Introduction

- **Focusing Philanthropy and One Acre Fund (1AF)** are partnering to bring our tree program to transformative scale across eight African countries. Together, we are working to develop the programmatic capacity and infrastructure to successfully plant 1 billion trees by 2030; the first phase of this effort, which runs through mid-2024, is focused on planting a cumulative 250 million trees.

- This collaboration now represents the largest and most efficient farmer-led tree-planting initiative in Africa. Cumulatively, the tree program is the most cost-effective program in 1AF’s history (in terms of farmer impact per donor dollar invested). Simultaneously, this work is creating wide-ranging benefits that extend beyond individual farmers, enabling environmental impact at country-wide scale (via new tree cover, soil health improvement, and carbon sequestration), and building lasting infrastructure to permanently transform rural tree markets (including launching and supporting over 4,000 local nursery entrepreneurs in seedling cultivation).

  - These results have placed 1AF in a strong position to begin the next phase of the organization’s impactful journey toward planting 1 billion cumulative trees. As described below, 1AF expects to reach the milestone of planting its 250 millionth tree by April of this year, and will thereafter officially embark on our Phase 2 effort to plant a cumulative 750 million trees by 2030.

**2023 organization-wide update:**

- The past year was an eventful and challenging one for 1AF, marked by regulatory headwinds and related financial volatility in some of the organization’s most mature markets. There was also mounting recognition in 2023 of the grave challenges that climate change poses for vulnerable populations in the Global South. In 2023, 1AF undertook several meaningful pivots to ensure reliable and impactful service to ever greater numbers of Africa’s farm families:

  - **Restructuring in Kenya and Tanzania:** As described below, in light of evolving market dynamics and with an eye toward long-term financial health and impact, 1AF streamlined core field-facing operations in two of its more mature country programs in 2023. Crucially, these shifts pose no meaningful impact on the scope or implementation of agroforestry programming in either country (partly because, as described below, such programming had already largely shifted distribution to center on fast-growing rural retail channels).

    - **Kenya:** In 2023, 1AF leadership made the strategic decision to merge its three farmer-facing channels (field, shop, and online) into one cohesive channel anchored around its extensive network of rural retail shops (dukas). This decision was a response to reduced farmer demand for fertilizer (due to a separate fertilizer subsidy program offered by the Kenyan government), and to reduced farmer need/appetite for the in-person staff-intensive services historically offered by the core field program (e.g., group loans and intensive personal training). The restructured Kenya program offers significantly improved operating efficiencies while maintaining the components of the core program that are most valuable to farmers (high-quality inputs, agronomic training, and last-mile distribution). The shift also allows 1AF to reach new Kenyan smallholder communities they could not access before (e.g., semi-arid areas), as well as new segments of farmers who prefer digital engagement (e.g., youth). 1AF continues to offer farmers’ robust access to trees by co-locating dukas and decentralized tree nurseries.

    - **Tanzania:** This year, 1AF’s Tanzania leadership decided to phase out the country’s higher-touch core program to instead prioritize investment in its fast-growing rural retail and agroforestry channels. In Tanzania, 1AF’s core program has long struggled to surpass an SROI of 1-1.5 due to low maize prices (partly driven by episodic export bans). Moreover, the
Tanzanian government, which controls the retail price of fertilizer, has recently set prices so low that it no longer makes sense for 1AF to provide fertilizer to its farmers as they can now buy directly at government subsidized prices. As a result, 1AF is focusing on its two most cost effective interventions: continuing to expand its high SROI agroforestry program, and providing Tanzanian smallholders with inputs and other services through its 40 rural retail shops in the country. Should Tanzania’s regulatory environment evolve over time, shops give 1AF the opportunity to layer back in other services.

- As previously reported, these programmatic shifts unfortunately required restructurings in both markets, leading to the departures of ~2,000 staff. Through generous separation packages and transparent staff communications, 1AF has worked hard to keep staff morale high as the programs transition to these new more sustainable business models.

  - 1AF’s financial position: 1AF now projects a net loss of ~$26 million for 2023, driven almost entirely by two non-recurring factors. First, the core program in Kenya experienced roughly ~$14 million in losses due to the aforementioned government fertilizer subsidy. The reduced fertilizer prices caused 1AF to experience modest financial losses on fertilizer it had purchased for resale, and also miss out on profit that would have been available in normal market conditions. The combination of missed profit and actual losses contributed to an annual deficit that was $14 million higher than budget for the year. Second, 1AF projects a ~$12 million book loss resulting from the depreciation of local currencies relative to the USD. The USD strengthened dramatically in 2023 against most currencies as US interest rates rose at an historic pace throughout the year. Generally, these currency related losses occur when 1AF purchases inputs using USD and then sells them to core farmers on credit in local currency. If the local currency depreciates by the time repayment, 1AF realizes a loss (in USD terms) to the extent of the currency devaluation. Similarly assets (e.g. fertilizer and other inputs) that 1AF continues to own in each country can be repriced downward when inventory is valued for accounting purposes in USD (consistent with GAAP rules). These losses were absorbed by operating reserves that 1AF held for unexpected shocks like this. 1AF has already undertaken program restructuring in Kenya to adjust to a lower revenue environment. This includes significant staff reductions that will increase operational efficiency going forward. The operating deficit in 2024 is now projected to be significantly lower than 2023 because of these cost reductions. To ensure continued strength in the organization’s ability to absorb future shocks in 2024 and beyond, 1AF is also strategically rebuilding reserves and is taking a conservative approach to growth and new investment. 1AF does not anticipate these updates will drive any changes in agroforestry spending.

  - Leadership transition: 1AF announced upcoming changes among the organization’s senior-most leadership that will add important capacity to the overall organization. After 17 years as 1AF’s CEO, co-founder Andrew Youn will transition into a new role as 1AF’s President in March 2024. As 1AF’s CEO, Andrew has overseen both fundraising and operations since 2006; as President, Andrew will focus primarily on shaping special initiatives together with strategic funding partnerships. In turn, this will create room for a new CEO to devote significant energy to 1AF’s field operations. 1AF’s board unanimously voted to appoint Eric Pohlman, 1AF’s co-founder and current Country Director for Rwanda, as its next CEO.

- 1AF’s M&E teams have now commenced their rigorous 2023 impact measurement activities; while final results will not be available until mid 2024, early projections suggest that 1AF’s 2023 core clients generated an average of $120 in new income and assets per farmer, above target for the year. This powerful sum for a smallholder family, even in the face of widespread inflation in the cost of farm inputs, resulted from improved planting compliance by farmers in the staple crop program, increased adoption of trees, and impact from 1AF’s first year of supporting planting in Kenya’s Short Rains season – bolstered by strong rainfall and high maize prices across most countries of operation.

### 2022 and 2023 (Projected) Tree Metrics/Impacts

**Note:** coloring in the 2023 Latest Projection column below refers to performance versus the 2023 Targets column.
<table>
<thead>
<tr>
<th>Metric</th>
<th>2022 Actuals</th>
<th>2023 Targets¹</th>
<th>2023 Latest Projection²</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># Farmers eligible to receive trees (000s)</td>
<td>4,485</td>
<td>5,368</td>
<td>5,454</td>
<td>In 2023, 1AF increased total trees planted by ~26% year over year, significantly surpassing the target. 1AF also surpassed targets for surviving and incremental trees. The below target projected adoption rates and number of adopters is nearly entirely the result of measurement adjustments in Rwanda (discussed in detail below). 1AF attributes its strong 2023 scale success to prior period program refinements and associated investments in decentralized tree nurseries, linked to retail distribution hubs; and to diversification of species offerings.</td>
</tr>
<tr>
<td>Adoption rate</td>
<td>63%</td>
<td>62%</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>Adopters (000s)</td>
<td>2,817</td>
<td>3,347</td>
<td>2,464</td>
<td></td>
</tr>
<tr>
<td>Trees planted (per adopter / total 000s)</td>
<td>22 / 62,427</td>
<td>22 / 73,911</td>
<td>28 / 78,867</td>
<td></td>
</tr>
<tr>
<td>Trees surviving (per adopter / total 000s)</td>
<td>11 / 29,887</td>
<td>11 / 35,490</td>
<td>14 / 37,398</td>
<td></td>
</tr>
<tr>
<td>Incremental trees (per adopter / total 000s)³</td>
<td>9 / 24,447</td>
<td>9 / 29,298</td>
<td>11 / 29,761</td>
<td></td>
</tr>
<tr>
<td># Tree species distributed (including trials)</td>
<td>42</td>
<td>No target set</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>¹ # Farmers eligible to receive trees (000s)</td>
<td></td>
<td></td>
<td></td>
<td>A target is set for the number of farmers eligible to receive trees.</td>
</tr>
<tr>
<td>² 2023 Latest Projection</td>
<td></td>
<td></td>
<td></td>
<td>Preliminary projections suggest that 1AF will meet 2023 targets for deficit per tree, bolstered by increased farmer revenue per tree and improved operational efficiencies (e.g., new tech systems for improved tree tracking). 1AF’s projected operating deficit per adopter is slightly above target because of the aforementioned shortfall in total adopters in Rwanda, rather than any meaningful efficiency challenges. Preliminary projections suggest that 1AF will meet 2023 targets for impact per planted tree and impact per adopter, driven by strong impact results in its largest country programs (Kenya and Rwanda). 1AF projects that its impact and efficiency results led to an on-target SROI of 13 last year, meaning that every $1 invested in this work by donors generated $13 for participating farm families, the organization’s most cost-efficient intervention. In 2022, 1AF collaborated with leading environmental advisory firm TerraCarbon to significantly refine its approach for estimating the CO2 sequestered by the tree program. 1AF now estimates that trees planted across its network in 2023 will sequester a cumulative 11.75 million MT of CO2 in their lifetimes (roughly half of which, 5.78 million MT, is expected to be permanently sequestered). As discussed below, select country programs are continuing to advance agroforestry ‘carbon pilots’ that can formalize these sequestration impacts via certification that may enable the sale of carbon offsets, unlocking a key new revenue stream for further agroforestry scale-up.</td>
</tr>
</tbody>
</table>

Impact

<table>
<thead>
<tr>
<th>Metric</th>
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<th>2023 Targets¹</th>
<th>2023 Latest Projection²</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating deficit per adopter/ per planted tree⁴</td>
<td>$2.3 / $0.11</td>
<td>$2.4 / $0.11</td>
<td>$2.7 / $0.11</td>
<td>1AF projects meeting the 2023 target for deficit per tree, bolstered by increased farmer revenue per tree and improved operational efficiencies (e.g., new tech systems for improved tree tracking). 1AF’s projected operating deficit per adopter is slightly above target because of the aforementioned shortfall in total adopters in Rwanda, rather than any meaningful efficiency challenges. Preliminary projections suggest that 1AF will meet 2023 targets for impact per planted tree and impact per adopter, driven by strong impact results in its largest country programs (Kenya and Rwanda). 1AF projects that its impact and efficiency results led to an on-target SROI of 13 last year, meaning that every $1 invested in this work by donors generated $13 for participating farm families, the organization’s most cost-efficient intervention.</td>
</tr>
<tr>
<td>Impact per adopter/ per planted tree⁵</td>
<td>$49 / $2.23</td>
<td>$50 / $2.25</td>
<td>&gt;$50 / $2.25</td>
<td>Preliminary projections suggest that 1AF will meet 2023 targets for impact per planted tree and impact per adopter, driven by strong impact results in its largest country programs (Kenya and Rwanda). 1AF projects that its impact and efficiency results led to an on-target SROI of 13 last year, meaning that every $1 invested in this work by donors generated $13 for participating farm families, the organization’s most cost-efficient intervention.</td>
</tr>
<tr>
<td>SROI (rounded)</td>
<td>14</td>
<td>13</td>
<td>13</td>
<td>1AF projects that its impact and efficiency results led to an on-target SROI of 13 last year, meaning that every $1 invested in this work by donors generated $13 for participating farm families, the organization’s most cost-efficient intervention.</td>
</tr>
<tr>
<td>Total CO2 sequestered from annual trees planted⁶</td>
<td>10.37 million MT</td>
<td>No target set</td>
<td>11.75 million MT</td>
<td>In 2022, 1AF collaborated with leading environmental advisory firm TerraCarbon to significantly refine its approach for estimating the CO2 sequestered by the tree program. 1AF now estimates that trees planted across its network in 2023 will sequester a cumulative 11.75 million MT of CO2 in their lifetimes (roughly half of which, 5.78 million MT, is expected to be permanently sequestered). As discussed below, select country programs are continuing to advance agroforestry ‘carbon pilots’ that can formalize these sequestration impacts via certification that may enable the sale of carbon offsets, unlocking a key new revenue stream for further agroforestry scale-up.</td>
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1 Targets correspond to 1AF’s latest campaign reforecast (from June 2023).
2 2023 projections represent 1AF’s latest view of performance for the year, however, they are still provisional and subject to change as M&E assessments remain ongoing (including ongoing analyses in the key market of Kenya, where as described below, 1AF produced a greater-than-expected number of trees which were subsequently distributed to institutions including schools and hospitals. 1AF is analyzing its data for the year to ensure that these trees are not included in our reporting).
3 Incremental trees refers to the estimated number of additional trees planted by 1AF-supported farmers compared to non-participating neighbors. Calculation methods vary by country yet are always informed by extensive internal research.
4 Operating deficit per tree includes production, distribution, and staffing costs, net of revenue collected (in sales models). Fully loaded deficit per tree further includes in-country support expenditures (e.g., M&E, R&D, logistics), but excludes ‘global’ costs (i.e., overheads not directly connected to in-country programming, such as legal and audit). 1AF’s 2023 fully-loaded deficit per tree is projected to be $0.16.
5 Impact per tree reflects financial value only; and as calculated as the NPV of tree revenues over time (e.g., prunings for firewood, harvest sales values, fruit and nut income) less tree costs over time (e.g., labor costs and land opportunity costs). Impact per adopter multiplies impact per tree by number of incremental, surviving trees per adopter.
6 Please note that we have adjusted the 2022 annual sequestration figure (of 11.1 million MT) downward in light of more accurate sequestration modeling; 1AF will continue to evaluate and refine projections for this key metric on a regular basis moving forward.

- **Overall tree campaign:** 1AF’s latest estimates show that we supported the planting of over 78.8 million trees in 2023. Roughly 37.4 million of these trees are projected to survive, adding 29.76 million total incremental trees (i.e. greater than what farmers would have planted without this program) which will generate an estimated $176.6 million of total impact with an SROI of 13. After years of laying the groundwork to launch strong, country-tailored tree programs, these figures reflect the rapid growth that 1AF is now achieving across nearly all markets. In 2023, 1AF achieved particularly robust growth in some of its poorest markets – Burundi, Rwanda, and Malawi – and in its newest program of Nigeria, home to Africa’s largest addressable market of smallholder farmers. This growth reflects the continued success of One Acre Fund’s innovative decentralized nursery model, now adopted across every country program, as well as other program refinements adopted since the launch of the 250 million tree Phase 1. These other refinements include significant expansion and diversification of species offered, refined farmer education and training tools and techniques, the build-out of a network of retail hubs, and the leverage derived from an expansion of the core program focused on annual crops. The vast majority of trees planted in 2023 were sourced from approximately 4,000 small-scale outgrowers, dramatically improving the efficiency of One Acre Fund’s tree distribution while creating new opportunities for income generation among participating rural entrepreneurs.
  - 1AF is now on track to plant its 250 millionth tree in April of 2024, successfully concluding the first phase of the 1 billion tree initiative. Based on the seasonal calendars across its eight agroforestry programs (not including Zambia), we expect that this tree will likely be planted in Kenya. With 1AF, we are closely monitoring progress of seedling cultivation and distribution in the country to ensure that we accurately capture and celebrate this important milestone.

- **2023 country performance:** Each country’s 2023 agroforestry activities and performance is briefly summarized below. Please note that this information is subject to change in light of ongoing M&E and budget reconciliation activities; we look forward to providing a more detailed and conclusive overview of 1AF’s performance for the year in our Final 2023 report.
  - **Kenya:** 1AF’s Kenya program had a particularly strong year of scale-up due to significantly above-target seedling survival/production, driven by favorable weather and strong seed supply.\(^2\) As a result, projections show that the country surpassed its 2023 goal, with 330 decentralized nurseries (spread across five regions) supporting farmers in planting an estimated 20.3 million trees (vs. 20.1 million target), a 37%+ year-over-year increase in its already substantial scale. Moreover, the Kenya program successfully distributed its 2023 surplus of trees to community institutions country-wide, supporting the planting of additional trees at local schools, hospitals, and other community centers. While we view this as a positive result, the somewhat unexpected production and distribution of these trees was not immediately attributable to directly supporting farmer individuals, and these trees are not included in the corresponding country performance metrics for the year. 1AF now expects the Kenya program to meet (and possibly slightly exceed) its target of planting a cumulative
67.5 million trees during the 2019-2024 Phase 1 campaign period. Looking forward to Phase 2 of the 1 billion tree initiative, preliminary projections suggest that Kenya will largely maintain its 2023 tree planting levels from 2024 onward, planting 145+ million trees during the 750 million tree phase and over 200 million trees over the life of the program.

- **Rwanda**: After initial projections of a slight shortfall due to early nursery production challenges, 1AF’s Rwanda program now expects to slightly exceed its target of 19.5 million trees planted in 2023, supporting the planting of 19.7 million trees. The year was marked by significant expansion in the country’s decentralized nursery model (now 1AF’s primary mode of tree production in Rwanda), with 1,841 nurseries established country-wide (up from 1,121 nurseries in 2022). Last year, Rwanda also continued to scale distribution of high-demand species of fruit trees, including the distribution of 265,000 avocado seedlings to 33,000 farmers and 120,000 coffee seedlings to 39 farmer cooperatives through a partnership with the country’s coffee department.

Earlier this season, a 1AF quality control review undertaken by the Rwanda agroforestry team uncovered inaccuracies in data collected by the Rwanda government’s field staff, which had caused 1AF’s systems to show a higher number of registered farmers than actually came to distributions to take seedlings. 1AF believes that this inaccurate reporting approach led to inflated estimates of adopting farmers in the country for the past several years (however, importantly, the issue does not affect Rwanda’s estimates for trees distributed or planted. Rather, the average participating farmer was receiving and planting more seedlings than previously recognized.). 1AF has now adopted an improved methodology which captures more accurate data on farmer tree collection in the country. This methodology leads to a decrease in Rwandan tree adoption rate/number of adopters (and an increase in Rwanda’s number of trees per farmer). 1AF plans to utilize this improved methodology from 2023 onward, and now expects that the tree program will serve approximately 700,000 Rwandan farmers in 2023, rather than the 1.5 million adopters originally projected (1AF also projects that these adopters will plant an estimated 28 trees each, rather than 12 trees each as originally projected). 1AF is continuing to invest meaningful M&E and Global resources to understand and address this and related data and measurement challenges.

- **Burundi**: Burundi once again surpassed its scale targets for the year, with preliminary projections suggesting the planting of 4.25+ million trees by roughly 220,000 adopters (versus the 3.5 million trees projected in the 2022 reforecast). This above target performance was driven by strong production across roughly 615 decentralized nurseries (up from 530 nurseries in 2022) and continued strong demand among the country’s extremely poor farmers for a way to build assets – a core proposition of the tree program. While grevillea still represented the majority of Burundi’s 2023 trees, the country also made promising progress around species diversification last year, particularly in terms of high-value fruit trees; 1AF supported the planting of nearly 50,000 seedlings of 3 different fruit tree species last year (avocado, macadamia, and Japanese plum). Separately, the program distributed an estimated 115,000 grevillea seedlings to select government sites and locations last year, unlocking further impact for communities in highly deforested areas while bolstering the organization’s relationship with key government entities (an important driver of program continuity/success).

- **Tanzania**: The latest estimates suggest that the program supported the planting of 2.6 million seedlings last year via 140 newly established decentralized nurseries. This was below the 3.1 million seedling target (preliminary data shows that the program reached an estimated 26,000 farmer adopters last year, somewhat below its 30,000 farmer target). 1AF attributes the shortfall to two key factors: 1) delays starting the season due to Tanzania’s broader program restructure; 2) germination challenges with the program’s main species Dovyalis and ‘backup’ species, in each case due to limited supply of quality tree seed in the country. Despite the projected shortfall, Tanzania achieved a meaningful scale-up relative to the 1.2 million trees planted in 2022 (i.e. 116% year over year growth). The Tanzanian team, in concert with 1AF’s Global Agroforestry team, are focused on...
driving scale by building on the demonstrated effectiveness of the decentralized nursery model and expanding species mix.

- **Malawi**: 1AF currently expects the Malawi program to surpass its 2023 tree distribution targets, supporting the planting of over 8.6 million trees (versus the 7.5 million target in the latest reforecast) to roughly 450,000 farmers. 1AF distributes seedlings to a combination of 1AF’s core program farmers (i.e. farmers participating in 1AF’s core farmer productivity program who get seeds from their field officers) and broader ‘whole market’ decentralized nursery distribution (i.e. farmers not enrolled in 1AF’s core program, but who are otherwise eligible to pick up seedlings at designated sites or directly from decentralized nurseries after being engaged through tree marketing officers). Core program farmers are expected to support the planting of a respective 2 million trees while an additional 6.5 million trees are projected to be planted by ‘whole market’ farmers via 1,045 decentralized nurseries. Strong farmer tree demand was the primary driver for this above-target performance, despite some initial delays in the season’s distribution due to the late onset of rains. This demand has led the Malawi team to undertake a review of the program’s expansion plans with an eye toward ensuring the optimal number of seedlings per nursery. Preliminary evidence suggests that the program may be able to achieve an adoption rate of 30-40 seedlings per farmer in several regions, versus the currently projected rate of 25 seedlings per farmer.

- **Uganda**: 1AF’s Uganda program continues to track closely to the most recent reforecast – in 2023, 1AF distributed an above-target 530,000 grevillea trees to 17,000 farmers (versus a target of 494,000 trees and 16,000 farmers) through 25 decentralized nurseries. Beyond direct distribution, the team also undertook key activities in 2023 to support its long-term growth and program health, including prioritizing efficiency in staff management to reduce average field operating costs by 5%, and improving farmer enrollment rates and overall satisfaction to achieve a year-over-year retention rate of 90% of tree adopters. As part of its locally adapted core program in Rwanda, 1AF also enrolled 10,000 farmers in 2023 in its coffee extension program, supporting the sustainable preservation and management of 1.8 million existing coffee bushes. By 2025, 1AF plans to expand to 55 locations, reaching 30,000 farmers managing 7.2 million coffee bushes per year. This intervention enables farmers to achieve yield increases of 30%+ per tree and earn price premiums, resulting in a strong average impact of $170+ per farmer. 1AF is researching coffee seedling production with hopes of distributing high quality coffee seedlings to farmers in the future as part of the tree program.

- **Ethiopia**: 1AF’s Ethiopia program surpassed its 2023 target, supporting the planting of an estimated 19.8 million seedlings by 180,000 farmers (produced by over 300 decentralized nurseries), versus a projected 17.3 million seedlings planted by 206,000 farmers. Despite a challenging security environment throughout the year (as discussed below), procurement of key supplies and distribution of seedlings occurred as planned and without significant additional cost. The Ethiopia team continued to invest in enhancements to its seed QC processes, as well as its approaches for monitoring seedling health, pests, and diseases, with the goal of improving tree survival rates that have been below expectations in recent years. Tree survival data for the season is still being collected, with results expected in mid 2024. These results were achieved notwithstanding meaningful security challenges beginning in August of last year, as tensions between the national army and a local paramilitary group (known as Fano) escalated to open conflict. An estimated 65% of areas in Amhara, 1AF’s base of operations, have since encountered active fighting, limiting internet and phone connectivity as well as basic freedom of movement. To ensure the safety of 1AF staff and the farmers they serve, the program has made major changes to its operating protocols and revised its expansion plans for the 2024 season, including pausing operations in over one third of program areas. While still in flux, these adjustments are unfortunately likely to reduce the number of seedlings that 1AF can produce and distribute in 2024. 1AF now believes that the program may only be able to support the planting of
7-9 million seedlings this season (versus the original projection of 20.2 million seedlings). Given continued strong farmer demand and the material impact where 1AF has been able to operate, 1AF will assess the feasibility of entering another region of Ethiopia to decrease reliance on a single region’s political stability if the conditions in the area of current operations do not stabilize soon.

- **Nigeria**: Last year saw the continued expansion of agroforestry in 1AF’s newest full country program (Nigeria formally graduated from pilot status in 2023, underscoring the organization’s long-term commitment to serving its large addressable market of smallholder farmers). In its third year of full-scale tree distribution, preliminary estimates suggest that the Nigeria program supported an estimated 110,000 farmers in planting roughly 2.4 million trees (produced by 193 nurseries), slightly above its 2.375 million tree / 100,000 farmer target for the year (representing significant expansion from 2022, when 680,000 trees were planted by 54,000 farmers). After pausing sales of high-value fruit trees in 2023 to prioritize strategy refinement, the program plans to resume its ‘economic tree’ trials in 2024, distributing 12,000 orange trees and 8,000 cashew trees to test production requirements, farmer demand and pricing strategy.

**Other Key 2023 Activities**

- **Tree survival**: All country programs continue to dedicate meaningful resources toward understanding and improving seedling survival rates, both in nurseries and farmers’ fields. This issue has been a particular priority in Ethiopia, Uganda, and Malawi, where survival rates have been lower than in other countries. In 2023, 1AF undertook extensive analyses of different species’ germination rates, improved systems for seed procurement and seedling distribution, and revamped related approaches to farmer training. It is expected that 2023 survival results will be available in Q2 and Q3 once data collection and processing has been completed. Malawi has emerged as a key country for generating and sharing learnings on this topic, having improved tree survival in a relatively short period (from an estimated 30% in 2021, to 35%+ today).

- **Carbon Financing**: In 2023, carbon sequestration continued to represent a promising area for 1AF’s agroforestry R&D, in order to understand and optimize direct environmental impact, and for the potential of carbon financing to help fund the organization’s long-term goal of supporting the planting of a cumulative 1 billion trees. Last year, 1AF expanded its Zambia carbon pilot, launched reconfigured carbon pilots in Tanzania, and scoped and initiated its first-ever carbon pilots in Malawi and Rwanda.

  - **Zambia**: 1AF is currently in the third year of this pilot, making it the organization’s most advanced carbon program. In 2023, Zambia’s alley cropping pilot expanded from approximately 1,000 to over 4,500 farmers. The average farmer planted about 500 trees with a total of about 2.25 million trees planted (sourced from 50+ decentralized nurseries). Species selected address soil health, boundary establishment/erosion control, and horticulture/fruit production. Last year 1AF successfully enrolled its first cohort of pilot farmers in Rabobank’s Acorn platform. This is the vehicle through which tree measurement (via remote sensing) occurs. With Acorn’s support, the Zambia pilot has also completed its Project Design Document (PDD)\(^2\) and is in the final stages of certification (under Plan Vivo’s methodology).

  - **Tanzania**: After model iteration in 2021 and 2022, 1AF’s Tanzania carbon pilot has now settled on an integrated agroforestry model wherein farmers intercrop trees with staple crops, receiving incentive payments to keep the trees in the ground. These payments are reinforced by co-benefits from the trees themselves, such as fruit/nut production, soil enrichment, and pruned foliage for firewood. With technical support from The Nature Conservancy, 1AF has enrolled a cumulative 1,200 farmers to participate in two near-identical pilots in South Kilolo and Wanging’ombe districts (representing tenfold growth from 2022). Simultaneously, Tanzania is in the process of drafting a PDD for eventual certification with Plan Vivo.

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\(^2\) This key document includes details like the project’s location, operational approach, and risks. It is needed for carbon certification and has to be approved to ensure that our project can be externally audited for carbon financing.
Unfortunately, in late 2023 the future of the Tanzania carbon pilot became less certain in the face of new carbon regulations introduced by the country’s government. These regulations impose an upfront 1% fee on all projected carbon revenues from offset initiatives, in turn threatening to increase participation/enrollment costs to the point where they are unaffordable for 1AF’s target demographic of poor smallholders. As the organization continues the Tanzania pilot’s certification process, 1AF is now lobbying alongside other carbon stakeholders in the country in the hope of encouraging the government to amend the policy. 1AF hopes to have more clarity on the viability of future pilot operations by year-end.

- **Malawi**: Malawi, with significantly smaller average land sizes than Zambia or Tanzania, represents an important new country for 1AF’s exploration of carbon agroforestry. Successes there have the potential to be more widely replicated across 1AF’s typical areas of operation. In 2023, the program actively tested two carbon agroforestry models: integrated agroforestry (planting diverse tree crops alongside annual crops in farmers’ fields), and reforestation (planting trees for sustainable harvest and soil improvement on degraded communal lands). The first pilot was launched with 600 farmers in two districts, Zomba District (Southern Region) and Dedza District (Central Region), whereas the reforestation program (which uses community land to restore forest with a combination of new tree planting and natural regeneration) began early testing with 50 farmers in a single community in Zomba. Only 20% of farmers enrolled in these programs were existing 1AF clients, indicating that the pilots are reaching an entirely new demographic of farmers; while demographic analyses remain underway, the trend suggests that ultra-poor farmers who cannot afford to enroll in 1AF’s core program package are drawn to the relative affordability of the carbon agroforestry package (i.e., the Malawi’s average core program credit size is ~$140, whereas the size of the tree package is ~$15).

- **Rwanda**: In Q4 2023, Rwanda became 1AF’s newest country for exploring carbon-focused agroforestry with the launch of an intensive agroforestry initiative that offers farmers customizable tree packages based on their needs, expected tree benefits, and land size. In this program, farmers enroll available land in 25 square-meter increments where trees will be planted on previously deforested land. Collectively, the carbon packages include a wide range of tree types, including nitrogen fixing, soil health, timber, fruit, and nutrition-promoting species. The program is now underway on a trial basis with 1,050 farmers in six sectors. Results from this initial season will be essential for testing the underlying assumptions of the model (specifically whether additional flexibility/tailoring will improve tree uptake and permanence), helping to inform the future trajectory of 1AF’s carbon-focused programming in the country. Note that this carbon-oriented program is not part of 1AF’s regular tree planting program, and is instead tailored towards carbon credit eligibility.