

REGREENING AFRICA



A GLIMPSE OF KENYA



REGREENING AFRICA WORKSHOP

Dawning into 2020, was a two-day planning workshop organised by the [Regreening Africa](#) team to build and accelerate impacts on land restoration. Hosted at [World Agroforestry](#) (ICRAF) headquarters in Nairobi, Kenya, and led by the [Stakeholder Approach to Risk Informed Decision-Making](#) (SHARED), the event brought together partners from [World Vision](#), [Catholic Relief Services](#) (CRS), [Oxfam](#), [CARE International](#) and [Sahel Eco](#) from 22-24 January, 2020.

Round table discussions, animated presentations and clinic sessions with component leads served as a thawing process to data that would mostly get many cringing due to the complexity they harbour. Moreover, it was a learning process too for the scientists once realities on the ground were presented in form of lessons, opportunities and challenges.

“This was a great opportunity to meet and learn about project interventions undertaken in the other seven countries. It was amazing to learn of the success of [farmer-managed natural regeneration](#) (FMNR) in Niger despite several challenges faced,” says Tom Nyongesa, Project Officer, [World Vision Kenya](#). These later on culminated with field excursions to sites in Western Kenya to reflect and inspire creative and strategic thinking once partners returned home.



A member of kumi bora self-help group in Homa Bay County explaining the steps of setting-up a nursery.
Photo: May Muthuri, World Agroforestry

Sampling from individual, communal and school-owned farms, project managers hailing from Ethiopia, Ghana, Mali, Niger, Rwanda, Senegal and Somalia, explored various restoration practices. It was refreshing to discover techniques that cut across diverse geographical locations, while at the same time an eye-opener to unique practices that could easily be replicated to meet country-level targets.

For instance, of the six sites visited, a 1.6 acre farm owned by Maxwell Ochoo left the guests in awe, begging each to wonder why they never ventured into farming, and if they did, certain innovations witnessed would have translated to better yields if explored. The farm hosts a stunning fruit orchard with the *Red royale* pawpaw variety, a 20m by 15m fishpond, and a tree nursery comprising of 14 different species.



While restoring degraded landscapes in Lambwe, Mr. Ochoo is also diversifying his income through sales from fruits, leaves from pawpaw trees that serve nutritious and medicinal purposes, latex for brews and tree seedlings for restoration and household needs.

It was also a learning opportunity to the hosting team as well as the farmers, to better current efforts if targets are to be met. These were pegged on gender and policy disparities, land tenure, stakeholder engagement, soil and water conservation techniques, strengthening tree-based value chains and community action planning. With technical backstopping from ICRAF, the team is optimistic future interventions will generate better outcomes.



"I am surely blessed. This has been a wonderful learning experience. We thank our Kenyan colleagues. You have made us feel at home and part of your project here in Kenya. We look forward to having more of such exchange learning events in the future," said Edward Akunyagra, Project Manager, World Vision-Ghana.

Alex Mugayi, Project Manager from World Vision Rwanda echoed these sentiments stating "During the field visit in Homa Bay County, it was amazing to witness peer and inter-generational relationship in scaling-up restoration practices."



Project managers from the seven countries visiting different farmers and planting diverse trees on an FMNR plot. Photos: May Muthuri & Irene Ojuok

RESTORATION CAMPAIGNS



Wandiji Primary School environment club members planting trees and another demonstrating FMNR techniques. Photo: World Vision



Member of Regreening Lambwe Initiative taking part in the campaign. Photo: World Vision

In the village of Ochieng Odiere, a farmer-led campaign by **Regreening Lambwe Initiative** to seed hills in the area was birthed. A drive to restore 70 hectares of public land wasn't welcome. "Many would mock us as we climbed the hilltops and seeded using *Terminalia brownii*, *Sesbania sesban*, and *Leucaena leucocephala*. Indeed, we are witnesses to the transformation trees can bring and improve the micro-climate of our area," narrates Maxwell Ochoo, founder of the group. "My neighbours admire my farm and come for advice to improve their pieces of land."

The prioritised tree species are pawpaw, grafted mangoes, oranges, avocado, *Sesbania sesban*, *Leucaena leucocephala*, and *Calliandra calothyrsus* varieties because they are high value species and provide quick returns for example through the sale of multiple products from pawpaw. The fodder trees are notably high in crude protein content and provide a cheap source for fish feed.

April 4, 2020 marked 1 year of the fulfilling initiative and additional trees planted during the anniversary celebrations will serve as a reminder that it was all worth it. In fact, the transformation curtailed a bigger mission, a one million tree seedlings model, proposed by World Vision team in January 2020.

This is targeted at enhancing tree variety at sub-county level with accountable stakeholders across the board. Courtesy of ICRAF, *Grevillea robusta*, *Casuarina equisetifolia*, *Sesbania sesban*, *Leucaena leucocephala*, *Moringa oleifera*, *Melia volkensii*, *Cordia africana*, *Markhamia lutea* and *Acacia polyacantha* tree species were distributed to meet different ecological and community livelihood needs.



Rehabilitation of Kaptagat Forest in Elgeyo Marakwet County, presided over by CS Hon. Keriako Tobiko. Photo: Charles Odhiambo, World Vision



Maxwell Ochoo planting a tree during the campaign. Photo: World Vision



Members of Nyatike Green Revolution Development Group sowing seeds on a communally owned nursery. Photo: Jared Owuonda, lead farmer/ community video taker



Farmers sowing groundnuts in readiness of the rainy season. Photo: May Muthuri/ World Agroforestry

Another restoration initiative by the team is targeted at reclaiming 2,500 and 2,000 acres of public and farmlands respectively. 1,000 hectares on Nyatike Mirema Hills has been set aside for rehabilitation through FMNR and enrichment planting. Other public lands under restoration include primary and secondary schools, churches, administrative offices and water towers in Nyatike sub-county.

The warm reception of this initiative is translating to a Participatory Forest Management Plan (PFMP) and gazettelement of the same is underway. The same has also earned World Vision an award as the best organisation in community projects/services under the non-governmental organisation category, and a certificate of second-best managed stand during the Nakuru and Migori County [Agricultural Society of Kenya](#) (ASK) show. The ceremony was graced by the [National Kenya Forest Service](#) (KFS) Board Vice Chairman, Mr. Peter Wandera.

In an effort to support the national and county governments to meet their land restoration targets in line with [AFR100](#) (The African Forest Landscape Restoration Initiative), [Aichi targets](#) and the [Nationally Determined Contributions](#) (NDC), the project planted 126,601 tree seedlings on-farm both in Migori and the leverage sites (Laikipia, Baringo and Elgeyo Marakwet counties).

Some of the planted species include bamboo, *Acacia polyacantha*, *Croton megalocarpus*, *Azadirachta indica* (Neem), *Markhamia lutea*, *Olea africana*, and *Cordia africana*; and high-value exotic tree species, like *Grevillea robusta*, *Sesbania sesban*, *Calliandra calothyrsus*, *Casuarina equisetifolia*, *Leucaena leucocephala* and *Moringa oleifera*; as well as fruit tree seedlings, e.g. mango and pawpaw.

20 kilograms of assorted agroforestry tree seeds were also issued to various groups in Migori for enrichment planting, in addition to 200kgs of African foxtail (*Cenchrus ciliaris*) seeds delivered to FMNR lead farmers in Marigat, Baringo county for rangeland reseedling.



The team in partnership with [MBCI Radio and TV](#), [Alpha Radio](#), [Dala FM](#) and [Lolwe TV](#) have been creating awareness on tree planting, nursery establishment and FMNR.

Through these platforms, the team has conversed candidly on sustainable farming practices that can help curb climate change and other adverse effects of land degradation.

Outstanding lead farmers accompanying different team members help create perspectives on issues affecting their peers, how these can easily be addressed and the joys to be experienced.

The shows have received immense response with a reach across at least 19 counties, namely; Homa Bay, Migori, Kisii, Nyamira, Kisumu, Kericho, Bomet, Nakuru, Baringo, Nyeri, Kirinyaga, Murang'a, Meru, Embu, Tharaka Nithi, Uasin Gishu, Kitui, Machakos, and Makueni. It also partly covers 4 other counties, namely; Nyandarua, Laikipia, Nandi, and Kakamega! Talk about popularity.

Beyond the shows were advertisements aired on the four stations to encourage community participation in farmer field days, exhibitions, intra-county exchange visits, trainings and roadshows, prior to COVID-19. So far, the team has participated in 25 talk shows.

MEDIA ENGAGEMENTS



World Vision and ICRAF teams participating in the radio and television shows

Additionally, the team marshaled communities through roadshows in Homa Bay and Migori counties. Organised on market days, the shows attracted a multitude of farmers and other community members. Beyond dancing to local tunes, all present are educated on restoration approaches and receive tree seedlings.

SOCCER TOURNAMENT



Both old and young participating in the tournament. Photos: Tom Nyongesa/ World Vision

A random tour to most junior learning institutions will mostly present at least two students digging or weeding. It may not always be because they are playing their role as environment club members, or nature enthusiasts, but because they simply did contrary to school rules. Consequently, agriculture is deemed to be a boring and tiresome task for the poor or 'rogue' students. So, with a darkened outlook on farming, is it possible to get the youth on board the restoration agenda?

Well, a group of lead farmers and their respective associations have found a fun remedy to this, soccer.

You may ask how the two relate, and here's how. Contests dubbed "Soccer for Regreening" target youths aged 12yrs and 19yrs. The matches kick-off with pre-event tree-growing campaigns to sensitise communities on the need to grow high value indigeneous and fruit trees. This is superseded by tree planting in select community grounds. Thereafter, two teams from the community play against each other for an hour and the winning squad is rewarded with seedlings. This is normally done in the presence of politicians, local leaders of both county

and national government, to create awareness and reach most community members.

One such tournament was held at Nyatoto in Ruma Kaksingiri ward on December 21 to January 1, 2020. Present at the tournament was Norah Okumu, the area chief, who could not hold back her pride, "When the youth and women embrace environmental conservation, we will restore our long-gone forests."

Some of the youth impacted by the event said "We thank Regreening Africa Project for hosting the tournament and sensitising us on the importance of caring for our environment. My outlook on farming has changed and I believe the 10 seedlings issued by the team will help my parents too in future when I join high school.

Crowning the event was tree planting on a 30-acre piece of land chosen based on degradation along the slopes of Gembe hills. Over 5,000 planted trees comprised of *Gliricidia sepium*, *Markhamia lutea*, *Croton megalocarpus*, *Mangifera indica*, *Grevillea robusta*, *Calliandra calothyrsus* and *Terminalia brownii* species. The event attracted more than 1,800 youth, who also tried their luck at dribbling in the hopes of securing a slot in either team. As the saying goes, if you can't beat them, join them!

A lead farmer, Julius Buong' hosted a farmers field day on his farm on 24th April, 2019. The event was organized by the project in partnership with the Ministry of Agriculture, Livestock and Fisheries Development, and Ministry of Environment, Forestry and Disaster Management, both from Homa Bay and Migori counties.

Farmers within Lambwe showcased their skills and products such as advocacy approaches, tree nurseries for **grafting** and budding, honey value chain production in partnership with Parecma Limited, high-value trees establishment on farm, FMNR interventions and pasture development.

The event witnessed by representatives of the National Oversight and Coordination Committee (NOCC), Homa Bay county government and officials from the two Ministries, provided a buffet of experiences and opportunities in relation to restoration efforts by the project. It was also a platform to collectively brainstorm on appropriate strategies to circumvent challenges farmers are facing.

FARMER FIELD DAY

The NOCC helps to streamline project operations, assure quality in implementation, monitoring and reporting; and provide oversight and external linkage for the project. NOCC in Kenya comprises of land restoration experts drawn from the county and national governments, Council of Governors (CoG), Stockholm Environment Institute (SEI), the Delegation of European Union in Kenya, Inter-faith Council of Kenya, ICRAF and World Vision Kenya.

EMPOWERING FARMERS WITH DISABILITIES

Four tree-nursery operators from Nyatoto Women's Group in Ruma Kaksingiri East Ward set out on an extension mission to train five physically impaired farmers. Out of their own will, the nursery operators distributed 600 pawpaw and mango fruit seedlings and trained the farmers on proper cultivation of the same. Beaming with excitement, one farmer narrated "I thank the Regreening Africa project for remembering us and supporting the community with skills to grow fruits on our farms that will provide food and income," shares Saya Wanga.



John Owaga, one of the farmers abled differently poses for a photo on his farm. Photo: Tom Nyongesa/World Vision

WORLD WILDLIFE CELEBRATIONS

The team marked this year's [World Wildlife Day](#) celebrations at Ruma National Park in Lambwe county. Graced by Cabinet Secretary for Tourism and Wildlife, Hon. Najib Balala, lead farmers had the honour of showcasing regreening initiatives which sparked positive feedback.

“This is good work, but more importantly, besides conserving the environment, there is a need to

protect endangered species like the roan antelope that can only be found at the Ruma National Park in Kenya. By doing this, we shall reduce human-wildlife conflict,” said Hon. Balala as he concluded his tour.

Some of the items on display were grafting and budding techniques for mangoes, avocado and oranges. There were also demonstrations for community video-taking as an approach to change mindsets, Environment clubs and practical demonstrations of soil erosion on bare ground and on ground with vegetation cover.



Tom Nyongesa explaining some of the restoration approaches carried out under the project.
Photo: Raphael Odwaro, lead farmer/ video taker

SAVING FOR TRANSFORMED LIVELIHOODS AND LANDSCAPES



A family in Nyatike showcasing their bountiful harvest since adopting FMNR. Photo: Brian Wambua, World Vision

One of the key restoration approaches the project promotes is saving for investments in land restoration efforts. This model is a sustainable and highly profitable way of assisting poverty-stricken households to manage limited finances effectively.

To this regard, the project is supporting various village savings and lending groups and five producer groups that integrate agroforestry related approaches through training on [empowered world view](#), group dynamics, financial management, resource mobilisation and record keeping. Reinforcing these efforts are linkages with KFS and Lambwe Hills Community to track savings progress.

THROUGH A FARMERS' LENS...

To document change as and when it happens, 16 lead farmers were trained on the perks of being video takers.

From the basics of operating smartphones to complexities revolving around editing, these farmers have been and still are filming diverse restoration approaches in their villages



The project is piloting the approach in Kenya to facilitate behaviour change in communities.

Simple edited videos are showcased during chief barazas, market days, environment clubs in junior schools, after church services, and other forums.

[Watch](#) two lead farmers narrate their journey.

STAKEHOLDER ENGAGEMENTS



A group of agroforestry tree nursery operators together with the Kenya Forest Service, Mbita Tree nursery management officer, Mr. Teddy Katolo, and sustainable energy technical working group, undertook an inter-county learning visit in Elgeyo-Marakwet County for a hands-on induction on tree nursery operations, grafting, FMNR and fruit tree farming.



Lead farmers being trained on tree planting and grafting techniques. Photos: Robert Oroiyo/ World Vision

The members resolved to put the learning into practice and to have some of their own take up training roles in grafting to further their interest in **fruit tree farming** and value chain development.

The team has also forged other partnerships fostering reach of over 5,000 community members. This is thankfully translating to increased demand for support in greening by individual farmers, groups and institutions. Additionally, in partnership with other stakeholders, the team has convened a Renewable Energy Technical Working Group in Homa Bay for deliberations on the draft renewable energy policy for the county. This move is geared towards incorporating FMNR and energy-saving cook stoves as approaches to environmental and energy conservation.

In Migori county, the team collaborated with British American Tobacco and KFS, in a tree-planting exercise at Mirema Hills in Macalder Kanyarwanda Ward. A total of 50,000 tree seedlings of various species such as *Markhamia lutea*, *Acacia polyacantha*, *Leucaena leucocephala* and *Senna Siamea* were planted.



Farmers in Musare village, Rangwa East, Kaksingri West ward being trained on Empowered World View. Photo: Tom Nyongesa/ World Vision

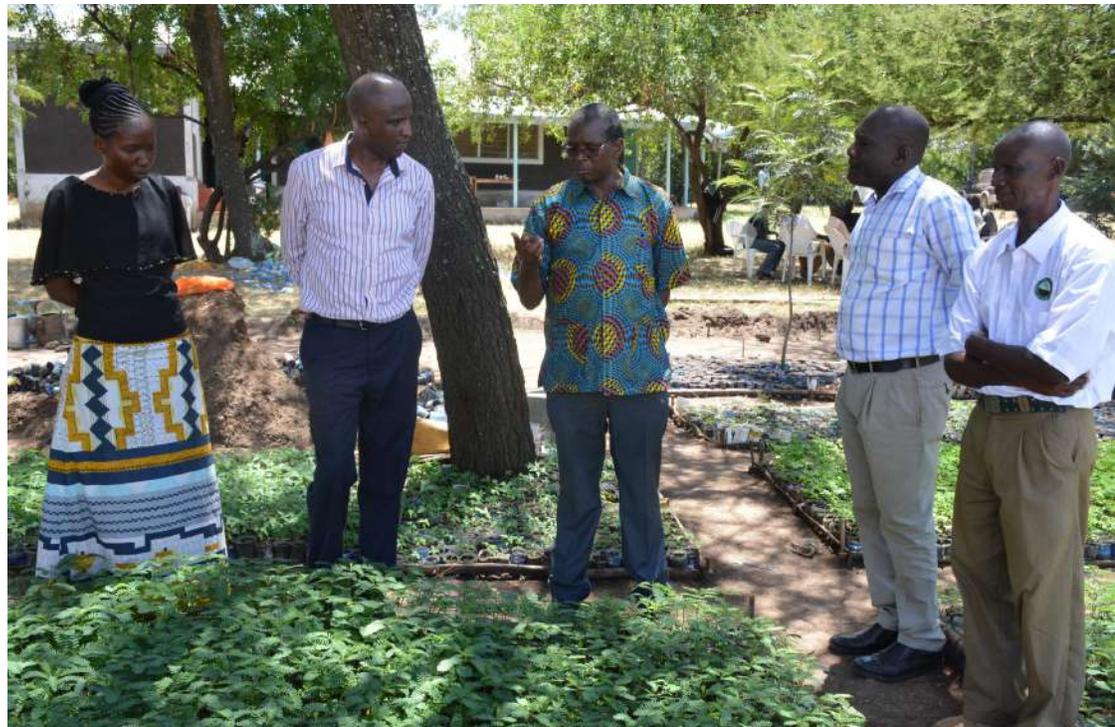
A similar partnership with the [Kenya Forestry Research Institute](#) (KEFRI) birthed the establishment of agroforestry model sites for Kimai, Ndemra and Orango tree nursery groups, as well as Lake Victoria Aids Support Organization (LAVISO), a community-based organization, that supports individuals and families affected by HIV/AIDS in Nyatike sub-county. LAVISO CBO was assigned 300 Moringa seedlings while the tree nursery groups received 900 mango seedlings each. This move by the project is geared towards influencing community adoption of tree planting activities, serve as community learning platform and a local genebank where farmers can obtain scions. Eventually, grafting of fruit tree seedlings like mangoes will also take place therein.

World Vision, KEFRI and the Department of Agriculture in Migori county conducted 33 technical site assessments to evaluate progress on 15 FMNR sites and 18 on-farm tree planting sites. One of the officials remarked that the work done by the farmers would go a long way in encouraging more people to be conscious of land restoration. An assessment report based on the site visit is being developed to inform decision-making on future plans for scaling in specific villages as the project comes to a close.



Habex Agronomist inspecting newly grafted avocado seedlings, Eldoret Kenya. Photo: Irene Ojuok/ World Vision

61 farmers (39 men, 22 women) from four groups are also beneficiaries of the partnership with KEFRI and the Ministry of Agriculture. Through trainings on mango grafting the farmers are now versed with the technicalities of boosting their production. A total of 5,000 mango seedlings were issued to the trainees.



Charles Odhiambo giving an update of the projects' progress. Photo: Grace Koech/ World Agroforestry

UPTAKE SURVEY IN KENYA

ICRAF's monitoring, evaluation and learning team carried out uptake surveys in Homa Bay and Migori counties, to inform the projects' progress, 2 years in, and actions to increase adoption rates. Results surveying data between February 2019 and January 2020 indicates that only 8% of the households' land is under restoration. This number is relatively low compared to 15% of land already harbouring trees prior to the projects' intervention. Additionally, there are more trees within homesteads in relation to cropping fields. These variations are helping the team marinate on unique sensitisation approaches that will spark farmers' interest in incorporating the right trees on their farms, as expounded above.



REGREENING AFRICA APP

Courtesy of the [Land Degradation and Dynamics](#) team, the team has mapped key interventions including tree nursery operations, FMNR, fruit tree farming, enrichment planting and engagements with school environment clubs and faith-based organisations on 383 model sites using the [Regreening Africa App](#). Based on data collected on the free android-based application, the project is now in the know of the hectares currently under restoration and households reached, which will inform scaling of these activities to leveraging sites, while also increasing adoption of the same in Migori and Homa Bay counties.



Tor-Gunar Vagen taking the team through the data uploaded from the App.
Photo: May Muthuri/ World Agroforestry



Robert Kipyego taking Mr. Peter Orimbo and young farmers through Regreening App Photo: Susan Chomba/ World Agroforestry



VIABLE REGREENING OPTIONS FOR SCALING

Regreening Africa in collaboration with [Farming Systems Kenya](#) (FSK) and World Vision Kenya sister project – Central Rift FMNR Scale-up Project (CRIFSUP) are championing the development of tree-based value chains among targeted smallholder farmers. While promoting *Grevillea robusta*, *Melia volkensii*, acacia species such as *Acacia seyal*, mango and avocado trees, farmers are envisioned to experience a turnaround in their surroundings and as a result, more money in their pockets.

Apiary farming, sustainable and green energy options, reseedling with adaptable grass species and soil and water conservation practices are also being explored. By further engaging other stakeholders including the county government and community groups, the networking pool is narrowing the following gaps:

1. Accessibility to tree germplasm

Inadequate access to certified germplasm and knowledge on value chain development was observed to be among the main constraints curtailing land restoration efforts. Regreening Africa in collaboration with other local partners is training farmers on tree nursery establishment and management, vegetative propagation and seed collection.

Charity Self-Help Group in Laikipia County is one of the beneficiaries and has successfully raised over 3,000 root-stocks of avocado seedlings that are ready for grafting. Another smallholder group, Nyakiambi-Munyaka, has also raised 2,000 root-stocks of Hass avocado seedlings. The project in collaboration with FSK is sourcing additional 1,000 Fuerte and 3,000 Hass scions for both groups.



It is envisioned that by the sale of avocado seedlings, the group will earn between USD 3,000 – USD 4,500 in the next 12 months.

“I am very grateful to World Vision and FSK for supporting us through theoretical and practical trainings. As members of Githima-Nyakiambi group, our target is to transform our immediate environment by planting indigenous trees which have been entrusted to us. We are also training more groups in our village, with a target of reaching out to at least two additional groups each,” Elizabeth Wambui Ngigi, one of the group members expressed.

Another beneficiary of these efforts is a unique group called Cheptengis Okilgei. With a prior thirst for an illicit brew, this group of 17 members having undergone rehabilitation is now passionate about the environment in Elgeyo-Marakwet county.

Owing to a three acre piece of land allocated by KFS, and consecutive teachings by the project on grafting, marcotting and seed collection, members have so far sold 60,000 assorted seedlings. Also, 2,000 Hass avocado seedlings have been grafted and will be sold by the group as a source of income.

1. Market linkages

Regreening Africa has forged partnerships with county governments (departments of Agriculture and Environment) in Homa Bay and Migori counties, Kenya Forest Service, [Pathfinder International](#) (Homa Bay), Farming Systems Kenya and CRIFSUP in Elgeyo Marakwet, Laikipia, Baringo and Nakuru Counties to foster the enhancement of value chains on mango, avocado, pawpaw and honey production, market linkages and quality control.

In Elgeyo Marakwet county, the project has facilitated the training of farmers on avocado production and signing of a 10-year avocado contract farming with [Habex Agro Limited](#). The avocado market linkage targets to export the Fuerte and Hass avocados through Habex. This relationship is geared towards securing the farmers' livelihoods while ensuring sustainable restoration.

In Homa Bay, honey farmer groups are linked to Parecma Company Limited and are looking forward to earning income from the sale of the refined products.



Charity self-help group members learning the ropes of grafting avocado rootstocks. Photo: Robert Oroiyo/ World Vision



Maxwell Ochen posing for a photo in his pawpaw orchard. Photo: Tom Nyongesa



Member of kumi bora self-help group tending to the group's nursery. Photo: May Muthuri/ World Agroforestry

ECONOMICS OF LAND DEGRADATION WORKSHOP

During a workshop held at Jacaranda Hotel in Nairobi on March 10 2020, the **Economics of Land Degradation** (ELD) team presented results on the economic benefits of investments in sustainable land management and the consequences of doing contrary to this. Studies carried out reveal that 22-30% of Kenya's land is considered degraded and a hefty fee of not addressing this is between USD 0.39 and 1.3 billion!

With a focus on gender inequality in management of rangeland resources and another on water towers, this study also disclosed implementation challenges and conflicts of policies and strategies that lead to sectoral fragmentation at county level, as well as other themes.

Furthermore, the exploration notes that implementing FMNR can translate to an 86% increase in crop production and income base for farmers. With a positive increase in the Net Present Value (NPV) of investing in sustainable land management, it is clear the project is moving in the right direction.

Some of the recommendations stemming from the discussions include the need for:

- A clear understanding on what land degradation means, what the key drivers are and how existing policies promulgate the same.
- Integration of social dimension in land discussions since usage varies among different groups of people thus context specificity is key.



Charles Odhiambo giving a presentation during the workshop.
Photo: May Muthuri/ World Agroforestry



Participants posing for a group photo

- Prioritisation of land tenure issues by formulating and implementing suitable policies.
- Synthesis of policies and institutional frameworks to facilitate discussions on how various actors in the land degradation space can work together in promoting land restoration and resilience.
- Sensitisation and capacity building of local communities on sustainable land management practices.
- The Ministry of Agriculture and Livestock at both the national and county governments to create awareness on the various sustainable land management (SLM) practices through farmer extension services.
- Encouraging private sector actors to invest in SLM practices and create enabling environments for sale of locally produced products.

The one-day event culminated with an agreement to include these recommendations in the 7th Annual Devolution Conference 2020, which has since been postponed, and the joint agricultural secretariat under the Council of Governors that supports the streamlining of activities within the agricultural sector.

**SPOTLIGHT ON
OUTSTANDING
FARMERS**



SABINA OTIENO

Ms. Sabina specialises in tree nursery establishment with more than 6,000 seedlings under her wing. She also has a thriving orchard with mangoes, oranges and other fruit trees. Recently, she was engaged by KEFRI to set-up an improved grafted guava farm for learning purposes. She has already established 80 guavas on-site in readiness for grafting. Previously, Sabina had an interest in running a tree nursery. However, due to nursing her ailing husband, she had to abandon her dream and be a full-time caregiver. In 2018, she attended a Regreening Africa training session and enrolled as a nursery operator. Since then she has not looked back.



Sabina tending to her nursery. Photo: May Muthuri/ World Agroforestry



Ake Mamo, a consultant, going through Sabina's footage during a refresher training. Photo: May Muthuri/ World Agroforestry



Some of the species on sabina's farm. Photo: May Muthuri/ World Agroforestry

She has influenced more women and assisted Nyatoto Primary school in setting up their nursery. Sabina has also been trained as a community video taker and has impressed many in her educative and instructive videos on the successful restoration approaches.

Having undergone training on farming lemons, Ms. Sabina has mastered the art of nurturing the fruits' seeds into mature trees through these simple steps:

- purchase 200 lemons. On average, each fruit has 6 seeds and you will need about 1,200 seeds to achieve a rough target of having 1,000 lemon trees on your farm
- wash the fruits. Cut them lengthwise to avoid destroying the seeds and squeeze out the juice into a clean cup. Sieve to obtain the seeds
- fill a pot with dry sand and bury all the seeds for two days. This will ensure they dry completely
- carefully remove the seed coat from the seed using a sharp razor
- sow this seed in a seedbed or potting tube and germination will commence in three weeks
- after 16 weeks, the seedling is now ready for grafting with orange seedlings. Combining the two assists the root-stock to develop resilience against disease and harsh weather. This can be nurtured to a mature tree or sold at USD 20.

Simple right? How about trying this out and sharing your results with us!

NICHOLAS IGONGO

Mr. Igongo has for the longest time operated a tree nursery under a tree in his compound. Courtesy of trainings on nursery establishment and management, he resorted to prioritise the purchase of seedlings with the meagre savings he had. At that point in time, suitable tools like a shade net would be dependent on him making sales from the seedlings to expand his nursery, but the money obtained from the trade was never enough to make such a 'luxurious' purchase.

But, World Vision came in right on time, providing the necessary tools and seeds and this has since then transformed his nursery to host

3,000 seedlings. His compound boasts of a canopy of trees. This miniature initiative is now a hub for community members should they wish to replicate the same on their farms. This has diversified Mr. Igongo's income streams as he has so far sold 2,000 seedlings: 1,000 pawpaw's, 400 passion fruits, and the rest comprising of pine tree seedlings, guavas, lemons, and loquats.

In the future, Mr. Igongo hopes to engage the beach management units to promote conservation around the shores of the lake and reach out to schools and churches in his neighbourhood.





Overview of diverse restoration activities on Samuel's farm. Photo: May Muthuri/ World Agroforestry

SAMUEL SANA

With the looming challenges presented by COVID-19, Mr. Sana has been supplying grafted mangoes and banana tissue culture to community members in the area while sensitising them on the causes and effects of land degradation. This way, the knowledge he possesses courtesy of project interventions, is scaled-out to farmers who are not direct beneficiaries of the project. So far, 12,000 seedlings of *Gliricidia sepium*, *Sesbania sesban*, *Leucaena leucocephala*, *Grevillea robusta*, pawpaw, grafted mangoes and bananas seedlings have been supplied.

Mr. Sana also rears dairy cows and goats on his farm. He has successfully established fodder trees to supplement feed for his livestock. He has a tree nursery with more than 10 varieties totaling to 8,000 seedlings.



Staff from ICRAF and World Vision visiting Samuel's farm during a mid-year review. Photo: May Muthuri/ World Agroforestry

He also grows arrowroots and pumpkins as well and has an apiary comprising of 6 hives.

“Now that I have a 600m³ capacity water harvest pond, I will successfully produce 20,000 grafted mangoes that I can supply to several customers. Farming has really improved my household income and enabled me to pay school fees for my children,” says Sana. Looking ahead, Mr. Sana plans to open up his home as a farmer school and partner with other stakeholders to train farmers on better environment conservation approaches.



Landscape views of Jared Owuonda's farm



Jared interviewing a fellow farmer during a refresher training on community videos. Photo: May Muthuri/World Agroforestry

JARED OWUONDA

Meet Jared Owuonda, a lead farmer hailing from Nyatike in Migori county who is not only a family man but a champion under the project. Owuonda having received training on FMNR, tree nursery establishment and management, as well as other agroforestry practices, almost put all his 'eggs' in the restoration basket.

How so? Owuonda dedicated 20 acres of his land for FMNR practices only. Harvesting wood for use in the kitchen not only benefits him and his wife but the community around, who also gain wisdom through practical trainings on the practice.

Beyond this, Owuonda inter-crops *Sesbania sesban* and *Gliricidia sepium* with maize on a one acre farm which has been thriving through trainings under the project. Owuonda attests to a significant increase in crop productivity since he embraced restoration

activities promoted by the project. Furthermore, he has successfully grafted 100 mangoes housed in his tree nursery. His dedication earned him a training on video taking and through him, timely documentation and editing of restoration activities is done at the comfort of his home. Looking into the future, Owuonda is planning to venture into pawpaw growing as well.

On their own volition, Owuonda and other project beneficiaries in the sub-county formed Nyatike Green Revolution Development Group to boost uptake of greening approaches. Setting by example, 13 members have 400 trees each on-farm. The knowledge and skills they possess that has so far trickled down to 5,000 farmers and 106 schools supplied with 1,200 tree seedlings.

The group is currently restoring 2,500 acres on Nyatike Mirema Hills through FMNR. Discussions are underway to set-up a model tree nursery where other farmers can learn from the group. A target of raising 30,000 seedlings has been set by the members to make this a reality and sustainable.

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