

# NURU ETHIOPIA

## 2021 IMPACT REPORT



RAY MARSHALL CENTER FOR THE STUDY OF HUMAN RESOURCES

JUNE 2022

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## EXECUTIVE SUMMARY

In 2021, Nuru Ethiopia (NE) offered interventions in cooperative and rural livelihoods programming with 7,475 participant households in Gamo and Gofa Zones of Southern Nations, Nationalities, and Peoples' Region (SNNP) of Ethiopia. The intervention activities achieved the following outcomes:

### **Agricultural Impact**

- By participating in the diversified livelihood interventions, Nuru farmers were able to generate \$401 USD of extra income, an increase of 73 percent compared to their 2020 baseline value of \$233 USD.
- Nuru Ethiopia farmers increased cash crop yields by 72 percent compared to their 2020 baseline. This achievement is more than double the yield increase target of 32 percent.

### **Cooperative Impact**

- NE-supported farmer organization businesses achieved an average SCOPEinsight score of 4.1 out of 5 demonstrating competitiveness at national, regional, and global levels for agricultural farmer organization businesses.
- 88 percent of NE-supported farmer organizations have achieved net profitability from their business operations as of 2021, which exceeded the target of 70 percent of businesses profitable in a given year.

Nuru interventions have led to higher incomes for Nuru farmer households while building a foundation of sustainable cooperative businesses. In 2021, Ethiopia continued to cope with the ongoing conflict in the Northern Tigray region, alongside the continued recovery from the COVID-19 pandemic, which continues to have an impact on supply chains worldwide. Although peace negotiations for the Tigray conflict have progressed since 2021, new threats from the war in Ukraine and rising domestic inflation are impacting the supply chains of key agricultural inputs and products in 2022. Nevertheless, Nuru Ethiopia farmers were able to dramatically increase their income from cash crops, and cooperatives have continued to operate successfully according to the rigorous analysis performed on the 2021 impact data. Moving forward, these promising results will serve as a launch point for continued operations in cash crops, and Nuru Ethiopia's new union approach detailed in the report below.

## FARMER ORGANIZATIONS

### INTRODUCTION

Farmer organization businesses are a cornerstone of sustainability in the Nuru Model. To successfully exit, replicate, and scale to new communities and zones in Ethiopia, Nuru must evaluate the capacity of emerging farmer organizations. Nuru must determine whether the farmer organizations can sustain the meaningful choices delivered to its farmer members. In 2021, NE worked with 32 farmer organizations composed of 31 primary cooperatives and one cooperative union. NE provided capacity development, seed capital, commercialization assistance, and other critical business support services to these farmer organization businesses. In 2022, NE is shifting its strategy to focus on union cooperative development. This new strategy will ensure the farmers supported by the primary cooperatives gain greater negotiation power with buyers and can develop diverse financial, market, and technology partnerships on a larger scale. However, the following impact report section only covers farmer organization performance in 2021 and includes the 31 primary cooperatives, as well as the cooperative union.

### METHODOLOGY

#### Measurement approach

After several years of providing direct resources and support, Nuru International (NI) and NE deployed the SCOPEinsight tool to assess the overall health of NE's eleven cooperatives established between 2016 and 2018.<sup>1</sup> SCOPEinsight generates internationally benchmarked assessments that measure the operational and professional efficiency of NE-supported agribusinesses. The SCOPEinsight assessment is linked to a database with over 4,000 comparable farmer organizations operating across over 40 countries. The consistency and comparability of SCOPEinsight assessments help to limit bias and allow NE to offer tailored interventions and technical assistance for partner cooperatives based on scores across eight dimensions (Figure 1).

#### Data collection

In 2021, NE and NI followed a modified approach to conduct SCOPEinsight assessments of Nuru-supported farmer organizations. Instead of outsourcing the assessment work—as was the case in the previous two years—NE and NI decided to use their internal capacity to carry out the assessments (data

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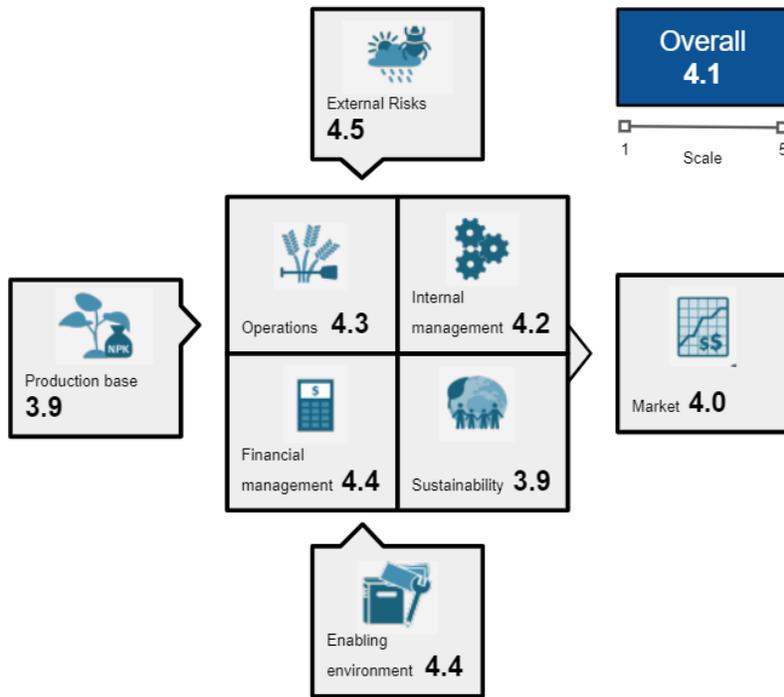
<sup>1</sup> <https://scopeinsight.com/>

collection). Accordingly, seven NE staff, most of whom were familiar with SCOPEinsight assessments, took a 3-week SCOPE Basic online training, organized by SCOPEinsight, in July 2021. All the staff completed the training successfully and became SCOPEinsight accredited (certified) assessors. After the training, five of the certified staff carried out the assessments (data collection) in the field while two of the staff were engaged in coordinating and facilitating the process as well as reviewing draft reports with the cooperatives.

## RESULTS AND DISCUSSION

SCOPEinsight basic assessments measure operational and professional efficiency against eight dimensions (Figure 1) and over 90 indicators. These dimensions and indicators are scored on a scale of 1 to 5 points with a final aggregate score provided for international benchmarking. The final profitability metric represents the percentage of farmer organizations that achieved net profits during the most recent fiscal year of operation on a July to June calendar. The final reports are distilled into briefs and translated. These briefs outline recommendations for each cooperative to implement in order to improve their operations, and subsequently, future SCOPEinsight scores.

Figure 1. SCOPEinsight average scoring matrix in 2021



**NE-supported farmer organizations averaged a SCOPEinsight score of 4.1 out of 5, far exceeding the target agricultural business benchmark of 3.3. Moreover, as of 2021 88 percent of NE-supported farmer organizations have achieved net profitability from their business operations, which exceeded the target of 70 percent of businesses profitable in a given year.**

## CONCLUSION AND RECOMMENDATIONS

In 2021, NE-supported farmer organizations met and exceeded their benchmark levels of performance for business professionalism and profitability. Given the ongoing conflict in the Tigray region and slow economic recovery from COVID-19, these results prove the robust nature of NE’s interventions in cooperative development and agribusiness professionalization.

In 2022, NE is implementing a union-focused strategy that will aim to shift much of the technical training and oversight capacities from NE to the unions that NE supports, which currently include two unions in the SNNP Region. By shifting their strategy to focus on union cooperative development, Nuru can ensure the farmers supported by the primary cooperatives gain greater negotiation power with buyers and can develop diverse financial, market, and technology partnerships. It also creates more continuity between the communities Nuru serves and the national-level federations that can advocate for long-term

contracts and policy changes. Future SCOPEinsight and profitability assessments will clarify the impacts that the union approach has on cooperative performance and profitability. **In 2021, the NE-supported cooperative union scored an impressive 4.4 out of 5.0 on a SCOPEinsight assessment**, underpinning the union's capacity in undertaking much of the cooperative support.

## RURAL LIVELIHOODS

### INTRODUCTION

The Nuru Ethiopia Rural Livelihoods (RL) program aims to build the capacities, assets, and income of farmer households (farmer organization members) to achieve diversified livelihoods and to cope with shocks. To accomplish this aim, NE supports activities that impact cash crop yield, livestock, food security, and household income. Agricultural extension, rural livelihoods field officers, and cooperative field officers provide technical training, extension services, and cooperative support structures through formal partnerships with the Government of Ethiopia’s primary cooperative support institutions. Livelihoods field officers focus on agricultural training and extension with farmers. The cooperative field officers are responsible for coaching and training primary cooperative management teams and leading financial inclusion activities with women cooperative members.

The Nuru Ethiopia Monitoring and Evaluation (M&E) team supports this work by conducting an annual assessment (Table 1) addressing the evaluation question: *What is the impact of the Nuru Ethiopia RL Program?*

**Table 1. Rural Livelihoods survey timeline and sample size**

Study Group	Sample Size: Cash Crops	Sample Size: Financial inclusion	Sample Size: Livelihood diversification	# of enumerators	Data collection dates
Nuru	1408	356	356	10	15-25 March 2022

### METHODOLOGY

In 2021, NE fully integrated cash crop program activities with monitoring, evaluation, and learning activities after a successful pilot season in 2019. To inform the small-scale pilot activities in 2019, NE conducted a preliminary baseline evaluation of mung bean and groundnut yields with a very limited sample survey paired with secondary research. Although this was the baseline value previously used, a programmatic shift towards cash crop activities that resulted in more comprehensive data collection methods and a larger sample size of farmers in 2020 has reset NE’s cash crop yield and income baselines to the 2020 value, which is referenced in this report.

#### Cash Crops

NE delivers training, extension, and loan packages for the production of mung beans and groundnuts as

cash crops in partnership with farmer organizations. As of 2021, NE decided to focus monitoring and evaluation methods related to agricultural activities exclusively on these cash crops as they represent a more meaningful income-generating activity for Nuru-supported farmers. The cash crop program has been successful and scaled in support of the upcoming 2022 NE union strategy and can be adapted to other higher value and more stable crops that offer farmers the highest potential to generate significant real income gains. The performance of the cash crop activity is assessed with an overall combined household income model that accounts for costs of production and estimates revenue from measures of productivity and sales prices for mung bean and groundnuts.

It should be noted that NE continues to monitor the production of staple food crops (maize and haricot bean) during periods of food insecurity. However, the delivery of services to farmers, like the provision of maize seed and fertilizer is primarily in the hands of the primary cooperatives and cooperative unions and is not a core function of NE-supported activities.

### **Crop Equivalent Yield**

For purposes of comparability across Nuru farmers and against the baseline, Nuru employs a single composite indicator of crop performance: Crop Equivalent Yield (CEY). The CEY calculation converts the performance of select crops into one standard average for kilograms per acre. This is done using the farm-gate prices per kilogram of mung bean and groundnut. One way to interpret this calculation is to ask: *If farmers only grew mung bean or groundnut this season, how much of either would they have produced?*

Since crop yield is measured as production amount per land area, measuring the land size is a critical part of the yield calculation. Whereas land size was previously measured using land pacing methodology, NE changed its approach this year, having survey enumerators directly measure the cash crop field perimeter of each individual farmer, and then performing calculations to find the area. The average land size per farmer was then calculated using the combined survey data.

### **Crop Equivalent Yield Income**

For cropping activities, revenue is calculated by multiplying the CEY by the average farm gate price. The costs are calculated using the cost of farm inputs from local suppliers that include improved seeds and biofertilizers optimized for the production of mung beans and groundnuts. The net profit or loss is calculated by subtracting the costs from revenue.

### **Livelihood Diversification Income**

Livelihood diversification programming facilitates training and loans for the cultivation of fodder and care of small ruminants (goats or sheep) intended to be resold at the market. The impact of livelihood diversification activities is assessed based on income, which accounts for costs including the loan for the purchase of two goats or sheep along with other animal care-related expenses (medications and fodder multiplication), and the revenue generated from the sale of the same two small ruminants. These data points are used to calculate the profit or extra income generated from the program activity.

### Combined Household Livelihood Income

NE programming offers diversified and complementary income-generating activities, including cash crops like mung bean and groundnut, and small ruminant production. To estimate the impact on household income, there is an accounting of revenue, costs, and profits based on program and market data from Gamo and Gofa Zones of the SNNP region.

## MONITORING

In addition to yearly impact evaluations focused on agricultural yield and profits, the NE M&E team collects monitoring data throughout the year. While evaluations focus on a sample of farmers, program teams monitor the entire Nuru farmer population. The monitoring data provides the NE team with quarterly information for real-time data-driven decision-making. In 2021, the monitoring data show that the NE Rural Livelihoods Program was on target for enrollment in farmers, as well as women household members participating in the livelihood diversification intervention.

**Table 2. Rural Livelihoods Program monitoring data**

Indicator	Performance	Target	Actual
Number of farmers	<i>On Target</i>	7,500	7,475
Cash Crop Participants	<i>On Target</i>	2,000	1,519
Women sustaining saving behavior and accessing loans for livelihood diversification from cooperative fund	<i>On Target</i>	3,500	3,668

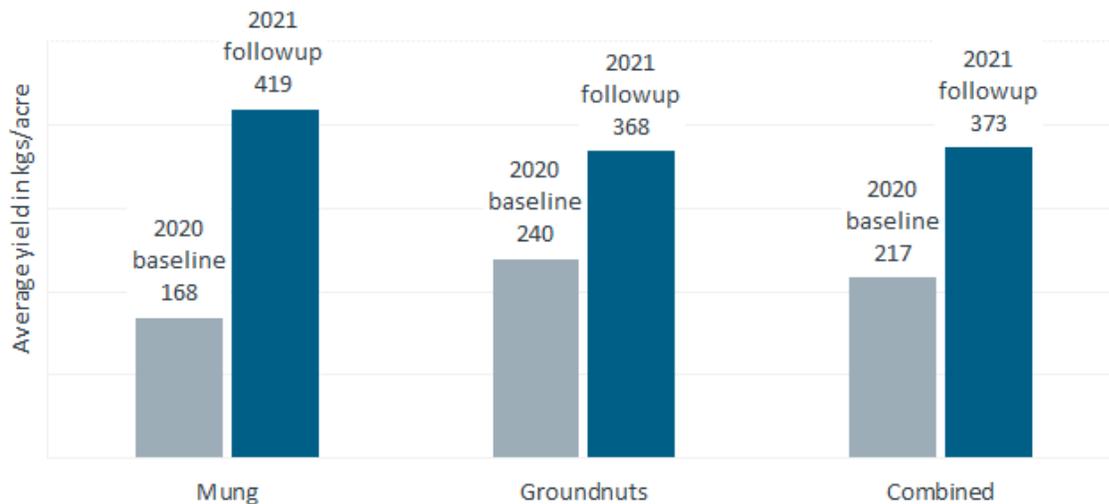
## RESULTS AND DISCUSSION

### Agricultural Yield

At baseline in 2020, Nuru farmers had an average cash crop CEY of 217 kgs/acre. Over the past year,

Nuru farmers have experienced a 72 percent increase in their yield with an average cash crop CEY of 373 kgs/acre, far surpassing NE's target of a 32 percent yield increase over baseline. The dramatic increase seen in cash crop yields can be attributed to training that NE provided to farmers on better agricultural practices (BAPs), including farmers' adoption of row planting, application of biofertilizers to improve nitrogen fixation, pest control methods, better harvesting technologies, and better-quality seeds. Prior to NE's intervention, mung beans and groundnuts were not commonly grown crops, meaning that agricultural extension and technical assistance were not widely available for either of these cash crops. This highlights why NE's intervention was absolutely necessary and profoundly impactful at the individual farmer level.

Figure 2. Trends in yields over time



### Agricultural income

In 2021, Nuru households generated an average of \$350 USD of profit from the sale of cash crops. In 2020, Nuru households only generated \$189 USD from the sale of cash crops. Thus, Nuru households experienced an 85 percent increase in the income derived from cash crops from 2020 to 2021.

Figure 3. Agricultural income model (USD)



## Livelihood Diversification

The NE Livelihood Diversification (LD) loan product is integrated with BMP training and extension for goat and sheep (shoat) fattening and is paired with financial inclusion activities to improve savings adoption amongst women. Nuru women savers qualify for a loan equivalent to two or more goats or sheep if they repay their previous loans 100 percent and meet savings requirements. NE provides working capital for three rounds of loans. The funds are added to the primary cooperative revolving funds to support the activity in the long term. The goal of these activities is to increase the resilience and economic empowerment of women in Nuru farmer households, increase their access to financial resources, and enhance their leadership positions in cooperative businesses.

**Figure 4. Customer satisfaction among Nuru farmers**



The vast majority of the participants would recommend the program activities to their neighbors (97 percent), which is indicative of high satisfaction with the LD activities (Figure 4). The vast majority (96 percent) of participants are also willing to share the knowledge they have gained from the program.

Overall, a quarter of participants reported selling both shoats while nearly two-thirds reported selling at least one shoat. Figure 5 illustrates the timing of these shoat sales.

Figure 5. Timing of shoat sales

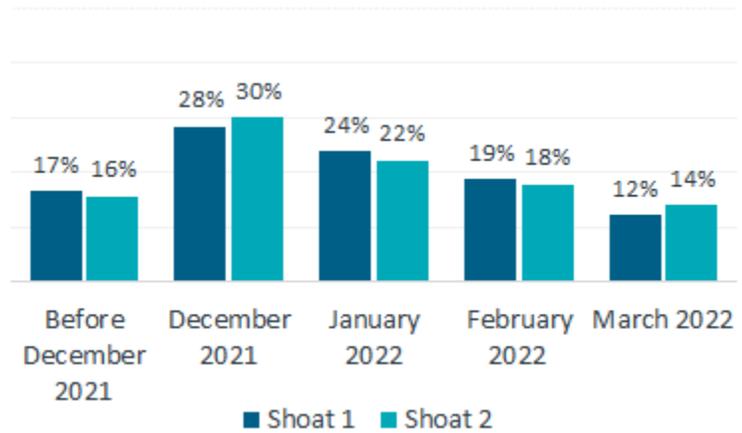
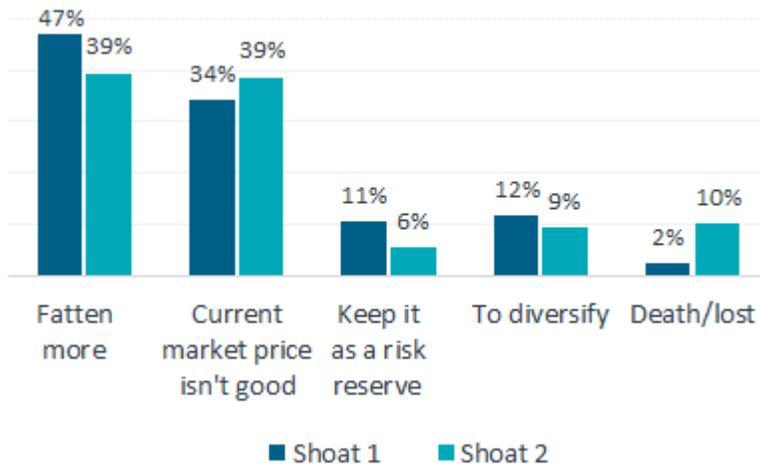


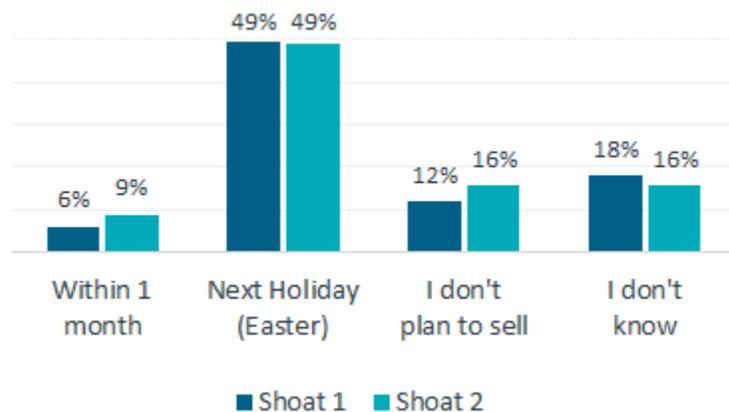
Figure 6. Reasons for not selling shoats



Among farmers who did not sell their shoats as of March 2022, the most common reasons for not selling were to fatten them more and because the current market price was inadequate.

About half of these farmers planned to sell their shoats during the next holiday (Easter).

Figure 7. Plans to sell shoats



### Livelihood Diversification Income

In 2021, women generated an average of \$51 USD of profit from the fattening and sale of two shoats. The costs are inclusive of the purchase price of the animal and average costs for additional medications and feeds. In 2020, participating women only generated \$44 USD from the fattening and sale of two shoats. Thus, women experienced a 17 percent increase in the income derived from shoat fattening activities from 2020 to 2021.

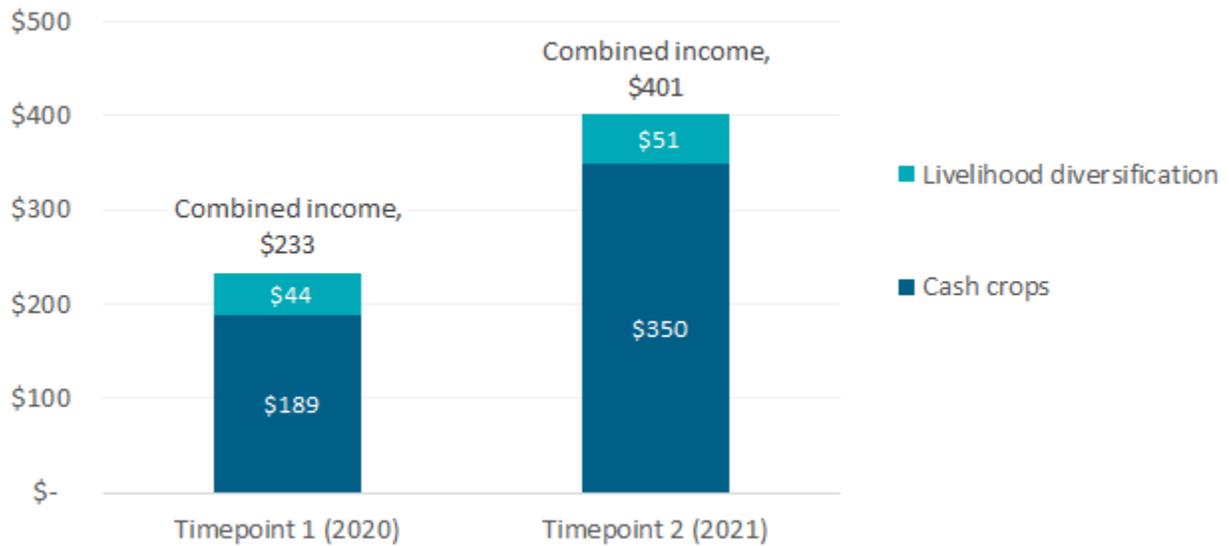
Figure 8. LD income model (USD)



### Combined Income Model

Improving on-farm and household income is a key feature of the NE RL Program. Households that participate in both activities, cash crop production (i.e. mung beans and groundnuts), and shoat fattening, have an opportunity to generate extra income from those activities. Participation in these activities generated an additional \$401 USD per household on average (Figure 9). Importantly, the income generated from the cash crops was a significant driver of extra income due to higher local, regional, and international market prices for these crops and products. For example, farmers could sell a kilogram of maize at the market for roughly \$0.23 USD in 2020, whereas this past year focusing on cash crops, farmers were able to sell a kilogram of groundnut for around \$2.00 USD. **By participating in both livelihood diversification and cash crop programs, Nuru farmers were able to increase their incomes by 73% over the 2020 baseline.**

Figure 9. Combined livelihood income model



## CONCLUSION AND RECOMMENDATIONS

Nuru Ethiopia was able to offer households and farmer organization members strong support throughout 2021. Nuru farmers were able to realize an increase in agricultural income and greater resilience through diversified livelihoods. The meaningful choices provided by Nuru Ethiopia resulted in the following positive results for Nuru farmers:

- Nuru Ethiopia farmers increased crop yields by 72 percent compared to their 2020 baseline. This achievement is more than double the targeted yield increase benchmark of 32 percent.
- By participating in the diversified livelihood interventions, Nuru farmers were able to generate \$401 USD of extra income, an increase of 73 percent compared to their 2020 baseline.

## DISCUSSION & CONCLUSION

2021 was fraught with challenges beyond those typical to smallholder agricultural production in Ethiopia, such as increasingly erratic rainfall and pest outbreaks. The instability and insecurity caused by the ongoing COVID pandemic and locust swarms were exacerbated by persistent domestic conflict in the Tigray region, fueled by historic, political, and ethnic grievances. The resilience of NE's development interventions was tested by these multi-dimensional disruptions as other local NGOs across Ethiopia ceased activities due to the shocks. Yet, the NE team remained vigilant, safe, and committed. They continued to support the communities in which they live and work and were able to adapt and deliver vital agricultural extension services and productive assets that would have been otherwise unavailable to those farmers in rural communities.

In 2022, NE looks forward to scaling its programs with a new union approach, and with a continued focus on cash crop production. This approach will allow for greater impacts for many more farmers and cooperatives through engagement with large-scale cooperative unions, which can offer more direct technical assistance and support to the farmers with which NE works. Unions additionally act as a sustainability engine for behavior change communication that allows communities to adapt to evolving risks like pandemics, climate change, and conflict, which NE encountered in 2021.

Despite these challenges, the primary findings of this report include notable positive impacts in the domains of cooperative professionalism and profitability, increases in cash crop yields, and combined income generation through livelihood diversification;

- By participating in the diversified livelihood interventions, Nuru farmers were able to generate \$401 USD of extra income, an increase of 73 percent compared to their 2020 baseline value of \$233 USD.
- Nuru Ethiopia farmers increased cash crop yields by 72 percent compared to their 2020 baseline. This achievement is more than double the yield increase target of 32 percent.
- NE-supported farmer organization businesses achieved an average SCOPEinsight score of 4.1 out of 5 demonstrating competitiveness at national, regional, and global levels for agricultural farmer organization businesses.
- 88 percent of NE-supported farmer organizations have achieved net profitability from their business operations as of 2021, which exceeded the target of 70 percent of businesses profitable in a given year.