

## Ways & Means S8E1: Paying for a Cleaner Planet

**Simran Sethi:** From the Sanford School of Public Policy at Duke University, this is Ways & Means. I'm Simran Sethi.

**Simón Mejía:** [natural sound of forest.] To walk in the forest is like meditating. You go into a special trance and the sounds are a key part of the process. Here in the Colombian pacific forests, you can understand the greatness of these places, and the reason we have to keep them standing, just as they are....

**Simran Sethi:** There's this really wonderful documentary film out, called Sonic Forest. It features the Colombian musician Simon Mejia.

**Simón Mejía:** My name is Simon Mejia, and I am part of the band Bomba Esteria from Columbia...

**Simran Sethi:** Simon accepted an invitation to travel to a super remote area in Colombia, in the Amazon.

**Simón Mejía:** I'm humbled by the chance to connect with this sonic world, and to create music with it as part of the effort to protect it.

**Simran Sethi:** The region that Simon visited is probably what you imagined when you think of the Amazon. Seen from above, it's a blanket of trees, carpeting the world as far as the eye can see. And from the ground, it's dense and wet, filled with 3 million species of animals, birds, and plants. You hear the sound of a thriving forest. But there are other sounds happening in the forest, too.

Development sounds

Commented [AG1]: should I include the sound effects?

**Simran Sethi:** Much is happening in the forest that isn't beautiful. It's harmful. For example, in Guaviare— a place in the heart of the Amazon in Colombia.

**Lina Moros:** Ok, so, Guaviare is called like the entrance to the Amazon. So this is like the most amazing place, or one of the most amazing place, I've been to. It's a very pristine tropical forest but also is a tropical forest that is dying.

**Simran Sethi:** It's dying, she says. Lina Moros is a professor at the University of Los Andes in Bogota, Colombia. She conducts research in Guaviare. The Amazon rainforest, she explains, has been called "the lungs of the planet."

**BBC Reporter:** The Amazon. The green heart of South America.

**Reporter 2:** It's called the lungs of the world

**Reporter 3:** They're known as the planet's lungs.

**BBC Reporter:** These verdant riches hold the key to humanity itself.

**Simran Sethi:** Its dense jungles play a key role in absorbing the Earth's greenhouse gases. Yet the rainforest is also disappearing at an alarming rate. It's lost forest 5 times the size of New York City this year alone. The result of development, logging, mining, and fires among other reasons. During the dry season, Lina drives around the region in a four by four and almost anywhere she goes, she sees both beauty and evidence of devastation – land burned by fires. And this other thing.

**Lina Moros:** I don't know. How can you say that? Like grab them -- grab this land.

**Simran Sethi:** Grabbing the land. Cattle farmers will either buy land for cheap from local people, or come in and squat on land that they don't own. Then they'll clear it, burn it, and prep the land for cattle farming. Lina says to see it is unbelievable – swaths of burned land right next to beautiful, healthy forest.

**Lina Moros:** You see on one side of the road, like this pristine environment, full of life, full of biodiversity, but just next to it, you see burning forests. Pure devastation.

**Simran Sethi:** On one side of the road, ash and cinders. But on the other side – a living, breathing forest teeming with life. Cattle ranching is responsible for 80 percent of current Amazonian deforestation. And the reason why?

**Lina Moros:** It is way more cheaper for land grabbers to burn down forests than to buy lands that have a location for crops.

**Simran Sethi:** Global and federal policies to stop this destruction are sorely needed, but for now, there isn't much in place to hold companies to account. What can be done, however are smaller, more immediate interventions: paying small-scale farmers to keep the forest intact. These financial incentives are known as “payment for ecosystem services”, and they can play a role in not only saving the Amazon but mitigating climate change.

(Music)

**Simran Sethi:** Today on Ways & Means, our new series: Climate Solutions. Throughout this season, we'll be sharing a variety of ideas that can help in the fight against the climate crisis. In this episode, paying for preservation, we'll head to China and Columbia to explore how economics can help combat deforestation, and learn why forest conservation is so critical for the sustenance of people and the planet.

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**Simran Sethi:** Colombia is home to some of South America's most precious ecosystems – a country that is rich in biodiversity but impoverished by a long civil war, human rights abuses, corruption and exploitation by foreign powers. It's estimated that about half of the people who live in rural areas in Colombia live in poverty, and the Amazon region of Guaviare is one of those areas. For small-scale farmers who have difficulty meeting basic needs for food, shelter, and medicine, the opportunity to earn money by selling their land to so-called land grabbers or cutting down the forest to have more space for cattle or crops, that's hard to resist. Lina Moros conducts research in Guaviare along with Duke University professor Alex Pfaff and others. They're studying the effects of paying these small farmers to not sell their land. The payments are modest by US standards. They're about \$120 a month, and they're given to farmers in exchange for not selling the land or cutting down trees. A small investment that offers an outsized return: forest protection. Lina has worked with rural landholders in Colombia over the past 5 years. She and her research partners are working with 200 farmers in the region who received the payments, such as this man.

**Farmer:** Buenas tardes, mi nombre... ..

**Simran Sethi:** In her fieldwork, Lina meets with farmers, learns about their financial challenges, and tries to understand what it would take to enable them to preserve the forest. What she learned is the survival of the forest is linked to the survival of the people who depend on it.

**Farmer:** Es una finca de aproximadamente 40 hectareas....

**Farmer Translation:** My farm is approximately 40 hectares. 22 hectares, are protected virgin forest. It has never been touched by timber logging.

**Simran Sethi:** Lina recalls asking one farmer to react to a statement on her survey ...

**Lina Moros:** He said, “Mmm, Well. Let me think about it, a minute.” Because I think that behind the duty of taking care of forests, there also should be an incentive. Because people do not have an alternative source of income. So we are asking people that are living in the forest to take care of the forests, but we are not giving anything back to them.

**Simran Sethi:** “Behind the duty of taking care of forests, there also should be an incentive.” Look - forests are a source of food, fuel, fiber, and medicine, and they hold cultural meaning for people that exists far beyond the value of a resource. But every acre of natural forest that isn’t being farmed or logged is an acre that isn’t earning money. And under a capitalistic system, preserving the forests – leaving them in their natural state — means economic sacrifice.

**Lina Moros:** I really like this quote because it is not like it's they're opposites. You know? It's not like a you should take care of the forest out of an intrinsic motivation or out of like a virtue, you know? But when you are talking about people who are living in very precarious conditions, they also need an income.

**Simran Sethi:** These payments for what are known as “ecosystem services” are payments for preserving the natural wealth that ecosystems like forests hold. For instance, forests are tremendously valuable for capturing carbon from the air. The smallholder farmers are offered an income for NOT cutting down trees and keeping that intrinsic value intact. It’s a way to preserve the forest and ensure people who live there don’t have to choose income made from clear-cutting, or burning the forest, or from selling their land. Lina’s research is in its early stages but looks promising.

**Lina Moros:** These payments work for vulnerable people that cannot get an alternative income because there are not many other opportunities. So these payments really make a significant change in their lives.

**Simran Sethi:** Lina says it really depends on how the program is set up, and whether the payment amount is appropriate, especially when we consider the risk of deforestation in the area. And that’s not all. Lina’s research suggests that the impacts of conservation payments might be long lasting. She’s working on another project that involves a simulation ...

**Lina Moros:** And then in this experimental world, we introduce a payment. And then in the experimental world, we remove the payment. And what we wanted to understand in this study was what happens when payments are removed.

**Simran Sethi:** There is a theory that posits that when you offer a reward – like paying someone to do something – that a person can lose their own internal motivation to do that thing. The desired behavior, the theory holds, is crowded out by the reward. So, in this case – according to the theory -- paying a person to conserve the forest would cause said person to lose their intrinsic desire to conserve ... that they'd really only do it for the money, and when the payments stopped, the person might be even less motivated to conserve the land than they were in the first place.

**Lina Moros:** So, they were like these fears that when you pay people to protect forests and then you remove the payment - the payment would crowd out previous motivations to protect the forests. That's why some conservationists and politicians have been hesitant to start payments. They worry that funds will run out, and when they do, they'll face even worse problems. But Lina says her research shows the opposite: that when payments stop, people still want to conserve.

**Lina Moros:** So this has policy implications in terms that our key message is do not be afraid of paying people to protect forests. Because once the payment is removed, nothing worse is going to happen.

**Alex Pfaff:** have payments changed the world environmentally? Absolutely.

**Simran Sethi:** Meet Alex Pfaff, a Duke professor who was a part of the research that Lina is conducting.

**Alex Pfaff:** I'm an environmental economist here, a professor in the Sanford School for a little over a decade now. For me, I am most passionate about finding ways to, you know, help relatively poor farmers, landholders on forested frontiers, improve their lives while also improving the environment.

**Simran Sethi:** Alex has studied all kinds of payments for environmental behaviors. He says to tackle a problem as far-reaching as climate change, we need to problem-solve on multiple fronts. First and foremost, that means system change. When it comes to cattle grazing that causes deforestation, as one example, we have to rethink our consumption and the ways in which large-scale agri-businesses grow and raise our food. Global demand for beef is unsustainable and contributing to deforestation that The Washington Post described, as quote, "bringing the Amazon closer to what scientists warn will be its death, when the loss of tree cover finally pushes it past the point of no return and the world loses its greatest shield against rising temperatures." That is what's at stake. We don't have any time to lose. And the people on the frontlines of this loss are providing a service to the world by not cutting down trees. A service that, Alex says, should be compensated for it. The United States is one of the top greenhouse gas emitters and consumers of beef in the world. We play a direct role in what's happening in the Amazon, and we can also have an impact by recognizing the true cost of our actions. If we want to preserve the Amazon, we need to recognize the economic realities that local people face, and make forest conservation a viable option.

**Alex Pfaff:** I'm convinced that if we are going to get to a sustainable planet involving, you know, people who are thriving and a planet which is thriving, we need to work really hard to figure out how to make it a winner for relatively poor local folks to do things that are conserving

**Simran Sethi:** These efforts, he says, aren't just limited to the Amazon.

**Alex Pfaff:** There's a lovely paper in Uganda of a randomized control trial where they found a place where there was pretty high deforestation. And critically, pretty high deforestation without a great deal of profit being made. That's perfect. If you're not making that much money, but you're knocking over a

lot of trees, then for a reasonable amount of money, we could give you more than you would have made from your other activity. You'll say, "Great, I'll take this money. I won't do my other activity and a bunch of trees get saved."

**Wumeng He:** my name's Wumeng He, Wumeng He [pronounces differently] in Chinese. I'm now a faculty member at Wuhan University in Wuhan, China.

**Simran Sethi:** Conservation incentives are being used in China, as well. Wumeng He received his PhD in environmental policy from Duke. He studies a program that pays farmers to turn farmland into forest. China's Sloping Land Conversion Program is one of the largest such programs in the world.

**Wumeng He:** So in order to provide incentive for the farmers to convert the farmlands back to forest, the government offers payments to local farmers. So farmers take the payments, in cash or in crops from the government, and in return they convert their sloped farmlands, back to forest.

**Simran Sethi:** The program is important because 65 percent of the country's land area is mountains and hills. And a lot of China's farmers live on lands that slope up or down. So the idea was to pay them not to farm, but to plant trees instead, because it is so good for climate mitigation. Wumeng visited one of the sites of the program 20 years after it began.

**Wumeng He:** I was able to already see the trees growing out of this program, like in one place they grow bamboos and those bamboos would already to be 10 meters high, it already became a forest.

**Simran Sethi:** Wumeng says that in the program's first decade, from 1999 to around 2008, it created forest that would have covered the entire state of Arizona. Nearly one-third of that forest was created through incentive payments to farmers. And this increase in forest cover is essential for battling climate change. Because trees release oxygen. And they help soak up carbon in the atmosphere – the carbon that traps heat and contributes to a warming planet. The good news is, a second round of the program began in 2016. Duke professor Alex Pfaff says, "while it's clear incentives can play a role in the solution to climate change, it's important to go slow and ensure the incentives aren't just paying people for something they're already doing. In the worst case scenario..."

**Alex Pfaff:** ...people rush to sign up for this program, and they immediately volunteer all the trees they weren't going to cut anyway. That's what I would do. If I had a bunch of trees that I was going to cut because they're on a steep slope, and I can't farm anyway. And the government shows up and says, "Hey, I'll pay you for every tree you keep standing." I'd say, "Super, how about these trees?" And they happily pay me. They say, "Oh, look, the trees are standing," and I kind of giggle and say, "Thanks for paying me for doing what I was going to do anyway."

That's the big challenge is finding a space where you can figure out that you pay not just for what would have happened anyway, but you actually paid for change and improvement.

**Alex Pfaff:** With the right design, Alex says, conservation incentives can be a powerful tool in the fight against climate change. The Colombian farmers that we connected with agree. These next two voices you'll hear are men who're receiving payments for not cutting down the forests on their lands. And they say the payment program has been a lifesaver.

**Farmer:** por el momento he recibido dos pagos a la fecha ....

**Translation:** So far, we have received two payments, and these payments have changed our lives in the countryside. We have invested this money in my parents' farm.

**Farmer:** ehh si el pago hace una gran diferencia porque yo me veia en unas situaciones economicas dificiles entonces....

**Translation:** The payment makes such a big difference because sometimes I would be in a difficult financial position, and with this money I'm able to buy uniforms for my children, shoes, well, anything they need and give them a better quality of life. We can buy the things that we couldn't afford before because we didn't have this income.

**Simran Sethi:** And who should foot the bill? Maybe it's the wealthy nations that have most contributed to the problem.

**Alex Pfaff:** If we can sort it out so that the richer countries who have had more development, who are going to have more development also try to take responsibility for the costs of that development, the potential is huge for payments. Will people get together and be willing to pay those costs and organize them? I think at the moment we're an open question, but I hope so because I think the potential is there.

**Simran Sethi:** So much can change if we start to see how interconnected we all are – not only to each other, but to the world around us. I'll leave you with this inspiring message from scientist Robin Wall Kimmerer's book "Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants." "In English," she writes, "we speak of the land as natural resources or ecosystem services as if the lives of other beings were our property. Imagine that while our neighbors were holding a giveaway, someone broke into their home to take whatever he wanted. We would be outraged at the moral trespass. So, it should be for the earth. The earth gives away for free the power of wind and sun and water, but instead we break open the earth to take fossil fuels. Had we taken only that which is given to us, and had we reciprocated the gift, we would not have to fear our own atmosphere today." She goes on to write, "The moral covenant of reciprocity calls us to honor our responsibilities for all we have been given, for all that we have taken."

(Music)

**Simran Sethi:** You're listening to "Let Me Breathe" – it's the result of documentarian Simón Mejía's trip to Colombia. We spoke of his film at the beginning of the episode. You can find out more about his work at [WaysandMeansShow-dot-org](http://WaysandMeansShow-dot-org).

(Music)

**Simran Sethi:** Ways & Means is produced by Carol Jackson, Alison Jones, and Kirsten Khire with Jack Maples. Johnny Vince Evans is our engineer. And I am your host, Simran Sethi. Thanks for listening.

(Music)

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