



**CRIFSUP**  
(Central Rift integrated FMNR  
ScaleUp) project

Kenya



## About this report

This report presents results of the evaluation study of the Kenya Central Rift Farmer-Managed Natural Regeneration Scale-up project (CRIFSUP). CRIFSUP ran between July 2017 and June 2021, when it transitioned to a further five-year phase. CRIFSUP is funded by the Australian Department of Foreign Affairs and Trade (DFAT) through the Australian NGO Cooperation Program (ANCP). The study was commissioned by World Vision Kenya, conducted by Perspective Kenya, and reviewed by World Vision Kenya (John Mutisya, Bernard Owino, Festus Chirchir and Justus Musau) and World Vision Australia (Cecilia Valla, Andy Hunter, Sarah Mckenzie, Katie Chalk).

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Cover: Ruth is from a farming family. Though she does not yet have land of her own to work, she takes part in cooperative farming and land restoration, as an FMNR Youth Champion.

# Context

**According to the Kenyan Ministry of Environment (2015), assessment report on land degradation, 61% of land in Kenya is degraded, and nearly half of this is severe degradation, where soil erosion and poor water retention threaten land sustainability.**

At least 12 million people live in degraded areas, most of them trying to live on agricultural and livestock practices that further damage land and forest. Arid and semi-arid counties are especially impacted. In the Central Rift region, for instance, as soil erosion accelerates, water catchment capacity decreases and farmers can face intense seasonal storms, floods and drought in a single year. In this region, people rely heavily on forest products such as trees for fuel and pastureland for grazing. It is critical to find a balance where human interaction with the ecosystem protects, rather than further degrades, local sustainable environments.

# Project overview

The project aimed to contribute to improved food security and livelihoods for smallholder farmers and pastoralists, both women and men, in Kenya by 2021 through FMNR and other regenerative agricultural practices. It built on a previous pilot testing community-led land management in the Central Rift Valley region of Kenya, and took place across seven World Vision Area Development Program (ADP) areas in the counties of Elgeyo-Marakwet, Nakuru and Baringo, Central Rift Valley.

The project applied an inclusive market systems development approach based on sustainable land management. Farmers and other producers learned to

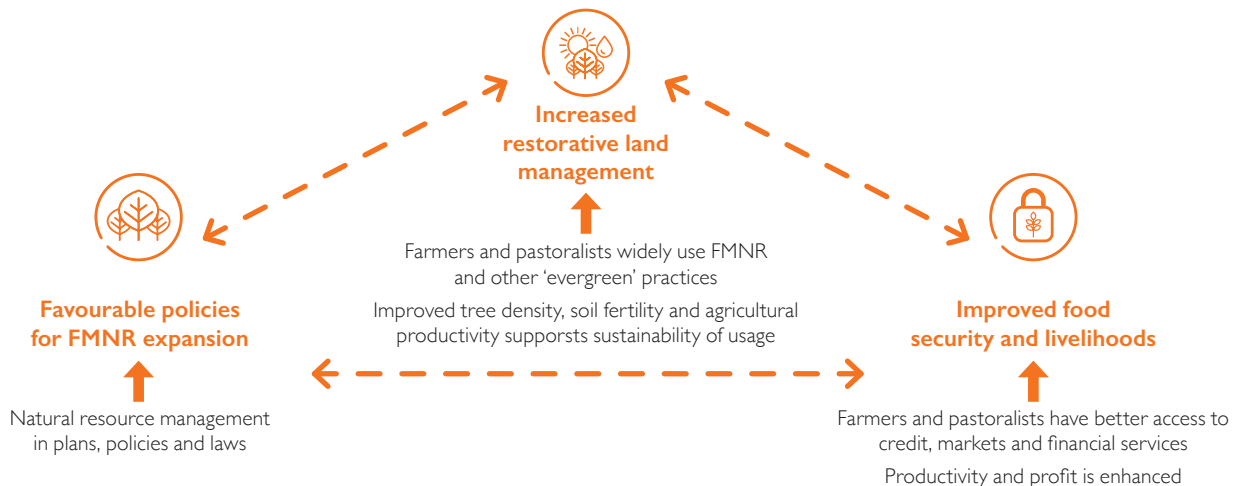
work with their land in ways that built productive capacity, and to connect with markets for profitability and resilience. The 'Scaling up' aspect of the project was important to its theory of change (see next page).

At community level, 600 Lead Farmers were trained and equipped to train at least 10 more on FMNR practices, while schools and other community groups took part in planting days and other environmental activities. In government, local ministries worked with community groups (Citizen Voice and Action) to understand policy and its local relevance, identify additional needs or bylaws and build a community-led vision for land management.

# Evaluation methodology

This impact evaluation focuses on the outcomes, lessons and next steps of CRIFSUP's first phase. It uses a mixed method approach based on primary qualitative and quantitative data from the three project areas, applying the same survey as had been used in the baseline study in early 2018 for best comparability of results. Analysis of indicators from this survey took into consideration information from focus group discussions, key informant interviews, observation and project documentation. In total 420 households took part in the participant survey, along with a further 102 in a control area where FMNR lead farmers had not been active. A focus group with 10 children took place in three schools using age-appropriate participatory discussion.

# Theory of change



## What is FMNR?

**Farmer Managed Natural Regeneration (FMNR)** is both a community mobilisation approach for landscape restoration and a specific technique to regenerate trees. Living tree stumps and self-sown seeds are re-grown into usable trees by pruning and protecting them. The regeneration of trees (which is generally faster and less expensive than planting trees) restores and builds natural assets and makes agricultural activities more productive, increasing income, as well as food and water availability. FMNR can be considered in any agricultural, livelihood or development project where tree regeneration will contribute to long-term well-being and where the physical conditions for FMNR exist.

FMNR is also an empowering form of social forestry or agroforestry, giving individuals and communities the responsibility to nurture trees and reap the rewards from the sustainable harvesting of wood and non-timber forest products. Even before environmental commitments and policies grow, it is clear that regenerating trees provide fodder, shade, and soil nutrients. As a natural resource management intervention, FMNR is a rapid, low cost and easily replicated community-led approach to restoring and improving agricultural, forested and pasture lands.

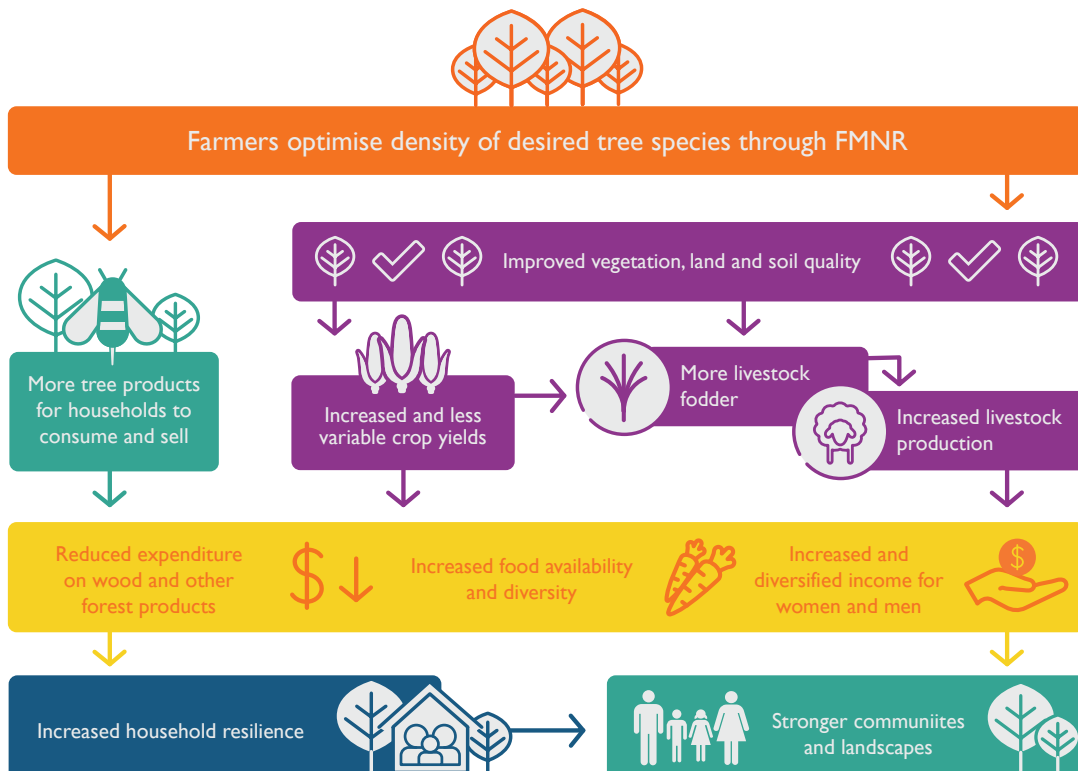
## What is Citizen Voice and Action (CVA)?

**Citizen Voice and Action (CVA)** is a local level advocacy and social accountability approach that facilitates collaboration between communities and government in order to improve local services and policies.

The first step of CVA is engaging community members to truly understand and monitor policy and their rights within it. Citizens are then empowered to engage in a dialogue with decision makers to address identified problems and gaps. CVA can be used across a broad range of sectors, from health and education through to gender. It has been found over time to be particularly effective in instilling environmental values through community groups informing and monitoring landcare policies and bylaws.

CVA is also used to identify patterns across different areas and advise systemic reform at provincial or national level: for instance, budget, personnel or cross-ministry planning. Because of this, it has become a core complementary activity when World Vision implements FMNR.

### Simplified FMNR program theory



# Findings

## Impact

**The final evaluation found poverty levels more than halved (Progress Out of Poverty Index), and 60% of household survey respondents agreed there was less poverty in their village than before.**

Multiple food security indicators together confirmed positive impact over the last four years. Parents were better able to meet their children’s needs (77.4%, compared to 71.3% at baseline). Farmers were on average managing 1.6 acres of land through FMNR and other evergreen agricultural practices; the total land managed is 6,938 acres (baseline 500).

Access to renewable forestry products, including firewood as a fuel source, has not markedly changed over the project’s timeframe. However, associated industries such as honey, fruit and processing are stabilising, supported

by strong uptake of financial services through Savings for Transformation. The evaluation concluded that sustainability of results through community ownership has been a focus, while capacity of local and national partners to continue aligned environmentally friendly agriculture, including through policy, has been strengthened.

Mainstreaming gender considerations has been partially successful but with land ownership and access heavily weighted towards men, barriers to participation and advantages for women have not been fully addressed. **The project has not visibly contributed to social and civic participation of people with disability.** In line with ANCP program logic and WVA’s own strategic application of ANCP grant, gender and social inclusion will be priority areas for improvement in the project’s second phase.

### Impact indicators

| SDG1: No poverty  | 2018 Baseline | 2021 Evaluation          |
|---|---------------|--------------------------|
| % parents /caregivers able to provide well for their children                             | 71.3%         | 77.4%                    |
| % households reporting reduced poverty in their location                                  | n/a           | 59.4%                    |
| % households living on less than US\$1.90 per day (Progress out of Poverty Index, or PPI) | 45.3%         | 18.6%                    |
| SDG2: Zero hunger   | 2018 Baseline | 2021 Evaluation          |
| % of households with year round access to sufficient food for the family’s needs          | 42.6%         | 73.6%                    |
| % of households with severe hunger (Household Hunger Scale, or HHS)                       | 7%            | 0%                       |
| % households with little or no hunger (Household Hunger Scale, or HHS)                    | 70%           | 97.3%                    |
| SDG15: Life on land   | 2018 Baseline | 2021 Evaluation          |
| Average tree density (trees per hectare) on farmland                                      | 79.5          | 122.6<br>(control: 87.2) |
| Average tree density (trees per hectare) on communal land                                 | 89.9          | 109.9<br>(control: 69.9) |
| Acres of land under regenerative management   | 500           | 6,938                    |



Through school environmental clubs, children learned about pruning, soil health and other FMNR priorities.

## Outcome 1: Increased restorative land management

The project has made substantial progress in a short amount of time in scaling up a protective and productive approach to the agricultural and natural resource management sector. This included including crop and income diversification, increased environmental awareness and action, and compound results through Lead Farmers and their 'train-the-trainer' outreach. Over 90% of people surveyed had heard of FMNR. Farm holdings were on average 2.8 acres; of this, farmers so far committed 1.6 acres on average to using FMNR and integrating trees onto farmland. Project monitoring recorded a baseline of 500 acres under FMNR community management in 2018. By 2021 this had increased to 5,617 acres. According to respondent perspectives, soil health is improving and pasture more plentiful, though pastoralists often still travel far from home in the dry season to provide for their cattle.

| Outcome 1 indicators (HH survey)  | 2018 Baseline | 2021 Evaluation         |
|---|---------------|-------------------------|
| % HHs who observe soil erosion has reduced  | 32.6          | 62.4<br>(control 44.1%) |
| % HHs who observe soil fertility has increased  | 15.6          | 55.0<br>(control 45.1%) |
| % HHs trained in FMNR   | 4.3           | 77.6<br>(control: 2.9%) |
| % HHs that are practicing FMNR  | 16.4          | 84.6                    |
| % of farmers who have awareness of local by-laws/regulations for land and tree management | 68            | 15.1<br>(control: 6.9%) |

## Outcome 2: Improved food security and livelihoods

Just over half of survey respondents reported their income had increased in the last 12 months. Against the extreme challenges of COVID19 lockdowns and economic downturn, this result reflects a level of resilience in the ADP areas, but also provides lessons for the next phase. The majority of income comes from farming; sale of cereals and livestock. The prevalent perception was that crop production had improved in the last five years. Increased productivity of livestock was not as evident to respondents, but higher than at baseline (24.5%, compared to 16.9% in 2018). The proportion of respondents reporting they could not produce or store sufficient staples for year-round household needs was higher than at baseline, with 75.9% repurchasing what they had originally grown and sold. However, severe hunger had disappeared from surveyed communities and the number of households with little or no hunger had reached 97.3%, indicating that the repurchasing of food was possible and affordable.

Income from crops is not year round, nor guaranteed; for instance, a locust invasion in the project's final year negatively impacted food production in these areas. Many respondents continued to seek casual labour, especially in the dry season, with youth or landless households particularly dependent on this strategy. The project aimed to mitigate seasonal variations with sustainable year-round agroforestry opportunities. While some success was noted, full market engagement was hindered by inability of private sector to build partnerships over this final COVID19-impacted year. Only 7.6% of respondents reported adopting alternative livelihood options, so the majority remain dependent on seasonal income flux.

| Outcome 2 indicators (HH survey)  | 2018 Baseline | 2021 Evaluation |
|---|---------------|-----------------|
| % of household reporting income from sustainable tree products (honey, firewood, fruits, medicine, other) | 30.4          | 35.6            |
| Reported income earned through sustainable tree products (last 12 months, USD)                            | \$94.95       | \$142.21        |
| % of HHs reporting increased income   | 25.2          | 52.5            |
| % of households who observe that (dryland) cereal crop production is improving                            | 17.2          | 52.7            |
| % of HHs repurchasing staple crops in the previous 12 months  | 41.3          | 75.9            |
| # of months of food insecurity  | 3.5           | 3.3             |

### Outcome 3: Favorable policy environment for FMNR expansion

The project partnered with county government to form seven sub-county steering/technical committee working groups for environmental conservation and sustainable land management projects. The committees connected with Lead Farmers as part of ongoing project monitoring, offering technical support as well as tracking land restoration progress. Citizen Voice and Action (CVA) groups successfully leveraged environmental bylaws and will continue to monitor local accountabilities. CVA appeared to be highly accepting of women as members and leaders, with 97% of survey respondents seeing equal opportunity to participate in this community structure. Effective research collaborations were also established, for instance:

- With ICRAF, publishing an FMNR manual for other development partners in Kenya
- With KEFRI Research Institute, to research the effects of FMNR on biodiversity
- With Moi University, School of Agriculture and Natural Resources, a Memorandum of Understanding to include FMNR in curriculum and opportunities for students to engage in CRIFSUP area monitoring

The evaluation tested whether community capacities to work together on environmental and other goals had strengthened as a result of the project. It found a remarkable increase in the proportion of survey respondents reporting harmonious community relations, and that their community could work together effectively, with no substantial difference between women and men surveyed.

| Outcome 3 indicators (HH survey / project records)                  | 2018 Baseline | 2021 Evaluation |
|---|---------------|-----------------|
| Number of policies promoting FMNR                                   | 0             | 7               |
| % of HH reporting harmonious community relations                    | 20.2          | 80.8%           |
| % of HH confident / very confident that community can work together | n/a           | 80.8%           |

## Sustainability

The evaluation noted that, from design onwards, sustainability of results through community ownership has been a focus. Capacity of local and national partners to continue aligned regenerative agriculture has been strengthened. Success of savings groups and environmental clubs in schools also indicates likelihood of sustainability and expansion of these practices. The communities' contribution towards the project's implementation through lead farmers enhances ownership and sustainability of the projects, with knowledge effectively shared and increasingly applied including among farmers who did not attend training directly. The project monitoring and implementation adhered to its environmental management plan to mitigate negative impacts and optimize positive impacts on the environment. Given the mitigation activities and the fact that most interventions are at the smallholder level, the evaluation concludes that emerging risks to these achievements (for instance, COVID19, or local social tensions) are manageable and will be met with agreement and goodwill from participating community structures. The project created shared values which are sustainable both in the medium and long-term, as well as enhancing local and county advocacy forums as community structures to monitor sustainability of outcomes.

## Equity (cross-cutting themes)

The project design did not contain a specific pathway for gender and disability outcomes. Mainstreaming these considerations has been partially successful but with land ownership and access heavily weighted towards men, barriers to participation and advantages for women have not been fully addressed. The communities live within a patriarchal structure in which the men are believed to have all or most of the power and importance. The evaluation noted confidence of women to participate in household economic decision and community structures (for instance, CVA), but also constraints to using natural resources to support increased economic participation. The project has not visibly contributed to social and civic participation of people with disability, noted by the evaluators and included as a constructive recommendation leading into the redesign phase.

| Gender indicators   | 2018 Baseline | 2021 Evaluation |
|---|---------------|-----------------|
| % of (female) respondents reporting easy / free access to forests and tree products | 42.7%         | 30.6%           |
| % of (female) respondents reporting increased household decision making power       | n/a           | 94.5%           |



Fred Wambia, World Vision Area Program manager, trains farmers in increasing crop productivity through soil management and regenerative planting methods.

## Lessons

Based on internal and stakeholder reflection, data validation discussions and annual reporting, the evaluation notes the following significant lessons:

1. **Natural resource management and climate change adaptation can be effectively integrated with poverty reduction.** However, it takes time. For CRIFSUP, a situational advantage was the concentration of geographical and sectoral scope of investments connecting to longer term views of community development in three ADPs. The Community Learning Centres also helped to create ownership and sustainability of the knowledge being introduced, so it could become part of ongoing policy and partnership between government and agricultural workers.
2. **Using grassroots structures proved influential for take up and sustainability.** The lead farmer approach, as well as CVA for planning and applying community-led land management policy, accelerated behaviour change. Lead farmers were selected because of local knowledge and relationship with the community. In exchange, communities demonstrated goodwill and shared their own resources over the implementation period.
3. **Different levels of government were needed for success.** The commitment of the highest levels of the County Governments was instrumental in the implementation of the project as they were involved in the design of the project activities. By including a specific outcome for policy engagement and partnerships, CRIFSUP was better placed to track progress and set goals among these partners.
4. **School engagement supported community awareness.** The school environmental clubs were popular and effective in connecting school children with land management and environmental values, and with specific knowledge of FMNR for regenerative practices. Children reported sharing their knowledge with others including parents and grandparents. Again, the advantage of location with ADPs was noted here, as the relationships with schools in the three areas was established and education standards were reportedly improving.
5. **Low-cost technology kept project partners and communities connected.** The extreme challenges of COVID19 including reduced mobility and face-to-face activities could potentially have set back implementation progress; however, the evaluation found nearly all targets had been met or surpassed by project end. Moving quickly into remote monitoring, virtual meetings, online reporting and community engagement, the project found with fewer resources they could reach more people. Though a necessity at the time, it has now become a valid alternative for many aspects of project management.





Beekeeping, rather than traditional methods of gathering wild honey, has been a popular sideline for farmers for year-round income.



Collecting firewood is usually the job of girls and women in this area. Though the project did not manage to shift expectations of gender roles, FMNR has brought sustainable firewood supplies closer to home, so women and children do not need to spend as much time on this chore.

6. **A phased approach supports long-term restoration and sustainability.** While the evaluation looks solely at the period 2017-21, results and lessons from the previous project have been applied. The project's design, partnerships and achievements built on strengths, and the upcoming phase will also be starting with a baseline where outcomes are evident. This may mean quantitative outcomes are less remarkable, but is also an opportunity to delve into hard-to-reach areas of vulnerability: for girls and women, landless families, people with disability and their caregivers.
7. **Distribution of workload remains unfair.** The evaluation found women, girls and boys were still spending long hours on daily chores, taking them away from home and placing them at risk. Some child labour concerns were noted. Under FMNR, restored trees and pasture for grazing is intended to make such duties faster and safer. The evaluation did not find strong results in terms of time saving or reduced burden for chores, and noted that this disadvantaged girls and women in particular.
8. **Savings for Transformation was an empowering association for many.** These groups proved strong and sustainable. Members were able to make a broader range of financial decisions to diversify their income sources and try new things. The emphasis on women as members was in line with the project's mainstreaming approach to gender and could be linked to perceived outcomes of equality in farming and FMNR. However, people with disability were not engaged to the same degree.
9. **Food security has improved but is not fully resolved.** CRIFSUP has implemented within a broader framework of rural agricultural development involving other partners and government. Seasonal fluctuations are recognised as a challenge, and the evaluation measured different patterns of food insecurity in the three locations. For many households, 'hungry months' were not caused by insufficient food, but by the inability to store food in bulk without spoiling. Farmers often sold their grain at harvest time, then bought the same produce back when it was needed.
10. **Private sector engagement was not fully developed.** CRIFSUP's use of Local Value Chain Development extended to supply, with new forest-based industries including processing, but did not fully develop demand. A value chain assessment was conducted, and some lead farmers connected with market events, but cooperative marketing has not yet started up. However, Producer Groups are in place and this could be developed further in the next phase.



The CRIFSUP2 project invited people of all ages to get involved in FMNR. This emphasis on children and youth is intended to create a long-term culture of environmental restoration and protection.

## Recommendations

### For the Project Implementer – World Vision Kenya

1. Establish more community FMNR learning centres
2. Support communal land and public institutions including schools
3. Support the community on understanding and using forest policy
4. Increase use and uptake of information sharing technology in the project
5. Exchange programme with farmers
6. Continue to promote viable business activities based on the FMNR concept: stepping into more formal relations with private sector and extension providers
7. Continue to focus on youth: needs and strengths
8. Promote the establishment of private public partnerships to link the smallholder farmers with buyers and markets
9. Identify entrepreneurial off-farm opportunities
10. Expand beekeeping and honey farming
11. More deliberate integration of WASH activities (and potentially, a shift into nutrition)
12. Target more vulnerable people, especially those with a disability
13. Sensitize the communities on the need for allocation of devolved funds up to ward level budget funding
14. Alternative extension service delivery models, including pay-per-visit, as possible successors to public service provision

### For the National and County Governments

15. Embed FMNR in mainstream planning of Ministry of Agriculture, Livestock, Fisheries and Cooperatives; Ministry of Lands, and the Counties
16. Include FMNR in County Integrated Development Plans and Budgets
17. Strengthen policies and legal frameworks to reduce child labour in the livestock sector



Communities still face annual dry seasons but are more resilient to withstand them, using trees or grain byproducts to feed their animals.



Pamela, pictured with her two children, now runs a tree seedling nursery with a wide variety of plants for sale.

## When you commit to humanity amazing things can happen!

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