Please note, this event is being recorded

APPROACHES AND PRACTICES OF RESTORATION

Regreening Africa

Funded by European Union

World Agroforestry

CIFOR

KENYA Forest Service

IUCN

ZERO TWO HEROES
Here for you

NRT
NORTHERN RANGELANDS TRUST

WWF KENYA
TOGETHER FOR NATURE

Friends of Karura Forest
Community Forest Association

EverGreening
GLOBAL ALLIANCE

NACOFA

GREEN ROAD FOR WAT

CERIOPS
Environmental Organization

META
META

ISLA

World Vision

WOCAT

idh
the sustainable trade initiative

ZOOM ETIQUETTE

Always join the meeting using your full name. For security purposes, unknown participants or those who join using numbers, initials or nicknames will henceforward be removed.

Mute your microphone every time you are not contributing.

For better bandwidth utilization, you may put off your video when not contributing.

Raise your hand when you want to speak

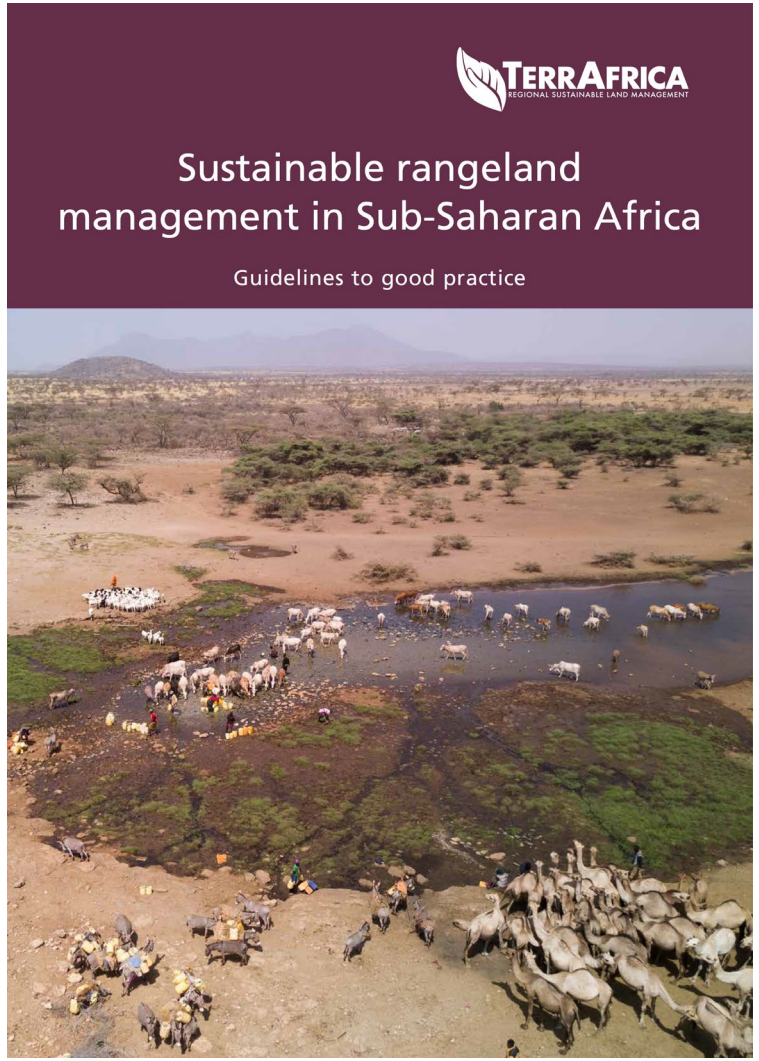
Ask questions or comment in the chatbox

Theme: Pastoral Rangeland System Restoration

Out scaling Successful Restoration Approaches and Practices from Sub-Saharan Africa

Presenter: Hanspeter Liniger, WOCAT, Bern Switzerland

Outscaling Successful Restoration Approaches and Practices from SSA



Hanspeter Liniger, WOCAT, Bern Switzerland

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TerrAfrica Financial Partners: EU, Netherland, Norway

Ministry of Foreign Affairs of the Netherlands

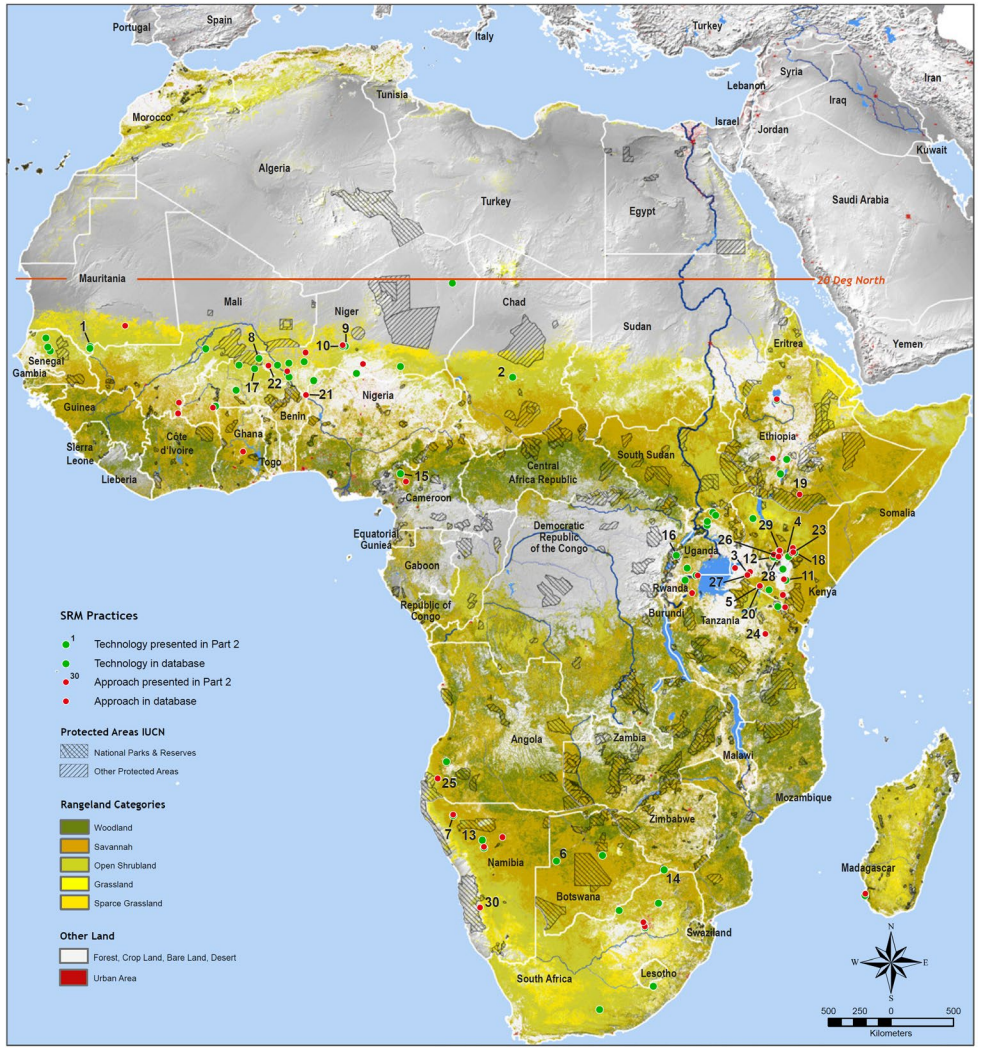
NORWEGIAN MINISTRY OF FOREIGN AFFAIRS

A TerrAfrica Partnership Publication, 2019

https://www.wocat.net/library/media/174/

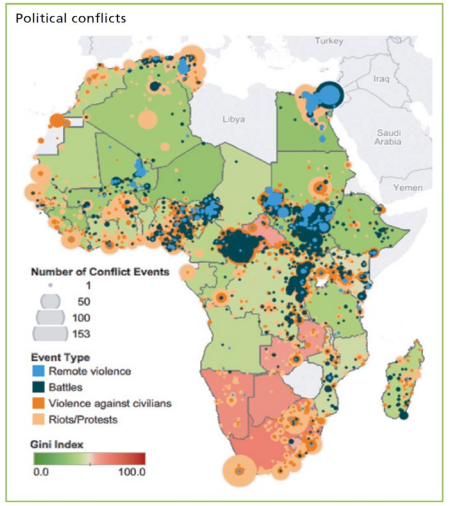
Authors: Hanspeter Liniger and Rima Mekdaschi-Studer, 2019
and 14 contributing authors (Part 1) 43 compilers of case studies (Part 2)

Mapping and recognizing spatial differences in Africa …. and Kenya

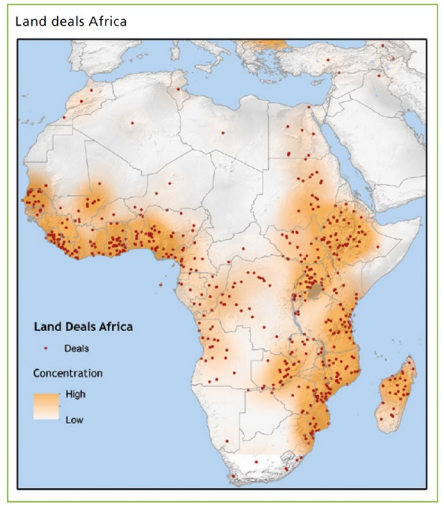


Rangeland Distribution

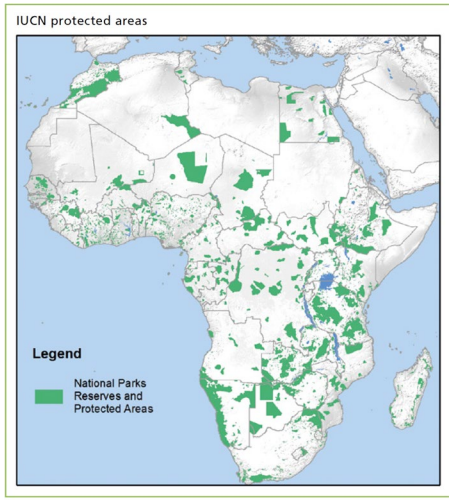
haran Africa – Guidelines to good practice



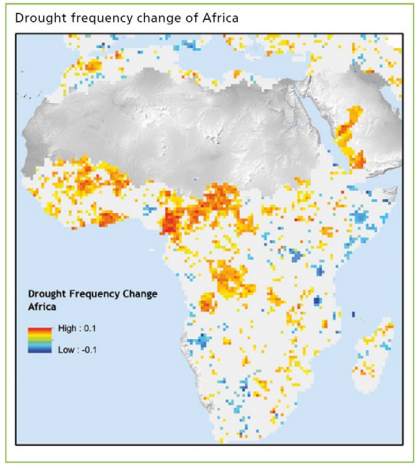
Conflicts



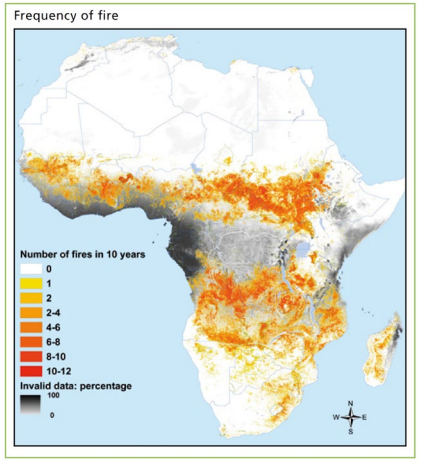
Land deals



Protected areas



Drought



Fire, …

More:
Global rangeland Atlas:
https://www.rangelandsdata.org/atlas/

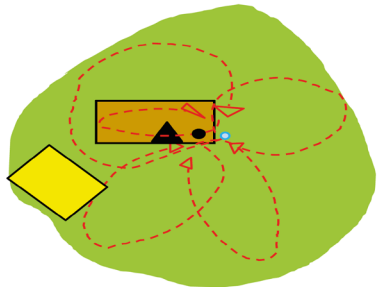
…

How to boost rangeland restoration and spread SLM widely?

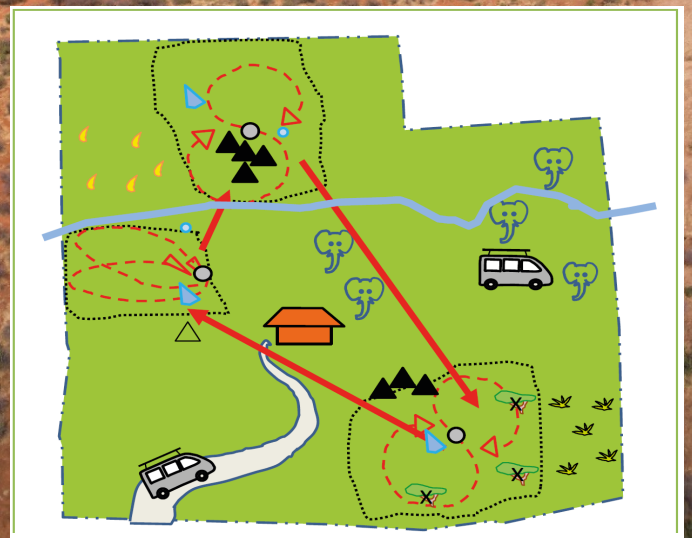
Differentiate solution per rangeland use system …

Mountains

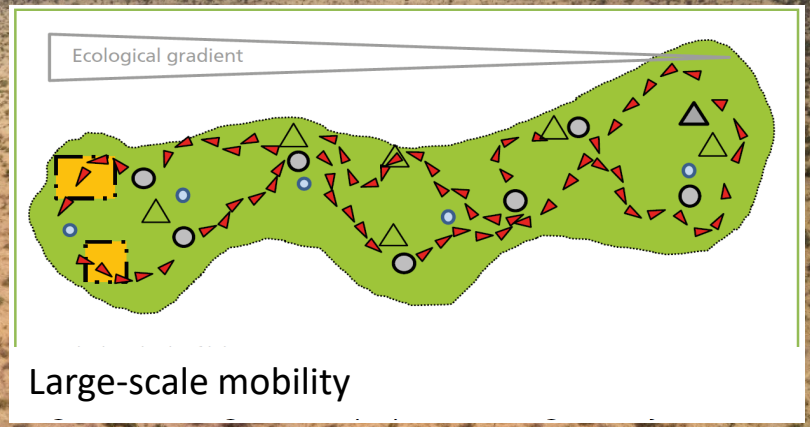
Plains



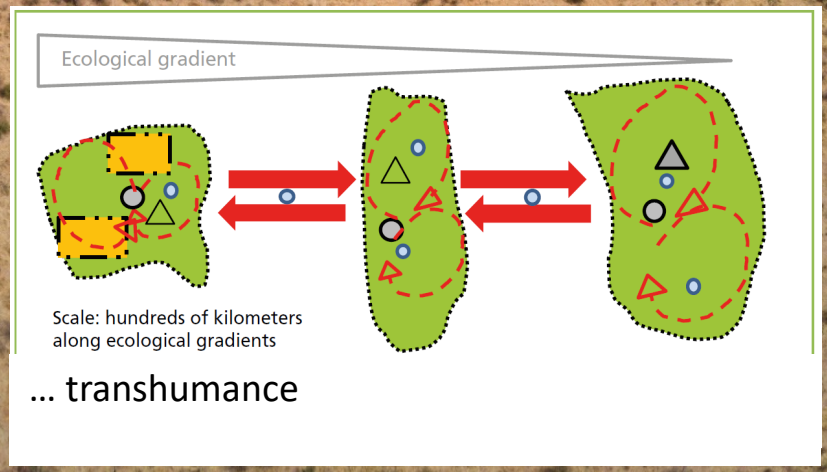
Small-scale settled



Bounded with wildlife conservancy and community ranching



Large-scale mobility



… transhumance

Photos, Graphs: H.P. Liniger

Differentiate groups of practices and combinations

Participatory resource mapping under solar panels in Merti (Caroline King Okumu).

Participatory mapping, database building, and monitoring of rangeland resources (Kenya)

Resource Mapping

DESCRIPTION

Participatory mapping and monitoring of vegetation types and other natural resources in the rangelands. This involves convening stakeholder groups, reviewing conditions of rangeland, water and other resources under changing climatic conditions.

Participatory digital mapping using satellite imagery and digital earth and other open source Geographic Information Systems (GIS) is a practical tool that can bridge knowledge and communication gaps between pastoral communities and county government planners. It offers an effective 'tool' for participatory planning and decision-making in support of climate change adaptation efforts in the drylands of Kenya. The use of participatory mapping is not new in seeking to capture communities' understanding and use of natural resources. These maps are typically drawn on the ground using stones, sticks and other locally available materials to depict key features such as schools, water points,

LOCATION

Location: Pasturalist areas, Isiolo, Kenya

Pastoralists undergoing Index Based Livestock Insurance (IBLI) training in Loyiangalani, Marsabit County (Credits to ILRI).

Northern Rangelands Trust - Livestock to Markets (Kenya)

DESCRIPTION

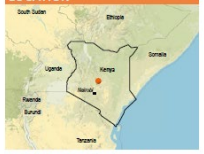
Northern Rangeland Trust works across the rangelands of northern Kenya to improve market access to pastoral communities across 20,000 km,. The program improves local revenue generation, incentives to reduce herd size, and channels funding into improved rangeland management across the conservancies.

The Northern Rangelands Trust (NRT) is a non profit organisation established in 2004. It works with communities to develop community conservancies, to transform peoples lives, secure peace and conserves natural resources in northern Kenya. NRT works cross 20,000 km,, with 33 conservancies.

NRT established NRT Trading to identify, incubate, and pilot, and scale sustainable business across the NRT conservancies. The help to incubate and run business that encourages conservation ethics, while improving livelihoods.

The Livestock to Market Program (LTM) was established in 2006 as a partnership between NRT, NRT affiliated conservancies, and two private conservancies - Ol Pejeta and Lewa. The program was funded by Flora and Fauna International and The Nature Conservancy.

LOCATION



Location: Baringo, Garissa, Isiolo, Laikipia, Meru, Samburu, Turkana and Lamu Counties, Kenya

Boran livestock in a wet season grazing area (Ibrahim Jarso).

Dedha grazing system as a natural resource management technology (Kenya)

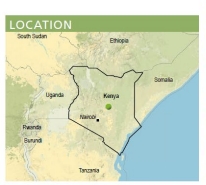
Jars Dedha

DESCRIPTION

The Dedha grazing system is an ancient, traditional governance system for land and its resources practiced by Boran pastoralists. It carefully balances how pastoralists use rangeland resources. The basis of the technology is three grazing rangeland governance zones: wet season grazing, dry season grazing, and drought reserves. There is also water governance based on a traditional hierarchy of rights. Through this system, Boran pastoralists adapt to severe and recurrent droughts.

This grazing system is applied in Isiolo County, Northern Kenya. The Waso rangelands are inhabited by Boran pastoralists with Somali, Samburu, Rendille and Turkana herders sharing cross-border resources through negotiation. The technology is based on the maintenance of a delicate balance between livestock numbers, the soply of water, and the amount/ quality of standing pasture within the vast grazing area which is water scarce and prone to extreme seasonal variations. Through its main tenet of governing grazing patterns (wet, dry season grazing area and drought reserve) planned use of pasture is

LOCATION



Location: Kinna town, Kinna Ward, isiolo County, Isiolo, Kenya

Delfino plow digging micro bassins (Lindo Grandi).

Vallerani System (Burkina Faso)

DESCRIPTION

A special tractor-pulled plow that constructs micro-catc traditional techniques of rainwater harvesting with scale land rehabilitation.

The Technology mechanizes the traditional technique of zai and ter harvesting using a modified plow named Delfino3s pulled b plow on flat land excavates a symmetrical, continuous furrow, a both sides of the furrow. The Delfino3s plow has a single rever an angled furrow and piles up the excavated soil in half moon downhill side. The plowing must be done along the contour to off water as it flows downhill. The plow's blade moves in and o basins about 5 meters long, 50 cm deep, 50 cm wide and spac before the plow cracks up the soil to a depth of 70 cm facilita

Approach groups

AG1	Community based NRM
AG2	Land & water use planning
AG3	Marketing & alternative income
AG4	Wildlife & nature tourism

Technology groups

TG1	Enabled mobility
TG2	Controlled grazing
TG3	Range improvement
TG4	Supplementary feeding
TG5	Infrastructure improvement

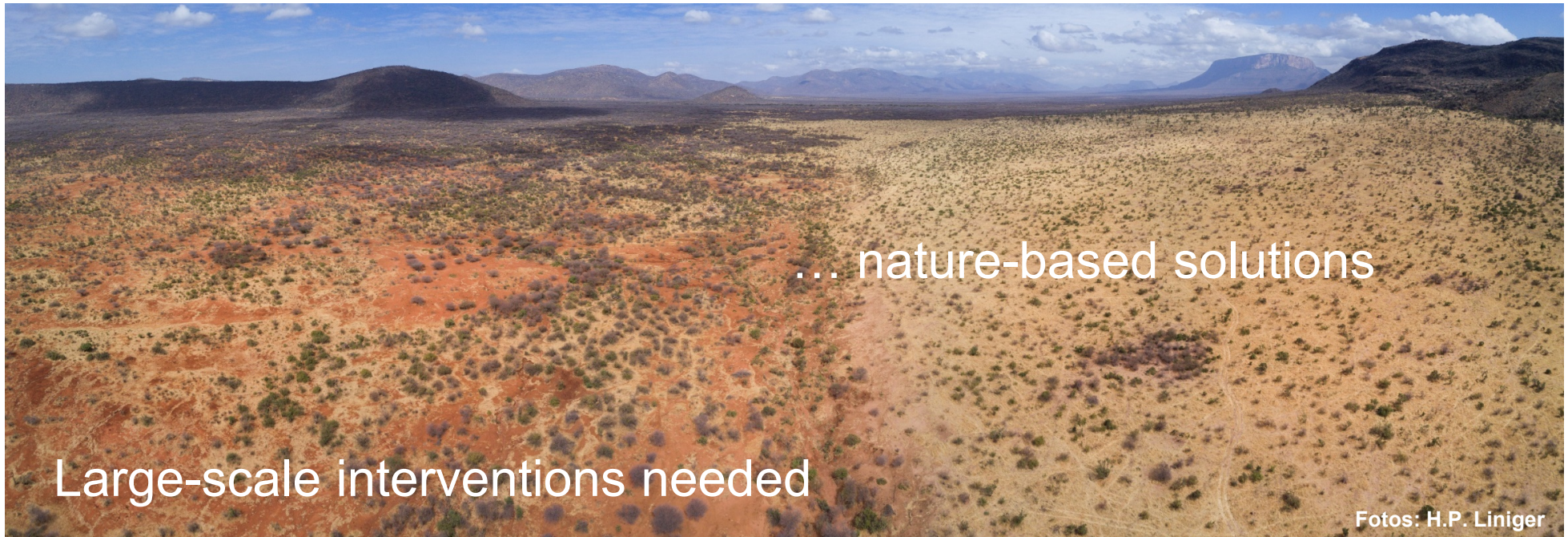
Documented:

12/30 from Kenya

Source: https://www.wocat.net/library/media/174/

Spread vast and fast

…. Small green spots are invaded…



Monitor impacts of land management on- and offsite

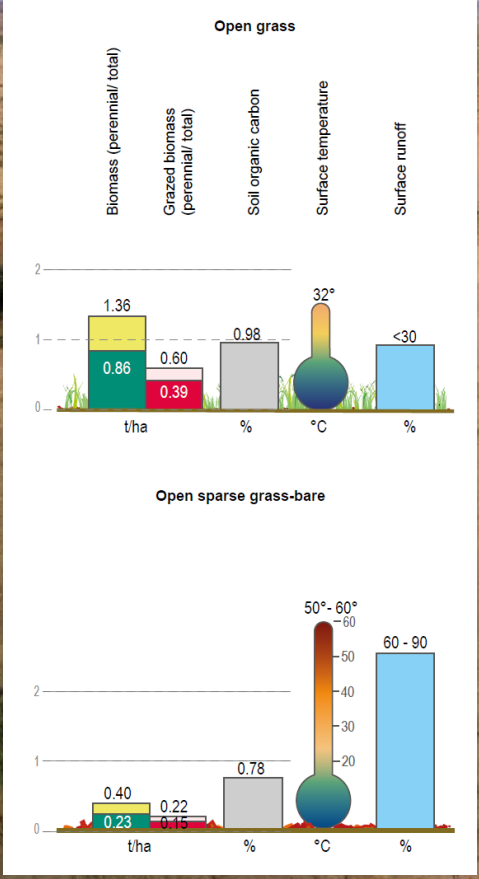
Onsite

Production

Biodiversity / tourism

Livelihood

Conflict, …

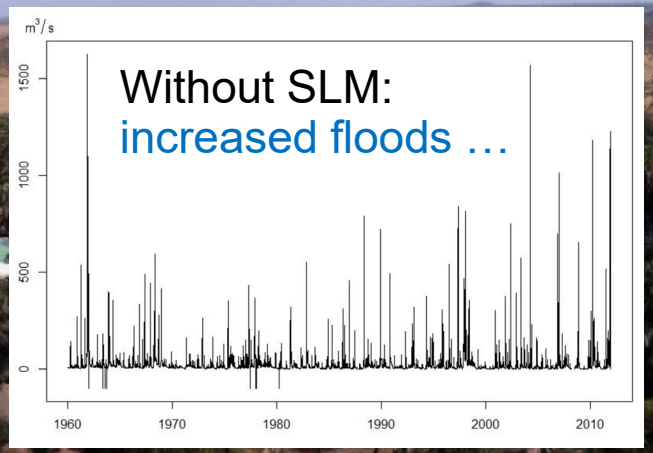


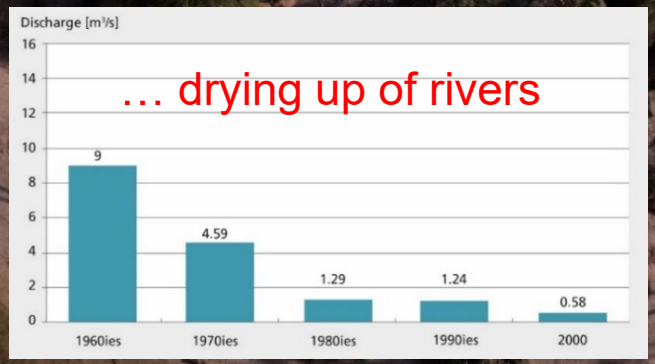
Offsite

Floods

Drying up of rivers and springs

Conflict, …





Photos, Graphs: H.P. Liniger

Use knowledge and monitored impacts for awareness raising and evidence-based decision making and capacity building (youth/women)

www.wocat.net
hanspeter.liniger@cde.unibe.ch
https://www.wocat.net/library/media/174/

video: https://www.wocat.net/library/media/226/

video: https://www.wocat.net/library/media/245/

Photos, H.P. Liniger, I. Jarso

Pastoral/Rangeland Restoration

Presenter: Dr Kieran Avery BVSc, MRCVS, MKVB,
Director of Natural Resource Management,
The Northern Rangelands Trust

What is pastoral / rangeland restoration?

A key question to answer…

1. Rangeland rehabilitation?
2. Improved governance / management?
3. Landscape level planning?
4. All the above…?

Rangeland rehabilitation

Looks great on paper but **is it worth it**…?

Many forms:

- Invasive species management / gully healing / grass re-seeding / etc

Important to consider:

- Short term VS long term benefits
- Sustainability / cost
- Symptom rather than the cause
- Possible “scapegoat”….
- Can cause more damage than good

Improved governance / management

The **most important** aspect – the “cause”

Multiple levels:

- Local – awareness / education
- Regional – cluster / leadership meetings

Challenges:

- Land tenure / “ownership”
- Conflict / weapons
- Extensive livestock movements
- Culture / traditions

Landscape level planning

Must happen if there is any future

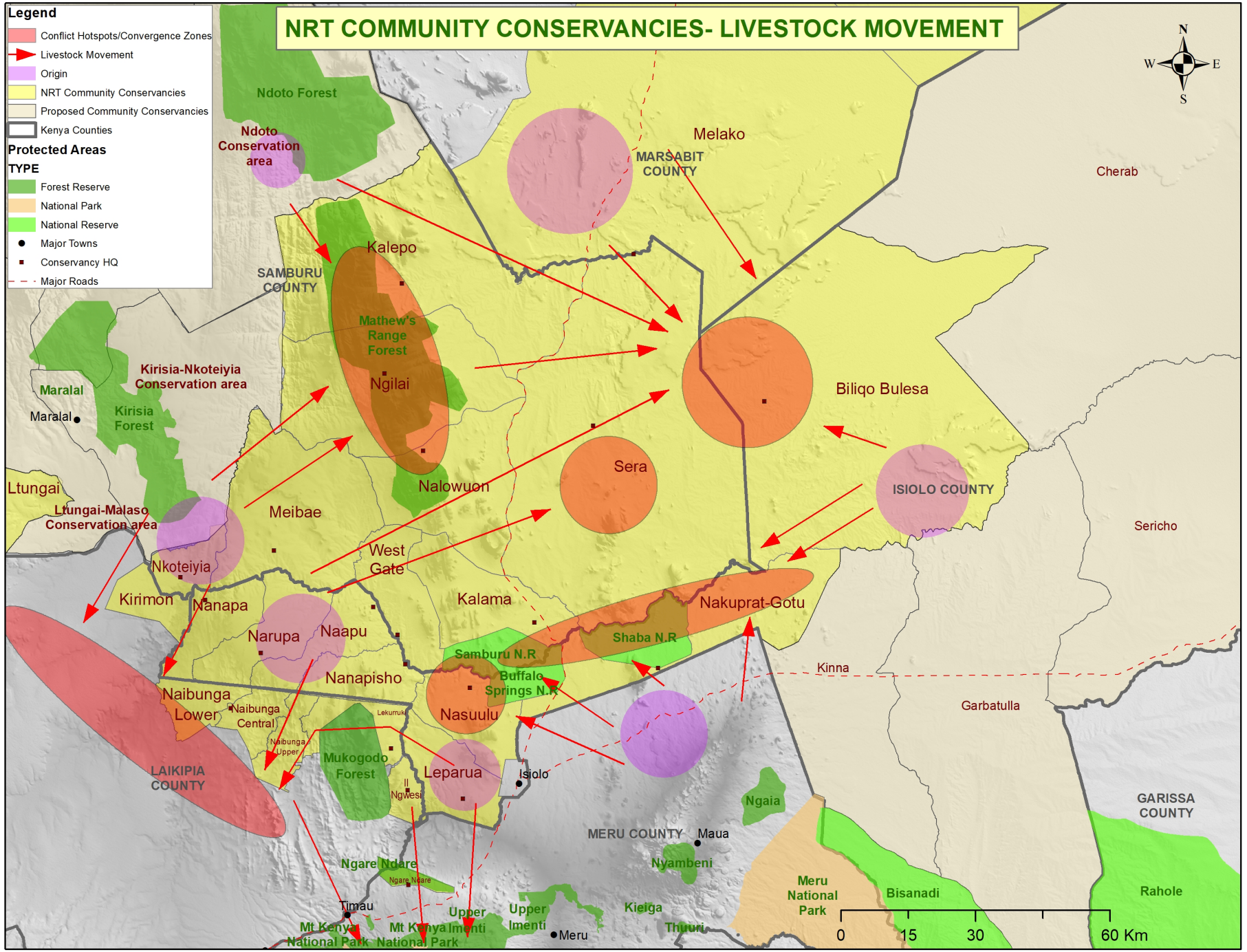
- Livestock movement cannot be stopped
- It has to be coordinated movement

Big concerns:

- Human population growth
- Settlement growth
- Uncontrolled infrastructure development

Solution?

- National and county government policies on land-use planning and rangelands management – enforced at that level


NRT COMMUNITY CONSERVANCIES- LIVESTOCK MOVEMENT
Legend
Conflict Hotspots/Convergence Zones
Livestock Movement
Origin
NRT Community Conservancies
Proposed Community Conservancies
Kenya Counties
Protected Areas
TYPE
Forest Reserve
National Park
National Reserve
Major Towns
Conservancy HQ
Major Roads
N
W
E
S
Ndoto Forest
Ndoto Conservation area
Melako
MARSABIT COUNTY
Cherab
Kalepo
SAMBURU COUNTY
Mathew's Range Forest
Ngilai
Kirisia-Nkoteiyia Conservation area
Maralal
Maralal
Kirisia Forest
Biliqo Bulesa
Sera
Nalowuon
ISIOLO COUNTY
Ltungai
Ltungai-Malaso Conservation area
Meibae
Sericho
West Gate
Nkoteiyia
Kirimon
Nanapa
Kalama
Nakuprat-Gotu
Narupa
Naapu
Shaba N.R
Samburu N.R
Kinna
Nanapisho
Buffalo Springs N.R
Naibunga Lower
Naibunga Central
Nasuulu
Garbatulla
Lekurruki
Naibunga Upper
Mukogodo Forest
Leparua
Isiolo
LAIKIPIA COUNTY
Il Ngwesi
Ngaia
GARISSA COUNTY
MERU COUNTY
Maua
Nyambeni
Ngare Ndare
Meru National Park
Bisanadi
Rahole
Timau
Upper Imenti
Kieiga
Mt Kenya National Park
Mt Kenya Imenti National Park
Meru
Thuuri
0
15
30
60 Km

What NRT has learnt over many years…

Effective pastoral rangeland restoration is a **slow process**:

1. Landscape approach to planning – must be led by county / national governments – policies important
2. Strong governance at **all** levels – village / conservancy / county – enforcement critical!
3. Rangeland rehabilitation is only applicable if it will be well managed **long-term**
4. Incentives are useful…

NRT rangelands strategy – a pastoral restoration approach

https://static1.squarespace.com/static/5af1629f12b13f5ce97ca0b5/t/5dcbd1c49b612d4aef7c5dbb/1573638639987/NRT_Rangelands_Strategy_D2_HR.pdf

Questions / comments welcome

NRT
NORTHERN RANGELANDS TRUST

Pastoral System Restoration

Presenter: Lavenda Alwaka Ondere, Technical specialist Natural Resource Management, World Vision Kenya

BACKGROUND INFORMATION

- World Vision Kenya is working in the most fragile Counties in Kenya, with focus shift to the Northern Kenya Counties where the effects of climate change have been adversely felt
- Pastoral systems are characterized by increasingly frequent and severe droughts and floods, more erratic rainfall, and higher average temperatures affecting food production and water availability ,high soil degradation and high poverty rates
- They form the biggest productive landscapes in Kenya, are rangelands and support a huge dynamic population/ they are ASAL.
- World Vision Kenya uses an integrated approach to Restoration-FMNR approach-which ensures key indigenous tree species adaptive to the areas and that define specific vegetation types can thus provide a natural support system for maintaining a multi-functional landscape status in such zones are maintained.
- This trees are also able to provide key and valuable ecosystem services to the indigenous communities
- WVK is implementing in 15 Asal Counties. This demonstrates that FMNR can be scaled across the country and help achieve massive rangeland restoration and climate change mitigation
- Natural regeneration has proven to be more effective as compared to tree planting in arid and semi-arid areas especially in areas with existing stock of seeds and stumps in the soil
- UN decade ecosystem restoration, AFR100, SDGs

Approaches to restoration is Pastoral systems by World Vision in Kenya

1. Reseeding and soil and water conservation initiatives
2. Invasive species management and control
3. Integrated Management and use of Natural Resources through diversification of livelihoods
4. Public private partnerships
5. Gender Mainstreaming and social inclusion
6. Peace and conflict resolution and governance strengthening Programming

Farmer/Community managed natural regeneration and or/ aided regeneration- over 250,000 of land is uder restoration






EVIDENCE OF LAND RESTORATION THROUGH INTERGRATED FMNR, SOIL AND WATER CONSERVATION MEASURES AND RESEEDING

Reseeding in Meyagari women group site-October 2019

1.

2. Sprouting of grass-December 2019

Grass harvesting-April 2020

3.

4. Grass Seed Harvesting-March 2020

Bulking of the grass –April 2020

5.

6. Storage for Utilization in the dry period

BEE KEEPING AS AN ALTERNATIVE AND INCENTIVE TO RESTORATION

Gums and Resins value chain- Driving Conservation Of The Acacia Tree Species In Northern Kenya

Challenges

- ❑ Land ownership issues /User rights especially for Women in ASAL areas where land ownership is communal
- ❑ Monitoring of the restoration efforts
- ❑ Lack of an enabling legislative environment
- ❑ Socio-Cultural barriers
- ❑ Livestock

The Great Transition to an EverGreen Earth
Pastoralist-Managed Natural Regeneration

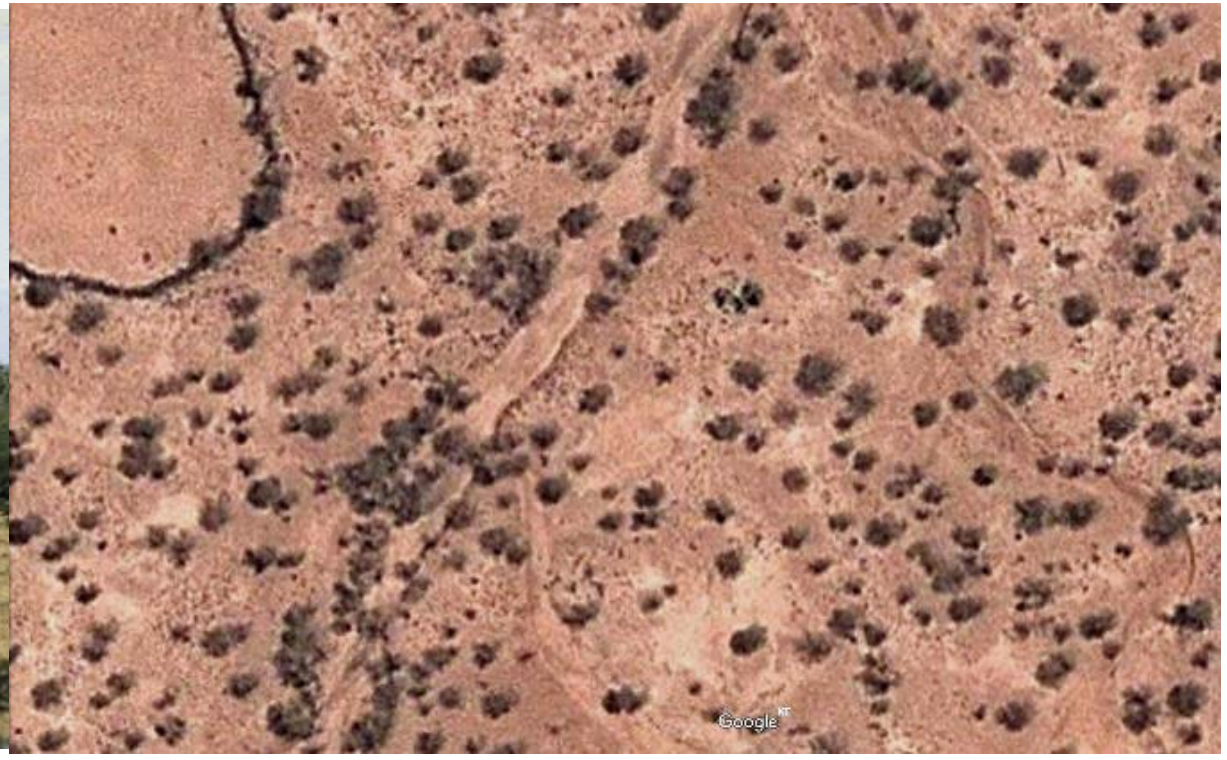
Dennis Garrity

Board Chair, Global EverGreening Alliance

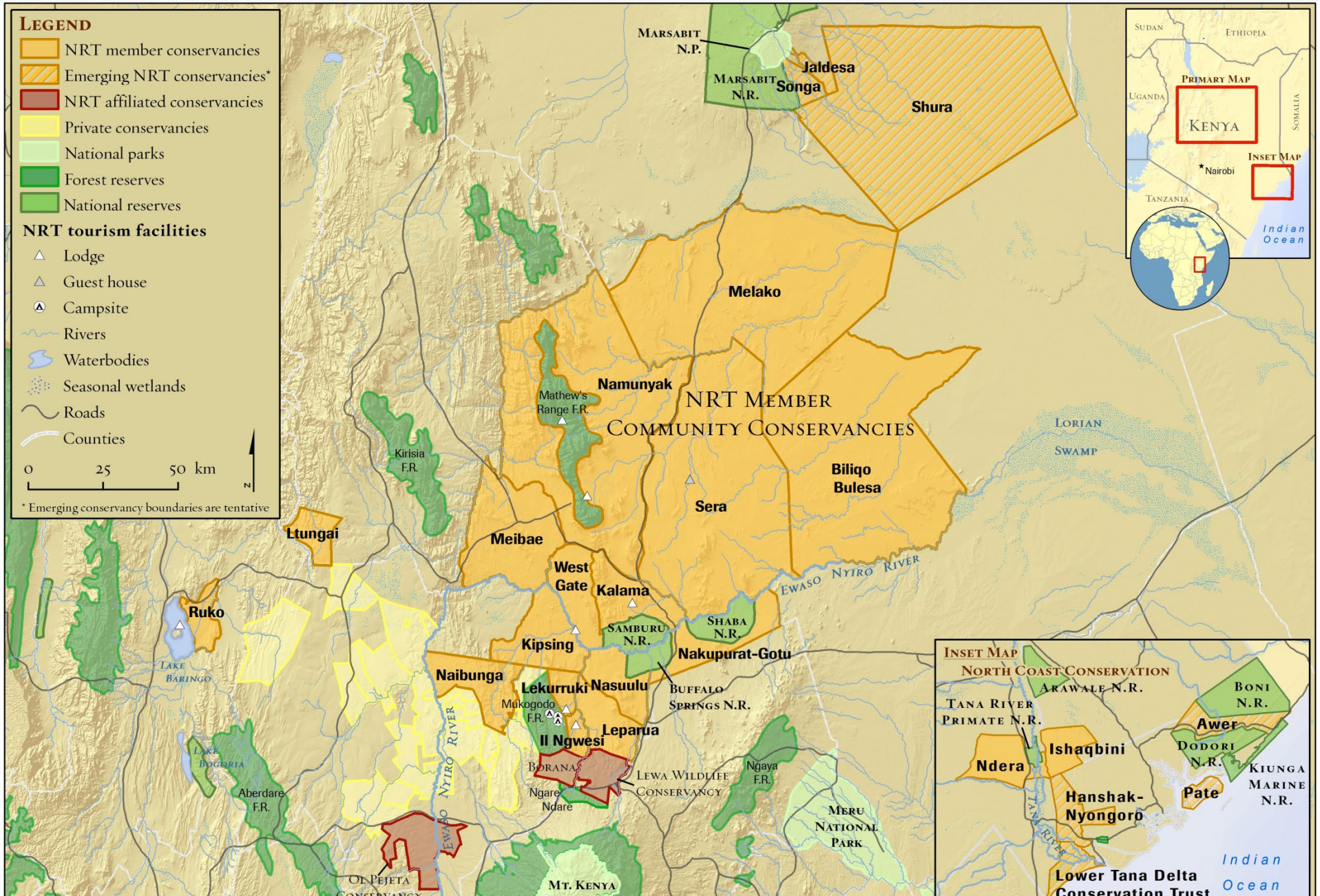
Fmr Director General, World Agroforestry

Pastoralist-Managed Natural Regeneration at Scale in Turkana:
Legacy the Elders of Lorugum

A Story of Success in Very Dry Conditions



The community conservancies movement in Kenya – now 114



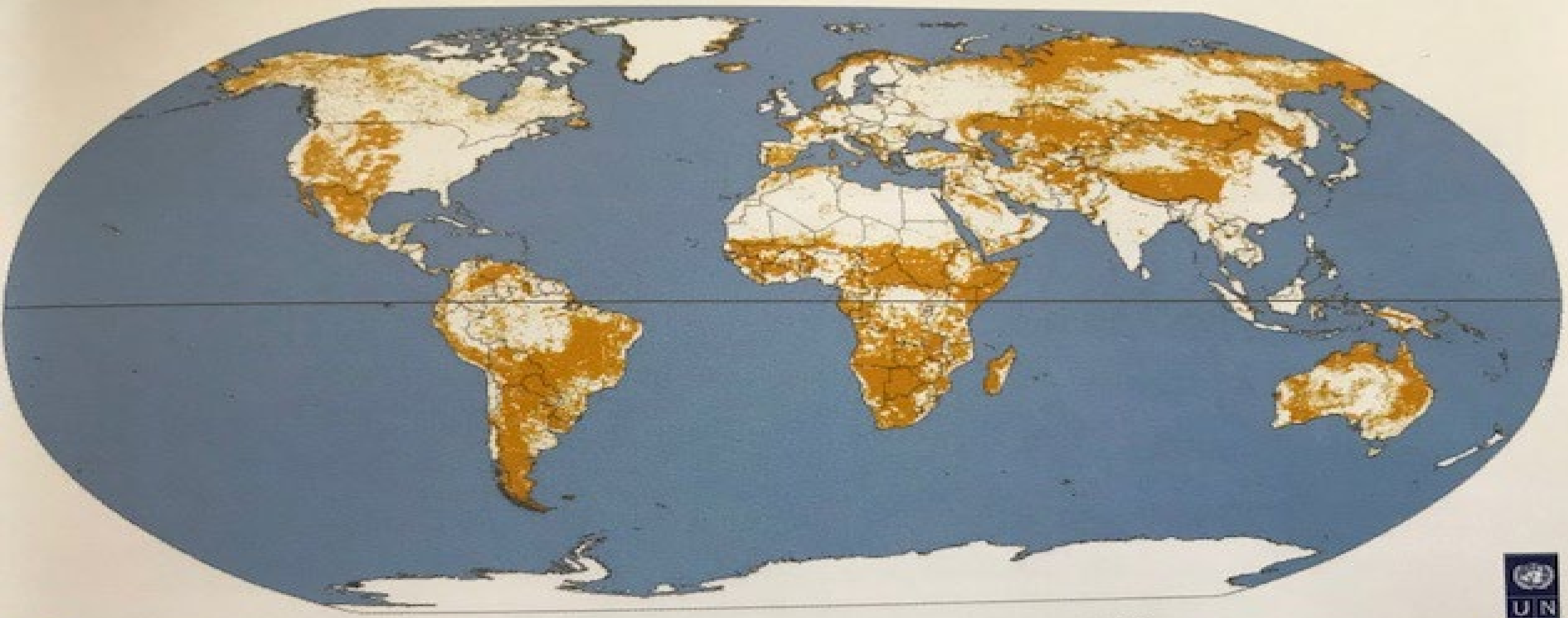

Shinyanga Tanzania
Community-Based Regeneration of woodlands and grazing lands covering about 500,000 ha in 934 villages
Awarded the UNDP Equator Prize

Assisted Natural Regeneration on grazing land in Ethiopia

Watershed Closures in Ethiopia

15 million hectares

Global distribution of areas where pastoralism is practiced



World Initiative for Sustainable Pastoralism

UNDP

IUCN

EverGreening the Degraded Pasturelands

Regenerate a healthy grass-tree balance on 650 m ha of degraded pasturelands by 2050.

This will be done by **regenerative grazing systems and pasturelands managed natural regeneration** to store an additional **3.60 billion tons of CO_2 per year.**

EverGreening
GLOBAL ALLIANCE

The EverGreening the Earth Campaign

White Paper: http://www.evergreening.org/wp-content/uploads/2019/11/EverGreening_CampaignPaper.pdf

Alliance Website: evergreening.org

dennis.garrity@evergreening.org

Indigenous Pasture using Road Water Harvesting in Africa Drylands

Presenter: Theophilius M. Kioko, Green Roads for Water

Flood-Based Livelihoods Network Foundation

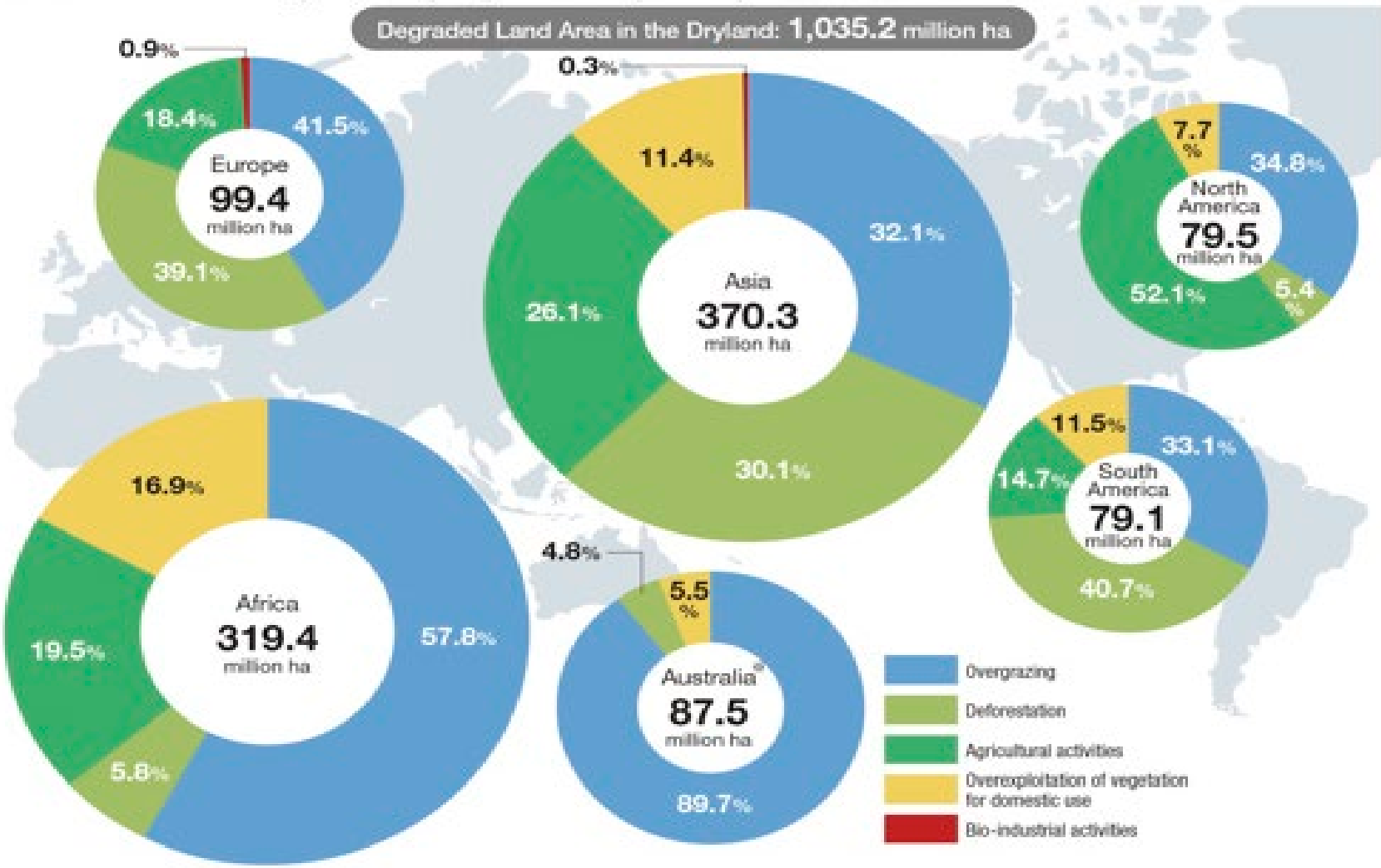
NWO Netherlands Organisation for Scientific Research

Food & Business Knowledge Platform

SEKU Arid to Green

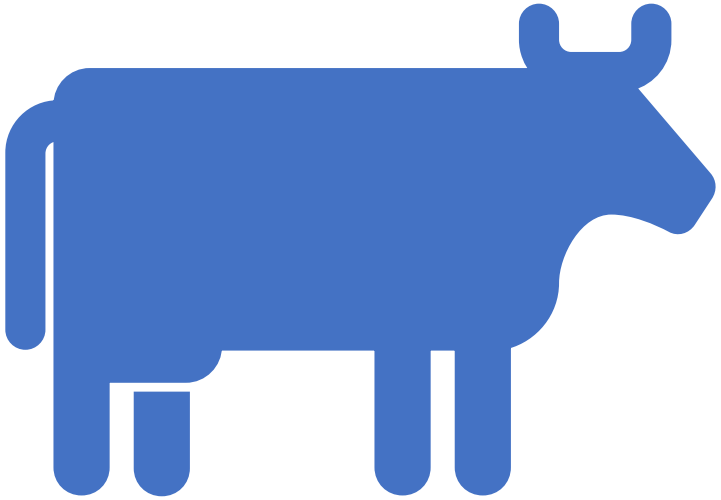
GREEN ROADS FOR WATER

Causes of Land Degradation in the Drylands



Source: World atlas of land degradation, 2nd Edition (UNEP)

Pasture Production: Why do I need to Produce Pasture in my dryland farm?



- Livestock production is one of the most important economic activities for farmers in ASALs.
- The availability of fodder is one of the limiting factors in animal production
- If farm animals are to be productive (milk, eggs, meat etc.), it is important that they get suitable food in sufficient quantities.
- Planting of grass is also one of the ways or rehabilitating degraded land

Why the Indigenous grass species

- drought resistant ,easy to manage, easy establishment, high nutrient content and marketable
- Supply enough forage for livestock
- Contribute to food security and healthier diet
- Increase household income
- improve and protect the environment
- Healthy livestock i.e forage quality and moisture content

Soil Conservation and Rainwater Harvesting

Indigenous Grass Reseeding Technology

Eragrostis superba

Cenchrus ciliaris

Enteropogon macrostachyus

Combining sustainable land management strategies

Grass reseeding

- Examples of grass species used

Cenchrus ciliaris
(African foxtail grass)

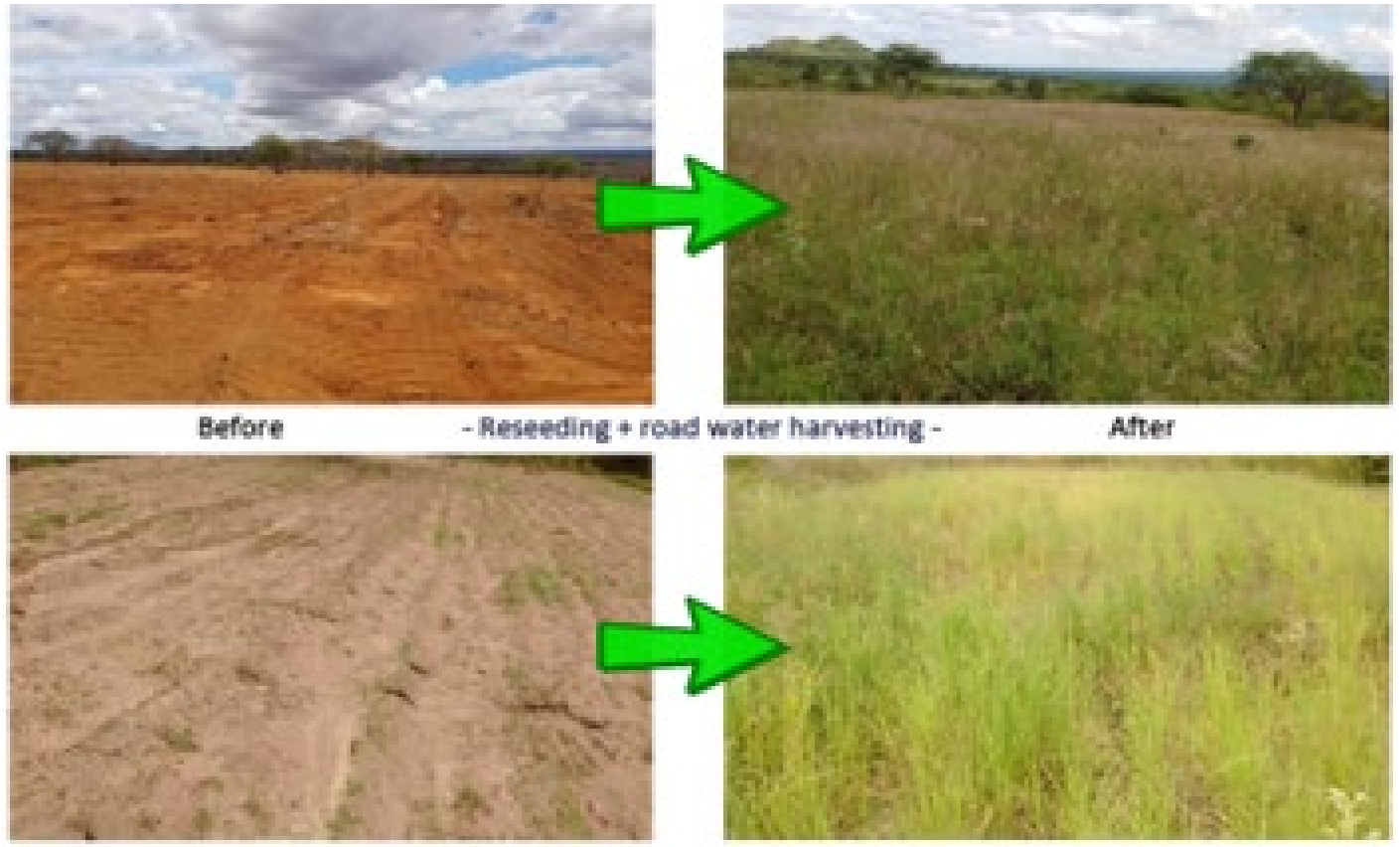
Enteropogon macrostachyus
(Bush rye grass)

- Drought tolerant
- Indigenous grasses
- Perennial species
- Livestock feed

Rainwater harvesting

Trench bunds

Results after 1 year



THANK YOU! ASANTE!

LEARN MORE:

www.regreeningafrica.org

Email: regreeningafrica@cgiar.org

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