



University of Nairobi

Triple L Initiative

Triple L- Land, Livestock & Livelihood Dynamics in Dryland Systems

# Enclosing the Commons: Reasons for the adoption of enclosures in the arid and semi-arid rangelands of Chepareria, Kenya

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# INTRODUCTION

\_Which are the key issues facing drylands globally?

\_Why is land degradation on the rise globally?



\_Why is land degradation a critical issue in the 21<sup>st</sup> century?

\_Are there attempts to rehabilitate degraded rangelands?

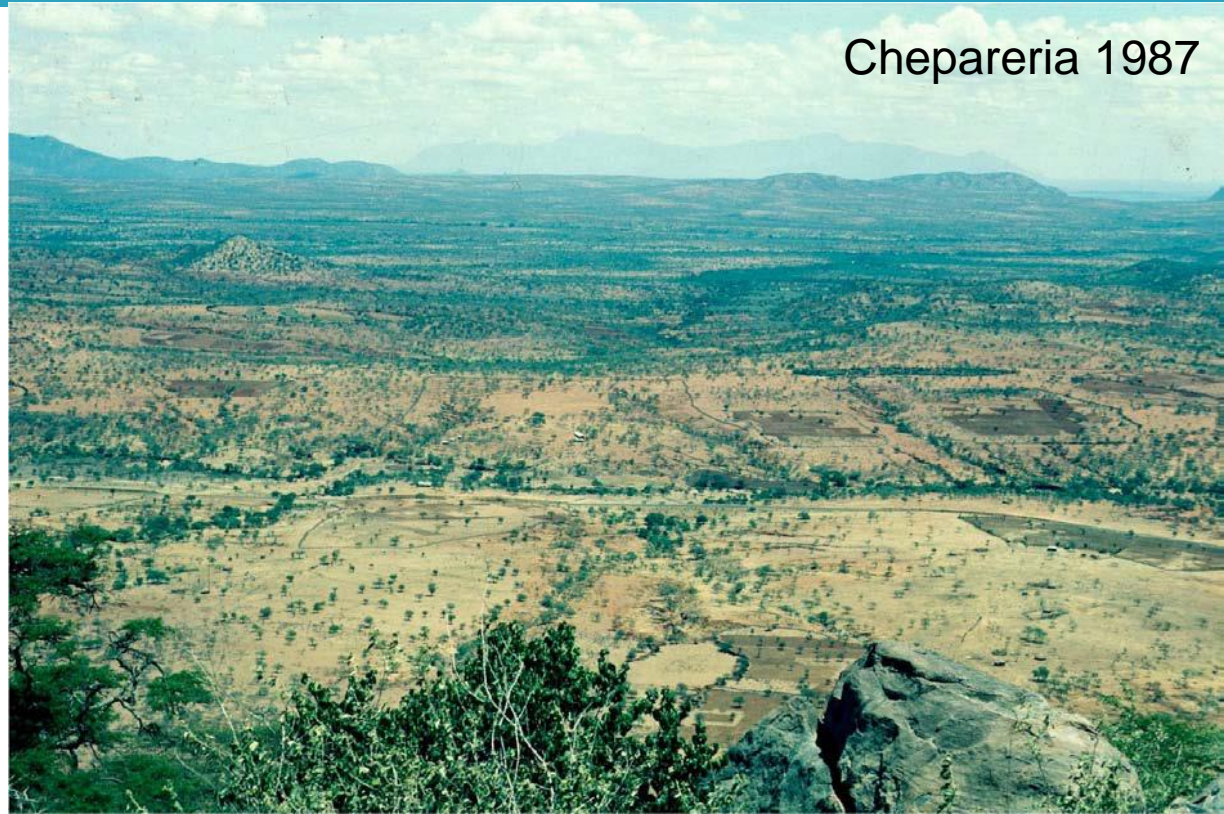


(UNCCD, 2012 & CSFD, 2009)

# Land Degradation in West Pokot County

- ▣ Changes in livestock grazing patterns
- ▣ Overexploitation & poor management of natural resources

(Kitalyi *et al.*, 2002, Meyerhoff 1991, Nyberg and Wangari Muthuri 2012)



Chepareria 1987

# Enclosures - Key to SLM

- Enclosures refer to areas closed off from cultivation and grazing for a specified duration of time in order to allow the regeneration of vegetation.
- A management tool for restoring degraded rangelands.
- Increasingly being adopted in in transition from extensive to intensive livestock-based production systems.

(Bayene 2009, Mekuria 2011, Mureithi *et al.*, 2010, Knutsson 2013 and Verdoodt *et al.*, 2008)



Chepareria 2013

# ENCLOSURE MANAGEMENT REGIMES



# PROBLEM STATEMENT

- In Chepareria, a formerly communal and degraded ward in West Pokot County, enclosures were mainly established to address pasture shortage
- Enclosures as a land management approach enabled individuals properly manage land, fodder and livestock hence creating stable and environment for the local pastoral community in Chepareria
- Increased alternative income generating activities (IGAs) and incomes, resulting in improved standards of living

(Makokha et al. 1999, Mureithi et al., 2010, Njoka 1998, Nyberg 2013, Verdoodt et al, 2010, Wairore et al. 2015a)

# PROBLEM STATEMENT



- While enclosures have been able to foster rangeland restoration and rehabilitation, it is now emerging that they were not solely established for land rehabilitation, particularly in Chepareria.
- As a land use management approach, we hypothesized that enclosures were established for diverse reasons, particularly if their categories/types, time of establishment and source of information/knowledge on how to establish them vary.

# OBJECTIVES & RESEARCH QUESTIONS

## Objectives:

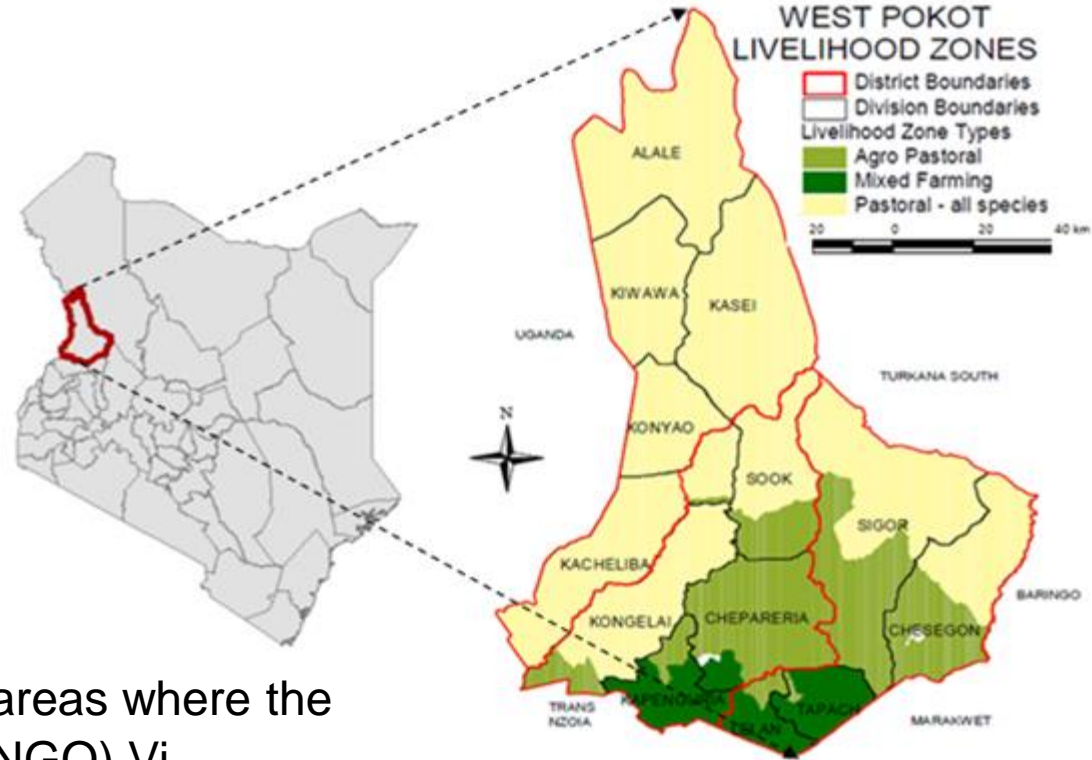
This study sought to:

- ❑ document the history of enclosures,
- ❑ identify sources of information/knowledge on enclosure establishment, and
- ❑ explore the reasons for the enclosure establishment in the formerly degraded rangelands.
- ❑ identify how land use management through rangeland enclosures has shifted risks of degradation from previously communal rangelands to private allotments in enclosed areas.



# STUDY AREA

- Ywalateke, Chepkopegh and Morpus administrative locations were purposively selected for this study.
- The three locations represent the areas where the Non-Governmental Organization (NGO) Vi-Agroforestry (Vi-AF) conducted intensive extension on agroforestry and enclosure establishment in Chepareria.



# DATA COLLECTION



A combination of data collection instruments were used:

- A semi-structured questionnaire - A total sample of 120 household - 40 enclosure owners in each location
- Key informant interviews (KIIs)
- Focus group discussions (FGDs)
- Extensive literature review

# RESULTS

**Table 1. Age distribution of enclosures establishment in Chepareria**

		<b>Count</b>	<b>Percent</b>
Enclosure Age	< 10	45	37.5
	11 – 20	42	35.0
	21 – 30	20	16.7
	31+	13	10.8
	<b>Total</b>	120	100.0

Most of the enclosures were established after technical interventions in land management by Vi-AF which started in 1987 (89.2% of the sampled enclosures which were established in the last 30 years)

# RESULTS

A significant negative correlation between enclosure category and both the age of enclosure and household head ( $p \leq 0.01$ ) indicates a trend of increasing establishment of **spontaneous enclosures, particularly among the younger generation** over recent years.

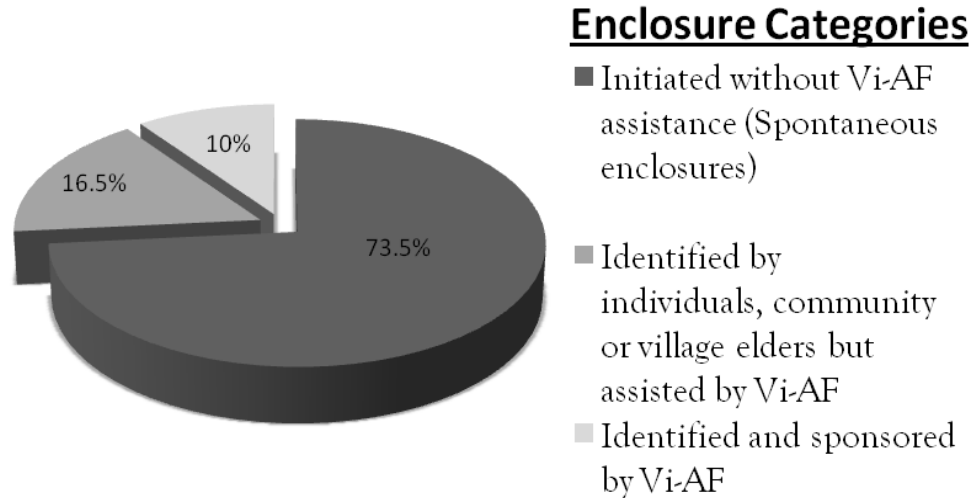


Figure 1: Categories owned by sampled households in Chepareria

**Table 2. Sources of information on enclosure establishment and management in Chepareria**

	<b>Responses</b>	<b>N=120</b>	<b>%</b>
Sources of information/knowledge on how to establish enclosures	Vi Agroforestry	63	52.5
	Neighbours/community members	33	27.5
	Local leaders	27	22.5
	Parents	19	15.8
	Government extension officers	3	2.5
	Field visits	3	2.5
	Other NGOs	1	0.8

**Table 3. Reasons for enclosure establishment in Chepareria**

<b>Responses</b>	<b>N=120</b>	<b>%</b>
Boundary demarcation/tenure insecurity	85	70.8
Preserve pasture	78	65.0
Proper/judicious land management	63	52.5
Enable crop production	38	31.7
Curb land degradation	32	26.7
Gain environmental benefits	17	14.2

# KEY MESSAGES

- Sustainable Land Management and rehabilitation of degraded rangelands are possible through rangeland enclosure.
- The transition in Chepareria is an ongoing transition, it is not something that researchers or policy makers have induced
- 37.5% of the enclosures are less than 10 years old, i.e. established after 2004. Vi Agroforestry left the area in 2001, which shows that the enclosing methodology is well adopted (and adapted) by the people of Chepareria.
- 90% of the farmers use enclosures, i.e. it dominates the landscape, and in Chepareria Ward for example is adopted by almost all households

# CONCLUSIONS

- Rangeland enclosures in Chepareria existed long before land management interventions by Vi-AF.
- While enclosures were mainly established for boundary demarcation, alleviate pasture scarcity and foster proper land management; they have increased flexibility in land use, fodder and livestock management enabling households to restore degraded areas over time and benefit from various ecosystem and environmental services.
- If the use and upscaling of rangeland enclosures is to be successful; technical interventions will have to be made to allow a more intensive use of rangeland resources.
- If this is not done, there are chances that land management through enclosures will shift risks of degradation from previously communal rangelands to private allotments established through the enclosure movement.





# THANK YOU

See more at <http://www.triplel.se> - Wairore JN, Mureithi SM, Wasonga VO and Nyberg G. 2015. Enclosing the Commons: Reasons for the Adoption and Adaptation of enclosures in the Semi-arid Rangelands of Chepareria. *Journal of Human Ecology* Springer Plus 4:595 DOI: 10.1186/s40064-015-1390-z