THE HILL

Canadian firm seeks to make tree planting programs more accountable

BY **SAUL ELBEIN** - 09/30/21 05:44 PM EDT

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A Canadian apparel company that focuses on sustainability is expanding its efforts by trying to solve a key problem at the heart of tree-planting programs worldwide: accountability.

In launching a blockchain-based forestry management tool, the clothing maker known as tentree hopes to release a flood of investment cash by helping companies ensure that the trees they are sponsoring have actually been planted; that they are still growing years after the fact; and that they haven't been sold to someone else.

One of the biggest challenges in global tree planting efforts – along with carbon offsetting programs more broadly – has been establishing a standardized certification process to determine which projects are reliable. The major hurdle now facing tentree is getting sufficient buy-in from companies in the sustainability sector.

But with the rise in interest in both carbon offsets and environment, social and governance investment, tentree sees it as a potentially lucrative bet.

Tentree guarantees ten trees planted for every item purchased – with over 65 million trees planted so far. To track those trees across a fragmented landscape of projects around the world, tentree created an accounting system called veritree – which it rolled out this week in a public version that CEO and co-founder Derrick Emsley hopes will form "an operating system for the restoration economy."

Veritree works by providing a phone platform that helps tree planters in areas with poor internet connectivity track trees that a sponsor has paid to plant, by means of a collection tool that creates a matching digital tree on the digital map.

This "token," Emsley said, lets trees submitted from the ground "become digital inventory items, like any other," allowing sponsors to see the impact their money is having.

"They can see when the trees planted; their progress against their orders; how much carbon will these trees sequester over their lifetimes," Emsley said in an interview with The Hill.

After years of spending hundreds of thousands of dollars annually in flying auditors to look over project sites they had sponsored in countries like Peru, Indonesia and Madagascar, tentree developed the veritree platform so it could get reliable data directly from the organizations doing the planting.

They did this, he said, because they were concerned about "egg on their face" if they backed projects that turned out to be exaggerated in terms of delivery.

Emsley says he suspects that such concerns have scared away other investments needed for the massive scaling up of natural climate solutions – like reforestation initiatives – that could account for over a third of needed solutions to climate change, according to a 2017 study in the Proceedings of the National Academy of Sciences.

Such risks haunt the whole industry, Emsley argues, looming over ambitious proposals like the Trillion Tree Campaign.

"The worst thing could happen is, OK, the trillionth tree is planted, we celebrate -- and then we find out years later we only planted a 100 million trees."

After working on tree planting programs, particularly with carbon-dense, hardy poplar in the Saskatchewan prairie, Emsley co-founded tentree, which uses proceeds from clothing sales for tree planting programs in places like Senegal, where agroforestry projects helped former peanut farmers shift to new agriculture that netted them 5 to 6 times as much money, he said.

Other projects included restoring mangrove estuaries and watching fishing communities recover with the return of the habitat of the fish they hunted, or planting trees on denuded Haitian hillsides to prevent landslides.

"The hardest part was monitoring and verifying the work and claims we were making," Emsley said.

Unlike the solar or wind turbine industries, tree planting has proven harder to measure outcomes, Emsley said.

"So we were spending millions of dollars a year planting trees, and then hundreds of thousands traveling there, auditing them, making sure those trees were in the ground having an impact," with digital tools far more rudimentary than those used in most businesses' supply or inventory management.

"We were lucky if a restoration group could provide more than a GPS coordinates, a Google Photo album, and an invoice," Emsley said. "Across all these different organizations we partnered with -- none had a tool that let us see the progress of the planting and the outcomes of the work."

Veritree grew out of a company initiative in 2018 that ended up solving "some of these major challenges that restoration companies face," Emsley said.

The program included collecting data on specific trees that were being planted in environments with poor internet connections and bandwidth and low literacy levels; getting that data back to the sponsor in a usable format; and monitoring that data so a company could have confidence their "portfolio" of planted trees was still standing.

The collection tool, Emsley said, "grabs from their photos some of the core metadata we need to collect, like time, date and GPS." From that information, veritree can plant a corresponding digital tree on the digital map – which then gets synced back to the central database.

"It gives us a ledger, backup, history -- does this tree match any other records? Are there discrepancies between them?"

Another major component of the program involves Cardano, a form of blockchain currency similar to – but far less energy intensive than – Bitcoin or Ethereum.

Blockchain is a good match for the tree-planting market, Emsley argued, because it continuously tracks and synchronizes a record of transactions that provides "a transparent ledger to certify ownership," Emsley said.

In other words, blockchain has already solved for e-currencies like Bitcoin the problem that carbon offsets still struggle with how to "be sure they're not owned by multiple people," he said.

"Carbon offsets are technically supposed to be retired when they're bought," Emsley said, "but there are a lot of different ledgers" that don't always agree.

"There needs to be a consolidated ledger."

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Emsley said he thinks tree planting programs may soon be able to stand on their own, without the need of, say, an apparel company to back them.

"As a customer it's easy to understand the planting of a tree, and a lot harder to understand a ton of carbon getting removed from the air. So there's interest in connecting consumers with tree planting."

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