

Getting to zero deforestation in the Amazon by 2030



Amazon deforestation in Brazil reached a 12-year high in 2020, and over 95 per cent of it is illegal. Governments and markets must radically revalue the rainforest's natural services and stimulate a green economy to avoid a nightmare scenario.

The Amazon Basin is fast approaching an irreversible tipping point. That should concern everyone, because what happens in the Amazon has planetary implications.

Spanning eight South American countries and French Guiana, the Amazon contains over 60 per cent of the world's tropical forests, 20 per cent of its fresh water, and about 10 per cent of biodiversity.

As a result of land speculation and insatiable global demand for meat, soy, gold, and other commodities, roughly 20 per cent of the world's largest tropical forest has already been

razed.

A further 5 per cent rise in deforestation levels could trigger catastrophic dieback, essentially dooming the 2015 Paris climate agreement.

Some fear this process may already have started. The current prognosis is not good: Amazon deforestation in Brazil reached a 12-year high in 2020, and over 95 per cent of it is illegal.

Unless governments and markets radically revalue the rainforest's natural services, this nightmare scenario may be unavoidable.

Dieback in the Amazon Basin could release the equivalent of a decade's worth of global greenhouse-gas emissions. The forest would also lose its ability to absorb billions of tons of carbon dioxide, disrupting hydrological cycles, evapotranspiration, and ocean currents.

The agro-industrial sector could collapse, and the loss of biodiversity could be staggering. Hydroelectric facilities would be shuttered, declining water tables would make cities unlivable, and fisheries would become unviable.

Preventing this outcome requires achieving zero deforestation in the Amazon by 2030. And that, in turn, requires a clearheaded scientific assessment and science-based targets.

The Science Panel for the Amazon, a coalition of about 200 leading scientists from the region, should become permanent. And, given the extraordinary wealth potential of preserving the forest's biodiversity, the best way to protect this resource is by stimulating the emergence of a green economy.

For starters, this will require a crackdown on illegal deforestation and the networks that sustain it. Brazil's environmental enforcement agency, Ibama, handed out 20 per

cent fewer fines in 2020 than in 2019, owing to funding cuts and reduced sanctions – and less than 3 per cent of fines are paid.

Reinforcing Ibama, a federal agency, is essential, as is bolstering state-level institutions on the frontlines of environmental crime, such as police, firefighters, and land registration offices.

Illegal deforestation occurs in several ways, but typically involves unlawful land invasions, followed by forest clearance for commercial agriculture and ranching.

Another encroachment, wildcat mining, mostly for gold, undermines local ecosystems and human health, while wildlife trafficking, fueled by unrelenting global demand for rare birds, reptiles, and mammals, also affects forest health.

Currently, two-thirds of global supply chains have no policies on illegal deforestation. Massive investment in high-resolution remote sensing and artificial intelligence-based alert systems is essential, as is tracking illegally extracted commodities in global supply chains and strengthening investigation and prosecution.

One of the most important priorities in the Amazon is developing a transparent and accountable system that allows property titles and land demarcations to be registered and monitored properly over time.

Given the considerable fraud and corruption in most Amazonian countries' land registries, creating a digitised, accessible, and up-to-date ledger is critical to enforcing existing laws and stimulating legal markets.

Developing an online dispute-resolution process to address outstanding legacy litigation related to competing land claims is no less vital. And establishing a blockchain verification system for land registries to demonstrate a clear

chain of ownership and custody, while difficult, would greatly improve the prospects for a green economy.

Another priority is accelerating reforestation and land regeneration. In Brazil, home to 60 per cent of the Amazon, the state of Pará is an obvious location for such efforts. In Colombia, Peru, and Ecuador, which together contain roughly 23 per cent of the Amazon, the states of Amazonas, Loreto, and Pastaza, respectively, stand out.

The key is to build a predictable pipeline of reforestation, biodiversity conservation, and sustainable forest management projects that can scale rapidly.

The Reducing Emissions from Deforestation and Forest Degradation initiative could accelerate funding for such efforts. International financing from the Amazon Fund, US President Joe Biden's administration, and tools such as green bonds would help, while local financing also could play a significant role.

So, too, could initiatives such as the Global Commons Alliance and It.org, along with investor activism, including from sovereign wealth and pension funds. In 2019, some 230 global investors, managing a total of more than \$16 trillion in assets, called on companies to meet their deforestation commitments or risk adverse economic consequences.

Most important are innovations to bolster the green economy and support the communities that are the custodians of the Amazon Basin. Such initiatives could be accelerated by a Brazilian equivalent to the US government's Defense Advanced Research Projects Agency to ramp up research and development, as well as related regulatory frameworks to enable an inclusive bioeconomy in the Amazon.

This approach would include applied research to collect and map Amazon biodiversity – with scientists studying fruits, nuts, plant extracts, and fibers, and using drones to sample

biodiversity in hard-to-reach areas – along with digital platforms to secure biological assets for the public good.

To ensure that indigenous and local populations are included and benefit, clear and enforceable data-sharing rules and safeguards to promote local value creation and retention must accompany these efforts. In addition, establishing low- and high-tech innovation hubs in selected countries can stimulate local innovation, harness traditional knowledge, and ensure local ownership.

Advancing the green economy and achieving zero deforestation in the Amazon will depend on the combined efforts of governments, the private sector, and civil society. In Brazil, several groups – including the Concert for the Amazon and the Brazilian Coalition on Climate, Forests, and Agriculture – are playing a pivotal role in shaping the agenda and connecting stakeholders. And with the country's federal government missing in action on this issue, local governments also are stepping up.

Concerted international and regional efforts – such as the Leticia Pact – combined with national and subnational interventions could create a brighter future for the Amazon. The health of the planet depends on it.

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