Equitable benefit sharing in reforestation:

Lessons from Taking Root to optimise value for smallholder farmers

April 2023
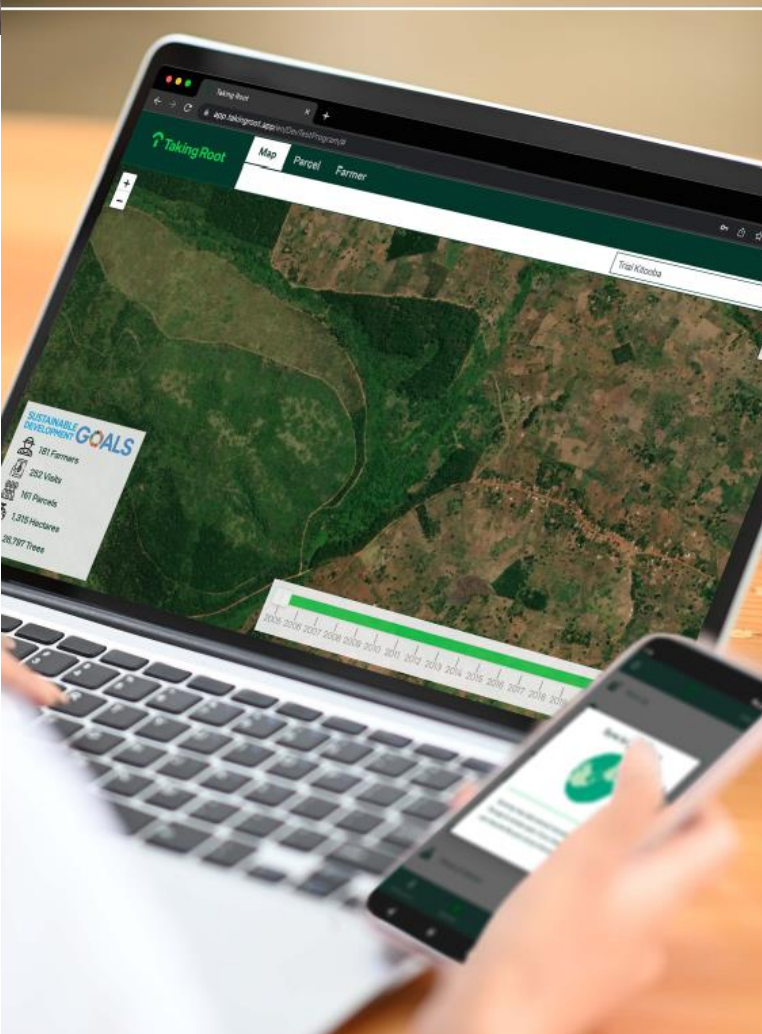
Context

About Taking Root

Taking Root's purpose is to accelerate the restoration of the world's forests. They enable smallholder farmers to grow trees and earn money from the carbon they remove from the atmosphere. Their technology and support make it simple for their reforestation partners to create transparent and robust forest carbon removals. From registering farmers and recruiting land, to monitoring trees grown and the carbon stored over time, they provide the tools at every step of the way to help their partners successfully manage and scale their reforestation projects. Recognised for its best practices by the UN, EU and World Economic Forum, Taking Root is connecting thousands of farmers to the carbon market, improving their livelihoods by restoring forests around the world.

After spending a decade building the largest reforestation initiative in Nicaragua, Taking Root is expanding their model to build new smallholder reforestation projects in other geographies. Notably, Taking Root is evaluating a project in the Dominican Republic. Working with a local project implementer, Taking Root has been piloting a new smallholder reforestation program focused on cacao farmers, looking at how they might incorporate agroforestry and forestry designs into their farms.

Taking Root's Technology Platform

Taking Root's platform helps project implementers build, manage, and scale reforestation programmes with smallholder farmers. The platform consists of a mobile and web application. Users log information through the mobile application including data on farmer profiles, tree measurements, activity logs, and parcel areas. This data is then aggregated into a web application dashboard that project administrators use to manage the program. Taking Root's platform integrates Taking Root's protocol which is a collection of methodological tools that detail

Taking Root's technology platform makes it simpler for reforestation partners to create transparent and robust forest carbon removals

steps to quantify smallholder reforestation impacts. For example, one tool describes how to map a parcel of land that will be reforested. This is crucial when quantifying the area restored and carbon being removed from the atmosphere, as it produces the area input value used to extrapolate the amount of carbon sequestered based on field and remote-sensing data. The mapping tool details how a field technician can walk the perimeter of a parcel, and how Taking Root's mobile application will automatically drop a waypoint every 2 seconds until a polygon can be traced. Taking Root's protocol provides a sound and detailed approach that is reflective of best practices in smallholder reforestation.

About Partnerships for Forests (P4F)

P4F is an eight-year programme that delivers grants and technical assistance to address the current market failures that continue to undermine the protection and restoration of forests. It does this by supporting forest partnerships (public–private–people partnerships), initiatives that support enabling conditions (at national and regional level) and demand-side measures (primarily from import countries).

A characteristic of P4F's approach is identifying and incubating models with the aim of supporting them to catalyse investments. By the end of 2022, P4F's support has catalysed £704m in private investment for forests and sustainable land use. Core to this approach is ensuring that P4F support does not substitute or replace supported organisation's core funding or subsidize activities that companies should undertake themselves. Additionally, models must clearly articulate how they will improve sustainable land use, address deforestation, protect biodiversity, or improve natural resource management in the tropical forest belt.

P4F support

P4F supported Taking Root to accelerate their work restoring forests with smallholder farmers. This support was applied for Taking Root to expand its forest restoration model to partners in new project geographies. Through the project, Taking Root enabled local project implementers to access sustainable sources of financing by selling the impacts created from planting and growing trees with smallholder farmers. This was achieved by investing in Taking Root's capacity to deliver its support services and technology platform to help implementing partners manage their forest restoration projects effectively and quantify the impacts from their activities so they could be sold to organisations seeking to make impact claims.

The funding provided by P4F has enabled the further integration of Taking Root's protocol into its technology platform as well as new enhanced training procedures to support its adoption with project implementers. These have been implemented and tested in new project regions to help implementers like Floresta Incorporada;

a) enhance the effectiveness of their forest restoration activities,

b) rigorously quantify the impacts they are creating

c) sell those impacts in a way which is attractive to organisations looking to make impact claims.

The collaboration between P4F and Taking Root has contributed to building a scalable model which Taking Root is now seeking to apply further to accelerate the restoration of the world's forests.

As the market for climate related claims such as trees planted and carbon removals expands, the project highlighted the importance of ensuring equitable financing when working with smallholder farmers. This knowledge product outlines some of the approaches and perspectives Taking Root applies to integrate the values of partnership and equity into forest restoration projects.

The importance of equity for successful benefit sharing in reforestation

As markets for climate related claims such as the carbon market explode in value, many are starting to wonder: who is benefitting? From 2020 to 2021 alone, the voluntary market quadrupled in value to $2 billion ⧉. Much of this value was created by local communities implementing climate solutions on the ground, but how much value returns to them? How much value should return to them? What does that value look like? These questions sit at the heart of benefit sharing discussions.

Benefit sharing is becoming a growing part of the carbon community's rhetoric. However, it often swings from being overcomplicated to oversimplified, both of which often result in equally ineffective outcomes. While Taking Root does not claim to have all the answers, they have collected thoughts and insights from years of experience working with smallholders in forest carbon. Hopefully, it can spur further discussions on how carbon forces us to think about livelihoods.

Let's align on what benefit sharing means

Broadly speaking, benefit sharing refers to how the value (i.e., benefit) created from the sale of carbon credits is distributed (i.e., sharing). Typically, it focuses on how value is distributed to communities—the ones implementing climate solutions on the ground. Depending on the carbon project, this could be any number of stakeholders: smallholder farmers growing trees, indigenous groups conserving forests, or community groups restoring grasslands. For the sake of this report, when referring to 'communities', we are referring to smallholder farmers growing trees.
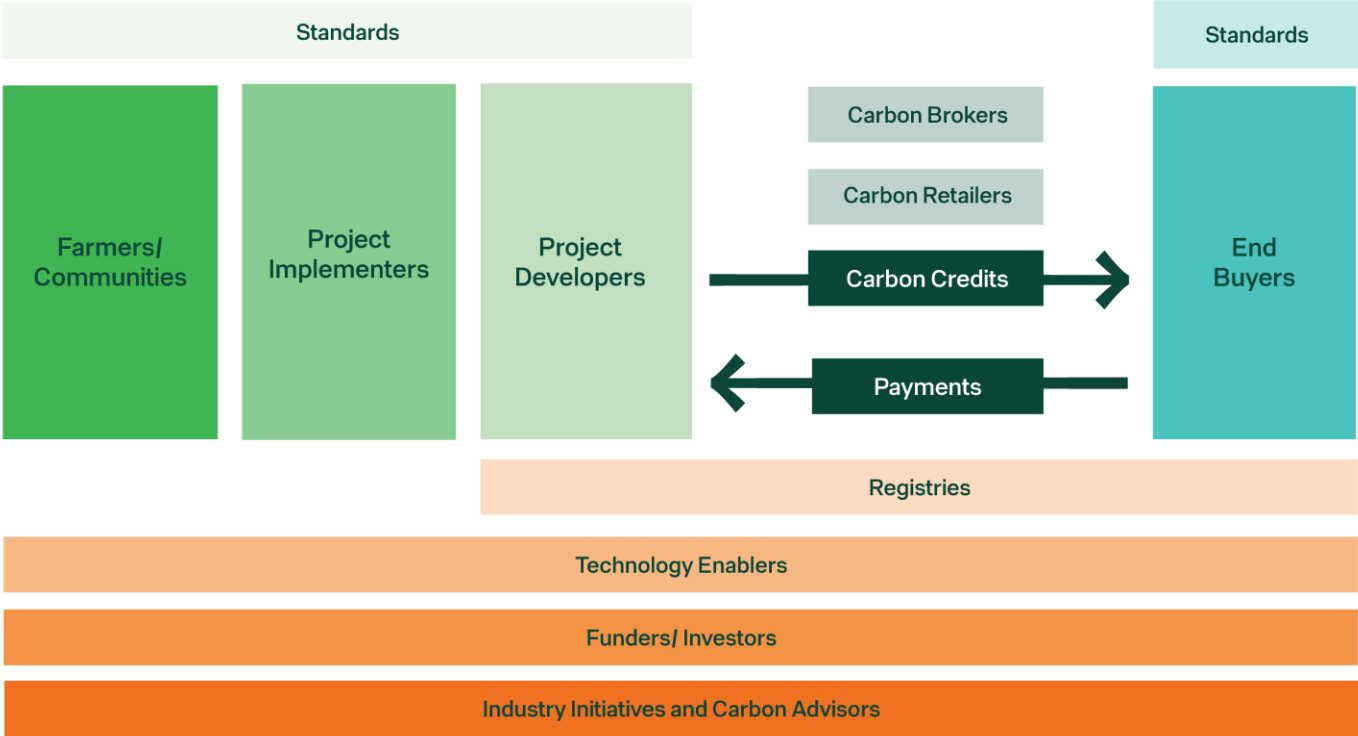
@ Taking Root

FIGURE 1. Stakeholder map of the Voluntary Carbon Market. As the market expanded, a flood of new actor types entered the market

Who exactly is sharing the benefits?

Carbon markets started as an exchange between two actors: corporates and project developers. As the market expanded, a flood of new actor types entered the market. This has made benefit sharing increasingly complex when it comes to ensuring value gets back to communities on the ground.

When a company purchases a carbon credit, the value from that sale can be shared between farmer, project implementer, project developer, project certifier, technology enabler, carbon retailer, carbon broker, investors, and speculators, to name a few. The specific mix of actors will differ depending on the type of carbon project and its needs.

Many have started to question if there are more actors than needed. This is a concern because if there is a surplus of actors, value is detracted from communities on the ground. However, there are reasons for so many having entered the market.

As the market has grown, so has its needs. Carbon standards emerged to certify that a carbon credit has real climate benefit. Carbon retailers alleviated sales burden from project developers so that developers can focus on creating impact. Investors are funding the capital-intensive process of creating new projects. The sophistication of the carbon market is both accelerating and safeguarding impact.

The challenge with the market evolving so quickly is that it is often hard to tell if with the addition of all these actors, equitable outcomes are being produced for communities. New market entrants may or may not have the knowledge about what those outcomes should be, have the tools to create those outcomes, or even value those outcomes at all.

For more than a decade, Taking Root has worked with almost every type of actor noted above. With that in mind, there are several lessons that Taking Root has learned to ensure that benefit sharing is conducted in an equitable way.

Key considerations for equitable benefit sharing

01 Ensure sufficient value to communities so that engaging in a carbon activity is worth it.

The most important consideration for any project is to ensure that it is worth it for a community to engage in a carbon activity. This is fundamental for any project to succeed. Take smallholder farmers in reforestation. If farmers can't improve their livelihood by growing trees, why would they choose to grow trees in the first place?

At a minimum, the price of carbon needs to cover these base costs. Not doing so not only creates risk for projects, but also creates inequitable outcomes for communities.

02 Ensure market premiums are shared with communities.

Once a baseline has been established for value needing to be shared with communities, then look at market premiums. Is the market offering more value than the established baseline? If yes, then ensure that communities are benefitting from those premiums.

There are a few ways to safeguard for this. The first is to ensure that a percentage of the sale of carbon credits always goes to communities. That way, if market prices of carbon increase, communities will benefit proportionately.

The second way is to limit additional resale transactions that don't benefit communities. This is of particular concern in the secondary market. When carbon credits are traded with multiple transactions, it is challenging to ensure that communities retain value with each transaction. Taking Root deals with this through upfront conversations with their buyers to ensure that they are values-aligned to best serve communities. Until proper mechanisms can be built that allow communities to benefit from each transaction, the secondary market should be approached with caution.

03 Quality comes with a cost.

More and more players are entering the market, each with their own value proposition. Carbon advisors and ratings agencies are making it easier for buyers to evaluate project quality. Technology enablers are making it easier for project developers to manage and monitor their projects. As more organisations look to play supporting roles in the market, we can categorize them into two broad types:

• Those who increase the ease and quality of project development (e.g., technology enablers, carbon retailers)
• Those who provide assurance to buyers of the quality for the credits they are purchasing (e.g., ratings agencies)

Actors in each one of these categories undoubtedly can provide value. They are entering the market as a response to the demand for better quality. But improving project quality means creating additional work for projects, which comes with a cost.
The demand for quality should not come at the expense of communities. With costs rising, prices cannot remain the same. As buyers increasingly expect projects to respond to quality demands through enhanced processes, reporting, and verification, they must be willing to pay for this added value. That way, they ensure that communities also benefit when additional service providers support the project.

04 There is no one-size-fits-all approach.

Projects are set up in a diverse number of ways. Some project developers work with a project implementer who works with communities. Other times, project developers also act as the project implementer, working directly with communities. Some project developers sell directly to end buyers, others work through retailers. Any of these setups can have value and make sense based on the project context. Besides different actor configurations, there also different project types to consider. Reforestation projects work differently from forest conservation projects. Improved forest management is different from agroforestry. A case-by-case approach is needed to evaluate equitable flows of value to communities. Trying to standardise benefit sharing across all projects will inevitably fail, as too much nuance exists to make this possible.

@Taking Root

Going forward – benefit sharing in the market

As the carbon market continues to develop, new challenges to benefit sharing will surely emerge. While some key considerations have been listed, it is by no means an exhaustive list. Ultimately, benefit sharing is something that requires ongoing discussion and deliberation.

What is clear is that actors must continually ask themselves: are the outcomes we create fair for those communities? If the market holds itself accountable to this question, then we can make important strides towards ensuring that communities on the ground benefit in a way that is truly equitable.

Understanding forms of value for communities

In the last section, the concept of equitable benefit sharing, or how the value from the sale of carbon credits is shared, was discussed. What form that value takes is an equally, if not more important discussion, as communities often define value differently and therefore the mechanisms through which value is shared may vary. In this section, we explore the types of values that can be shared with communities, and the three guiding principles market actors must follow when tailoring their approach.

Value can take many forms for communities

Market participants most often think of value as monetary payments. That is, when a share of carbon credit sales revenue is given directly as money to communities (e.g., smallholder farmers) who have implemented a climate solution (e.g., reforestation). This may be referred to as carbon payments, payments for ecosystem services, or cash payments.

But that's just one example of benefit sharing with communities. There are many others, including investment in job creation, improved farming practices, and climate resilience. With so many options available, buyers, project developers, and other market participants need to understand how to choose the right ways to deliver value.

@Taking Root

Three guiding principles for selecting forms of value with communities

1 Ask communities directly what is valuable.

There are several key considerations to keep in mind when it comes to benefit sharing with communities. First and foremost, communities must be at the forefront of defining what they consider to be valuable. Value needs to be meaningful and relevant to the needs and priorities of communities for them to want to grow trees. For example, in Taking Root's CommuniTree Program, some farmers were open to growing trees but didn't want that to be at the expense of their cattle rearing. Taking Root worked with those farmers to define a system where farmers could grow trees while leaving space for their cattle to roam. In that case, a low-density forest was designed to let farmers retain the value from their cattle. At the same time, they get additional value from the shade that trees provide for their livestock, as well as from the additional revenue received for growing trees.

2 Focus on reducing barriers to implementing climate solutions.

Another important consideration is to identify and address any barriers that communities may face in participating in climate solutions. Often, farmers would like to grow trees but they lack the funds needed to start a forest. In other instances, there is a lack of long-term incentives (e.g., no market for timber), that prevents a farmer from wanting to maintain a forest. By addressing these barriers, it becomes easier for communities to make land-use choices in favour of natural climate solutions.

3 Diversify value across the short, medium, and long term.

The last consideration is to ensure that communities can obtain value from growing trees in the short, medium, and long term. If value is weighted too heavily into short-term incentives, farmers may be less likely to continue maintaining their forests once those incentives stop. Conversely, if value is weighted too heavily into long-term incentives, there isn't enough initial payback to motivate farmers to get started. Diversification across time helps to balance this.

@Taking Root

The CommuniTree carbon program: a case study for benefit sharing

The CommuniTree Carbon Program is a smallholder reforestation program located in Nicaragua, run by Taking Root and local project implementer APRODEIN. The program started in 2007, becoming a certified Plan Vivo carbon project in 2011. Its model is focused on enabling small landholders to improve their livelihoods by growing trees.

Farmers conduct a series of activities to successfully grow a forest in CommuniTree (Figure 2). After signing a contract to enter the program, nurseries are established to grow seedlings. Once seedlings reach sufficient size and the rainy season arrives, these seedlings are planted on the farmer's land, usually with the help of their local community.

After planting, farmers ensure that their trees grow successfully. This includes weeding any shrubbery, as well as pruning and thinning trees. These activities reduce competition for light, water, and other nutrients to ensure that the forest grows successfully. When

trees reach maturity, farmers can selectively harvest them for the sale of timber, offering a sustainable, long-term source of income.

All the while, technicians from APRODEIN work with farmers to provide the education, training, and support needed to successfully grow their trees. This includes educating on the environmental benefits of forests, training for how to plant and grow trees effectively, and troubleshooting when tree targets are not being met.

Benefit sharing in CommuniTree

The principles laid out in the previous sections has helped to drive CommuniTree to become the largest reforestation initiative in Nicaragua, and one of the largest and most trusted smallholder carbon projects in the world. The central tenet of the program—enabling people to improve their livelihoods by growing trees—has become Taking Root's mission statement.

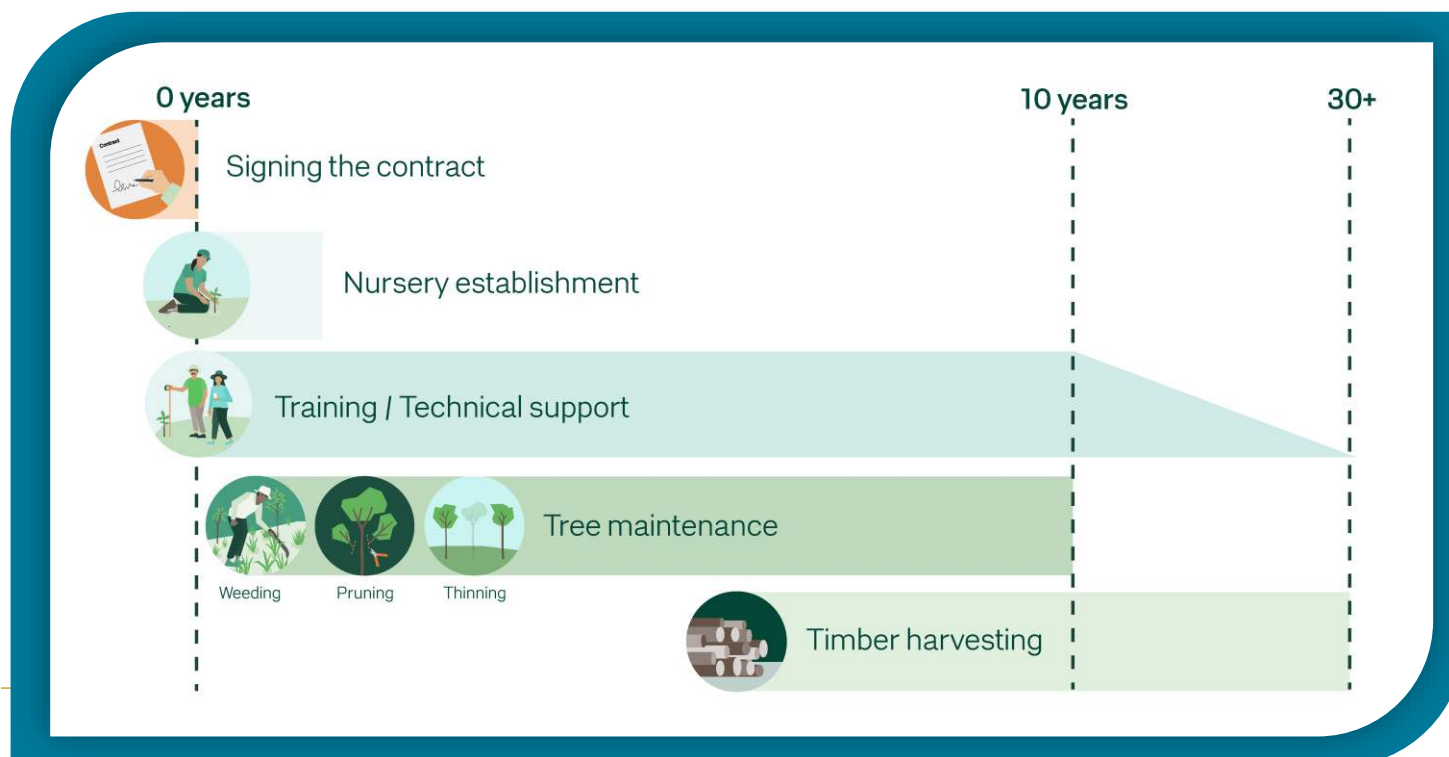FIGURE 2. A timeline of a farmer's typical reforestation activities

Figure 3 illustrates some of the ways that farmers in the CommuniTree Program can improve their livelihoods by growing trees. The following presents some of the thinking behind a few of the activities through a lens of benefit sharing.

Carbon payments: an easy benchmark

When Taking Root first registered CommuniTree as a Plan Vivo project, they had to ensure that 60% of the revenue that we received from the sale of carbon credits went back to farmers. Plan Vivo refers to this as Payments for Ecosystem Services (PES). While PES can be distributed through a variety of ways, CommuniTree was set up to distribute PES as cash payments to farmers over a 10-year time period.

When farmers were asked about their desires to grow trees, they often expressed that despite their dreams of having forests, they lacked the funds to be able to grow them. While it was known that forests could yield future incomes through various forest products, it was recognized that farmers needed short-term compensation to get started.

Farmers and technicians establish a mutually agreed payment schedule, and payments are delivered based on two types of triggers: completion of activities and achieving reforestation targets. Technicians will evaluate if activities such as weeding, pruning, etc. have been completed. Additionally, they will assess the trees to ensure that they are meeting their basal area targets. If both the activities and targets have been achieved, payment will be released. If not, technicians will work with farmers to troubleshoot how they can improve.

Taking Root uses carbon payments as a baseline for value in CommuniTree. Using rule of 60% of carbon credit revenue going to farmers, they always have an amount to directly allocate and trace to farmers. This keeps things simple while also ensuring those doing the work are receiving the majority of the benefits. It also means that as credit prices increase, communities benefit directly. In reality, time and resources beyond the 60% is invested to create other forms of value for farmers.

FIGURE 3. Value opportunities for farmers
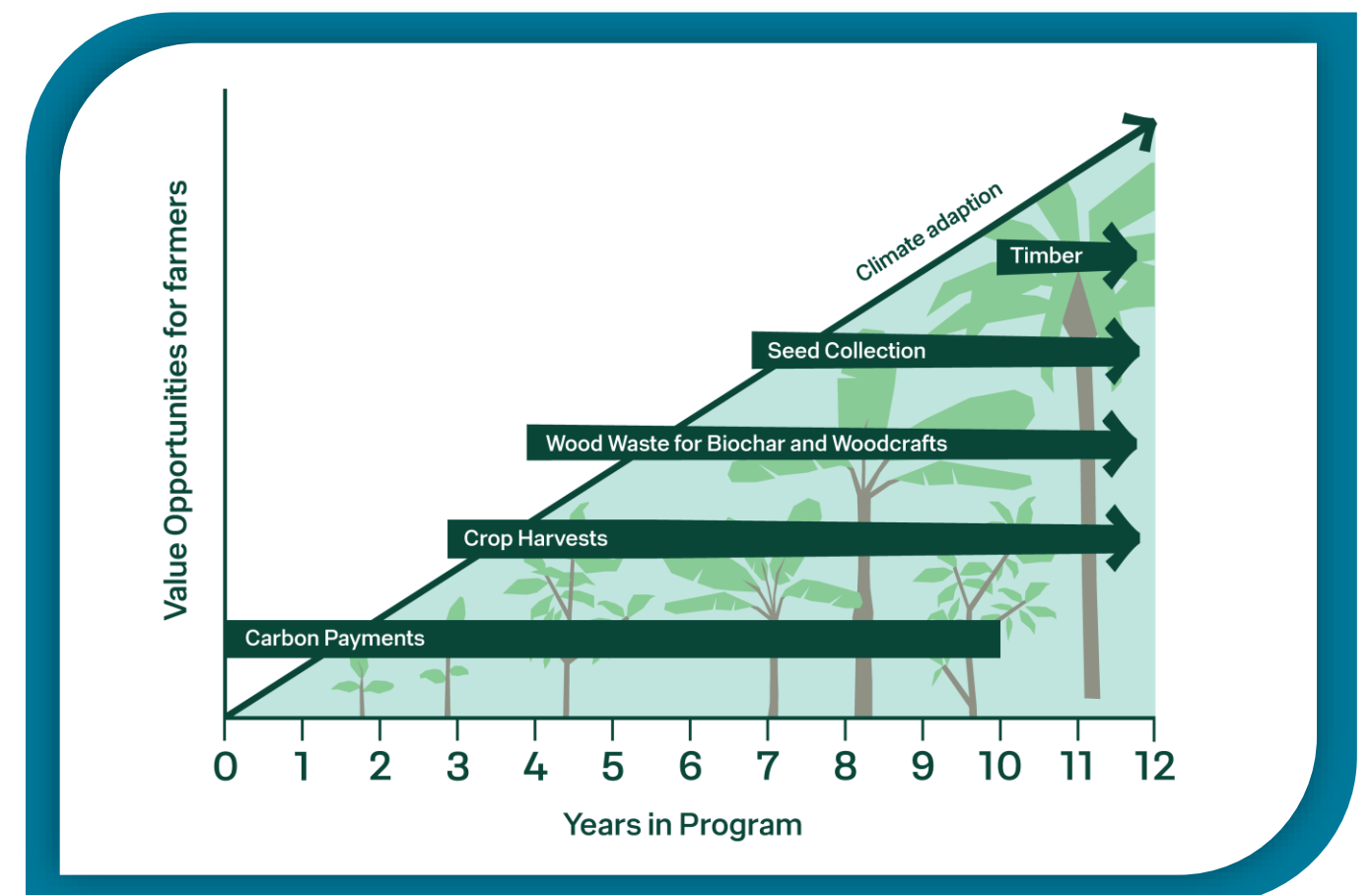
@Taking Root

This biochar reactor was constructed to create additional sources of income for farmers participating in the CommuniTree Carbon Program.

Biochar: value for farmers new and old

Biochar is a form of charcoal that is produced by heating organic matter, such as wood or agricultural waste, in the absence of oxygen. When biochar is added to soil, it can improve crop yields and tree health, while also storing carbon in the soil. When farmers prune and thin their trees, they create wood waste that could be purchased and used to create biochar. This would provide farmers with a source of income in their forests' early years, which is particularly important as the trees are too young to provide other types of value.

For APRODEIN to purchase biochar, the facilities, equipment, and staff needed to produce it must be in place. In the CommuniTree Program, this was addressed by investing in the construction of a biochar reactor, which allows APRODEIN to purchase wood waste from farmers to produce biochar. By investing in the infrastructure needed to produce biochar, the CommuniTree Program is able to create additional income sources for farmers while also improving the tree-growing conditions of new farmers in the program.

Timber: sustainable harvests for long-term benefits

With forests starting to mature from some of the early farmers of the CommuniTree Program, trees will soon be ready to be selectively harvested*. This can provide long-term, sustainable revenues for farmers. The challenge is that in Nicaragua, there is a limited market to process or sell timber. On top of that, there are regulatory hurdles to overcome.

Note that selectively harvested trees, when done sustainably, allows for the carbon stock to remain stable. This is because after you harvest one tree for timber, you wait until sufficient regrowth and regeneration has occurred before harvesting another tree.

To enable a market for timber, Taking Root is investing carbon credit revenues into equipment, facilities, and staff–on both the Taking Root and APRODEIN teams. This creates long-term revenues independent of carbon credit sales that give incentive for farmers to maintain their forests. To bring it back to benefit sharing, it lets farmers obtain more value than if it were a cash payment as a share of carbon revenue.

What does this mean for the carbon market?

The various forms of value that can be shared with communities highlight the complexity and diversity of benefit sharing in the carbon market. As previously mentioned, there is no one-size-fits-all approach to benefit sharing, and this is worth emphasizing again. Different communities have different priorities and needs, and the most appropriate forms of value to share may vary depending on specific contexts and circumstances.

Communities might define value differently, face different barriers to engage in implementing climate solutions, or need a different spread of short, medium, and long term incentives. This makes it extremely challenging to apply a standardised percentage across all projects. Approaching benefit sharing across all projects with the above principles in mind helps to ensure that benefit sharing is fair and effective.

These considerations are to help guide others as they navigate integrating benefit sharing into their own projects. Taking Root is always looking to innovate and improve, particularly around delivering value in the medium to long term. While there is still a lot to figure out, one thing is clear: actors need to stay committed to ensuring that farmers and communities on the ground are those who are benefitting the most.

@Taking Root

Acknowledgements

This knowledge product was developed by Taking Root with support from Partnerships for Forests.

Photo credits

Cover image and photos: @Taking Root