

GHANA

Country Information Brief

Best practices, opportunities and bottlenecks for scaling-up regreening practices

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Image: Participants pose for a group photo after a monitoring exercise on FMNR plots.
Photo: Abena Agyei-Boateng, World Vision Ghana.

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Image: Innovation at Jagrido, using discarded sachet rubbers to plant seedlings as a way of recycling.
Photo: Abena Agyei-Boateng, World Vision Ghana.

Introduction

This document provides a brief synthesis of best practices and opportunities for scaling-up greening¹/land restoration and sustainable land management in Ghana, learnt from the implementation of the Regreening Africa program and the experience of implementing partners. It is intended to inform future European Union (EU) programming efforts to support restoration investments in the Sahel, including the Great Green Wall Initiative.

The Economics of land Degradation (ELD) studies show that the cost of inaction on land degradation in Ghana using a 30-year planning horizon is USD 65.9 billion at national level, while the returns on action against land degradation per dollar invested is USD 5 in returns. Regreening Africa is in its fourth year of implementation in the Upper East region (Bawku West and Garu Tempane districts) and the Northern region (Mion district)

where a total of 80,000 ha are targeted for regreening, benefiting 40,000 households.

The project is focused on strengthening and mainstreaming community-led approaches to ensure the adoption of sustainable land management practices for improved food security and biodiversity conservation to sustain rural livelihoods and ecosystems in Ghana. The project target areas include the drier parts of Ghana. Farmer Managed Natural Regeneration (FMNR) is a major contributor to the regreening of areas affected by land degradation due to agriculture, over grazing, bushfires, unsustainable logging, charcoal making, mining, and other activities accelerating deforestation.

Landscape restoration also involves income generating activities through strengthening of community-prioritised value-chain outputs such as shea butter and wood products. This creates jobs for women and youth thereby limiting migration to urban areas. There is increased recognition that women and youth play key roles in local food security and resilience in communities. However, their rights to land, trees and forests are not secure, a topic currently being researched for a PhD co-funded by the Forest Research Institute of Ghana (FORIG), Bangor University (UK) and the project.

Northern region (Mion district)



**80,000 ha are
targeted for
regreening**



**40,000
households
benefitting**

¹Regreening refers to an increase in tree/vegetation cover as a step towards full landscape restoration, through the promotion of planting/growing a diversity of tree species and farmer-managed natural regeneration (FMNR) in agricultural and pastoral systems, including associated sustainable land management/soil and water conservation measures, livestock management and other related policy engagement processes.

What have been the main restoration successes, best practices and scalable models for Ghana?



Farmer Managed Natural Regeneration (FMNR) is a low-cost land restoration technique used to combat land degradation by rural communities. FMNR, involving nurturing existing shoots from roots and tree stumps, has proven successful in restoring degraded lands in communal areas. FMNR is being practiced on farmlands to increase tree biomass and improve soil fertility. The practice ultimately enhances tree and crop yields thereby contributing to the food security and climate resilience of rural communities.



Trees are planted to enhance species diversity, in FMNR areas, or to add high value tree species whose natural regeneration potential has declined over the years due to severe land degradation. Vegetative propagation techniques such as tree grafting are used to shorten the maturity period so that farmers can realise increased benefits within a relatively short period of time. The greening project in Bawku West, Garu Tempene and Mion has supported seventeen nurseries producing some 15 different tree species of interest to local communities.



Some of the tree species grown include *Anacardium occidentale*, *Vitellaria paradoxa*, *Parkia biglobosa*, *Khaya senegalensis*, *Ceiba pentandra*, *Tectona grandis*, *Adansonia digitata*, *Senna siamea*, *Azadirachta indica*, *Mangifera indica*, *Acacia spp.* amongst others, with the purpose of providing timber, firewood, fruit, fodder, medicinal and environmental benefits.

Preparation and use of compost manure. Communities have come to realise the need to practice conservation agriculture to avert the effects of chemicals on the environment. As such, farm residues, grasses, farmyard manure and other organic wastes are being used to prepare compost for improving soil fertility and enhancing crop production.



Non-use of fires during land preparation. The traditional method of land preparation in which farm residues are gathered and burnt has become a thing of the past. Farmers are now aware of the negative effects of fire on land and the environment. Subsequently, farm residue is now retained as mulch to improve soil fertility.



Creation and support of district and community level structures for managing natural resources. Before the inception of the project, communities burnt dry grasses without considering the adverse effects on the environment, weather, and biodiversity. Through, bushfire education programs, the communities are now aware of the negative impacts. As such, they have identified volunteers to help with the prevention and control of bushfires. They have also formulated by-laws to penalise bushfire offenders.



Mobilising traditional authorities, opinion leaders and local people in the management of restored areas. These people are educated on the importance of the restored areas to the natural ecology and the benefits they can derive. The local people rely on the forest for fuelwood, indigenous/local fruits, medicine and construction materials.



Image: A farmer watering a tree seedling during a farmer field day.
Photo: Abena Agyei-Boateng, World Vision Ghana



Image: Elizabeth, a lead farmer from Ghana, posing beside one of the planted seedlings on her farm.
Photo: Abena Agyei-Boateng, World Vision Ghana.

What are the social, cultural and technological issues that may hinder the adoption of regreening activities?



Increasing crop production requires that machinery (e.g., tractors) be used for laborious tasks as human labour is less efficient at large scales.

The use of tractors and other heavy machinery during land preparation results in the uprooting of young shrubs and trees if not done cautiously. However, tractor operators are likely unaware of the agricultural and ecological benefits of the trees and shrubs and taking care to avoid them when ploughing is time consuming.



Poor germplasm collection and management

results in poor germination, seedling survival and growth at the nursery and field levels.



Outdated community festivals and rituals

such as the 'fire festival' in Northern Ghana and annual hunting expeditions aggravate the land restoration processes.



Mining is counter-productive to land restoration initiatives.

There is a belief that gold can be obtained from virgin lands. Prospecting for gold, mostly done illegally, has increased in many rural areas. These activities are often carried out in areas under conservation.



Land ownership remains the single most challenging obstacle

to the adoption of the project, as women have to negotiate with men first before planting trees.



Cultural beliefs that women are expected to be silent in the presence of men, particularly in religious communities.

What are the main policy, regulatory and governance barriers to regreening activities and how can they be addressed?



Small-Scale Gold Mining Law of 1989 (pnDcL 218) legalised small-scale mining

in Ghana through the purchase of a license. Small-scale miners contribute to land degradation through the removal of vegetation to carry out their mining activities. There are no provisions in the law for regreening degraded land post-mining. This hinders regreening activities in Ghana. It requires lobbying for a provision in the law for the regreening and restoration of small-scale mining areas.



The lack of vegetation specific restoration plans tailored to the needs and challenges of the Sahel environment creates a barrier to restoration. Despite having a national land restoration agenda there is no specific

roadmap for the drier shea parklands of the north. The more challenging climate requires a defined action plan inclusive of proven technologies and suitable plant species. This could be determined through evidence based research. Training and capacity development of local communities to produce and gazette by-laws will also improve restoration efforts.



Inadequate coordination between formal and informal institutions and land restoration actors for managing the project at local and national levels. A platform assembling all land restoration actors is needed for effective management and coordination of the movement.



Lack of land and tree tenure security

causes conflict that threatens rural development in Ghana. A reform process is underway to improve user rights to trees on farmland. However, the process has not yet been finalised which means that in some cases land managers may not have the rights to benefit from trees on their land and must go through an application process to gain such rights. Therefore, it is important to promote and strengthen inclusive local institutions to enable the communities, especially women and youth, to agree on enforceable social contracts that guarantee permanent access to land and tenure rights and regulate power dynamics among different land and other natural resource users.



Inadequate tree germplasm sourcing and distribution systems especially for native species.

A lack of quality germplasm supply for both public and private/informal actors, has meant farmers and extension services use poor quality tree germplasm for restoration with no guarantees of increased tree product yields or improved overall farm productivity.

Photo: ©Alex Fassio (CIFOR)

What are the most promising value chains and investment opportunities that could incentivise regreening activities, and how could they be supported?



Shea Butter

Source of production: shea butter is from the nuts of the shea tree.

Market: the butter is used for cooking oil and beauty products both locally and internationally.



Key constraints for sustainable commercialisation

- The felling of shea trees to produce charcoal due to its high caloric value;
- Poor management of the shea trees. Parasitic plants such as mistletoe are destroying shea tree populations and management practices such as pruning are not being practiced; and
- Poor farm-gate pricing of the product coupled with outdated collection and processing methods.



Potential methods for overcoming key constraints

- Awareness creation coupled with punitive measures put in place for people who cut down shea trees to produce charcoal;
- Enrichment planting and replacement of over-aged shea trees in existing forests; and
- Formation of cooperatives and associations and the introduction of modern processing and collection methods.





Fuelwood

Source of production: fuelwood (firewood and charcoal) has been the preferred source of fuel in the locality due to its availability.

Market: it is comparatively cheaper on local and regional markets.



Key constraints for sustainable commercialisation

- Lack of means for transportation to urban and peri-urban areas where demand is high;
- The unavailability of established woodlots in the communities for firewood and charcoal production; and
- Lack of standardisation in packaging and pricing.



Potential methods for overcoming key constraints

- Formation of fuelwood cooperatives and linkages to buyers in urban and peri-urban areas;
- Establishment of community forests and individual woodlots; and
- Capacity building on packaging and standardisation.



Photo: ©Alex Fassio (CIFOR)



Honey

Markets: honey is used locally and internationally for domestic consumption and internationally in the cosmetic industry.



Key constraints for sustainable commercialisation

- Declining forest cover which provides habitat to the bees.



Potential methods for overcoming key constraints

- Increased tree cover through tree planting and FMNR.



Photo: ©C.Schubert



What are the best practices for gender and youth inclusion in the regreening movement?



Encouraging women to take leadership positions. For example, lead farmers in FMNR committees have increased women's participation and benefits from regreening interventions by directly including them in decision-making.



Formation of anti-bushfire groups with equal representation of men, women, and youth.



Gender transformative action trainings for couples has been insightful for households. It has helped men and women appreciate each other's challenges and opportunities and equipped them with negotiating skills for navigating key household decisions such as selecting the types of tree species to plant.



Active engagement of women and youth groups in initial intervention designs has been key in capturing and reflecting their needs and perspectives in project activities such as preferred tree species or technical training.



Strengthening government flagship programs such as women and youth in afforestation.



Cultivating community champions to support households with the gender discourse promotes dialogue and encourages households to suggest their own solutions. This has resulted in several households reaching a consensus on ploughing schedules for women's farms and assistance with household chores.



Image: One of the women speaking on her experiences with FMNR.
Photo: Abena Agyei-Boateng, World Vision Ghana.

What are some key tools and methods for monitoring regreening activities?

The Regreening Africa App is a mobile-based android application that allows users to collect data at farm level on a range of land restoration practices that allows for robust landscape level monitoring.



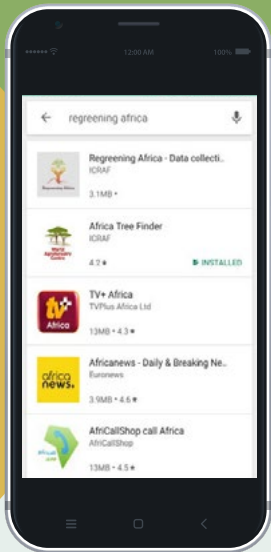
Regreening Africa App

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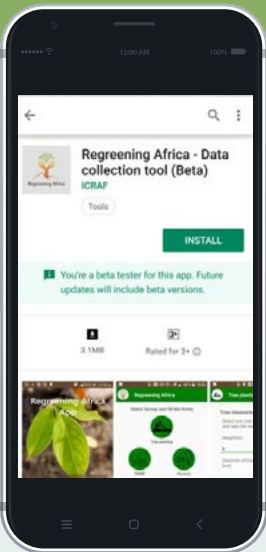
Why do we need it?

The Regreening Africa App links land restoration activities implemented by farmers, pastoralists, and large global initiatives, providing evidence that can positively inform these efforts, whilst simultaneously assessing their effectiveness on the ground.

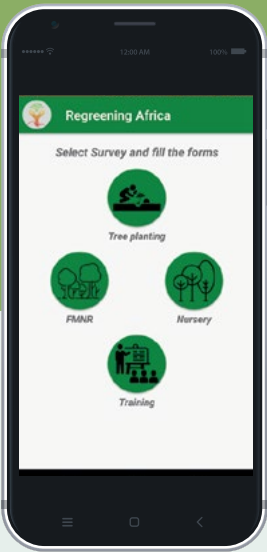
Locate App



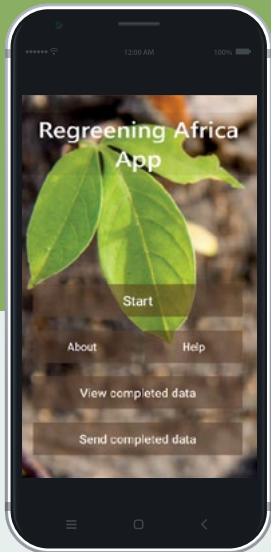
Install App



Start up App



Open survey forms



What is unique about the Regreening Africa app?



The App is a data collection and monitoring tool. The information collected can be integrated into various types of analytics and combined with information on land health and other thematic data.



The App enables stakeholders including farmers to record and track their land restoration practices. The locations of their activities are geo-referenced and species diversity and growth are recorded in real-time.



Data collected through the App is freely and instantly available to the users and various outputs from the synthesis of the data, such as

critical land health indicators, are then shared with the public through the Regreening Africa Dashboard.



The App is continually updated and the design and interface amended, based on farmers, extension agents and project implementing teams to add requested data and ensure the design and functionality match the user needs.



The Regreening App was developed in close consultation with stakeholders, with continual interaction between the World Agroforestry development team and users.



Project implementors are able to use the data for real-time decision support in project implementation and monitoring.

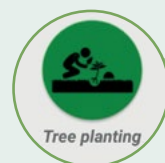


Data collected using the App is combined with spatial assessment of land health and can be applied in soil carbon monitoring, relating directly to climate neutrality goals or restoration targets.

“The beauty about this App is its simplicity. I have used it to record trees on many farms and have been fascinated to see what the data looks like once it is processed”.

Mohamed Dicko,
project officer, Oxfam Mali.

Photo: Joseph Bidiar/ World Vision Senegal.



TREE PLANTING MODULE

- Record details of farmers and regreened plot
- Track tree growth
- Date(s) planted
- Characterise species composition and assess tree planting practices
- Field boundary recorded
- Location of trees planted
- Number of trees planted
- Survival of trees



FARMER MANAGED NATURAL REGENERATION (FMNR) MODULE

- Record details of farmers and regreened plots
- Assess FMNR practices
- Characterise dominant species composition



Photo: ©Kelvin Trautman



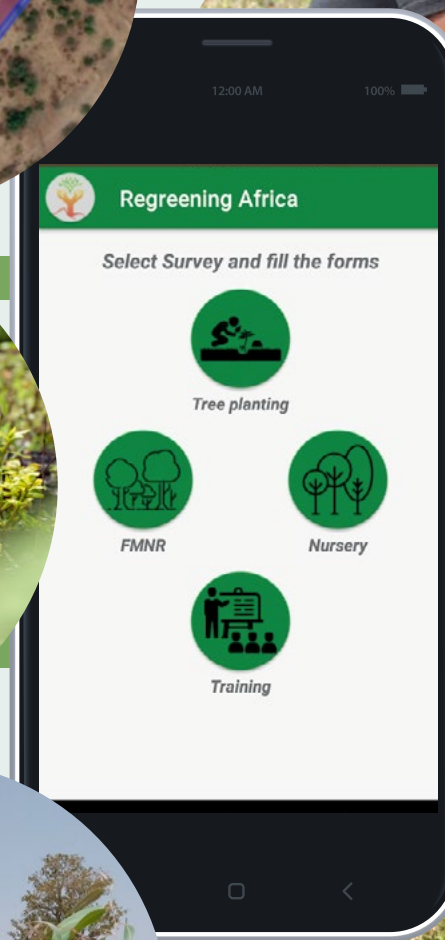
NURSERY MODULE

- Ensuring that farmers have access to quality planting materials and a wide range of species for tree planting
- Record nursery practices
- Record nursery production
- Record nursery information and location



TRAINING MODULE

- Record training details
- Record gender participation in training sessions



Assisted crowd sourcing, through data collection across multiple countries and contexts is giving critical insights into drivers of land degradation. This will allow for more effective restoration efforts to be designed and implemented on the ground.

Photo: Felix Mulindagabo/ World Vision Rwanda.



Periodic field visits to communities involved in the project to track key indicators.



Image: Monitoring team talking to extension officer about the nursery. Photo: Abena Agyei-Boateng/ World Vision Ghana.



A Regreening Ghana dashboard is under development and will be available in 2021 to ensure that project data is widely available to the public. The dashboard will include monitoring results from the project baseline survey, the tree establishment mobile phone application, and land health and climate information. The dashboard can be augmented to accommodate additional monitoring results.

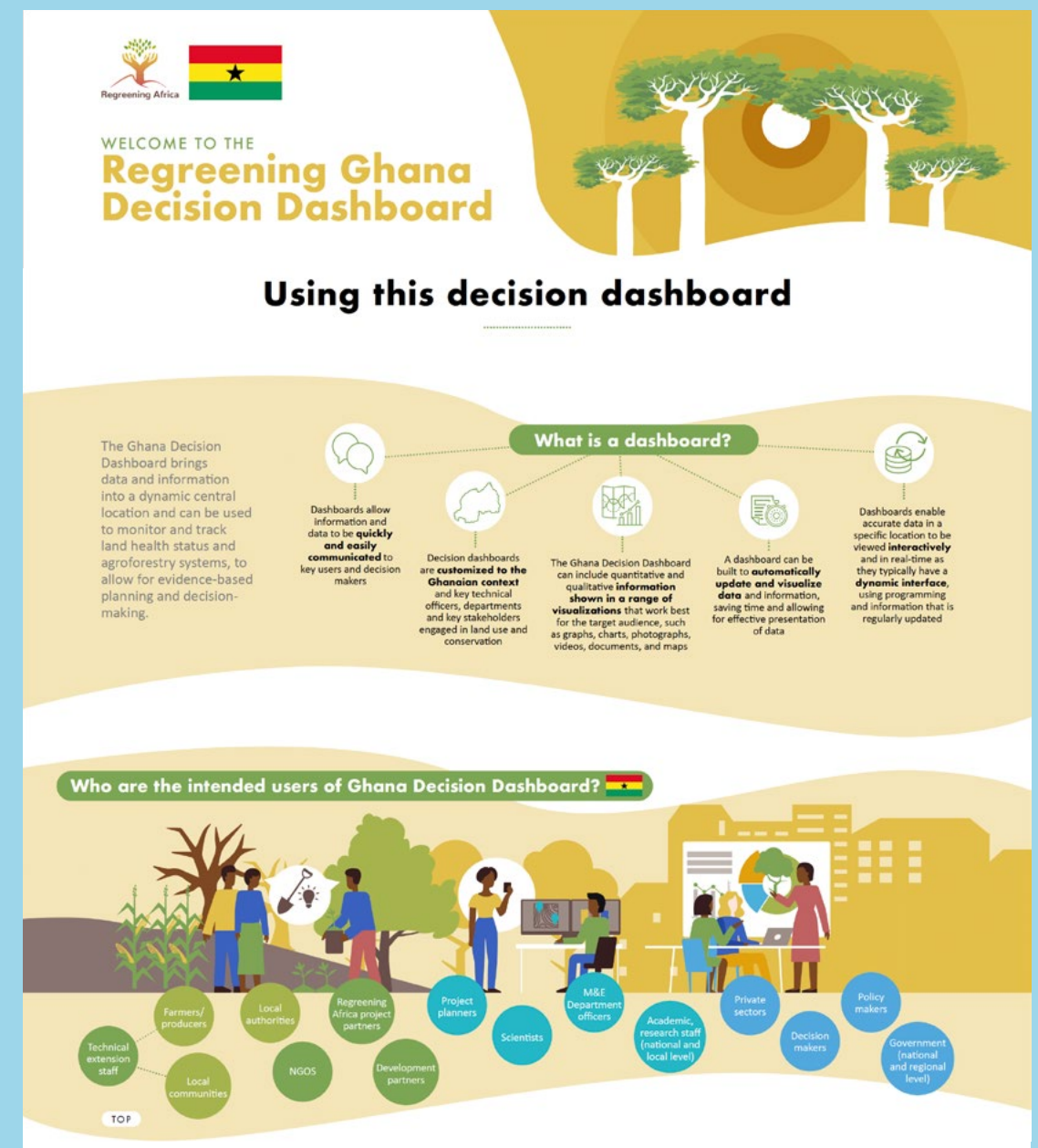




Image: Women of Jagrido village taking part in a focus group discussion during one of the projects' review meetings.
Photo: Abena Agyei-Boateng, World Vision Ghana.



Valuable resources that can be consulted for further information:



- Small-Scale Gold Mining Law of 1989 (pnDcL 218)
- Reversing Land Degradation by Scaling Up Evergreen Agriculture Country Baseline Survey Report, Ghana
- ELD reports for Ghana



- Transforming Land and Livelihoods
- Ghana Investing in Land Degradation Neutrality: Making the Case



Regreening Africa



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