

Rethinking Multilateralism

***A GREEN ECONOMY  
CAN DELIVER  
ZERO DEFORESTATION  
IN THE AMAZON  
BY 2030***



**IGARAPÉ INSTITUTE**  
a think and do tank

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# ***A GREEN ECONOMY CAN DELIVER ZERO DEFORESTATION IN THE AMAZON BY 2030***

## ***Overview***

A rapid acceleration of the green economy — upon a low carbon and efficient production, sustainable technology and biotechnology and fostering nature based activities and solutions — is essential to achieve zero deforestation, particularly in the Amazon Basin. This short paper details why an end to deforestation and degradation is imperative to “protect our planet” as well as how it can be achieved. The elements of the idea are:

- 1** Establish a permanent scientific panel for the Amazon.
- 2** Increase remote sensing and enforcement of zero deforestation.
- 3** Scale-up blockchain land registration.
- 4** Accelerate green finance for conservation and regeneration — including Reducing Emissions from Deforestation and Forest Degradation (REDD+) initiative and green bonds.
- 5** Ramp-up biotech innovation with local indigenous peoples rights/wealth creation.

Engagement with the Amazon Treaty Cooperation Organization could also help strengthen regional cooperation.

## ***Background***

The Amazon Basin is on the brink of an [irreversible tipping point](#) with planetary implications. Its roughly 2.7 million square miles stores around 100 billion tons of CO<sub>2</sub> and keeps nearly 400 billion tons of CO<sub>2</sub> out of the atmosphere. Spanning eight South American countries, the Amazon is home to over 60% of the world’s tropical forests, 20% of all freshwater and about 10% of biodiversity. Owing to insatiable global demand for meat, soy, gold and other commodities, roughly 18% of the Amazon has been razed to the ground. If deforestation levels rise another 5%, the world’s largest tropical forest could experience catastrophic [die-back](#). There are [fears](#) this process may have already started. Unless governments and markets radically revalue the rainforest’s biodiversity, then this nightmare scenario may be unavoidable.

There is a risk that the [25% deforestation threshold could be passed](#) before 2030. If the Amazon Basin undergoes die-back, the equivalent of a decade of global emissions could be released. Making matters worse, the Amazon will also lose its ability to absorb billions of tons of CO<sub>2</sub> annually. Hydrological cycles will be disrupted impacting evapo-transpiration and ocean currents. The agri-industrial sector could collapse along with staggering biodiversity loss. Hydro-electric facilities will be shuttered, declining water tables

will make cities unlivable and fisheries could collapse. Since 2019, relentless deforestation resulted in 825 million tons of CO<sub>2</sub> — more than from all US vehicles in a single year. Deforestation reached a [12-year high in Brazil](#) in 2020. If deforestation is not dramatically reversed, targets set by the Paris Climate Agreement are doomed. One of the best ways to avoid this is by stimulating a green economy: applying a [financial value on nature](#) may be key to preventing its destruction.

Achieving zero deforestation in the Amazon requires a clear-headed **scientific assessment** of the problem. Governments across the region blame smallholder farmers, artisanal miners and even indigeneous groups involved in subsistence food production for the destruction of the Amazon. [Study after study](#) shows that massive agribusinesses, beef-producers, mining companies and their local suppliers may be considered responsible for forest clearances and degradation. A combination of [legal and illegal](#) players are involved, most of them connected to domestic and global supply chains. The bottom line is that South American governments tend to value soy, cattle and mineral resources over the extraordinary biodiversity of the forest. According to leading climate scientist Carlos Nobre, the Amazon is one of biodiversity's "[greatest show-rooms](#)" with incalculable wealth potential. The [Scientific Panel for the Amazon](#), a coalition of 150 leading scientists from the region, should be significantly scaled-up to become a permanent standing structure. Building a green economy requires **cracking-down on illegal deforestation** and the networks that sustain it. More than [95% of all deforestation in the Amazon is illegal](#) and less than 3% of fines are ever paid. Brazil's environmental enforcement agency, IBAMA, is handed out [20% fewer fines in 2020](#) due to funding cuts and

reduced sanctions against illegal loggers, farmers and miners. Illegal deforestation occurs in several ways. It typically begins with illegal land invasions followed by selective logging and the clearance of forest for commercial agriculture and ranching. Another approach involves [wildcat mining](#), mostly for gold, which has lasting effects on local ecosystems and human health. Forests are also affected by [wildlife trafficking](#), fuelled by unrelenting demand for rare birds, reptiles and mammals around the world. Many governments, law enforcement organizations and environmental groups treat these phenomena in isolation, yet there is [evidence](#) that many of the underlying networks involved in these criminal activities are connected. Massive investment in integrated [high resolution remote sensing](#), [alert systems](#) using machine learning, [tracking illegal commodities](#) in global supply chains, and strengthening [investigation and prosecution](#) is essential. Indeed, two thirds of the world's supply chains [do not have policies](#) on illegal deforestation.

One of the most significant priorities is ensuring a transparent and accountable **land registration system**. Arguably the trickiest problem in the Amazon is aligning developing a system that allows property titles and land demarcations to be properly registered and monitored over time. There is tremendous fraud and corruption in the land registries of most Amazonian countries. Creating a system that is digitized, accessible and updated is critical to enforcing existing laws and also stimulating legal markets. Developing an online dispute resolutions system to address outstanding legacy litigation related to [competing land claims](#) is also critical. While difficult, the development of a blockchain system of verification for land registries to demonstrate a clear chain of ownership and custody

would vastly improve the potential of a green economy. A Brazilian state-run technology company, Serpro, has [attempted to do precisely this](#), though the initiative needs to be urgently scaled. Next, the focus must be on **accelerating conservation, reforestation and regeneration of land** especially in the most affected countries. In Brazil, home to 40% of the Amazon's tropical forests, Pará is an obvious candidate. In Colombia, Peru and Ecuador with roughly 23% of the Amazon between them, it is Amazonas, Loreto and Pastaza states respectively. A priority is to build a predictable pipeline of reforestation, biodiversity conservation and sustainable forest management projects that can rapidly scale. Financing could be accelerated by the Reducing Emissions from Deforestation and Forest Degradation (REDD+) initiative. There are already [several REDD+ initiatives](#) and other conservation instruments as the Payment for Environmental Services that facilitate the trade of carbon credits, though special care is needed to avoid undermining local control of forest areas, amplifying the power of “carbon cowboys” and “recentralizing” forest governance. Novel financial instruments, including [green bonds](#), are also part of the solution. Brazil already has 30 bonds worth almost \$6 billion. A recent estimate of green-aligned financing in Brazil alone is over \$160 billion by 2030. So too is investor activism, including sovereign wealth funds, pension funds, retailers and others. In 2019, over [230 global investors with more than \\$16.2 trillion in assets](#) warned companies to either meet their commodities supply chain deforestation commitments or risk economic consequences.

Most important are **innovative solutions to stimulate the green economy** and support the communities who are the custodians of the Amazon Basin. What is needed is a Defense Advanced Research Projects Agency (DARPA) like approach to ramp-up the research and development, and related enabling innovation and regulatory frameworks to engineer an inclusive bioeconomy in the Amazon. This includes national research to collect and systematize Amazon biodiversity — including using drones to sample biodiversity in hard-to-reach areas and the study of fruits, nuts, plant extracts and fibers — and digital platforms to secure biological assets for the public good. These efforts must be accompanied by clear enforceable rules to share data and safeguards to promote local value creation and retention. It may also include the formation of low- and high-tech innovation hubs in selected countries to stimulate local innovation, harness traditional knowledge and ensure local ownership and wealth creation. Most presidents and several governors from Brazil, Colombia and Peru have [already called for a green economy](#), “a new model of sustainable development based on giving value to environmental assets”.

# References

Muggah, R. (2020) Reducing deforestation in the Amazon means taking environment crime seriously, The Agenda, 2 September, <https://www.weforum.org/agenda/2020/08/reducing-deforestation-means-getting-serious-about-environmental-crime>

\_\_\_\_. (2020) Lockdowns have been amazing for the environment but they won't heal the planet, Foreign Policy, 21 August, <https://foreignpolicy.com/2020/08/21/pandemic-lockdowns-climate-environment/>

\_\_\_\_.(2020) "The pandemic won't heal the planet. Only radical action by humans will.", Thrive, 24 August, <https://thriveglobal.com/stories/the-pandemic-wont-heal-the-planet-only-radical-action-by-humans-will>

\_\_\_\_. (and Franciotti, J.) (2019) "New Data Points to Staggering Violence in the Amazon", Americas Quarterly, 5 December, <https://www.americasquarterly.org/content/new-data-points-staggering-violence-amazon>

\_\_\_\_. (with Schiappani, A.) (2019) "The Environmental Crime Behind the Climate Crisis", Financial Times (documentary), September, <https://www.ft.com/video/a2082c03-41e2-493b-8e63-0556f4f79d90>

\_\_\_\_. (2019) "E Preciso Salvar Amazonia Antes Que Se Atinja Ponto Irreversível, Dizem Autores", Folha de Sao Paulo, 3 September, <https://www1.folha.uol.com.br/ilustrissima/2019/09/e-preciso-salvar-amazonia-antes-que-atinja-ponto-irreversivel-dizem-autores.shtml>

\_\_\_\_. (with Baretto, P.) (2019) "The Amazon is Reaching a Dangerous Tipping Point", Agenda, 23 August, <https://www.weforum.org/agenda/2019/08/amazon-dangerous-tipping-point-forest-fires-brazil/>

\_\_\_\_. (2019) "It Isn't Too Late to Save the Brazilian Rainforest", Foreign Policy, 19 August, <https://foreignpolicy.com/2019/08/19/it-isnt-too-late-to-save-the-brazilian-rainforest/>

\_\_\_\_. (with Szabo, I. and Abdenur, A.) (2019) "Fighting Climate Change Means Fighting Organized Crime", Project Syndicate, March 12, <https://www.project-syndicate.org/commentary/amazon-illegal-mining-climate-change-by-robert-muggah-et-al-2019-03>



# ***Our Common Agenda***

The world is contending with multiple interconnected challenges ranging from global health threats and geopolitical tensions to massive digital transformation and accelerating climate change. These complex risks threaten to overwhelm existing multilateral institutions. New thinking is required. To this end, the Igarapé Institute is supporting the United Nations Secretary-General craft [\*Our Common Agenda\*](#). The Agenda is committed to delivering on the promise of the United Nations Charter by refocusing investment in international cooperation.

*Our Common Agenda* is intended to accelerate a new kind of multilateralism. It is mandated by a UN Member States Declaration commemorating the 75th anniversary of the United Nations. The Secretary-General was explicitly requested to report back to Member States with recommendations to address current and future challenges to the UN General Assembly before the end of the 75th session in September 2021. 1,759 participants from 147 countries.



*Our Common Agenda* is informed by consultations with Member States, thought leaders, young people, civil society, and the UN system. It is led by the Executive Office of the Secretary-General with support from the [UN Foundation](#) and [Igarapé Institute](#), along with a network of partners from around the world, including ACCORD (South Africa), [Southern Voice](#) (a network of 50 think tanks from Africa, Asia, and Latin America) and the [Lee Kuan Yew School of Public Policy](#) of the National University of Singapore.

*Our Common Agenda* proposes a series of very practical measures to advance the 12 themes set out in the [UN75 Declaration](#). Among other things, it calls for a reimagined social contract, greater solidarity across generations, reinvigorated protection of the global commons and more rapid and inclusive delivery of global public goods.

During 2020 and 2021, the Igarapé Institute helped backstop the Executive Office of the Secretary-General in its development of *Our Common Agenda*. The Institute conducted research, reviewed recommendations and coordinated a global digital consultation with support from a diverse range of partners.

**Research:** The Institute produced analytical papers on ways to accelerate inclusive and networked multilateralism and developed data visualizations of international cooperation on issues such as global vaccination, nuclear non-proliferation, and climate finance.

**Consultations:** The Institute led a global consultation involving non-governmental organizations, impact investors, philanthropists, parliamentarians, city leaders, academic institutions, and under-represented groups. The process generated 523 proposals from 1,759 participants from 147 countries.



## **IGARAPÉ INSTITUTE** a think and **do** tank

The Igarapé Institute is an independent think and do tank focused on public, climate and digital security and their consequences for democracy. Its objective is to propose solutions and partnerships for global challenges through research, new technologies, communication and influence on public policymaking. The Institute works with governments, the private sector and civil society to design data-based solutions. Prospect Magazine named Igarapé Institute the best Human Rights NGO in 2018 and the best think tank on social policy in 2019.

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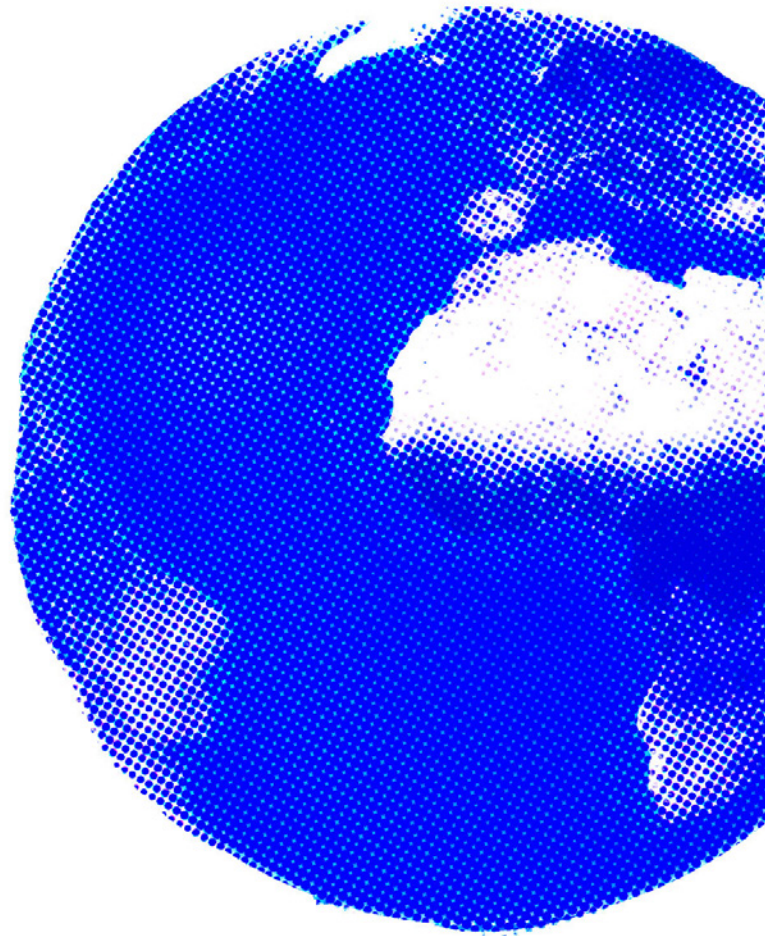
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