

Mining and megaprojects emerge as alarming threat to tropical forests and biodiversity

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A new study assessing progress on global efforts to end forest loss worldwide offers the most comprehensive overview to date of the large role that infrastructure and mining play in tropical deforestation, now and in the future. The study finds that an increasing number of megaprojects—massive and complex development projects that may combine transportation, energy and other infrastructure—planned for tropical forests are on track to destroy forests and open remote forested areas to even more development. In particular, this new infrastructure is on track to increase mining activity deeper in the remote forests of South America, Southeast Asia and Central Africa.

"Forests, [forest](#) peoples and wildlife, already at a breaking point, are increasingly in the crosshairs of large infrastructure and [mining](#) developments," said Franziska Haupt, Berlin executive director of Climate Focus and the lead author of a new report by the NYDF Assessment Partners, *Progress on the New York Declaration on Forests: Balancing forests and development: Addressing infrastructure and extractive industries, promoting sustainable livelihoods*.

"Big new projects underway or planned in the Amazon, Indonesia, Mesoamerica, the Congo Basin and beyond reveal that our insatiable appetite for coal, minerals, metals, energy and agricultural commodities like soy has opened up a new front in the battle to protect the world's forests," Haupt added. "Some governments are compounding this threat

and rolling back forest protections, as countries struggle to cope with the economic fallout of COVID-19."

Released six years after the launch of the New York Declaration on Forests, a pledge to halve deforestation by 2020 and end it by 2030, the report finds that the 2020 target of halving deforestation will not be met and that meeting the 2030 target of ending deforestation will require an unprecedented reduction in the rate of annual forest loss.

The report is also the first study of its kind to describe the full extent of a pan-tropical trend that sees companies, governments, investors and other actors greenlighting damaging mining and infrastructure projects behind closed doors, while failing to factor in the climate, economic, social and environmental value of forests through effective forest and biodiversity policies. The report also looks at the role that civil society and Indigenous and [local communities](#) play in pushing back against these trends.

"Many of these projects would never get the green light, if the true value of forests was factored in—their role in reducing climate change, protecting animal habitats and reducing the spread of zoonotic diseases, keeping water sources clean, providing economic opportunity and a long list of other benefits without a price tag," said co-author and coordinator of the report, Erin D. Matson, a senior consultant at Climate Focus.

In the Pipeline

Economic corridor megaprojects, which link roads, waterways and railways with natural resource extraction, and megadams are planned or under development in most remaining critical tropical forest regions, including South America, Sub-Saharan Africa, Indonesian Borneo and Papua and the Mekong.

- Across five Amazon countries (Bolivia, Brazil, Colombia, Peru and Ecuador), governments are investing a total of US\$27 billion over the next five years to construct or update more than 12,000 kilometers (7,456 miles) of roads. If all planned projects are realized, they will cause the deforestation of approximately 2.4 million hectares over the next 20 years.
- In Indonesia, the Trans-Papua Highway—a 4,000-kilometer network—will cut through Lorentz National Park, increasing access to over 50,000 hectares of mining concessions inside the park.
- A railway planned for Kalimantan, Indonesia, would open areas for coal mining and palm oil production. And in neighboring Papua New Guinea, two plans in process would double the length of the country's road network by late 2022.
- In Sub-Saharan Africa, there is an infrastructure boom organized around dozens of international development corridors to extract, transport and export minerals and energy. These corridors, spanning nations, would cut across 400 protected areas and degrade an additional 1,800.

"The proper analysis of forest impact—a Forest Impact Analysis—for large infrastructure projects remains a major challenge," said reporter contributor Arild Angelsen, a senior associate at the Center for International Forestry Research (CIFOR) and a professor of economics at the Norwegian University of Life Sciences (NMBU). "The overwhelming importance of new infrastructure, and roadmaps in particular, to properly evaluate the fate of forests should make this a top public policy priority."

Mining projects across the tropics are also in operation, with coal mining the most damaging. Studies have shown that deforestation for coal mining delivers a "double whammy" of harmful emissions: Ripping up forests and then producing and burning coal release carbon.

Furthermore, the report points out that mining is the world's most violent economic sector, with the largest proportion of reported environmental conflicts in the Environmental Justice Atlas, at 21%, and the most associated murders of environmental defenders—50 in 2019.

A survey conducted as part of the report of mining companies reveals that industry-wide action on biodiversity is lagging, with only a handful of companies reporting they have robust biodiversity policies in place and even less evidence that policies are being put into practice.

"Forests are at a dangerous tipping point, and these new large-scale infrastructure projects and extractive developments could push us over the edge and undermine global efforts to stop deforestation. There's a very small—and closing—window of opportunity now to rethink and reorient these projects in a more sustainable direction. Governments, companies and investors all need to step up, commit to more transparency and act quickly to avoid further harm to people, wildlife and nature," said Matson.

Roads to Deforestation

The report reveals that an unchecked rise in transportation networks is poised to do the most damage to forests. Studies show these roads and networks make it easier for loggers, farmers and others responsible for legally and illegally chopping down trees to access forests. Right now, roadways are responsible for 9% to 17% of tropical and subtropical deforestation, with most new deforestation occurring within one kilometer of a road.

"People need improved access, but these are not highways designed to prioritize linking communities to health care, other essential services or economic opportunities. Rather, their purpose is to facilitate the movement of commodities and to make it easier and cheaper to extract

natural capital in ways that benefit economic elites above all. Meanwhile, they unleash a Pandora's box of potential forest damage that does harm to local peoples and biodiversity," said Anthony Bebbington, a leading researcher on extractives and infrastructure and a report co-author.

"These road projects are, in turn, part of much more extensive networks of waterways, railways, ports and logistics centers that dramatically increase the likelihood of future deforestation by making once remote forested areas accessible to investment."

In Indonesian Papua and the Congo Basin, road networks have increased by over 40% since the early 2000s. These roads and infrastructure often lead to illegal or unchecked activities that can have significantly higher impacts on forests. In Brazil, for every kilometer of legal road, there are an estimated three kilometers of illegal roads. This also leads to increased contact between humans and wild animals, which is a major contributor to the spread of new zoonotic diseases like COVID-19.

Commitments to Nowhere

The report includes the results of the first-ever survey by CDP, a New York Declaration on Forests Assessment Partner, on the status of the corporate biodiversity commitments of metal, mining and coal companies operating in forested areas. Of some 225 companies invited to report on their efforts, only 23 responded. CDP analyzed an additional 22 companies to provide an analysis of 45 key companies operating in tropical regions.

"There are some signs of progress—more than three-quarters of companies we assessed have made a biodiversity-related commitment," said Morgan Gillespy, Global Director of Forests at CDP, the nonprofit that spearheaded forest-related disclosures of metals and mining companies. Most surveyed companies also indicated that biodiversity or the environment are considered at the highest levels, by their boards or at

the senior management level.

"But more work needs to be done," Gillespy said. "Only about a third of companies disclosed details of their biodiversity offset projects, and few shared clear and specific targets for action. Extractive companies, and governments as well, must step up their game by improving transparency and implementing management plans that protect forests."

The report supports findings from other recent studies that high-level corporate commitments among mining companies have not always translated into action at the project level. In fact, several of the stronger commitments were paired with poor practices on the ground. A 2019 World Bank analysis of 29 case study sites of large-scale mining in forests could not find a single example of a mining operation that comprehensively addressed and mitigated forest risks.

"This is a salutary reminder that we are living in a dreamworld of pledges, but a reality of little progress, lack of transparency, vested interests and short-termism," said Robert Nasi, Director General of CIFOR. "Alas, reality will always catch us up."

Barriers to progress include the imbalance of power between, on the one hand, governments and companies that prioritize forest destruction over protection, and, on the other hand, Indigenous and local communities eager to keep forests standing. Government-level barriers include difficulties in implementing existing forest policies due to lack of political will, capacity and stability—and the powerful influence of industry actors. At the corporate level, there is a lack of independent verification of company-reported data on progress, a wide variety and lack of common definitions and norms across mining and limited incorporation of local communities in monitoring efforts.

"Even more fundamental is the absence of meaningful consultation

processes to obtain the consent of the affected Indigenous, Afro descendant and local peoples who play such critical roles as forest stewards. Taken together, these barriers constitute profound obstacles to, and failures of, accountability and transparency," Bebbington said.

The report also offers new CDP survey results from 200 state and regional governments about the extent to which mining leads to deforestation in their jurisdictions and their responses to this destruction. Some 21 respondents representing subnational forest states in Latin America and Southeast Asia asserted that mining and infrastructure are a cause of deforestation in their regions and have adopted policies to regulate this activity. But few have translated these policies into concrete forest management plans or systematically assessed their forest risks.

"The solutions to deforestation driven by extractive industries and infrastructure are available, but they are still not being implemented at scale" said Alison Hoare, a senior research fellow at Chatham House and a report co-author.

"This will remain the case unless the full environmental impacts of these sectors are integrated into the decision-making of investors and consumers," Hoare added. "In turn, this would help to open up space for governments to consult with their national stakeholders and to properly consider all options for land-use."

Rollbacks and the Way Forward

In addition, national and local governments have made a series of rollbacks, sometimes using COVID-19 as a justification. Throughout the Amazon, Indigenous communities have suffered sustained violence and threats, including the murder of Indigenous leaders, by groups of small-scale, informal miners. The Brazilian government's decisions to open Indigenous territory to industrial mining and to legalize small-scale

mining on Indigenous lands threaten communities further. In Indonesia, a May 2020 law gave mining companies greater freedoms, setting the stage for them to open new mining territory and ramp up exploration activity.

Pulling together all these insights, the report lays out four complementary strategies for reducing the threat that infrastructure and mining pose to forests:

- Embrace alternative development pathways that reduce over-exploitation, inefficient production and excessive consumption of resources;
- Align macroeconomic and strategic planning with forest protection goals;
- Fully assess potential negative forest impacts of new infrastructure and mining projects and devise strategies for minimizing them; and
- Recognize and account for local communities, and devise ways to promote sustainable livelihoods and address deforestation.

"We're seeing trends playing out across forest nations fueled by decisions at the highest levels. By making way for other drivers of deforestation, infrastructure and mining together pose perhaps the greatest threat to forests and biodiversity," Haupt said. "But with these four strategies, we see a path forward that can realize the full social, economic and environmental benefits of development."

Provided by New York Declaration on Forests Assessment Partners

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