

The Art and Science of scaling up best Practices in Climate Smart Agriculture; Learning from the experience of FMNR Network in Uganda.



By

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Knowledge is like garden: if it is not cultivated, it cannot be harvested- Proverb

Introduction

Since 2010, there has been a breeze of transformation driven by a hope that forests and landscapes can be restored if given a chance to regenerate. This has been evident using the Farmer Managed Natural Regeneration (FMNR) approach that has been tested in the different regions of the world including west Africa, Asia, and East Africa to facilitate the processes of landscape restoration in the rural communities.

Farmer Managed Natural Regeneration (FMNR) is the systematic regeneration of trees from tree stumps, seeds and roots based on the amazing gift of nature, which gives most of the indigenous trees an inherent ability to coppice or resprout after they have been cut down. Through systematic regeneration and management of trees and shrubs from tree stumps, roots and seeds. It has provided evidence as an approach that is low-cost, sustainable land restoration technique used to combat poverty and hunger amongst

poor subsistence farmers in developing countries by increasing food and timber production, and resilience to climate extremes.



Photo: Participants trained under tree shade

The concept of FMNR started intentionally in West Africa in early 1980s and has been effective in restoring degraded landscapes with trees. The initiative came in as a result of several attempts to plant trees and they could not make it due to desert wind, dry conditions after spending a lot of time, money, and other resources to plant trees. After several attempts with little success, Tony Rinaudo discovered some tree stumps that were abandoned had life under neath with a hope of regenerating. It is then that he purposed to take good care of the stumps to help trees recover and regenerate using the approach. In Uganda, FMNR was spread more through structures the World Vision in 2010 with the aim of promoting environmental sustainability. Since then, FMNR has been promoted in various parts of Uganda including Kibale, Nakasongola, Abim and Katido, where Community learning sites have been established.

This that started as a small project in Ugandan rural areas of Ottuke, and Kotido has spread like wild fire to the different farming communities with the short and long term benefits accrued by thr farmers from the approach. This has helped to restore degraded forests like in Mpigi District where 200 acres forest had been cut down, in Kibale, Arua and other parts where recovery with indigenous tree species, rangelands, land cover have been evident.



Photo: Participants during field inspection and land clearing exercise.

Generally, the refugee crisis mostly in West Nile Sub region of Uganda has increased demand for fuel wood and poles for construction, resulting into severe deforestation. However, efforts to plant trees are unable to match the rate of tree cutting within refugee settlements and host communities. Unless efforts to increase the rate of tree planting and provision of alternative sources of building materials and energy, deforestation and land degradation will likely increase. Tree regeneration growing using



conventional planting of seedlings has limitations such as difficulty of raising seedlings and delivering them to farmers for planting, and low survival rates after planting-out.

The objective of FMNR is enable the farmers maintain soil fertility and restore degraded land for sustainability of the environment. The idea of establishing the FMNR network to keep scaling up the approach among the community members was developed from one of the lessons learning workshop that brought together partners to learn from the lessons of the project our partner World Vision was implementing for three years.

Through the increasing interest, result sharing of the potential of FMNR, several stakeholders got interested to follow-up and take on FMNR to revive the landscapes that were endangered. The interest from stakeholders gave rise to the establishment of the FMNR network in Uganda to enable the scaleup of the approach across the country.

Partner mobilization

Establishment of relevant and strategic partnerships has been one of the key pillars that has upheld scaling up of FMNR approach in the relevant communities. This was successful with both individual partners and institutional partners. The FMNR Champion Tony Rinaudo at the time of uniting to form FMNR network was in Uganda to motivate and encourage other practitioners and create better understanding of what and how the FMNR approach would transform the communities through sharing his experiences. When a presentation was made, we learnt that this practice of land scape restoration was a very good tool, cheap, easy to use, restores the soils, adds to the soil fertility, the tree survival rate is higher than planting trees, and the FMNR practice favored establishment of several categories of enterprises.

From the lesson sharing event where Tony was presenting, the meeting anonymously agreed to carry the banner of scaling up this redemptive approach. A multi stakeholder network to scale up FMNR was then established with representatives from Farmer Organisations such as the Uganda National Farmers Federation, The Hunger Project-Uganda, research organisations including ICRAF and, National Agricultural Research Organisation (NARO), advocacy and publicity organisations such as Tree Talk Plus. There are also development partners and government the representatives that have been advising, practicing and advancing the scaleup of the approach through their members and the rural communities and partners they work with.

This lessons learning workshop at Imperial Royale Hotel in Kampala matched many questions related to livelihoods that needed redress by the farmers themselves making the efforts to change situations learning from the experiences of Districts where FMNR

had been piloted including Offaka, Nakasongola, and Kibale. Learning from the lessons of FMNR approach was one of the key drivers for us to plan and establishing the FMNR Network to take the good news beyond ourselves.

The Uganda National Farmers Federation (UNFFE) whom I represented in that lessons learning workshop organized by World Vision Uganda that day was encouraged to support the efforts of scale up of FMNR. Since then several of our District farmers Associations (DFAs) have adopted the approach of FMNR integrating it with apiary, livestock, crop farming. When I met colleagues at work I shared with them the magical FMNR approach which since then has been a game changer for most of the farmers we have worked with.

We saw this as an approach and as a solution that would answer the problems that the farmers were facing especially the quest for livestock feeds, soils losing fertility, forests being cut with environment being destroyed, increasing number of refugees and more.



Photo: Participants mark a tree stump after identifying it.

From establishment a steering Committee, it has now graduated to an Executive committee that guides the operations of the institutions. It is this committee that stirred the process of development of governance and operations institutions like the



constitution, work plans, strategic plans and many more. The network has survived for some good time on a voluntary basis without a big funding but relying on member support with rotational support, and hosting.

Several partners including Climate Action Network (CAN U), Participatory Ecological Land Use Management (PELUM), District Farmers Associations (DFAs), have signed us to scale up the FMNR. For World Vision Uganda - Area Development programmes have all mainstreamed the FMNR as a key livelihood tool, in all their programmes. Several training manuals have been developed to train different stakeholders, We have now a functioning secretariat with a coordinator in place that has attracted funding and other partners from some partners, we have also established regional Nodes of FMNR network to help scale up the approach and we have mobilized a pool of trainers in FMNR that support the process of the interested stakeholders who need to learn more on the approach of Climate Smart Agriculture and sustainability.

Learning visits, mentorships and Lobby meetings.

Learning visits were organized among the partners that show interest in taking on FMNR. In this several of them have been taken to the sites to learn see the results in regard to FMNR. These have been organized across different partners, regions to help other who were starting to practical. As usually said "seeing is believing"most of the farmers who have got an opportunity of travel from one place to another in learning about the FMNR have eventually become good vessels of transformation and champions.

In FMNR approach we mostly use Champions model who are trained and equipped with necessary skills to be able to champion in the application of the best practice and be able to transfer knowledge to other community members. This has been an effective approach for the majority especially in scaling up the approach to other members. Over the last eight years, over 25,000 individuals have adopted FMNR, approximately 1,100 ha of degraded farmlands/rangelands has been restored, and 5,500 children trained in FMNR and energy saving technologies.

Generally, sixty eight percent of the FMNR adopters are food secure and now provide well for their child wellbeing. 24 government institutions are actively implementing FMNR model and four bye- laws have already enacted to promote FMNR, over 60 national and international organisations subscribe to the FMNR model (are members of the FMNR network).

Some Monitoring and Evaluation (M&E) tools have been developed to help the FMNR practitioners track progress and impact. The tools to track how many hectares of land



are under FMNR as a Model of land scape restoration. Livestock has been mapped to be able to access good fodder through the pruned branches.

The approach has been shared to facilitate mulching especially the pruned branches and other CSA and good Agricultural Practices.

Trees on farm also have led to increased fuel at home especially for women who are more in need of fuel.



Photo: Regenerating Guavas



With FMNR approach the farmer selects the trees he/she will utilize and decide how many stumps will be allowed to grow on each stump. All the above is based on farmers' needs and purpose for reforestation.

Roll out in other regions of the country has been done through the regional nodes. Supporting regional nodes to select their stakeholders will stir the agenda of FMNR at regional level to plan for the next steps based on the unique challenges, opportunities and needs of the different regions in the country where participants meet together to deliberate and reflect on the different experiences practitioners of FMNR are doing. Through annual conferences there are always sessions of learning on what is happening with in and out of Uganda regarding the FMNR model.

It is from the motivation of one of the AGMs that West Nile region started to plan to establish a strong farmers platform for farmers to start networking and mobilizing seriously in the region. The west Nile regional node was established because it was demanded by farmers and stakeholders in the region to harmonize their efforts in scaling up FMNR. West Nile region is one of the refugee hosting regions that has got most of the trees cut down by the refugees for firewood, construction. The approach of caring for the tree stump to enable assisted regeneration of these trees has been an answer to restoring vegetation to reduce on global warming effects.

The progress and results of west Nile Chapter have encouraged the FMNR Network secretariat to establish other regional nodes in the Northern region, Albertine region, Eastern and central region to encourage growth and scale up.

Training in FMNR practice.

The farmers and other stakeholders in the different regions of the country have been trained in the FMNR approach which is comprises of both theory part and practical part. The trainings have been organized to enhance understanding of FMNR as a development tool among stakeholders in the region; and increase awareness about ongoing initiatives as responses to advance FMNR adoption and mitigating environmental degradation.



Photo: Participants arriving at Omuge Sub County for the FMNR practical session

The purpose of the training and dialogues has always been aimed at developing a common understanding about the need to build resilience and jointly plan for adoption through FMNR .

As FMNR network we have a pool of trainers that we trained and profiled who mainly offer the service to the interested stakeholders.

Usually, the session is packaged in the two days to offer theory and practical of the FMNR approach. Participants learn about the opportunities that FMNR brings including being simple to understand, easy to use, economical, offering quick results, cheap and sustainable way of regreening. The practical has been mainly tested and recommended for the highly degraded areas where house hold incomes, food security and a right to a safe environment are threatened.

The practical session usually involves field work where practical lessons of clearing the site selected for FMNR, selectign desired tree stumps to retain on the selected piece of



land, removal of unwanted stems, side branches, thinning where necessary in case trees are overcrowded are conducted. Excess grass is cleared, identification of tree species and their importance is also done with farmers collecting their leaf specimen, tree diversity is also ascertained by counting the species.

The participants are also usually trained on how vegetation, soils, water cycle, biodiversity, land scape, economics and communities are affected by change in climatic patterns

Benefits of FMNR

- Treeless fields may contain seeds and living tree stumps and roots which have got the ability to sprout new stems and regenerate trees if given chance.
- Wood security is facilitated by FMNR provides fuel--- fire wood
- There is regeneration of edible species hence good nutrition
- People sell wood products to get money.
- Trees act as wind breakers and provide shade to people and animals and increase on the rain formation
- There is also improved water infiltration and hence ground water recharge.
- Increase in crop yields by providing shade.
- Bio diversity with the return of wildlife and natural plant pest predators Development and support of different value chains like honey, timber, beans, cassava
- FMNR is the answer to the above questions on the increased global warming, sustainably growing food and restoring landscapes; the opportunity still lies with the practice of FMNR.
- FMNR has been proved to result into the natural regeneration of the environment, creating the favorable micro climate suitable for growth of crops and animals.

Complementarity of FMNR: There is emphasis on the fact that FMNR cannot be implemented in isolation, therefore, complimentary interventions like Sustainable land management practices, livestock rearing and apiary are viable income generating enterprises in the FMNR site. In the communities where FMNR is integrated with Such enterprises have realised better results from the model.

Unexpected results

- While we expected the adoption of the approach to be phase by phase, there has been an increase in the demand of capacity building in that approach the different regions of the country, demand by the different farmers, development partners, and other nearby countries like Kenya.
- FMNR network Uganda is one of the existing established FMNR networks among the other countries where it has the approach has been used that has been standing since 2015.
- The network has been invited in the different conferences nationally and internationally to share about the approach opportunities, and equally other countries come to Uganda to learn on how it works.
- The approach is very simple and very cheap that most would be adopters do not believe in the results.

•It has
been



difficult for us to fast track majority of the farmers doing FMNR because it is expensive to map the whole country.

Challenges faced.

Most of the times the FMNR network has got to operate on a voluntary basis which is sometimes straining for those that have been supporting it since it is rotational.

Staff turnover by some champions from different organisations who move for other opportunities and we get other champions onboard.

Encroachment on degraded areas for settlement and cultivation continually has suppressed the tree stumps that destroys the opportunity for the FMNR.

Politics Vs natural resource development is another challenge where the interest by some stakeholders is still limited and thus political will and support to embrace FMNR still limping.

Bush burning which limits regrowth of stumps and seedling has also been persistent.

Restored land under pure conservation are faced by encroachers who cut trees in absence of the custodians

In open or unfenced areas, grazing lands eat and trample on the regenerating shoots. This retard the growth process.

Recommendation.

□ FMNR is a simple to use approach, low cost that need the mindset of farmers to tune to the agenda of sustainability and landscape restoration for adoption.

- There is need to fast track and profile more of the evidence in the enterprise based approaches since it has spread beyond the boundaries of the Monitoring and evaluation teams.
- Government should also be deliberate in scaling up FMNR since it is less costly and easy to use.
- Bush burning should continually be prohibited to ensure that the tree stamps could be allowed to regenerate.

Conclusion



Learning that FMNR approach would increase the opportunities of sustainability was one thing but also sharing another. We have seen the FMNR grow from 7 members to 11 members and now 69 members country wide. We believe that the good practice if it result returning, adoption and interest in scaling up will be high and will be intrinsic motivation to carry the light from one farmer to another, farmer to another stakeholder to another.