Taking Root

2024

ANNUAL REPORT

CommuniTree Carbon Program

Advancing forest restoration for the carbon market 2.0

PLAN VIVO
For nature, climate and communities

BOSNICA

2024

ANNUAL REPORT

CommuniTree Carbon Program

Advancing forest restoration for the carbon market 2.0

CommuniTree Carbon Program Annual Report for year ended 31 December 2024

Message from the CommuniTree Leadership Team

Kahlil Baker, Taking Root CEO, at the Somoto regional nursery.

The global carbon market stands at a critical crossroads, presenting both immense opportunities and urgent challenges. The market has the potential to drive transformative financing for climate action, livelihoods and nature conservation. This was demonstrated this year as we saw the signing of multiple hundred-million-dollar offtake agreements accompanied by major investments into nature based projects. This marks a clear signal in the long-term confidence in the voluntary carbon market, especially for high-integrity carbon removals. But the shorter-term challenges are concerning. The market has shrunk to 38% of its peak in 2021, and political winds are changing with the United States pulling out of the Paris Climate Accord.

As the industry shifts away from short-term demand towards longer-term investment models, there's a choice to be made. The industry either continues valuing more decentralized approaches that emphasize family farmers and rural communities or returns to more centralized industrial approaches. While investing in forest restoration across thousands of small land parcels delivers greater scale potential, durability, and impact, it remains far less common than restoring fewer, larger tracts of land. It took years for the voluntary carbon market to fully recognize the value of nature-based solutions and the critical role of co-benefits to drive community buy-in—despite history proving that those who rely on natural resources for their livelihoods are their best stewards. The added complexity is undeniable, but the long-term benefits make it a challenge worth embracing. Prioritizing smallholder focused projects will deliver wins for investors, buyers, and local communities by unlocking the most scalable and impactful model we have at hand for nature restoration and carbon removal.

CommuniTree is a case study showcasing the potential of the locally led decentralized model. In 2024, a total of 464 farming families came together to plant 1,966,685 trees across 1,417.90 hectares of land. But we could have done so much more if demand was greater. This brings the total area of land restored through the program to 17,287.99 hectares—a testament to the incredible collaboration between the Taking Root and BOSNICA (formerly APRODEIN) teams. At the same time, we have accelerated our transition to Version 5 of the Plan Vivo Standard, so that the program will be able to deliver both ex-ante (fPVCs) and investor funded ex-post (vPVCs) credits starting in 2025.

For 15 years, CommuniTree has been a leader in delivering high-integrity ex-ante carbon removals. But with market preferences shifting toward ex-post carbon credits, we've embraced the need to adapt. With this shift requires a new way of financing programs like CommuniTree. With the decline in market demand, the sale of ex-ante credits alone will no longer finance the expansion of the program to its full potential. Bridging the gap requires buyers to commit to long-term offtakes and investors to back projects to deliver impacts and returns in the long run. It is time for corporates and investors to take action. The value of taking action is increasingly clear as climate efforts prove effective in mitigating the climate crisis, protecting and restoring nature, and supporting the communities that depend on natural systems.

As we approach our 15th year as a certified Plan Vivo project, I am continually inspired by the "can-do" attitude of our teams, partners, and communities. It is this shared commitment that turns ambitious goals into reality. And with the right support, we can set the bar higher to push the industry to new levels of scale and quality. For the first time, we are raising funds to accelerate the expansion of our forest restoration model across Nicaragua. This marks an extraordinary opportunity to strengthen and build partnerships united by a shared purpose: restoring the world's forests and supporting the livelihoods of farming families.

None of this would be possible without the incredible team behind CommuniTree, the communities we work with, and the partners who believe in our mission. Your continued support fuels everything we do, and we are deeply grateful as we move forward into this exciting new chapter.

KAHLIL BAKER,
CEO & Co-Founder

So much work has been done this year as we continue to grow and learn. We remain focused on what we know will drive long-term success: community involvement, close collaboration with our local partners and operational discipline. We simply cannot aspire to restore ecosystems effectively and robustly without putting farmers and their families at the heart of the program. Restoring ecosystems requires not just science, but local expertise.

Over the spring, we conducted extensive community consultations to get a better understanding of what farmers want to grow, why, and where. As our program has expanded into new regions, we have encountered new environmental conditions requiring localised approaches. Through community focus groups and field visits, we gathered important local knowledge that we integrated into planting designs. We were happy to find that most species in our traditional planting designs were valued and considered well suited by the farmers in new regions. At the same time, we learned that certain species were more susceptible to pests in wetter areas, informing adaptations of our planting designs to wet and dry regions. As a result of learning from communities, we now have planting approaches that are better suited to local climate and conditions, helping grow the program and while de-risking long-term carbon yields.

In the summer, we updated our silvicultural activity schedule to provide farmers with more effective guidance to be successful in their restoration efforts. We know, for example, that early and frequent weedings are critical in the early stages of tree growth, especially in wet regions, so we built more economic incentives for those activities. By better tailoring our silviculture interventions, we set up farmers for success and increase chances of robust tree growth.

Throughout the whole season, we've continued to work with the local team to design and implement better planning approaches. This includes better tracking of the recruitment process to avoid ineligible farmers entering the program or launching a new payment module to streamline payment requests for completed silvicultural activities. Our team has collaborated quickly to design and support the implementation of tools that make the work of local partners easier and more impactful.

As we look ahead to the next year and beyond, while the demands of clients, investors and regulators continue to increase, there is one thing we know won't change: to succeed, we need the commitment and knowledge of farmers and partners.

LAURA MORILLAS
Reforestation Partnerships (Nicaragua) Director, Taking Root

As we reflect on 2024, I am filled with pride seeing CommuniTree be recognized locally, nationally, and internationally as a transparent and viable project that has stood strong for 15 years. A recent WRI report has shown a rapid increase in primary forest loss in Nicaragua, demonstrating the need for investment into projects such as CommuniTree.

Investing in Nicaragua's forests and farmers creates a powerful ripple effect. For farmers, it diversifies income streams; for the ecosystem, it enhances flora and fauna diversity; and for communities, it generates vital employment opportunities. What sets CommuniTree apart is our impact on close to 5,000 farmers and track record supporting these farmers over time. Our commitment to transparency, sustainability, and traceability ensures that investors can confidently say, "I'm working with thousands of Nicaraguan farmers and contributing to positive change".

In 2024, we've seen technology development in traceability and plot eligibility checks dramatically improved our operations, while our organizational structure has matured into a consolidated team across finance, operations, monitoring, human resources, and value chain management. Growing BOSNICA's operational capacity ensure that we can continue to effectively support farmers to restore local habitats and ecosystems while removing carbon from the atmosphere.

Looking ahead to 2025, our vision is to improve productivity—producing more and better with lower costs—while scaling our operations without compromising our commitment to social and environmental impact. Maintaining quality is essential as we scale further across the country, requiring new capacity and new program adaptations.

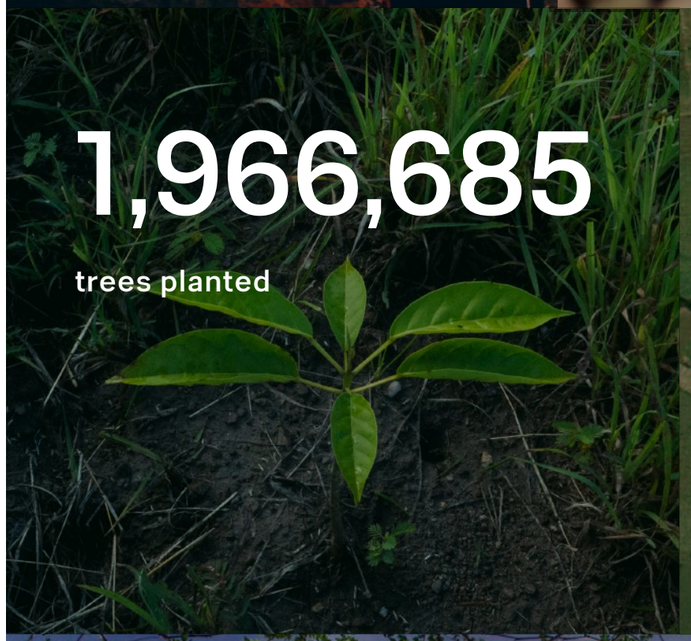
Climate change affects us all, regardless of where we live or our economic status. Supporting CommuniTree means supporting both a local and global solution. We are excited to continue growing our impact in 2025, producing tangible results for our shared future.

ELVIN CASTELLON
Executive Director, BOSNICA

2024 Vintage at a Glance

In 2024, CommuniTree made significant impacts across climate, nature, and local communities. Over the year, the program restored 1,208 hectares of new land with 464 farming families—416 of them newly joining—while 48 smallholder farmers from previous years expanded their land in the program. This work led to the issuance of 426,912 certified carbon credits.

Beyond removing carbon from the atmosphere, the program has supported 172 local permanent jobs to help farmers start growing 1,966,685 million new trees. The program is now working with a total of 4,613 farmers, who are collectively restoring 17,287.99 hectares across Nicaragua. Their forests are regenerating vital local ecosystems and watersheds, enhancing biodiversity, and building improved climate resilient livelihoods for hundreds of local communities in Nicaragua.



Total Program Impacts
for people and nature

Community engagement

1,509

Communities in program

Livelihoods

4,613

Participating smallholder families

Climate justice

$40,671,973

Total being paid to farmers (USD)

Economic

172

Permanent local jobs

Land

17,288

Hectares being restored

Water

6 out of 6

Key watersheds being restored

Soil

29,529 kg

Biochar applied in 2024 for enhanced soil health

Biodiversity

140

Unique tree species recorded

Project Updates

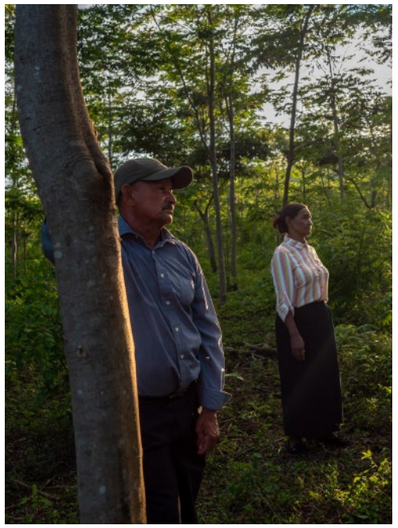
Highlights

01 Program expands and readies for delivery of ex-post carbon removals

In 2024, the CommuniTree Carbon Program continued its impactful growth, while preparing for its registration under Version 5 of the Plan Vivo Carbon Standard in 2025.

Over the year, 416 new farming families joined the program, bringing the total number of participating families in the 2024 planting season to 464. Together, they planted 1,966,685 trees across 1,417.90 hectares of new land, with 1,208.31 hectares contributing to the issuance of 426,912 certified carbon credits, while the remaining land was used to replace historic areas. The program expanded into two new regions—San Pedro del Norte and Nuevo Guinea—now working with 4,613 farmers across 1,509 communities to restore 17,287.99 hectares throughout Nicaragua. The program took the decision to issue significantly less credits than previous years due to a reduction in demand from the carbon market. While the program did invest in restoring additional land, the issuance of those credits is being deferred until demand has been secured.

The strategic decision to scale operations at a more measured pace compared to previous years meant the program could focus on preparing for its transition to Version 5 (v5) of the Plan Vivo Standard. This will enable the program to secure greater demand and return to its previous rates of growth by delivering the option for buyers to purchase both ex-ante (fPVCs) credits for climate contributions, or ex-post credits (vPVCs) for carbon removal claims (refer to Learnings, Section 1). This transition has entailed comprehensive updates to CommuniTree's planting designs, farmer contracts, and carbon model. An updated Project Design Document (PDD) detailing these changes is slated for public consultation by Spring 2025.



Don and Ester Martin, on thier mature parcel in Somoto.

The program's expansion and preparation to transition to Version 5 was underpinned by new operational efficiencies, and a continued push to meet the market's needs for enhanced trust and integrity. For example, the program increased the efficiency of its recruitment approach by 20% following lessons learned in 2023 (see 2023 annual report). The program implemented pre-recruitment screening checks to provide technicians with earlier insights into farmer and parcel program eligibility before entering them into the program. Meanwhile monitoring was conducted across 5,481.02 hectares of historically planted land – the largest ever monitoring in the project's history to ensure transparency into program performance. 76.94% of monitored parcels were found to be meeting targets, with resulting data highlighting the critical role of timely silviculture interventions such as replanting, weeding, and thinning in optimizing tree growth and maximizing carbon outcomes (refer to Learnings, Section 3).

A Guardabarranco, the national bird of Nicaragua, captured on farmer's land being restored in CommuniTree.

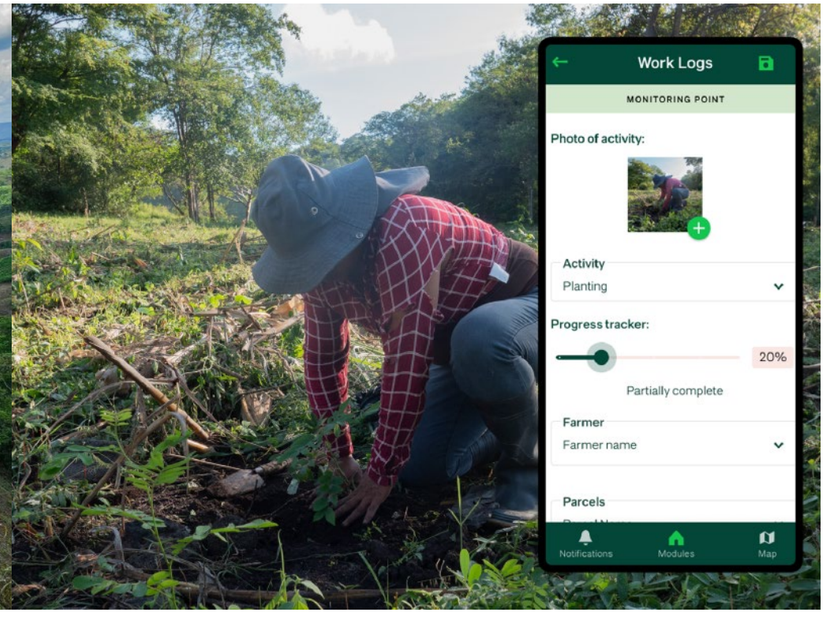
02 Capacity enhanced to improve program quality and performance

In alignment with CommuniTree's focus on delivering high-integrity carbon removals, new training programs, infrastructure, and technology have been introduced to improve program quality and performance.

In 2024, the program undertook an extensive training program to ensure the high quality delivery of program interventions. As the program has grown, so has its local team, which now comprises of 172 full-time employees. To empower that team, a purpose-built training centre complete with an auditorium was established at the demonstration farm in Somoto. Training was delivered across a range of topics, including recruitment, nursery establishment, planting best practices, monitoring, and the use of Taking Root's technology platform to manage farmer payments. A total of 61 training sessions were conducted throughout 2024, ensuring all team members possess the knowledge and skills needed to effectively support farmers in achieving their goals and successfully grow their forests.

CommuniTree expanded its physical nursery infrastructure to accommodate growing farmer participation and build operational resilience. The number of central nurseries increased from 22 in 2023 to 40 in 2024, ensuring that each project region now has a dedicated central nursery. To support the 2024 planting season, 54,379,498 seeds were sourced from various regions, selected for their adaptation to local climatic conditions. Extending the project's network of central nurseries has reduced transportation costs, improved access to quality seedlings, helped create more buffers for seedlings being established, and enabled more farmers, unable to build nurseries on their farms, to join the program and restore their land.

Finally, significant updates to Taking Root's technology platform have further optimized operations. An improved web application was launched to enable faster task execution, an enhanced user interface, and more self service operations reporting to provide clearer insights into program and parcel progress. These updates have allowed the program to better track silviculture activities and performance targets, ensuring that timely support can be deployed to farmers when needed.



Left: Technician training in Matiguas, Centre: Training session on planting best practices.

Far right: The updated work logs feature in the Taking Root mobile app.

Justina Gutierrez Muñoz, CommuniTree participant, collects thinnings from her parcel.

Laura, Kahlil, and Elvin from the project team, in front of bags of biochar produced in Somoto.

03 Continued access to local value chains unlocked for farmers for long-term durability

Connecting farmers to forest value chains is fundamental to delivering both medium- and long-term economic benefits, ensuring farmers remain motivated to grow and maintain their trees for years to come. CommuniTree has continued to deliver on this commitment in 2024 by expanding access to local wood markets for farmers whose parcels are ready for thinning, a critical silvicultural activity.

Thinning typically begins around seven years after a parcel is enrolled in the program and involves selectively removing energetic species to create space and access to nutrients for the remaining trees. To facilitate this process, the project collaborated with Nicaragua's Ministry of Environment and Natural Resources (MARENA), following its absorption of the National Forestry Institute (INAFOR), to register 258 farmers' parcels for legal thinning. Farmers were supported by BOSNICA's pre-commercial thinnings team, which managed the permitting process and provided comprehensive training on equipment use, tree selection, and the transportation of wood off-cuts.

The sale of wood waste from thinnings generated a combined income of USD $10,043.83 for CommuniTree's farmers in 2024, while also improving the health and productivity of their forests. To further enhance the value of these by-products, the project expanded its biochar production capacity, thanks to grant funding from GIZ, Interteam and PRIMAKLIMA, by constructing and operating two additional biochar reactors, bringing the total to five reactors across project regions. These reactors are operated by four full-time employees, who together processed thinning by-products into 29,529 kg of raw biochar.

The biochar produced by the project was incorporated into 100,104 kg of bokashi mixture, a nutrient-rich soil amendment created with organic inputs. This mixture was applied to seedling bags during nursery establishment, offering a sustainable and effective alternative to chemical fertilizers. Early results from using biochar have demonstrated notable improvements in seedling growth and reduced tree mortality, particularly in regions with variable climate conditions.

Learnings

01 Shift in market demand requires acceleration in ability to deliver ex-post carbon removals

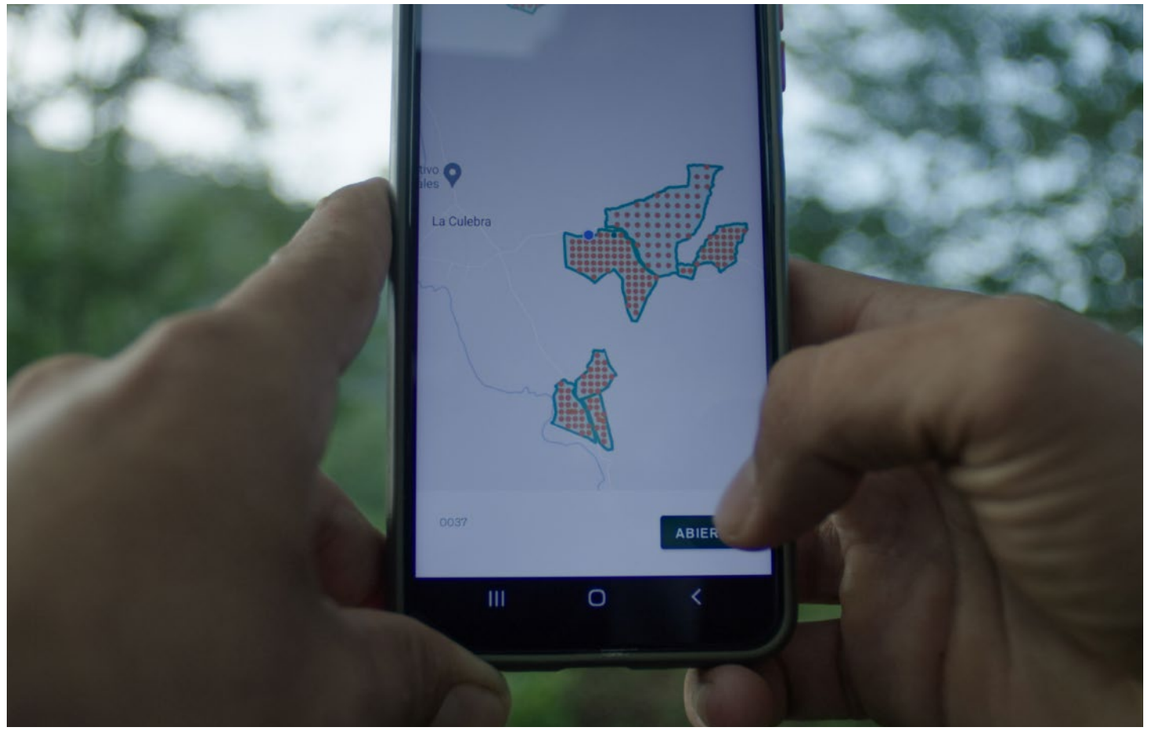
During the past year, CommuniTree accelerated its registration under Version 5 of the Plan Vivo Standard to deliver ex-ante credits (fPVCs) with an ex-post pathway (vPVCs), as of planting from 2025 onwards. This will unlock new market demand for the program from corporate buyers of ex-post credits, or vPVCs, so that the program can fulfil its growth and impact potential.

Historically, CommuniTree's reforestation work has been entirely financed through the sale of ex-ante credits. This has been an extremely successful model, representing a highly impactful and additional form of climate financing. There is still demand for the program's ex-ante credits, particularly as an effective mechanism for corporates to meet climate contribution commitments. However, with the reduction in size of the carbon market, overall demand for the program's ex-ante credits has reduced, limiting the rate at which the project can expand and deliver impacts. Transitioning to Version 5 will enable the program to access a greater market by delivering both ex-ante (fPVC) and ex-post (vPVC) credits, meeting a greater number of corporates' carbon credit requirements. Credits issued under Version 5 are anticipated to be recognised as some of the highest integrity credits in the market, having already received approval from the International Carbon Reduction and Offset Alliance (ICROA), with review and approval by the Integrity Council for the Voluntary Carbon Market (ICVCM) at the time of this report currently pending.

Taking Root's team collecting forest data for the new Version 5 PDD.

To deliver ex-post credits in the future under Version 5, CommuniTree will require a new financing model. To cover the upfront costs of program interventions, CommuniTree will need to move from being exclusively financed via ex-ante carbon credit sales to a combination of ex-ante credit sales and project investment. This dual approach provides the flexibility to offer buyers a choice of ex-ante or ex-post carbon credits while ensuring the project's financial sustainability.

The transition to Version 5 is anticipated to be completed in 2026. Land planted in 2025 will mark a pivotal milestone for CommuniTree as it prepares for the first issuance of credits under Version 5. Over the course of 2024, Taking Root and BOSNICA have been laying the groundwork for this migration by updating planting designs, amending farmer contracts, and developing Taking Root's technology platform to ensure compliance with v5. With its proven operational track record, ability to scale, and history of delivering premium carbon credits for over 15 years, CommuniTree is uniquely positioned to continue meeting the evolving needs of buyers, and engaging investors seeking high-impact projects that deliver scalable and lasting benefits for climate, nature, and communities.



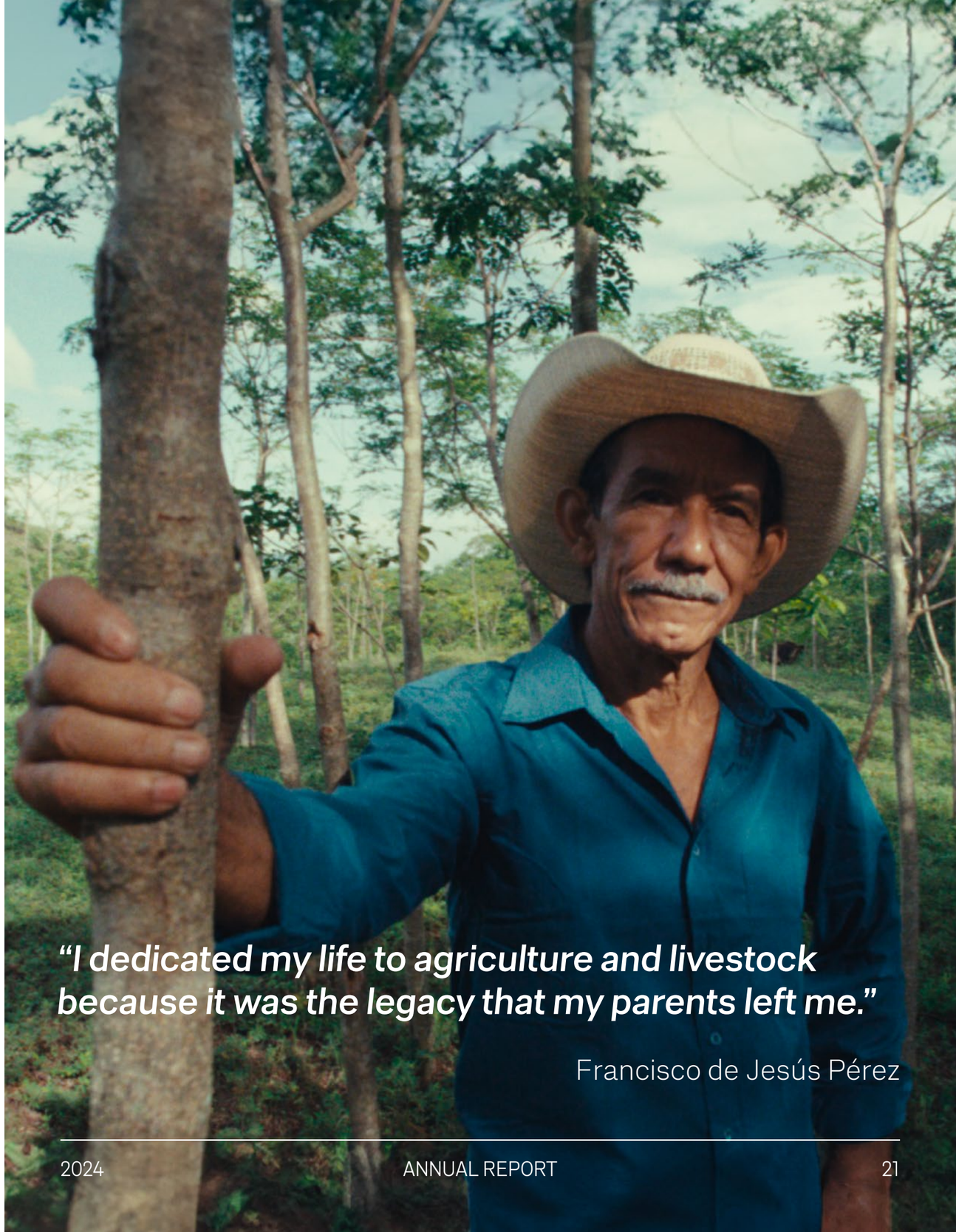
Taking Root's technology platform with parcels and monitoring plots.

02 Local adaptations will help drive program expansion

To enable CommuniTree's continued expansion across Nicaragua, the project's planting designs have been tailored to suit the unique characteristics of different ecoregions. This approach will ensure that forests established by project participants are suited to local climatic conditions and regional economic drivers, thereby enhancing both ecological and economic outcomes for farmers and their parcels.

To achieve this, members of the Taking Root and BOSNICA teams conducted a comprehensive project design trip in June 2024. Sixty-one farmers from five different communities participated in workshops and consultations. Through facilitated discussions and interactive land mapping exercises, the team gained valuable insights into regional land-use practices, preferred tree species, and the challenges farmers face when growing trees on their land. These focus groups form a key part of CommuniTree's participatory design process, ensuring that planting designs are shaped in collaboration with local communities to remain relevant and viable for their specific needs and geographic context.

This participatory process, combined with extensive desk research, informed the development of updated planting designs. From 2025 onwards, both mixed-species forests and silvopastoral systems will feature tailored variants for wet and dry regions. Key adaptations include reducing tree density in mixed species designs to prevent overcrowding as parcels mature, while decreasing the proportion of energetic species and increasing hardwoods to enhance long-term carbon sequestration. In silvopastoral systems, tree density has been increased to boost carbon incentives for farmers without compromising future cattle grazing. These refinements align planting compositions with local climatic conditions and farmer needs, maximizing ecological and economic benefits. The new planting designs will be made public with the new PDD set to be published in early 2026.



03 Building climate resilience will sustain high-integrity carbon removals

As local climatic conditions change, and become less predictable as a result of the climate crisis, a cross-cutting theme in the program's investments has been to enhance farmer and operational resilience.

Several initiatives were designed to not only help the program expand, but build increasing resilience to the program's operations such as: including diversifying the program's growth across landscapes (Section 1.1.1), increasing the program's central nursery infrastructure (Section 3.1.2), and developing tailored planting designs (Section 3.2.2). Additional measures were introduced in 2024 to enhance the flexibility and safety of operational staff, such as appointing regional sub-coordinators to oversee localized operations and respond to emerging challenges. New protocols were also implemented to ensure technicians remain safe in adverse conditions. Additionally, enhanced worklog tracking integrated into Taking Root's technology platform have enabled teams to monitor farmer progress more effectively and prioritize support for at-risk parcels, driving greater efficiency across operations. With access to real-time data and insights that optimize decision-making, the local team can prioritize resources to adapt to changing conditions.

Rolando Antonio Ocampo experiences water benefits after having reforested his land.

BOSNICA team undergoes planting training in San Juan de Rio Coco.

The program has also prioritized building its capacity to support replanting in parcels affected by adverse weather conditions. Using a combination of on-the-ground monitoring by technicians and insights from Taking Root's technology platform, parcels with significant early-stage tree mortality were identified and prioritized for replanting to ensure they remain on track to become healthy, productive forests. Most of these parcels were those planted in 2023 and affected by dry conditions caused by an El Niño year. Replanting efforts have been supported by CommuniTree's extended network of central nurseries, providing the infrastructure needed to assist farmers whose parcels had been impacted.

Looking ahead, the project is continuing to prioritize early planting during the rainy season and leveraging innovative solutions such as biochar applications to maximise early-stage tree growth and build parcel and farmer resilience. The project also received grant funding at the end of 2024 from Mercy Corps to explore how Taking Root's technology platform can be further developed to support farmers with timely silviculture interventions to enhance their forests' early-stage performance and resilience.

Future developments

01 New program to launch in 2025 under Version 5 of the Plan Vivo Carbon Standard

BOSNICA training in Somoto.

Building on the groundwork laid throughout 2024, Taking Root and BOSNICA are preparing to complete CommuniTree's registration under Version 5 (v5) of the Plan Vivo Carbon Standard in 2026. This transition represents a pivotal moment in the program's evolution, demonstrating its ability to adapt to emerging market demands while continuing to deliver high-quality carbon removals.

Recruitment of farmers for the 2025 planting season under v5 is already underway, with farmer agreements having been amended to align with the updated Standard. An updated Project Design Document (PDD) will be published and project registration anticipated to be completed by early 2026.

02 Focus on securing market demand to drive program expansion

With recruitment of farmers under v5 set for the 2025 planting season, the project is focusing on securing demand for future credit issuances. While CommuniTree has historically produced ex-ante credits, the shift to v5 will allow buyers greater flexibility to access the program's high integrity credits and choose between ex-ante (fPVC) and ex-post (vPVC) carbon removals, enabling the project to meet a wider range of buyer preferences. This diversification is critical to meeting market demands to drive program expansion, allowing more smallholder farming families across Nicaragua to improve their livelihoods by growing trees.

Kahlil Baker at the Forestry and Agriculture Investment Summit in London in June 2024.

As well as securing market demand, the project will be looking to raise additional financing with project-level investors and grantors to bridge the critical financing gap between early project costs and the delivery of ex-post credits. Having been delivering high-integrity impacts since 2010, CommuniTree is uniquely equipped to navigate this new landscape and collaborate with buyers and investors seeking high-impact projects with a strong track record of success.

03 Taking Root's technology platform to drive new efficiencies

In 2025, Taking Root is set to launch significant upgrades to its technology platform, introducing key features that will enhance operational efficiency. Among these upgrades are major improvements to contract-related workflows. These updates have been specifically prepared to support recruitment for the 2025 planting season, ensuring the platform is ready to onboard farmers and their parcels under Version 5.

Streamlined payment-related workflows are also ready for deployment, significantly reducing the time required to process farmer payment requests. This will ensure faster payments to farmers while freeing up capacity for technicians and administrative staff, improving overall productivity and resource allocation across BOSNICA.

In addition, new functionality will enhance parcel tracking by enabling the platform to organize parcels according to growth stages. This innovation will provide greater visibility into parcel performance, support more informed decision-making, and improve monitoring throughout the parcel lifecycle.

Taking Root's technology with updated interface and several new features.

Project documentation updates

There are no new updates to CommuniTree's project documentation.

Taking Root is actively preparing CommuniTree's updated Project Design Document (PDD) under Version 5 of the Plan Vivo Carbon Standard. This revised PDD reflects the project's transition to deliver both ex-ante (fPVC) and ex-post (vPVC) high-integrity Plan Vivo Credits (PVCs). The updated PDD will include detailed information on changes to the project under the new standard, including updated planting designs, carbon models, and farmer agreements. The updated PDD is anticipated to be completed by early of 2026, with a public consultation phase scheduled for Spring 2025.

Farmer community consultation to collect input on desired tree species.

Bertha Flores Morales

Bertha Flores Morales, a farmer from Totogalpa, joined the CommuniTree program in 2019. Five years into the journey, she shared her experience of restoring her land.

Name:
Bertha Lilliam Flores Morales

Community:
Totogalpa

What made you decide to participate in the CommuniTree project?

I liked this project very much because, as a farmer, I felt it was an opportunity for my farm. I'm someone who cares deeply about protecting the environment, and this project came at just the right time for this area. It's a very dry region, and the areas we're reforesting used to be so eroded. There were no trees—just lots of weeds.

What has the experience been like for you so far?

I didn't have the resources to do this on my own, but the program provided everything—the materials and the knowledge I needed. I learned so much—how to install a nursery, how to fill the seedling bags, prepare the soil, and check the growth of the plants every day.

What changes have you noticed to your land since joining CommuniTree?

I've been taking care of what we planted, and now we're seeing a lot of changes. The soil is staying humid, and we're noticing a big difference in the land. Where there were once weeds, there are now trees. We've had long periods of drought here, and I always say we blame climate change, but we've also contributed to this environmental deterioration. That's why this project is so meaningful to me—it's helping us restore what we've lost.

What would you say to other farmers who are considering joining the program?

I encourage other farmers who haven't joined yet to do it. This is such an incredible opportunity, both for their farms and for the environment. If we don't take action ourselves, we won't leave anything for our loved ones who come after us.

Date joined the program

2019

3834
trees planted

2.3
ha being restored

689.3
tCO_2 being removed

Summary of Credit Issuance

Table 1: Program Summary

Project Overview	
Reporting Period	1 January 2024 – 31 December 2024
Technical specifications applied in 2024 vintage	Mixed Species Forest Plantation, Silvopastoral Planting
Technical specifications applied in historic vintages	Mixed Species Forest Plantation, Silvopastoral Planting, Coffee Agroforestry, Boundary Planting
Geographical areas	Nicaragua
Area under management	
New area put under management and meeting targets in 2024 (ha)	1,417.90
New area allocated to replace historic area removed from program (ha)	209.59
New area allocated to 2024 PVC issuance (ha)	1,208.31
Total program area under management as reported in 2023 annual report (ha)^	16,079.68
Total program area under management (ha)	**17,287.99**

Smallholder Farmers participating in Program	
New smallholder farmers joining program in 2024	416
Smallholder farmers from previous historic vintages adding additional land in 2024	48
Total smallholder farmers adding land and meeting targets in 2024	**464**
Smallholder farmers reported in 2023 annual report	4,202
Smallholder farmer dropouts in 2024 from previous historic vintages	5
Total smallholder farmers participating in program	**4,613**
Plan Vivo Certificates (PVC) issued	
Total saleable PVCs generated in 2024	420,211
Total risk buffer PVCs generated in 2024 (15%)	74,154
Total PVCs generated in 2024	494,365
Saleable PVC losses from historic vintages in 2024	57,275
Risk buffer PVC losses from historic vintages in 2024	10,178
Total PVC losses from historic vintages and reallocated using 2024 PVCs	67,453
Total issuance submission from 2024 vintage PVCs	426,912
Issuance submission for 2024 vintage saleable PVCs	**362,875**
Issuance submission for 2024 vintage risk buffer PVCs	64,037
Historical saleable PVCs issued as reported in 2023 annual report	4,316,143
Total PVCs issued to Plan Vivo Risk Buffer from program	825,709
Total saleable PVCs issued from program	**4,679,018**

^ This number has been updated due to areas previously calculated as equivalent hectares, now calculated only as hectares to provide consistency in reporting. This does not impact the number of credits issued from 2023.

Table 2: Payments across all years PES and Community Fund Payments (USD)

Payments across all years PES and Community Fund Payments (USD)	Total
Total direct payments through 2024	$9,731,212
Other payments to community through 2024	$5,662,384
Payments made from the Community Fund	**$15,393,596**

Table 3: Funds held in trust for future PES and Community Payments

Funds held in Trust PES and Community Fund Payments held in trust (USD)	Total
Opening balance from prior year	$23,400,020
2024 increase	$3,845,788
Total funds held in trust	**$27,245,807**

Activities, Total Project Size, and Participation

Current land-use activities updates

In 2024, Taking Root continued implementing its Mixed Species and Silvopastoral Planting technical specifications while maintaining coffee agroforestry and boundary planting used as a technical specification in previous years. All technical specifications are integrated into the CommuniTree PDD which can be downloaded from the Plan Vivo website:

https://www.planvivo.org/communitree-documents

Mixed Species Forest Plantation

This technical specification involves planting and intensively managing multi-purpose mixed-species forest plantations on participating smallholders' land. All the species selected are native to the region and are chosen in consultation with local smallholder groups and professional foresters. This technical specification was added in 2014.

Silvopastoral Planting

The Silvopastoral Planting technical specification acknowledges the need for cattle pastures by integrating trees and improved pastures with livestock. The trees improve pasture productivity, provide shade, and produce timber and forage for the farmers and their cattle. The short-rotation nitrogen-fixing species are harvested at a young age, providing building posts while fertilizing the soil. Silvopastoral Planting sequesters carbon dioxide, provides ecosystem services in the short term, and sustainably produced, highly prized timber in the long term. Additionally, the system helps improve the pasture below the trees and adds biomass to the soil. This technical specification was added in 2012.

2024 Participation and program size

Table 4: Summary of new participation and program size of year (2024 vintage)

Community technicians successfully recruited new participants from 131 new communities to meet the current demand for Plan Vivo Certificates (PVCs), bringing the project to a total of 1,509 participating communities as detailed in Appendix 6.

Participants	
Total smallholders with new registered PES agreements meeting targets	464
Total area planted meeting targets (ha)	1,417.90
Area planted and meeting targets breakdown by technical specification	**Area in hectares**
Mixed Species Forest Plantation	1,373.85
Silvopastoral Planting	44.05

Farmers at a recruitment event in Totogalpa.

Ongoing Community Participation

As CommuniTree continues to grow, engaging communities remains at the heart of the program's success. As outlined below, 2024 saw new initiatives launched to strengthen collaboration with farmers and local stakeholders, highlighting the program's commitment to tailoring solutions that drive long-term impact.

Community participation to enhance farmer success

In 2024, CommuniTree implemented two key initiatives to enhance farmer satisfaction and actively collaborate with local communities to ensure the project meets their specific needs.

The first initiative involved a project design visit, during which five workshops were held across five different communities. A total of 61 farmers shared valuable insights about land use practices, economic drivers, ideal land-use scenarios, and the barriers they face in restoring forests on their land. These contributions directly informed the development of updated planting designs, which will be implemented for the 2025 planting season (see Learnings, Section 2).

Interactive community session to explore preferred tree species.

The second initiative focused on identifying challenges and opportunities to improve early-stage parcel performance. Engagement with farmers and BOSNICA technicians revealed key drivers of underperformance in the years immediately after planting, such as soil quality issues, pests, and access to labour. Management opportunities were identified for each of these challenges to improve parcel performance. This will be key to strengthening the program's planning and decision-making processes and improving technical support for farmers.

To complement these initiatives, a farmer satisfaction survey was conducted with 25 farmers from Limay and Matiguás. Results showed that 80% of respondents strongly agreed their parcels held greater value since growing trees. Building on this, the survey will be expanded in 2025 across all project regions, providing deeper insights into farmer perceptions and further supporting measures to drive improvements.

New communities engaged to scale impact

11 regional zones the project is operational in across Nicaragua

In 2024, recruitment efforts enabled CommuniTree to expand its operations into two new regions—San Pedro del Norte and Nueva Guinea—resulting in the establishment of two additional regional offices, bringing the total to 11 across Nicaragua. Both new regions are located in the country's 'wet' zone, which benefits from higher rainfall levels. This aligns with CommuniTree's strategy to build climate resilience, as increased rainfall supports optimal conditions for planting and tree growth.

To support operations in San Pedro del Norte and Nueva Guinea, technicians were recruited locally to work closely with communities and facilitate the expansion. Additionally, BOSNICA strengthened its organizational structure by introducing regional sub-coordinators to work alongside existing coordinators. These sub-coordinators focus on conducting frequent field visits to monitor operational progress and ensure best practices are followed, allowing coordinators to dedicate more time to strategic planning and oversight.

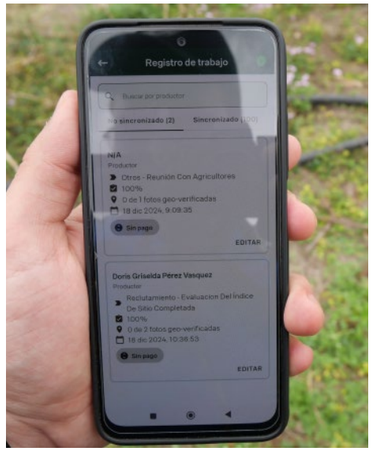
Knowledge sharing strengthens operations and prepares for Version 5

Marylin Bejarano, Taking Root's Quality Program Manager, running a training session in Boaco.

Throughout the year, training sessions and knowledge-sharing workshops were conducted to strengthen team expertise, unify understanding across the BOSNICA team, and prepare operations for Version 5 of the Plan Vivo Carbon Standard. A total of 61 training sessions were held covering key operational topics such as nursery establishment, planting, contracts, recruitment, and farmer payments.

Taking Root also delivered specialist training to 57 BOSNICA employees on the project's grievance mechanism, which has been updated to meet the requirements of v5. This includes the addition of an independent arbitrator to resolve complaints as needed. New measures have also been implemented to improve farmer access to the grievance mechanism. This includes updated guidance in farmer contracts, informational one-pagers, and enhanced accessibility to the mechanism through both the Taking Root and BOSNICA websites. There were no significant grievances reported in 2024.

Trainings on Taking Root's technology platform were also held throughout the year, including training sessions specifically focused on preparing for the adoption of updated payment workflows within its technology platform. Training was held for staff across BOSNICA's operational regions, ensuring the team is fully equipped to manage the payment process from start to finish. Together, these initiatives have strengthened BOSNICA's capacity to conduct operations under Version 5 and deliver high-quality support to farmers.



Taking Root's mobile app, processing farmer payments to deliver complete auditability on farmer payments.

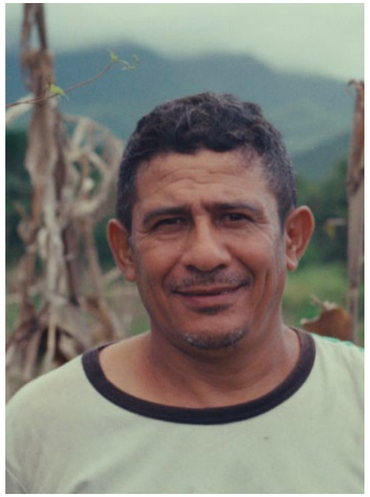
Continued partnerships to secure access to forest value chains

CommuniTree has maintained strong and collaborative relationships with relevant government agencies to ensure ongoing support for the project and facilitate farmers' access to forest value chains. In 2024, despite structural changes within the Nicaraguan government—specifically, the integration of the National Forestry Institute (INAFOR) into the Ministry of Environment and Natural Resources (MARENA)—this collaboration continued to deliver results.

Working closely with MARENA, the project successfully supported 258 farmers in Limay and Somoto to obtain parcel registrations for the legal thinning of their forest parcels. This not only prevents the suppression of remaining trees but also enables farmers to generate income from their forests. In 2024, this resulted in a total income of USD $10,043.83 for farmers.

BOSNICA technicians with timber from recently thinned parcels.

Nelson Agustín Gómez Dávila



Name:
Nelson Agustín Gómez Dávila

Title:
Field technician, Juigalpa

Nelson Agustín Gómez Dávila joined the CommuniTree Carbon Program as a farmer and was later inspired to become a BOSNICA field technician. He shared his experiences with us.

What led you to become a technician?

I became a technician in March 2023. Before that, I had experience as a farmer participating in the program, and I realized I could use this knowledge to help others. As a technician, I now share what I've learned with fellow farmers.

What do you enjoy most about being a technician?

I love the fact that I can combine my experience as a farmer with the technical knowledge I've gained. It's fulfilling to guide farmers, show them the demonstration farm, and encourage them to join the program.

How does CommuniTree benefit farmers and communities?

The project is very beneficial. I encourage farmers to enter the program because it helps them with the technical elements of growing trees and connects them to forest value chains. It also benefits the community because jobs are created, and people are given work. We pay workers for planting, maintenance and weeding, creating a source of employment.

How has your own land changed since you started growing trees?

Planting trees has brought life back to my land. The soil now retains more moisture, there's more organic matter, and I see more water, animals, and birds. There has 100% been a change.

Nelson Agustín Gómez Dávila

Farmer since:

2018

Technician since:

2023

Region

Juigalpa

Monitoring Results

Nature and Socio-economic impacts

Table 5 displays some of the key nature, environmental and socio-economic impacts of CommuniTree during this year. The data is collected and reported through Taking Root's technology platform.

Table 5: Nature and socio-economic impacts in 2024

Nature impacts:	
Trees planted:	
Mixed species forest plantations trees planted for 2024 vintage PVC issuance	1,951,670
Silvopastoral plantations trees planted for 2024 vintage PVC issuance	15,015
Total trees planted for 2024 vintage PVC issuance	**1,966,685**
Water:	
Watersheds being restored from all project parcels	6 out of 6 key watersheds being restored
Soil:	
Biochar applied in 2024 plantings to enhance soil health (kg)	29,529
Biodiversity:	
Number of unique tree species recorded in program	140
Socio-economic impacts:	
Community engagement:	
Participating new communities in 2024	131
Total communities in program	**1,509**
Participating new smallholder families in 2024	416
Total participating smallholder families	**4,613**
Education:	
Education and support sessions^	26,842
Total session attendance	**34,379**
Jobs:	
Total seasonal workers hired^^	419
Permanent positions	172
Total employment created	**591**

^ Education and support sessions are logged through Taking Root's platform and include sessions where technicians have supported or educated farmers in various aspects of the program including silviculture best practices such as land preparation and forest management.

^^ The calculation for seasonal workers changed in 2024 from previous years. It now only considers centrally hired workers and not workers hired by farmers. That number is expected to be much higher.

Summary of 2024 results for new 2024 plan vivos

Table 6 is a summary of monitoring results for PVCs issued in 2024. Complete details of the monitoring can be found in Appendix 2.

Table 6: Summary of 2024 monitoring results for new 2024 plan vivos

2024 Vintage	
Area of land meeting monitoring targets (ha)	1,417.90
Area monitored (ha)	1,417.90
Percentage of monitored land meeting monitoring targets (%)^	100.00%

^ The high percentage (%) of 2024 land meeting monitoring targets is due to the exclusion of any parcels that did not meet targets required for issuance.

BOSNICA technicians Marcel Gradiz Montoya and Wendy Gonzales collect field data.

Summary of 2024 results for pre-2024 plan vivos

Table 7 provides a summary of the 2024 monitoring results for parcels planted between 2010-2023. Monitoring data is provided from vintages 2015, 2020, and 2022 in line with CommuniTree completing formal field inventories of parcels in years 1, 3, 5 and 10 of them joining the project. For land not meeting targets, the project works with farmers to implement corrective actions. Where it is not possible for land to meet growth targets in the future it is removed from the program (see section 5.4). Complete details of the monitoring can be found in Appendix 2.

Table 7: Summary of 2024 monitoring results for pre-2024 plan vivos

2010-2023 Vintages	
Historic area meeting and exceeding targets (ha)	4,216.91
Historic area monitored (ha)	5,481.02
Percentage of monitored land meeting and exceeding monitoring targets (%)	76.94%

Land Attrition

Through 2024, 209.59 ha from historically planted land was removed from the CommuniTree program. The decision to remove parcels was made as these parcels either had no possibility of meeting growth targets in the future or farmers were not motivated to stay in the program. The land and associated credits lost has been replaced by an equivalent amount of land restored in 2024 to ensure the total carbon being removed from the atmosphere remains the same.

Project Finances

Project sales and allocations

Table 8 summarizes the sale of PVCs for the 2024 Vintage. The contents of Table 8 have been reviewed and approved by Plan Vivo. The contents have been removed from the public version of the annual report as they include sensitive information which are a source of competitive advantage for the project.

Table 8: Program CO2 Sales and allocations for the 2024 vintage

Metric	Value
Total volume of CO2 forward sold	312,775
Total sales for 2024 vintage (USD)	
Average certificate price (USD)	
% of average sale price to community fund	60%
Average increase to community fund per offset (USD)	
Increase to community fund from this year's vintage (USD)	

Sales Summary Vintage 2024

Table 9 summarizes the distribution of PVCs sold in the 2024 vintage through December 31st, 2024. The contents of Table 9 have been reviewed and approved by Plan Vivo. The contents have been removed from the public version of the annual report as they include sensitive information which are a source of competitive advantage for the project.

Table 9: Summary of carbon sales for vintage 2024

Vintage	Name of purchaser	PVCs purchased	Price/PVC (USD)	Amount signed (USD)
2024	Abatable	86,000		
2024	C-Level	20,000		
2024	C-Level	15,000		
2024	MyClimate	100,000		
2024	MyClimate	50,000		
2024	MyClimate	31,751		
2024	PrimaKlima	3,598		
2024	Pure Leapfrog	5,504		
2024	Taking Root	922		
Total		**312,775**		

For a detailed list of all carbon sales to date, see Appendix 3.

Total payment for ecosystem services made

Table 10 below provides a summary of the payments for ecosystem services (PES) made to date for all current participating producers.

Table 10: PES summary – total payments made

Payment year	PES amount paid (USD)
2010	$5,019
2011	$28,202
2012	$97,290
2013	$121,694
2014	$123,505
2015	$178,912
2016	$309,174
2017	$372,811
2018	$323,914
2019	$147,072
2020	$521,286
2021	$906,795
2022	$1,961,226
2023	$2,137,649
2024	**$2,496,661**
Total	**$9,731,212**

Additional payments to the community

Table 11: Other payments to the community to date

Payment year	Amount paid (USD)
2010	n/a
2011	$14,221
2012	$33,288
2013	$44,291
2014	$52,616
2015	$50,870
2016	$113,955
2017	$41,608
2018	$91,110
2019	$135,669
2020	$267,820
2021	$411,108
2022	$798,827
2023	$1,637,547
2024	**$1,969,454**
Total	**$5,662,384**

*Amounts for 2022 and 2023 were updated to reflect the inclusion of in-kind services and support as Payments for Ecosystem Services alongside cash and material payments provided to participating farmers in the program.


Rolando Antonio Ocampo
“By planting trees, we are investing in a sustainable future, leaving a legacy for our children.”

Organizational Expenses and Revenue

Table 12 provides an overview of all organizational and operational expenses and revenue in US Dollars from 1 January 2024 – 31 December 2024. This table includes both Canadian and Nicaraguan finances.

The contents of the following table have been reviewed and approved by Plan Vivo. The contents have been removed from the public version of the annual report as they include sensitive information which are a source of competitive advantage for the project.

Table 12: Organizational expenses and revenue in USD for the reporting period (unaudited)

Reporting Period	Jan 1 - Dec 31, 2024
Revenues	
Carbon offset sales	
Consulting services	
Value chain revenues	
Total revenues	
Costs of goods sold	
Cost of sales - carbon removals	
Value chain inputs	
Total costs of goods sold	
Expenses	
Human resources	
Operational Costs	
Administration	
Transport and travel	
Total expenses	
Other income	
Interest income	
Grants and donations	
SRED tax credits	
Financial fees and foreign exchange	
Total other income	
Net loss	

*In 2024, Taking Root shifted its fiscal year end from March 31 to December 31. This transition prompted revisions in accounting timing, policies and adjustments in the presentation of financial figures for audit purposes. As a result, the revenues reported in this Annual Report may differ from those presented in Taking Root's audited financial statements.

Appendix 1:

Saleable tCO2 per Technical Specification

The following Table 13 shows the equivalent tonnes of CO2 removed per unit area for each technical specification currently in use.[1]

Table 13: Saleable tCO2 sequestered per technical specifications

Technical specification	Gross tCO2e sequestered per unit (Saleable + Risk Buffer)	Saleable tCO2e sequestered per unit
Mixed Species Forest Plantation	352.6 tCO2e/ha	299.7 tCO2e/ha
Silvopastoral	225.8 tCO2e/ha	191.9 tCO2e/ha
Coffee Agroforestry	241.5 tCO2e/ha	203.2 tCO2e/ha

[1] A PVC represents the long-term sequestration or mitigation of one tonne of CO2e by a Plan Vivo-certified project.

Gross equivalent tonnes of CO2 sequestered per technical specification in the CommuniTree program.

Appendix 2:

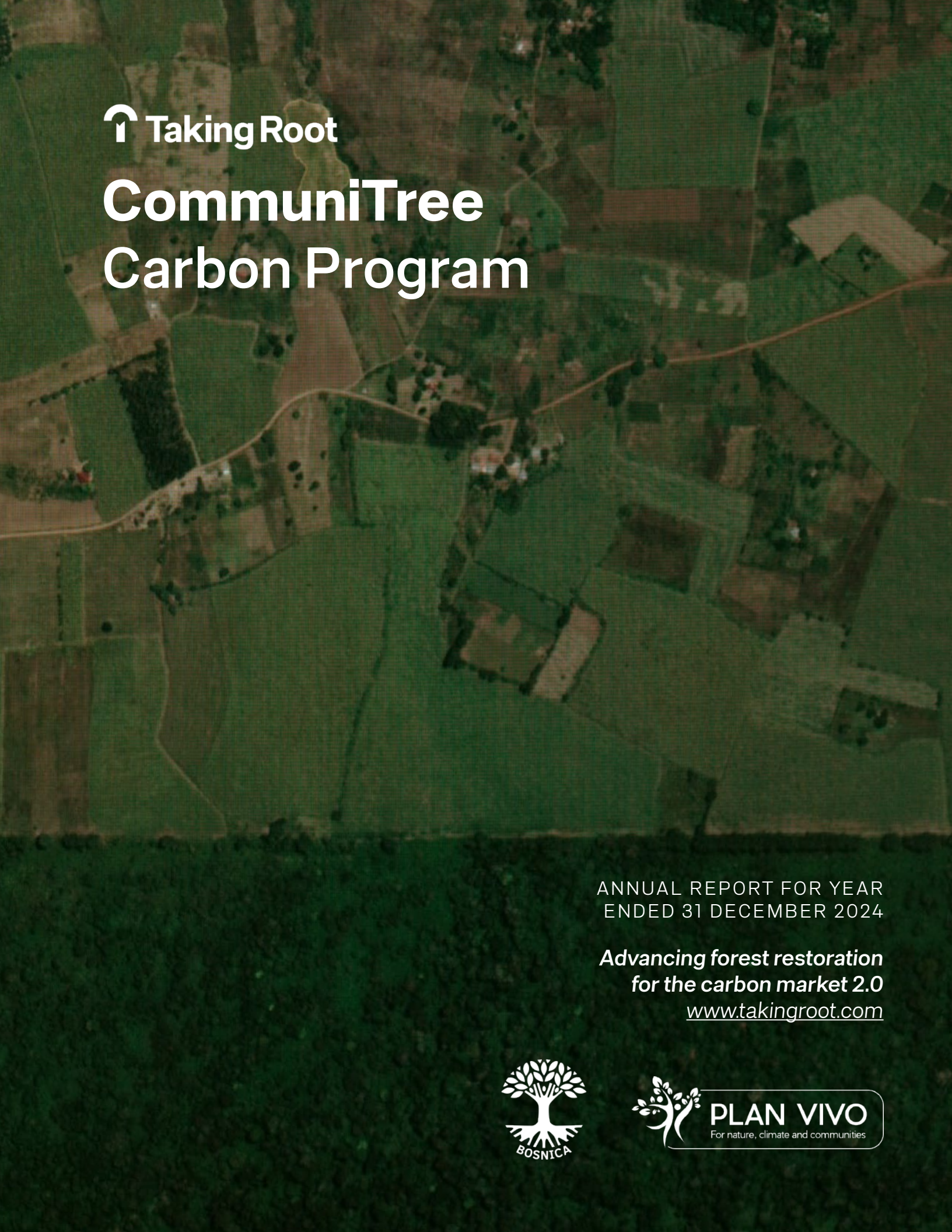
Supplementary Information

Due to the high volume of information and data connected to the CommuniTree Carbon Program, Taking Root has included select information through an Excel file, viewable through this link.

The information in the file is broken into 6 different tabs:

1. **Land added in 2024:** The Table A1 lists each parcel that was added to the program in 2024.
2. **Detailed carbon sales to date:** The Table A2 provides a detailed list of Plan Vivo Certificates sold to date by vintage.
3. **Monitoring results–2024:** The Table A3 contains Taking Root's monitoring results or forest inventory from 2024 for plan vivos planted in 2024.
4. **Monitoring results–2010-2023:** The Table A4 contains Taking Root's monitoring results or forest inventory from 2024 for plan vivos planted in 2015, 2020 and 2022.
5. **Land and Farmers exiting in 2024:** The Table A5 contains a comprehensive list of the parcels lost in 2024 along with accompanying farmer data.
6. **Program communities:** The Table A6 contains all communities that have farmers participating in PES agreements and shows which of them are new communities in 2024.

CommuniTree participants planting seedlings on their land.



Taking Root

CommuniTree Carbon Program

ANNUAL REPORT FOR YEAR ENDED 31 DECEMBER 2024

Advancing forest restoration for the carbon market 2.0

www.takingroot.com

BOSNICA

PLAN VIVO
For nature, climate and communities