

Regions Take Action:

Sustainable Land Use

We must preserve and enhance the natural resources that create beautiful places, economic opportunities, and essential carbon “sinks” that pull pollution from the air.





Sustainable Land Use

Policies to decarbonize land use provide valuable non-carbon benefits, such as market development opportunities, preservation of ecosystem services, air and water quality improvements, and opportunities to engage with disadvantaged communities and improve quality of life.

Regional land use issues are multidimensional, underscoring the need for an inclusive stakeholder engagement process. Land use policies and approaches that bring together a large set of public and private sector stakeholders to align their interests and mitigate land use issues in a particular region are increasingly gaining traction. These initiatives, often referred to as “jurisdictional approaches,” are usually undertaken at the subnational level and focus on a single state or multiple states.

About 23% of global GHG emissions come from land use activities such as agriculture and forestry. Natural land processes also absorb about a third of anthropogenic CO₂ emissions.¹ Thus, the land use sector represents both a challenge as well as a great opportunity, and we cannot meet a 1.5°C limit to climate change without addressing land use challenges and seizing the opportunities they present.

When land use policy solutions are inclusive, they can better incorporate the wide-ranging interests of people on the ground and can serve as a tool for accomplishing a range of connected social, economic, and environmental goals.



¹ IPCC (Intergovernmental Panel on Climate Change). 2019. “Land Is a Critical Resource, IPCC Report Says.” News release, August 8, 2019. https://www.ipcc.ch/2019/08/08/land-is-a-critical-resource_srccl/.




Leadership in Action

Mato Grosso, Brazil: Produce, Conserve, Include Strategy

The state of Mato Grosso is a leading agricultural producer in Brazil. It supplies nearly 30% of the country's soy and has the largest cattle herd in the country.

Though the percentage is shrinking each year, about 60% of the state is covered by native vegetation,² including Amazon rainforest. Agricultural expansion in Mato Grosso is driving deforestation throughout the state.

Determined to increase agricultural productivity across the state while maintaining native vegetation and reducing deforestation, Mato Grosso's government and partners from different sectors created the Produce, Conserve, Include (PCI) strategy in 2015. This

strategy describes a new, sustainable vision for the future of Mato Grosso and includes specific, measurable targets to achieve this vision. Meeting these aggressive targets requires a multistakeholder effort, and the PCI brings together government agencies, civil society, producer groups, and companies to develop solutions.

The PCI aims to decouple agricultural production from deforestation at the state level, increasing production through agricultural intensification while reducing deforestation. Developing carbon markets is a crucial part of the strategy, making it possible for farmers to be paid for conservation and reforestation.

² PCI (Produce, Conserve, Include). n.d. "PCI Monitoring Dashboard." Accessed June 18, 2020. www.pcimonitor.org.

Key Milestones

Prior policies lay groundwork for bolder action

Numerous efforts to address deforestation in Mato Grosso, most of which were led by European market actors and environmental nongovernmental organizations (NGOs), provide mixed success and set the stage for more ambitious action.

Strategy launches at COP21

The coalition's work and its underlying structure become known as the PCI, which formally launches at COP21 in Paris.



Governor assembles stakeholder coalition

Former Governor Pedro Taques provides decisive political leadership by bringing together nearly 50 interested stakeholder groups to address land use challenges in Mato Grosso.

Structure receives formal legal recognition

The governor recognizes the coalition as the State Committee, a formal initiative to reconcile land use interests through a consensus-based process.



Driving Forces

The factors that led to the PCI's development include:

Mounting pressure.

Previous efforts to address deforestation had proven insufficient, the need for economic development and better stewardship of natural resources remained, and tension was continuing to build between stakeholders.

Emerging economic risk and opportunity.

International supply chain actors expressed increasing concerns over sustainability that were perceived to put Mato Grosso agricultural markets at risk. At the same time, stakeholders recognized the opportunity to take advantage of the growing global demand for sustainable commodities.

The PCI undertakes strategic planning

The PCI defines priority actions regarding financing mechanisms, land regularization, market access, land tenure, technology, and the dissemination of good practices.

World Bank helps the PCI receive recognition

Mato Grosso receives a \$250 million development loan from the World Bank which includes substantial funding for the PCI. Among other requirements, the loan requires that the Mato Grosso government formally recognizes the PCI Institute as a partner, and the government does so.



The PCI becomes separate from the government

The PCI's work gains autonomy, becoming housed within the PCI Institute, an independent body supported by, but not controlled by, the state government.

Maturation of carbon markets.

Growing international interest in the purchase of carbon offsets and the development of these markets provided a foundation for the PCI work.

Aligning stakeholder interests.

The overlap between multiple land use issues in Mato Grosso became increasingly clear. Stakeholders recognized that challenges like market access for smallholder farmers and land restoration, for example, would best be solved as part of a comprehensive, "big tent" process rather than addressed individually. New political leadership in the state, existing models for partnership between industry and conservation, and the need to attract investment contributed to this alignment.

Keys to Success

While the PCI is a work in progress in Mato Grosso, this visionary initiative has laid a solid foundation upon which to build. Some of the critical factors that are driving the initiative toward success include the following:



Stakeholder inclusivity

Ensures that communication and feedback are integrated into the PCI's processes and that a wide array of interests from all major stakeholder groups (government, private sector, civil society, etc.) is represented in these conversations.

Shared vision

Aligns stakeholders on achieving 21 specific, measurable targets through a consensus process. This alignment is critical to moving past disagreement and directing the group's resources toward shared goals. A focus on the opportunities resulted in broad stakeholder buy-in and made it politically expedient for new political administrations to preserve the PCI. This framing makes the PCI an asset rather than a political liability.

Long-term planning

Focuses on building long-term transformation of the region's entire land use system over many years. This vision requires long-term planning and incremental progress, such as the steps needed to secure carbon offset funding, and much of the PCI's targets are oriented toward a 2030 timeline.

Monitoring and transparency

Builds trust in the PCI's processes by tracking progress toward the key performance indicators and displaying the data publicly on [PCImonitor.org](https://pcimonitor.org).

Early supporters

Certain organizations provide tangible early support, which establishes credibility around the PCI as a proof of concept for its implementation. This early support came from the Sustainable Trade Initiative (IDH) as well as \$50 million from Germany and the UK through the [REDD Early Movers program](#).

Independence

Exists independently from the government but at the same time allows for government support and representation within the PCI Institute's decision-making framework. This independence helps insulate the PCI from political changes while giving the government a seat at the table.

Funding mechanisms

Focuses primarily on identifying funders, funding mechanisms, and implementation partners as well as developing the legal framework through which funds can flow. Acquiring this funding is critical, and the PCI is exploring opportunities from grant money, credit money from banks, farmer investment, and corporate purchases of carbon offsets.



Benefits

Creating opportunities with near- and long-term benefits for the region while mitigating climate change and conserving natural resources have been the PCI's main goals from the start. Furthermore, the initiative is designed to take advantage of the synergies between benefits—for example, economic development drives better health and improved security outcomes.

Economic Development

Market transformation. The PCI initiates a transformation of Mato Grosso's agricultural economy, which involves many connected benefits. These include:

- Increasing efficiency, transparency, and inclusion for farmers
- Becoming a Verified Sourcing Area (VSA) for low-carbon products, allowing farmers to be paid a premium for certified commodities
- Creating a mechanism to provide offsets in the global carbon market
- Intensifying agriculture, which will improve production on degraded land, resulting in greater economic returns while safeguarding natural resources

Stabilizing markets. The PCI is a flagship model of a jurisdictional approach, with other states in Brazil and part of southeast Asia modeling their work off the PCI. As these solutions grow, this scaling serves to expand the market and support all regions undertaking the policy.

Company benefits. Jurisdictional approaches can benefit participating companies by setting up processes and structures that reduce participants' monitoring costs, mitigate long-term risk, and help them achieve their goals related to both social and environmental responsibility.³

³ Environmental Defense Fund. n.d. "The Jurisdictional Approach: Forests." Accessed June 18, 2020. <https://supplychain.edf.org/resources/the-jurisdictional-approach/>.

Health

Protecting air quality. Protecting native ecosystems from fires related to land use change can prevent harmful air pollution. Research has shown that, for example, preventing peatland fires in Singapore, Malaysia, and Indonesia could save about 24,000 lives per year across the three countries.⁴

Inhibiting disease spread. Reforestation and forest conservation have the potential to mitigate the emergence and spread of infectious diseases by limiting human exposure to foreign pathogens.⁵ Land use change that has diminished the area of natural habitat has played a major role in increasing the risk of infectious disease throughout history.

Equity

Protecting indigenous communities.

Indigenous communities face many challenges, such as agricultural land grabbing, which pose a direct threat to their culture and existence. The PCI has included indigenous communities in the process, helping to advance their economic development and protect indigenous lands from the threat of large-scale agriculture.

Supporting smallholder farmers.

Smallholder farmers in Mato Grosso often lack access to credit, have trouble getting their products to market, and are burdened by bureaucratic requirements. As a result, they face disproportionate economic hardship, and their farms are frequently bought and consolidated by large corporations. The PCI has specific targets to mitigate each of these challenges and advance smallholder interests.

Resilience and Security

Enhancing economic resilience and independence.

Mato Grosso depends on many basic products, such as vegetables and dairy, mainly from out-of-state markets even though there are many producers within the state. By strengthening the in-state supply chain for smallholder producers of these products, the PCI will enhance economic resilience by making Mato Grosso less dependent on external supply chains.

Preservation of forest resources. Globally, many communities rely on forests for their livelihoods, particularly in developing countries like Brazil. Preserving natural ecosystems protects these places as sources of food, medicine, fuel, and other natural products that people can use for



⁴ "The Human Health Benefits of Conserving and Restoring Peatlands." 2019. United Nations Environment Programme. November 8, 2019. <https://www.unenvironment.org/news-and-stories/story/human-health-benefits-conserving-and-restoring-peatlands>.

⁵ B.A. Wilcox and B. Ellis, "Forests and Emerging Infectious Diseases of Humans," *Unasylva* 224 57 (2006), accessed August 2020. <http://www.fao.org/tempref/docrep/fao/009/a0789e/a0789e03.pdf>.



themselves and sell for income. Long-term conservation can also allow these communities to set up nature-related tourism operations as additional sources of income.⁶

Protection of ecosystem services.

Initiatives like the PCI protect ecosystem services, which provide valuable benefits. These include protecting watersheds, maintaining soil health, regulating pests and disease, improving air quality, and helping pollinate crops.⁷

Biodiversity conservation. The PCI aims to permanently protect and restore large swaths of the country's natural ecosystems in one of the most biodiverse areas on the planet. Biodiversity protection itself is an explicit goal of numerous major efforts, including the international treaty known as the Convention on Biological Diversity, which nearly all of the world's countries, including Brazil, have ratified.⁸

6 Shaw, Julie. 2018. "Why Is Biodiversity Important?" *Conservation International*. November 15, 2018. <https://www.conservation.org/blog/why-is-biodiversity-important>.

7 U.S. Mission to International Organizations in Geneva. 2010. "The Importance of Biodiversity for Development." April 20, 2010. <https://geneva.usmission.gov/2010/04/20/usaid-biodiversity/#:~:text=Biodiversity%20conservation%20protects%20plant%2C%20animal,and%20pollinating%20crops%20and%20trees>.

8 Convention on Biological Diversity. n.d. "List of Parties." Accessed June 18, 2020. <https://www.cbd.int/information/parties.shtml>.

Sustainability creates economic opportunity.

Economic Growth Rate of Brazilian Economy vs. Growth Rate of Mato Grosso Agricultural Sector from the PCI⁹



PCI Resources

➔ [Mato Grosso Jurisdictional Sustainability Profile](#)¹⁰

➔ [PCI Documents and Downloads](#)¹¹

➔ [PCImonitor.org](#)²

➔ [Produce, Conserve, Include Pitchbook](#)¹²

➔ [PCI Webinar through Tropical Forest Alliance](#)¹³

9 Annual Brazilian GDP growth of 1.4% based on World Bank Data (Report No: 123808-BR) average annual GDP growth between 2010 and 2019. Annual growth of Mato Grosso agricultural sector of 10% based on (1) GDP of Mato Grosso of \$22.6B from Brazilian Institute of Geography and Statistics from 2016; (2) World Bank estimate of agricultural sector as 50% of Mato Grosso economy (Report No: 123808-BR); and (3) total annual investment of \$1.3B, based on \$13B by 2030 that the PCI aims to acquire ("World Bank Press Release: Mato Grosso to Enhance Fiscal Sustainability while also Protecting the Environment"), divided by 10 to annualize for 2021–2030. Thus, $(\$1.3B) / [(\$22.6B) \times (50\%)] = 11.5\%$, rounded to 10%.

10 Nepstad, D., C. Stickler, O. Carvalho, M. Leal, J. Shimada, O. David, and A. Ribeiro. 2018. *Jurisdictional Sustainability Profile: Mato Grosso, Brazil*. Energy Innovation Institute, CIFOR, GCF Task Force. https://earthinnovation.org/wp-content/uploads/2014/09/Profile_MATOGROSSO_2018_ENG.pdf.

11 Produzir, Conservar, Incluir. n.d. "Documentos & Downloads." Accessed June 18, 2020. http://pci.mt.gov.br/?post_type=docs.

12 PCI. 2019. *Produce, Conserve, Include Pitchbook: An Overview of Initiatives That Support Corporate Engagement in Mato Grosso, Brazil*. <https://www.idhsustainabletrade.com/uploaded/2019/05/PCI-PitchBook-final-online.pdf>.

13 TFA (Tropical Forest Alliance). 2020. "A Closer Look: Produce, Conserve, Include (PCI) in Mato Grosso." Webinar, May 8, 2020. <https://www.youtube.com/watch?v=PmvzzcrsQYs>.



Broader View

Solving land use issues is particularly important in areas with high levels of emissions from land use, vulnerable communities, and at-risk natural resources. As a result, jurisdictional approaches are most commonly applied to tropical forests. However, the core strategies of a jurisdictional approach could be adapted to a variety of terrestrial, or even marine, ecosystems throughout the world (e.g., protecting peatlands or providing a sustainably certified supply of seafood).

Not only can jurisdictional approaches address different land use challenges in different geographies, but the structure of the approach itself is adaptable. Existing initiatives vary significantly. For example, Ghana's jurisdictional approach exists at the country level, not the state level, and is at its core a REDD+ program, in contrast to the PCI, which is multifaceted.¹⁴ In the Orinoquía region of Colombia, the approach is implemented within the government rather than as an independent entity.¹⁵

Policymakers should also recognize that, though promising, jurisdictional approaches are fairly nascent, and it is too early to gauge their collective level of success. In particular, stakeholders

should be aware of challenges associated with pursuing burgeoning market opportunities through the approach, including the complexities around carbon accounting, sustainable product certifications, and additionality of offsets.

Regardless of the particulars of the structure or geographical context of a land use strategy, whether it is market based or government led, an inclusionary process is critical to the lasting success of land use policies. The principle of inclusion is the starting point from which comes the framework and strategy to match regional context and local needs.

¹⁴ Fishman, Akiva, Edgar Oliveira, and Lloyd Gamble. 2017. *Tackling Deforestation Through a Jurisdictional Approach: Lessons from The Field*. World Wildlife Fund. https://c402277.ssl.cf1.rackcdn.com/publications/1146/files/original/wwf_ja_brasilia_final_exec_sum_w_cover.pdf?1520454599.

¹⁵ BioCarbon Fund. n.d. "Orinoquía Sustainable Integrated Landscape Program." Accessed July 1, 2020. <https://www.biocarbonfund-isfl.org/programs/orinoquia-sustainable-integrated-landscape-program>.



These pages are excerpts from **Regions Take Action: The Many Benefits of Major Climate Policies**. This action is one of five featured actions which may be relevant to others in your region. Download and share the full guide for free at under2coalition.org/news/regions-take-action or rmi.org/regions-take-action.



About Rocky Mountain Institute

Rocky Mountain Institute (RMI)—an independent nonprofit founded in 1982—transforms global energy use to create a clean, prosperous, and secure low-carbon future. It engages businesses, communities, institutions, and entrepreneurs to accelerate the

adoption of market-based solutions that cost-effectively shift from fossil fuels to efficiency and renewables. RMI has offices in Basalt and Boulder, Colorado; New York City; the San Francisco Bay Area; Washington, D.C.; and Beijing.



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About the Under2 Coalition and the Climate Group

The Under2 Coalition is driven by a group of ambitious state and regional governments committed to keeping global temperature rises to under 2°C. The coalition comprises more than 200 governments that represent over 1.3 billion people and nearly 40% of the global economy.

The Climate Group is the Secretariat to the Under2 Coalition and works with governments to accelerate climate action through three work streams: planning deep decarbonization pathways, scaling innovative policy solutions, and mainstreaming transparency and reporting.

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