



An untapped opportunity for reforestation

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How does coffee connect to forests? As one of the world's largest commodities, coffee grows on over 11 million hectares of land across the tropics [\[1\]](#). Unfortunately, because of the rise in consumer demand for coffee and the impacts of climate change on farm productivity, tropical forests are increasingly threatened of being cleared for coffee farms [\[2\]](#).

However, trees and coffee do not have to be mutually exclusive. In fact, reforesting alongside and around coffee production benefits not only the climate, but farmers as well. This high-potential natural climate solution is starting to become recognized around the world. Companies are exploring how to meet their climate commitments by investing in reforestation in coffee supply chains. But in order to effectively address the scale of the challenges at hand, we need to move much quicker.

The coffee industry's climate and livelihoods problem The largest driver of deforestation is agriculture. Farmers often clear new land in pursuit of better agricultural economic opportunities, such as cattle raising or crop farming (soy, cacao, coffee). This is further compounded by climate change. Cash crops like coffee require specific temperatures to grow successfully, and as temperatures rise, farmers are led to work at higher altitudes where it is cooler. Those higher altitudes often have pre-existing tropical forests.

There is also a human side to this story. Coffee farmers are locked in a cycle of poverty. Even those able to sell internationally struggle to cover their costs, as small production volumes mean they rely on intermediaries who drive commodity prices down to a minimum. As illustrated by [Fairtrade](#), 80% of the world's 25 million smallholder coffee farmers earn less than \$2 a day, leaving farmers with insecure and vulnerable livelihoods. These livelihoods are further strained by the effects of climate change on their production, and more recently, the impact COVID-19 has had in reducing available labour and investment for coffee farmers [\[3\]](#).

A forest-friendly solution

Coffee brands and corporate actors who want to reduce their climate footprints could represent a solution. Many are investing in natural climate solutions like reforestation and forest conservation to meet carbon neutrality commitments. For example, recently partners in the Sustainable Coffee Challenge – a global coalition led by Conservation International with over 160 actors from across the coffee sector – pledged to secure at least 1.5 gigatonnes of CO₂ by 2050 [\[4\]](#).

One of the largest opportunities for the sector to meet these targets is to drive investment into reforestation and forest conservation within industry supply chains with smallholder farmers in the tropics. Many producers and communities they source from could grow trees on and around their farms. Coffee can be grown and often benefits from being grown with or alongside trees [\[5\]](#). Growing shade trees around coffee allows coffee to ripen more slowly [\[6\]](#), intensifying flavours and offering a higher premium to farmers. Not to mention, they restore ecosystems in degraded landscapes and help farmers adapt to climate change. As extreme weather events become more frequent, forests act as both a wind buffer and water regulator, mitigating the damage that weather events might incur to farms.

If the coffee sector adopts more forest-friendly farming practices it could remove up to 148 million

tons of carbon from the earth's atmosphere [7] while providing innumerable additional environmental and social benefits. However, farmers do not have the financial ability or market incentive to do so. At the same time, companies are not able to invest in climate impacts associated to these farmers due to a lack of information that makes such investment risky. The result is that coffee brands risk missing their climate targets, while smallholder farmers are losing out on an opportunity to unlock a new revenue source from the climate impacts that they create.

How to drive reforestation with coffee farmers

There are two approaches that companies popularly employ to reforest with coffee farmers: offsetting and insetting. When a company makes a net zero climate commitment, they will first determine what operational emissions they can reduce, and then invest in carbon removal practices to compensate for what can't be reduced. Those carbon removals can be outside the company's supply chain (offsetting), or inside a company's supply chain (insetting). Taking Root works with both approaches.

For example, farmers in Nicaragua are growing trees alongside coffee practices as part of Taking Root's CommuniTree project. The impacts generated by farmers then provide carbon offsets to companies. Launched in 2016, CommuniTree's coffee agroforestry technical specification was designed for farmers to grow rust-resistant coffee varieties alongside fruit and shade canopy trees. Now 5 years later, over 120,000 trees have been planted (3.2 million if coffee trees are included), reforesting close to 800 hectares of land and sequestering over 160,000 tonnes of CO₂.

More recently, in May, Taking Root launched an insetting pilot project in partnership with leading Swedish coffee brand Arvid Nordquist. Using Taking Root's technology platform, FARM-TRACE, Taking Root is working with Arvid Nordquist, ECOM and the Rainforest Alliance to deliver verified emissions reductions and removals at the farm level in Arvid Nordquist's coffee supply chain in Nicaragua.

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