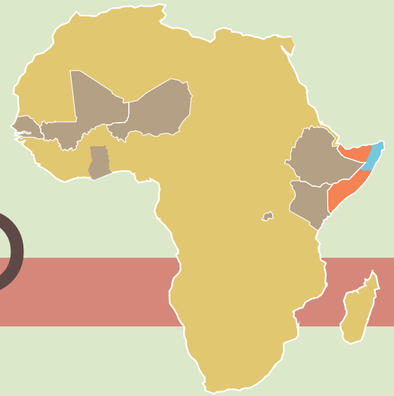
Regreening Africa



PUNTLAND

Country Information Brief

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

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ELD THE ECONOMICS OF LAND DEGRADATION

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Image: *Amarindus indica* tree. **Photo:** Jonathan Muriuki.

Image: Project staff and government officials visiting Qardho Nursery, which has taken to alternative and affordable forms of raising seedlings. **Photo:** CARE.

Introduction

This document aims at providing a brief synthesis of best practices and opportunities for scaling-up regreening /land restoration and sustainable land management in Puntland, learnt from the implementation of the Regreening Africa program and the experience of implementing partners. This will be useful for informing future European Union (EU) efforts to support regreening in the territory.

The Team Europe Initiative (TEI) in Somalia is supporting climate change mitigation and adaptation using investments in sustainable and renewable energy as a driver for change. Increased access to sustainable and renewable energy throughout Somalia will have broad-based benefits across the society. It will facilitate the provision of basic services in education, health care, water/sanitation, security services as well as increase agricultural and manufacturing productivity. An affordable, clean, and reliable supply of energy reduces CO_2 emissions, creates opportunities for new businesses, and eliminates a significant barrier to the transformational potential of digital solutions in business and service delivery.

A key result area proposed is enhanced climate change adaptation and climate resilience through:

- Strengthening Somalia's national adaptation program to deal with recurrent droughts and floods and ultimately improve the climate resilience of vulnerable communities and ecosystems.
- Better land management to protect forests and improve land use, strengthened water resources management, and strengthened disaster management capacity both at government and community level. With natural resource degradation, Somalia is becoming increasingly vulnerable to conflicts over scarce resources highlighting synergies with the Team Europe Initiative on Governance, Peace and Security - Reconciling Somalia.

Affordable, clean, and reliable supply of energy reduces CO_2 emissions and creates opportunities for new businesses

[1]Regreening 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 achieved under Regreening Africa in Puntland?

The ultimate aim of the EU-funded Regreening Project in Puntland is to foster a massive, sustained landscape restoration movement with uptake throughout the territory. The project has built on the successes of existing restoration programs providing a solid basis for scale-up. Restoration efforts have been established in new locations in the Bari and Sanaag regions (Jurile, Jiingada, Dhud, Hadaaftimo, Kobdhexaad, Ceel la helay, Dharoor, Lako, Waciye and Badhan). The program expansion was achieved by building a coalition of local, national and international non-governmental organisations (NGOs) and civil society organisations, collaborating with government at all levels, and with the technical support and overall coordination by World Agroforestry.

Mindset change is a fundamental aspect of building a restoration movement. Thus, the project has focused on shifting the attitudes of all stakeholders by improving their understanding of the positive benefits received from investing time and effort in landscape restoration.

A much stronger technical capacity is imperative for successful restoration, particularly in grazing lands. The project has focused on building technical capacity among government experts, development agents and beneficiaries through continuous awareness creation, training, experience-sharing visits, and peer-to-peer learning opportunities.

***Xeer*, the traditional customary law, has been the basis under which the pastoral communities agree to protect the rangelands and pasturelands.** *Xeer* is a traditional legal system that regulates the affairs and relationships of sub-groups of society such as farmers, nomads, merchants and hunters, among others. It has been relied upon for settling natural resource management (NRM) related disputes in the territory as it is compensatory rather than punitive, and hence widely accepted. Hearings are conducted in the open and decisions require consensus among major parties. Clans indemnify against violation of the decisions reached.

The accelerated action by pastoralists to protect and manage naturally regenerating trees on their farmland. This widespread action can be attributed to pastoralists' improved awareness and knowledge of natural tree regeneration benefits such as the provision of fodder, fuelwood and environmental amelioration.

The farmer-managed natural regeneration (FMNR) model has empowered individuals and communities with responsibility for the care and nurturing of naturally occurring woody vegetation. This rewards the sustainable harvesting of wood and non-timber forest products (NTFPs). FMNR can be practiced by men, women and youth, majority and minority ethnic groups, individuals, and whole communities. About 270 FMNR champions were established and are active across 27 FMNR project sites.

Image: Maxamed M. Jama, a farmer, tending to his cabbage integrated with lemon trees (agroforestry). **Photo:** Mohamed Ahmed Mohamed/ World Vision.

The identification of FMNR champions played a significant role in land restoration efforts. It boosted ownership and participation from the communities. The champions are active members selected by the communities to promote and lead restoration activities in their respective areas.

Champions were equipped with knowledge and skills on FMNR approaches for implementation. The FMNR champions/lead farmers trained other community members on the best approaches for improving land conditions from its degraded state. The champions are also active ambassadors reaching all parts of society. This effective and inexpensive restoration practice has been well-proven in certain areas of the country. The project aims to expand the restoration practice throughout the country during the coming decade.

Soil and water conservation practices. Physical measures, such as the construction of soil or contour bunds, have worked well in controlling runoff and in retaining rainwater. These measures have enabled the regeneration of vegetation cover in rangelands and were particularly successful in eight direct intensification sites namely, Kubo, Jeded, Adisoone, Libaax har, Hido, Carmo, Rad and Midigale and in ten further sites under the RESTORE project in Bari and Sanaag regions.

Tree species planting and agroforestry nursery sites. Quality tree seedlings offering good field survival and tree products are lacking for many planting programs. Over the past two years, twelve agroforestry nurseries have been established by the state, mostly within Bari and Sanaag regions. These nurseries produced 500,000 seedlings that were used for FMNR site enrichment as well as 5,000 women home gardening practices. The fruit producing trees contribute to improved nutrition in these households.

Regreening Africa nurseries provide entrepreneurs with opportunities for new local businesses. The nurseries have already supplied approximately 120,000 seedlings, worth an estimated USD 240,000, to private tree planting programs and government buyers. Determining the sites for setting-up nurseries, selecting tree species and sourcing quality germplasm are important factors that contribute to the success of such businesses.

What are the best regreening practices and scalable models for Puntland?

- Promotion of land enclosures for FMNR approaches to be implemented. Fencing is important for the enforcement of customary law. Model sites can be used to demonstrate the benefits of fencing to a community. This is useful for encouraging communities outside of target areas who may be skeptical of land enclosures.

- Agroforestry, particularly the planting of trees with crops. Farmers are now familiar with the benefits of agroforestry. Investment in tree nurseries is important for the future of regreening work as it increases farmers' production of seedlings and therefore enhances supply to the communities. Nurseries are better suited for establishment on oasis farms, however, providing support to nurseries located in major towns is also important as it allows for a wider reach.

- Water conservation structures work well. Water conservation structures such as soil bunds, half-moons, and check and rock dams, reseeded with animal manure as appropriate, are important contributors to land restoration.

- Support and encouragement of community-led tree planting in both urban and rural areas. Tree planting is uncommon in rural areas, as access to seedlings is limited. However, towns also tend to be bare. Carrying out tree planting exercises in urban areas enables community members and merchants to appreciate the value of trees. Further, tree planting in urban areas can easily be promoted via radio shows.

- School greening programs are important for promoting a tree planting culture among community members, both present and future. School greening programs were supported in the previous project, with model schools given awards for exemplary performance. Additionally, a greening football tournament was held for the various target schools. The greening concept/syllabus also needs to be integrated in school curriculums. The program contributed to making schools greener in Puntland. This initiative needs to be strengthened as it improves the students' perception of trees.

- In addition, the revitalisation of customary laws was a positive step for the regreening movement. The Xeer play a pivotal role in ensuring sustainable land management (SLM) by assisting with the resolution of conflict and encouraging participation. When communities were assured (customary) that their efforts would not be wasted they adopted the regreening movement wholeheartedly.

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

Image: Practice training - good nursery management. Community mobilisation in Jeded village (Bari). **Photo:** CARE.

Most of the communities in the rural areas of Puntland are pastoralists who herd their livestock freely. **Free grazing is a common problem** that hinders land restoration efforts. Frequent droughts and the associated movement of livestock further contributes to the issue.

Local laws and by-laws that do not offer women equitable participation in value chain development such as those on the marketing of firewood, charcoal, timber, frankincense, and myrrh. Women have no rights to standing trees in communal lands and lack the capacity to establish them. Engagement with community leaders and scholars to include women's rights in traditional institutions while supporting the establishment of trees valued by women in croplands could address this bottleneck.

Poor government control and demarcation of roads has contributed to land degradation caused by vehicle movement. Drivers determine their own routes when delivering livestock and milk in rural areas. This has been a large contributor to land degradation, as the ubiquitous tracks accelerate erosion during rainfall season. The project team has raised awareness of the issue with government and community institutions. They are now aware of the problem and are in the process of determining a solution.

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

Fuelwood is a viable value chain with potential to incentivise regreening when well-managed. However, charcoal production is now prohibited in most communities as charcoal burners used to harvest trees indiscriminately. Proper fuelwood harvesting techniques have not been well adopted. The Regreening Africa Project encourages the harvesting of dry wood and trees that are known to re-sprout easily. Fuelwood management training is given to enhance the communities' knowledge of the benefits whilst highlighting the negatives of unrestrained tree clearance. There is, however, a need to discuss the appropriate policies to put in place to encourage sustainable investment in fuelwood.

Several policies were developed for previous NRM projects in Puntland such as the rangeland management policy, environmental policy, environmental law, environmental impact assessment, waste management and environment policies. All these efforts need continuation by disseminating and advocating for their implementation.

Community institutions such as district pastoral associations are important for decentralisation of the program i.e., taking regreening decisions closer to the local context. The institutions are, however, not strong and need to be better utilised for the communities to realise positive gains.

Photo: ©Axel Fassio (CIFOR)

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

Frankincense and myrrh

Source of production: resinous tree species that grow naturally in the escarpments of the Golis mountain range, in the Bari and Sanaag regions.

Market: : both local and international markets. The main international markets are Arabian and European countries, especially France. The main local markets are Bosaso and Hargeisa.

Key constraints for sustainable commercialisation

- Lack of transportation. Frankincense is sourced from a mountainous area with poor road network;
- The government taxes the production of frankincense;
- Poor harvesting techniques. Frankincense tree populations are overharvested, there is inadequate time between harvesting for regeneration;
- Climate change has affected the yields and value of the tree as it depends on rainfall. Poor rainfall has reduced tree productivity as well as the propagation and reproduction of new trees;
- Frankincense trees grow in arid areas, subsequently, workers have to cart water with them to site;
- There are no plantation, breeding, protection, or other improvement actions in place to grow the population of source trees; and
- Lack of micro industries to process and manufacture frankincense products locally.

Potential methods for overcoming key constraints

- Training and capacity building for farmers;
- Establishment of large companies and micro industries;
- Forming strong cooperatives for better price capture;
- Plantation and protection of trees;
- Youth employment to protect overharvested trees to allow regeneration;
- Improvement of storage and harvesting methods; and
- Creation of laws and regulations to protect the trees.

Firewood

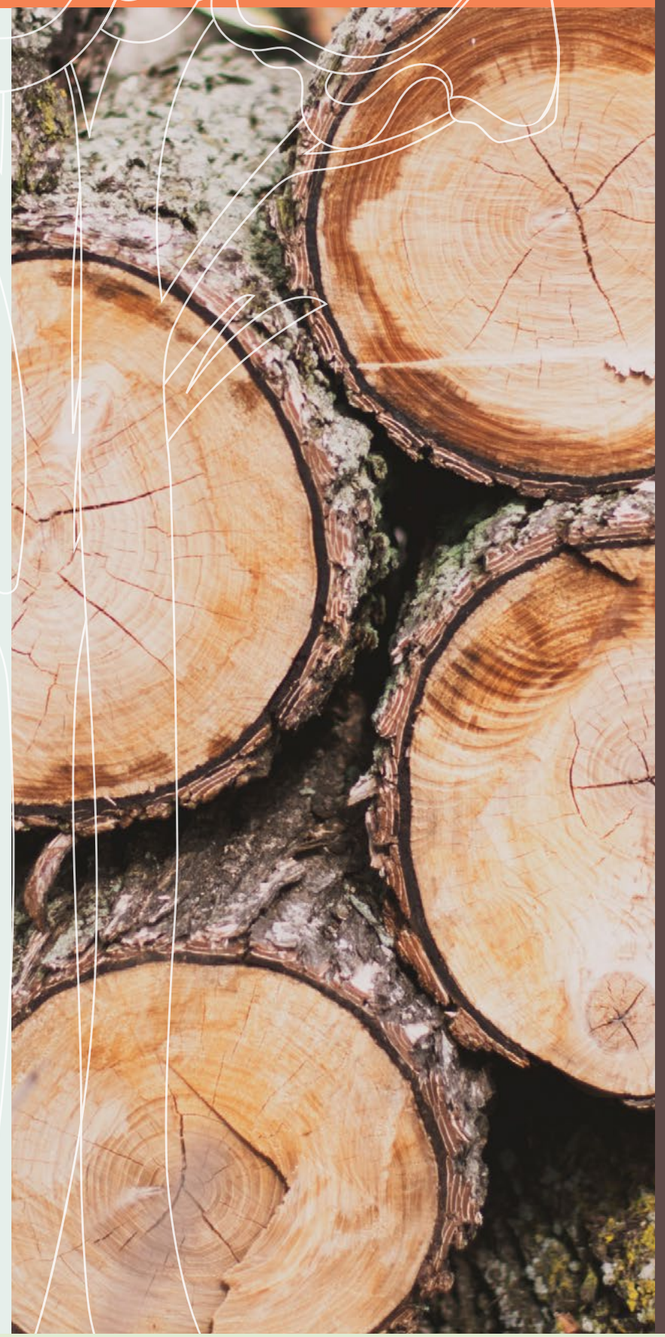
Market: mainly meant for local markets.

Key constraints for sustainable commercialisation

- Improper/unsustainable harvesting of firewood;
- Shortage of biomass, not enough trees are grown to replace those cut down;
- Belief that firewood harvesting contributes to deforestation;
- Resource degradation increases risks to women. As the number of trees reduce, women are required to walk further from their homesteads to fetch wood; and
- Firewood sales is a business dominated by men.

Potential methods for overcoming key constraints

- Policy influence to support the sustainable use of fuelwood;
- Capacity building for producers and/or traders on harvesting and marketing skills;
- Encourage the harvesting of tree species that can regenerate quickly;
- Awareness raising on safer firewood harvesting for women groups;
- Train women on trading and firewood harvesting techniques; and
- Encourage the use of *Prosopis juliflora*, an invasive tree species, for fuelwood.



Fruits and vegetables

Market: local markets.

Key constraints for sustainable commercialisation

- Low production;
- Poor skills in good agricultural practices;
- High competition as traders import the same products from other regions and internationally e.g., from Ethiopia;
- Water scarcity affects production with most of Puntland being arid or semi-arid. This is compounded by high energy costs needed for accessing water from boreholes and shallow wells;
- High taxation; and
- Industry constraints such as packaging, storage skills and infrastructure.

Potential methods for overcoming key constraints

- Capacity building for farmers during farmer field schools and day events;
- Supporting farmers with equipment such as solar panels and greenhouses;
- Establishment of nurseries in farming areas for the supply of quality tree seedlings;
- Promoting and advocating policies that empower local production; and
- Good agricultural practice training for farmers.

Summary of sustainable land management investment opportunities

Developing sustainable livestock value chains. Livestock is the major economic activity in Puntland.

Other critical areas for immediate investment include:

Integrated water and rangeland management practices (SLM practices). Puntland is water scarce and this constraint highly impacts livelihoods as well as land restoration activities. Investments in water infrastructure, such as diversions, berkards, soil bunds, and rock dams, boost land restoration activities by providing water for tree nursery establishment. Restoration activities also need to focus on soil conservation structures that enhance water capture in-situ to accelerate grass regrowth, thereby creating areas optimal for FMNR. Land management practices should also include sand dune fixation in rangelands (Bari, Mudug and Nugaal).

Environmental capacity building for government officials. This will facilitate dissemination and implementation of environmental legal frameworks developed with the support of the previous NRM project as well as Regreening Africa. Strengthen and implement policies towards the improvement of natural resources. Train law enforcement officers, courts, both regional and headquarters to support the implementation of environmental law.

Conduct studies on rangeland dynamics focusing on extinct, rare, endangered and endemic tree species, and the general changes in biodiversity since the collapse of the Somali central government. Improve community awareness of sustainable rangeland management practices. Encourage the harvesting of Prosopis trees and promote its products in value chains.

Enhance farmers' capacity. Train farmers in good agricultural practices, targeting the main farming areas, to improve the quality and quantity of farm products. Secondly, strengthen farming cooperatives and supply them with common water infrastructure and solar panels to reduce the energy costs that discourage production.

Promote customary law (*Xeer*) and the decentralisation of local or community-based environmental institutions for tackling environmental problems. Community institutions have demonstrated capacity to enforce social fencing, which allows for the rehabilitation of large areas of grazing land. Allocating resources to support these community institutions and link them with formal institutions holds great potential to increase returns on NRM investments.

Training on high-density rotational grazing systems. This approach can be piloted in some areas to support community rehabilitation in combination with FMNR. Since most of the grazing land is denuded and no longer productive, working with community leaders to enclose land and move livestock across paddocks could support regenerative activities.

Advocacy forums and events that promote equality between men and women in sustainable agricultural production and rural development for the elimination of hunger and poverty.

Photo: ©Apollo Habtamu (ILRI)

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

Women and youth are marginalised in many sectors of society in Somalia. It is challenging to empower women in pastoralist communities that believe a women's role is to take care of the house. CARE has a good track record for empowering women and youth and has put measures in place to enhance their level of participation.

A minimum target was set for reaching beneficiaries. A minimum target of 30% women and youth is encouraged for all project activities. In some areas the percentage is higher.

Community mobilisation and sensitisation was also focused upon to ensure gender and youth participation.

Previously, communities, especially men, had a belief that women were weaker than them, so there was little confidence in their contribution to land management work. Women have proven otherwise by displaying their strength and commitment. It is now commonly accepted that women are more committed and self-driven than men in our target areas. This was found through observation and interviews conducted by the project team in the field.

In most locations, women and youth are now preferred to lead the committees, particularly as FMNR champions.

Photo: ©Mike Goldwater

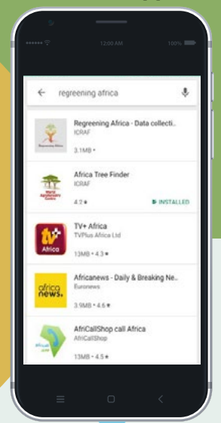
What are some key tools and methods for monitoring regreening activities?

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.

Why do we need it?

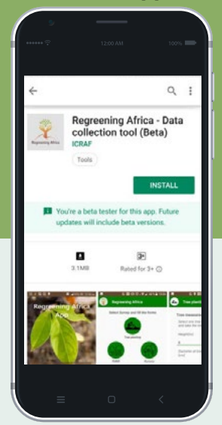
The Regreening Africa App links land restoration activities implemented by farmers farmers and pastoralists to large global initiatives, providing evidence that can positively inform these efforts, whilst simultaneously assessing their effectiveness on the ground.

Locate App

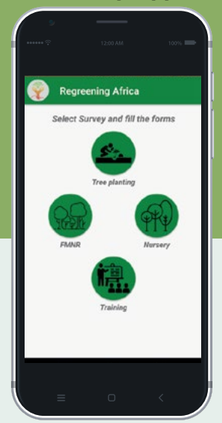


Google Play

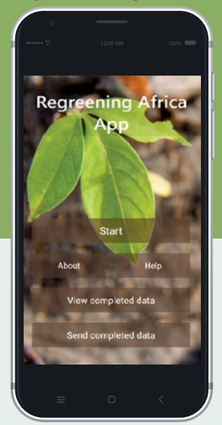
Install App



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.

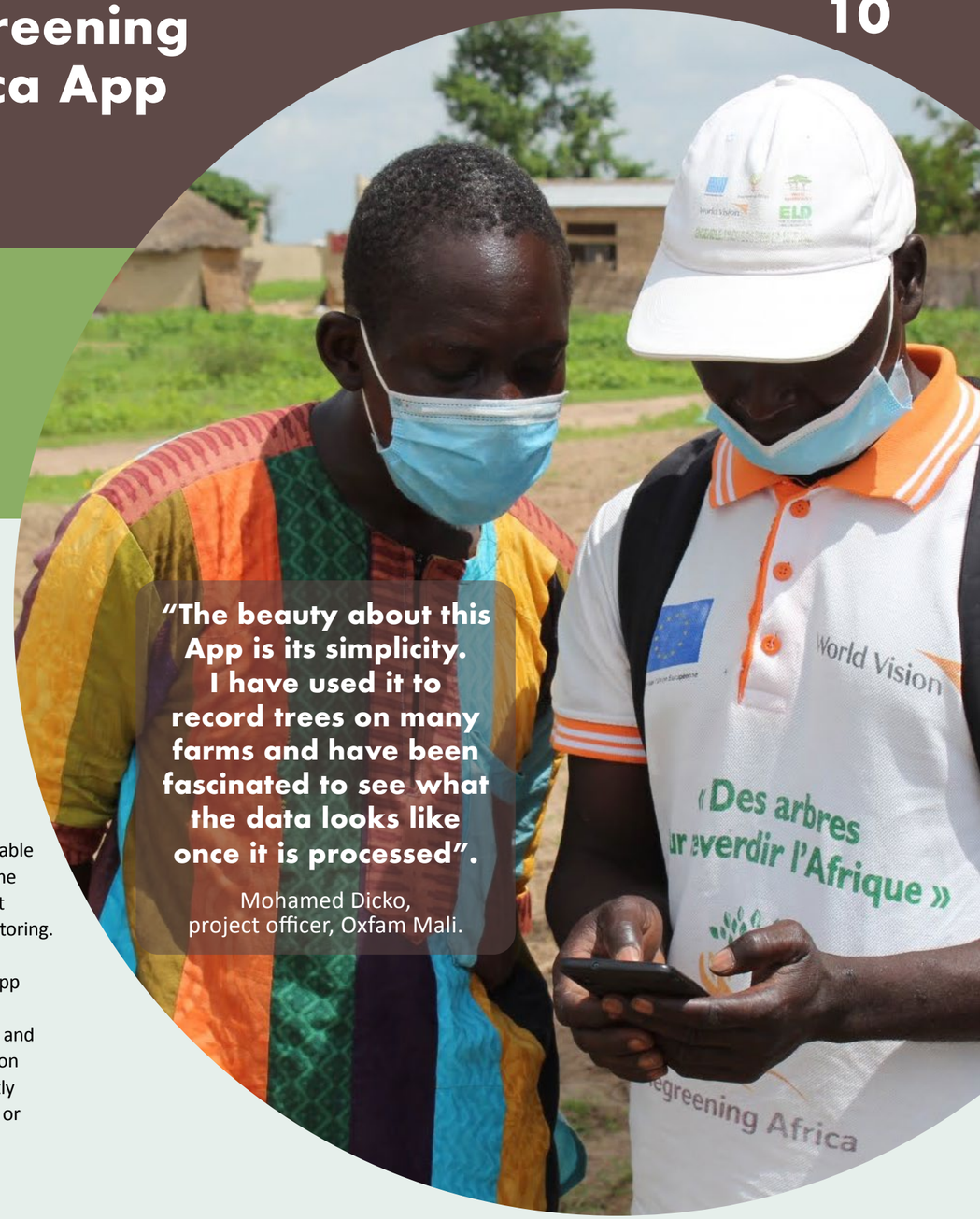
The App is continually updated and the design and interface amended, based on farmers, extension agents and project implementing teams to add requested data and ensure the design and functionality match the user needs.

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.

Regreening Africa App



"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.

Regreening Africa

Features of the Regreening Africa App

TREE PLANTING MODULE

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

FARMER MANAGED NATURAL REGENERATION (FMNR) MODULE

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

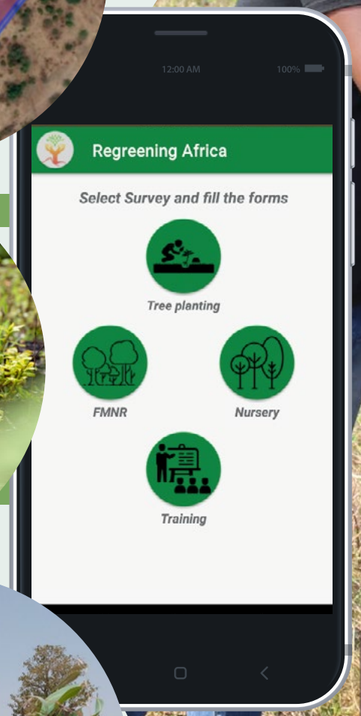

Photo: ©Kelvin Trautman

NURSERY MODULE

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

TRAINING MODULE

- Record training details
- Record gender participation in training sessions

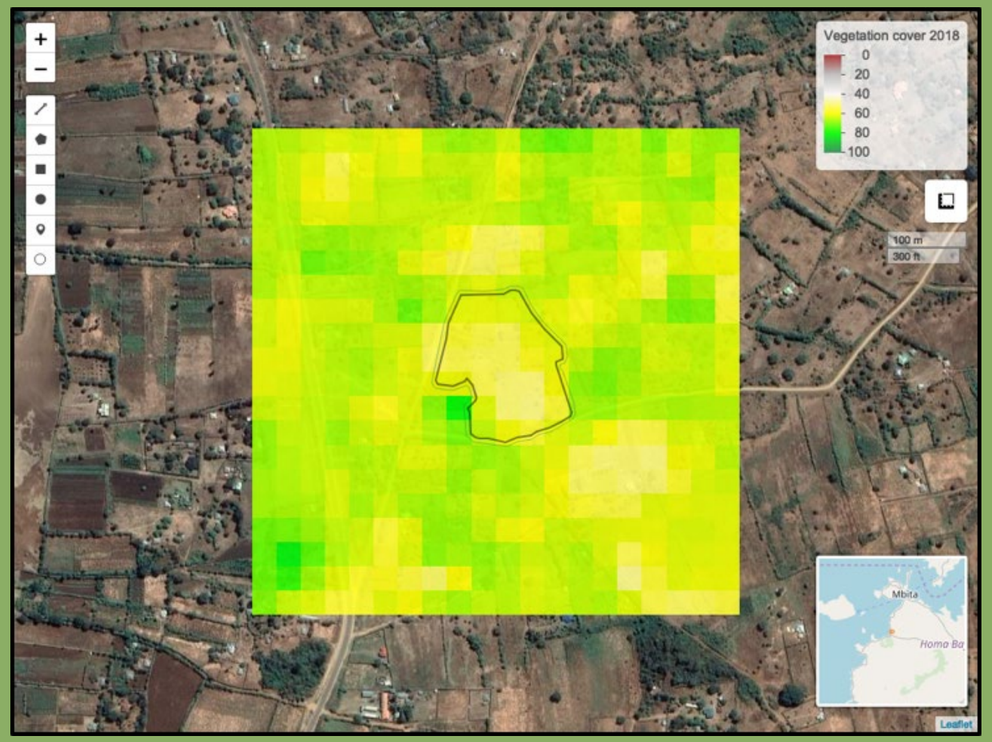


Assisted crowd sourcing, through data collection across multiple countries and contexts is giving critical insights into drivers of land degradation. This will allow for more effective restoration efforts to be designed and implemented on the ground.

Photo: Felix Mulindagabo/ World Vision Rwanda.

Regreening Africa

Geo-spatial mapping of real-time land restoration efforts using tools that capture landscape change. Given the sparsely populated and extensive geography, geo-spatial tools are of significant value to Somaliland SLM monitoring.



Joint monitoring and learning events. State institutions are not very strong, this calls for joint action by various actors to facilitate learning, feedback and planning. This will also contextualise actions in localities that may differ with others and that may not be properly captured in national documents.

Dashboards at State level growing into Federal level. These will help with reporting on the restoration achievements of various actors, given the increasing interest in SLM work in Somalia.

Surveys including baseline, endline, uptake, etc. The use of IT/ web-based tools to undertake surveys reduces human error and administration time. Further, the surveys help to capture socio-economic aspects of land restoration and can be used for ground truthing in geo-spatial approaches. Standardised instruments used by various actors could help in feeding data to national level dashboards.

Image: Ahmed Mohammed, technical officer, taking field officers through the Regreening Africa App during the project's JRLM field visits in Somalia, 2020. **Photo:** CARE Somalia.

Valuable resources that can be consulted for further information:

- **Regreening Africa baseline survey reports for Puntland and Somaliland**
- **ELD reports for Somalia**
- **UNCCD, 2016. Somalia National Action Program for the United Nations Convention to Combat Desertification**
- **World Bank, 2020. Somalia Country Environmental Analysis. (A diagnostic study on trends and threats affecting the environment and natural resources.)**

Image: Landscape view of rock dams established by FMNR groups to prevent gully erosion. **Photo:** CARE.

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