



'Game Changer' Case Study Series

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CASE 3

**Collaborative leadership in
Agroecology**

**Sustainable Land & Forest
Management in Western
Kenya**

CALA is an AGRA-led initiative



Executive summary

This case study considers the work of Sustainable Land & Forest Management (SLFM) in Western Kenya – an agroecology project focused on “scaling up sustainable land management and agro-biodiversity conservation to reduce environmental degradation in small-scale agriculture”.

Operational from 2017 to 2022, the project was conceived as a direct response to natural resource depletion, encroachment and exploitation within the Kakamega-Nandi Forest ecosystem in Western Kenya. Over five years, SLFM in Western Kenya engaged local farmer communities in sustainable land and forest management. Reaching nearly 100,000 smallholders, it significantly reduced environmentally degrading activities and stimulated a 300% increase in local farm productivity. It also facilitated, through participatory forest management systems, the rehabilitation of over 7,000 hectares of forest land under.

But promoting SLFM techniques as a viable alternative to forest-based income generation was no easy task. Community behaviours in the Kakamega-Nandi ecosystem were entrenched, and resistance to the new ideas was strong. At the outset, the fulfilment of the project’s goals, and the future of Kakamega forest, looked uncertain. Convincing farmers to embrace new methods required major engagement and education interventions as part of a region-wide behaviour change programme.

This case study looks at the work undertaken by the project team to overcome the barriers to SLFM uptake. It also explores the collaborative leadership efforts that united multiple stakeholders around the common goal of biodiversity conservation in Western Kenya.

Uncertain ground: land degradation in sub-Saharan Africa

Land degradation is the process by which anthropogenic activities negatively impact the value of a biophysical environment. Such activities include intensive agriculture, overgrazing by livestock, and overexploitation of forests and woodlands. The additional pressures of population growth, climate change and poverty also play a part, accelerating unsustainable land management practices.

Across sub-Saharan Africa (SSA), hundreds of millions of people depend upon land and natural resources for food production and income generation. Land degradation, which is estimated to affect about 67%, or 16.1 million km², of SSA’s total land area, therefore poses a major threat to livelihoods and food security.

And in a region of over one billion people, countries are having to meet the demands of growing populations from a rapidly diminishing resource base.

In Kenya, these challenges loom large. Recent studies show that 22% of land area in Kenya is affected by land degradation. Other countries fare worse, with degradation affecting 51%, 41% and 23% of land area in Tanzania, Malawi and Ethiopia respectively. However, it is estimated that around 30% of Kenya's landmass experiences 'severe soil degradation, which is the point at which land cannot be productive without a certain level of rehabilitation. And in recent decades, an expansion of agriculture and livestock production has led to increased pressure on natural resources. These pressures are set to rise further, with the UN Food and Agriculture Organization (FAO) predicting that Kenya's cattle population will increase by 90% by 2050.

Water erosion, soil nutrient depletion, agro-biodiversity loss and deforestation are just some of the degradation impacts witnessed in recent years. In Western Kenya, for example, average soil loss in 2017 was 0.5 tonnes per hectare per year, compared to 0.3 tonnes per year in 1995. And originally fertile lands that yielded 2-4 tonnes of cereal grains per hectare now have cereal crop yields of 1 tonne per hectare. At the same time, commercial farming activities have driven a downward trend in the cultivation of indigenous crops and vegetables.

Kenya's forests have been especially vulnerable, with land pressures prompting frequent encroachments into forest reserves and woodland areas. According to the FAO, between 1990 and 2010, forest cover in Kenya reduced from 3.7 million to 3.4 million hectares. In turn, forest ecosystem fragmentation has led to the loss of natural habitats and biodiversity. This reflects the general trend for Africa as a whole, which has the highest annual rate of net forest loss in the world (3.9 million hectares a year), followed by South America (2.6 million hectares).

To relieve these pressures and, where possible, reverse the damage done, the expansion of sustainable land and forest management (SLFM) policies and practices is essential. In Kenya and across SSA, SLFM is critical to restoring agro-biodiversity, reducing environmental degradation, and improving food and water security. It is also vital to helping smallholder farmers transform their productivity and income.

Scaling SLFM and biodiversity conservation

Kakamega forest

Kakamega forest is the only forest of its kind in Kenya. The eastern-most fragment of the Guinea–Congolean lowland rainforest belt, Kakamega is home to plants and animals not found anywhere else in the country. It has a rich diversity of primates, such as the redtail monkey and the black and white colobus monkey, plus over 500 species of bird, many of which are endangered. It is also home to more than 120 species of tree; some, like the Elgon teak and *Prunus Africana*, are of ‘special conservation concern’.

The forest area extends to around 230 square kilometres (23,000 hectares) and comprises two protected zones – a forest reserve, designated in 1933, and a national reserve dating back to 1985. Crucially, it provides a wealth of biodiversity benefits and ecosystem services. The ecological health of Lake Victoria, for example, depends upon the forest’s ability to generate rainfall and control soil erosion. Similarly, the forest sequesters and stores carbon, helping to regulate the carbon cycle and mitigate climate change. It also stabilises stream flows and water runoff, reducing the risk of floods and landslides.

The forest is economically important too. About 3 million people depend upon it for their livelihoods, with Kakamega providing a rich source of food, fuel, cattle fodder and building materials, as well as medicinal plants and tree bark. But over the years, as land pressures have intensified, local communities have increasingly abused their forest privileges. As a result, Kakamega’s natural resources have become perilously overexploited.

Increasing human pressure

Western Kenya is the most densely populated region in the country, with 1,000 people per square kilometre in some areas compared to the national average of 66. This population bulge has driven increased demand for food, shelter, water, energy and waste disposal.

But in a region with limited available land, where farmsteads are on average just 0.4 hectares in size, such demand is difficult to meet. Consequently, people have turned to Kakamega forest to supplement their incomes. Poverty-driven logging and other illegal activities have accelerated. Unsustainable harvesting of fuelwood and non-wood products, such as bushmeat, herbs and honey, has increased. Woodland has also been opened up for grazing and cultivation. In the process, the Kakamega forest has become severely damaged and degraded.

Between 1933 and 2010, the forest cover in the Kakamega–Nandi ecosystem declined from 24,798 hectares to 11,848 hectares. In the past 38 years, tree cover in the Kakamega forest has reduced by 50%. And according to Global Forest Watch, more than 200 hectares of tree cover was lost between 2001 and 2014 alone.

Such a degradation rate threatens to push the forest into irreversible decline, threatening social, economic and environmental wellbeing across the region.



Figure 1: Forest degradation and declining tree cover in Kakamega forest; Credit Global Forest Watch.

SLFM in Western Kenya

In response to these challenges, SLFM in Western Kenya sought to relieve the pressures on Kakamega forest by increasing the productivity of adjacent, non-forest land.

To this end, the project's primary goal was to enhance the livelihoods of smallholder farmers in Kakamega, Nandi and Vihiga counties. Its development objective was to promote the adoption of sustainable land and forest management practices as part of a region-wide behaviour change programme. And its global environment objective was to reduce land and ecosystem degradation, mainstream biodiversity conservation, and contribute to climate change adaptation and mitigation.

Overall, the project's intervention strategy comprised four main pillars:

- Building capacity among farmers and stakeholders in SLFM and biodiversity conservation
- Strengthening farmer linkages to agricultural input and output markets
- Supporting the policy environment and institutional framework at the local level
- Enabling knowledge management and dissemination

Through these efforts, SLFM in Western Kenya supported progress towards the strategic objectives of the United Nations Development Assistance Framework (UNDAF). It also contributed to the Nagoya Protocol on Access and Benefit-sharing and the United Nations Sustainable Development Goals (SDGs), in particular, SDG 11 (sustainable cities and communities); SDG 15 (life on land); and SDG 16 (peace, justice and strong institutions).



Images credit: European commission- europa.eu

A partnership approach

SLFM in Western Kenya was forged through a Partnership Cooperation Agreement signed in 2016 between the Alliance for a Green Revolution in Africa (AGRA) and the United Nations Environment Programme (UNEP). Funded by the Global Environmental Facility (GEF), the project was launched in 2017 with a five-year operational period to 2022.

With direct funding from GEF of \$US 3.58 million, the project received additional in-kind co-funding of \$US 9.0 million from key project partners. It was delivered under UNEP National Execution procedures, with AGRA as the executing agency and the Kenya Agricultural and Livestock Research Organisation (KALRO) leading on-the-ground implementation in a consortium of eleven other institutions. These

institutions included the County Governments of Kakamega, Nandi and Vihiga, the Kenya Forest Service (KFS), the Kenya Wildlife Services (KWS) and the Kenya Forestry Research Institute (KEFRI), among others, all acting undersigned Partnership Agreements.

In support of these institutional actors, Farmer Associations and Community Forest Associations were formed or strengthened to ensure farmers played a key role in project development and delivery.

See Appendix for more information on project partners and governance structure.

Barriers to SLFM uptake

SLFM in Western Kenya was built on AGRA's previous work on integrated soil fertility management and other SLFM -related projects, implemented through KALRO from 2009 onwards. Despite the success of these earlier schemes, when SLFM in Western Kenya was first conceived, uptake of SLFM practices was still desperately low – as indicated by the rate and extent of degradation in the region.

During project formulation, it was unclear why so many local farmers continued to engage in unsustainable land-use practices. Why did they resist the adoption of available SLFM technologies and techniques?

To answer these questions, the project team had to identify and understand the principal gaps, barriers and bottlenecks preventing local engagement with SLFM.

Resistance to change

The overwhelming challenge the project faced was resistance to change among local communities and smallholder farmers, mainly linked to socio-economic constraints and concerns, as follows:

- **Poverty-driven short-termism**

Poverty, hunger and lack of resources, driven primarily by low crop and livestock productivity, meant many local farmers adopted a short-term livelihood outlook. Unable to make long-term investments in their land or livelihoods, they were reluctant to abandon their forest-based income-generating activities. Their on-farm production efforts were also subsistence in nature. This meant they prioritised the mining of local resources for short-term profit over enterprise development.

- **Lack of ownership, security, and incentive**

Another major barrier to scaling SLFM was farmers' lack of security over their resources. The local land management system failed to provide security of tenure, making it difficult for farmers to make SLFM practices profitable. These arrangements also meant they had little sense of ownership or agency over their land. Farmers, therefore, lacked the incentive to adopt measures designed to deliver long-term land enhancements.

- **Lack of value chain approaches to production***

Farmers' production and income constraints were compounded by an absence of market-based opportunities across the value chain. Most smallholders were not connected to structured value chains of any kind. Their productivity was therefore hampered by inefficiencies linked to lack of storage capacity and post-harvest services, poor access to input markets, and limited credit facilities. As a result, farmers remained trapped in a cycle of low productivity and poverty, which reinforced their reluctance to invest in SLFM technologies.

** A value chain approach considers the entire spectrum of agricultural activity, from raw commodity production through to the marketing and distribution of produce for wealth creation.*

- **Low levels of awareness**

Above all, awareness and understanding of agrobiodiversity, and the benefits of sustainable land use, were low among the farmer population. For example, indigenous crops and vegetables (sorghum, finger millet, African kale) were still looked down upon as a poor man's crop, despite their good commercial prospects within the region. The critical role of in-situ pollinators (such as bees) in agricultural production was also misunderstood. Farmers were, therefore, disinclined to embrace practices whose benefits and value they could not perceive.

In short, many farmers were reluctant and, in many instances, unable to engage conceptually or practically with SLFM measures. As such, in 2017, the fulfilment of the project's goals, and the future of Kakamega forest, looked uncertain. A new approach was clearly needed to win the confidence of the local farming communities.

Institutional challenges

To complicate matters further, within the SLFM in Western Kenya consortium, a number of institutional challenges began to emerge. These were:

- **Technological and knowledge barriers**

The project team discovered that a full economic valuation of local ecosystems and land degradation had never been undertaken. This, they saw, made it difficult for decision makers to appreciate the enormity of the problem and secure political will* to promote SLFM.

It also became clear that very few SLFM best practices had progressed beyond pilot sites to the wider landscape. Furthermore, narrow sectoral and monolithic approaches to SLFM and biodiversity conservation had failed to account for the multiplicity of actors, landscapes and interdependencies involved in these efforts. This had led to a lack of integrated ecosystem thinking and action, creating a major barrier to uptake.

* The project's key political stakeholders included county executives, esp. Governors and members of County Assemblies, who play a key role in converting project evidence into policy frameworks. With the Ministry of Environment chairing the project steering committee, national government was also a major political stakeholder.

- **Lack of harmonisation and alignment**

As a multidisciplinary, multi-institutional and multistakeholder project, SLFM in Western Kenya was initially hamstrung by conflicting operational frameworks and technical approaches. With NGOs, academic bodies, faith-based organisations and parastatal agencies thrown together, a general lack of coherence and collaboration slowed progress on the ground. Differing expectations also caused disagreements around workload, output, roles and responsibilities. For example, there was a lack of clarity around the roles of the executing agencies, AGRA and UNEP.

- **Policy and protocol constraints**

Varying administrative protocols and financial management systems led to delays in the opening of partners' accounts and the disbursement of funds. This again slowed project execution. Further, in Kenya, agricultural decision making is devolved to the county level, with county governments responsible for their own agricultural policies and practices. Environmental

affairs, however, sit with the national government. Harmonising agricultural and environmental policy in support of project objectives therefore, took time, resulting in further delays.

- **Lack of consistency and continuity**

Local government systems and structures meant senior staff members were frequently replaced, leading to a lack of consistency in project personnel. Governors also regularly delegated to their deputies, who in turn delegated to their staff. With one person attending meetings one week, and another person the next, continuity of knowledge was hard to maintain. In a major quirk of county protocol, directors attending meetings at which their boss is also present are not allowed to speak. During the project's early days, this often resulted in ill-informed and irrelevant exchanges, with information owners forbidden from contributing to discussions.

Driving progress through participation and collaboration

To overcome the barriers to engagement, SLFM in Western Kenya developed a game-changing model based on the following core approaches:

- **Community engagement, consultation and collaboration**

At the time of project formulation, an in-depth stakeholder consultation exercise was conducted. This brought farmers and other local stakeholders together to identify the underlying challenges. These stakeholders also helped to define degradation hotspots that could be targeted for project interventions. In addition, baseline stakeholder surveys were conducted throughout the region to ascertain local priorities and needs.

Based on collaborative interaction and dialogue, the leaders of several Farmer Associations and Community Forest Associations then played an active role in the project design and development. Validating the baseline study and assessment, they ensured the project reflected the needs of local communities and landscapes.

- **Local ownership and empowerment**

Through sensitisation meetings, awareness-raising sessions and field demonstrations, the project team rolled out a comprehensive community involvement and education programme. This programme sought to engage farmers and other stakeholders as active participants in the project, as well as

key beneficiaries. It highlighted the costs and consequences of forest encroachment, and the profit potential of sustainable land use.

As part of this process, SLFM in Western Kenya assigned key project roles to early adopters and farmers who showed initiative. Some were appointed Agricultural and Environmental Change Agents or Trainers of Trainees. Others were made Community Change Agents, Ecosystem Conservators and Forest Stewards.

By empowering local farmers, the project team built a grassroots behaviour change programme focused on local ownership, agency and participation. Leveraging the power of peer-to-peer influence, it encouraged local farmers to embrace and disseminate the core principles of sustainable land and forest management.

- **Integrated landscape management**

Integrated landscape management (ILM) addresses complex and interconnected agricultural and environmental issues. It brings together diverse stakeholders who share the same landscape, often with conflicting interests, and provides innovative strategies to achieve a shared vision and goal. In the case of SLFM in Western Kenya, stakeholders ranging from County Extension Service Leadership, through to grassroots community groups and individuals, were engaged with project objectives.

This process also involved identifying micro-catchments of land adjacent to Kakamega forest and sensitising their inhabitants to the implications of resource degradation. Further, it involved rehabilitating and increasing the productivity of these catchments, enabling farmers to improve their livelihoods without exploiting forest resources.

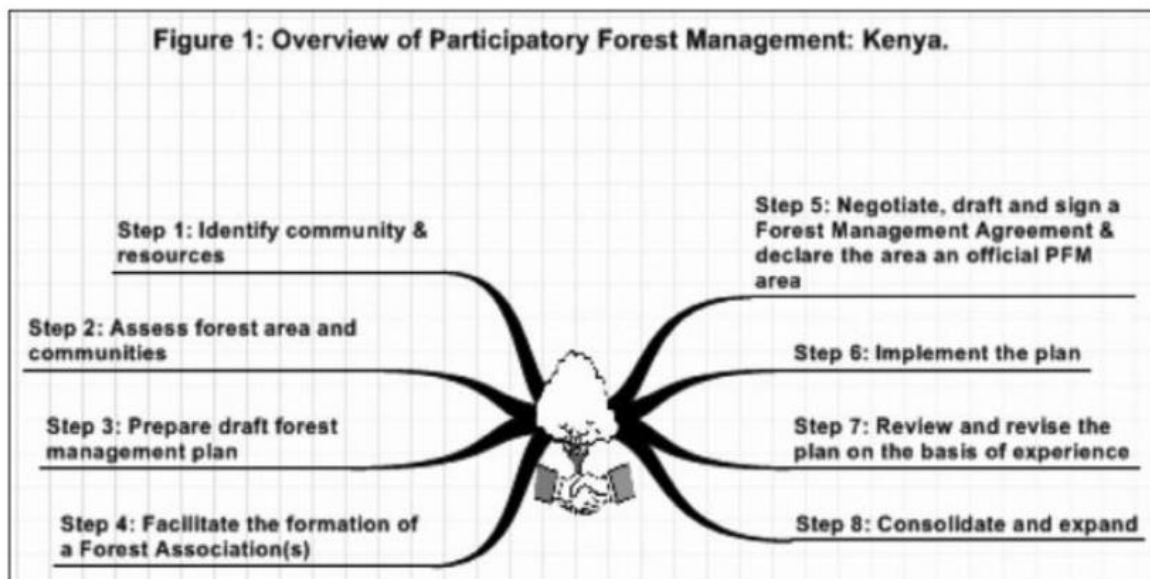
- **Participatory forest management**

Whereas ILM refers to on-farm interventions by farmers, participatory forest management refers to the actual protection and conservation of forests by Community Forest Associations. It is predicated on the belief that the involvement of multiple stakeholders leads to sustainable forest stewardship. SLFM in Western Kenya used this approach to overcome local resistance to change and promote community cohesion around the goal of conservation. It brought local farmers and families together to help them collectively agree on how best to reverse the impacts of degradation.

A key point of convergence and collaboration came through the agreed co-management of natural resources between Kenya Forest Service and local Community Forest Associations. Achieving common agreement on resource

preservation, this work laid the ground for Participatory Action Plans (PAPs), which combined known conservation technologies with scientifically selected SLFM techniques.

In addition, the project team encouraged farmers to view their micro-catchments as a common resource, while raising awareness of the forest as a valuable natural asset. In this way, SLFM in Western Kenya nurtured local collaboration around sustainable land and forest management.



Guidelines for the implementation of Participatory Forest Management in Kenya

- **Unifying and collaborative leadership**

Through a central project steering committee, SLFM in Western Kenya provided vital umbrella leadership and harmonised the diverse interests and agendas of the project's many stakeholders. The steering committee comprised top-level administrators, such as permanent secretaries of affiliate government ministries, CEOs of state corporations, and directors of NGOs or their representatives. Providing clarity and closure on a range of key issues, it acted as a core decision-making body, with the mandate to approve project work plans and budgets and authorise major actions. And while it operated separately from farmer representation bodies, it regularly interacted with them, especially during organised field visits.

Above all, the steering committee provided a platform for collaborative leadership. It ensured all parties worked together constructively and focused on the delivery of the set outputs and outcomes. And it successfully united multiple stakeholders around the twin goals of agricultural transformation and biodiversity conservation.

Key project activities and interventions

The main interventions and activities promoted through SLFM in Western Kenya were:

- **Agroforestry**

Agroforestry interventions were critical to enhancing smallholder productivity. Farmers were shown how to develop woodlots, and how to combine silviculture, agriculture and pastoralism. By planting tree species appropriate to local soil conditions and climate, farmers created sustainable sources of fuelwood and fodder.

Farmers were also shown how to grow leguminous trees like the Calliandra. This species enhances soil fertility through nitrogen fixation, while using its leaves as animal feed generates nitrogen-rich manure for fertiliser.

- **SLFM practices**

In addition to agroforestry, farmers were trained in a range of SLFM and integrated soil fertility management techniques. These include maize-legume intercropping, conservation agriculture, soil and water conservation, crop-livestock integration, and the use of farmyard manure. A focus on African leafy vegetables and other indigenous crops – cowpea, black nightshade, Ethiopian kale – helped farmers to enhance productivity cycles and profitability. It also enabled them to support agrobiodiversity conservation.

- **Input outreach**

Capacity gaps were bridged to enable input suppliers and extension service providers to reach farmer communities. Demonstrations, training sessions and field days were held to help farmers get the most from new inputs and technologies.

- **Market linkages**

As farmers increased their productivity, the project team forged strong links with produce aggregators and output markets, maximising income-generation potential for smallholder communities.

- **Financial inclusion**

To ensure farmers could purchase the inputs they required (seeds, fertilisers), relationships with microfinance institutions (MFIs) were established, providing access to soft loans and credit.

Innovation Platforms

To successfully unite the numerous value chain actors involved in SLFM and forest management, the project team created ten Innovation Platforms for Technology Adoption. These grassroots platforms comprised groups of interested stakeholders, ranging from input dealers, producers and researchers, to MFIs, traders and women and youth groups. They were designed to help visualise joint objectives relating to increased farm production, conservation, and markets for wealth creation. In the Makuchi micro-catchment, for example, the local Innovation Platform drove smallholder engagement with commercial vegetable production, influencing opinions and behaviours around indigenous crops and land preparation techniques.

During the course of the project, the ten platforms matured into functional entities with elected officials and certificates of incorporation. In many ways, these platforms embody the achievements of SLFM in Western Kenya: harmonising the efforts of multiple stakeholders across diverse value chains and sectors; enabling these actors to collectively address the constraints and challenges they face; and leveraging the resources at their disposal to scale SLFM practices, policies and interventions.

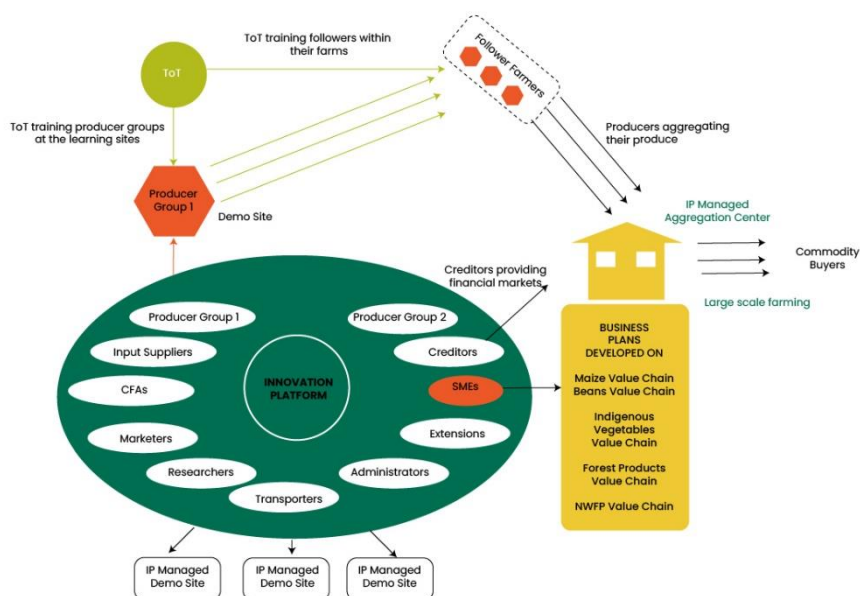


Figure X: Innovation Platform conceptual framework (source; Ayaga et al. 2019)

Delivering on the ground: programme impact

Following its work with communities in Kakamega, Nandi and Vihiga counties, SLFM in Western Kenya reached almost 100,000 farmers.

Most of these farmers adopted SLFM technologies and techniques, increasing productivity levels with crops they had struggled with previously, such as maize and beans. They also increased their focus on local vegetable cultivation. As a result, they boosted their incomes and enhanced their livelihoods. And they no longer encroach or exploit the Kakamega forest area.

Overall, project interventions helped to increase local productivity by 300%. At the same time, close to 7,000 hectares of land were placed under participatory forest management and are currently being rehabilitated.

Between April and October 2020, the SLFM project underwent a mid-term review conducted by an independent consultant. The mid-term report recorded the following achievements:

- Increased yields (maize 0.8 t/ha to 2.3 t/ha, beans 0.2 t/ ha to 0.32 t/ha, vegetables >than 10-fold from 0.22 t/ha to 2 t/h)
- Reduced poverty levels, whereby farmers obtain at least US\$240 in monthly income, up from US\$105 in 2019, through the commercialisation and sale of local crops and vegetables
- Reduced pressures on forest resources (6,090 hectares put under participatory forest management)
- Adoption of technologies by 76% of the total beneficiaries reached
- Reduced land degradation through the planting of 282,758 tree seedlings in hotspots and on farms, as well as increased access to clean water due to conservation and rehabilitation of water sources

Grant / Indicator	Actual to date	Project life Target	Achievement (%) To date
Number of policy analysis reports completed.	3	3	100%
Area (Ha) of forest land under Participatory Forest Management (PFM)	7022	7772	91%
Area (Ha) of land under Sustainable Land Management - SLM	4,440	3913	113%
Percentage (%) of farmers using at least 1 SLM strategy (Soil and water conservation, agro forestry,	76%	80%	95%

Conservation agriculture, ISFM)			
No. of farmers trained in post-harvest handling	15,413	10,000	154%
Number of farmers participating in field days on improved varieties	20,819	30,000	69%
Number of non-wood forest products (NWFP) developed and marketed	7	4	175%
Number of sustainable land management related frameworks at country and landscape level	6	3	200%
Number of Sustainable Land Management strategies developed	3	3	100%
Number of value chain analysis reports	10	3	333%
Number of women and youth groups supported	40	20	200%
Training of trainers of trainers (ToT) trained.	300	150	200%

Replicating success: leadership lessons learned

There is much to be learned from SLFM in Western Kenya's five-year operational period. The leadership lessons below provide clear pointers for agroecology actors looking to lead and sustain meaningful change in this crucial development sector.

- Enable local ownership and agency:** successful behaviour change programmes depend upon the positive engagement of local actors. By allocating individual farmers key roles in project delivery (Change Agents, Conservators etc.), SLFM in Western Kenya mobilised grassroots action and participation. Empowering local actors leads to successful peer-to-peer knowledge dissemination, motivating collective community uptake. This approach focused on bottom-up engagement rather than top-down instruction, fosters ownership and agency among the target community, which is key to attaining project goals.

- **Convene and collaborate:** both centrally, through the project steering committee, and locally, through Innovation Platforms, SLFM in Western Kenya brought people together. Through gaining investment funds, the project had the power to convene disparate entities, which took direction from the project team and facilitated collaborative leadership and implementation. On the ground, participatory management approaches encouraged people to work together and take collective responsibility for their resources. Such strategies are essential to agricultural and biodiversity projects, where multiple interdependencies and linkages require synergistic endeavours.
- **Align environmental and agricultural approaches:** sustainable land management is all about balancing the conservation of environmental resources with the interests of agricultural communities. In the past, approaches to agricultural and environmental issues have been separate, sectoral and siloed. This has led to misaligned efforts and poor outcomes. Further, SLFM and biodiversity conservation are deeply connected, cutting across ecosystems and value chains. Integrated ecosystem and value chain approaches are therefore critical to achieving unity and impact.
- **Keep stakeholders regularly updated:** to keep farmers, senior leaders and other stakeholders onside, regular information updates are critical. Particularly when programme methods are new, it is essential to keep all parties informed and abreast of developments. Regular, open and honest communication leads to convergence of vision and effort. From the project outset, face-to-face meetings and convenings between consortium partners and implementation bodies were crucial. Continuous harmonisation and dialogue sessions helped to elucidate roles and responsibilities. Locally, Innovation Platforms performed the same role among farmers and local stakeholders. This clarity facilitated the achievement of key project milestones.

Appendix

SLFM in Western Kenya partners and governance structures

Within the SLFM in Western Kenya project, various partners were engaged to carry out specific roles and responsibilities. These included:

Central project consortium

- **United Nations Environment Programme (UNEP):** GEF implementing agency; oversight and technical backstopping.
- **AGRA:** executing agency; Secretariat to Project Steering Committee, with oversight of financial management and monitoring and evaluation.
- **Kenya Agricultural and Livestock Research Organization (KALRO):** lead implementing agency on the ground and host to Project Management Unit (PMU); supervision of other implementing partners; technical and financial reporting.
- **County Government (Kakamega, Nandi and Vihiga):** project implementation, in-kind budgetary support; political will.
- **Ministry of Agriculture, Livestock and Fisheries:** project implementation; linkage with ongoing programmes for up-scaling of SLFM.
- **Agricultural Sector Development Support Programme (ASDSP):** project implementation; linkage with ongoing programmes for up-scaling of SLFM.
- **Kenya Forest Service (KFS) and Nature Kenya:** development, review and implementation of participatory forest management plans; capacity building of Community Forest Associations.
- **Kenya Wildlife Service (KWS):** support to biodiversity conservation, support to eco-tourism activities.
- **Kenya Forestry Research Institute (KEFRI):** assessment and product development of non-wood forest products and services; dissemination of SLFM technologies.
- **Masinde Muliro University of Science and Technology (MMUST):** capacity building on agrobiodiversity and social/environmental management framework; support to higher level student trainings.
- **Anglican Development Services Western (ADS-W) and Rural Outreach Programme (ROP):** community mobilisation.

Project Steering Committee (PSC)

Chaired by the Ministry of Environment, the PSC provided high-level orientation and guidance on all institutional, political and operational matters. It ensured the

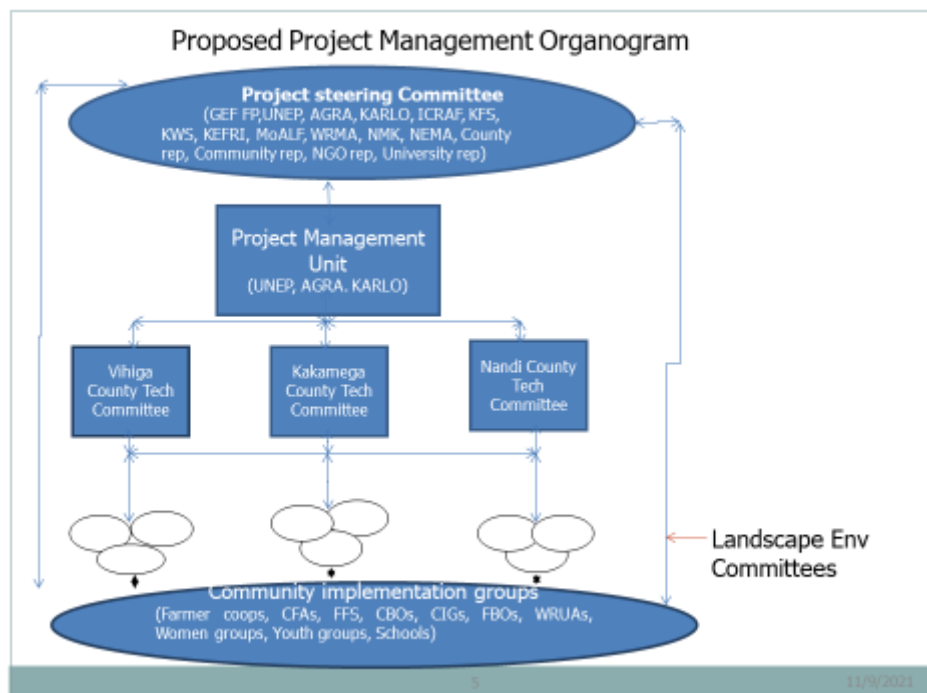
project was implemented in accordance with the agreed framework and achieved its targets. Crucially, the PSC also ensured collaboration between all participating institutions. The PSC met at least twice a year during the project period.

Project Management Unit (PMU)

The PMU was composed of AGRA and KALRO as the lead agencies on the ground. Reporting to the PSC, its main duties involved the coordination of day-to-day project implementation, the facilitation of project partners, the review of technical and administrative concerns, and the oversight of financial expenditure. The PMU met quarterly or as required during the project period to review progress and plan follow-up activities.

Landscape Committees

Within the sub-catchments of the Kakamega-Nandi ecosystem, Landscape Committees were responsible for guiding and coordinating the delivery of site activities. They reviewed project progress locally, addressed implementation barriers, harmonised activities and shared information and experiences. They comprise producer groups, NGOs, extension leaders and other special interest representatives.



Local level project delivery

At the local level, in collaboration with AGRA, KALRO and other implementation bodies, project delivery was coordinated through:

- Farmer Associations
- Community Forest Associations
- Producer Groups
- Innovation Platforms

Project conception and formulation

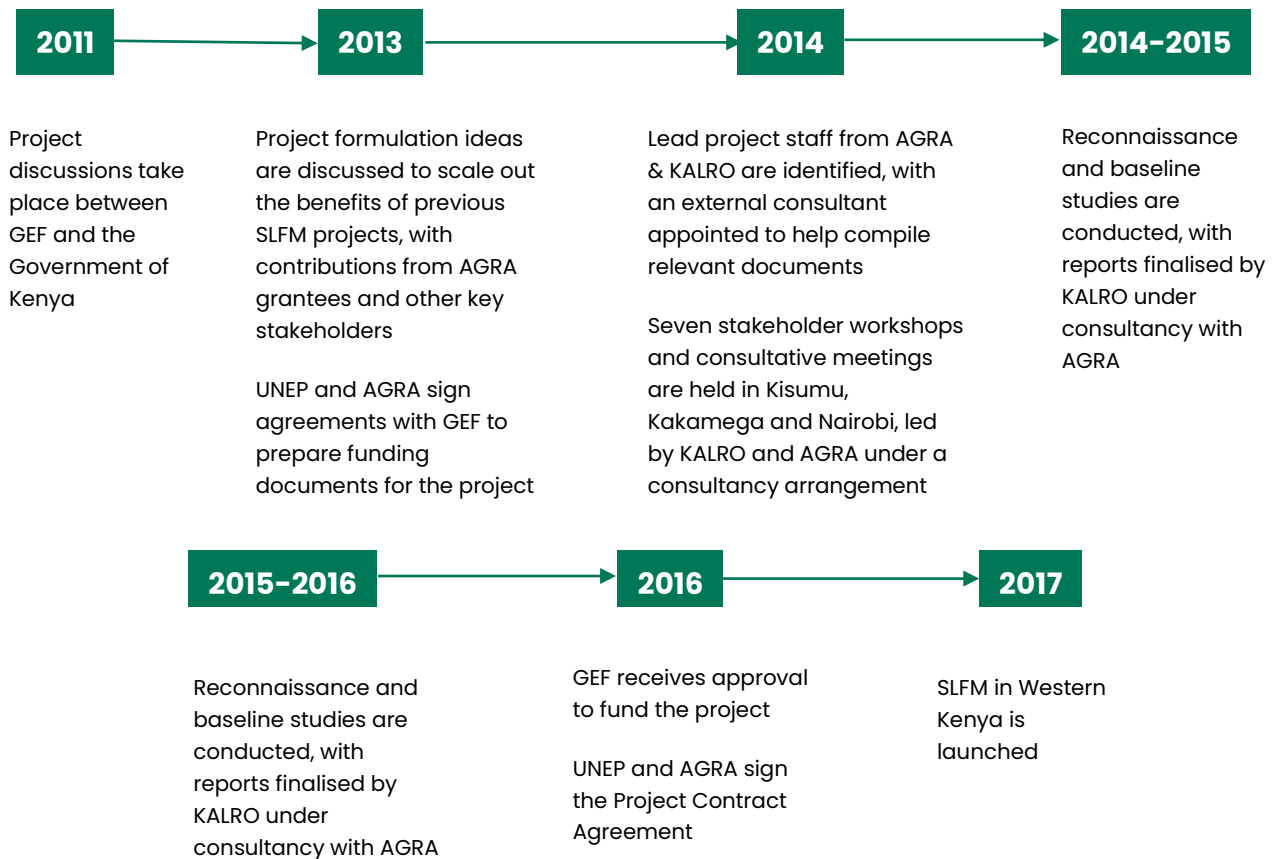
In 2011, the Government of Kenya endorsed a proposal presented by the Global Environment Facility (GEF) for the “scaling up of sustainable land management and agro-biodiversity conservation to reduce environmental degradation in Western Kenya”. Drawing on previous SLM studies and soil fertility projects conducted by AGRA and KALRO, GEF promoted the SLM concept as vital to the conservation of ecosystems in Western Kenya. Confirming that GEF’s proposal was in line with national priorities, the Ministry of Environment and Mineral Resources approved the project’s development.

Following further discussions between the Government of Kenya and GEF, the latter contracted UNEP to drive the project forward, with approved funding of \$US 3.58 million. UNEP approached AGRA, and AGRA in turn approached KALRO, to develop a joint project proposal. Representatives from the three organisations, with the support of an external consultant, then set about project formulation, conducting multiple stakeholder consultations as part of the process. Financing Agreements were then formalised, with specific implementation roles allocated to each of the three organisations (as above).

As members of the central project consortium and project steering committee, UNEP, AGRA and KALRO developed a delivery model that would extend outward to enable local community participation, ownership and implementation.

The Government of Kenya retained a key oversight role through the Minister of Environment, who chaired the project steering committee. The project also aligned with the Kenya Strategic Investment Framework (KSIF) for SLFM. However, the project’s management arrangements incorporated existing county level structures in order to create local linkages and synergies. In particular, project implementation was linked to County Environmental Committees and ASDSP County Coordination Units.

SLFM in Western Kenya timeline



Additional reading and resources

Other SLFM projects, reports and case studies include:

- AGRA Soil Health Program**
<https://agra.org/wp-content/uploads/2020/09/SHP-Impact-Study-2020.pdf>
- FAO Global Soil Partnership**
<https://www.fao.org/global-soil-partnership/areas-of-work/soil-fertility/en/>
- UNEP Business Cases for Sustainable Land Use**
<https://www.unep.org/resources/case-study/business-cases-sustainable-land-use>

- **SOILS4NUTRITION project**
<https://www.fao.org/global-soil-partnership/resources/highlights/detail/en/c/1305568/>
- **Integrated soil fertility management and household welfare in Ethiopia**
<https://www.sciencedirect.com/science/article/pii/S0306919220302281>
- **Sustainable intensification with cereal-legume intercropping in Eastern and Southern Africa**
https://www.researchgate.net/publication/333239436_Sustainable_Intensification_with_Cereal-Legume_Intercropping_in_Eastern_and_Southern_Africa
- **Sustainable Forest Management – Case Studies**
<https://forestindustries.eu/sites/default/files/userfiles/1file/SustainableForestManagementCaseStudiesTO12.pdf>

Concluding quotes and observations

“The real game-changing aspect of SLFM in Western Kenya was its ability to unite and combine the strength of so many different stakeholders. Bringing all of these diverse individuals and organisations together, getting all of them working for the common good of achieving food security through improved farm productivity, and the common good of preserving Kakamega forest, was an exceptional achievement.”

Abednego Kiwia, Associate Program Officer, Program Innovation and Development, AGRA

“Implementing a multi-institutional, multi-disciplinary and multi-stakeholder project like SLFM in Western Kenya requires participatory and hands-on leadership. It requires joint planning and prioritisation of actions and decisions which are satisfactory to all, but responsive to the anticipated project delivery.”

Dr George Ayaga, SLFM Project Coordinator and Centre Director at KALRO Alupe

“My position as Agricultural and Environmental Change Agent enables me to educate the community on sustainable land and forest management on a weekly basis. This encourages men and women to become involved in gainful engagement in farming as a business to improve production and profit...we need to take care of our land and use appropriate SLFM technologies to reduce poverty.”

Wellington Ingosi Izechero, farmer, Makuchi micro-catchment, Vihiga County

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