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LANDSCAPE RESTORATION MONITORING



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FOREST AND LANDSCAPE RESTORATION PLAN (FOLAREP) MONITORING FRAMEWORK

Rose Akombo
Principal Conservator of Forests

Kenya National Landscape Restoration Scaling Conference
9 – 16 July 2021



Kenya landscape restoration commitments

- Kenya has committed to restore 5.1 million ha of deforested and degraded landscapes
- Increase and maintain 10% tree cover by 2022
- Reduce 50% of GHGs emission from the forest sector by 2030 in the NDC
- To achieve these commitments, Kenya has in place supporting national policies, legislations, strategies and programmes



National efforts for the achievement of the commitments

- Kenya Forest Service is currently leading a multi-stakeholder process developing a Forest and Landscape Restoration Implementation Action Plan 2021-2025 (FOLAREP) with support from FAO and GEF.
- The 5-year plan aims accelerate actions to restore deforested and degraded landscapes for resilient socio-economic development, improved ecological functioning and contribute to the realization of the national aspirations and international obligations.

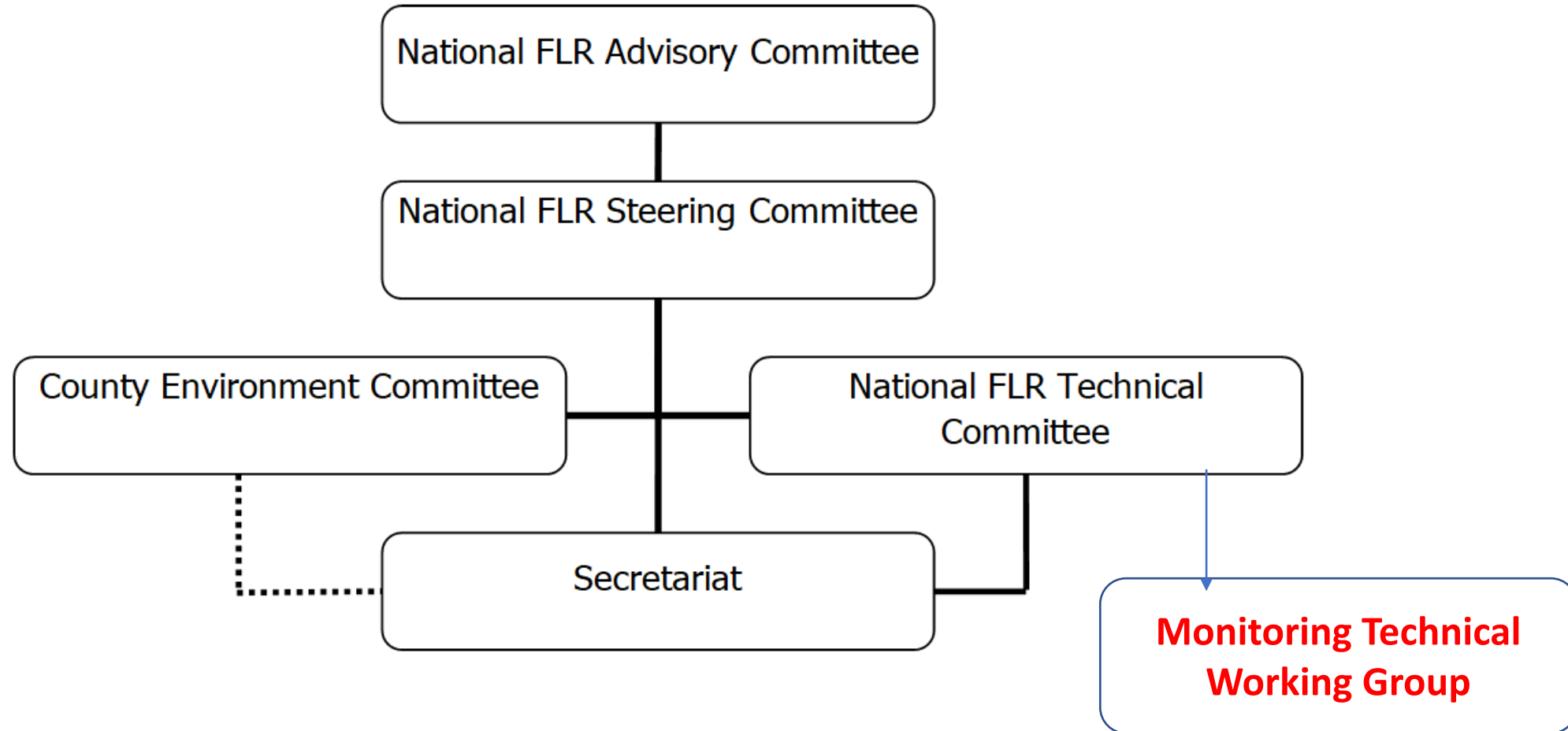


National efforts for the achieving the commitments (2)

- The action plan aims to put **2.55 million ha** of deforested and degraded landscapes by 2025.
- It proposes the establishment of integrated monitoring and reporting framework and a Multi-stakeholder FLR Monitoring Technical Working Group (TWG) to coordinate, monitor and report all the restoration efforts among the key objectives.
- The FLR Monitoring TWG will comprise of government ministries, departments and agencies, CoG, partners and other institutions with capacity to support monitoring and reporting frameworks.



Coordination framework for FOLAREP



FOLAREP Organizational structure

FOLAREP Monitoring Framework

FOLAREP Monitoring framework will be integrated in the following existing frameworks:

- Integrated MRV framework for climate change/reporting NDCs in Kenya.
- The National Forestry Monitoring System .
- The Forest and Landscape Restoration portal



KENYA NATIONAL LANDSCAPE RESTORATION SCALING CONFERENCE

FOREST AND LANDSCAPE RESTORATION (FLR) MONITORING

Promoting an Integrated Monitoring System for Sustainable Management of Water Towers in Kenya

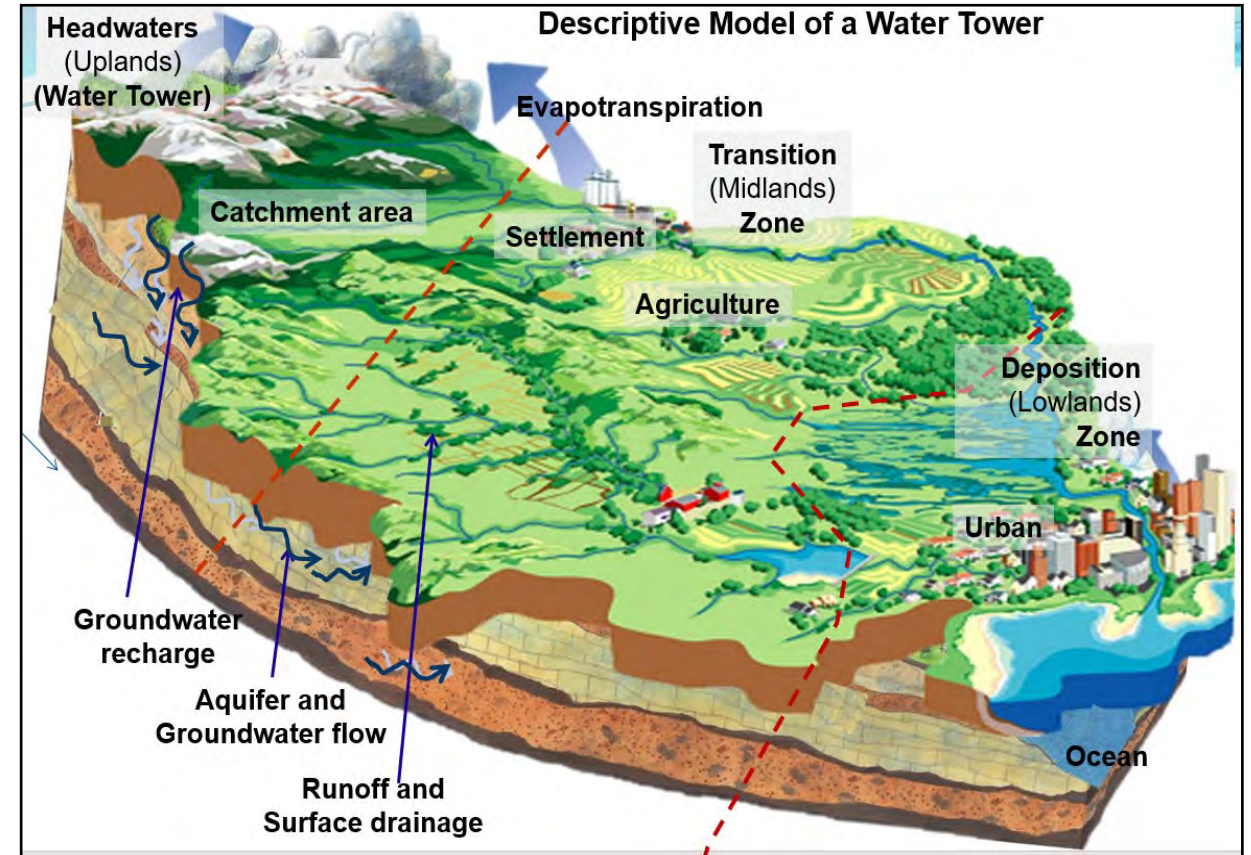
Presenter: Dr. Winfred Musila,

July 15, 2021



The Kenya Water Towers Ecosystem

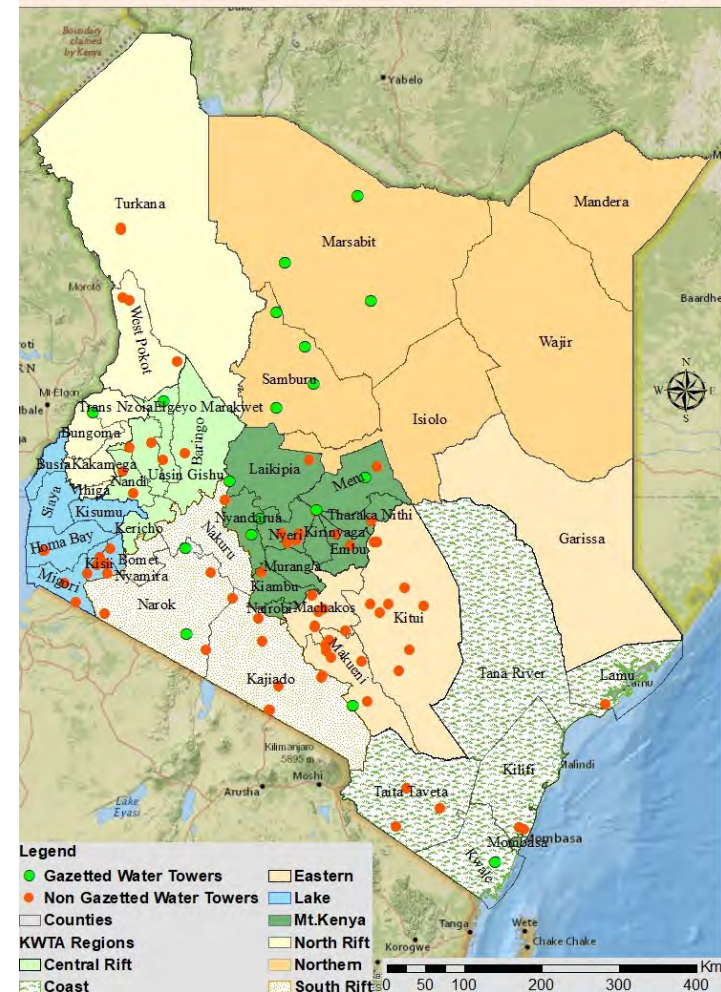
- Landscape that is **elevated** and receives **precipitation** (mountains, hills, and plateaus)
- Has a **basin** on the surface that allows for **water storage**
- **Vegetation** that allows **adequate infiltration** of precipitation
- **Releases** water through **springs, streams** and **rivers** emanating from it



Kenya's Water Towers

- The five main Water Towers are the source of more than **75% of surface water resources**;
- There are 18 gazetted Water Towers in Kenya;
- Other 70 Water Towers have been proposed for gazettement;

Distribution of Water Towers in Kenya per Region



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Importance of Water Towers

Water Towers supports key sectors: agriculture, energy, tourism, manufacturing and health



Agriculture - Tea



Water supply

Mau Forest Complex contributes about Ksh. 189 billion per year



HEP generation – Seven Fork dam



Tourism - Maasai Mara

Restoration of Water Towers in Kenya

- The Kenya Water Towers Agency (KWTA) is mandated to coordinate and oversee the protection, rehabilitation, conservation and sustainable management of all the Water towers in Kenya
- One of the main Strategic Objectives is to **Coordinate and oversee Water Towers Ecosystem Health and Resilience**
- Need for **reliable and timely information** on their status of Water towers to support decision making and action by policy makers and other stakeholders



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Information Barriers Facing Water Towers Restoration

- 1) **Inadequate information** on the status of water towers -(socio-economic, physical and biological data);
- 2) **Uncoordinated approach across partners** on monitoring ecosystem health of water towers – data collection, processing and data management;
- 3) **Lack of a centralized data platform** – data in scattered and disaggregated
- 4) **No clear mechanism to share data** among the existing interested stakeholders
- 5) **Limited capacity to monitor the status and health** of the water towers ecosystem
- 6) **Limited long-term monitoring programs and systematic collection** and archiving of data

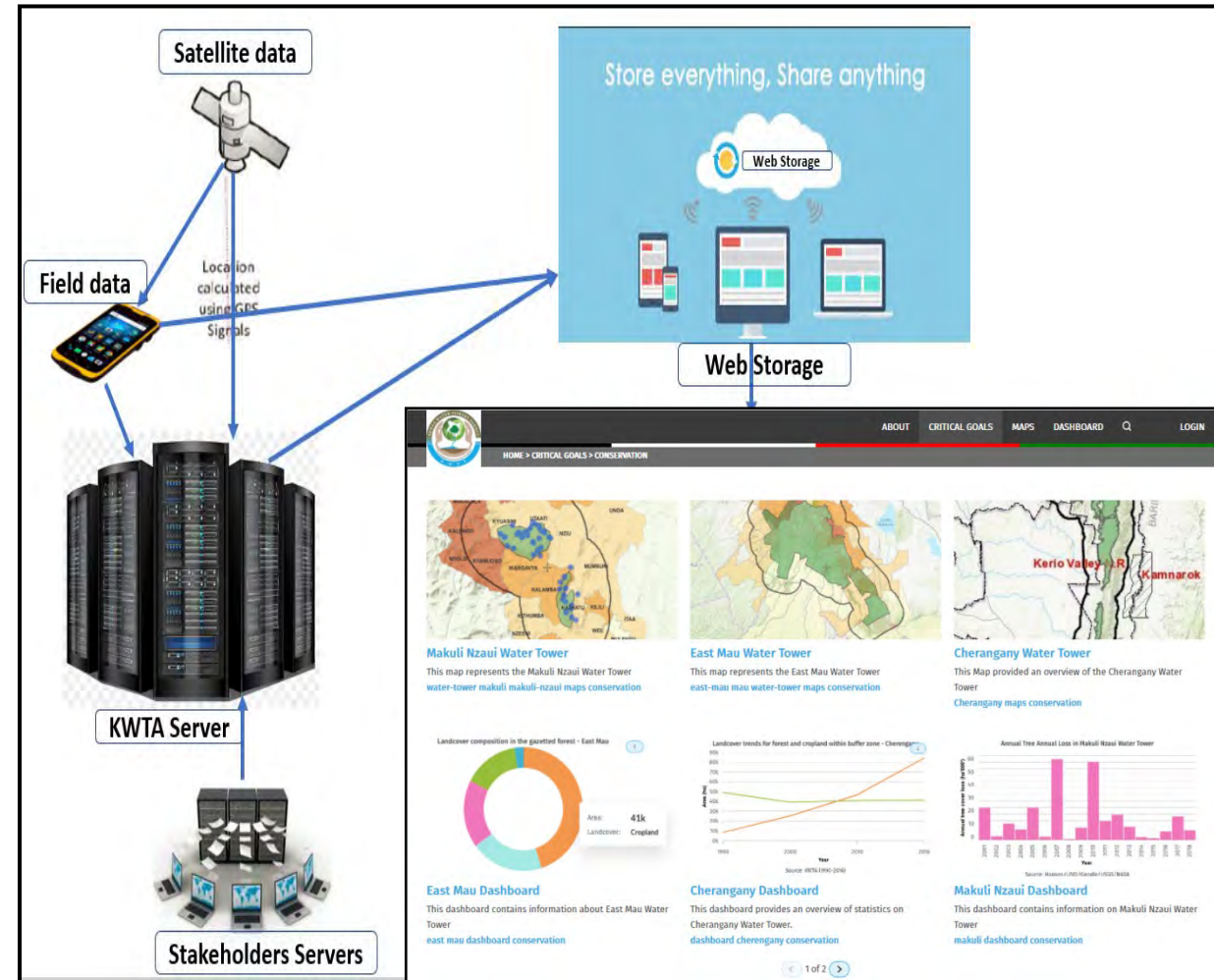


Integrated Water Towers Monitoring System

KWTA has developed an **Integrated Monitoring System** for collecting and integrating data from various stakeholders to inform implementation and track progress towards restoration of water towers

Platform for **managing** and **visualizing** water towers **information** via a web platform

Integrates data from various **stakeholders**



Why an Integrated Water Towers Monitoring System

- a) **Provide updated, comprehensive and reliable data** for decision-making and action by policy makers and other stakeholders on WT status
- b) **Develop data protocols and system** for sharing water towers data and information
- c) **Ensure consistent and comprehensive monitoring** of key elements of natural resource management in the water tower ecosystems
- d) **Provide a means of tracking impact of projects and programs** implemented within the water towers –both Long and medium term



Process of developing the Monitoring system

- a) **Multi-stakeholder driven-** developed through a Technical Working Group bring on board 18 institutions (mainly state actors)
- b) Technical support from **World Resource Institute (WRI)**

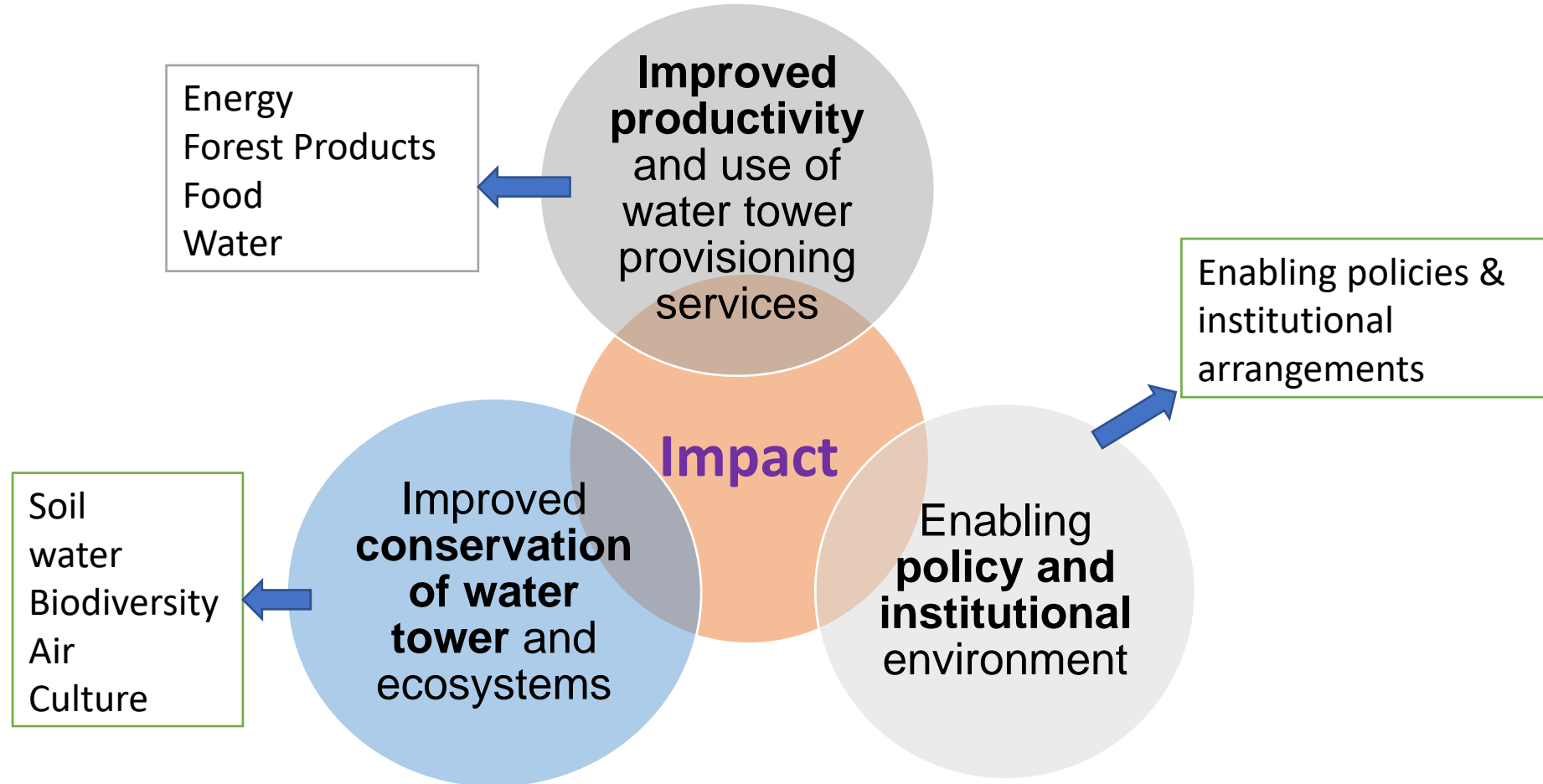
1. Kenya Forest Service
2. Council of Governors
3. Ministry of Agriculture
4. Kenya Forest Research Institute
5. Kenya Metrological Department
6. Kenya Wildlife Service
7. Climate Change Directorate
8. Water Resources Authority
9. National Environment Management Authority
10. World-Agro Forestry Center -ICRAF

11. Kenya Institute for Public Policy Research and Analysis
12. Ministry of Water and Sanitation
13. National Museums of Kenya
14. Nature Kenya
15. Ministry of Environment and Forestry
16. Ministry of Energy
17. Kenya National Bureau of Statistics
18. Ministry of Industrialization and Trade



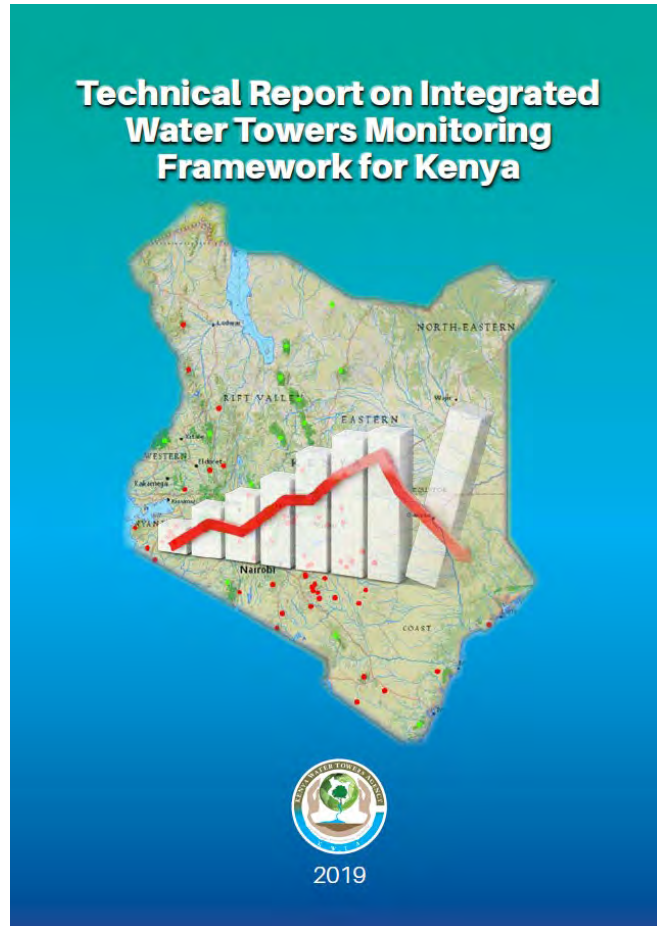
Process of developing the Monitoring system

b) Defining Goals: Sustainably Managed Water Towers and Ecosystem



Process of developing the Monitoring system

a) Water Towers Monitoring Framework



Provides guidance on **indicators, metrics and criteria** for monitoring within the Water towers:

- ❖ Focuses on goals of **protection, restoration and management** of the water towers
- ❖ Framework links **Goals** with the **Process** and enables us to know **What** to measure and **How** to measure
- ❖ **256** indicators identified and **76** prioritized



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World Vision



GLFX
Nairobi
act locally, impact globally

Process of developing the Monitoring system

c) Prioritization of Indicators

1. **Strong scientific and conceptual basis** - i.e. indicators based on well-defined or validated cause-and-effect chains linking anthropogenic pressures to ecosystem response;
2. **Provide signals** that can be measured in simple, cost-effective ways with available resources, and analyzed in a fashion that allows unambiguous interpretation;
3. Have well established links with specific management objectives and are responsive to related management actions over policy-relevant time frames; and
4. Easily understood by stakeholders and/ or target audience.

- 256 indicators were identified
- 76 indicators prioritized based on:
 - ✓ Cost of monitoring
 - ✓ Data availability
 - ✓ Technical capacity
 - ✓ Accessibility to data
 - ✓ Time taken to monitor
 - ✓ Ethical issues
 - ✓ Relevance/ effectiveness
- Indicators evaluated based on Weighted Average Score for Monitoring Indicators (WASMI)
- Validation of the MF metrics at County level and by the Scientists



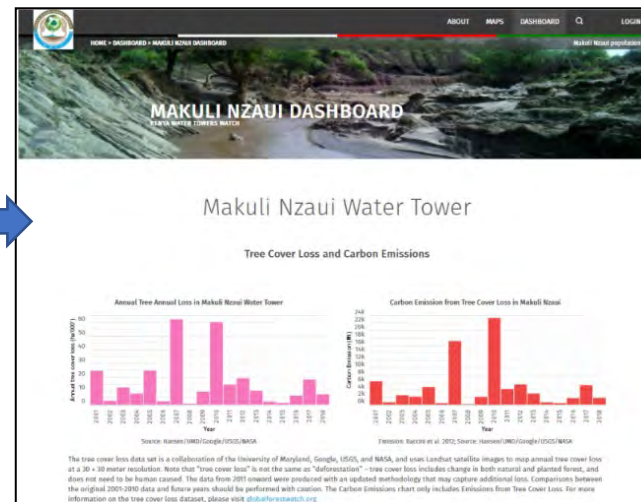
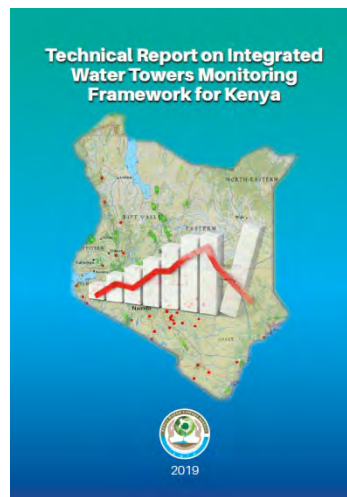
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Progress of developing the Monitoring system

d) Achievements

- a) Developed a **prototype of the system** – dashboard and algorithms for data integration
- b) Developed data sharing agreement (protocol)
- c) **Piloted the system in 3 water towers** (Eastern Mau, Cherangany and Makuli-Nzau)
- d) **Trained IWTMS champions** from the 17 institutions represented in the TWG



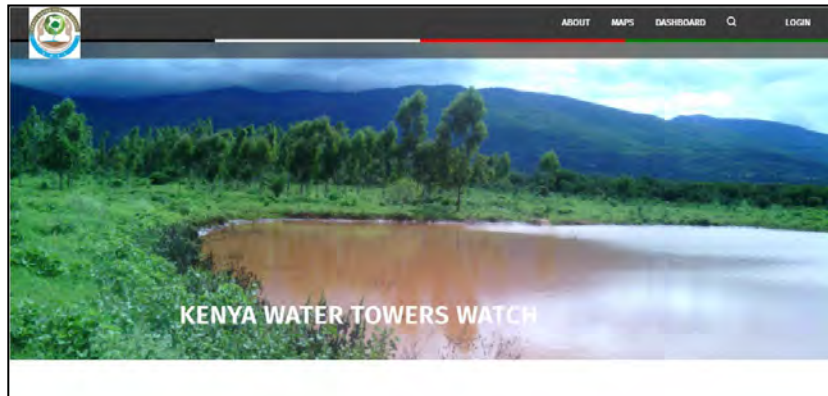
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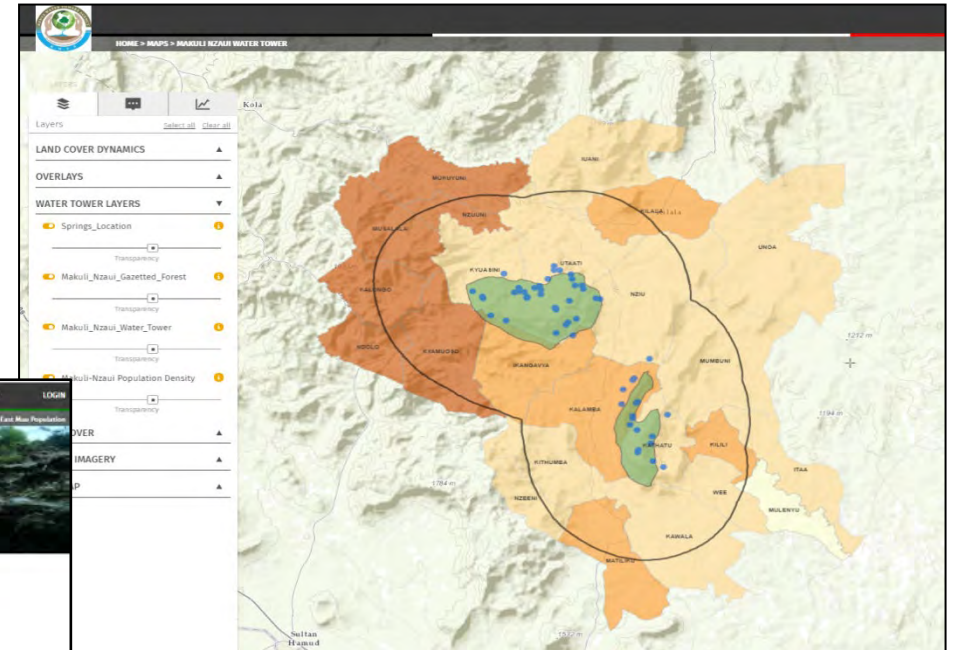
Integrated Water Towers Monitoring System

Home page

Maps

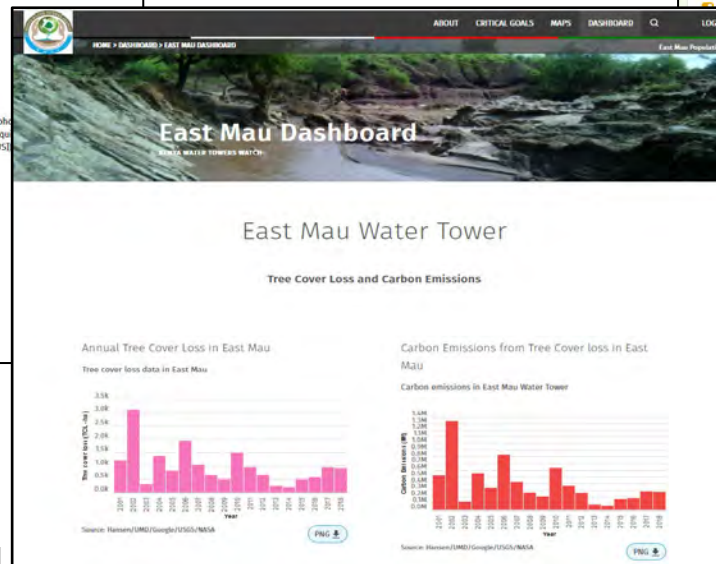
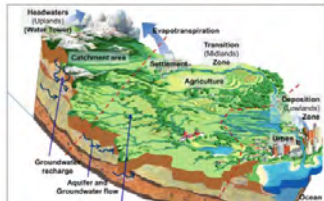


Dashboard



The Kenya Water Towers Watch

A Water Tower refers to an upland area (hill, plateau and mountain) whose climate, geology, tectonics, substrate, land cover/use and hill-slope morphology characteristics support reception, infiltration, percolation and storage of rainfall (or any form of precipitation) on the surface, in the soil, rock and aquifers. It is a gradual source of water through springs, rivers and swamps in a drainage basin (also called catchment [UK] or watershed [US]).



Key functionalities-What IWTMS can do?

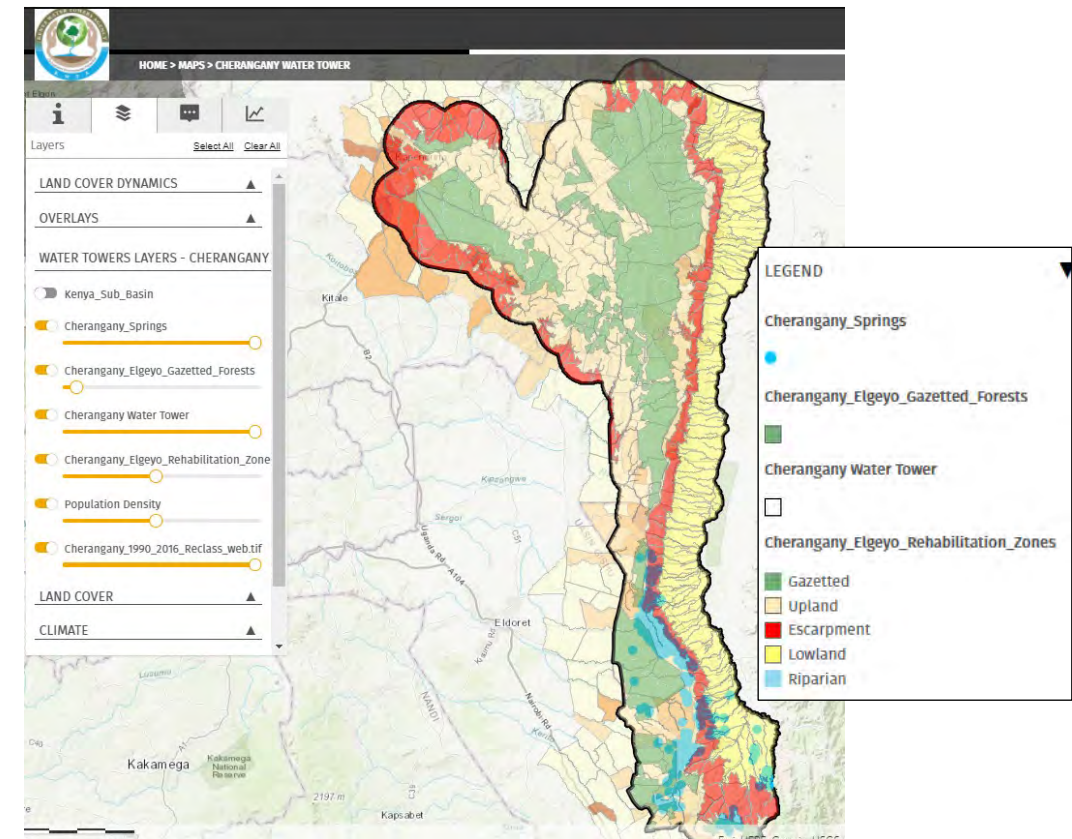
- 1) Integrates datasets collected and processed by various institutions in form of maps and graphs (dashboard)
- 2) Integrates **global datasets** (forest fires alerts, carbon emission and tree cover loss.)
- 3) **Monitors trends in landcover and land use changes** in the water towers
- 4) Shows degraded areas in the water towers for **rehabilitation**
- 5) Provides alerts of **deforestation** in the water towers
- 6) Indicates **population densities, biodiversity hotspots and springs** in the water towers



Key functionalities-What IWWTMS can do?

- 7) Tracks key economic growth indicators within the water tower
- 8) Customized data processing -you can carry out own analysis on the dashboard e.g. Generating landcover statistics of an area

Example – Priority areas for rehabilitation in Cherangany Hills Water Tower



Key lessons

- 1) Need for **good will** among institution providing data
- 2) Availability of large pool of data (national and global), hence need to **develop algorithms** to mine, process and visualize data
- 3) Need for **skilled personnel** on data science and system development
- 4) Need for **capacity building of institution** on data management
- 5) **Mobile applications provides opportunity for crowdsourcing** data hence reduction in the cost of data collection
- 6) Need for a **data sharing guidelines** (protocol)
- 7) There is needs to be **win-win strategy** for successful implementation of an integrated water towers monitoring system



Thank You

East Mau Water Towers



KENYA NATIONAL LANDSCAPE RESTORATION SCALING CONFERENCE

FOREST AND LANDSCAPE RESTORATION (FLR) MONITORING

Presenter: Mr. D.N Chege, Kenya Forest Service

July 15, 2021



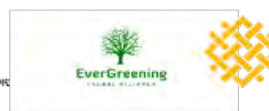
Presentation Out line

1. Introduction
2. Priority Landscape Restoration Options for Kenya
3. Restoration practices in Kenya
4. Monitoring restoration efforts
5. Challenges
6. Way forward and Lessons



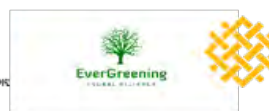
Introduction

- Globally, Kenya is categorized as a low forest cover – low deforestation country with less than 10 per cent forest cover.
- Forest and Landscape Restoration seeks to:
 - Restore function and productivity through tree planting, natural regeneration, or improved land management.
 - Regain ecological integrity and enhance livelihoods in deforested and degraded landscapes.
- This is in response to commitments to on land restoration, climate change, and biodiversity



Priority Landscape Restoration Options for Kenya

1. Afforestation and reforestation of natural forests
2. Rehabilitation of degraded natural forests
3. Agro-forestry
4. Commercial plantations (including bamboo)
5. Silvo-pastoral and rangeland restoration
6. Tree-based buffer zones along water bodies and wetlands
7. Tree-based buffer zones along roadways

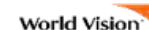


Restoration practices in Kenya

1. Public education, awareness and sensitization on tree growing
2. National tree planting campaigns
3. Greening of schools and other learning Institutions
4. Adoption of forests
5. Urban Forests and Green Spaces



Female ranger day



Monitoring Restoration efforts

1. Kenya has identified near real time processes for forest cover change monitoring - detect deforestation. These are:
 - a) JJ-FAST – Uses Synthetic Aperture Radar (SAR) image to detect deforestation every 1.5 months
 - b) The Near Real Time Forest Alert System (NRTFAS) – Uses Sentinel 2 Data and is updated every two weeks (piloted in Kwale County)
 - c) Use of mobile smartphone or tablet device equipped with Survey123 application to validate the above and report by KFS rangers.



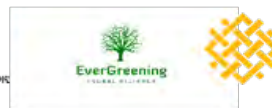
Monitoring Restoration Efforts – Other Tools

2. Online Tree Planting and Seedling Reporting System- reports on trees planted and seedlings raised.
3. Periodic progress reporting covering restoration activities
4. Periodic forest cover mapping through use of Remote Sensing technology (Use of Satellite imageries),
 - Conducted every 2 yrs, last conducted 2018, 2020 currently ongoing
5. Monitoring Sustainable management of plantation areas to ensure no backlogs



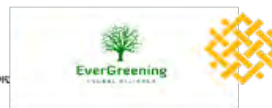
Challenges

- Monitoring survival rates in restoration sites particularly in land outside public forest
- Poverty levels – communities need initiatives with quick and tangible benefits.
- Land tenure
- Monitoring areas of less than three year in the mapping aspect – data availability
- Funding



Way forward and Lessons

1. Important to have a framework that integrates online platforms across various institutions
2. Use of citizen science – mobile applications in reporting
3. Private sector stakeholders have a role in monitoring – Case of East African Data handlers



THANK YOU



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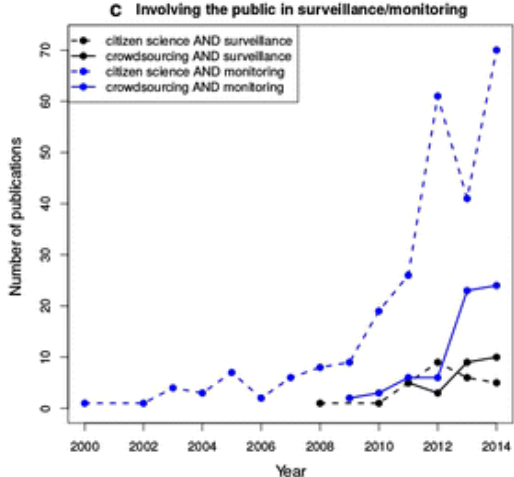
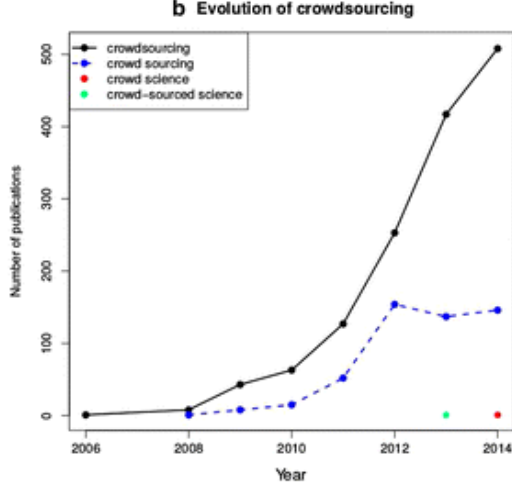
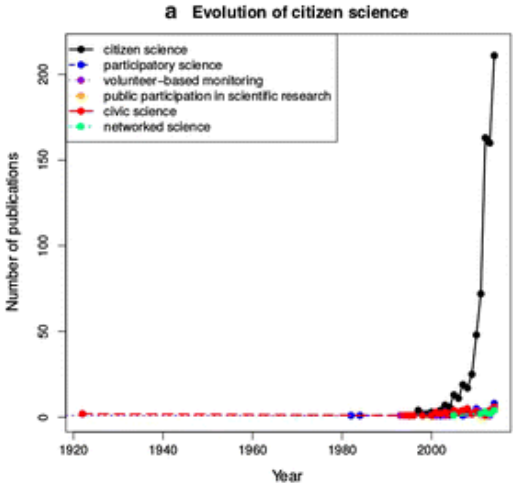


Integrating citizen surveillance and systematic data collection in monitoring of land restoration

Tor-G. Vågen



“Citizen surveillance as any type of activity conducted by volunteers, recruited or not, that results in monitoring or surveillance data”



citizen science has become popular in many scientific areas

can be structured or unstructured (i.e. crowdsourcing)

trade-off between data quality and data quantity



Welvaert, M., Caley, P. Citizen surveillance for environmental monitoring: combining the efforts of citizen science and crowdsourcing in a quantitative data framework. SpringerPlus 5, 1890 (2016). <https://doi.org/10.1186/s40064-016-3583-5>



Structured or systematic data collection and monitoring

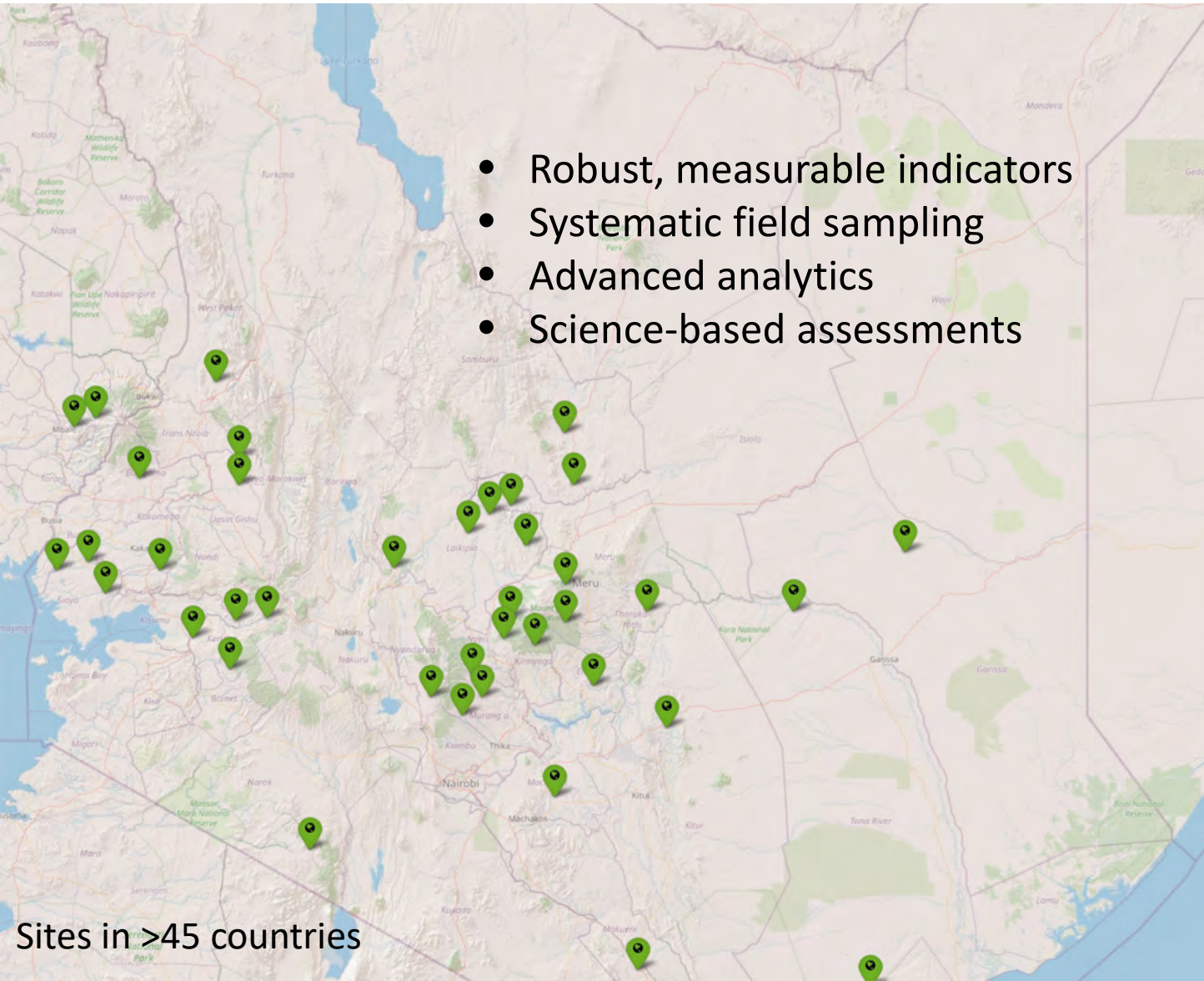
more costly

more challenging to scale

data quality high(er)



The Land Degradation Surveillance Framework (LDSF)



- Robust, measurable indicators
- Systematic field sampling
- Advanced analytics
- Science-based assessments

Sites in >45 countries



Regreening Africa App

Start

About

Help

View completed data

Send completed data

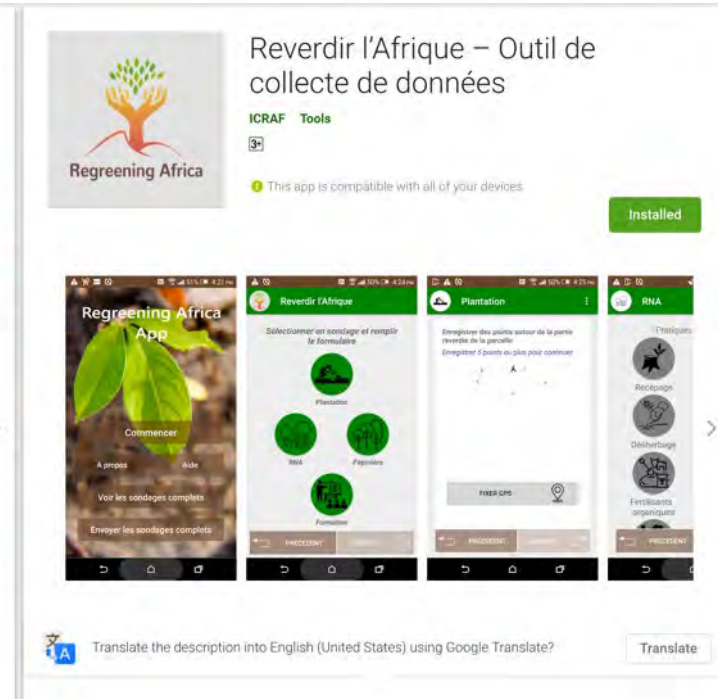
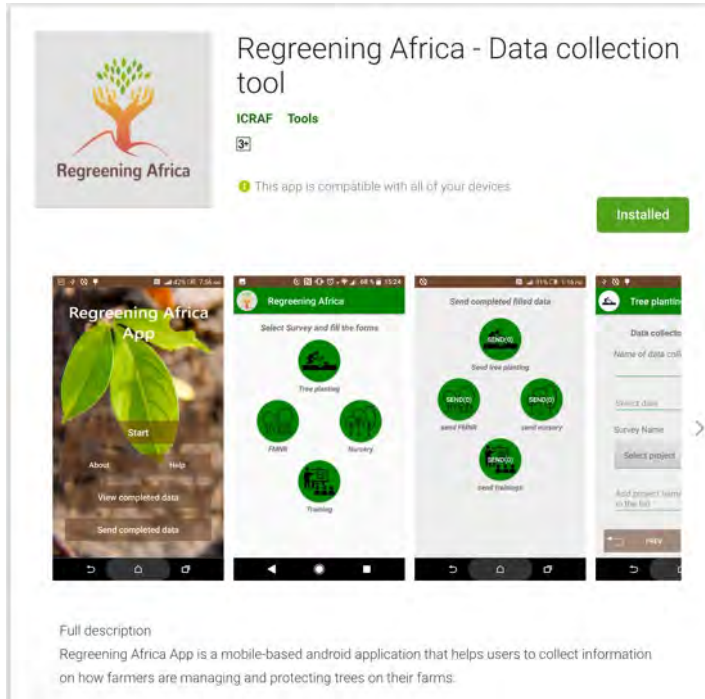
Citizen science data collection using the Regreening Africa App

Used by (among others):

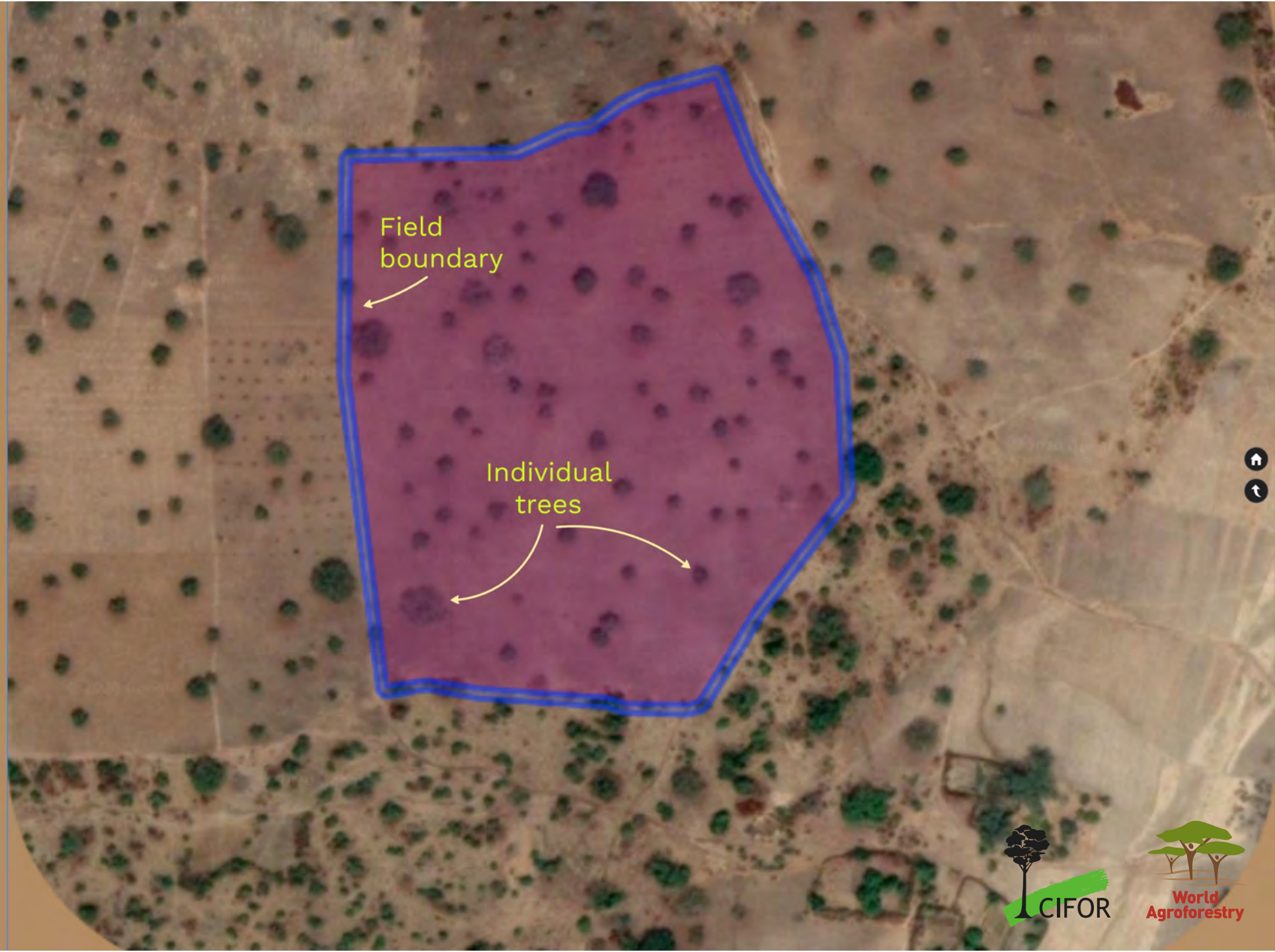
- Implementing partners
- Scientists
- Extension agents
- Lead farmers
- Nursery managers

Modules:

- Tree planting
- FMNR
- Nurseries
- Training



- Field boundary delimited
- Number of trees planted
- Date(s) planted
- Species planted
- Location of trees planted
- Survival of trees



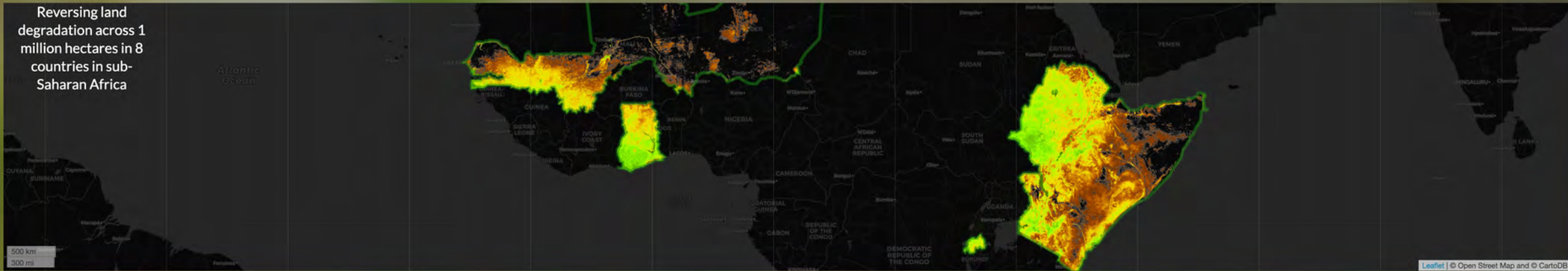
Regreening Africa

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Welcome to the Regreening Africa Restoration Hub

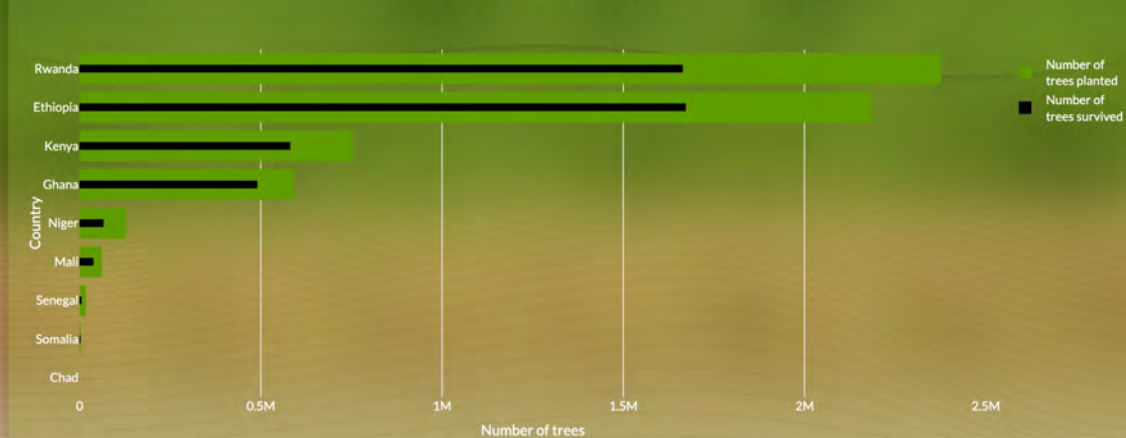
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Map of project countries

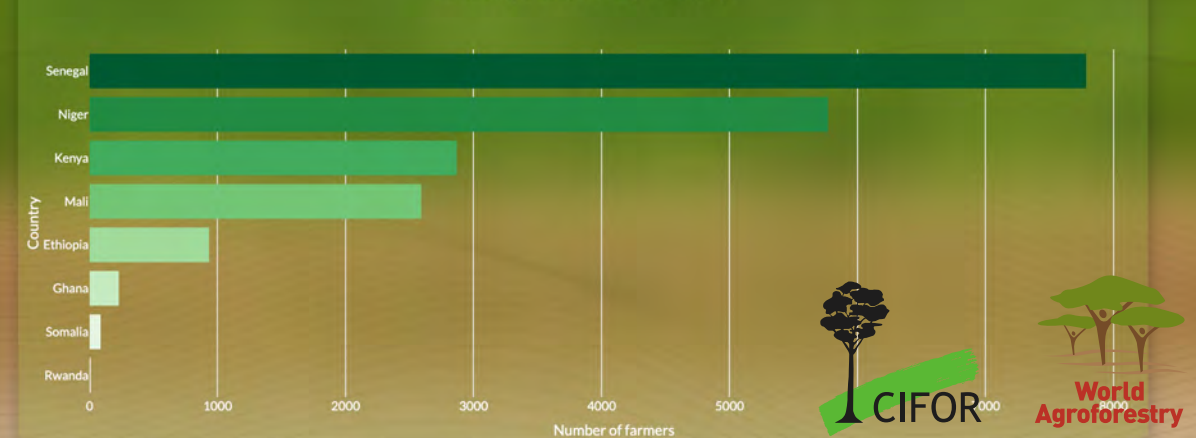


Summary of data collected using the Regreening Africa App across project countries

Tree planting by country



FMNR practices by country



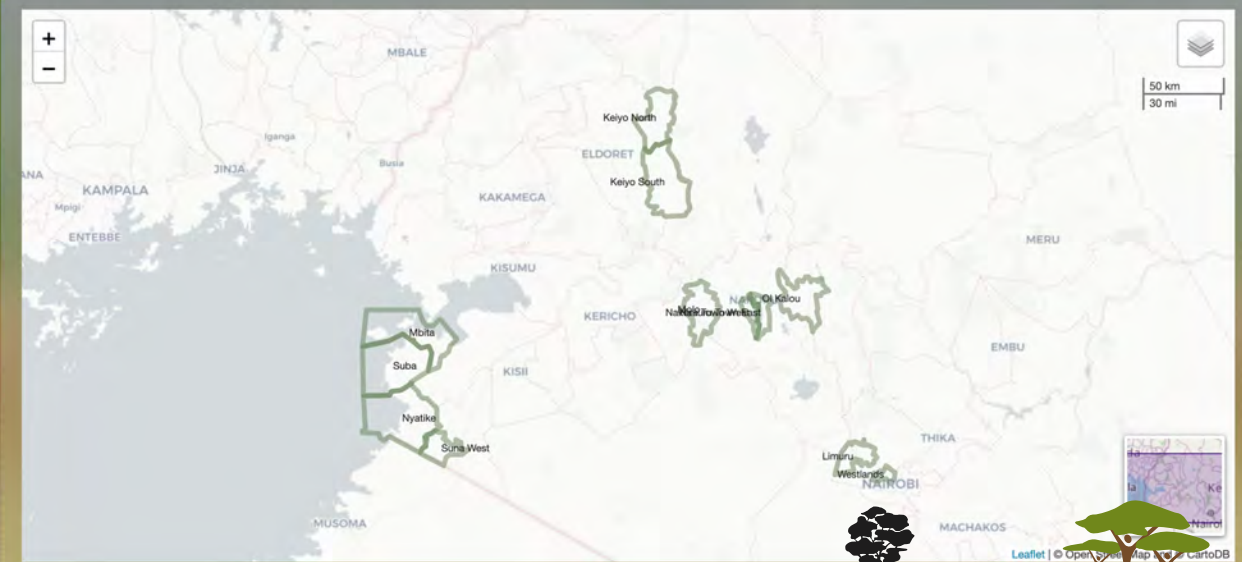
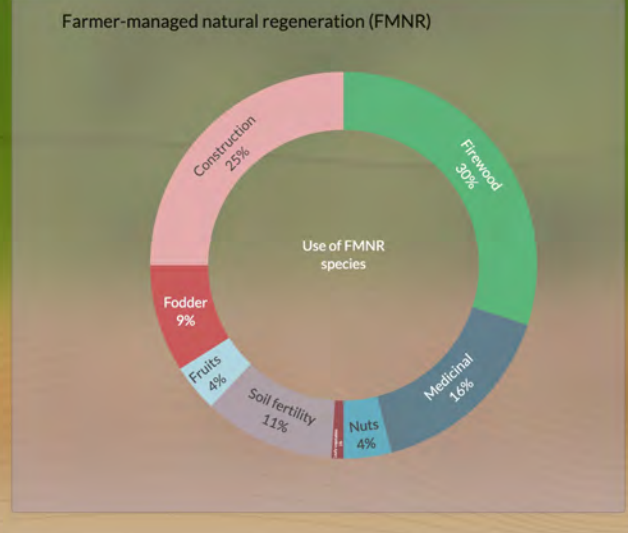
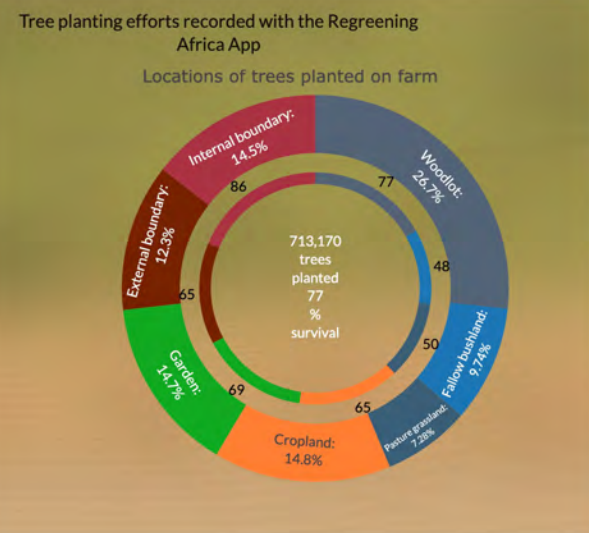


Kenya



Main map Explore monitoring and evaluation results Explore land health indicators and maps

English/Français
English



Integrating citizen surveillance and systematic data collection in monitoring of land restoration as part of the Regreening Africa Land Restoration Hub



Select the project area you would like to explore!

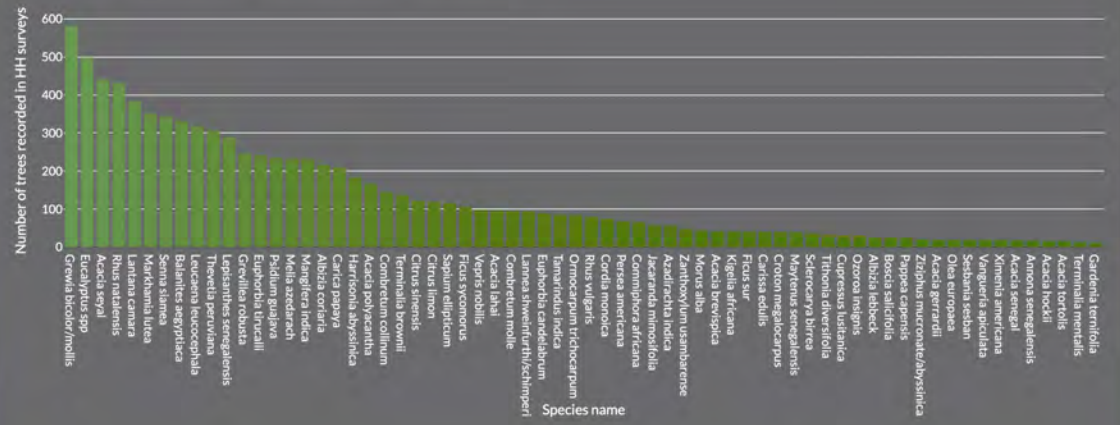
All

When you select a project area from the dropdown list above, a heatmap will also be shown on the map. This shows where the Regreening Africa App is being used to track tree planting activities. Also, other graphics on this page will update to reflect the area selected (if data is available for this area).

Explore household survey and tree planting data

Tree species Regreening action Restoration activities

Most common tree species on farm based on project baseline surveys



Tree species planted Tree species in nurseries

Most common species planted

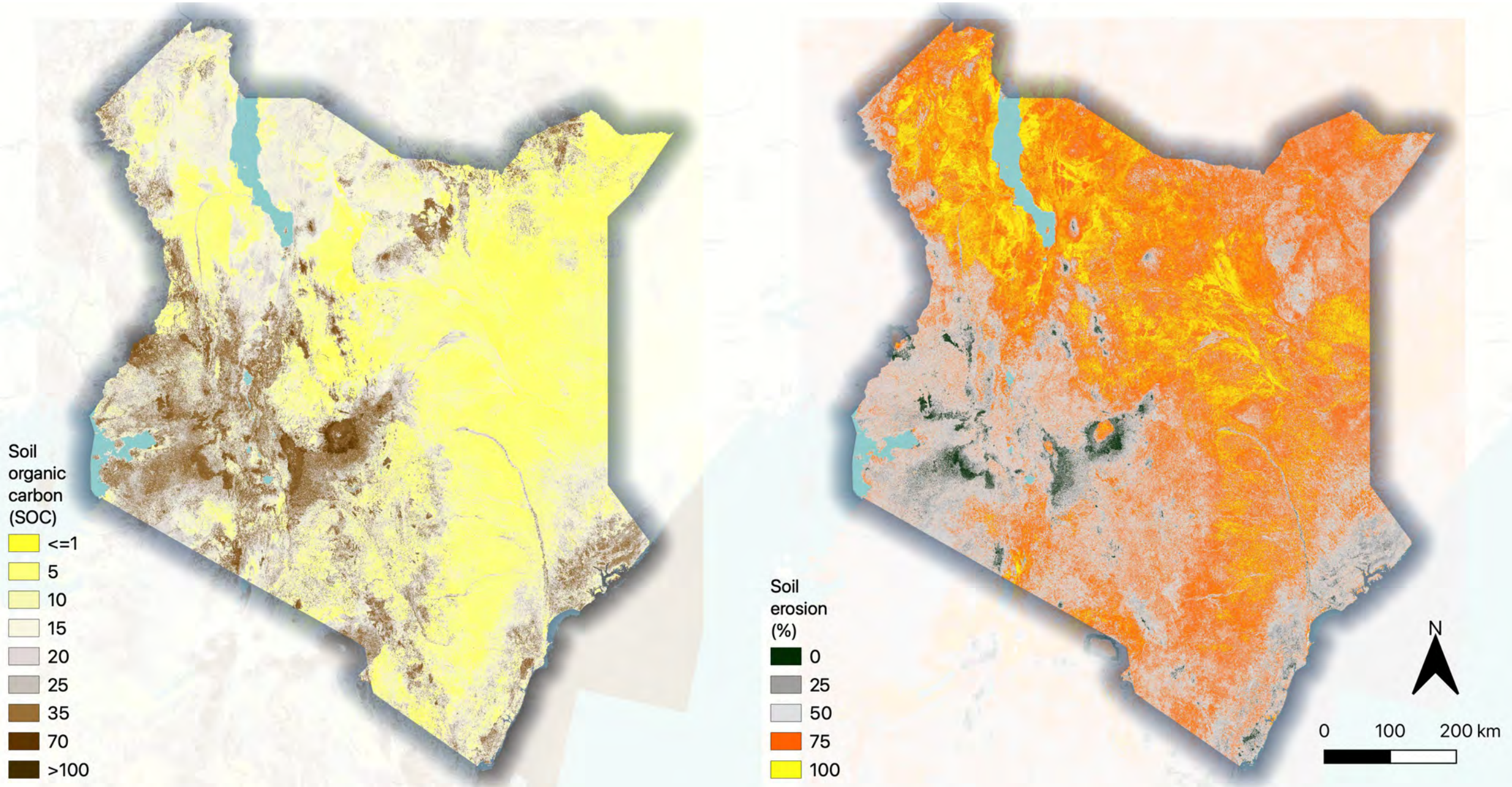


Structured data collection as part of monitoring and evaluation baseline surveys



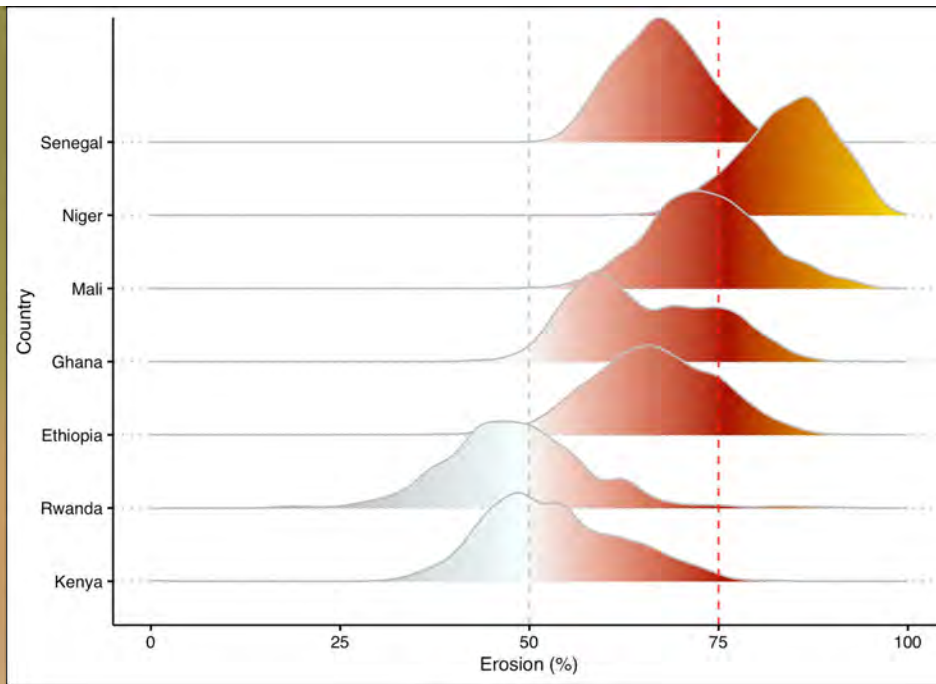
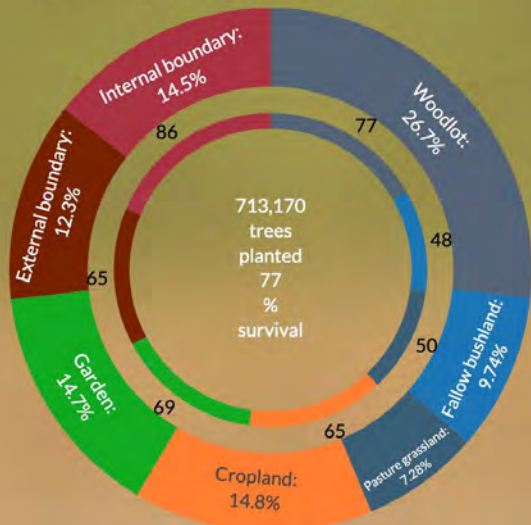
Citizen science data collection using the Regreening App

Mapping soil and land health using LDSF data coupled with earth observation



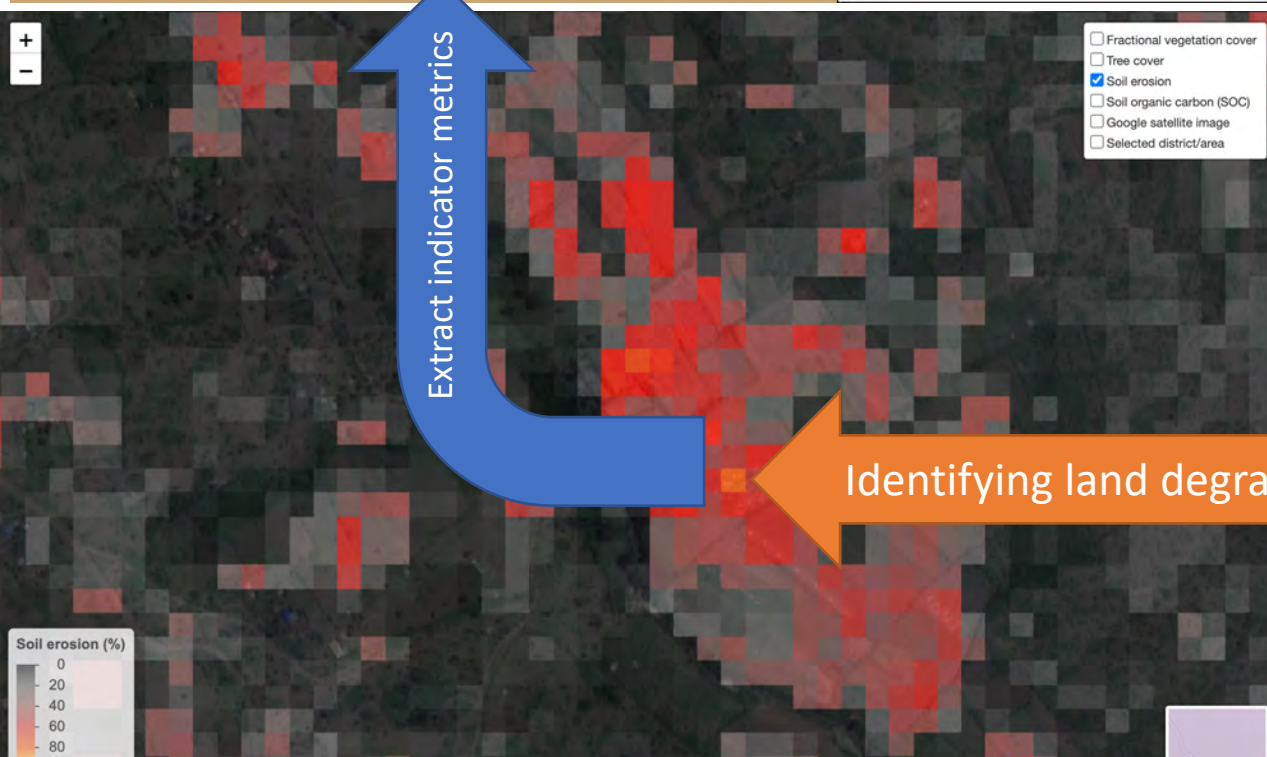
Tree planting efforts recorded with the Regreening Africa App

Locations of trees planted on farm



Integrating citizen surveillance with science-based (structured) data collection and analytics to

- Target restoration interventions
- Assess the effectiveness of restoration interventions across scales



Thank You!



TOPIC: Forest and Landscape Restoration Monitoring

Presenter: Presentation made during the Kenya National Landscape Restoration Scaling Conference, 15th July, 2021 by OPONDO, Maurice , Ministry of Water, Sanitation and Irrigation (Kenya)



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Mandate of Ministry of Water, Sanitation and Irrigation-Executive order No.6 of 2019(Rev 2020)

- ▶ Development and management of water resources, water services, sanitation, irrigation, drainage and land reclamation

- ▶ **It entails:**

Availing water in sufficient quantity and quality to support development

Provision of reasonable standards of sanitation

Irrigation development, management and regulation

Land reclamation- degraded lands

- ▶ **Goal:** Universal access to water, sanitation and, food and nutrition security



Key Terms defined

- ▶ **Landscapes** may be forested or non-forested. According to SER (2002) landscape is defined as a mosaic of two or more ecosystems that exchange organisms, energy, water, and nutrients”
- ▶ **Forest and land scape restoration:** According to Lamb (2014) and Chazdon et al. (2015) Forest and landscape restoration is a process that aims to regain ecological functionality and enhance human well-being across degraded landscapes
- ▶ **Monitoring:** Process to assess progress toward specific goals that the restoration effort plans to achieve
- ▶ **Agricultural sector:** food producing and related sectors including water and land
- ▶ **Tools / methods:** instruments and approaches used for data collection and analysis to assess progress towards a specific goal
- ▶ **Indicators:** A measurable variable used to represent change or the attainment of a goal, may be a composite measure, made up of multiple metrics




Forms of degraded lands for restoration in agricultural context

- ▶ Arid and Semi- Arid Lands / bare lands/ water stressed soils,
- ▶ Rills and gullies, eroded lands,
- ▶ Quarries, mining sites,
- ▶ Lands affected by landslides or mass movement,
- ▶ Saline and sodic soils,
- ▶ Mash lands/ waterlogged / poorly drained lands,
- ▶ Infertile soils and rocky soils




Reclamation/ restoration measures

- ▶ Restoration is a slower process that might be able to show tree cover gain only after several years.
- ▶ Mapping degraded landscapes, developing a master plan and have it implemented. The listed degraded landscapes require different reclamation/ restoration measures, which includes:
 - ▶ Physical measures : filling up quarries with top soils
 - ▶ Biological measures : agro forestry tree planting / afforestation and reforestation, revegetation
 - ▶ Chemical measures : liming acidic soils, irrigation
 - ▶ Other restoration options (include, restocking of degraded natural forest, commercial plantations, buffer zone to waterbodies)




The tools / methods/ approaches used in forest and landscape monitoring

- ▶ Restoration needs to be tracked over longer periods of time to detect changes and measure the impacts. To detect and quantify restoration, we need distinct methods and tools
- ▶ Restoration targets are set for five years (or more as in vision 2030) in the Medium Term Plans (MTP)
- ▶ Baseline data sets / reference data are set for reference in subsequent years
- ▶ Data are periodically collected at a local, even site scale, from where it can be aggregated up to represent the situation for an ecosystem, or a sub-basin, or a complete basin or for the political boundary of a country
- ▶ Depending on form of restoration, various tools are used in data collection, analysis and reporting. These includes, global web sites, Earth Observation monitoring, Analysis and digitisation of local aerial photographs, maps and ground- based surveys




Tools/ Methods Used in Monitoring- how to track change

- ▶ Earth observation-Google earth/ Geographical Information Systems/ Remote sensing technology to estimate the areas restored through coordinates
- ▶ Ground based periodic surveys/database – to monitor restoration over periods of time and space, including impacts
- ▶ Quarterly and annual reporting template - including quarterly and annual performance contract reporting template on restored areas
- ▶ Site visits and engagement with communities
- ▶ Land Degradation Assessment (LADA)




Output Indicators used to monitor the restoration in the agricultural context.

- ▶ Indicators and metrics track progress toward restoration goals. They include:
- ▶ Area (Ha) of land put under Irrigation – for irrigated
- ▶ Area (Ha) of land reclaimed- degraded agricultural lands such as ASALs, saline soils,
- ▶ Area (Ha) of farm land areas under agro – forestry
- ▶ Land degradation neutrality (LDN)
- ▶ Area (ha) restored
- ▶ Percentage of a given land area under tree canopy cover
- ▶ No of trees planted



Outcome Indicators used to monitor the restoration in the agricultural context

- This is accomplished by measuring changes in specific outcomes of interest (indicators). Eg:
- crop yield or products harvested
- Volume(Kg/kshs) of products harvested per year, or average crop yield per hectare, by crop type
- Yield (volume/ Kshs) per hectare
- Trend lines: e.g. land use land cover changes
- Percent(%) tree cover -indicator of land use / land cover (LULC)
- Improved livelihoods/ resilience to climate change
- No of beneficiaries/farmers made resilient



Examples of some of the data from monitoring efforts.

- **Data on Irrigated lands**

- Target: Increase the size of irrigated areas (as per its value observed in the year 2000) to the year 2030.

- Year/ areas: 2000 (**10,150ha**) 2015 (**180,505ha**) 2016 (**209,601ha**) 2017 (**193,600ha**) 2018 (**203,871ha**) 2019 (**201,952ha**) 2020 (**216,000ha**)

- **Data on Land reclamation:**

- Target 110,000 ha in counties prone to flooding, land slides and water stress by 2022

- Actual land reclaimed, Year/ areas :2018(**45,000 ha**); 2021 (**60,000 ha**)



Land degradation severity monitoring

- ▶ Data on Land degradation assessments undertaken- Land degradation progression in Kenya 1990 to 2012.
- ▶ Years / degradation levels: 1990 (**12%**), 2000 (**22.1%**), 2005 (**24.3%**), 2010 (**24.9%**), 2012 (**25.3%**)
- ▶ The trend depicts a nation with increasing levels of degradation overtime, and that the rate of degradation is higher than that of restoration.
- ▶ See pictures on degraded lands and ecosystems , monitored over time



QUESTION AND ANSWER SESSION

- ▶ questions
- ▶ Comments
- ▶ Clarifications
- ▶ Compliments



END

Restoration Monitoring Readiness in Kenya: A rapid assessment

Mildred Ada (Consultant)– Regreening Africa Programme (World Agroforestry)

Study contributed to by Dr Susan Chomba WRI, Dr Jane Njuguna KEFRI, Rose Akombo KFS, Patrick Mugi FAO, Mieke Bourne CIFOR-ICRAF



Objectives and methods of this rapid study

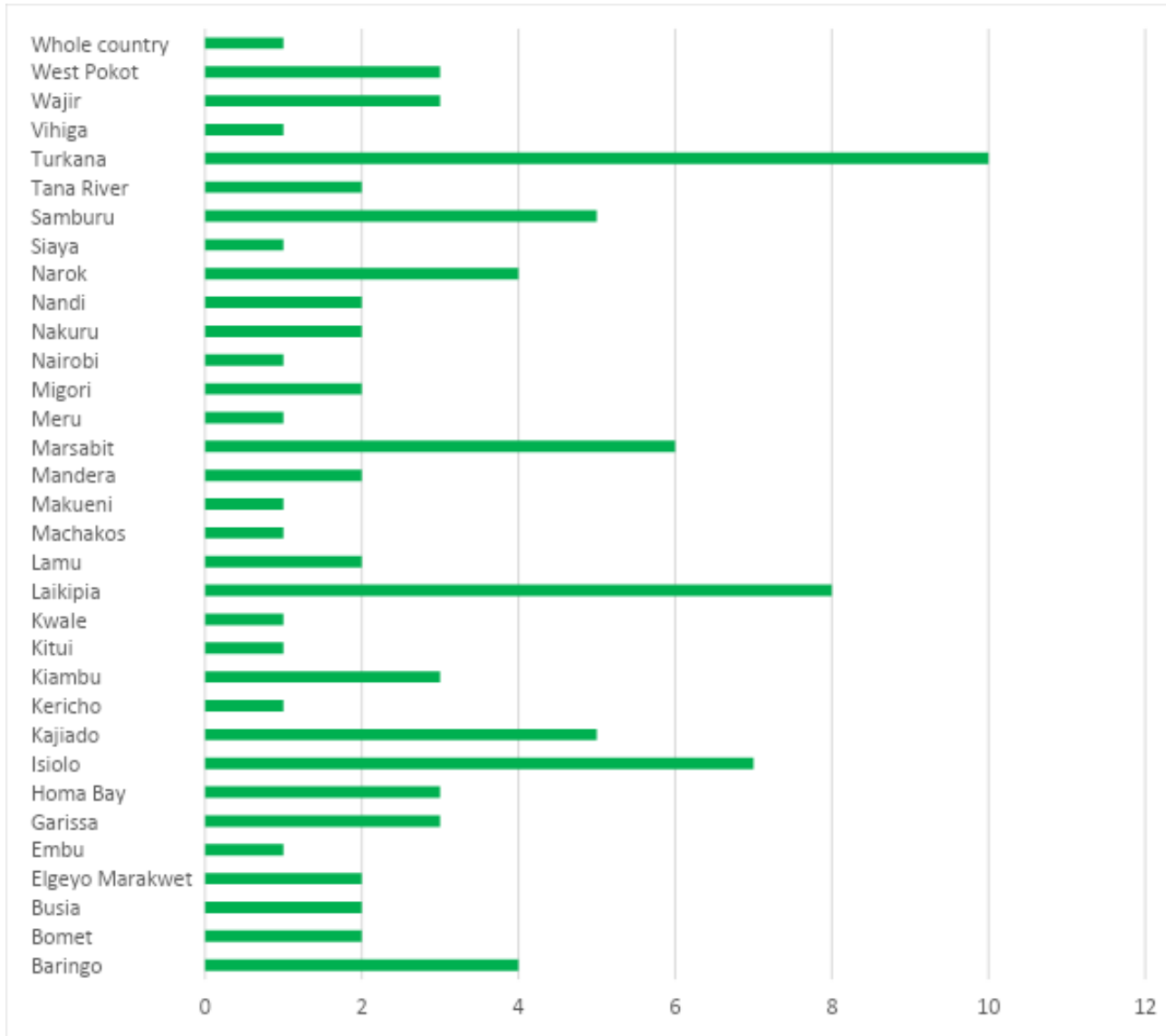
To build understand of the extent and type of landscape restoration initiatives, the monitoring indicators and tools and approaches used to measure and their effectiveness.

To inform an integrated landscape restoration monitoring, reporting and learning framework.

Method:

- (i) Online survey targeting a wide range of restoration projects/activities in Kenya: government agencies, NGOs, CBOs etc.
- (ii) Qualitative data from the series of webinars that the stakeholders have participated between 2020-2021.
- (iii) Desk review of restoration work in Kenya.

Counties and number of projects



The number of projects/initiatives that filled the survey were 32.

Turkana had the highest number of projects (10), Laikipia (8) and Isiolo (7).

Majority are in the ASALs, where most land degradation is prevalent (MENR, 2016).

There was no feedback from 15 counties.

Landscape restoration activities/practices (most reported are shown larger)



Restoration indicators being monitored by the projects surveyed

- **Area of restoration**, including hectares of land reclaimed/under improved land management/direct restoration/reseeded with pasture or hay.
- **Tree growth/diversity**, including number of trees managed/ Germination, growth and maturity to reseeded of selection sites/ Regreening action index (extent of restoration practices, intensity of restoration practices, diversity of restoration practices, intra-household equity).
- **Population benefitting**, including number of people trained/ benefiting from FLR interventions/ farmers integrating FMNR/ number of local community restoration crews employed and trained for restoration/ participation in training/extension on restoration approaches.

Restoration indicators being monitored by the projects surveyed (cont.)

- **Alternative energy/carbon**, including number of households adopting alternative and clean efficient technologies/ number of tons of CO₂ directly mitigated/ reduction in cutting of trees for charcoal production.
- **Policy and enabling environment/institutions**, including number and type of relevant FLR -related action plans and policies developed and adopted/ cross-sectoral coordination mechanisms in place at the national level.
- **Investment**, including number of investment tools developed/improved to support FLR initiatives.
- **Yield**, including volume of yield increase, capacity and volume of water harvested.

Mostly activity and outcome indicators, less looking at impact.

Tools and methods that are used to monitor the indicators



Challenges in developing indicators and deploying monitoring tools

Challenge	Responses from the survey
Technological	<ul style="list-style-type: none">● weak technological base● not comprehensive
Financial	<ul style="list-style-type: none">● inadequate financial resources for projects
Human capacity	<ul style="list-style-type: none">● inadequate human capacity
Data challenges	<ul style="list-style-type: none">● knowledge gaps● no previous programs and/or images for comparison● data available is unreliable
Engagement	<ul style="list-style-type: none">● low reporting● insincerity from beneficiaries● lack of good will and poor coordination between stakeholders
Bio-physical	<ul style="list-style-type: none">● poor terrain making project sites inaccessible● measures the status (current) of activities but not progressively
Policy and legal framework challenges	<ul style="list-style-type: none">● weak policy and legal support of restoration activities● unfavorable land tenure system

Next steps

- Draft report available online (link in the chat)
- We welcome improvements, additions and feedback
- Findings from this rapid assessment can feed into efforts to establish a robust and integrated restoration monitoring framework for reporting and learning.

KENYA NATIONAL LANDSCAPE RESTORATION SCALING CONFERENCE

FOREST AND LANDSCAPE RESTORATION (FLR) MONITORING

Experience sharing from The Restoration Initiative(TRI)

July 15, 2021



TRI Monitoring, Evaluation and Learning (MEL) Framework

PATRICK MUGI, M&E SPECIALIST

Food and Agriculture Organization of the United Nations



OVERVIEW OF TRI

Unites **10 countries and 3 GEF agencies** – IUCN, FAO and UNEP along with governments and strategic partners to overcome existing barriers to restoration and to restore degraded landscapes, in support of the [Bonn Challenge](#).

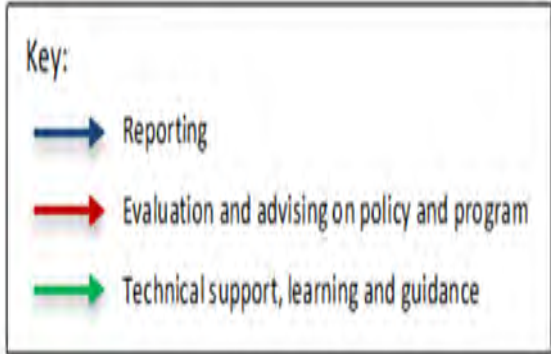
11 TRI projects in 10 countries/ 2 Continents (Asia and Africa)

2 in Kenya one led by FAO/KEFRI other by UNEP/NK

5 led by FAO: Kenya, Central African Republic, DRC, Pakistan, Sao Tome and Principe

TRI approach replaces focal-area specific indicators with a set of core indicators

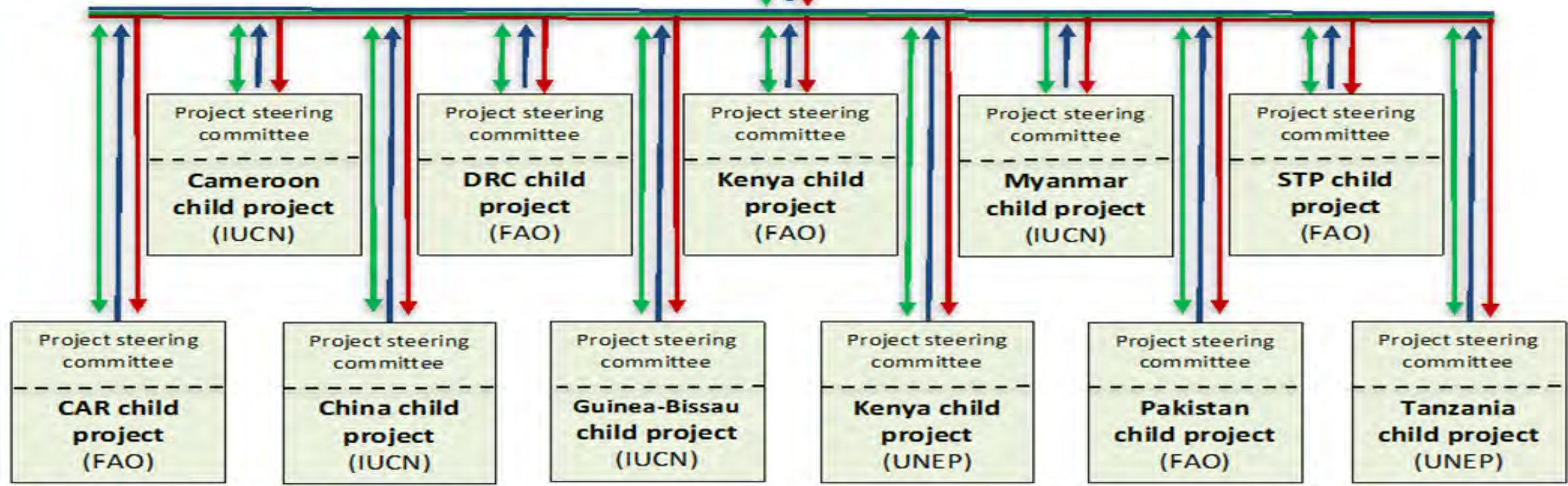




TRI Program Advisory Committee (PAC)

TRI Global Coordination Unit (GCU), and Global child project (FAO, IUCN, UNEP)

Restoration partners
Including initiatives and partnerships (Bonn Challenge, AFR100, GPFLR, FLMR, etc.) and relevant programs and projects.



TRI Theory of Change

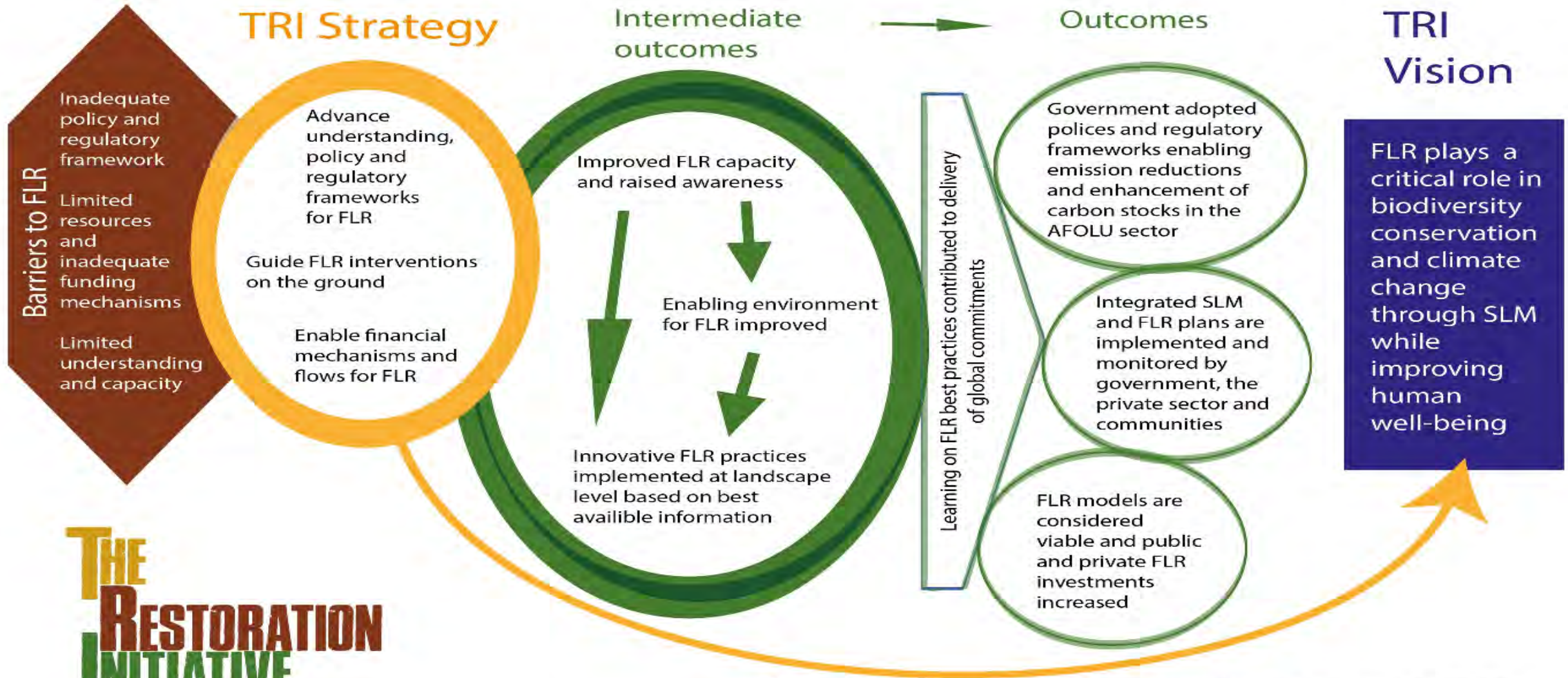
TRI advocates a strategy with three pathways taken in parallel:

Advance understanding, **policy** and regulatory frameworks for FLR

Guide **FLR interventions** on the ground

Improve **financial** mechanisms and flows for FLR





THE RESTORATION INITIATIVE

Theory of Change

- Assumptions**
- 1 Governments continue to promote integrated and inclusive FLR and SLM
 - 2 Tools and FLR approaches accessible and available to all
 - 3 Market conditions continue to support the bankability of FLR projects
 - 4 Benefit sharing within communities is sufficiently equitable



Indicator #	Indicator
1	Number of new or improved policies and regulatory frameworks * adopted that support forest and landscape restoration
2	<p>Area of land undergoing restoration (hectares).</p> <ol style="list-style-type: none"> 1. Area of degraded agricultural lands restored 2. Area of forest and forest land restored 3. Area of natural grass and shrublands restored 4. Area of wetlands (including estuaries and mangroves) restored
3	<p>Area of landscapes under improved practices (hectares; excluding protected areas).</p> <ol style="list-style-type: none"> 1. Area of landscapes under improved management to benefit biodiversity (qualitative assessment, non- certified) 2. Area of landscapes that meet national or international third-party certification and that incorporates biodiversity considerations 3. Area of landscapes under sustainable land management in production systems 4. Area of High Conservation Value forest loss avoided
4	<p>Greenhouse Gas Emission Mitigated (tCO2eq).</p> <ul style="list-style-type: none"> • Carbon sequestered or emissions avoided in the sector of Agriculture, Forestry, and Other Land Use
5	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment
6	Number of cross-sectoral government-led coordination mechanisms supporting restoration established/strengthened at national and sub-national levels in TRI countries
7	Value of resources (public, private, development partners) flowing into restoration in TRI countries
8	Number of “bankable” restoration projects developed & submitted (according to the scorecard matrix)
9	Number of TRI knowledge products developed, disseminated and accessed through relevant knowledge platforms

M&E FRAMEWORK

- Results framework([Log Frame](#))
- M&E [Plan](#) : When/How/Who collects/reports on each indicator
- Performance Indicator reference sheet([PIRS](#))- Defn/Units/source of data/measurement/frequency
- Performance indicator tracking table([PITT](#))
- M&E [Calendar](#) & Budget
- [Tools](#) for data collection [for each indicator](#) – Collect Earth, Ex-ACT, HH Survey



In Conclusion

If 9 Indicators can be used to measure restoration interventions in 10 countries in Africa and Asia,

Then Kenya doesn't need hundreds of indicators...

FOLAREP is the vehicle to help Kenya track and report on the 5.1 M Ha under the Bonn Challenge.

Much Work needs to be done to actualize this...

This can only be done by a small technical and dedicated team –
The **M&E Technical Working group**



ENVIO



Overview of the Proposed National Restoration Monitoring Working Group

Charity Munyasya, Deputy Chief Conservator of Forests,
Forest Conservation and Management, Kenya Forest Service (KFS)



Goal of the National Restoration Monitoring Working Group

To develop a shared vision for coordinated and integrated Forest & Landscape Restoration monitoring and reporting framework and mechanisms to ensure tracking of progress, reflection and learning.



Proposed members of the National Restoration Monitoring Working Group

State Actors

- Ministry of Environment and Forestry
- Ministry of Agriculture (MoALFC)
- Kenya Forest Services (KFS)
- Kenya Forest Research Institute (KEFRI)
- National Environmental Management Agency (NEMA)
- Kenya Agricultural & Livestock Research Organization (KALRO)
- Council of Governors
- Kenya Water Towers Agency (KwTA)
- Kenya Wildlife Services (KWS)
- Directorate of Resource Surveys and Remote Sensing (DRSRS)
- Water Resources Authority (WRA)

Non-State Actors (supporting)

- CIFOR-ICRAF
- World Resources Institute
- Food and Agricultural Organization (FAO)
- WWF
- IUCN
- ACC
- CI
- Kenya Private Sector Alliance
- Northern Rangelands Trust
- Green Belt Movement
- Associations/societies TBD



Key Tasks for the National Restoration Monitoring Working Group

Agree on mandate, scope, roles and reporting framework for the working group.

Oversee a participatory process to agree on definitions, identify monitoring and reporting barriers and gaps, indicators for restoration, tools and approaches for data collection and opportunities for reporting.

Outline measurable and context relevant indicators (outcome and impact) for restoration and requirements of tools that report on.

Propose a national framework/process for a coordinated monitoring, reporting and learning framework for Forest and Landscape restoration.



Key Tasks for the National Restoration Monitoring Working Group

Develop a roadmap for the implementation of a national framework for landscape monitoring and reporting for Kenya - with proposed timelines, roles and responsibilities

Propose sources of finances and technical assistance to implement the national framework for restoration monitoring and reporting



Proposed Timeline of the National Restoration Monitoring Working Group

July-August 2021

Formulate the working group

September-November 2021

Participatory review of indicators and tools

Propose a national framework/process for a coordinated monitoring,
reporting and learning

January-May 2022

Develop roadmap for implementation

Capacity building

Initiate reporting



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Discussion



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