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APPROACHES AND PRACTICES OF RESTORATION

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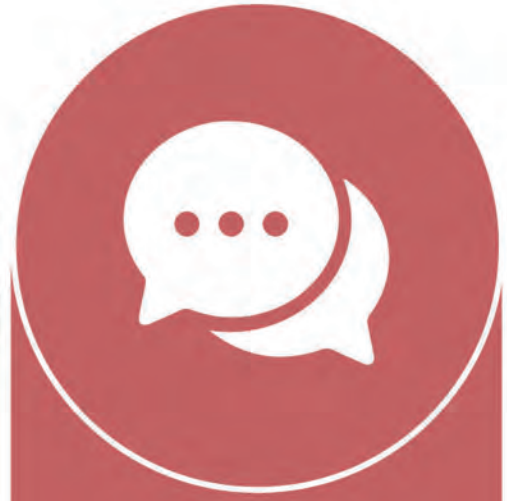

Ask questions or comment in the chatbox

KENYA NATIONAL LANDSCAPE RESTORATION SCALING CONFERENCE

RESTORATION APPROACHES AND PRACTICES

July 12, 2021

Collins Cheruiyot, Chief of Party. IUCN

Business case: Why pastoral system restoration is important and viable

- Increases overall productivity(livestock) and reduce climate risks by improving the overall supply of fodder, water and other critical productive inputs. → increased food, water security and greater income security.

- Increases infiltration rates, moisture storage, recharge of aquifers thus contribute to reducing hydrological drought, and lessen the impacts of climate-change-induced drought events

- Restored pastoral rangelands provides alternative income sources through harvesting of natural products, such as gums, fruits and medicinal plants.

- Generates ecosystem service externalities, enjoyed outside the rangelands, such as downstream water supply or protection of wildlife

Best practices in pastoral system restoration

- Successful restoration actions: (i) prioritized by communities and (ii) informed by robust analysis, data and evidence.

- It takes a landscape and transboundary approach to restore. Degradation within a rangeland landscape often have far-reaching impacts in other zones due to the high degree of interconnectedness.

- To reduce spread and introduction of invasive species, its critical to use protocols with clear guidelines on selection of tree species/grass establishment included in the ESMF.

- Where restricted access is practises it is critical to pay attention to vulnerable and disadvantaged groups in the communities who may not be able to cope with seasonal restrictions.

- Nature based solutions(Nbs) including approaches such as Ecosystem based adaptation **are vital since** as they restores whilst, simultaneously providing human well-being and biodiversity benefits.

Best practices in pastoral system restoration

- Capacity strengthening , stronger community based institutions (eg women led restoration enterprises to coordinate, lead and guide restoration efforts), access to information (such as interactive rural radio programs)

- Embrace multi-stakeholder engagement, participatory planning and decision-making

- Priority value chains- create opportunities for investments in grass, gums, resins, livestock and other value chains

- Development and strengthening relevant legislation for the rangelands, to secure restoration approaches

- Scaling up monitoring systems to track progress and targets on restoration

Pastoral system restoration measures to scale

- Natural regeneration → through improved coordination and timing of herd movements (community grazing plans)
- Assisted natural regeneration; through reseeding (grass seed banks); community grass seed multiplication units, soil and water conservation, encouraging infiltration/groundwater recharge
- Control of bush encroachment by invasive alien species (mechanical removal).
- Fire management in pastoral areas
- Alternative livelihoods and viable prioritised values chains - beekeeping, gums, resins, livestock and other value chains
- Rotation/controlled grazing/ranching/conservancies:

Towards ending drought emergencies: TWENDE project

Objective: Reduce the *cost of climate change induced drought* on Kenya's national economy by *increasing resilience of the livestock and other land use sectors* in restored and effectively governed rangeland ecosystems

Target landscapes: Sabarwawa, mid tana and chyulu hills land scapes across 11 counties

Components:

- Climate change adapted planning for drought resilience
- Restoration of rangeland landscapes for ecosystem-based adaptation
- Climate change resilient ecosystem management for investments

Towards ending drought emergencies: TWENDE project

IUCN is the accredited entity(AE), with NDMA, CI and Department for livestock executing entities.

Service providers: JDI, KWTA, WRA, NRT, MWCT, KEFRI, ICRAF & IUCN Kenya.

Project funded by GCF with co-finance from GoK, executing entities, AE and service providers

Project period: 2020-2025. Budget $35 million

Targets to restore 500, 000 ha of pastoral rangelands in Kenya. We are glad to be part of this movement to support the government's commitment to restore 5.1 million hectares of land by 2030.

OVERVIEW OF FOREST AND LANDSCAPE RESTORATION IMPLEMENTATION ACTION PLAN 2021-2025 (FOLAREP)

Rose Akombo
Principal Conservator of Forests

Kenya National Landscape Restoration Scaling Conference
9 – 16 July 2021

Context

- There is growing commitment to reverse land degradation.
- Globally, about 25% of the total land area is degraded.
- Nationally, about 22% of the total land area is degraded.
- Cost of land degradation in Kenya is estimated at 1.3 billion USD annually.
- Hence the urgent need for landscape restoration.
- The government has committed to restore 5.1 million ha of deforested and degraded landscapes by 2030.

Why FOLAREP

FOLAREP will contribute to the realization of:

- Kenya's pledge to the Bonn Challenge and AFR100
- The Convention on Biological Diversity (CBD) Aichi Target
- UNCCD Land Degradation Neutrality (LDN) by 2030
- Achieve and maintain a minimum of 10% tree cover by 2022
- Kenya's Vision 2030 Medium term Plan (MTP) III (2017-2022) flagship projects
- The National Climate Change Action plan (NCCAP 2018-2022) and updated NDC targets
- County Integrated Development Plans (CIDPs) FLR targets

Goal and Objectives of FOLAREP

- Forest and Landscape Restoration Implementation Action Plan 2021-2025 (FOLAREP) is a 5 year plan that seek to accelerate actions to restore deforested and degraded landscapes for:
  - ➢ resilient socio-economic development
  - ➢ improved ecological functioning
  - ➢ contribute to the achievement of national aspirations and international obligations.
- The overall objective is to bring 2.55 million hectares of degraded landscapes under restoration through integrated restoration approaches and best practices .

Specific objectives of FOLAREP

This plan will deliver on the following objectives;

1. To review and develop FLR related policies and regulatory frameworks.
2. To strengthen governance, institutional coordination, inclusive partnerships and collaborations among different actors.
3. To restore 2.55 million ha of degraded forests and landscapes through multi-sectoral stakeholder approaches and scaling up best practices.
4. To develop and promote green value chains to generate economic opportunities for improved livelihoods.
5. To strengthen research, technology and innovations and capacity development for FLR.
6. To develop and strengthen an integrated monitoring and evaluation framework.
7. To mobilize resources from public, private partnerships and development partners for FLR implementation **at least Kshs 12 billion annually.**

Expected Outcomes & Outputs

- 2.55 million ha of degraded land put under restoration
- Governance and institutional coordination, collaboration and improved partnerships enhanced
- Green value chains for improved livelihoods for women, youth and vulnerable communities promoted.
- Research, technology and innovations and capacity development for FLR strengthened.
- Integrated monitoring , reporting and learning framework for FLR developed and strengthened
- At least Kshs 12 billion from public, private partnerships and development partners mobilized annually for FLR implementation

Coordination framework for FOLAREP

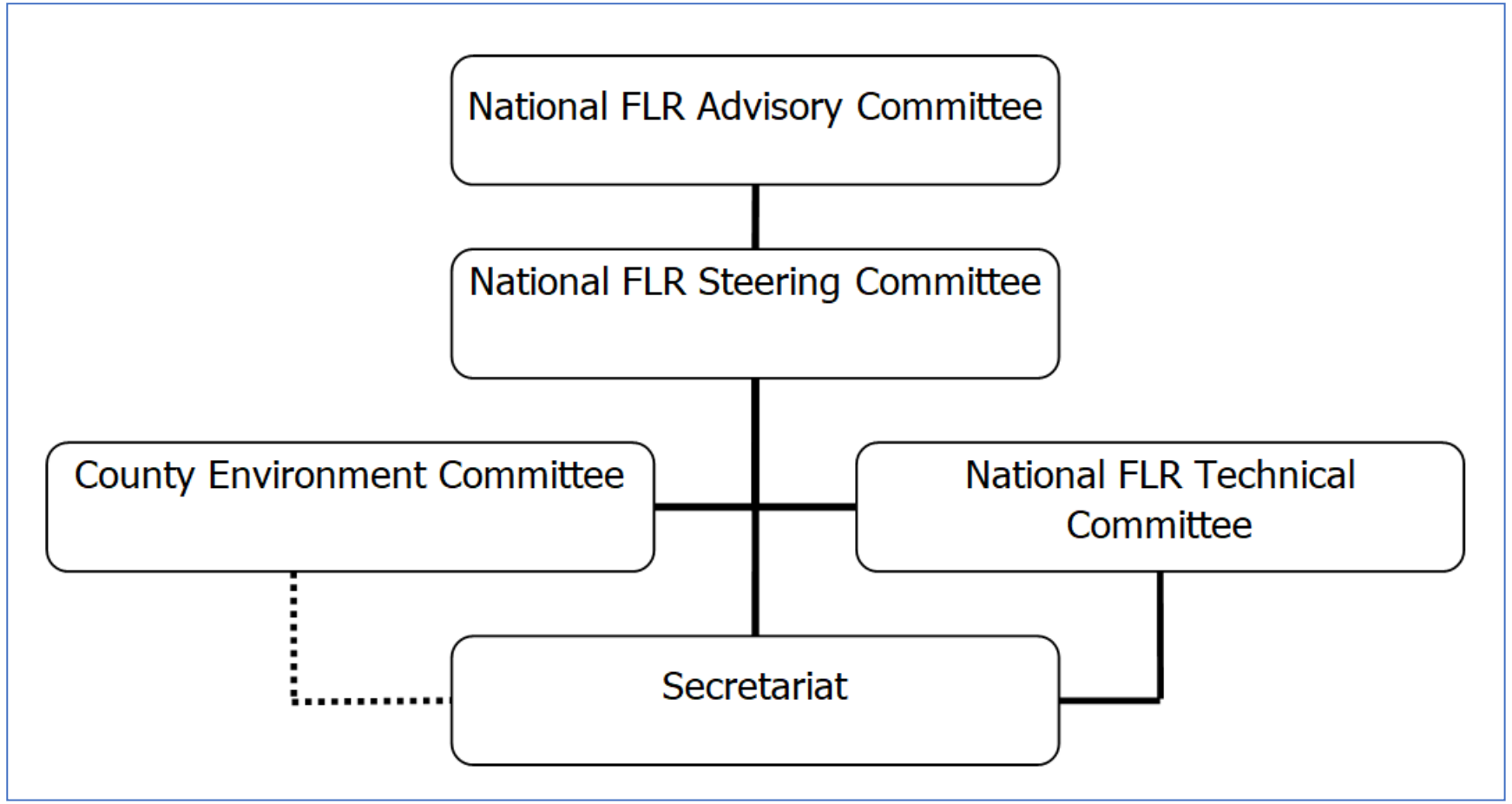

Figure 1: FOLAREP Organizational structure

Examples of Restoration Approaches and Practices

1. Rehabilitation of degraded natural forests through enrichment planting
2. Natural forest regeneration with protection
3. Intensive Agroforestry (Maize, Grevillea robusta and fruit trees)
4. Integration of Melia and Cowpeas Intercrop in the Dry Land
5. Riparian planting using bamboo and grass
6. Tree –based buffer zones along roads using indigenous tree species
7. Grass reseeding Enclosures (Improved pastures)
8. Traditional pastoral system to Silvo-Pastoral System (Acacia senegal and natural grasses)

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Thank You for Joining the Restoration Movement for Kenya

For further information contact us through director@kenyaforestservice.org

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Food and Agriculture Organization of the United Nations
GLFX Nairobi
act locally, impact globally

KENYA NATIONAL LANDSCAPE RESTORATION SCALING CONFERENCE

APPROACHES AND PRACTICES FOR RESTORATION

F. K. Nyambariga: State Department for Crop Development & Agricultural Research

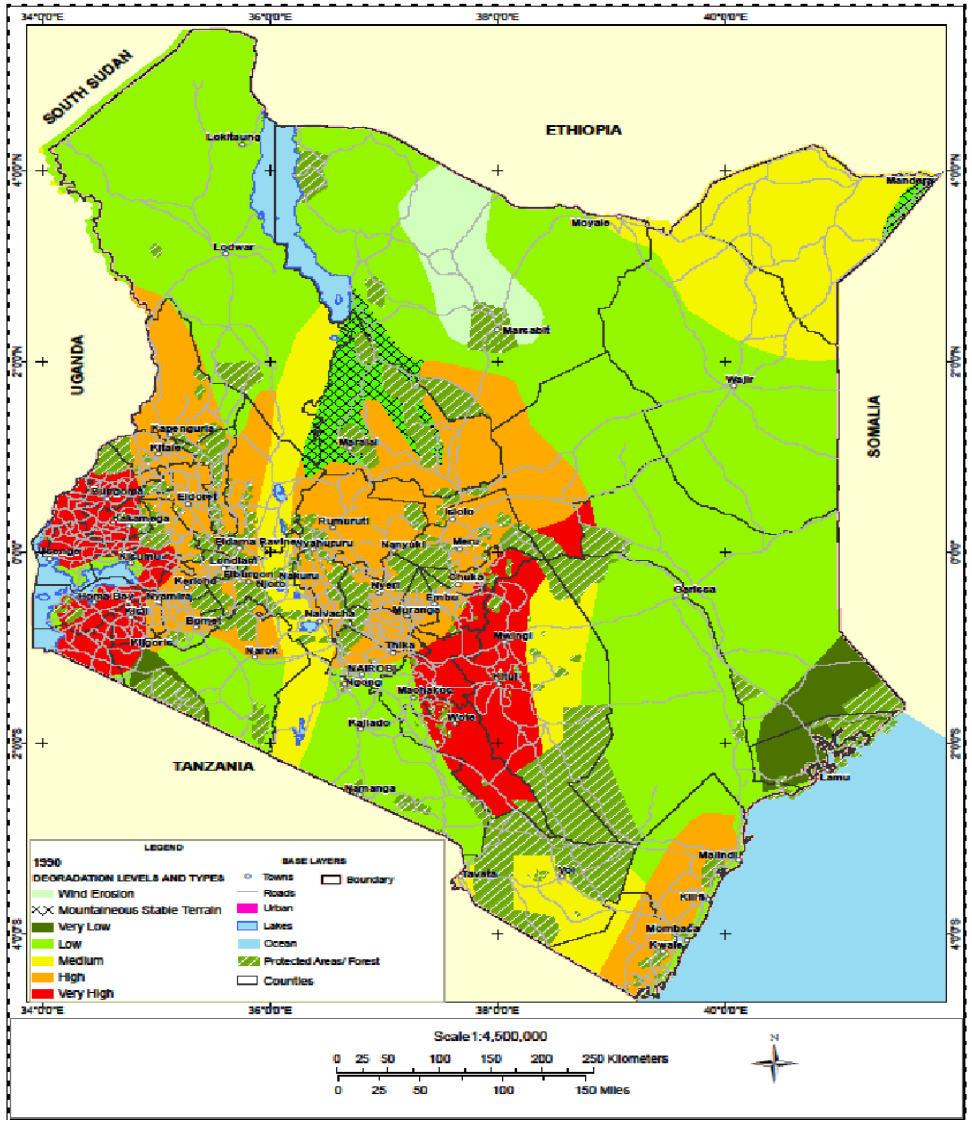
Summary of key points/outcomes

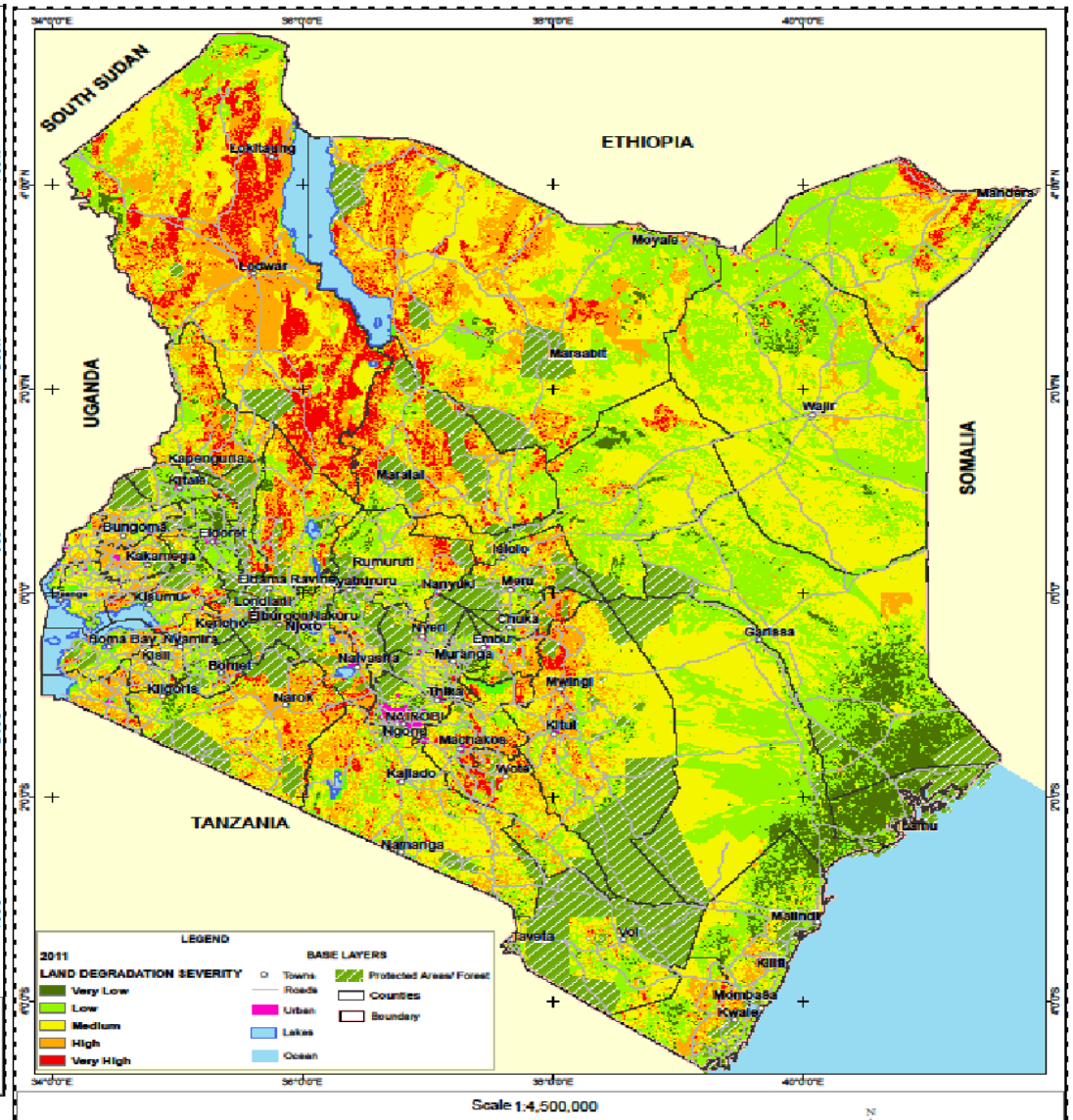
- Land degradation occurs slowly and cumulatively and has long lasting impacts on rural people who become increasing vulnerable
- It is a threat to natural resources with consequences on food security, poverty, and environmental sustainability
- Increasing occurrence of climate extremes is having an impact on land degradation processes, including floods, mass movement, soil erosion by water and wind and salinization
- Land degradation results in the destruction and loss of unique ecosystems and their endemic components of biodiversity, and the breakdown of traditional livelihood systems and mass migrations due to recurrent droughts.

Summary Contd…

- Land degradation threatens unique agro-pastoral and silvo-pastoral farming systems, and nomadic systems.
- land degradation affects millions of people who also experience poverty and repeated natural disasters especially drought and floods.
- population growth is contributing to the influx of more people into arid and semi-arid land (ASAL),
- land is being fragmented into uneconomical parcels,
- marginal lands are increasingly being cultivated, pastures overgrazed, and forests encroached upon.

Map of Land degradation in Kenya 1990 & 2012





Deforestation for agriculture (Wunanyi)

Mavueni, Kilifi County

Charcoal burnining, Mweleni, Kwale County

But who is the major culprit?

Kajie, Homabay County

Anthropogenic activities in Bolo, Kisumu County

Key challenges

- Land degradation occurs slowly and cumulatively
- threat to natural resources
- consequences on food security, poverty,
- unsustainable use of environmental
- soil erosion
- Loss of biodiversity
- Displacements by natural disasters especially drought and floods
- poverty and destitution
- Low capacity among communities and technical staff
- Inadequate resources to support restoration programs

Capacity building needs for Agricultural Landscape Restoration

- Participatory landscape needs assessment to identify needs in order of priority
- There is need for training on PESTEL and SWOT analysis in self evaluation
- There is need for identification of partners and how to engage them in implementation of restoration initiatives
- Participatory planning and implementation of climate Smart agriculture technologies
- Establishment and management of tree value chains
- Selection and management of agroforestry value chains

Solutions: recommendations

- Undertake comprehensive land degradation assessment and establish hotspots as areas of priority. prioritizing the most affected basins to establish the level, severity and extent of land degradation as well as sedimentations levels so that the information can be used for catchment conservation.
- Deliberate sensitization and training of policy makers at both levels of government (National and County) on the importance of land restoration.
- Sensitize and empower stakeholders involved in land degradation and restoration activities including community farmers associations (CFAs).
- Conduct tree planting and other soil and water conservation measures to including establishment of tree nurseries and agroforestry.

Recommendations Contd….

- Promote appropriate land restoration interventions such as fencing, rotational grazing, and pasture reseeding among others.
- Embrace indigenous technical knowledge (ITK) for sustainable land management in land restoration practices.
- Adopt effective conservation measures targeting natural resources through agro-forestry among others.
- Adopt alternative livelihood strategies such as bee and poultry keeping; gum Arabic and aloe Vera growing and others to safeguard against environmental degradation.
- Determine causes and levels of land degradation by chemical agents such as salinity and solidity.
- Capacity building for community on land carrying capacity and climate change adaption strategies.
- Encourage appropriate agricultural practices such as adoption of CSA strategies

Action points: way forward

Action plans for the creation and development of action groups

- Advocate for political will so as to minimize on political patronage on interventions
- Embrace Local knowledge and governance systems where traditional systems can work to deter members from offensive practice or activities such as use of traditional courts.
- Embrace alternative livelihood strategies such maximizing on browsers and minimize on grazers as a way of adapting to prevailing climate change.
- Propose and revise relevant policy legislation and monitor their enforcement.
- Embrace partnerships and collaborations in planning and implementation of landscape restoration interventions
- Adopt an integrated landscape restoration approach

FMNR as practiced in Regreening Africa Project in Kenya

Dr. Charles Odhiambo, PhD-WVK. Jul 12, 2021.

1. Regreening Africa Project Overview

Project Name: Reversing Land Degradation in Africa by Scaling-up Evergreen Agriculture

Project duration: September 2017-August 2022

Donor: The EU

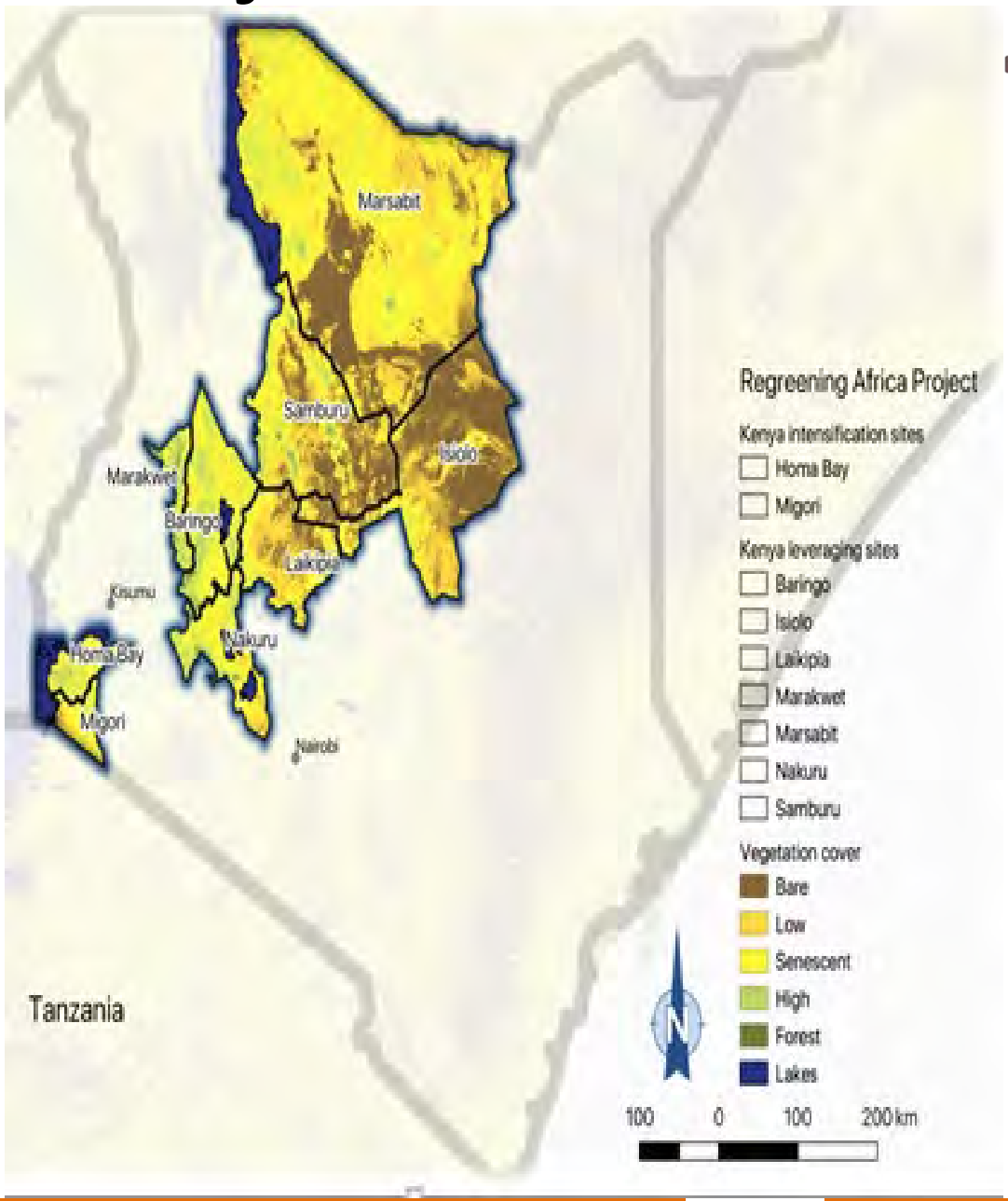
Target countries: 8 (Ghana, Mali, Senegal, Niger, Kenya, Rwanda, Somalia, & Ethiopia)

Goal: Improved livelihoods, food security and resilience to climate change by smallholder farmers in Africa and restore ecosystem services, particularly through evergreen agriculture.

Lead implementer: ICRAF

Implementing partner: WVK leads in Kenya

Kenya's target: 50,000 hh; 150,000ha (9 counties)



2. Key Landscape restoration approaches

- Farmer Managed Natural Regeneration (FMNR)
- Fruit tree farming
- Enrichment planting
- Nature-based VC dev.

(fruit trees/fodder/Honey)

- Sustainable and green energy options
- Financial inclusion (women & youth)
- Soil and water conservation
- Reseeding with adaptable grass spp.

3. Implementation Strategy

- 9 implementation counties based on restoration potential
- Homa Bay & Migori Counties-Direct Scaling sites, with agricultural restoration potential; target mainly smallholder farmers
- Laikipia, Samburu, Isiolo & Marsabit-Indirect Scaling counties, with rangeland restoration potential; target mainly pastoralists
- Nakuru, Baringo & Elgeyo Marakwet counties-Indirect Scaling counties with agro-pastoral restoration potential; target agro-pastoralists
- Strategy is to test out restoration scaling models with farmers in the direct scaling sites and scale successful models in the indirect scaling sites through partners

4. Scaling Models

- Lead Farmer
- Farmer Exchange Visits
- Community Forest Associations (CFA)
- School Environment Clubs
- Faith Based Group
- Youth Soccer Tournament
- Farmer/Producer Group

5. FMNR in Regreening Africa Project

- Practiced in Agricultural and Forest landscape restoration.

5.1 FMNR in Agricultural Landscape Restoration

- On-farm,
- Choice of trees based on farmer's priorities (short to long term)
- Spacing based on land cultivation method and implements
- Priority is on **high value indigenous tree species** that provide fuel wood/charcoal, enrich the soil, provide shade, control erosion, are medicinal, provide fruits, act as wind breaks, and are compatible with food/cash crops grown
- Management depends on weather, growth pattern, growth rate of crops in field, etc.; but generally **pruned every 6 months**
- Practiced by individuals & groups

5.2 FMNR in Forest Landscape Restoration

- Cheap, quick, farmer-friendly way to restore degraded forest landscapes
- Priority is on high value indigenous tree species that quickly form canopy, are medicinal, control erosion and enrich the soil
- Often supplemented with enrichment planting
- Largely practiced by groups- CSOs, CFAs, CBOs/FBOs in forest landscape restoration
- First piloted in direct scaling sites, now the key restoration approach across the 9 counties

Regreening Africa

6. Critical factors for FMNR success

6.1 Agricultural Landscape Restoration

- Farm size
- Farmer's interest & priorities
- Farmer's choice of food/cash crops
- Household fuel demand
- Land tenure arrangement/security
- Household Ownership
- Community ownership

Challenges and Needs for Training and Capacity Building in Support of Land Restoration

Conference Webinar Outcomes
1 July 2021

The Global EverGreening Alliance: What we do?

EverGreening
GLOBAL ALLIANCE
green up to cool down

Works through its 50+ member organizations – and with governments and multi-lateral agencies – to implement massive land restoration programs.

Fosters collaboration, learning, sharing and harmonization across institutions, sectors and borders.

Committed to scaling-up locally generated, long-term, movements in order to accomplish unprecedented outcomes.

EverGreening the Earth Campaign

Capture 20 billion tons of carbon every year by 2050

EverGreening GLOBAL ALLIANCE

green up to cool down

Achieved by supporting farmers and communities

- **Increase tree cover on farmlands**
- **Sequester more carbon in soils**
- **Scale up leguminous shrubs on farmlands**
- **Increase biomass energy production**
- **Restore 575 million hectares degraded forestlands**
- **Regenerate 650 million hectares of pasturelands**

A critical element is training and capacity building!

Proposed approach and partners of ‘Regional Capacity Building Hubs’

- **Support curriculum development**
- **Conduct training programs,** seminars, webinars, training events
- Provide opportunities for **practical hands-on training**
- **Develop decentralized platforms to increase support for training** – tailored to the needs of each regional restoration program

Survey of Training Resources and Capacity-Building Needs for Landscape Restoration

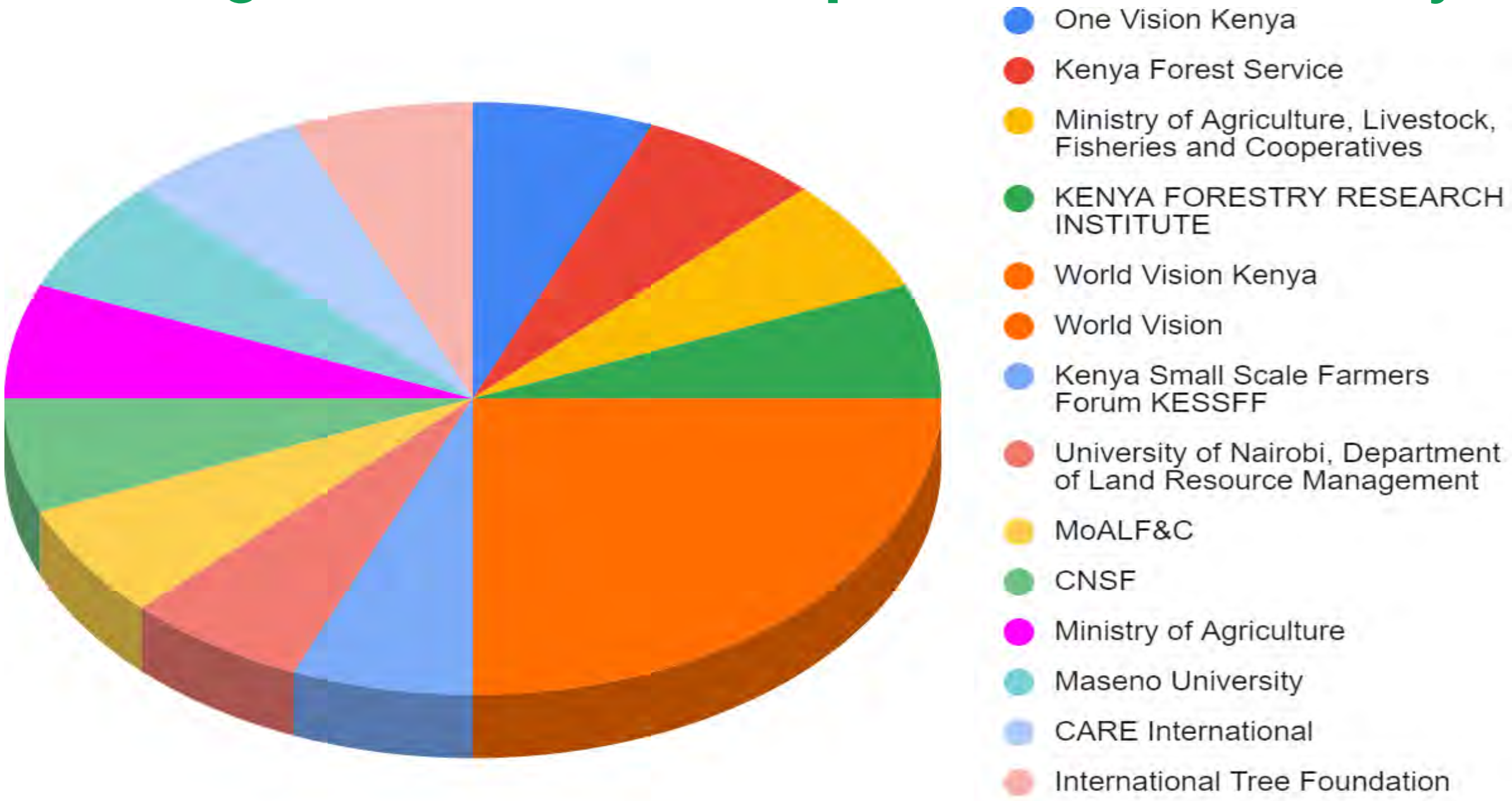
- Developed by the Global Evergreening Alliance (GEA).
- Address evergreening training needs by leveraging and disseminating existing training materials and increase support for capacity-building activities.
- The survey is composed of three 3 parts:

    -- Questions about existing training materials and how they are used.

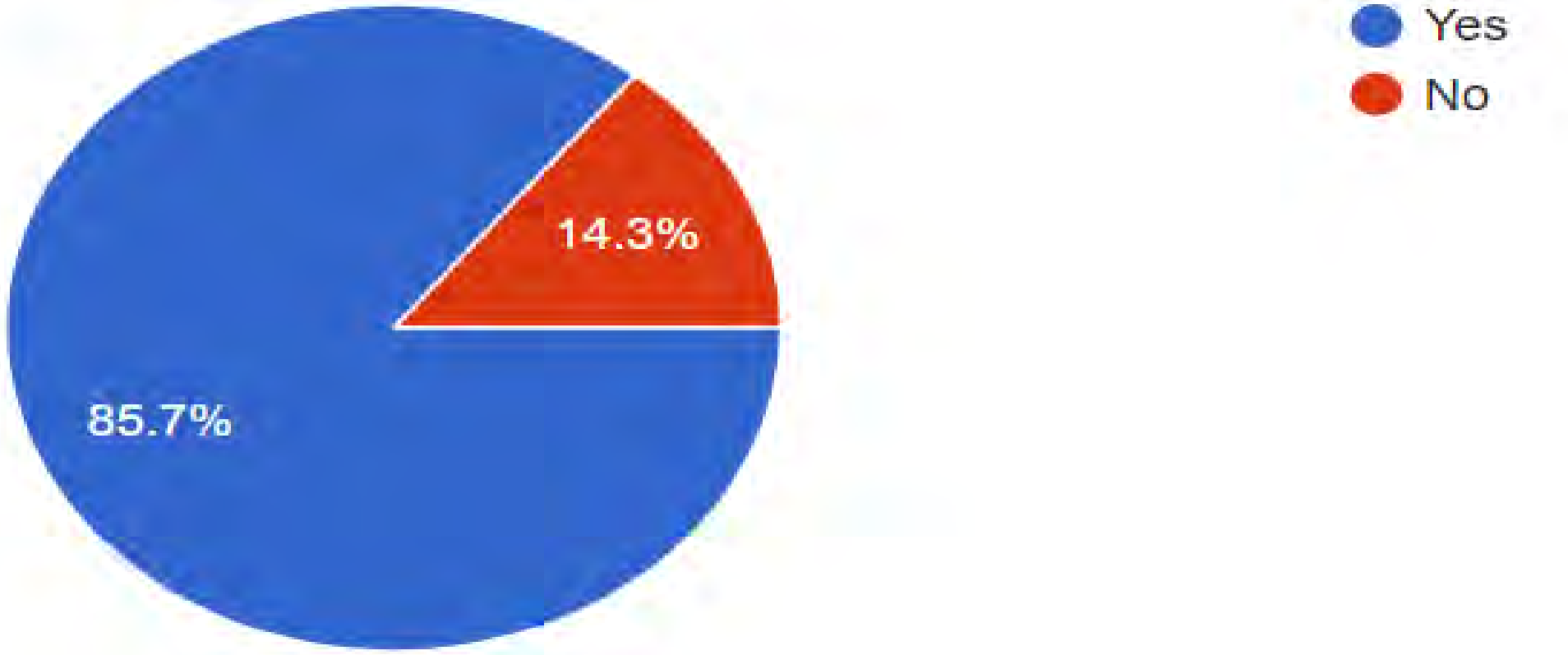
    -- A**ssessment of Training Needs**

    -- Evolving Context for Training and Capacity Building for landscape restoration

The organizations that responded to the survey



Has your organization provided training to enable the widespread adoption of evergreening practices and landscape restoration?



What have been the main objectives of the restoration training activities?

Top 3 objectives:

Reduce deforestation and increase tree cover
Reduce rural poverty and increase incomes
Increase resilience to climate change

What are the most common approaches used in the training?

Top three approaches:

- **Visits** to demonstration sites
- **Cross-visits** / exchange visits
- Support for **peer-to-peer learning** among lead farmers in the field

Who are the main actors targeted by the evergreening trainings?

Top four actors:

- Lower income, **smallholder farmers**
- **Lead farmers** (training of trainers)
- **Extension workers**
- **Government officials**

Key Recommendations from Panelists:

Training Implementation

- **Seeing is believing.** Onfarm demonstrations, cross-visits and exchange visits are the most effective training methods.
- **Go to ground.** Start with the communities' priorities.
- **Careful participant selection** -- crucial. Identify the needs of each type of trainee.
- **Content must be carefully adapted** to the specific audience.
- **Work within established groups** – rather than create new ones.
- **Find ways to increase womens' engagement** in training.
- **Overcome barriers to land access by women and youth.**
- **Engage people living with disabilities.**
- **Deploy radio and mobile messaging.**

Key Recommendations from Panelists

Organizational level

1. **Develop cross-organizational partnerships** and collaboration on training.
2. **Organizations should complement each others' efforts**, not compete.
3. **Training Networks** -- start with assessment of who is doing what and where.
4. **Partner with research organizations.**
5. **Monitoring apps** are numerous – rationalize their use.
6. **Need more innovative ways to engage youth** in restoration.
7. **Transformative training -- Mindset change** is fundamental.
8. **Donor partners must be educated** on community priorities.

Action

- **-- Expand the Survey to many more collaborating organizations.**
- **-- Create a National Capacity-Building Action Group.**
- **-- Launch capacity-building for restoration carbon projects.**

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cool down

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