



Growing the movement for change

Boosting incomes and soil health for women smallholder farmers, through regenerative agriculture



What we've learned so far

Hand in Hand's three-year pilot project supported by IKEA Foundation successfully supported almost 2,000 smallholder farmers in Kenya to transition their farms towards regenerative agricultural practices, resulting in a 155% average income increase, with 99% of farmers reporting benefits. Here, we share some of our key learnings from this project.



1,948

Farmers reached
(80% women)



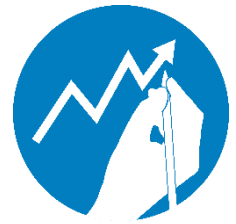
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Counties in Kenya
(Busia and Bomet)



99%

Of farmers
reported benefits



155%

Average on-farm
income uplift

The problem

Despite agriculture playing a pivotal role in Kenya's economy, accounting for approximately 26% of Kenya's GDP and employing 70% of the rural population, years of bad harvests and low yields are trapping farmers and their families in a cycle of poverty. Smallholders struggle with insufficient inputs, lack of capital, droughts, deforestation, poor soil quality and pests. Most lack the money, skills and tools to improve their yields, relying on costly, resource-intensive practices on their farms (monoculture, synthetic fertilisers), but lacking the money and time to do so consistently. Soil fertility and land degradation are also pressing issues; the result of continuous cropping, soil erosion and an absence of organic fertilisers (FAO, 2018). With over 30% of Kenya's land severely degraded, the country's economic losses amount to 3% of GDP annually (UKPACT, 2023). Thin and distorted agricultural markets often leave farmers with little price visibility or negotiating power, creating a further disincentive to adopting new approaches.

“Typically, farmers increased their profits by an average of 155%, challenging the assumption that there’s a trade-off between income generation and sustainable farming.”

Farmers are resistant to shift to new methods worried to see dips in profits, further disincentivizing change. These challenges create a self-perpetuating cycle of low yields and income, damaging the environment and deepening poverty.

Our solution

Working with the IKEA Foundation and UN FAO advisor Dr Pablo Tittonell, Hand in Hand developed an income driven approach to combat rural poverty through regenerative agriculture. This aimed to restore soil health without compromising profitability, ensuring that smallholder farmers can earn more and provide nutritious food for their families.

Over the course of a three-year programme, 1,958 farmers in Busia and Bomet - 80% of whom were women - were supported to transition towards regenerative agriculture. Recognising that no two farms are the same and that context matters, each farmer received tailored support. Prioritising the adoption of regenerative agricultural practices, Hand in Hand delivered training directly to avoid the risk of training dilution. The programme emphasised practices adapted to local soils, reducing or eliminating the need for expensive and harmful commercial fertilisers and pesticides.

Headline result

Smallholder farmers increased profits by 155% while advancing their agroecological transition and improving soil health from 'non-desirable' to 'acceptable', demonstrating that sustainable farming enhances both environmental and economic outcomes.



Transitioning to regenerative farming can be done without economic sacrifices

Contrary to concerns that incomes might dip during the transition to regenerative agriculture, the pilot found that this was not the case.

On-farm incomes increased by 155%, and farmers embraced regenerative principles. The Soil Health Index improved from 3 (non-desirable) to 3.9 (acceptable), and farmers achieved an average 71% in the Characterization of Agroecological Transition (CAET) metric, indicating an advanced transition to agroecology. At the baseline, 82% of our farmers had non-agroecological farms, but by the endline, all farmers were at least transitioning to agroecology (51% in transition and 49% in advanced transition).

How did we achieve this?

- Established businesses - Target farmers had already completed Hand in Hand's entrepreneurship programme and were therefore already equipped with the business skills to run profitable enterprises.
- Low upfront investment - The project emphasized low-cost, farm-based approaches. Trainers focused on working with what was available to farmers at the time, rather than requiring a high initial investment in new farm inputs.
- Tailored support - Recognising that regenerative agriculture is context-specific, personalised coaching sessions provided farmers with an opportunity to deepen their understanding and application of practices on their own farms. Farmers receive technical advice tailored to address individual challenges they may encounter.

“Contrary to received wisdom that incomes might dip during the transition to regenerative agriculture, the pilot found that this was not the case.”





What's next?

While we are proud of our results, we acknowledge the need for replication before scaling up. Hand in Hand's pilot launched in 2020 amid the COVID-19 pandemic and its associated restrictions, which may have influenced our farmers' initial economic conditions. As a pilot project, we continuously revised and adapted our model. Now that we have established a solid framework, our goal is to replicate the approach and validate the consistency of our results. This replication phase will help us determine if we can expect similar outcomes across different contexts and timeframes, thereby strengthening the foundation for potential large-scale implementation.



Effective measurement and collaboration is vital

There are numerous frameworks emerging to monitor sustainable agriculture projects. While we initially considered focusing on practice adoption to measure farmers' transition to regenerative agriculture, we realised we wanted to go further. We wanted to ensure that, while supporting to boost the income of our farmers, we were also making positive strides in restoring soil health.

Dr Pablo Tittone's team introduced the UN FAO's Tool for Agroecology Performance Evaluation (TAPE) framework. We decided to adapt the TAPE framework, including the Sociedad Científica Latinoamericana de Agroecología's (SOCLA) Soil Health Index, because it can capture changes at both social and environmental levels, allowing for comparability. While the changes we observed are promising, we encountered some methodological challenges.

- **Methodological complexity**– Monitoring progress across the 10 elements of agroecology requires extensive technical expertise and a significant time investment. To address this, trainers were tasked with data collection. However, this approach was not without its difficulties; frequent personnel changes led to inconsistent interpretations of framework definitions, necessitating ongoing training and clarification.
- **Observational bias** – To mitigate potential biases during data collection, participatory farm walks and observations were implemented in trainer pairs. However, maintaining consistency in pairs across baseline, midline, and endline assessments proved challenging, introducing the risk of data inconsistency.
- **Seasonal limitations** - TAPE was not included at project design stage, so collecting it in the same seasons and at the same point of the agricultural cycle was not possible due to the project timeline.

What's next?

While the improvements in soil health measured by TAPE are encouraging, before scaling up these projects, we aim to further test and validate our approach to measurement. This will involve revisiting farmers from the pilot for a sustainability assessment, exploring triangulation methods like satellite imagery and refining TAPE implementation through farm spot checks to ensure more accurate results. We will also provide ongoing support to trainers on effectively utilizing TAPE and will further adapt the tool to enhance its ease of use (i.e. integration of reference pictures and videos, and more comprehensive questions).

We believe a standardised methodology is essential to ensure true progress towards healthy soils – from smallholder farms to large-scale commercial operations.. We are committed to continuing to share our learnings and results, encouraging others to adopt meaningful methods for tracking agroecological transition. By fostering this collaborative environment, we aim to accelerate the collective understanding and implementation of regenerative agricultural practices across the sector.



Gender norms in rural communities are deeply ingrained and continue to hold women farmers back

During the project, farmers' on-farm incomes increased by 155% overall. However, men saw a slightly higher income growth (169%) compared to women (152%), with men still earning more on average (Ksh 18,000/month PPP US\$ /405 vs Ksh 11,000 /PPP US\$ 247). Additionally, indicators of women's involvement in decision-making showed little to no improvement. In fact, the percentage of women participating in household and business decisions either remained the same or decreased from the baseline to the endline evaluations.

This highlights a persistent gap between male and female smallholder farmers. Although women have benefited from the project, our initial goal of addressing gender barriers was only been partially achieved. Participant feedback continues to point out inequalities in access to and ownership of land, businesses, and services, with women primarily owning specific farm activities.

“Participant feedback continues to point out inequalities in access to and ownership of land, businesses, and services.”

What we've changed

Hand in Hand understands the complex relationship between gender dynamics and societal norms and is committed to enhancing gender integration across our programmes. To identify potential areas of improvement in our work to support women, in 2024, we worked with an external consultant to conduct a Gender assessment of our work so far. A key recommendation included the adoption of the Oxfam-developed Gender Action Learning System (GALS) methodology. GALS addresses the power relationships at a household and community level. Moving forward, farmers and their spouses will attend four training sessions to discuss their vision for the future and how best they can work together to achieve it. The sessions will use visual tools to support participants envision and plan for positive change in their lives and families. It aims to transform gender relations at household and community levels by addressing root causes of inequality.



A one-size-fits-all approach won't achieve change at scale, we need to bring farmers with us on this journey

Over 30% of Kenya's land is severely degraded. A shift towards agricultural techniques that restore, rather than damage, soils is needed and there is an urgency to regenerate as much land as possible.

In Kenya, Hand in Hand works with 28,000 farmers annually and has established teams in 28 counties, giving us the capacity to scale our efforts. However, we recognize scale alone isn't enough. We must consider local contexts and avoid applying a one-size-fits-all approach to regenerative practices because each landscape's specific ecological, climatic, and economic nuances need to be taken into account.

“Farmers need to witness results firsthand – being told that transitioning to regenerative practices will restore their soil without affecting their income isn't enough.”

Regenerating soils is a long-term process, and many farmers remain hesitant. With narrow profit margins and limited land, smallholder farmers require a clear 'proof of concept.' Simply being told that transitioning to regenerative practices will restore their soil without affecting their income isn't sufficient — they need to witness the results firsthand.

What we're doing differently

After almost fifteen years of delivering agricultural training across East Africa, we've learned that changing perspectives takes time. To support this gradual shift, we've integrated regenerative agriculture practices into Hand in Hand's core agri-entrepreneurship programmes. These programmes equip women with the skills and knowledge to build successful, profitable enterprises while experimenting with regenerative principles. This gives farmers the opportunity to try these practices on their farms and begin to see the benefits of regenerative agriculture – particularly to their 'bottom line'.

Once we've developed a 'pipeline' of smallholders ready for the next step, we can then provide the intensive, individualised support needed for them to fully transition to regenerative agricultural techniques.

Further information

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