# Restoration of rangeland carbon sinks for increased community resilience and agricultural outcomes and Towards Ending Drought Emergencies (TWENDE)

## Rangeland health data use Workshop

## Kimana, Kajiado, Kenya

## 24-25 March 2025

**WORKSHOP REPORT**

**APRIL 2025**

# Table of Contents

**Acronyms**

AET - Amboseli Ecosystem Trust

CI – Conservation International

FMNR – Farmer Managed Natural Regeneration

ICRAF – International Centre for Research in Agroforestry

IUCN – International Union for Conservation of Nature

JDI - Justdiggit

LDSF - Land Degradation Surveillance Framework

MOA-SDL – Ministry of Agriculture State Department of Livestock

TWENDE – Towards Ending Drought Emergencies

## 1. Background and Introduction

Restoring rangelands is essential for improving community resilience and agricultural productivity, particularly in the face of climate change. Rangelands support biodiversity, livestock, and livelihoods, while also having significant carbon sequestration potential. When degraded by overgrazing, deforestation, or poor land management, their ability to provide critical ecosystem services is reduced. However, targeted restoration efforts, such as replanting native vegetation and implementing sustainable grazing practices, can enhance carbon sequestration. These restoration efforts improve soil fertility, water retention, and biodiversity, helping agricultural systems cope with climate challenges like droughts and floods. They also boost livestock productivity, stabilize food sources, and create economic opportunities. By promoting a balance between agriculture and environmental health, restoration ensures long-term sustainability and climate resilience.

Many rangeland restoration projects aim to create a strong evidence base for sustainable management practices. The Rangelands Restoration project, for example, aims to provide a robust evidence base for sustainable management of rangeland health, informing management and monitoring by making this evidence available through user-friendly tools and platforms. Another example is the Towards Ending Drought Emergencies (TWENDE) project which seeks to reduce the economic impact of climate change-induced droughts in Kenya by increasing the resilience of the livestock and land-use sectors in restored rangeland ecosystems.

Effective restoration relies on data from systems like LDSF, which measure biophysical indicators. The Land Degradation Surveillance Framework (LDSF) is a systematic monitoring framework to assess soil and rangeland health, land degradation and vegetation diversity. It is based on a stratified random sampling design which allows for the assessment of soil and land health including rangeland health at multiple scales.


*Figure 1: Multiple spatial scales with the LDSF (left) and the indicators monitored (Right). Read more on the LDSF **here***

In the Chyulu Landscape, data was collected from 18 clusters randomized across 4 conservancies in the Amboseli Ecosystem as part of the Rangelands Restoration project and from 16 clusters in Mbirikani as part of the Twende Project.

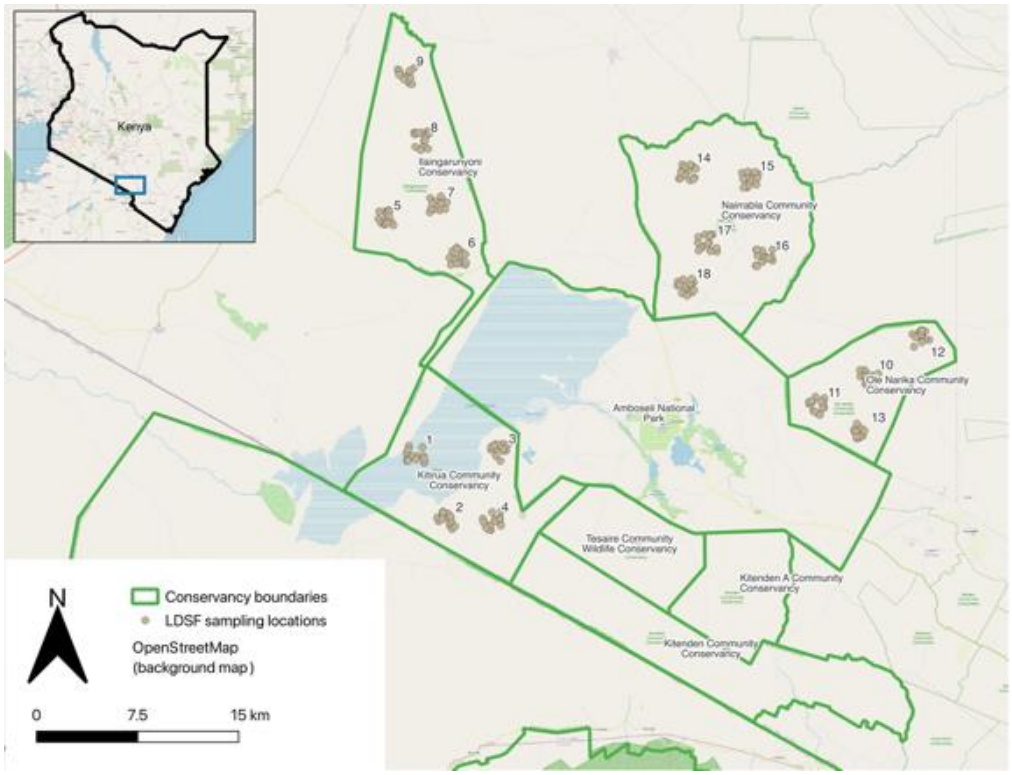


*Figure 2: Amboseli LDSF sampling clusters. Each cluster is 2.5km by 2.5km with 10 sampling plots each 1000m$^2$ randomised within each cluster.*


*Figure 3: The three Twende LDSF sites (Laisamis, Mbalambala and Mbirikani). Each LDSF site is 10km by 10 km with 16 clusters randomized in each site.*

## 2. The Workshop

The workshop, held on 24-25 March in Kimana, Kajiado County aimed to achieve several key objectives:

- Share rangeland health data collected using the LDSF in the Amboseli and Chyulu Landscape.
- Build capacity on interpreting and using rangeland health data.
- Understand use cases for rangeland health data and current data needs within the Amboseli Landscape.
- Enhance capacity in using the Regreening App to monitor rangeland restoration activities.

## 3. Workshop Opening remarks

Daniel Kaka from the Amboseli Ecosystem Trust (AET) provided the opening remarks for the workshop. In his opening remarks, Daniel thanked the partners and ICRAF for organizing the workshop. He acknowledged the restoration efforts made by various stakeholders and emphasized that for pastoralists, "grass is not just grass" — its type, quality, and availability are crucial. He noted the coexistence of livestock and wildlife in the Amboseli ecosystem, which is vital for the Maa community's survival. He also highlighted the importance of selective grazing to prevent rangeland degradation and promote coexistence, urging stakeholders to unify their restoration efforts and make carbon knowledge accessible to the local community.

*Figure 4: Daniel Kaka from the Amboseli Ecosystem Trust (AET) gives the opening remarks.*

In his remarks, Henry Parkolwa, TWENDE project coordinator at NDMA discussed the impacts of climate change, including increased human-wildlife conflict and the emergence of zoonotic diseases due to reduced pasture availability. He encouraged stakeholders to adopt natural regeneration practices to restore rangeland health. He provided an overview of the TWENDE project

*Figure 5: Henry Parkolwa, NDMA gives additional remarks and the overview of TWENDE project*

**4. Introductions and workshop expectations**

Christine Magaju of ICRAF led the workshop participants through the introductions as well as a menti poll on participant's expectations. Participants, through the menti poll, recorded what they were looking forward to the most from the workshop, whether their organizations implemented rangeland restoration, types of restoration interventions and whether they monitor rangeland among others.

Below are some responses

Mentimeter

## What are you looking forward to the most from this workshop (your expectation)

| | | | |
|---|---|---|---|
| Enhance my knowledge on potential data sources | To learn more | To share experiences and learn how to use LDSF data for decision-making. | Using data to promote and monitor rangeland health |
| Get insights on the findings of the data collected Interactions and Learning | To understand the use case needs for Chyulu and Amboselu | To learn how citizens science can be used in collection rangeland health data. | To learn |
| Feedback and future data utilization plan | Hear about the exciting work within the landscapes. | How to measure rangeland health and productivity | Sharing data, discussing results, and brainstorming ideas |
| To learn more about rangeland health monitoring | Different types of data and how to present and interprete them | Learning what kind of data partners are interested in | How best data can be shared |
| learn more on rangelands restoration | Understand how the collected data informs future restoration initiatives Interact with the regreening App | Interactive session | |

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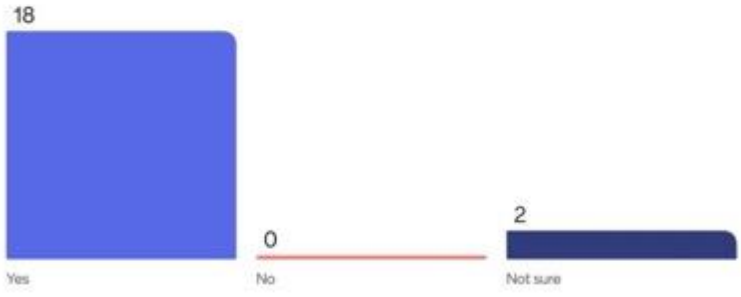
## Do you/your organisation implement rangeland restoration?



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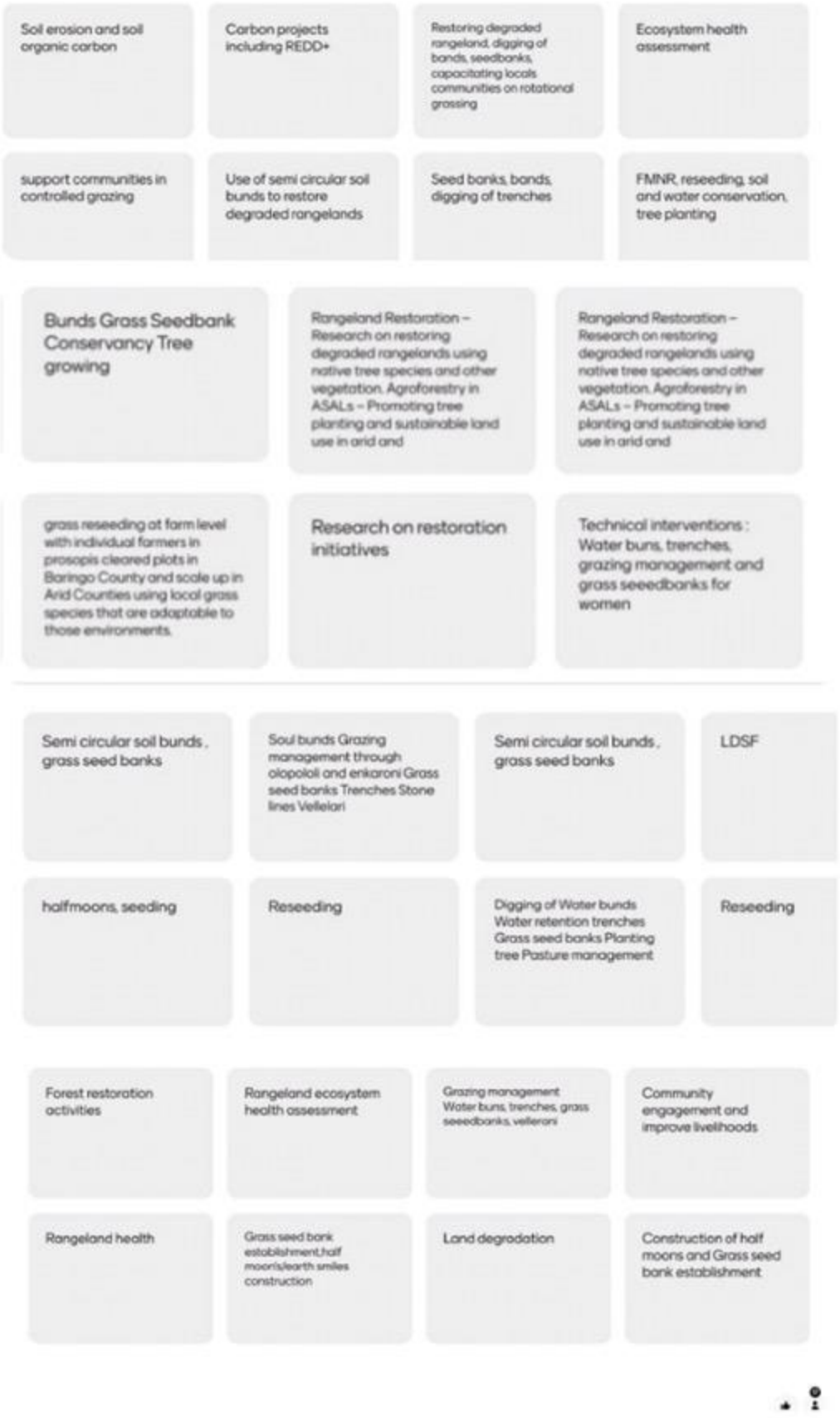
# What rangeland restoration activities do you implement?



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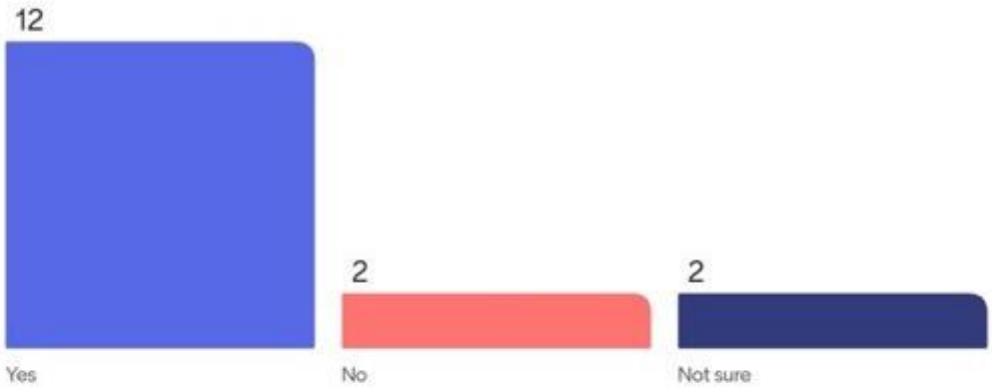
## Do you / your organization monitor rangeland health?

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## What types of data do you/ collect when monitoring?

| | | | |
|---|---|---|---|
| Vegetation cover | Forestry and tree data | SOC Species diversity Species abundance Land use history | Vegetation condition using VCI/NDVI |
| Vegetation cover Grass species Rangeland health Grazing committee performance | Qualitative and quantitative | SOC, grass forb and tree diversity | Vegetation data |
| Soil health and vegetation data | Vegetation species, plot sizes, uses etc | carbon stocks for both above and below ground biomass | n/a |


Participants also recorded the various ways in which they use rangeland health data and the barriers to using the data.


Participants also identified the knowledge gaps around rangeland health data and their wish list for rangeland health


Wish list for rangeland health data

## 5. Introduction to rangeland health monitoring using the LDSF and the importance of data in rangeland restoration

Leigh Winowiecki of ICRAF presented the Land Degradation Surveillance Framework (LDSF), a systematic methodology for assessing soil health, rangeland health, land degradation, and vegetation diversity. She shared results of the rangeland health assessments conducted across the four conservancies in the Amboseli ecosystem as part of the Rangelands Restoration Project. Leigh highlighted data gaps in grasslands, rangelands, and savannahs in Africa and emphasized how LDSF provides baseline data for rangeland health. She also noted the involvement of local women who were trained on using the framework.

*Figure 6: Leigh Winowiecki, ICRAF, presents the LDSF and the results of the rangeland health assessments conducted across four conservancies in the Amboseli ecosystem.*

She explained that grasslands are important carbon sinks, storing significant amounts of carbon below ground, and that the degradation of rangelands has made Africa more vulnerable to climate change. The data collected can guide decisions on rangeland restoration and health monitoring. The Amboseli ecosystem contains 45 perennial and 25 annual grass species, each with varying soil type preferences. She identified grazing pressure as a key cause of degradation and suggested that such data could be used for site matching in restoration efforts, such as reseeding. The presentation can be accessed **here**.

## 6. Introduction from AET

Kenneth Sokoine of Amboseli Ecosystem Trust (AET) provided an overview of AET's rangeland restoration project, highlighting several success stories. AET is a community-led conservation organization that supports traditional pastoral systems for livestock and wildlife. The organization manages 1.3 million acres of conservancy and rangelands, with 35 member conservancies. They have implemented technical restoration interventions such as bunds, trenches, and valerian, with locals digging the bunds for a small fee. While the bunds are monitored, they have not been documented, and the Regreening App was identified as a useful tool for this purpose.


*Figure 7: Kenneth Sokoine, AET, provides an overview of the organization's rangeland restoration peoject.*

AET's restoration goals align with the national target of planting 15 billion trees. The community, especially women, has been empowered to take a leading role in the restoration work. Success stories include women's involvement in seedbanks, where they have started earning income from selling seeds and hay. This has allowed them to invest in livestock, a traditionally male-dominated activity, and is contributing to a shift in gender norms within the community. The presentation can be accessed **here.**

## 7. Restoration interventions by other stakeholders

### a. *Soil for Africa*

Soil for Africa is promoting sustainable land management by encouraging rapid rotational grazing and training grazing committees to revisit traditional, sustainable grazing methods.

### b. Big Life Foundation

Big Life offers conservation education to local communities and organizes annual Maasai Olympics to engage morans, discouraging them from harming lions as part of their traditional rites of passage.

### c. Wildlife Research Training Institute

Wildlife Research Training Institute oversees wildlife research across the country, focusing on invasive species, land degradation, seedbanks, and natural regeneration.

## 8. Interactive data wall on Rangeland health data

This session focused on sharing the rangeland health data generated from the LDSF surveys in the Amboseli ecosystem. Participants were invited to interact with data available on the physical data wall and encouraged to interrogate the meaning, implications and relevance of the data.

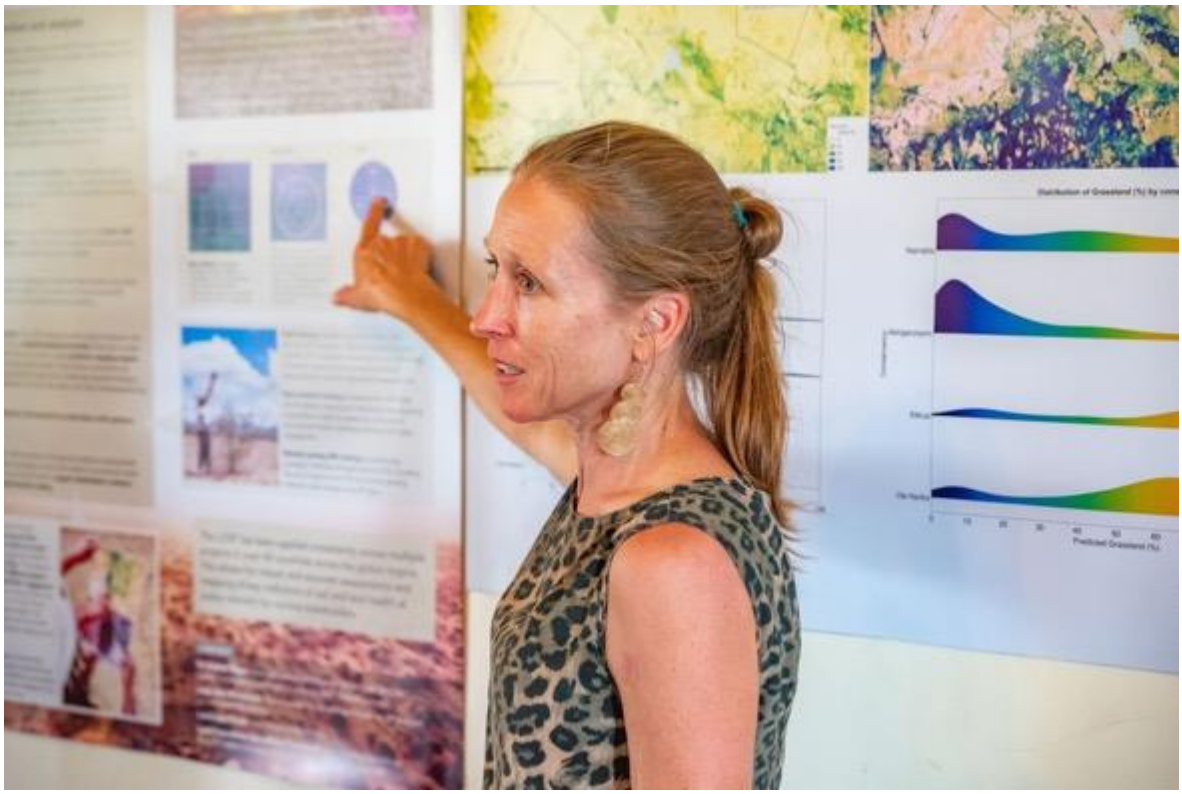


*Figure 8: Leigh Winowiecki, ICRAF presents the LDSF during the interactive data wall. She also presented the grass species diversity data generated from the rangeland health module in the LDSF.*


*Figure 9: Robin Chacha, ICRAF presents the land cover maps (tree cover and grassland cover distribution) generated from the LDSF surveys in the Amboseli ecosystem.*

The State Department of Livestock (SDL) is carrying out restoration interventions in the Chyulu landscape, including Pastoralist Field Schools that teach grass bulking with species *like Eragrostis superba* and *Cenchrus ciliaris*. Mature grass is harvested and sold by the community.

*Figure 10: Petronila Wanjugu, SDL, presents the restoration interventions implemented in the Cyulu landscape as part of the TWENDE project.*

Benard Onkware, ICRAF presented the Regreening App. The Regreening App, developed by ICRAF, helps collect and monitor restoration data, including details about rangeland plots, practices, species present, and erosion status.


*Figure 11: Benard Onkware, ICRAF, presents the Regreening App.*

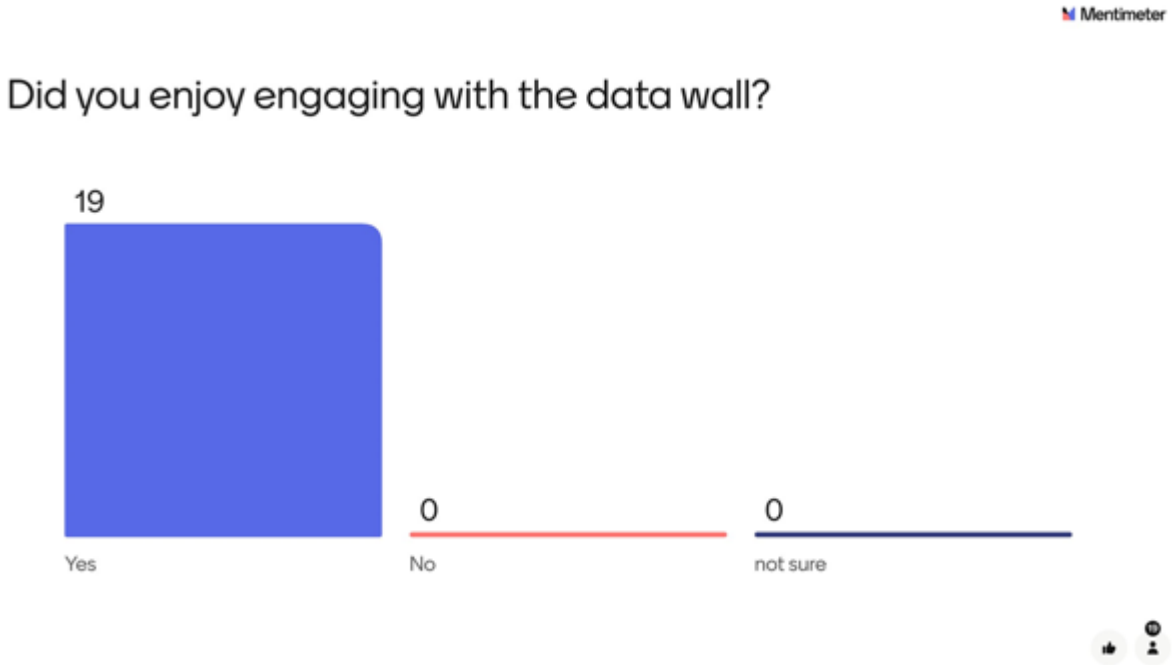
Tor Vagen, ICRAF presented LDSF outputs in the form of soil organic carbon (SOC) and erosion maps. These maps revealed an inverse relationship between SOC and erosion, showing how increased erosion leads to decreased SOC. The data allows for predictions on future erosion trends, improving decision-making for rangeland restoration.


*Figure 12: Tor Vagen, ICRAF, presents the soil erosion and soil pH maps generated from the land health data collected during the LDSF surveys in Amboseli and Mbirikani.*

All the data presented during the interactive data wall session can be accessed here.

### 9. Feedback session on the data wall

The interactive data wall was followed by a feedback session on what the participants liked about the data wall, conclusions that can be derived from the data presented and the actions that can be informed by the data among others.



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# What did you like?

| | | | |
|---|---|---|---|
| Talking about grassea | Interactive | The regreeniing app | Pictorial explanation |
| All the data products | There were some really useful insights from participants looking at the maps | The data products | The visual presentation of data |
| The high amount of data shared in simplified form The vegetation data captured to inform restoration decisions | Everything, starting from the regreening app livestock department, the LSDF, type of grasses and also degradation have really learnt alot | I liked all the stations, the work done by Regreening App, the opportunities to collaborate with Jazo Miti and what this means to national programs like The 15 Billion Initiative/ Updating FRL | App |
| The visual products from the data made it easy to understand. The presenters were very well informed. | The way the data is presented, easy to read | The maps, presenters, the pictures.. | Got me curious to go do some research on grass: Grass is not just grass |
| One on one feel on the various sessions. For instance, an opportunity to ask specific questions. | The richness of knowledge | Everything | Regreening app |
| The clarity of the data sheets | Twende | Interactive | I have learn a lot rangeland health data |

## What can we do better?

| | | | |
|---|---|---|---|
| Increase time abit | Well so far More time on the technical stuff | N/A | Provide pie chats |
| Show historical status | More time for discussion | All was amazing | Create more time for the session |
| Implants data into actionable policies | More time for discussion | The application mechanisim and interpretation of result | Add interactive sessions where you can share the process of data collection, analysis, and presentation |
| Maybe simplify the data for the local communities, example names of the grass species | Big posters | Break it down further for more easier understanding. | Integrating LDSF with other restoration intervention |

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# What conclusions can we derive from the data?

| | | | |
|---|---|---|---|
| We can do a lot with good data | Degradation trends | Correlation between different variables | We need to collaborate in restoration efforts |
| SOC Species abundance and distribution Degradation | Data is everything | Good for policy and decision making | Data is importand but more crucial when its shared |
| That different species do better in differently and there is need to increase variety for healthier soils and increase biodiversity | The actions (are clear) needed to restore the respective rangelands based on the results from the assessments | There is a lot of knowledge that stakeholders are missing to guide their work | Data is important |
| Insights | Data drives better informed decision making | It helps in carbon identification in the Ecosystem | Data is informative. |

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## What key actions can we take in the landscape based on the data?

| | | | |
|---|---|---|---|
| Systematic monitoring | Areas for intevention | Improve projects | get data for landscapes |
| Work more together with the communities in target areas | Improve restoration activities in rangeland | Reseeding Irrigation | Consult data for any decision making |
| Encourage natural regeneration | Work together and have more variety | Form a community of practice for data sharing | Start finding ways of making seeds available |
| Collaboration | More landscape level coordinated approach to restoration | Evidence based | It helps restoration strength |

## What are some new ideas or thoughts you have after engaging with the data wall?

| | | | |
|---|---|---|---|
| Extrapolating data for our project area | see if we can get data for the area | I have learn more about database | Data is key for restoration interventions |
| Genetic Diversity is very important | How to use data in decision-making and how to merge this with indigenous knowledge | Community engagements | We need more native grass seeds for restoration |
| Time trends | Periodic updates | Share data in the community | Include pie charts in data visualisations |

After looking at the data what are some ideas you have for bringing these data to pastoralists? Policy makers? The wider community?

| | | | |
|---|---|---|---|
| I don't have a ideas | Protection Vs sustainable use | Improved data collection | Breaking it down to be consumed by non-scientists |
| Through workshops and pictorials | Having regular meetings with the pastoral communities | Sustainability of livelihood | Sharing the processed data back to stakeholders to share |
| Converging them at a central point to share the information | Converging them regularyly to give updates | | |

## 10. Group Work Session: Use cases for rangeland health data

This session focused on the use cases for rangeland health data, challenges and opportunities with regards to sharing, accessing and using these data.

*Table 1: Use cases and data types for rangeland health*

| Use case for rangeland health data | Who uses it | Type of data used or needed for the use case | Status of the data: Already being used/ needed |
|---|---|---|---|
| Restoration | SDL, CI, JDI, MWCT, BL, CIFOR ICRAF, KEFRI | Erosion | Data is already being used but more data is needed |
| | | Soil (SOC, texture, type) | Data is already being used but more data is needed |
| | | Vegetation | Data is already being used |
| Grazing /pasture management | SDL, AET, NDMA, Communities | Vegetation /grass species availability and suitability | Data is already being used but more data is needed |
| | | Land size, rapid rotation grazing, Olopololi/ Enkaroni model, grazing management plan and committees, thump's rule | Data is already being used |
| | | Available interventions | |
| | | Animal biodiversity | Data is needed |
| | | Degradation | Data is needed |
| | | Water resources | Data is already being used but more data is needed |
| | | Land carrying capacity | Data is needed |
| Conservation | MWCT, BL, CI, JDI | Vegetation cover | Data is already being used |
| | | Biodiversity | Data is needed |
| | | Degradation | Data is needed |
| | | Water resources | Data is already being used but more data is needed |
| | | Land carrying capacity | Needed |
| Livestock production | SDL | Carrying capacity | Data is already being used |
| | | Livestock Breed suitability | Data is already being used |

| | | | |
|---|---|---|---|
| | | Vegetation cover | Data is already being used but more data is needed |
| Land use planning | JDI, MWCT, NDMA | Soil organic carbon (SOC) | Data is already being used but more data is needed |
| | | Bulk density | Data is already being used but more data is needed |
| | | Plant biomass | Data is already being used but more data is needed |
| Carbon credits | MWCT, BL, KWS,KFS | Soil carbon | |
| | | Carbon stock | |
| Biodiversity credits | Redd+, AET | Species density and diversity | Data is needed |
| | | Habitat density | Data is needed |
| Disaster management | BIG LIFE, AET, ACP | Fire outbreaks | Data is already being used but more data is needed |
| Rangeland productivity | AET, ACP | Vegetation cover, species density and diversity | Data is already being used but more data is needed |
| Cost of restoration | BIG LIFE, AET, ICRAF, SDL, NDMA | Policy strengthening and development | Data is needed |
| Weather pattern change | AET, NDMA,SDL,ACP | Rainfall density and distribution, seasons | Data is already being used but more data is needed |
| Community livelihoods | AET, SDL, ICRAF, ACP | Socioeconomic (grass seed sales), cash flow | Data is already being used but more data is needed |
| Tree planting | AET, BIG LIFE, NDMA, ACP, | Tree survival rates, species grown, soil bunds, trenches, stone lines | Data is already being used but more data is needed |
| Biodiversity restoration | AET, ACP, BIG LIFE,WRTI | Vegetation cover | Data is already being used but more data is needed |
| | | Species density and diversity | Data is already being used but more data is needed |


*Figure 13: Group report back on the use cases for rangeland health data and the type of data used or needed for each.*

### Challenges to using rangeland health data and proposed solutions

*Table 2: Challenges to using rangeland health and the proposed solutions.*

| Challenges to using rangeland health data | Proposed solution |
|---|---|
| Data access | Develop data sharing MoUs and agreements |
| Inadequate technical skills in data handling, processing and interpreting | Building more partnerships and capacity to the stakeholders |
| Cost data, collection, process and dissemination | Leverage on stakeholders capital and human capital, amendments on data policy |
| Lack of centralized data repository | Creation of a centralized data hub, an online data sharing hub, develop a county/national resource center with a digital library |
| Coordination of stakeholders- not ready to share data freely | Develop data sharing MoUs and agreements |
| Data storage and management | Develop data sharing MoUs and agreements |
| Data credibility/misuse/Breaching | Develop data sharing MoUs and agreements |
| Limited knowledge on the data protection and handling policy | Building capacity on data policy |

| | |
|---|---|
| Low quality data | Harmonization on the data collection and analysis procedures(protocols) |
| Static data | Need to regularly update the data |
| Policy gaps | Policy strengthening and developments |
| Vastness of the landscape for monitoring | Partnerships with stakeholders working within the landscape |

*Figure 14:Group report back on the challenges/barriers to using rangeland health data.*

**Opportunities for improving the use of rangeland health data**

*Table 3: Opportunities for improving the use of rangeland health data*

| Opportunities for improving rangeland data use and sharing |
|---|
| • Stakeholder engagements in resource mobilization<br>• Use of the existing policy frameworks on data<br>• Artificial Intelligence, Machine Learning and Modelling<br>• Community and political goodwill<br>• Stakeholders goodwill to share data – open/free source data |

- Embracing new technologies
- Data collection tools such as LDSF and Regreening App

**Decisions that can be improved with rangeland health data**

| Decisions /conclusions/key actions/derived from the use of data |
| --- |
| • Informs the type of intervention to employ on a given area<br>• Data informs the policy decisions- that is the NDMA bylaws used currently, dry season grazing implementation matrix<br>• Best suited stakeholders to engage on a given project/intervention<br>• Determination of the carrying capacity and restocking of a given ecosystem<br>• Decision on when to open a specific areas for use<br>• Gives the trend of the status of a specific rangeland ecosystem- by getting the intervention alerts<br>• Helps get the impacts of a given intervention that's later cascaded to other areas<br>• Help in making decisions on prioritizing resource allocation |

## 11. Field visit and capacity building on the use of Regreening App for monitoring rangeland restoration

The field visit aimed to observe ongoing rangeland restoration initiatives in the Amboseli Ecosystem and provide hands-on training on using the Regreening App for monitoring restoration efforts.

*Figure 15: Participants during the field trip to Kitilome Conservancy in Kimana.*

**Grass Bunds and Terraces** – Kitilome, Aloca Conservancy: This restoration project, funded by WWF-Kenya, Justdiggit, WWF-Germany, and Big Life, is implemented by AET. It involves creating 6-meter diameter half-moon grass bunds to aid pasture production. These bunds are protected with sticks and thorny branches until stable, with rotational grazing planned to fertilize the soil naturally. Terraces, such as fanya juu and fanya chini, are also built to combat soil erosion, improve water retention, and reduce runoff.

*Figure 16: Ernest Lenkoina of Big Life Foundation gives the overview of the restoration project in Kitilome Conservancy.*

Two restoration sites were visited: one reseeded in December 2024 and another in November 2023. Dominant grass species include *Eragrostis superba* and *Cenchrus ciliaris*.

*Figure 17: Figure 18: Earth bunds established and reseeded in 2024.*

*Figure 19: Earth bunds established and reseeded in 2023.*

Participants used the Regreening App to monitor and record the earth bunds in each site, discovering additional species, *Aristida kenyensis* and *Dactylonium aegyptium*, growing naturally.

*Figure 20: Participants record the earth bunds using the rangeland module in the Regreening App.*

*Figure 21: Tor Vagen records the earth bunds using the rangeland module in the Regreening App.*

**Noonkotiak Grass Seed Bank** – Managed by AET, Supported by Justdiggit:

The 20-acre grass seed bank is run by 50 women, who manage the daily activities and security. The women harvest mature grass seeds and hay twice a year, selling seeds for 1000-1500 per kilogram. In 2024, they earned 2 million from seed sales, which they used to buy livestock, a traditionally male-dominated activity. The women are now empowered through this initiative, gaining financial independence and ownership of livestock.

*Figure 22: Kenneth Sokoine, AET, introduces the Noonkotiak grass seed bank to the participants.*

*Figure 23: Some of the members of the Noonkotiak women's group who run and manage the grass seed abck.*

*Figure 24: Eragrostis superba, one of the grass species grown at the Noonkotiak grass seed bank.*

Photos taken during the workshop can be accessed **here**

## Annex 1: Agenda

### Rangeland health data use Workshop

**Kimana, Kajiado, Kennya**

**24-25 March 2025**

The World Agroforestry (ICRAF) is pleased to invite you to a two-day data sharing and data use workshop for the projects, "**Restoration of rangeland carbon sinks for increased community resilience and agricultural outcomes**", and **Towards Ending Drought Emergencies (TWENDE).** This workshop will focus on discussing and interpreting rangeland health data and as well as provide training on use of the Regreening App to track rangeland restoration activities.

**Background**

The Rangeland Restoration project aims to provide a robust evidence base for sustainable management of rangeland health, informing management and monitoring by making this evidence available through user-friendly tools and platforms. The objective of the TWENDE project is to to 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.

The Land Degradation Surveillance Framework (LDSF) is a systematic monitoring framework to assess soil and rangeland health, land degradation and vegetation diversity. Three LDSF sites were randomized as part of the TWENDE project including the Chyulu Landscape and 18-1 km2 LDSF clusters were stratified across four conservancies in the Amboseli ecosystem as part of the Rangeland restoration project.

**Objectives of the Workshop**

The main objectives of the workshop are to: 1) To share the rangeland health data collected using the LDSF in the Amboseli and Chyulu Landscapes; 2) To build capacity on the interpretation and use of rangeland health data; 3) To understand the use cases for rangeland health data and current data needs within the Amboseli and Chyulu Landscapes; and 4) To build capacity around use of the Regreening App to monitor of rangeland restoration activities.

*Figure 1: The Lionesses learn how to collect soil samples during the Amboseli LDSF survey.*

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**Agenda**

| Time | Activity | Lead |
|---|---|---|
| **Day 1: Monday, 24th March 2025** | | |
| 8:30 - 9:00 | Registration | |
| 9:00 - 9:30 | Welcome<br>Workshop objectives<br>Introductions / menti poll | AET<br>Christine /Leigh |
| 9:30 - 09:45 | Introduction to rangeland health monitoring using the LDSF and the importance of data in rangeland restoration | Leigh Winowiecki/ Tor Vagen |
| 09:45 - 10:45 | Understanding and interpreting rangeland health data<br>- Introduction to the types of data collected for rangeland restoration<br>- Group exercise: interpreting different types of rangeland health data | AET/Big Life/SDL/ICRAF |
| 10:45 -11:15 | Coffee/ Tea Break | |
| 11:15 - 12.30 | Interactive session on Rangeland health data - data wall | AET /Big Life / SDL/ICRAF |
| 12:30 - 13.00 | Feedback session on the data wall<br>- What conclusions/key actions/decisions can we derive from the data? | Christine Magaju |
| 13:00 - 14.00 | Lunch | |
| 14:00 - 14:40 | Use cases for rangeland health data<br>- What are the use cases for rangeland health data and which ones do you use the data for?<br>- What data do you already use or need for each identified use case? | All facilitated by Christine/ Robin/ Clemence/ Eugene/ Sylvester/Wanda |
| 14:45 - 15:30 | Rangeland restoration data<br>- Current data needs<br>- Decisions that could be improved with data<br>- Other uses of information and data | All facilitated by Christine/ Leigh/ Robin |

| | | |
|---|---|---|
| | - Opportunities for improving use of rangeland health data | |
| 15:30 - 16:00 | Creating a data sharing and data use community of practice<br>- How do we share data? | Christine/Leigh |
| 16:00 - 17:00 | Coffee and tea | |
| **Day 2: Tuesday, 25th March 2025** | | |
| 8.00 - 8:30 | Welcome back and reflection from previous day<br>Menti poll – How are we currently monitoring rangeland health | Facilitators |
| 8:30 - 12:00 | Field visit and capacity building on the use of assisted citizen science for monitoring rangeland restoration<br>Regreening App: https://regreeningafrica.org/in-the-news/the-regreening-africa-app/ | Benard/ Eugene/ Clemence/ Sylvester/ Silas/ Robin/ Wanda |
| 12:00 – 12:30 | Wrap up and next steps | Leigh Winowiecki |
| 13:00 -14.00 | Lunch at the hotel and departure | |

**Project resources**

Website: https://www.cifor-icraf.org/restoration-of-rangeland-carbon-sinks/

**LDSF Resources**

LDSF GRIT: https://ldsf.thegrit.earth

Updated 2023 LDSF field manual: https://www.cifor-icraf.org/knowledge/publication/25533