



RIGHTS AND RESOURCES INITIATIVE | FEBRUARY 2021

*Scaling-Up the Recognition of Indigenous and
Community Land Rights:
Opportunities, Costs and Climate Implications*

Technical Report

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Introduction

Recognition of the customary rights of Indigenous Peoples, local communities, and Afro-descendants represents a critical pathway to confronting the dual climate and biodiversity crises, but global donor financial and programmatic resources are uncoordinated and insufficient to respond to this opportunity and challenge. Though stronger and more secure Indigenous, local community, and Afro-descendant tenure to rural land and forests is associated with positive carbon and biodiversity outcomes, communities have formal rights to only a fraction of the rural lands and forests that they customarily claim and manage. The success of locally led, grassroots movements to advance tenure reforms has revealed that rights-holders and their networks are the actors best positioned to lead efforts to secure tenure rights. Yet, no financial mechanism exists to channel funds at scale to directly support the efforts of Indigenous Peoples, local communities, and Afro-Descendants to secure customary tenure rights.

The Rights and Resources Initiative (RRI) instigated a suite of analyses to support coordination among donors and development finance institutions to scale up cooperation, finance, and ambition to recognize Indigenous, local community, and Afro-descendant land tenure, and directly fund community organizations to mitigate climate change and biodiversity loss. Part I provides a summary of two recent studies published by RRI, which estimate the total potential area where the rights of Indigenous Peoples, local communities, and Afro-descendants have not been recognized in 42 countries, as well as an operational framework for prioritizing investments in land tenure reform projects in 29 tropical forest countries. Part II uses those analyses to provide rigorous estimates of the amount of carbon in customary and formal community territories and estimates avoided carbon loss if community rights to these areas are recognized. This analysis was conducted by Indufor, based on data provided by RRI and the Tenure Facility. Part III uses the RRI analyses, along with cost data on tenure reform implementation projects gathered by the Tenure Facility, to estimate the financial costs of scaling up rights recognition.

Part I: Opportunities for Scaling up Rights Recognition – Review of Recent Findings

RRI published a suite of analyses in 2020 to identify potential opportunities for investments by governments and development, climate, and conservation organizations in projects to formally recognize the land and forest rights of Indigenous Peoples, local communities, and Afro-descendants. This section presents a summary of the findings of these published reports, namely: *Estimate of the area of collective land and territories of Indigenous Peoples, local communities, and Afro-descendant peoples where their rights have not been recognized* and *The Opportunity Framework 2020*.

Estimate of the area of collective land and territories of Indigenous Peoples, local communities and Afro-descendant peoples where their rights have not been recognized. [\(Link to full report\)](#)

This study is the first of its kind to attempt to quantify the potential for further rights' recognition by estimating the amount of land area customarily inhabited by Indigenous Peoples, local communities, and Afro-Descendants where their rights are not recognized. The analysis covers 42 countries, representing almost 50 percent of global land area, not including Antarctica. An estimate of the extent of such lands with unrecognized rights is meant to facilitate and accelerate donor investment in the formal recognition of community land rights.

The total (recognized and unrecognized) lands and territories of Indigenous Peoples, local communities, and Afro-Descendants were found to constitute 49.27 percent of the geographical area of the countries covered by this analysis; this finding is consistent with prior research findings that Indigenous Peoples, local communities, and Afro-Descendants have historic or customary rights to 50 percent or more of global land area. Significantly, the analysis found that, within the study area, there were 1488.65 million hectares (mha) of lands that are customarily occupied or stewarded by Indigenous Peoples, local communities, and Afro-Descendants, but where these communities have no legal recognition of their land tenure rights. This area of unrecognized Indigenous, local community, and Afro-Descendant lands represents 22.9 percent of the total land area of the countries included in the study, suggesting significant scope for scaling up rights recognition.

Opportunity Framework 2020 [\(Link to full report\)](#)

The study assesses the readiness of 29 countries with significant tropical forest areas to undertake tenure reform projects to formally recognize the rights of Indigenous Peoples, local communities, and Afro-Descendants to their lands, territories, and resources, based on five parameters: 1) adequacy of legal and regulatory frameworks; 2) national government willingness and interest; 3) sub-national government willingness and interest; 4) operational capacities within governments; and 5) operational capacities within rights-holding Indigenous Peoples', local communities', and Afro-Descendants' organizations and allied civil society organizations.

Based on their score on these five parameters, countries were categorized as either:

- Ready for large national, or sub-national projects to implement forest tenure reforms (10 countries)
- Ready for medium projects to implement forest tenure reforms (14 countries)
- Ready for small projects to build or strengthen the enabling environment (5 countries)

Taken together, these two studies demonstrate the total potential area for scaling up rights recognition, as well as a framework for prioritizing country-level investments to achieve global goals.

Part II: Calculation of Carbon-Benefit Scenarios

Objective

We aim to estimate potential climate benefits from securing collective tenure on lands customarily claimed, but not legally recognized, by Indigenous Peoples, local communities, and Afro-Descendants across 29 low- and middle-income countries. The set of 29 countries was identified in RRI's Opportunity Framework,ⁱ which assessed the readiness of countries with significant tropical forest areas to implement projects to recognize community forest tenure rights.ⁱⁱ

Literature Review and Definitions

Baseline carbon stocks: In 2018, Woods Hole Research Center (now Woodwell Climate Research Center) and RRI conducted an analysis of estimated carbon storage in aboveground live dry woody biomass, belowground live dry woody biomass, and soil organic matter in community-held or claimed lands in 64 countries.ⁱⁱⁱ For the subset of 29 countries identified in RRI's Opportunity Framework, the total carbon stored in unrecognized community lands is estimated at 212.6 GtC.^{iv}

Carbon loss rates due to deforestation and forest degradation: Forestlands to which Indigenous Peoples, local communities, and Afro-Descendants hold customary but legally unrecognized rights are at risk of deforestation and forest degradation. The carbon stored in these forests is some of the most vulnerable, with community lands with insecure tenure frequently targeted for agricultural expansion, mining, and other deforestation activities. Much of this carbon, once lost, is not recoverable on timescales relevant to avoiding dangerous climate impacts.^v

Threats to forestlands more broadly underscore the outsized risks to unrecognized Indigenous, local community, and Afro-Descendant lands. Global Forest Watch forest loss data shows that a weighted average of 8.0 percent of tree cover was lost in the 29 countries of analysis from 2001 to 2018. This heightened risk is shown by Walker et al. (2014) which found that nearly 20 percent of carbon stored in Indigenous territories and protected natural areas in Amazonia is at risk due to ongoing and planned development projects.^{vi}

Potential for formalization of collective tenure to reduce carbon losses: Indigenous Peoples, local communities, and Afro-descendant peoples have been crucial in stewarding forests—avoiding deforestation as well as forest degradation and natural disturbances.^{vii} Securing collective tenure on unrecognized Indigenous and local community lands can provide a basis for lower deforestation and forest degradation along with other measures. Blackman et al. (2017) found that titling in the Peruvian Amazon reduced clearing by over 75 percent and forest disturbance by roughly 66 percent in a two-year window. The study strongly supports the notion that awarding land titles to Indigenous and/or local communities can provide enhanced protection in the short term.^{viii} The authors' review of previous theoretical and empirical literature highlights the diversity of relationships between community titling and forest cover found in developing countries. Previous studies suggest that while community titling can increase forest cover, it can also reduce forest cover by creating or reinforcing common-pool resource problems,^{ix} or incentives for expansion of productive activities such as agriculture.^x In other

cases, private or public sector actors could co-opt community forest management.^{xi} Secure tenure on its own may be insufficient to prevent deforestation, and needs to be paired with sufficient incentives to keep forest ecosystems intact in areas where there is strong benefit to clear forest.^{xii} "Bundle of rights"-based approaches have also shown variable effects to deforestation rates, indicating that local solutions require a strong understanding of complex forest loss drivers.^{xiii} Rules, monitoring, and maintenance are essential to enabling effective community forestry governance, as shown in large-N studies explaining the variation in the performance of community forestry regimes.^{xiv}

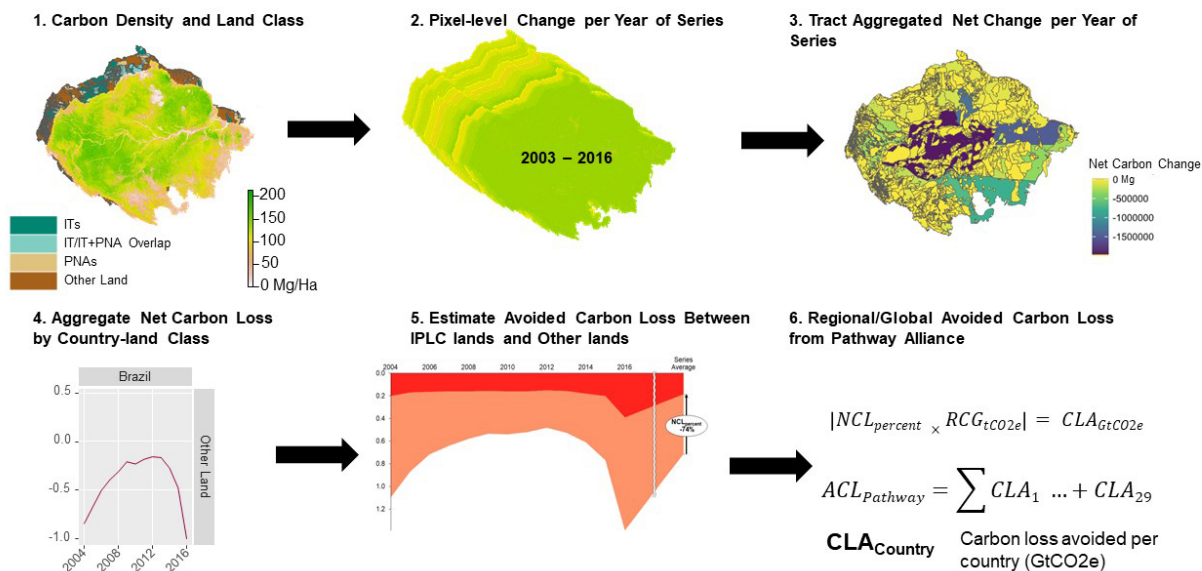
This finding is further bolstered by Walker et al. (2020) which finds that while lands classified as Indigenous territories or protected natural areas store more than 58 percent of the region's carbon, they were responsible for just 10 percent of the net change in aboveground carbon.^{xv} With the new carbon loss estimates from Baccini et al. (2017) and methods by Walker et al. (2020), the authors estimate the net realized carbon avoided across the set of 29 countries and perform a country-by-country analysis.^{xvi}

Methodology and Findings

According to the RRI Opportunity Framework analysis, 24 countries are ready for medium- and national-scale projects to map and title Indigenous, local community, and Afro-descendant forestlands. These 24 countries collectively hold 197.2 GtC of carbon stocks in unrecognized Indigenous, local community, and Afro-Descendant lands. The formal recognition of forestland rights alone is not sufficient to achieve sustained protection or forest-based livelihoods and economic development that local people want and deserve. Therefore, our projection of climate benefits assumes that projects of the Path to Scale initiative mobilize increased investments in tenure reform, and that projects are complemented by assistance and capacity-building to strengthen forest governance, develop and maintain forest management plans, protect forests against external threats, and build sustainable forest enterprises and renewable energy systems. This more comprehensive approach will increase the likelihood of permanence and reduce potential leakage.

To assess the potential for avoided carbon emissions from interventions to secure collective tenure and maintain forests on Indigenous, local community, and Afro-descendant lands, we take a meta-analysis approach using key datasets from: Walker et al. 2020 carbon loss time series data for Amazonia; RAISG 2020 online database of Indigenous lands in Amazonia; RRI 2018 global baseline on carbon storage; and the technical paper described in Part I from RRI on Indigenous, local community, and Afro-descendant rights.^{xvii}

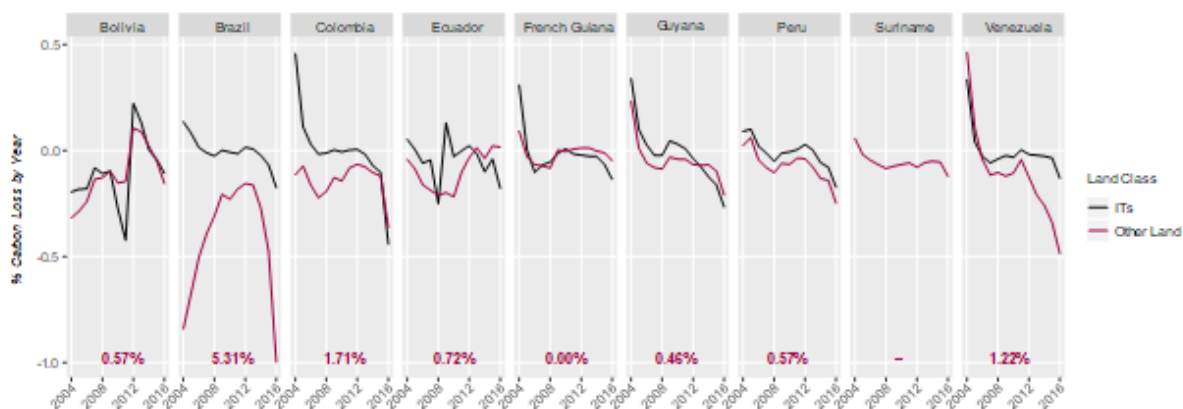
Method for Estimating Avoided Carbon Loss



Starting first with the most data-rich region, we calculate the net carbon loss by country-land class type for the time series using a stack of net change rasters (2004 – 2016).^{xviii} Our analysis only compares “other lands,” or lands without formal recognition/conservation protection, and recognized Indigenous Territories provided by the Amazon Geo-Referenced Socio-Environmental Information Network (RAISG).^{xix} The resulting delta is referred to as the “country gap” below—or the estimated avoided carbon loss in lands that are recognized Indigenous Territories when compared to a baseline of unrecognized other lands. We present Amazonia as a natural experiment in titling performance, and find that relative to other lands, Indigenous Territories experienced less carbon loss by country and as a region. The results from this are presented below; further disaggregation is presented in the Supplemental Figures section that follows.

Net Above Ground Carbon Loss in Amazonia

Sample average net change in above ground carbon stocks relative to 2003
Country gap average indicated in red



Source: Woods Hole
Note: Figure and realisations by Indufor.

Working under the assumption that this country gap presents the relative benefits and costs associated with both land ownership classes, we then can simulate historical scenarios for the period 2004 – 2016, if titling regimes outside of Amazonia were to behave as specific countries or the regional average. The average historical scenario was taken as the average performance gap between each country for all of Amazonia, attributed to the current carbon stock of unrecognized lands in Africa, Asia, and Latin America outside of Amazonia.^{xx} For a high- and low-avoided carbon loss scenario we use the case of Brazil and Guyana, respectively—these comprise the range estimate presented below. High-avoided carbon loss signifies that there is a large gap between the carbon loss in other lands and recognized Indigenous territories, while the low-avoided carbon loss signifies relatively small benefit between the land classes.

We estimate that the total historical savings (2004 – 2016) across the portfolio due to Indigenous Territories’ relative carbon performance was an Avoided Carbon Loss (ACL) of 2.723 GtCO₂e (range 1.416 - 7.515). Benefits are driven by Africa which witnessed an estimated ACL of 1.724 GtCO₂e (range 0.645 – 8.110); Latin America (including Amazonia) which witnessed an ACL of 0.635 GtCO₂e (range 0.635 – 0.638); and Asia which witnessed an estimated ACL of 0.363 (range 0.136 – 1.584).

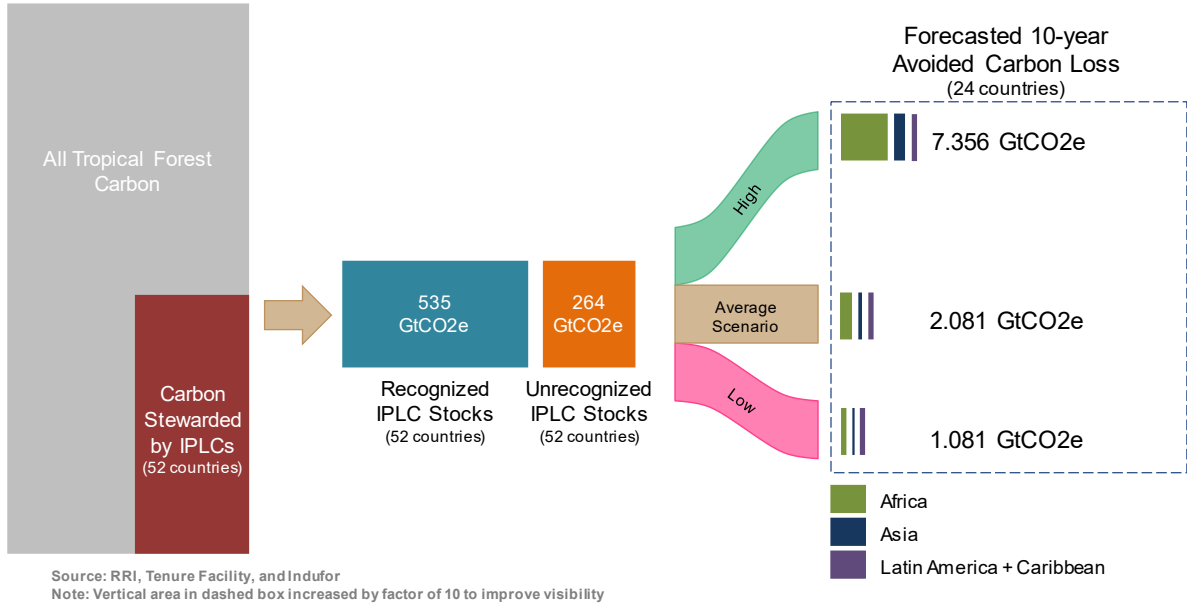
To forecast out from the 2004 – 2016 series data, we take the average annual performance for each country in Amazonia and extrapolate the year-over-year change for ten years, using the assumption that all titling occurs at the start of the first year. In the average scenario we use Amazonia as the baseline for all countries that lack historical carbon loss-land class time series data. Again, in the high- and low-avoided carbon loss scenarios we use the case of Brazil and Guyana, respectively.

We estimate that the total future savings (2016 – 2026) across the portfolio due to Indigenous Territories’ relative carbon performance would be an estimated ACL of 2.081 GtCO₂e (range 1.082 – 7.354). Benefits are driven by Africa which would witness an estimated ACL of 1.321 GtCO₂e (range 0.495 – 5.676); Latin America (including Amazonia) which would witness an ACL of 0.482 GtCO₂e (range 0.482 – 0.484); and Asia which would witness an estimated ACL of 0.278 (range 0.104 – 1.196). In the table below we present the results of the three scenarios across two time periods.

Table 1 Avoided Carbon Loss (ACL) by Scenario and Time Period (GtCO₂e)

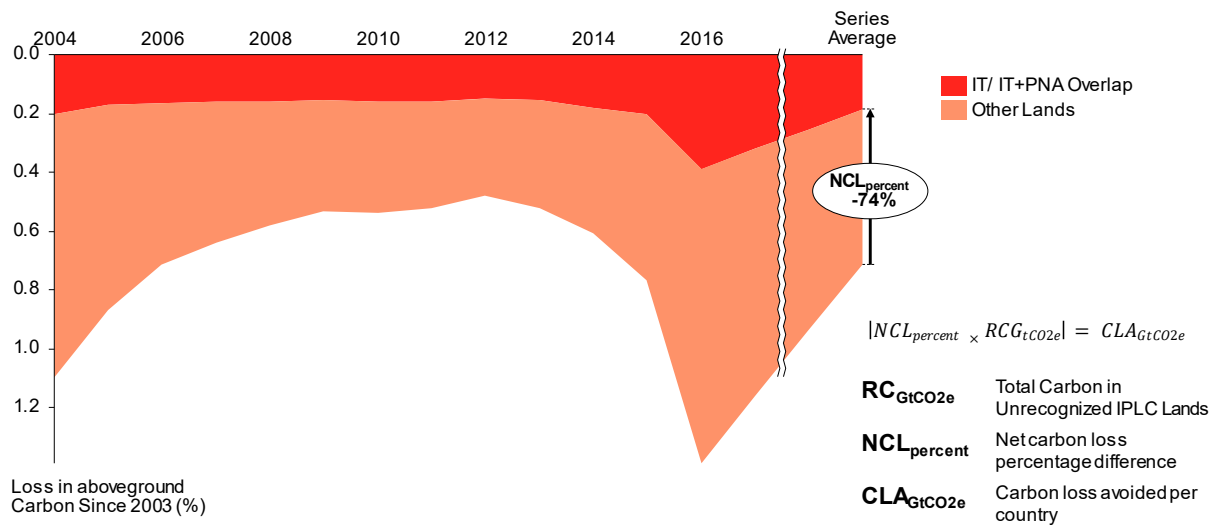
Region	Historical Average ACL	Historical High-ACL	Historical Low-ACL	Forecasted Average 10-year ACL	Forecasted High-10-year ACL	Forecasted Low-10-year ACL
Amazonia	0.635	0.635	0.635	0.481	0.481	0.481
Latin America	0.001	0.004	0.000	0.001	0.003	0.000
Africa	1.724	7.515	0.645	1.321	5.676	0.495
Asia	0.363	1.584	0.136	0.278	1.196	0.104
Total	2.723	9.734	1.416	2.081	7.354	1.082

Avoided Carbon Loss Estimation



Supplemental Figures

Estimating Avoided Carbon Loss

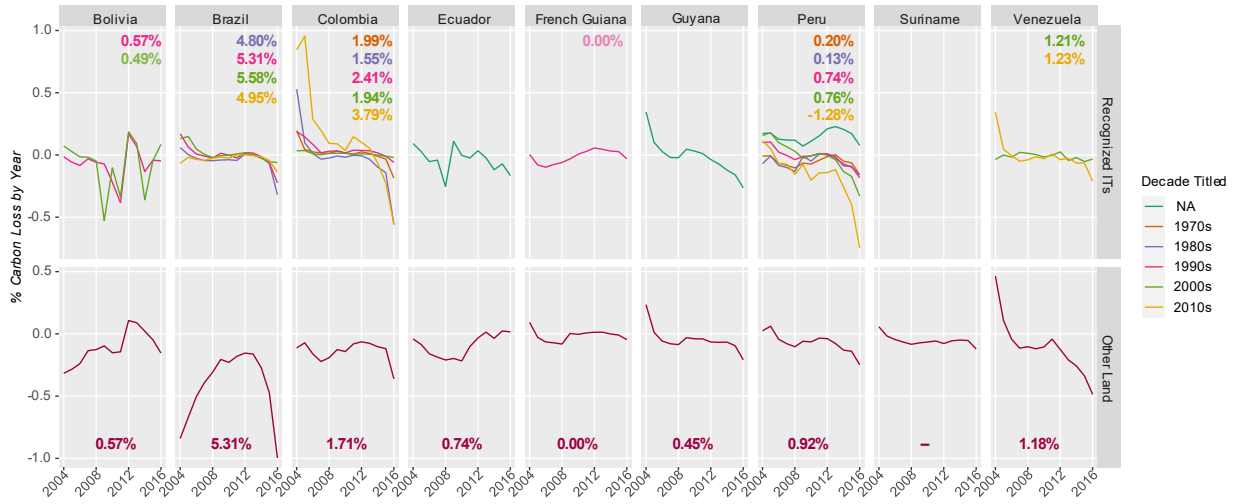


Source: Woods Hole, Figure by Tenure Facility and Indufor
 Note: Indicative figure of carbon loss (deforestation, degradation, and disturbance) for Amazonia adapted from Walker et al. 2020.
 Other lands include all land outside of Indigenous Territories (IT) and Protected Natural Areas (PNA).

Net Above Ground Carbon Loss in Amazonia

Sample average net change in above ground carbon stocks relative to 2003

Country gap average indicated in red, decade gaps indicated in colors respectively



Source: Woods Hole
 Note: Figure and recalculations by Indufor.

Part III: Financial Costs of Scaling Up Rights Recognition and Carbon Cost Comparison

Objective

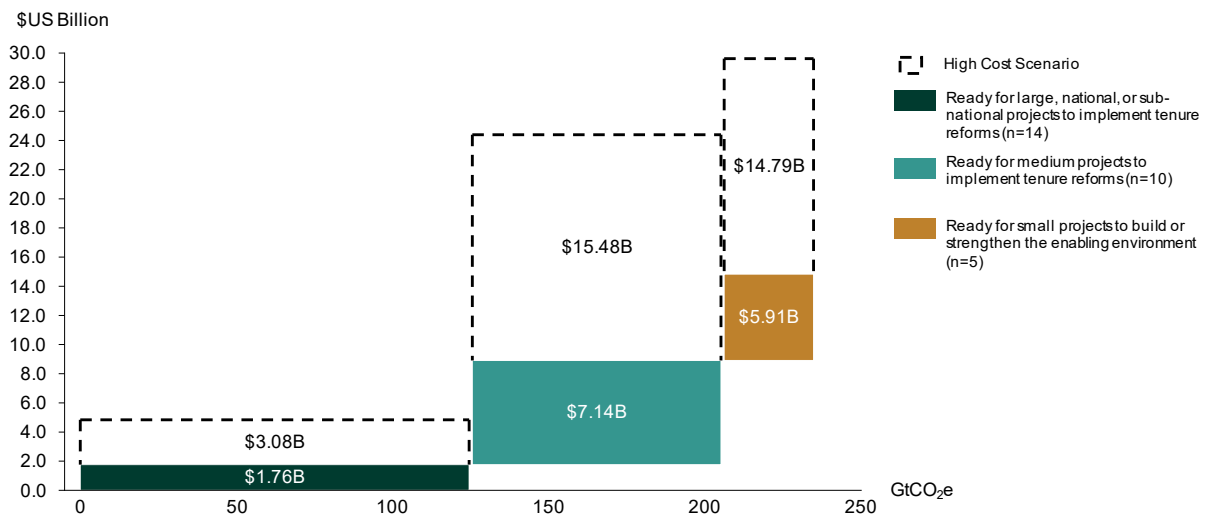
We aim in this section to provide an estimate of the operational costs associated with implementing land tenure security projects and to provide calculations on the cost per hectare as well as cost per tCO₂e of avoided emissions.

Data, Assumptions, and Findings

RRI, the Tenure Facility, and other land tenure security projects implemented in the past decade have generated detailed cost data and ranges, enabling for the first time robust estimates of the costs to secure community land rights across a wide range of political and biological contexts. The cost to delimit, map, and register community land rights averages US\$5 per hectare for large, national projects, \$22.5 per hectare for medium, sub-national projects, and approximately US\$50 per hectare for small, strategic investments to build the legal and regulatory enabling environment.

These estimates include the costs of mapping, delimitation, and titling—the first operational step in recognizing Indigenous and community ownership on the ground—but do not include the costs of building community capacity to manage these lands, or government capacity to enforce the laws or support community governance. With these averages, it would cost approximately US\$1.76 billion to recognize the forest rights in the 10 countries that are ready for national-scale projects, and an additional US\$7.14 billion to do so in the 14 countries that are ready for medium-scale projects.^{xxi} With these assumptions, the cost per tCO₂e ranges from US\$0.19 and US\$2.77 on average.^{xxii} For

Opportunity Framework Cost Curve



Source: RRI, Tenure Facility, and Indufor

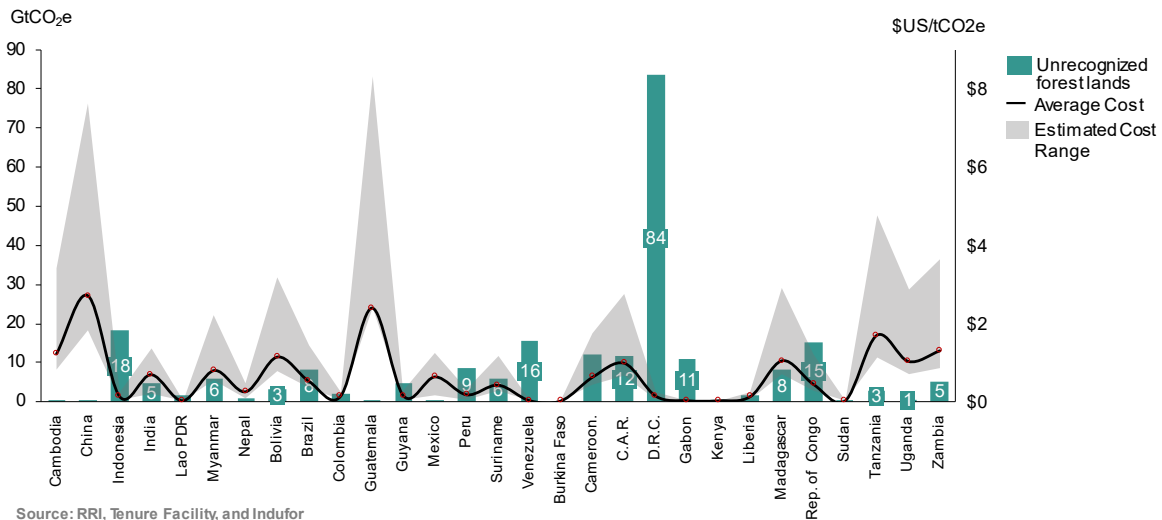
comparison, over US\$4 billion has been pledged to multilateral climate funds to finance REDD+ since

2008.^{xxiii} And, compared to other climate abatement options, the tenure rights solution is also likely to be highly cost effective.^{xxiv}

The costs of securing land rights are also low and favorable compared to other, more conventional, approaches to achieve conservation outcomes. For example, the costs of setting aside 30 percent of the world’s land for conservation under conventional approaches are currently estimated at between £770 billion and £1.34 trillion over 10 years.^{xxv} And the estimated cost of recognizing the tenure rights of Indigenous and local communities in currently unprotected biodiverse areas is less than 1 percent of the cost of resettling them to create new public protected areas.^{xxvi} In addition to playing a preeminent and direct role in reducing carbon emissions and preserving biodiversity, securing the land rights of communities also produces a wide range of benefits that are foundational to the social, economic, and political development targets in the SDGs, including improved community incomes and livelihoods, reduced rural to urban migration, and gender justice^{xxix}, among others.

There is now an actionable understanding of the total area in the world of unrecognized Indigenous and community land rights, the location and population of those areas, the operational possibility and cost of securing those land rights, and the benefit of securing those lands in climate and biodiversity terms.

Estimated Cost per tCO2e to Recognize IPLC Forest Lands



Source: RRI, Tenure Facility, and Indufor
 Note: Cost estimates are exclusive of countries in opportunity framework category 1 (as well as Kenya from category 2), as costs are too variable to accurately estimate.

About the Rights and Resources Initiative

The Rights and Resources Initiative is a global Coalition of 18 Partners and more than 150 rightsholders organizations and their allies dedicated to advancing the forestland and resource rights of Indigenous Peoples, Afro-descendants, local communities, and the women within these communities. Members capitalize on each other's strengths, expertise, and geographic reach to achieve solutions more effectively and efficiently. RRI leverages the power of its global Coalition to amplify the voices of local peoples and proactively engage governments, multilateral institutions, and private sector actors to adopt institutional and market reforms that support the realization of rights. By advancing a strategic understanding of the global threats and opportunities resulting from insecure land and resource rights, RRI develops and promotes rights-based approaches to business and development and catalyzes effective solutions to scale rural tenure reform and enhance sustainable resource governance.

RRI is coordinated by the Rights and Resources Group, a non-profit organization based in Washington, D.C. For more information, please visit www.rightsandresources.org.

Partners



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- xxii Ibid.
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