



photo credit: Adam Finch/Root Capital

Climate Resilience Roadmap

Annual Report 2022

Climate change is an existential crisis for smallholder farmers across the world. From historic droughts in Kenya to catastrophic rains and landslides in Peru, extreme weather, unstable precipitation patterns, and rising temperatures are devastating harvests and incomes. Without stable earnings, it's difficult for farmers to invest in practices and infrastructure that would help them better withstand climate impacts. Despite these barriers, rural communities that are most vulnerable to climate impacts are often the most innovative and driven to find climate solutions. With the right support, these communities can be powerful champions of climate action.

In 2020, Root Capital launched our [Climate Resilience Roadmap](#), a six-year strategy to support urgent climate action in rural communities by building the resilience of agricultural enterprises serving smallholder farmers. We resolved to provide businesses with the information, management skills, and capital needed to confront the climate crisis by nearly doubling our lending to businesses committed to climate action in rural communities, expanding our climate resilience advisory services across our global portfolio, designing and piloting new forms of climate finance, and sharing our learning with others to maximize impact.

Halfway through our strategy, we have made significant progress against our goals and generated valuable insights about how best to support small and growing agricultural enterprises to ramp up climate action. **In 2022, we expanded the scope and reach of our agronomic and climate resilience advisory services, deployed new climate finance products, and partnered with others to scale up climate solutions.** All of this brings us closer to achieving our ultimate goal: building a more resilient future for rural communities.

While we have seen encouraging progress to date, the climate crisis is immense and will require the collective efforts of us all to solve it. **We're only as strong as our community of clients, supporters, and partners.** Thank you for joining us on this journey.

2022 BY THE NUMBERS

\$99M

Climate Finance Disbursed To
Vulnerable Communities

(Annual Goal: \$75M)

56%

of Lending Clients Were Climate
Action Leaders

88

Businesses Receiving Agronomic and
Climate Resilience Advisory Services

(Annual Goal: 69)

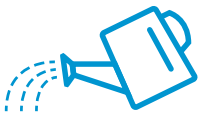


GROW

Grow our lending to businesses committed to climate action in rural communities

Through our ongoing lending activities, Root Capital unlocks the success, growth, and resilience of agricultural enterprises on the front lines of climate change. These enterprises provide invaluable support to their suppliers, offering resources and training for farmers to invest in regenerative agriculture, renewable energy, and ecosystem preservation. As part of our Climate Resilience Roadmap, we seek to increase our lending to “climate action leaders”—businesses already making substantial contributions to mitigating greenhouse gas emissions

or assisting smallholder farmers in adapting to climate risks. **Since the start of the Roadmap, we’ve grown our portfolio of climate action leaders by 80%, from 63 businesses in 2019 to 114 in 2022.** Climate action leaders now represent 56% of our global lending portfolio. In 2022 alone, we disbursed \$98.8 million to help climate action leaders sustain investments in projects such as reforestation, regenerative agroforestry farms, or climate-ready crops like sorghum.



CULTIVATE

Cultivate business and farmer capacity to mitigate and adapt to climate change

Through our agronomic and climate resilience advisory services, Root Capital builds business capacity to prepare for climate change and create a resilient future. As climate impacts—as well as business capacity to address them—differ across regions, Root Capital works hand in hand with clients to develop locally relevant solutions. For businesses that have robust technical assistance capacity, we share data on local climate risks and guidance on how to address these risks through practical climate mitigation or adaptation strategies. For businesses with less robust technical assistance functions, we first strengthen that critical capacity through internship placement programs, digital services, and training on agronomic best practices.

In 2022, we provided agronomic and climate resilience advisory services to 88 clients across three continents. In East Africa, advisory services included a mobile agronomic messaging service to complement businesses’ in-person training. The service provides farmers with text messages about climate-smart practices, such as how to create and apply compost. One coffee farmer in Rwanda said the messages helped her remember when to apply certain practices and balance coffee farming with her other responsibilities. In an evaluation of this service funded by the IKEA Foundation, 85% of farmers receiving messages reported learning new information and 72% reported additional use of good agricultural practices.



IMPACT STORY: Climate Adaptation Planning in the Peruvian Amazon

“You can tell the climate is changing, with increasing temperatures. It isn’t like it was 40 years ago. There is a noticeable difference in the seasons. The rainy season comes earlier or later than it should.”

—Coffee farmer member of CENFROCAFE, Peru

In 2022, Root Capital worked with seven coffee cooperatives in Peru to co-design data-driven climate change adaptation plans. The engagement began with climate vulnerability workshops to determine where each business was in its climate journey, where it wanted to go, and what it would take to get there. The workshops were facilitated by Root Capital and included relevant cooperative employees (e.g., general managers, agronomic technicians). In post-workshop evaluations, **enterprise staff said that they highly value Root Capital’s climate advisory services, which provide training that is not otherwise available to them;** staff also increased their knowledge of climate change and its expected impacts on coffee production in Peru. After the workshops, cooperatives worked with Root Capital advisors to develop climate adaptation plans tailored to the risks and needs of each business. While each plan is customized to the enterprise, common activities include creating demonstration plots to exhibit

regenerative agricultural practices, expanding tree nurseries for climate-resilient crops or shade trees, disseminating real-time weather and agronomic alerts, and providing ongoing technical assistance for farmers. For six out of the seven cooperatives, this represented their first written climate plan.

All seven businesses also received a \$20,000 resilience grant to offset the initial costs of implementing identified climate actions. Four of the seven clients used the grants to create “Resilient Farm” contests among their suppliers, funding farmers who carried out vulnerability assessments of their land. These farmers also received additional technical support to implement climate-resilient practices like mulching or the creation of erosion barriers to protect soil health. Prior to the selection of winners, farmers took part in learning exchanges where they could hear about their peers’ experiences creating resilient farms, as well as share their own. Winners were selected by a jury and awarded farm equipment and tools. More “Resilient Farm” contests are expected in 2023.

With support from Root Capital, these seven cooperatives are investing in the future of their farmers and their business, as well as the ecosystem on which they depend.



Innovate financial solutions to unlock business investments in climate action

Approximately 95% of the world's farms are small scale, yet the sector only receives 1.7% of global climate financing. Small deal sizes, high transaction costs, and high risk relative to other sectors already limit the flow of capital to smallholder agriculture. Increasing risk and uncertainty tied to climate change only compound this longstanding market failure—with potentially devastating consequences for vulnerable communities.

To help close this financing gap, Root Capital is developing and testing climate finance products (loans and grants) that meet the needs of smallholder agricultural businesses and farmers. Our innovation centers on scaling climate investment by businesses that are embedded in smallholder supply chains—ones that provide farmers

with access to high-value markets, training, and other resources, but do not focus on new climate technologies or services as their core business model. As such, our work requires us to understand business demand for climate action across a diverse portfolio (see more detail below); identify which climate action priorities translate into clusters of viable investment opportunities; and customize our loan products to serve these emerging opportunities.

In 2022, informed by client priorities, we **piloted five climate finance loans in Central America and East Africa, disbursing \$445,000 for business investments** in soil regeneration and renewable energy. Recognizing that not all climate investments are suited to debt

What do agricultural enterprises think about climate action?

To ensure that our climate finance innovation agenda prioritizes what businesses really need, we spent much of the first half of the Roadmap listening to our clients. This included a global survey conducted in collaboration with Bain & Company. We heard:

- **Climate action is a high priority.** Ninety-five percent of surveyed clients (88 businesses) have experienced climate-related shocks in the past three years; 95% of these clients say the shocks affected their business. Across geographies, climate action is a “high” or “highest” priority for more than 90% of clients.
- **Enterprises are already implementing climate actions and plan to do more.** Ninety-three percent of surveyed clients have invested in climate actions in the past three years, and 97% have plans to invest in the next three years. Primary investments include input distribution, farmer training, input production (e.g., nurseries), landscape-level activities (e.g., reforestation), and climate-smart business infrastructure.
- **Though average investment sizes are small, our clients' collective investment in climate action is approaching scale.** The average investment per activity was \$20,000. But most clients are investing in multiple climate actions, for a total average of \$150,000 per client.

- **Despite client demand, there remains a financing gap.** Limited access to external financing restricts clients from fully investing in climate actions. About 60% of past climate actions were financed solely from internal business funds. Clients report limited sources of climate finance, especially non-grant sources of capital. But when clients can access external financing, they spend two to three times more on climate action investments.
- **Even when clients have access to climate financing, they often find it difficult to “pull the trigger,”** especially to invest in climate actions that do not immediately generate additional revenue.

This analysis, coupled with the lessons learned from our initial climate finance pilots, helped us identify three areas for further development and testing of climate financing products in 2022 and beyond:

1. Maintenance or introduction of farm-level climate-smart practices, such as organic agroforestry and regenerative soil management;
2. Expansion of business nurseries for climate-resilient crops, shade trees, and/or cover crops; and
3. Installation of climate-smart business infrastructure, such as clean energy and water-efficient processing facilities.

financing, we also disbursed **\$286,000 in resilience grants** to defray the costs of 16 climate adaptation plans co-created with Root Capital's advisory services. While a promising start, this represents a first step toward closing the financing gap, even within our own portfolio. Over the next three years, we plan both to scale our own climate financing, and to exchange learning with other impact investors to collectively scale up climate finance for agriculture (see Amplify section).

As we've pursued our innovation agenda, one of the main challenges we've encountered is how to design for scale while maintaining focus on local needs and solutions. When it comes to adaptation and resilience, investment focus, size, financial return, and other

dynamics can vary significantly across farmers and businesses, especially across countries and supply chains. This variability presents challenges to investors seeking to build a pipeline of similar deals to gain operating efficiencies.

To address this challenge, Root Capital has leveraged our agronomic and climate resilience advisory service. Advisers help businesses identify locally-relevant climate investment opportunities and present them in a standardized way to our lending team. While still a work in progress, we see enormous potential in advisory-enabled climate lending: this approach unlocked 85% of climate loans disbursed since 2020.



Amplify learning to encourage adoption and replication by others

While we've made great strides toward increasing climate resilience in partnership with our clients, we know that promoting climate action globally is only possible when we work at the sector level. To that end, we build and share the impact case for farmer-allied businesses as local agents of climate action to drive greater support and capital to smallholder communities.

This year, we saw increasing recognition of the need for more climate finance for smallholder agriculture, particularly to help farmers adapt. At COP27, global leaders—especially from nations most impacted by climate change—called for increased investment in climate adaptation immediately, alongside critical investments in mitigation. As a lender working at the intersection of smallholder farmer livelihoods and climate action, **Root Capital was invited to participate in multiple expert working groups, learning efforts, and conferences related to scaling climate finance for agriculture.** For example, our staff spoke on a panel about innovation for climate change adaptation at the Sankalp Africa Summit and participated in the [ClimateShot Investor Coalition](#), a group of leaders in the impact investment community working to accelerate climate financing for agriculture and food systems under the Glasgow Breakthrough Agenda on Agriculture. Through these partnerships, we will continue to share what we've learned in our climate finance pilots, as well as what we're hearing directly from agricultural enterprises on the front lines.

In addition, we began working with partners to explore how collective action might increase access to carbon payment models, such as carbon premiums or credits, for smallholder farmers and businesses. Many clients in our portfolio use planet-friendly practices like agroforestry or organic soil management that reduce emissions; yet they are not recognized for their important contributions in the fight against climate change. **Root Capital envisions a future where the market rewards smallholder farmers and enterprises for their carbon benefits and incentivizes them to scale their positive carbon practices.**

Over the last two years, we have been pleased to partner with [The Chain Collaborative](#), the [Cool Farm Alliance](#), [Cooperative Coffees](#), the [Inter-American Development Bank](#), and the [Sustainable Food Lab](#) to pilot a carbon premium model for several coffee cooperatives in our portfolio, informed by carbon footprint data collected via Root Capital Digital Business Intelligence Advisory. **Root Capital and our partners [shared](#) new primary data addressing industry knowledge gaps around the carbon removal potential of agroforestry coffee farms.** [This data](#) shows that small-scale, organic agroforestry coffee farms can operate with carbon-neutral or even carbon-negative footprints, demonstrating their potential as an important natural climate solution. In 2023, we will continue sharing these results, as well as forging new partnerships with allies seeking to increase farmer access to carbon payments.



photo credit: Adam Finch/Root Capital

PROGRESS TOWARD 2025 GOALS

CLIMATE FINANCE DISBURSED

\$98.8M/YEAR

2025 GOAL: \$105M/YEAR

BUSINESSES RECEIVING AGRONOMIC AND CLIMATE RESILIENCE ADVISORY

116

2025 GOAL: 125

CLIMATE ACTION LEADERS REACHED

114/YEAR

2025 GOAL: 125/YEAR

FARMERS AND EMPLOYEES REACHED VIA CLIMATE FINANCE OR ADVISORY

472K

2025 GOAL: 500K



rootcapital.org

Thank you to our growing community of dedicated climate funders
for making this work possible!