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9 FACTS ABOUT COMMUNITY LAND AND CLIMATE MITIGATION

By Peter G. Veit — October 2021

INTRODUCTION

Indigenous peoples and other local communities (IPLCs) are essential for forests, climate, biodiversity, public health and a host of other local and global ecosystem services. Securing IPLC land rights, helping protect their lands from external threats and supporting their forest management efforts would allow IPLCs to contribute even more to these public goods. Evidence on IPLC forest management has been accumulating steadily over the last decade since this matter gained attention in the climate change policy circles. This document provides nine recent insights on the roles of IPLCs and community land in climate mitigation and six commonly reported next steps.

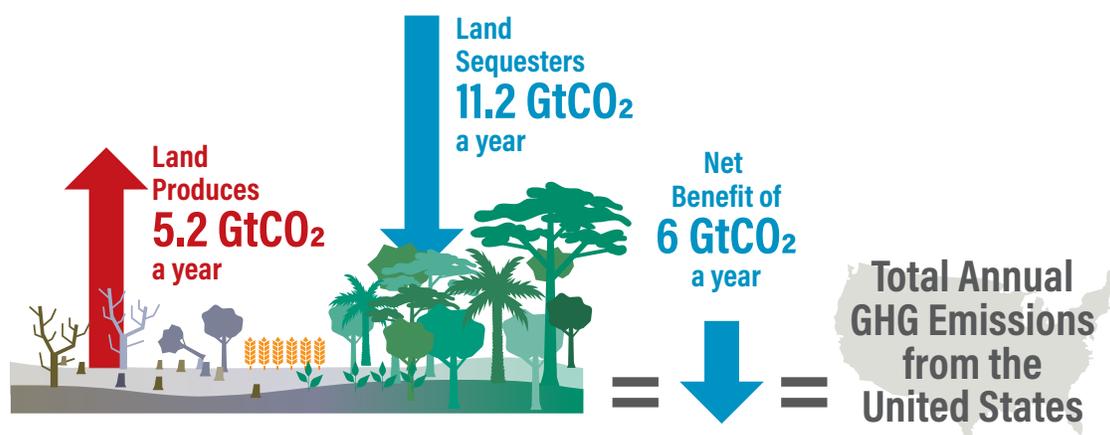
Most of the world's forests are the traditional land of IPLCs (hereafter community land). However, governments in many countries legally hold and administer most of the nation's forests. Many countries have experienced high rates of forest loss and degradation that have been attributed to the failure of state management. In the last few decades, some governments legally recognized traditional community land and customary tenure arrangements, and registered and titled the land to IPLCs. Since the late 1980s, governments have also decentralized public roles and decision-making authority in forestry from higher to lower jurisdictional levels (e.g., provinces, districts, villages and private bodies, including IPLCs), although the forests remain state property. These reforms were driven by local demands for participation, external pressure from donors and fiscal and administrative constraints.

Key international climate instruments now recognize the role of IPLCs and community land in forest health and climate mitigation, including the Intergovernmental Panel on Climate Change (IPCC), Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) and New York Declaration on Forests. In 2020, the IPBES report on the *Workshop on Biodiversity and Pandemics* noted that “developing effective pandemic prevention programmes in these regions will be enhanced by efforts to enhance secure land tenure and ownership rights for Indigenous Peoples and Local Communities.”

In 2019, the IPCC report, *Land Use, Land-Use Change and Forestry*, recognized land as both a source of greenhouse gas (GHG) emissions and a climate change solution. Agriculture, forestry and other land use contributed about 23% of anthropogenic emissions from 2007 to 2016 and sequestered almost a third of all human-caused emissions, removing a net six gigatons of carbon dioxide (Gt CO₂) per year in this time period (see above).

Forests present a significant global carbon stock accumulated through growth of trees and an increase in soil carbon. According to the IPCC, the largest potential for reducing GHG emissions from the land sector comes from curbing deforestation and forest degradation, while afforestation and reforestation of degraded land have the greatest carbon removal potential. In the long term, sustainable forest management that maintains or increases forest carbon stocks, while producing an annual sustained yield of timber, fiber or product from the forest, generates the largest climate mitigation benefit.

Land is both a powerful sink and emitter of carbon dioxide emissions



Source: IPCC, 2019. *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*. P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, et. al. (eds.). In press.

Like the IPBES report, the **IPCC report recognizes the role of IPLCs and tenure security**. “Insecure land tenure affects the ability of people, communities and organisations to make changes to land that can advance adaptation and mitigation (*medium confidence*),” according to the report. “Limited recognition of customary access to land and ownership of land can result in increased vulnerability and decreased adaptive capacity (*medium confidence*). Land policies (including recognition of customary tenure, community mapping, redistribution, decentralisation, co-management, regulation of rental markets) can provide both security and flexibility response to climate change (*medium confidence*).”

Following this introduction, nine key insights from recent research on community lands, IPLCs and climate

mitigation are presented. The researchers and policy analysts behind these findings make several suggestions regarding next steps; six of the most common suggestions are provided after the key findings. This note aims to inform and shape the decisions by the climate change community, including international climate instrument negotiators, national and international climate fund managers, national leaders responsible for establishing national climate goals, the practitioners responsible for implementing climate initiatives and civil society organizations (CSOs). IPLCs and their supporters can also use these insights to make strong, compelling cases to the climate community.

FROM THE RESEARCH

Learn more about *Introduction* with these sources:

- At a Crossroads: Consequential Trends in Recognition of Community-Based Forest Tenure from 2002-2017.
- African decentralization: local actors, powers and accountability.
- Workshop on Biodiversity and Pandemics: Workshop Report.
- Land Use, Land-Use Change and Forestry.

Cover photo kindly provided by Joel Redman, If Not Us Then Who, ifnotusthenwho.me.



Juan Carlos Huayllapuma/CIFOR

KEY INSIGHT 1. HALF THE WORLD'S LAND IS COMMUNITY LAND GOVERNED BY IPLCS

Many experts agree that about **half the world's land is community land**, although estimates are as high as **65% or more of the global land**. Community land is found on all continents except Antarctica, with Africa having more community land (78.7% of Africa's area) than any other region in the world.

IPLCs hold community land in a collective manner, regardless of recognition under national statutory law. Most community land is managed under customary tenure arrangements — rules that govern community allocation, use, access, and transfer of land and natural resources. While IPLCs distribute rights to land in different ways, community land often includes land that is allocated to individuals or households for homesteads, family farms and other purposes, as well as common property that is available for the benefit of all members (e.g., forests, rangeland and wetlands).

Historically, community land covered much or all the land in of many countries. Today, a few countries like Rwanda have lost all community land, often because the land has been acquired by the state or other actors or the IPLCs have individualized their land. Many IPLCs, sometimes with help from government or civil society organizations, are taking steps to regain control of their traditional land and reconstitute collective ownership.

Community land supports over two billion people (almost a quarter of the world's population), including **370 million to 500 million Indigenous people**. Indigenous people make up just 5% of the global population and hold **an estimated 20% to 25% of the Earth's land**.

Poor rural populations and **low-income countries are particularly dependent on natural assets**. For IPLCs, community land is a primary source of food, medicine, fuelwood and construction materials, as well as

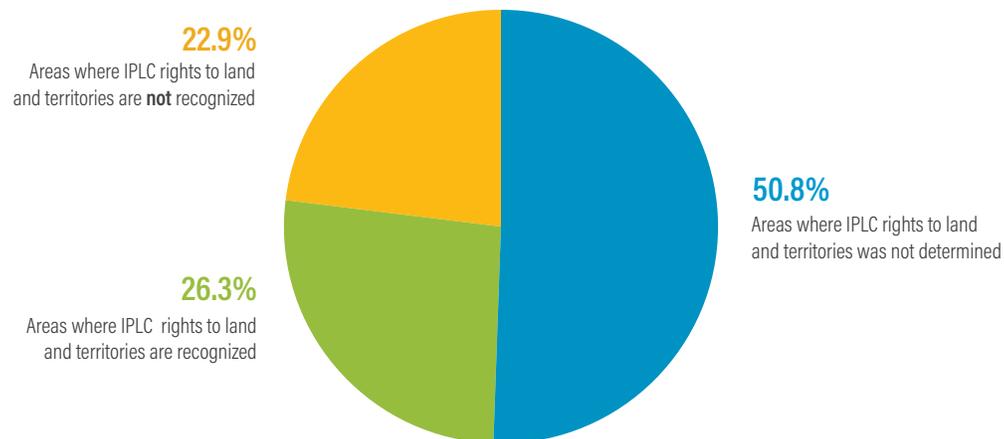
employment, income, welfare, security, culture and spirituality. Community land is also a basis for social identity, status and political relations. Community land is often associated with social cohesion, which can generate governance dividends like reduced conflict.

Despite its importance to local wellbeing, only **10% of the world's land is recognized under national laws as belonging to IPLCs**. Another 8% of the world's land is designated by governments for IPLCs where they have some recognized rights, but not ownership. About 67% of the global land that is owned by or designed by government for IPLCs is found in just five countries: China, Canada, Brazil, Australia and Mexico.

As such, most of the world's community land is not legally recognized and is **held by IPLCs under customary tenure arrangements** alone. **Africa has the lowest formal recognition among continents**, as only 26.7% of community land is legally recognized. This land is particularly vulnerable to expropriation by powerful interests.

In a study of 42 countries that cover 49% of global land, **IPLCs held 49.2% of national area**. IPLCs held at least some legal rights to 26.3% of this land, while 22.9% of the national land was held under custom without legal rights (see figure below). Some of the remaining 50.8% of national area may have been community land in the past but is no longer held by IPLCs.

Proportion of recognized and unrecognized area of indigenous and local community lands and territories



Source: Rights and Resources Initiative, August 2020. *Estimate of the area of land and territories of Indigenous Peoples, local communities, and Afro-descendants where their rights have not been recognized.*

Even less of the world's community land is registered in a government cadastre and documented with an official land title or certificate. The titling of community land **integrates customary rights into official legal systems** and establishes formal land rights. The amount of titled community land

varies by country. In a few countries (e.g., Tanzania and Mexico), most community land is titled. However, little or no community land is titled in most countries (e.g., Democratic Republic of Congo and Indonesia).

FROM THE RESEARCH

Learn more about *Half the World's Land Is Community Land Governed by IPLCs* with these sources:

- Who Owns the World's Land? A Global Baseline of Formally Recognized Indigenous and Community Land Rights.
- The Tragedy of Public Lands: The Fate of the Commons under Global Commercial Pressure.
- Factsheet. Who are indigenous peoples?
- Indigenous Peoples. Environment.
- The Changing Wealth of Nations: Measuring Sustainable Development in the New Millennium.
- Forests for People: Community Rights and Forest Tenure Reform.
- Customary Tenure: Remaking Property for the 21st Century.
- Estimate of the area of land and territories of Indigenous Peoples, local communities, and Afro- descendants where their rights have not been recognized.
- Held, Legally Recognized, Documented, and Not-Recognized Community Land: Findings from 14 Countries.
- The Scramble for Land Rights: Reducing Inequity between Communities and Companies.



Joel Redman/If Not Us Then Who

KEY INSIGHT 2. COMMUNITY LAND GENERATES VALUABLE ECOSYSTEM SERVICES THAT BENEFIT IPLCS AND SOCIETY

Community land provides a range of ecosystem goods and services that generate local, regional and global benefits. Different ecosystems, such as forests, rangelands and wetlands, provide unique services. Community land holds significant shares of some ecosystems. For example, community land (formally recognized and customarily held) holds most of the world's forests, and Indigenous land alone holds at least 36% of the world's large, unbroken swaths of natural forests, known as "intact forests." Indigenous land also harbors 80% of the planet's remaining biodiversity.

To inform decision-makers, some ecosystem services have been valued in monetary units to highlight the magnitude of ecosystem services and draw comparisons to human-engineered infrastructure and services. In 1997, the global value of 17 ecosystem services for 16 biomes was estimated to be between \$16 trillion and \$54 trillion per year. In 2011, the global value of the same 17 ecosystem services was estimated at \$125 trillion to \$145 trillion per year. From 1997 to 2011, the loss of ecosystem services due to land use change was estimated at between \$4.3 trillion and \$20.2 trillion annually. By comparison, the combined gross national income of all countries — known as the "gross world product" — was estimated at \$31.462 trillion in 1997 and \$73.48 trillion in 2011.

For the Amazon, the loss of economic, natural capital and ecosystem services of a tipping point — where restoration to its previous state may not be possible — is estimated at a value of \$256.6 billion through 2050. Reducing deforestation and taking other actions to avert a tipping point would generate \$339.3 billion. From a public investment perspective, the returns to implementing these strategies would be \$29.5 billion.

Few studies have valued ecosystem services from community land. In 2020, the value of just four ecosystem services — carbon sequestration, air quality, maintaining

water cycles and biocontrol — from the world's community land was estimated at \$1.16 trillion per year. This estimate assumes that just 25% of the world's land is community

Categories of Ecosystem Services

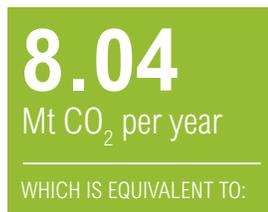
- **Provisioning Services.** The products obtained from ecosystems, including genetic resources, food, fiber, and fresh water.
- **Regulating Services.** The benefits obtained from the regulation of ecosystem processes, including carbon sequestration and the regulation of climate, water, and some human diseases.
- **Cultural Services.** The non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experience.
- **Supporting Services.** Ecosystem services that are necessary for the production of all other ecosystem services, including biomass production, production of atmospheric oxygen, soil formation and retention, nutrient cycling, and water cycling.

Source: Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Synthesis*.

Annual avoided CO₂ emissions through indigenous forestland-tenure security

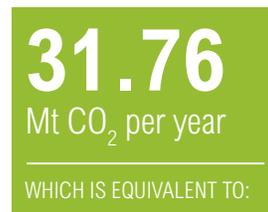
Bolivia

has the potential to avoid:



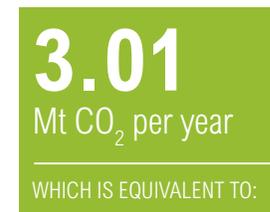
Brazil

has the potential to avoid:



Colombia

has the potential to avoid:



Source: From "Climate Benefits, Tenure Costs" published by the World Resources Institute, October 2016.

land and that only half this land delivers the four ecosystem services.

In 2016, the value of seven ecosystem services — carbon mitigation, regulation of local climate dynamics and water cycling, hydrological services, pollination, nutrient retention, existence values, and recreation and tourism — from Indigenous lands in the Amazon in Bolivia, Brazil and Colombia was estimated between **\$700 billion to \$1.561 trillion** over a 20-year period. The value of only the carbon benefits was estimated at \$21 billion to \$30 billion over the 20-year period (\$32-\$48/ha/yr for Bolivia, \$12-\$16/ha/yr for Brazil, and \$5-\$7/ha/yr for Colombia) through the

avoided annual release of 42.8 to 59.7Mt CO₂ emissions (see figure above).

The value of ecosystem services that drive economic life on Indigenous lands in Indonesia has been estimated at **\$1.997 to \$11.044 million per year**. The bundle of economically important ecosystem services varies by Indigenous community, but commonly include food (e.g., crops and livestock), forest products, tourism, hydrological function, fresh water, carbon sequestration, custom and building material (e.g., sand). Loss of these ecosystem services through displacement or environmental degradation can lead to significant local hardships.

FROM THE RESEARCH

Learn more about *Community Land Generates Valuable Ecosystem Services That Benefit IPLCs and Society* with these sources:

- Ecosystems and Human Well-being: Synthesis.
- Closing the Gap: Strategies and scale needed to secure rights and save forests.
- Importance of Indigenous Peoples' lands for the conservation of Intact Forest Landscapes.
- Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.
- The value of the world's ecosystem services and natural capital.
- Changes in the global value of ecosystem services.
- Data: GDP (current US\$).
- An Amazon Tipping Point: The Economic and Environmental Fallout.
- Global Importance of Indigenous and Local Communities' Managed Lands: Building a Case for Stewardship Schemes.
- Climate Benefits, Tenure Costs: The Economic Case for Securing Indigenous Land Rights in the Amazon.
- Appraising Economic Performance of Indigenous Peoples' Sustainable Landscape Management.



Joel Redman/If Not Us Then Who

KEY INSIGHT 3. IPLCS SUSTAINABLY MANAGE THEIR LAND AND NATURAL RESOURCES

IPLCs — small farmers, pastoralists, forest-dependent people, fisherfolk and hunter-gatherers — have used, managed and conserved their land for generations. The motivating factors and management approaches vary, but IPLCs often sustainably manage their lands and natural resources because they are central to their livelihoods and to the wellbeing of future generations.

A large body of literature assessing the effectiveness and impacts of IPLC land management, especially forests, provides clear evidence that IPLC approaches stem forest loss and degradation. A recent [literature review by FAO](#) concluded that, “(o)n average, the forests in the indigenous and tribal territories have been much better conserved than other forests in Latin America and the Caribbean, and their low carbon emissions reflect that. In just about every country in the region indigenous and tribal territories have lower deforestation rates than other forest areas.”

A review of 643 community forestry cases in 51 countries found that: [environmental conditions improved in 56% of the 524 cases](#) tracking environmental conditions and decreased in 32% of them; incomes increased in 68% of the 316 cases reporting on livelihoods, decreased in 6.3% of the cases and showed no change in 26% of the cases; and 34% of the 249 cases reporting on resource access rights indicated an increase in rights, 54% reported a decrease and 12% reported no change.

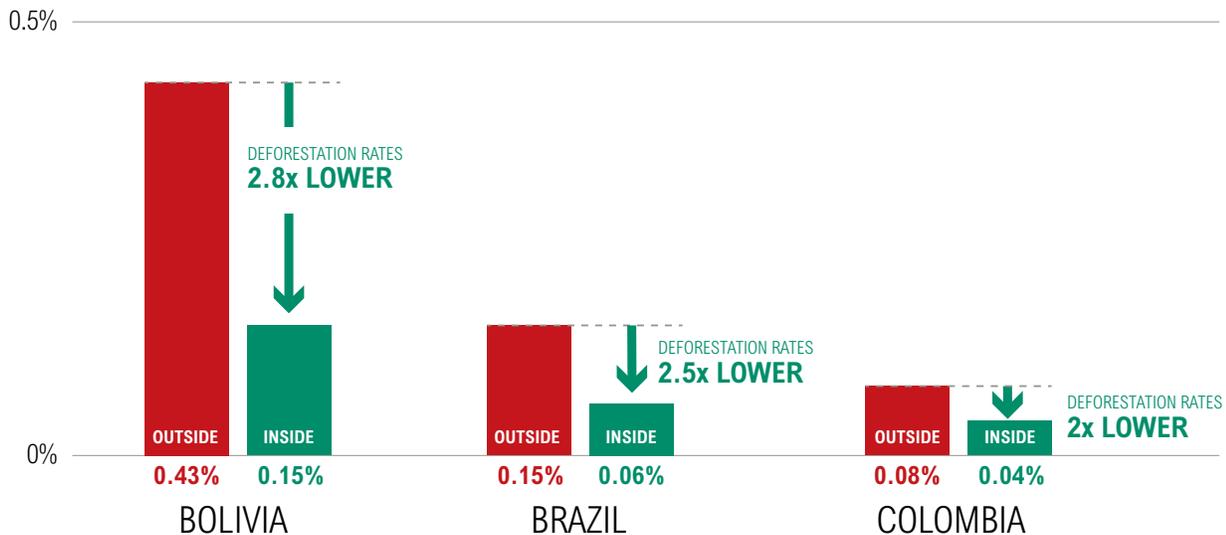
A small but growing number of studies have applied [experimental and quasi-experimental approaches](#) to draw causal inferences by controlling for pre-existing characteristics. This work has helped establish whether and to what extent IPLC management led to changes in forest outcomes. Such studies include:

- In the Amazon in Bolivia, Brazil and Colombia, the average annual deforestation rates from 2000 to 2012

in [Indigenous lands were two to three times lower](#) than in similar land not managed by Indigenous people. In Bolivia, there was a 43% to 67% reduction in deforestation rates; in Brazil, a 49% to 88% reduction; and in Colombia, a 3% to 67% reduction (Figure 1).

- In the Brazilian Amazon, Indigenous lands, strict protected areas and multi-use protected areas showed [reduced deforestation from 2000 to 2005](#), with Indigenous lands particularly effective at avoiding forest loss in locations with high deforestation pressure.
- In Panama, Indigenous communities on legally-established Indigenous land and customary land, together with protected areas, explained [a higher rate of success in avoided deforestation](#) than other land tenure categories from 1992 to 2008.
- In Latin America, protected areas managed by [Indigenous people reduced fire incidence](#), a proxy for deforestation, by 16% from 2000 to 2008 — two times as much as strict protected areas, multi-use protected areas and other areas combined.
- In the Peruvian Amazon, Indigenous lands and state protected areas had [significantly lower deforestation and degradation rates](#) than logging areas with similar conditions from 2006 to 2011. Indigenous lands reduced deforestation twice as much as protected

Less deforestation in tenure-secure indigenous lands (average annual rates, 2000-2012)



Source: From "Climate Benefits, Tenure Costs" published by the World Resources Institute, October 2016.

areas, while protected areas were more effective at reducing forest degradation.

Other studies using experimental and quasi-experimental methods have demonstrated that democratic principles and institutions often lead to better forest outcomes. In Indonesia, local government elections resulted in **reduced deforestation in communities inside and near protected areas**, while district splitting and mayoral change weakened enforcement in the villages.

In Oromia, Ethiopia, leader turnover in community forest user groups is **positively correlated with ecological and socioeconomic outcomes**: One or more turnovers increased forest stock by about 10%, increased forest incomes by 9% and reduced inequality through community forest income distribution by 25%. User groups with higher leader turnover elected leaders who were educated, held frequent group meetings and performed better than groups with lower turnover.

FROM THE RESEARCH

Learn more about *IPLCs Sustainably Manage Their Land and Natural Resources* with these sources:

- Forest governance by indigenous and tribal peoples. An opportunity for climate action in Latin America and the Caribbean.
- A global analysis of the social and environmental outcomes of community forests.
- Decentralized forest management: Experimental and quasi-experimental evidence.
- Titled Amazon Indigenous Communities Cut Forest Carbon Emissions.
- Governance regime and location influence avoided deforestation: success of protected areas in the Brazilian Amazon.
- Forest protection and tenure status: the key role of indigenous peoples and protected areas in Panama.
- Effectiveness of strict vs. multiple use protected areas in reducing tropical forest fires: a global analysis using matching methods.
- Conservation performance of different conservation governance regimes in the Peruvian Amazon.
- The effectiveness of protected areas in the context of decentralization.
- Leader turnover and forest management outcomes: Micro-level evidence from Ethiopia.



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KEY INSIGHT 4. SECURE TENURE LEADS TO THE SUSTAINABLE MANAGEMENT OF COMMUNITY LAND

Various factors and incentives can enable and encourage IPLCs to sustainably manage their land, including supportive national policy, strong local institutions and positive economic incentives. Land and natural resources, together with labor, form the most common endowments used by IPLCs to produce food and other necessities. As such, there has been **particular attention on the role of land rights and tenure security**.

Secure tenure creates incentives for people and IPLCs to make investments of labor, resources and other assets in their land by providing them with high expectations of rights over the returns. State recognition of community land rights is a foundation for the organizational capacity, social cohesion and sustainable economic alternatives that fortify IPLCs. IPLCs with tenure security have strong incentives to invest in managing their land and protecting it from outsiders, including **drug traffickers and organized crime**. Along the Panama-Colombia border, for example, the **Indigenous Emberas set up guard posts and patrols**, told members to report intruders by phone or radio and worked with border police to protect against narco-guerrillas.

A recent **Climate and Land Use Alliance review** “confirmed the existence of a large and growing literature in support of the proposition that strong indigenous/local tenure is associated with forest management outcomes that are at least as good (as) or better than outcomes for areas owned and managed by the State (such as protected areas).”

Recent studies using experimental and quasi-experimental methods to draw causal inferences have further substantiated the role of tenure security in IPLC forest management. For example:

- In the Peruvian Amazon, the titling of Indigenous lands (an indicator of tenure security) from 2002 to 2005 **reduced contemporaneous forest clearing by more**

than three-quarters and forest disturbance by roughly two-thirds in the first two years.

- In the Brazilian Amazon, the demarcation, registration and documentation of Indigenous lands from 1982 to 2016 **produced a 66% reduction in deforestation**. The effect did not exist in untitled Indigenous lands.
- In Colombia, providing Afro-descendant communities with land titles **reduced deforestation by an average of 30%** from 1990 to 2010, although the magnitude of this effect varied across subregions.
- Indigenous communities with legal rights to their lands in the Bolivian lowlands **inhibited deforestation from**

What Is Land Tenure?

Land tenure is the legal or customarily defined relationship among people, as individuals or groups, with respect to land. Rules or norms govern the granting of rights to use, control and transfer land.

Tenure security provides an expectation that a person or IPLC can use land for a period of time and be free from unreasonable threats or interference from others. It is the certainty that a person's rights to land will be recognized by others and protected in cases of challenges.

Source: Food and Agriculture Organization of the United Nations, 2002. Land tenure and rural development.

mechanized agriculture, cattle ranching and small-scale agriculture from 1992 to 2004.

- In Benin, the titling of community land resulted in a reduction in tree cover loss of around 20% and a reduction in fires of 5% from 2009 to 2017.

Tenure security coupled with other incentives, such as Payment for Ecosystem Services (PES) schemes, have shown to promote long-term investments by IPLCs that generate positive environment and development outcomes. Governments sometimes package incentives with restrictions on how community land is used or managed, such as prohibiting the commercial exploitation of forest products. Costa Rica's PES program, established in 1996,

provides payments to landowners for ecosystem services their lands produce when adopting sustainable land-use and forest-management practices. Indigenous groups receive significant resources from the program, representing one of the main sources of cash in their economies.

Investments in sustainable land management can, in turn, enhance the productivity of the land, boost farmer income and discourage unsustainable practices. In Guatemala, Mexico, India, Nepal and other countries, many IPLCs with documented land rights have established forest-based enterprises that produce significant benefits for local producers and restore ecological values for society.

FROM THE RESEARCH

Learn more about *Secure Tenure Leads to the Sustainable Management of Community Land* with these sources:

- Securing Africa's Land for Shared Prosperity: A Program to Scale Up Reforms and Investments.
- Land Tenure and Rural Development.
- Protecting indigenous land rights could help deter drug trafficking in Central America, says new report.
- Central America forest tribes fight cocaine trafficking "tsunami" – report.
- Evidence linking community level tenure and forest condition: an annotated bibliography.
- Titling Indigenous Communities Protects Forests in the Peruvian Amazon.
- Collective property rights reduce deforestation in the Brazilian Amazon.
- Is collective titling enough to protect forests? Evidence from Afro-descendant communities in the Colombian Pacific region.
- Proximate causes of deforestation in the Bolivian lowlands: an analysis of spatial dynamics.
- Formalizing land rights can reduce forest loss: Experimental evidence from Benin.
- Learning from 20 years of Payments for Ecosystem Services in Costa Rica.
- Smallholder Forestry Creating Benefits at Scale: The Case of the Quiche Forestry Association, Guatemala. New York: Rainforest Alliance.
- Mexican Community Forestry: Enterprises and Associations as a Response to Barriers.



Joel Redman/If Not Us Then Who

KEY INSIGHT 5. COMMUNITY LAND SEQUESTERS AND STORES A CONSIDERABLE AMOUNT OF CARBON

Well-managed forests with low deforestation and degradation rates capture and store more GHG than disturbed forests. Most of the world's forests are on legally recognized and customarily held community land. In 2017, **governments administered 72.7% of the forest in 41 countries**, much of it on claimed community land. Only 15.3% of the forest, however, was legally owned by IPLCs or public forest designated by governments for IPLC use. This is an increase from 2002 when 10.9% of the forest was owned or designated for IPLCs.

Forests and other natural climate solutions can contribute **upwards of 37% of CO₂ mitigation by 2030**. IPLCs are key to achieving this outcome. An analysis of 64 countries representing 69% of the world's forest found that IPLCs manage at least 17% of these forests, which **store a collective 293,061 MtC**. About 22% (217,991 MtC) of the forest carbon found in 52 tropical and subtropical countries is stewarded by IPLCs, and one-third of this is on customarily held community land. Soil organic carbon accounts for 65% and nearly 90% of the total forest carbon managed by IPLCs in tropical and non-tropical forest countries, respectively.

A recent global assessment of annual forest-related GHG emissions and removals from 2001 to 2019 found that **forests absorb twice as much carbon as they emit each year**. Global forests were a net carbon sink of about $-7.6 \text{ GtCO}_2 \text{ e/yr}$.

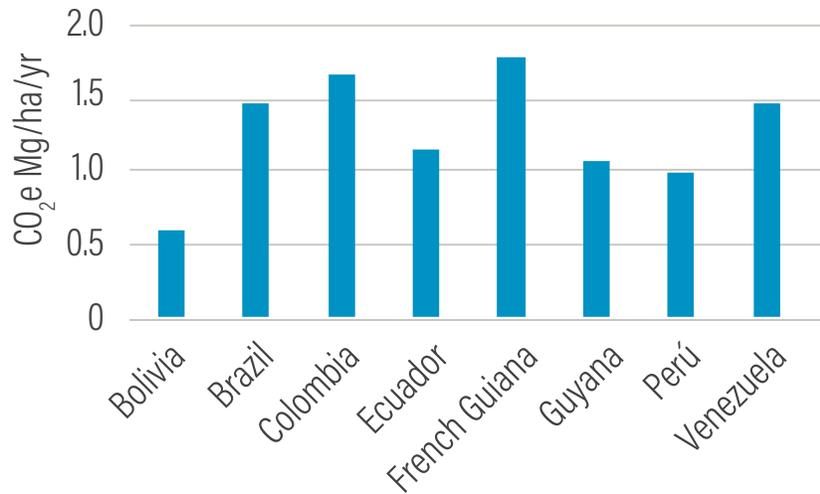
But not all forests are alike. Indigenous lands in the Amazon (29% of the basin) sequestered 5.6 billion $\text{Mg CO}_2 \text{ e}$ from 2001 to 2020. The amount varied by country with Brazil — which holds 47% of Indigenous land in the basin — accounted for 54% of the total $\text{CO}_2 \text{ e}$ sequestered on Indigenous lands.

Indigenous lands sequestered an average of $-1.4 \text{ CO}_2 \text{ e/ha/yr}$ across the entire Amazon, with French Guiana ($-1.8 \text{ Mg CO}_2 \text{ e/ha/yr}$) and Colombia ($-1.7 \text{ Mg CO}_2 \text{ e/ha/yr}$) at the high end and Bolivia ($-0.6 \text{ Mg CO}_2 \text{ e/ha/yr}$) at the low end

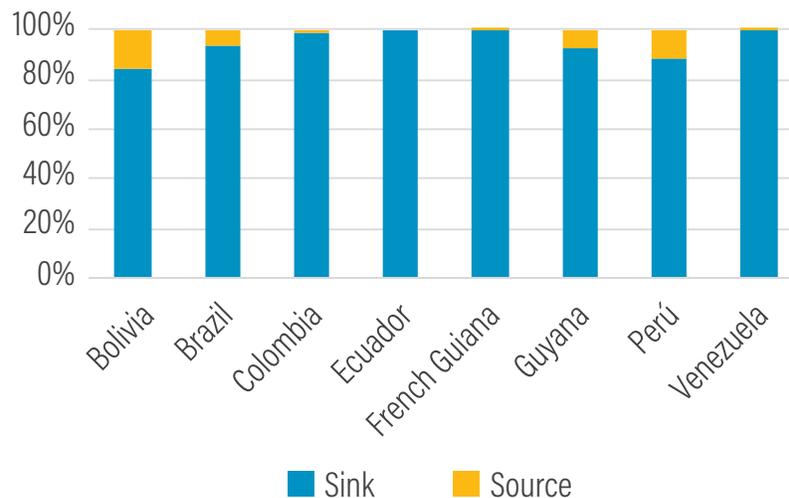
(Figure 1). The rest of the Amazon outside Indigenous lands was a net emitter of GHGs at $0.6 \text{ Mg CO}_2 \text{ e/ha/yr}$. In Brazil, Indigenous lands sequestered on average $-1.4 \text{ CO}_2 \text{ e/ha/yr}$, while outside of indigenous lands the Brazilian Amazon emitted $1.2 \text{ Mg CO}_2 \text{ e/ha/yr}$. Colombia and Ecuador are also net sources of GHGs outside of Indigenous lands, both emitting an average of $0.2 \text{ Mg CO}_2 \text{ e/ha/yr}$. Only in Guyana and Venezuela, does the Amazon outside of Indigenous lands, which includes protected areas, sequester more GHGs per hectare per year than inside Indigenous lands. When Indigenous lands are excluded from the Amazon, Brazil, Colombia, and Ecuador are all net emitters of GHGs, while Bolivia, French Guiana, Guyana, Peru and Venezuela remain sinks of GHGs.

Across the Amazon, 94% of Indigenous land area was a carbon sink from 2001 to 2020. More Indigenous land was a carbon sink than a source in the nine Amazonian countries, although the share varied. More than 99% of Indigenous land area in Colombia, Ecuador, French Guiana and Venezuela was a carbon sink, and more than 92% of Indigenous land area in Brazil and Guyana was a sink (Figure 2). Data on Afro-descendant lands were only available for Brazil but 90% of the forested Afro-descendant land area was a carbon sink.

Average Mg CO₂e sequestered (2001-2020) per ha per year in indigenous forests



Proportion of Forested Indigenous Land Area Per Country by Sink or Source



Note: Calculated at WRI using data on forest greenhouse gas fluxes from Global Forest Watch (2021) and indigenous land boundaries from LandMark (2021).

Research shows that community lands that are secure and protected have low deforestation rates. Size also seems to matter: Indigenous lands that are sinks are, on average, seven times larger than Indigenous lands that are sources

(98,647 ha vs. 13,451 ha). The average size of an Afro-descendant land that is a sink is almost ten times the size of one that is a source (23,156 ha vs 2,342 ha).

FROM THE RESEARCH

Learn more about *Community Land Sequesters and Stores a Considerable Amount of Carbon* with these sources:

- At a Crossroads: Consequential Trends in Recognition of Community-Based Forest Tenure from 2002-2017.
- Natural climate solutions.
- A Global Baseline of Carbon Storage in Collective Lands: Indigenous and Local Community Contributions to Climate Change Mitigation.
- Global maps of twenty-first century forest carbon fluxes.



Joel Redman/If Not Us Then Who

KEY INSIGHT 6. THE COSTS OF SECURING COMMUNITY LAND: HIGH FOR IPLCS, LOW FOR GOVERNMENTS

IPLCs often pay a high price for securing their land, yet the costs to government are relatively low when compared to the value of the ecosystem services from community land. While customary tenure systems historically provided communities with tenure security, growing threats are leading to insecurity. In many places, customary laws and traditional institutions are being challenged, weakened or no longer able to safeguard community land for its members.

The registration of community land rights into a government cadastre and the issuance of an official land title or certificate by the government to the IPLC are central to the integration of customary rights into official legal systems and the establishment of formal land rights. However, procedures to title customary land may not exist in some places, and where they do, are **often complex, difficult and costly for IPLCs**. In the Philippines, the process requires 56 legally mandated steps; in Indonesia, 21 different government entities are involved. In many cases, not all traditional land can be titled and not all customary land rights are recognized with formalization.

In law and practice, many costs of land titling fall on IPLCs. In Africa, Asia and Latin America, the costs range from **\$400 to \$13,000 per community** (\$0.05 to \$9.96 per hectare), with an average of about \$5,000 per village (\$3.68 per hectare). It can take decades for IPLCs to title customary land and require outside financial and technical assistance.

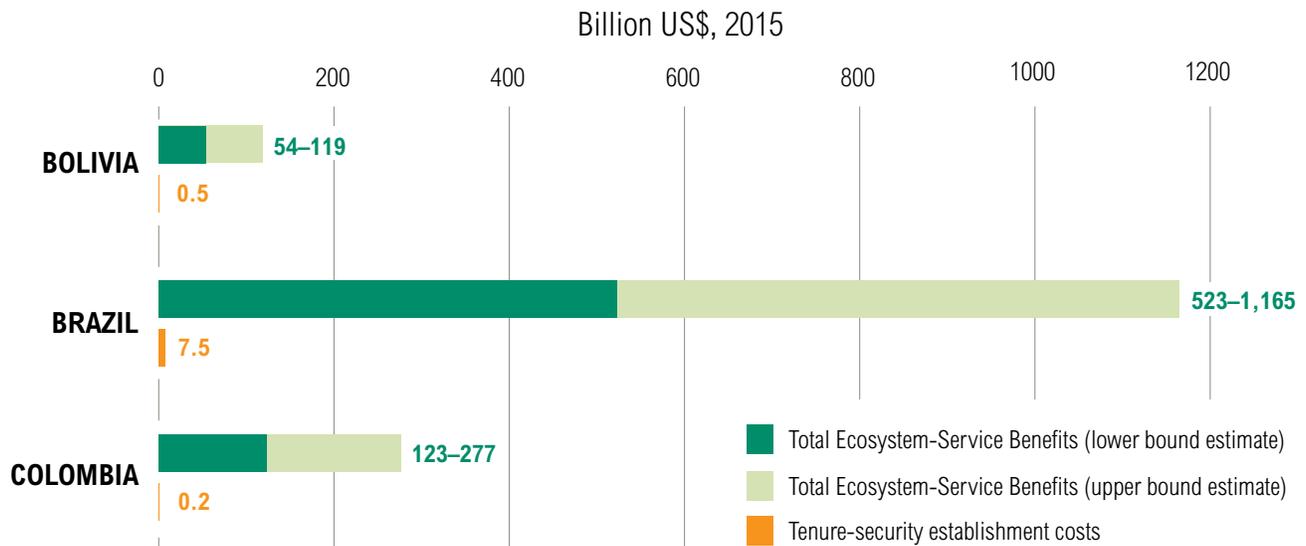
Land titling is not a guarantee of tenure security, but as global demand for foods, fuels, minerals, fibers and other products grows and competition for land intensifies, undocumented community land is particularly vulnerable to confiscation. Where governments have failed to protect community land, many IPLCs have made efforts to defend their land from outsiders. The costs to IPLCs to

monitor their land, evict intruders, confiscate equipment, take disputes to court and other measures can escalate quickly. Disputes over community land are on the rise and becoming more violent.

These and other costs (e.g., establishing a supportive institutional framework and opportunity costs) of securing Indigenous land have been estimated at **\$45/ha in Bolivia, \$68/ha in Brazil and \$6/ha in Colombia** for a 20-year period. The costs account to at most 1% of the value of seven ecosystem services — carbon mitigation, regulation of local climate dynamics and water cycling, hydrological services, pollination, nutrient retention, existence values, and recreation and tourism — from Indigenous land. The positive net per-hectare benefit in Bolivia ranges from \$4,888/ha to \$10,784/ha, in Brazil from \$4,636/ha to \$10,402/ha, and in Colombia from \$4,610/ha to \$10,344/ha.

The costs of other forest management approaches, such as government-managed protected areas, tree planting and **reforestation projects**, and **voluntary zero deforestation supply chains** are often higher and less effective. In 2004, Central Africa had an existing protected area system of about 13,500,000 ha. The costs to add another 7,600,000 ha to the system and manage the whole area was estimated at **\$1 billion in the first 10 years and then \$87 million per year after**. However, costs over a 20-year period total \$1.87

Benefit-cost analysis results. Net present values (2015 USD)



Source: From "Climate Benefits, Tenure Costs" published by World Resources Institute, October 2016.

billion or \$88.6 per ha, considerably more than the per ha costs of securing and protecting community land.

Securing community land is also a cost-effective approach for climate mitigation when compared with other carbon capture and storage measures. The costs of carbon mitigation through securing Indigenous land in Bolivia, Brazil and Colombia range from \$2.04 to \$3.66/t CO₂, \$8.74 to \$11.88/t CO₂ and \$4.75 to \$7.26/t CO₂, respectively.

These costs are significantly lower than the average costs of avoided CO₂ through carbon capture and storage, estimated at \$58/t CO₂ for coal-fired power plants and \$85/t CO₂ for natural gas-fired power plants. Moreover, other carbon mitigation solutions can threaten community land, such as REDD+ (Reducing Emissions from Deforestation and Forest Degradation) land investors and biofuel plantations.

FROM THE RESEARCH

Learn more about *The Costs of Securing Community Land: High for IPLCs, Low for Governments* with these sources:

- The Scramble for Land Rights: Reducing Inequity between Communities and Companies.
- Analysis on the Costs of Securing Communal Land Rights: New Technologies and Approaches Offer Potential for Scaling Up.
- Climate Benefits, Tenure Costs: The Economic Case for Securing Indigenous Land Rights in the Amazon.
- Análisis de los impactos en las coberturas forestales y potencial de mitigación de las parcelas del programa Sembrando Vida implementadas en 2019.
- Time for change: Delivering deforestation-free supply chains.
- An estimate of the costs of an effective system of protected areas in the Niger Delta – Congo Basin Forest Region.



Falco/Pixabay

KEY INSIGHT 7. IPLCS RECEIVE A SMALL SHARE OF INTERNATIONAL CLIMATE FUNDS

Official development assistance (ODA), including international climate funding, is under supporting IPLCs for their climate mitigation contributions. Most climate funds have Indigenous peoples policies and some have mechanisms for channeling money to IPLCs (e.g., the GCF adopted an Indigenous Peoples Policy in 2018). Significant challenges remain, however, including complex application processes, high financial management demands and steep monitoring and reporting requirements. Often for administrative and management purposes, climate funds tend to go to governments for large projects, such as hydroelectric dams that may displace IPLCs and clear forests. Few climate funds reach the ground or go directly to IPLCs.

REDD+, a major climate fund, provides financial and technical support to lower income countries to reduce their emissions from deforestation, reforestation and degradation, although to date it has focused on deforestation and reforestation, not degradation. Because deforestation rates in Indigenous forests are low, **the assumption is that they are not threatened**. While some Indigenous forests are under clearance threat from acquisition, degradation from fires, illegal logging, illegal mining and other actions is the principal challenge. Only about **2% of REDD+ funding, however, has been directed to Indigenous lands** and few of these funds reach IPLCs.

A recent analysis of ODA found that from 2011 to 2020, bilateral, multilateral and private foundation donors disbursed about **\$2.7 billion for projects supporting IPLC land tenure and forest management** in tropical countries (see figure below). Latin America was the primary recipient of this funding, followed by Africa and Asia. This amount is less than 1% of ODA for climate change, and less than 5% of ODA for general environmental protection.

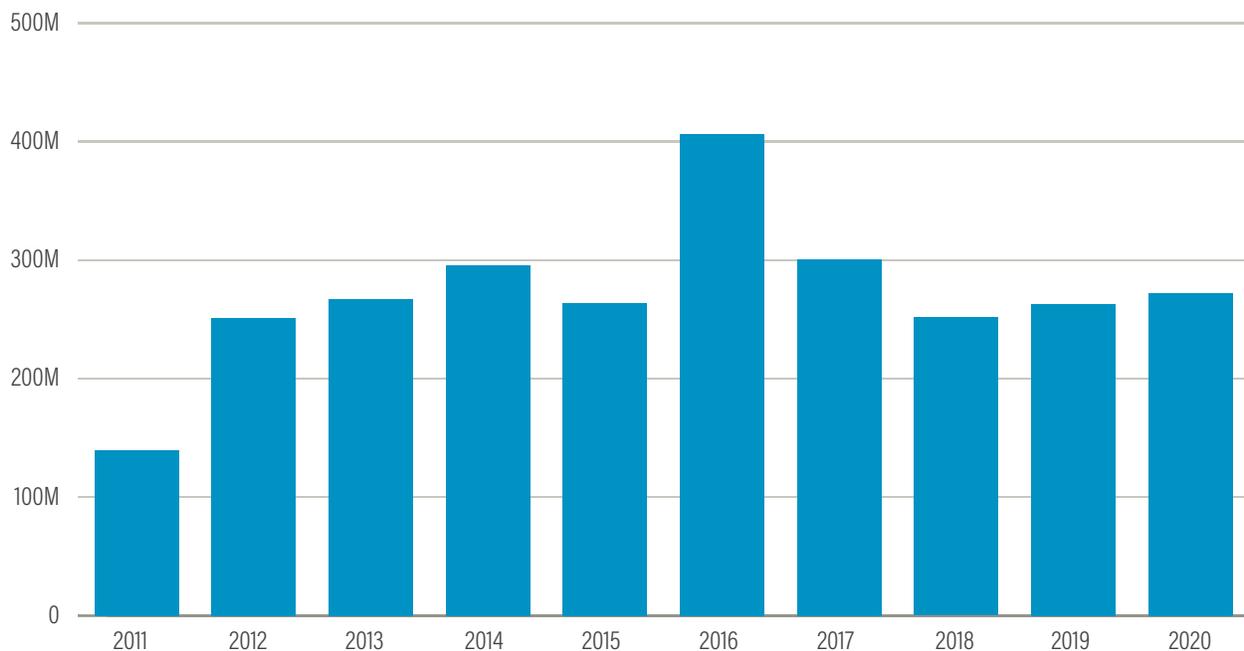
Of the total funding for IPLC tenure and forest management, only a small share likely reached IPLCs or their organizations directly. Most funds went to large intermediary organizations — international NGOs, UN

agencies and consulting firms — or large donor programs, where IPLC organizations sometimes receive small grants. Multilateral institutions have had limited success reaching IPLCs. For example, the Forest Carbon Partnership Facility (FCPF) Readiness Fund disbursed just **1.4% (\$6.7 million)**

Climate Funds

Various multilateral funds, including the Global Environment Facility (GEF), Green Climate Fund (GCF), UN REDD+ (Reducing Emissions from Deforestation and Forest Degradation), Africa Climate Change Fund, World Bank Forest Investment Program (FIP), Climate Investment Funds (CIF), and Forest Carbon Partnership Facility (FCPF) Carbon Fund. Climate finance is also available through bilateral channels such as the Global Climate Change Initiative (United States), Global Climate Partnership Fund (Germany, United Kingdom, and Denmark), International Climate Fund (United Kingdom), International Climate Forest Initiative (Norway), and International Climate Initiative (Germany). Further, a growing number of recipient countries, including Brazil and Indonesia, have set up national climate funds that receive and disburse funding for mitigation and adaptation.

Donor disbursements to IPLC tenure and forest management projects in tropical forested countries (USD, 2011-2020)



Source: Rainforest Foundation Norway, 2021. *Falling short: Donor funding for Indigenous Peoples and local communities to secure tenure rights and manage forests in tropical countries (2011-2020)*.

of its funding to IPLCs and capacity-building programs since being established in 2008.

Multilateral institutions disbursed approximately **\$1.3 billion to IPLC projects** from 2011 to 2020. The World Bank managed the largest source of multilateral disbursements to IPLC tenure and forest management, including through regular operations and funds through the FIP, CIF and GEF. These funds accounted for about 80% of all multilateral funding and about 41% of total disbursements to IPLC projects.

Norway and the United States were the largest bilateral contributors to IPLC tenure and forest management from 2011 to 2020, followed by Germany, the United Kingdom and Sweden. Norway and Finland disbursed the largest share of its ODA to IPLC tenure and forest management with **Norway contributing about 0.9% of its ODA** to these causes. Private philanthropic foundations contributed about 3% of their disbursements, much of it directly to IPLCs and their organizations.

FROM THE RESEARCH

Learn more about *IPLCs Receive a Small Share of International Climate Funds* with these sources:

- How to Redesign Climate Funding to Better Support the Amazon's Indigenous Communities.
- The Geography of REDD+ Finance Deforestation, Emissions, and the Targeting of Forest Conservation Finance.
- *Falling short: Donor funding for Indigenous Peoples and local communities to secure tenure rights and manage forests in tropical countries (2011–2020)*.



Manon Koningstein (CIAT)

KEY INSIGHT 8. COMMUNITY LAND IS UNDER THREAT

Community land is under growing threat. Competition for land is intensifying as global demand for foods, fuels, minerals and other products grows. Companies and investors are scrambling to acquire land, including a considerable amount of community land, and securing it for long periods of time. In addition to rising illegal activities like logging, mining and hunting on community land, the production and trafficking of illegal drugs and associated money laundering through land deals by organized criminal groups is on the rise on community land, especially in Latin America.

In many countries, high-value natural resources — oil, natural gas, minerals, water, wildlife, trees and forests — are the legal property of the state or held in trust by the government for the people. And as other resources gain value, such as carbon, laws that establish them as state property are being enacted in many countries. Governments often allocate the rights to these resources to entities outside the IPLC and grant them broad authorities to enter and use community land, with few requirements to consult with IPLCs or obtain their consent.

In many countries, economic development, conservation and other purposes are recognized as national or public interests, allowing governments to acquire land in a compulsory manner. When communities lose their lands and are resettled, social and economic hardships often follow. National laws do not always provide individuals or communities with fair or adequate compensation for their losses. In Tanzania, for example, only “improvements” on the land (e.g., standing crops and structures) are eligible for compensation. Even where investments bring jobs or other benefits, these do not typically compensate for the loss of the land.

Mining is a good example of a threat to community land given its growth and impact on IPLCs and the environment. With strong global demand and soaring prices, mining has risen markedly in the last few decades and is expected to continue growing to serve the needs of a larger, more

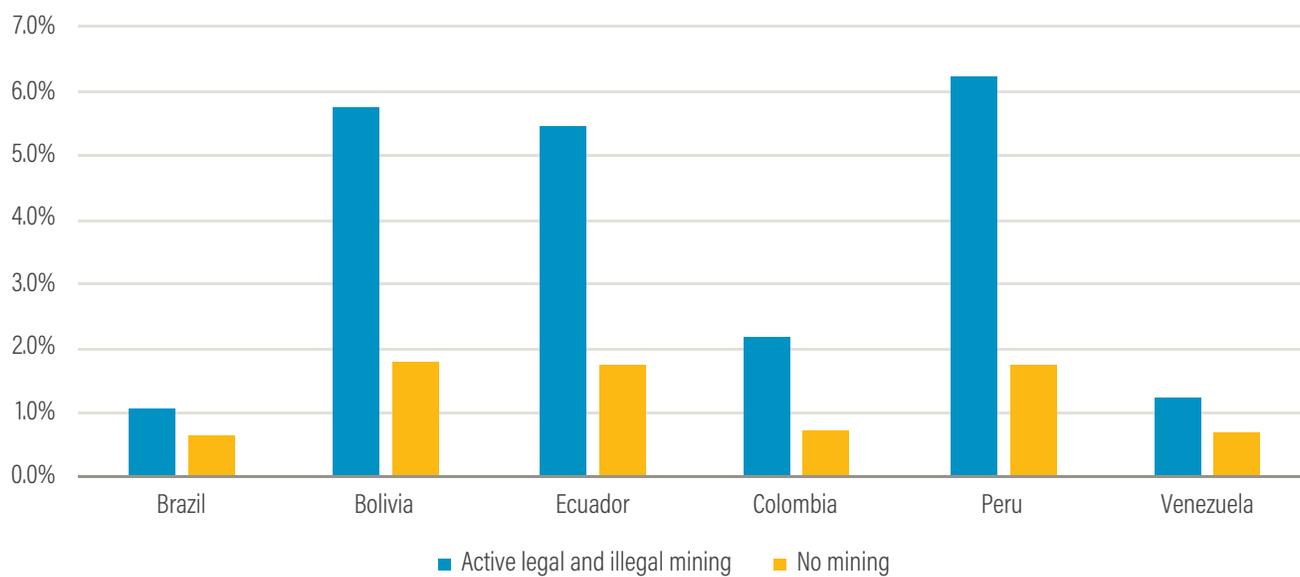
affluent and increasingly technology-driven population. These and other developments have driven mining onto community land.

In South America, large-scale mining concessions cover about 1.28 million sq. km, or more than 18% of the Amazon (excluding French Guiana and Suriname). Nearly 45% of the concession area is active, with the remainder yet to be tendered or the mineral rights holder has yet to begin operations. More than 10% of the active mining concessions overlap with Indigenous land with many lands affected by multiple concessions. Active mining concessions overlap Indigenous lands in all nine Amazonian countries.

Illegal mining, mostly artisanal and small-scale mining, is also growing, particularly in Peru, Bolivia, Brazil and Venezuela. At least 30 large rivers in the Amazon are affected by illegal mining or are acting as routes into and out of Indigenous land. Illegal mining operations overlap with at least 370 Indigenous lands.

Together, about 450,000 sq. km, or more than 20%, of Indigenous land in the Amazon (excluding French Guiana and Suriname) overlaps with mining concessions (active and inactive) and/or illegal mining. About 143,000 sq. km, or almost 32%, of this land overlaps with active concessions and illegal mining areas, much of it in Venezuela, Brazil and Colombia.

Indigenous Lands, Large-Scale/Illegal Mining Overlapping with Indigenous Lands, and Deforestation (2000-15)



Source: From *Undermining Rights: Indigenous Lands and Mining in the Amazon* published by the World Resources Institute, October 2020.

Across the Amazon, Indigenous lands that experienced mining from 2000 to 2015 had **higher rates of forest loss than Indigenous lands without mining**. In Bolivia, Ecuador and Peru, the rate of forest loss was at least three times

higher on Indigenous land with mining than Indigenous land absent mining; in Colombia and Venezuela, the rate was one to two times higher (see figure above).

FROM THE RESEARCH

Learn more about *Community Land Is Under Threat* with these sources:

- Land Matrix.
- Climate Change in Central America: The Drug War Connection. Georgetown Journal of International Affairs.
- Status of Legal Recognition of Indigenous Peoples', Local Communities' and Afro-descendant Peoples' Rights to Carbon Stored in Tropical Lands and Forests.
- Challenging the Prevailing Paradigm of Displacement and Resettlement: Risks, Impoverishment, Legacies, Solutions.
- Protected Areas and Property Rights: Democratizing Eminent Domain in East Africa.
- Mineral Resource Governance in the 21st Century: Gearing Extractive Industries towards Sustainable Development.
- Resource Extraction and Infrastructure Threaten Forest Cover and Community Rights.
- Undermining Rights: Indigenous Lands and Mining in the Amazon. Washington, DC: World Resources Institute.



350.org/Flickr

KEY INSIGHT 9. IPLC LAND DEFENDERS ARE UNDER THREAT

Land disputes between IPLCs and external actors, especially governments and companies, are becoming more common and growing more dangerous. When IPLCs stand up for their land and natural resource rights, intimidation and violence can ensue.

Around the world, land and environmental defenders (LEDs), including IPLC members face diverse and growing threats, including surveillance and stigmatization (often labeled by government as “anti-development,” “anti-state,” “traitors,” “terrorists” or “criminals”), harassment, criminalization of their efforts, arrests and detention, false criminal charges and civil actions, death threats and acts of physical violence like torture and murder. In addition, threats to Indigenous and LED organizations include burdensome registration and government reporting requirements, Strategic Lawsuits Against Public Participation (SLAPP) suits, restrictions on funding and other regressive laws and regulations.

While there is little data on the number LEDs threatened or harassed, the number of LEDs killed is on the rise. In 2018, **at least 164 LEDs, were killed around the world**, with many more threatened, harassed, stigmatized, attacked or jailed. In 2019, **212 LEDs were killed, a 30% increase from 2018**. About 40% of those killed were Indigenous people. Seven of the top 10 worst-affected nations were in Latin America, where more than two-thirds of the total killings took place. Latin America has consistently ranked as the worst-affected region since at least 2012. In 2019, the Amazon region alone saw 33 deaths.

In 2020, **227 LEDs were killed** — an average of more than four people a week — making it again the most dangerous year on record. Over half of attacks took place in three countries: Colombia, Mexico and the Philippines with 65, 30 and 29 LEDs killed, respectively. Over a third of those killed were Indigenous people even though they make up

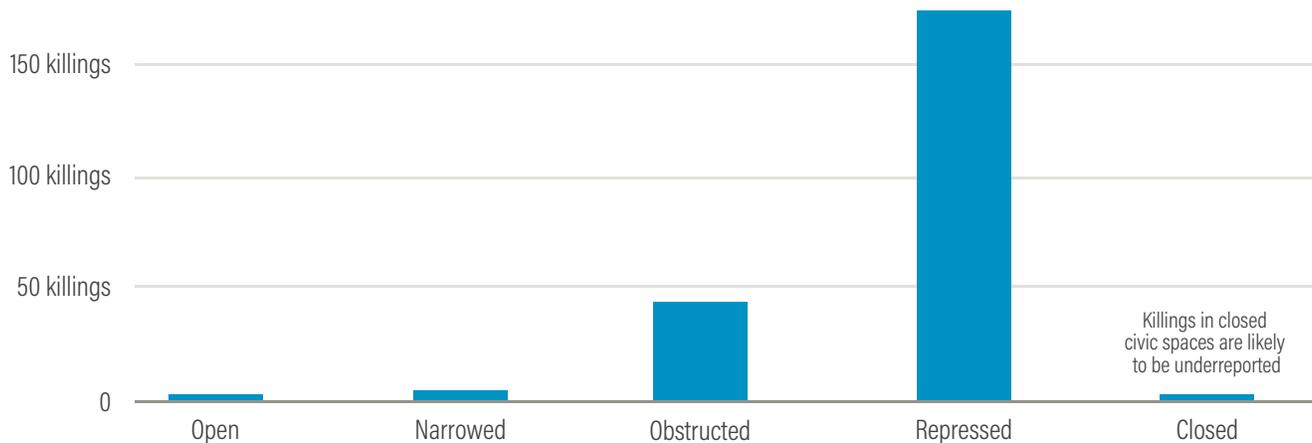
just 5% of the world’s population. About 70% of those killed were defending forests. In Brazil and Peru, nearly three quarters of recorded attacks took place in the Amazon.

Indigenous people are particularly at risk given their unique vulnerabilities, including living in remote areas far from government support. From 2015 to 2019, over a third of all LEDs murdered were Indigenous people. Uncontacted and voluntarily isolated Indigenous peoples are especially harmed by incursions into their territories.

LEDs are among the most threatened among all human rights defenders. In 2020, at least 331 human rights defenders were killed, including the 227 LEDs, 86 of which specifically worked on Indigenous rights. Since 2017, at least 327 defenders of Indigenous rights have been killed. The UN estimates that at least 1,940 human rights defenders have been killed since 2015. These figures are likely low as attacks on **human rights defenders, including LEDs, are underreported** by many governments. Only three countries indicated that at least one human rights defender had been killed or attacked since 2015. Seven countries reported zero cases and 94% of countries did not report at all.

Many governments acknowledge the threats to LEDs, but not all have prioritized actions that would significantly reduce those threats or improve the protection of LEDs. Some governments have taken actions that make it more difficult for LEDs to protect their rights. For example, governments have pursued measures to close the space for peaceful protest and deployed various tactics to silence LEDs. Whether for lack of human capacity, financial resources or political will, there are also high levels of

The majority of killings took place in states with limited civic freedoms



Source: Global Witness, September 2021. *Last line of defence: The industries causing the climate crisis and attacks against land and environmental defenders.*

impunity for those responsible, further encouraging those who perpetuate these crimes.

Recently, governments around the world have used the COVID-19 pandemic to strengthen draconian measures that weaken or remove legal and policy protections for IPLC

rights and close civic space. There is a clear link between the availability of civic space and attacks against defenders — attacks are most frequent in restricted societies (see figure above).

FROM THE RESEARCH

Learn more about *IPLC Land Defenders Are Under Threat* with these sources:

- Last Line of Defense: The Industries Causing the Climate Crisis and Attacks Against Land and Environmental Defenders.
- Defending Tomorrow: The Climate Crisis and Threats against Land and Environmental Defenders.
- Front Line Defenders: Global Analysis 2020.
- A Crucial Gap: The Limits to Official Data on Attacks Against Defenders and Why it's Concerning.



James Anderson, WRI

STEPS TO BETTER INTEGRATE COMMUNITY LAND AND IPLC MANAGEMENT IN CLIMATE ACTION

A growing number of climate mechanisms now recognize the role of community land and IPLC management in forest health and climate mitigation, yet few in the climate community have made IPLCs and community land central components of climate mitigation strategies. The researchers behind the nine key insights have proposed several steps for the climate community, including international climate instruments, climate funds, government agencies responsible for national climate agendas and CSOs advancing just climate solutions. The steps are also relevant to government agencies responsible for supporting IPLCs, development assistance organizations, IPLCs as well as their organizations and supporters. Six common actions include:

1. SECURING COMMUNITY LAND.

Given the significant social, economic and environmental benefits of community lands at the local, national and global levels, many researchers have called for governments and their development partners to better secure community lands. Governments can:

- **Enact Supportive Legislation.** While the laws in many countries now recognize community land and customary tenure systems, few establish the strong legal protections needed to secure community land. Governments can ensure their laws recognize rights under customary tenure systems and provide IPLCs with strong participation rights (e.g., Free, Prior, and Inform Consent).
- **Register and Document Community Land.** Most community land is not mapped or titled although some countries have made strides. Governments can remove administrative barriers and provide responsible agencies with the human and financial resources needed to title all community lands.
- **Provide Economic Incentives.** Governments can couple actions to secure community land with incentive packages that promote sustainable land management. PES schemes based on accurate ecosystem service values can support IPLCs who conserve forests and protect biodiversity.

2. ENSURING EFFECTIVE LAW ENFORCEMENT.

For IPLCs to realize their rights, supportive laws must be effectively implemented. Governments can use their police powers to help IPLCs monitor community lands, stop illegal activities and remove illegal occupants. This may require governments to invest in new technologies (e.g., drones); support IPLCs to better monitor their land; build local capacity to sustainably manage community lands; and refrain from allocating concessions on community lands. Many governments will need to strengthen — legally, politically and practically — the institutions tasked with advancing IPLC matters, including agencies responsible for mapping, demarcating and titling community land and preventing invasions of community land by unauthorized outsiders.

3. MAKING SECURING COMMUNITY LAND A CENTRAL CLIMATE MITIGATION STRATEGY.

Many governments recognize the role of forests in carbon mitigation and have committed to protect forests, reduce deforestation and degradation, and restore forests. Few NDCs, however, explicitly recognize the contributions that community land makes to meeting emissions reduction objectives, and fewer yet prioritize securing community land and supporting IPLC forest management. Given the benefits of secure community land, governments can make these actions a central component of their climate mitigation strategy. If the currently tenure-insecure community lands were to be titled and protected, the CO₂ emissions in many countries would be further reduced through avoided deforestation.

4. UTILIZING INTERNATIONAL CLIMATE FUNDS TO PROTECT COMMUNITY LAND.

Securing community land is a low-cost, high-reward investment, and a cost-effective climate mitigation measure. To date, however, community forestlands and IPLC management efforts receive only a small share of ODA and are seriously underfunded. Governments and international climate funds can direct their resources to securing community lands. This would support IPLCs and their organizations to monitor their lands and sustainably manage their forests. Some analysts have argued that **climate funds have had only limited success reducing deforestation and degradation**, contributing to the shuttering of some funds such as the Congo Basin Forest Fund. Climate funds could, in some cases, meet their climate mitigation objectives by supporting efforts to empower IPLCs and secure community land.

FROM THE RESEARCH

Learn more about *Steps to Better Integrate Community Land and IPLC Management in Climate Action* with these sources:

- The Global Climate Finance Architecture.
- Satellite-based deforestation alerts with training and incentives for patrolling facilitate community monitoring in the Peruvian Amazon.
- Environmental Conflicts and Defenders: A Global Overview.
- Earth Defenders Toolkit.

5. BUILDING LOCAL CAPACITY.

As the threats to community land escalate, many IPLCs are realizing they lack the expertise, contacts and resources needed to effectively address the challenges. Governments and donors can provide training as well as technical and financial resources for IPLCs to develop new skills such as in financial management, company negotiations and in government laws and procedures. IPLCs can support government patrols by learning how to collect data that meet the national legal burden of proof and provide evidence for the prosecution of offenders. In the Peruvian Amazon, a program to train IPLCs in safe patrolling approaches and provide access to early deforestation alerts **reduced deforestation rates by 52% in the first year and 21% in the second year**. The most significant reductions were on community lands facing the most immediate threats.

6. PROTECTING LAND AND ENVIRONMENTAL DEFENDERS.

As the risks increase, many LEDs are taking more precautions **to carry out their campaigning safely and defending themselves from harassment** and attacks. Still, governments can establish an enabling environment that strengthens safeguards and reduces risks to LEDs; adopt mechanisms to better monitor conflicts, threats and attacks against LEDs; and ensure the people responsible for attacks are held accountable for their actions. **LEDs would benefit from gaining a better understanding of their legal rights**; learning how to better recognize threats and minimize risks; building capacity in new approaches to deescalating confrontational situations; and building skills in self-defense techniques. LEDs would also benefit from access to emergency funds, contact information for legal counsels and CSOs that provide urgent assistance.

LEARN MORE: WWW.WRI.ORG/INITIATIVES/LAND-AND-RESOURCE-RIGHTS

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