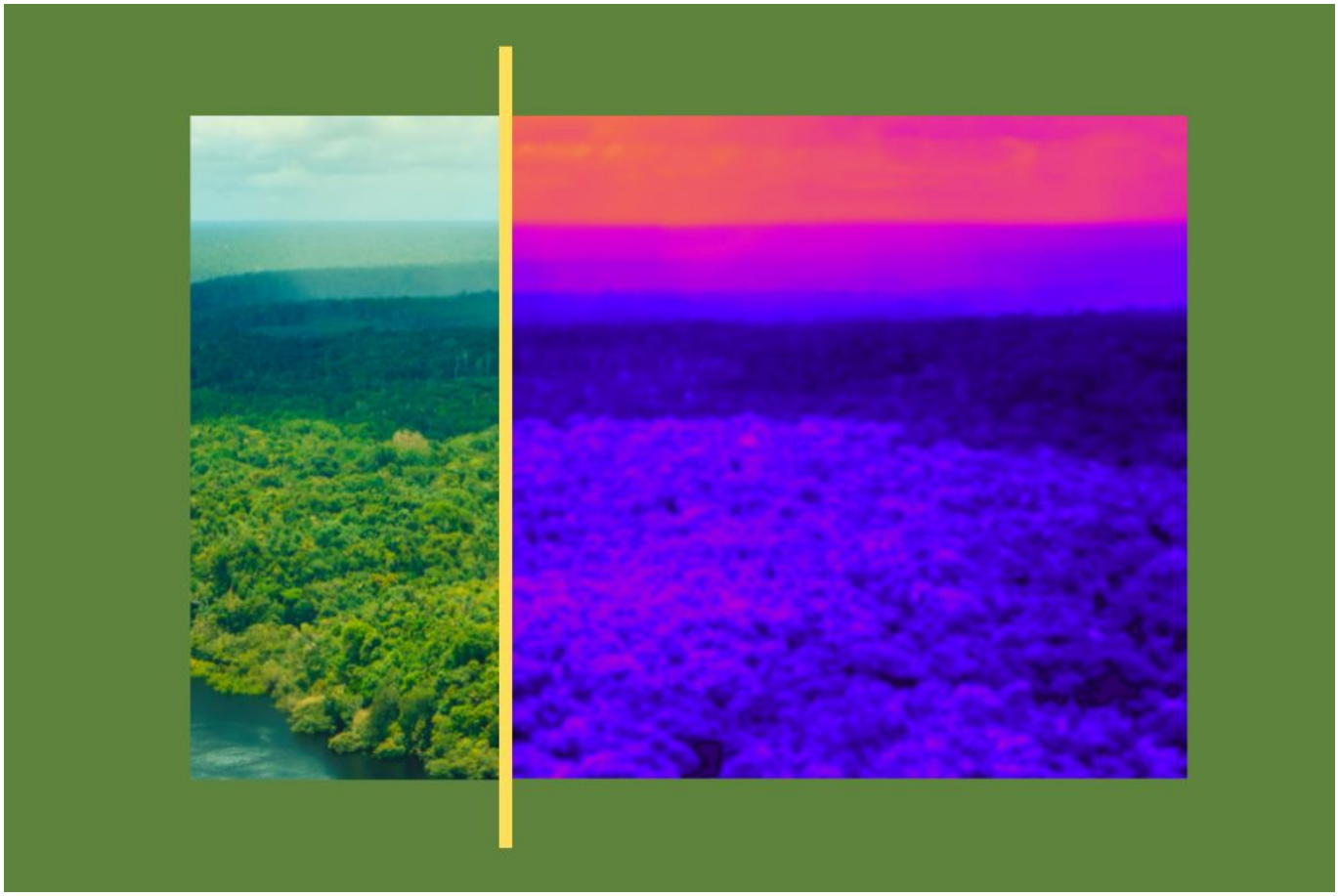

In case you missed it: there's some good news about Amazon deforestation continuing to plunge. Jason Gray and I spoke recently about why tropical deforestation is down in Brazil, Colombia, and Indonesia. That's good news because deforestation of tropical forests is a huge source of greenhouse gas emissions. The World Resources Institute's Forest Pulse report found that in 2022, emissions from tropical deforestation were equivalent to the annual emissions of India (currently the world's third largest emitting country). So, to address global climate change, we must better protect tropical forests.

This second installment of our conversation centers on the always confusing, often divisive, and sometimes not-so-good news around carbon offsets, particularly as they relate to tropical forest protection.

A common definition of carbon offsets is "reductions of greenhouse gas emissions from an activity in one place to compensate for emissions elsewhere." It seems like every month there's a new research study showing the significant limits to some carbon offsets. One recent review in Science estimated that only 6% of 89 million carbon offsets issued to 26

projects under one of the voluntary crediting standards would be associated with real carbon reductions. Some have gone so far as calling voluntary carbon offsets "unscalable, unjust, and unfixable."

Gray is project director of the Governors' Climate and Forests Task Force (GCF Task Force), a subnational coalition of 43 states and provinces in 11 countries working to protect forests through a combination of regulatory enforcement, capacity building, partnerships, and economic policies. Gray previously served as chief of California's cap-and-trade program. So, he has a unique perspective on the role of carbon offsets in the fight against deforestation and why so many recent studies are critical of offsets.

Q: This recent paper in Science looked at 26 "voluntary avoided-deforestation projects" and concluded that they did not significantly reduce deforestation or that the impact was inflated. Can you first describe how an "avoided-deforestation" offset works?

Gray: Avoided deforestation means demonstrating that actions – through policy, funding, incentives, changes in on-the-ground activities – result in protecting forests that otherwise would have been cleared. This often involves demonstrating historic deforestation levels (a reference level, or baseline) due to various "drivers of deforestation," which are activities such as clearing for livestock, agriculture, or oil, gas, timber, or mineral extraction; and then addressing those drivers through actions that incentivize alternative economic activities such as more sustainable agriculture or livestock practices, agroforestry initiatives, moratoria on new agricultural or extractive concessions, and better protections for Indigenous territories. Very simplistically, the difference between the historic deforestation level and the avoided emissions from avoided deforestation due to the actions taken is what could be considered for carbon offset crediting.

Q: What does it mean practically for those kinds of carbon offsets to be voluntary?

Gray: This is really about a distinction between regulated compliance markets and voluntary carbon markets. Regulated compliance markets, like California's or Quebec's Cap-and-Trade Programs or the European Union's Emissions Trading System, place a legal requirement on emitting companies. That means they can require a power plant, oil refinery, or even a large university campus to surrender compliance instruments to match their previous year's GHG emissions. Voluntary carbon markets do not have that same kind of legal obligation. In a compliance market, like California's, emitting entities have the option to purchase and turn in a limited number of government-issued offset credits, along with government-issued allowances, sort of like a permit, that come from approved

categories of projects that reduce emissions – like improved forest management and avoided conversion projects, destruction of high global warming potential gases – to meet a portion (currently just 4%) of their total reported emissions. Compliance markets – because of the legal requirements and oversight – tend to have added rigor behind the design, implementation, and enforcement of their offset programs. There is a lot more behind how the California program is structured, but I'll leave it here for now.

Voluntary carbon markets also deal with certain categories of projects – in some instances, the same kinds as authorized by California – but the issuing body is a voluntary offset project registry (like Verra,the Climate Action Reserve, or the American Carbon Registry) instead of the government, and the buyer is not legally obligated to surrender anything to meet its emissions. This means, there is no governmental oversight on the purchase and surrender of that instrument since it is done on a completely voluntary basis. There are multiple efforts underway to assess whether oversight of some kind is necessary, including from environment agencies to consumer protection agencies.

The credits assessed in the Science article were all from the voluntary carbon market space, as they were derived from methodologies adopted by Verra and are not approved for use in any compliance market. This does not mean voluntary credits are good or bad, just that they are not approved for use in a compliance market.

Q: What do you make of findings like these?

Gray: Well, I come from a previous job where I have strong confidence in the rigor of offset credits generated under the California compliance market, which has undergone multiple rounds of amendments that were adopted following intense public process and been upheld by California courts. And, I have seen various responses critiquing some of these recent studies around tropical forest credits in the voluntary carbon market. As they often say, the results of one study, or even a number of articles, should be considered within the broader literature (and work based on program implementation) that has been developed over many, many years. But the media attention to these specific studies, as well as confusion due to the ever-changing definition of what constitutes "high-quality" in the voluntary offsets space has certainly resulted in a drop in what had been a growing interest in investing in forest protection efforts.

With all of that said, to me, the bigger question is not whether offsets should be used or not. Instead, it is how are we—the collective we—going to incentivize, recognize, and support large-scale investments to protect forests, reduce and avoid emissions due to land-use change, and do so in a way that supports long-term sustainable development efforts of

governments and communities. In the tropical forest space, offsets—in particular those that follow rigorous jurisdictional standards like TREES or the principles in the California Tropical Forest Standard—can be an important tool for some jurisdictions, including some jurisdictions who are members of the Governors' Climate and Forests Task Force. But they are not the end goal and not all jurisdictions will have the capacity or interest in applying a voluntary carbon market approach. Instead, my view is that our goal should be to significantly increase financial support of all forms for good actions in tropical jurisdictions and in their communities to protect forests and reduce emissions. So, on this front, I agree with part of the perspective of those involved in the studies you mention – that broader sources of financing need to be made available to help protect tropical forests.

Q: What are you seeing lately in forest jurisdictions you work with, and what do you think the impact of these studies will be?

Gray: Very little financing – offsets or otherwise – has actually flowed into forest jurisdictions or communities in the tropics. In fact, annual domestic and international mitigation finance for halting and reversing deforestation by 2030 is estimated to stand at less than 1% of the necessary total. This is the reality, despite global pledges to provide more funding to governments, and a commitment to contribute $1.7 billion directly to Indigenous Peoples and local communities. This has resulted in a situation in which it can be very hard to show real economic alternatives to the current drivers of deforestation. So, while technical questions about additionality and permanence and "leakage" that are raised in the studies you mention may have an important place in some contexts (e.g., regulated carbon markets most specifically), it seems to me that we need to be approaching the question of tropical deforestation in the same broad manner as we do for investments in the clean energy and transportation sectors (some of which, by the way, are eligible for offsets in the voluntary market). Namely, let's leverage all of our financial tools together to tackle the tropical deforestation crisis.

If we instead primarily focus on investments in industrial technologies or in removal efforts, which some in the offsets space seem to be advocating for, then we are truly missing the forest for the trees. We must find ways to tackle all emission sources and avoid further losses of tropical forests and the carbon they sequester. This has been a consistent call to action from GCF Task Force member jurisdictions, many of whom have developed decarbonization and forest protection strategies that are really worth discussing and partnering on directly with them.

Q: Are there specific elements of the standards you mentioned, like TREES or the principles in the California Tropical Forest Standard, that you think have been overlooked in the research papers and recent reporting?

Gray: Yes. Both of these standards start from the premise that scale is important to reducing various types of risk that exist in the offset space. This is because they focus on jurisdictional action – that means that instead of looking at a smaller offset project, like those assessed in the Science article, you would be looking at reductions achieved at the scale of a state, province, or country.

The advantages to this type of jurisdiction-scale approach include ensuring government design, implementation, and enforcement of program requirements, which helps to better ensure permanence of reductions as the government would need to enact and enforce laws and policies to implement its program for the long-run. Assessing progress over a larger area also reduces the risk of leakage between or from smaller projects. Leakage is essentially the risk that if you halt an activity (e.g., timber harvesting) in one location, demand for timber will push the activity into another location nearby. These jurisdictional standards require an assessment of leakage risk and a demonstration that the jurisdiction's program reduces the risk of leakage by directly addressing those drivers of deforestation that cause leakage.

Each of these standards also includes requirements that implementing governments follow certain social and environmental safeguards, which means that the program cannot proceed without ensuring protections, partnership, and participation by Indigenous peoples and local communities in the design and benefits of the program. This includes following the requirement to obtain free, prior, and informed consent. Both TREES and the California Tropical Forest Standard include these safeguards, although California's standard incorporated a set of Guiding Principles that were developed by Indigenous organizations and endorsed by all members of the GCF Task Force.

It is important to note that there are projects that also follow similar safeguards, and these can provide important benefits – including direct financing – to communities. They are just done at a smaller scale than a jurisdictional approach. And jurisdictional programs can be designed to incorporate projects within their overall footprint, through something called "nested" accounting.

There have not yet been many examples of credits issued to jurisdiction-scale programs, although several GCF Task Force jurisdictions are actively pursuing crediting under the TREES standard. While the California Air Resources Board adopted the California Tropical

Forest Standard in 2019, it has not yet approved any jurisdictional offset credits for us in California's Cap-and-Trade Program.

Q: Can you say more about how some jurisdictional members of the GCF Task Force currently engage with offsets and what they see as the opportunity for their regions and their citizens?

Gray: As I stated previously, offset credits represent an important type of financing tool – if you can demonstrate you have achieved emissions reductions against what would have otherwise happened, there is a market to reward you for that action. Funds from the sale of offsets can help governments with their ongoing land use management efforts, from conservation programs to protected area management. They can also help support community initiatives and more sustainable enterprises. Each GCF Task Force member may have different goals and different objectives with their communities – but financing through offsets can be an important tool for them to further protect their forests while providing more sustainable economic alternatives to their people.

Q: It sounds like you're saying that rather than declare all carbon offset schemes "unfixable" that there are ways to improve some of the more rigorous ones. Say more about why and what would some fixes be?

Gray:I don't agree that offset schemes are unfixable; and I wouldn't even say that they are necessarily broken. However, they are currently insufficient in and of themselves to address the urgent need for large-scale funding to protect our ecosystems at scale.

I believe it is important to reflect on a number of issues when assessing these types of reports. First, existing offsets programs – both voluntary and compliance – have been developed over many years with a great deal of expert review and public process, undergone (and continue to undergo) periodic updates based on new science and data, and are designed to incentivize real emissions reductions. Some of the critiques based on updated data and science are important to consider and the offset standards developers appear to be taking these into account and updating their standards, much as they have always done. So continuous improvements can certainly be made. Second, there is competition amongst the various types of offsets and offset developers – for instance, technological removal through direct air capture versus reductions from improving the management of forests. This competition can bleed over into how (and possibly why) these types of studies are connected and reported. Third, and more importantly, offsets should be viewed as one tool, not as the end goal. The end goal is to help develop new low emissions economies – or "new forests economies" in GCF Task Force parlance. The end goal is to

create a world where the economic incentives align to protect standing forests, promote sustainable livelihoods, and drastically reduce GHG emissions. We need to look at protections for forests and other lands through a broader lens and mobilize multiple sources of funding (including from carbon markets) to tackle the substantial GHGs coming from our forests and make this new forest economy a reality. Otherwise, these emissions will just keep on occurring and the resulting damage to ecosystems, biodiversity, people, and the planet will continue to worsen.

Q: Putting aside whether voluntary carbon offsets should prosper or decline, what do jurisdictions need from developed countries, corporations, or financial institutions going forward?

Gray: From my experience, jurisdictions and communities are seeking to be able to tap into a diverse array of opportunities to support their efforts to protect their forests, alleviate poverty, and develop long-term, sustainable economies for their people. They are interested in exploring carbon market opportunities if they can work within their specific contexts and for their people, just as they are interested in exploring other types of financing tools. In fact, some jurisdictions and communities have spent years developing laws, actions, and results to be able to meet carbon market standards; and public and private sector finance through voluntary offsets programs can be a really important part of their jurisdictional actions. We – again, the collective we – must be ready to listen to and work with front-line jurisdictions and communities to help them innovate and implement policies and programs to reduce deforestation by mobilizing significant, flexible, and transparent financial support to undertake the transformational actions they are seeking to implement in their jurisdictions.