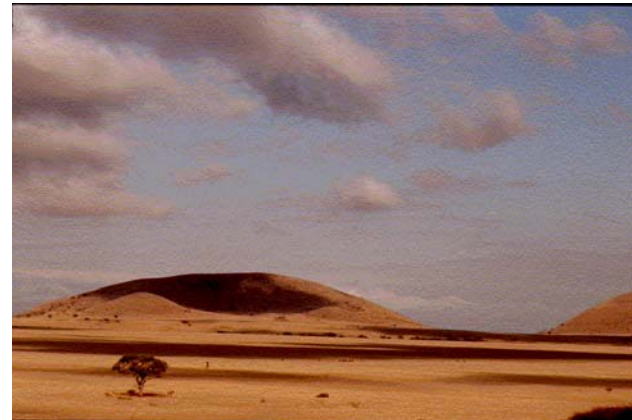




# Beyond Group Ranch Subdivision: Collective Action for Livestock Mobility, Ecological Viability and Livelihoods



S. BurnSilver<sup>1</sup> and E. Mwangi<sup>2</sup>

<sup>1</sup>Natural Resource Ecology Laboratory, Colorado State University

<sup>2</sup>CGIAR Systemwide Program on Collective Action and Property Rights (CAPRI)

# Pastoral Landscapes: A Nexus of Change



## ● Land Tenure Change

- External and Internal Drivers to this process
- A policy framework also in flux

→ Fragmentation of Group Ranches into individual parcels

## ● Underlying ecological characteristics of East African pastoral systems

- Ecological Variability → Heterogeneity of resources in space and time
- Mobility as primary coping strategy

# Subdivision Outcomes in Kajiado District, Kenya



- The specter of ecological degradation
  - transition from extensive/staged grazing system to intensive/full-time grazing of individual parcels
- Economic Diversification and Intensification
  - what people are doing, and how they are raising their animals?

## In the context of:

- Rising Poverty → More livelihood costs
- Declining mobility
  - Assumption of sedentarization
  - Less flexibility and increased risk?



# Emergent Pastoral Responses to Subdivision

- SO- subdivision a fact: it is ongoing and is **sometimes** considered **“inevitable”** in still intact areas
- However: New collective action arrangements are emerging
  - Re-aggregation mechanisms
  - Awareness of pastoralists themselves....
- Theoretically **unexpected** under subdivided property assignment
  - high transaction costs
  - little incentive under private property for group effort



# Questions we asked....



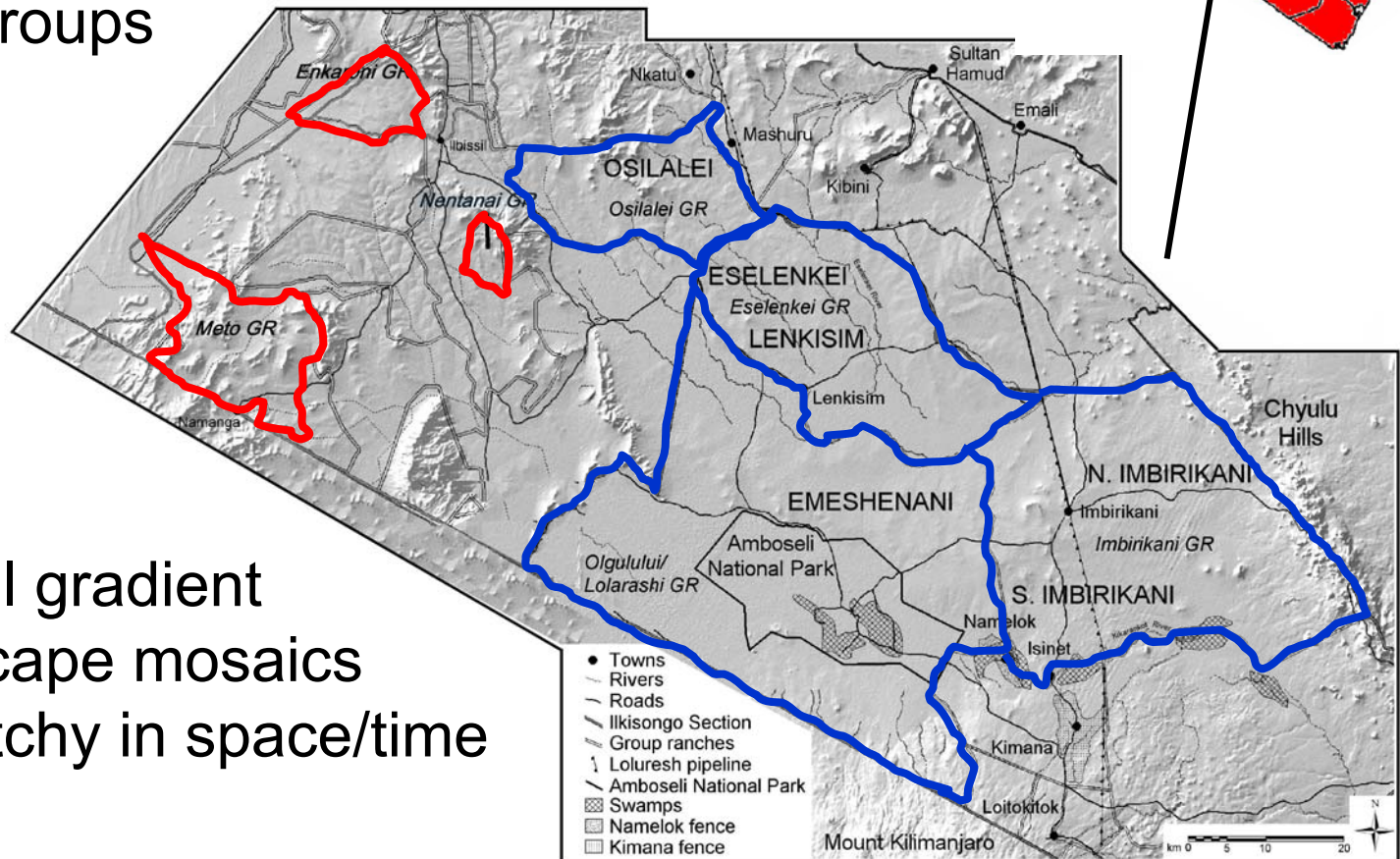
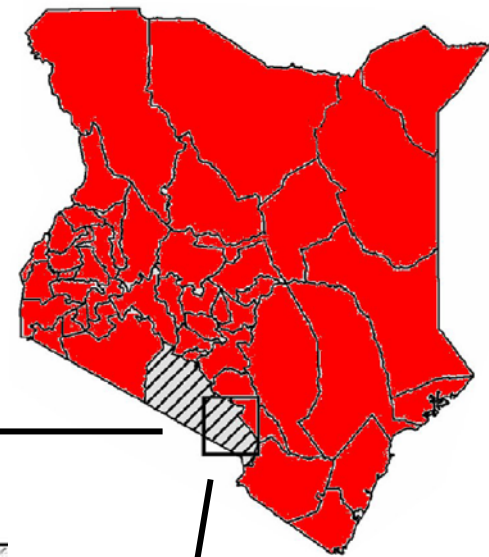
- What kinds of re-aggregation mechanisms and examples of collective action are emerging in a post-subdivision environment? Why?
- What factors influence use of these mechanisms? Is there a pattern to re-aggregation across the group ranches?
- How do these arrangements work?
- What are the policy Implications associated with these re-aggregation efforts?



# Group Ranch Study Areas

4 subdivided and 3 unsubdivided

- Socio-economic data (N=184, N=154)
- Mobility quantified
- NDVI analyses
- Focus groups



- Rainfall gradient
- Landscape mosaics  
- patchy in space/time

# Size of individual parcels post-subdivision (Actual and Expected)



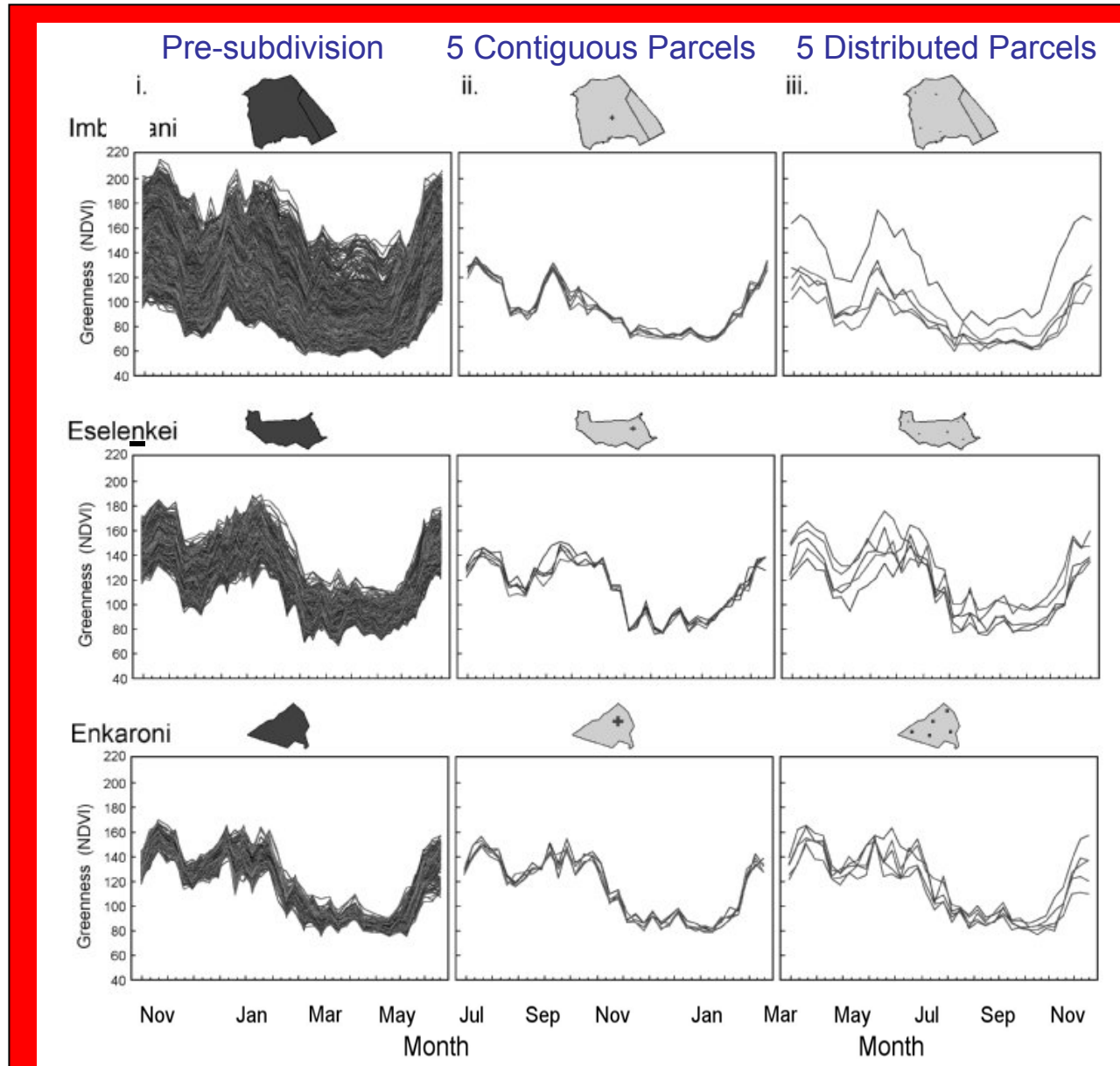
Group Ranch	Average parcel size (ha)
Imbirikani*	26.8
Olgulului/Lolarashi*	43.0
Eselenkei*	60.0
Osilalei	40.5 +/-
Meto	35.56 (.379)
Enkaroni	49.92 (.233)
Nentanai	72.12 (.399)

# NDVI Analyses - Conceptual illustration of subdivision impacts

- NDVI → Forage “Greenness”
- Years: 1998-2004
- 1 km<sup>2</sup> resolution
- Sharing and subdivision scenarios
- Look at **depth** of profiles and **average values**

## SO:

- GR's are different
- Subdivision truncates options
- Sharing has potential to mitigate lost flexibility

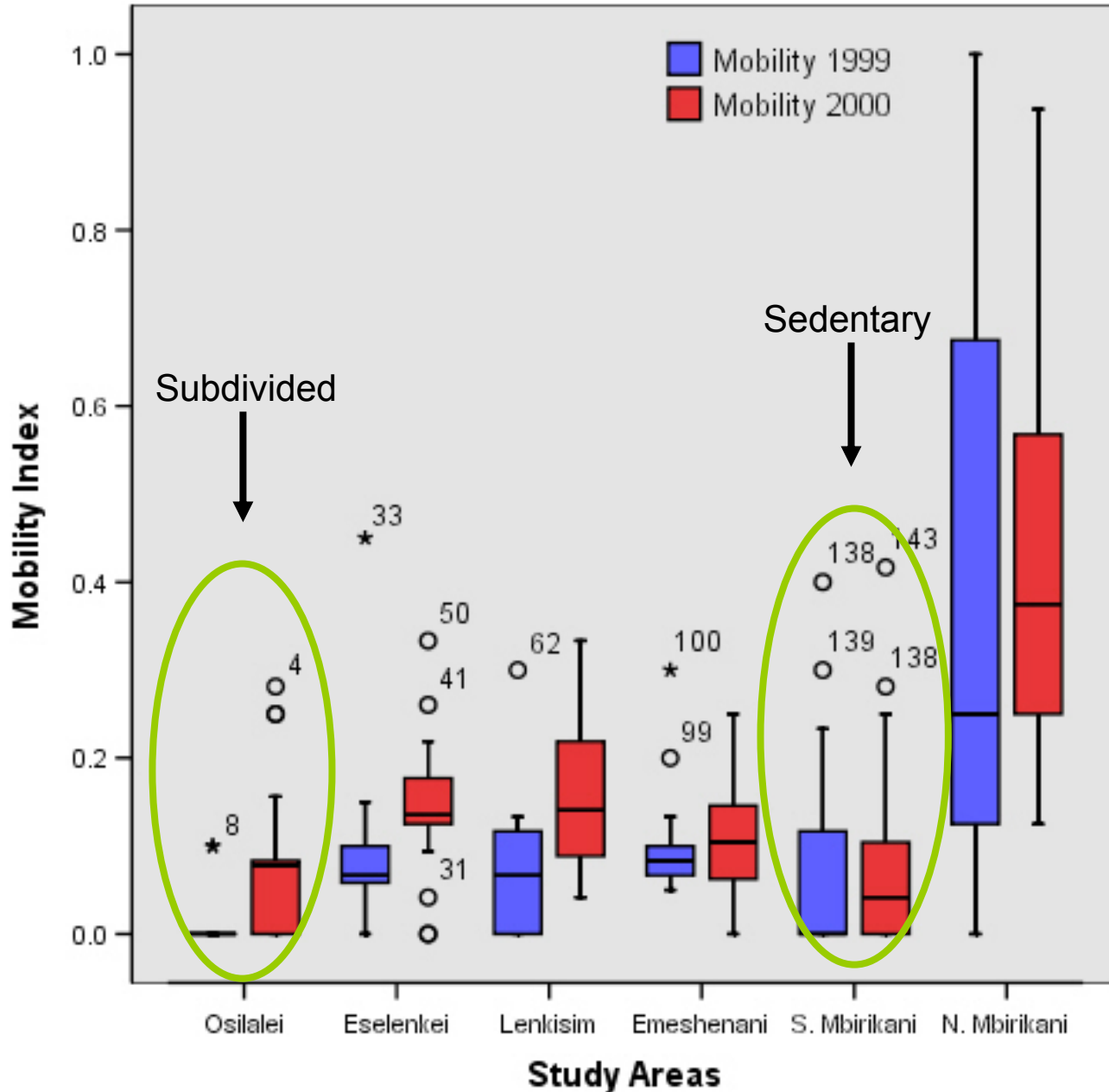




# Existing Re-aggregation Arrangements

<b>Grazing Arrangements</b>	<b>Frequency*</b>	<b>Percent</b>
Yes	59	41.8
Yes + Lease	2	1.4
Lease Only	9	6.4
None	71	50.0
Total	141	100.0
Missing Households	13	
Total	154	

# Mobility in Amboseli Study Areas



Index:  
 - No. moves  
 - No. months away

# Conditions linked to mobility and use of re-aggregation strategies:



	Climatic Conditions
	Land Tenure/Degree of Sedentarization
	Size of herd
	Group Ranch
	Parcel size

**Those not swapping?** Parcels are not of equal size and richer households tend to benefit more from sharing/swapping

# Collective action around post-group ranch infrastructure

Of Interest: Bore holes  
Dams  
Schools  
Roads



- Again- Mechanisms of collective action would be predicted to **decline**
- Strong majority of respondents engage in maintenance, construction, contribution of funds and fundraising around these resources
  - committees elected
  - statements of “collective responsibility”



# Focus Group Results

Amboseli Group Ranches (Jan 2005):

- Salient Coping Strategies under Subdivision
  - Economic Diversification
  - Intensification of livestock production strategies
- **But still:** Mobility under subdivision **will be critical**
  - mechanisms to still use land communally would “have to come”
  - leasing arrangements would have to occur  
*“Because the land is too dry”*



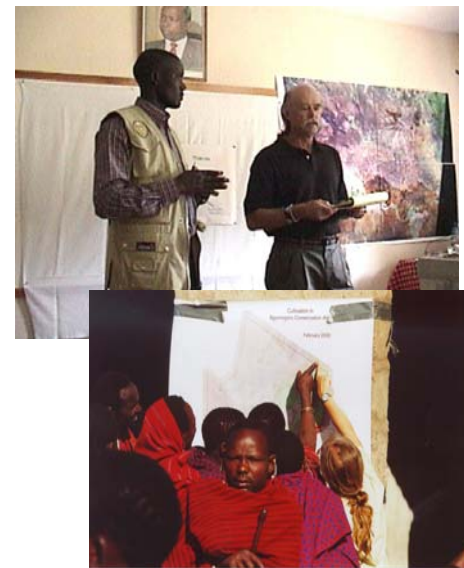
# At the Interface of Policy and Research

- Poverty reduction in pastoral systems
  - opportunities and risks are **substantial**
  - a positive livelihood outlook **IF**
    - economic diversification occurs
    - market integration improves
    - social capital mechanisms remain intact

(Thornton et al. 2003, *Mapping poverty and Livestock in the Developing World*)

- Current research in ecology and common property theory emphasizes the criticality and underlying rationality of pastoral mobility in dry environments

Yet: The current policy environment supports subdivision





# A Mismatch.....

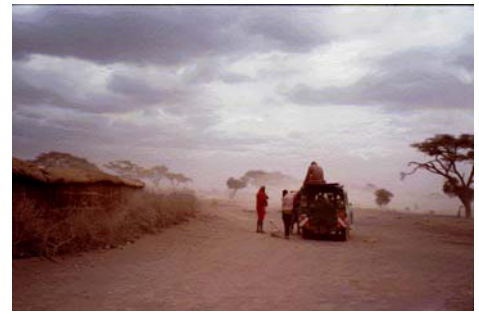


.....between subdivision policy and economic/ecological realities for pastoralists on the ground

## Critical Thinking about Subdivision:

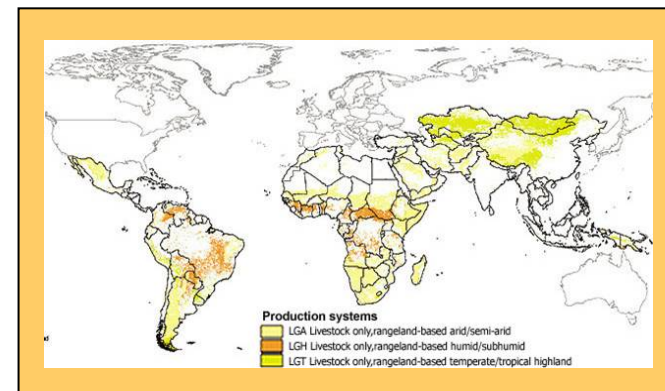
- Support for subdivision reflects a defensive strategy by pastoralists to defend against internal and external threats to land, **not** necessarily agreement with the basic tenets of private property ownership
- Property rights evolution does not necessarily end when individual titles are issued to herders

# Points to Policy Makers



- Pastoralists are seeking ways to enlarge their options for mobility and management in a post-subdivision environment
  - Re-aggregation strategies are widespread
  - Mobility is not gone
- There is a critical need for policy to recognize group or collective rights, especially in circumstances where groups and collectivities continue to use and prefer such arrangements.
- Group ranch subdivision does not preclude individuals from seeking common solutions to shared problems.
  - Innovative measures to enhance collective action?

# Finally....



- The challenges currently faced by Maasai herders are common to **most** pastoral systems globally
  - they lie at the intersection of culture, ecology, economy and politics
- Examples of re-aggregation and collective action mechanisms are emerging globally
- These emergent mechanisms speak to potential abilities of pastoral groups to adjust pro-actively to new realities on the ground



# Ashe na ling...

Pastoralists of Central and Southern Kajiado District

R. Boone- Imagery and NDVI analyses

GL-CRSP

NSF

ILRI: Ereto O Ereto

Compton Foundation

NSF

ISWP

Association of AUW

# Pastoralists in Amboseli and Central Kajiado

## Amboseli:

- 64% of gross household income based on livestock
- Relative dependence 45-85% depending on location
- 51% of households combine with agriculture
  - 59% at least 1 “off-farm” activity
  - 14% two activities
  - 8% between 3-6 activities

## Central Kajiado:

- 87% reliance on livestock as “main” source of income
- 72% combine livestock with 1 other activity
  - 78% rainfed ag.
- 29% combine LS with 3<sup>rd</sup> source of income