal timber in Indonesia. *For. Policy Econ.* **71**, 115–123 (2016).
155. Phelps, J., Carrasco, L. R., Webb, E. L., Koh, L. P. & Pascual, U. Agricultural intensification escalates future conservation costs. *Proc. Natl. Acad. Sci.* **110**, 7601–7606 (2013).
156. Ribeiro, D. & Garcia Drigo, I. *Public Policies Addressing Deforestation Reduction and Sustainable Production for Small Producers in the Brazilian Amazon: Focused in State of Pará and State of Mato Grosso*. (2020).
157. Bymolt, R., Laven, A. & Tyszler, M. *Demystifying the Cocoa Sector in Ghana and Côte d'Ivoire*. <https://www.kit.nl/wp-content/uploads/2020/05/Demystifying-complete-file.pdf> (2018).

158. Danso-Abbeam, G. & Baiyegunhi, L. J. S. Technical efficiency and technology gap in Ghana's cocoa industry: accounting for farm heterogeneity. *Appl. Econ.* **52**, 100–112 (2020).
159. Schulte, I. *et al.* *Supporting Smallholder Farmers for a Sustainable Cocoa Sector: Exploring the Motivations and Role of Farmers in the Effective Implementation of Supply Chain Sustainability in Ghana and Côte d'Ivoire.* (2020).
160. Gilmour, D. A. *Forty years of community-based forestry: a review of its extent and effectiveness.* (Food & Agriculture Organization of the United Nations, 2016).
161. Wong, G. Y. *et al.* Social forestry in Southeast Asia: Evolving interests, discourses and the many notions of equity. *Geoforum* **117**, 246–258 (2020).
162. Cummins, A. & Yamaji, E. To See Invisible Rights: Quantifying Araman informal tenure and its immediate relationship with Social Forestry in Central Java, Indonesia. *For. Soc.* 193–201 (2019) doi:10.24259/fs.v3i2.6289.
163. Centre pour l'Environnement et le Développement (CED), Fern, Forest Peoples Programme (FPP), International Institute for Environment and, & Okani. *La foresterie communautaire au Cameroun: analyse diagnostique des lois, institutions, acteurs et opportunités.* <https://www.forestpeoples.org/sites/default/files/documents/communityforestrycameroonFRE.pdf> (2017).
164. Oldekop, J. A., Sims, K. R. E., Karna, B. K., Whittingham, M. J. & Agrawal, A. Reductions in deforestation and poverty from decentralized forest management in Nepal. *Nat. Sustain.* **2**, 421–428 (2019).
165. Salzman, J., Bennett, G., Carroll, N., Goldstein, A. & Jenkins, M. The Global Status and Trends of Payments for Ecosystem Services. *Nat. Sustain.* **1**, 136–144 (2018).
166. Samii, C. *et al.* Effects of Payment for Environmental Services (PES) on Deforestation and Poverty in Low and Middle Income Countries: A Systematic Review. *Campbell Syst. Rev.* **10**, 1–95 (2014).
167. Cisneros, E., Borner, J., Pagiola, S. & Wunder, S. *Impacts of Conservation Incentives in Protected Areas: The Case of Bolsa Floresta, Brazil.* (World Bank, 2019). doi:10.1596/33077.
168. Pham, T. T. *et al.* Impacts of Payment for Forest Environmental Services in Cat Tien National Park. *Forests* (2021) doi:10.3390/f12070921.
169. Wunder, S. *et al.* REDD+ in Theory and Practice: How Lessons From Local Projects Can Inform Jurisdictional Approaches. *Front. For. Glob. Change* **3**, (2020).
170. Thuy Thuy, P., TB Duong, N., Thüerer, T. & O'Connell, E. *Payments for Forest Environmental Services in Viet Nam: Strengthening effectiveness through monitoring and evaluation.* (Center for International Forestry Research (CIFOR), 2021). doi:10.17528/cifor/008028.
171. Thuy, P. T., Chau, N. H., Chi, D. T. L., Long, H. T. & Fisher, M. R. The politics of numbers and additionality governing the national Payment for Forest Environmental Services scheme in Vietnam: A case study from Son La province. *For. Soc.* 379–404 (2020) doi:10.24259/fs.v4i2.10891.
172. WRI. What is a Long-term Climate Strategy? *World Resources Institute* <https://www.wri.org/climate/what-long-term-strategy> (2018).
173. Nepstad, D. C., Boyd, W., Stickler, C. M., Bezerra, T. & Azevedo, A. A. Responding to climate change and the global land crisis: REDD+, market transformation and low-emissions rural development. *Philos. Trans. R. Soc. B Biol. Sci.* **368**, 20120167 (2013).
174. Stickler, C. *et al.* *State of Jurisdictional Sustainability: Synthesis for Practitioners and Policymakers.* 19 (2018).
175. Larson, A. M., Sarmiento Barletti, J. P., Ravikumar, A. & Korhonen-Kurki, K. Multi-level governance: Some coordination problems cannot be solved through coordination. *CIFOR* <https://www.cifor.org/knowledge/publication/7067/> (2018).
176. Essen, M. von & Lambin, E. F. Jurisdictional approaches to sustainable resource use. *Front. Ecol. Environ.* **19**, 159–167 (2021).
177. Larson, A. M., Sarmiento Barletti, J. P., Ravikumar, A. & Korhonen-Kurki, K. Multi-level governance: Some coordination problems cannot be solved through coordination. *CIFOR* <https://www.cifor.org/knowledge/publication/7067/> (2018).
178. A.M., L. *et al.* *Can multilevel governance transform business-as-usual trajectories driving deforestation? Lessons for REDD+ and beyond.* (Center for International Forestry Research (CIFOR), 2018). doi:10.17528/cifor/007043.
179. Nepstad, D. C. & Warren, M. Jurisdictional Public Private Partnerships: For low-emission rural development in the tropics.
180. Ravikumar, A., Larson, A., Duchelle, A., Myers, R. & Tovar, J. G. Multilevel governance challenges in transitioning towards a national approach for REDD+: evidence from 23 subnational REDD+ initiatives. *Int. J. Commons* **9**, 909–931 (2015).
181. Bollen, A. & Ozinga, S. *Improving forest governance: a comparison of FLEGT VPAs and their impact.* (2013).
182. IUFRO. *Illegal logging and related timber trade - dimensions, drivers, impacts, and responses. A global scientific rapid response assessment report.* <https://www.iufro.org/science/gfep/gfep-initiative/panel-on-illegal-timber-trade/> (2016).
183. EU FLEGT. *Independent evaluation of the EU FLEGT Action Plan.* <http://www.flegt.org/evaluation> (2016).
184. FLEGT. EU FLEGT - News Archive 2019. <https://www.euflegt.efi.int/news-2019>.
185. FAO. *Better data, better decisions.* (FAO, 2020). doi:10.4060/cb0437en.
186. Neshu, M. K. *et al.* An assessment of data sources, data quality and changes in national forest monitoring capacities in the Global Forest Resources Assessment 2005–2020. *Environ. Res. Lett.* **16**, 054029 (2021).
187. de Sousa, C. *et al.* Cloud-computing and machine learning in support of country-level land cover and ecosystem extent mapping in Liberia and Gabon. *PLOS ONE* **15**, e0227438 (2020).
188. Skole, D. L. *et al.* Direct Measurement of Forest Degradation Rates in Malawi: Toward a National Forest Monitoring System to Support REDD+. *Forests* **12**, 426 (2021).
189. Neeff, T. & Piazza, M. How countries link forest monitoring into policy-making. *For. Policy Econ.* **118**, 102248 (2020).

190. Neeff, T. *et al.* How forest data catalysed change in four successful case studies. *J. Environ. Manage.* **271**, 110736 (2020).
191. Neeff, T. & Piazza, M. Developing forest monitoring capacity—Progress achieved and gaps remaining after ten years. *For. Policy Econ.* **101**, 88–95 (2019).
192. Yanai, R. D.; Wayson, C.; Lee, D.; Espejo, A. B.; Campbell, J. L.; Green, M. B.; Zukswert, J. M.; Yoffe, S. B.; Aukema, J. E.; Lister, A. J.; Kirchner, J. W.; Gamarra, J. G. P. Improving uncertainty in forest carbon accounting for REDD plus mitigation efforts. (2020).
193. Pham, T. T. *et al.* Strategic alignment: Integrating REDD+ in NDCs and national climate policies. *CIFOR* <https://www.cifor.org/knowledge/publication/7066/> (2018).
194. Bakhtary, H., Haupt, F. & Manirajah, S. M. *Enhancing forest targets and measures in Nationally Determined Contributions (NDCs)*. https://wwf.panda.org/wwf_news/?1064466/NDCsWeWant-Enhancing-forest-targets-and-measures-in-Nationally-Determined-Contributions-NDCs (2020).
195. Brack, D., Glover, A. & Wellesley, L. Agricultural Commodity Supply Chains. 80 (2016).
196. Pendrill, F. *et al.* Agricultural and forestry trade drives large share of tropical deforestation emissions. *Glob. Environ. Change* **56**, 1–10 (2019).
197. *WWF Enforcement Review of the EU Timber Regulation (EUTR)*. https://wwf.panda.org/wwf_news/?357123/WWF-Enforcement--Review-of-the-EU-Timber-Regulation-EUTR (2019).
198. Deutscher Bundestag. *Beschlussempfehlung und Bericht des Ausschusses für Arbeit und Soziales (11. Ausschuss)*.
199. InitiativeLieferkettenGesetz.de. What the new Supply Chain Act delivers - and what it doesn't. https://lieferkettengesetz.de/wp-content/uploads/2021/06/Initiative-Lieferkettengesetz_Analysis_What-the-new-supply-chain-act-delivers.pdf (2021).
200. Government of France. Ending deforestation caused by importing unsustainable products. *Gouvernement.fr* <https://www.gouvernement.fr/en/ending-deforestation-caused-by-importing-unsustainable-products> (2018).
201. Due diligence on forest risk commodities - Defra - Citizen Space. <https://consult.defra.gov.uk/eu/due-diligence-on-forest-risk-commodities/>.
202. *Tropical Timber Market Report*. https://www.itto.int/direct/topics/topics_pdf_download/topics_id=6747&no=1 (2021).
203. WWF UK. *Due Negligence: Will a due diligence regulation on illegal deforestation delink UK supply chains from deforestation?* <https://www.wwf.org.uk/sites/default/files/2021-08/WWF-UK-Due-Negligence-Report.pdf>.
204. Skene, J. California assembly passes groundbreaking deforestation bill. (2021).
205. OECD. Reforming Public Procurement : Progress in Implementing the 2015 OECD Recommendation. <https://www.oecd.org/gov/reforming-public-procurement-1de41738-en.htm> (2019).
206. Kanashiro Uehara, T. Public Procurement for Sustainable Development. *Chatham House* <https://www.chathamhouse.org/2020/11/public-procurement-sustainable-development> (2020).
207. Navarro, G. & Abruzzese, R. Promoting Legal Timber Markets: the Role of Public Procurement Policies in the Tropics. *Forest Governance and Legality* <https://forestgovernance.chathamhouse.org/publications/promoting-legal-timber-markets-the-role-of-public-procurement-policies-in-the-tropics> (2021).
208. S'ENGAGER DANS UNE POLITIQUE D'ACHAT PUBLIC ZÉRO DÉFORESTATION: Guide de conseils et de bonnes pratiques à destination des acteurs de la commande publique. (2020).
209. NYDF Assessment Partners. Goal 1 Assessment: Striving to end natural forest loss. (2020).
210. Deutz, A. *et al.* *Financing Nature: Closing the Global Biodiversity Financing Gap - Full report*. 256 (2020).
211. McKinsey & Company. Consultation: Nature and net zero. (2021).
212. Environmental Investigation Agency. *Tainted Beef*. 26 <https://eia-global.org/reports/20210527-tainted-beef-report> (2021).
213. USDA FAS. *Imports Buoyed by Softwood Log Demand*. 9 https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Imports%20Buoyed%20by%20Softwood%20Log%20Demand_Beijing_China%20-%20People%27s%20Republic%20of_05-30-2021.pdf (2021).
214. Government of Indonesia. Indonesia Terminates The Loi On Redd With Norway. *Portal Kementerian Luar Negeri Republik Indonesia* <https://kemlu.go.id/portal/en/read/2912/berita/indonesia-terminates-the-loi-on-redd-with-norway>.
215. Government of Norway. Press statement: The Indonesia-Norway climate and forest partnership. *NICFI* <https://www.nicfi.no/current/press-statement-the-indonesia-norway-climate-and-forest-partnership/> (2021).
216. Sari, A. P. Lessons from collapse of RI-Norway REDD+ plan. *The Jakarta Post* <https://www.thejakartapost.com/academia/2021/09/15/lessons-from-collapse-of-ri-norway-redd-plan.html> (2021).
217. Sawitri, A. S. End of Indonesia-Norway deal reveals distrust, vulnerability in climate funding. *The Jakarta Post* <https://www.thejakartapost.com/academia/2021/09/13/end-of-indonesia-norway-deal-reveals-distrust-vulnerability-in-climate-funding.html> (2021).
218. Climate Focus analysis based on <https://redd.unfccc.int/>

NEW YORK DECLARATION ON FORESTS PROGRESS ASSESSMENT

Learn more at: forestdeclaration.org

