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

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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)

<table>
<thead>
<tr>
<th>Group Ranch</th>
<th>Average parcel size (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imbirikani*</td>
<td>26.8</td>
</tr>
<tr>
<td>Olgulului/Lolarashi*</td>
<td>43.0</td>
</tr>
<tr>
<td>Eselenkei*</td>
<td>60.0</td>
</tr>
<tr>
<td>Osilalei</td>
<td>40.5 +/-</td>
</tr>
<tr>
<td>Meto</td>
<td>35.56 (.379)</td>
</tr>
<tr>
<td>Enkaroni</td>
<td>49.92 (.233)</td>
</tr>
<tr>
<td>Nentanai</td>
<td>72.12 (.399)</td>
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</tbody>
</table>
NDVI Analyses - Conceptual illustration of subdivision impacts

- NDVI \(\rightarrow\) Forage “Greenness”
- Years: 1998-2004
- 1 km\(^2\) 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

<table>
<thead>
<tr>
<th>Grazing Arrangements</th>
<th>Frequency*</th>
<th>Percent</th>
</tr>
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<tbody>
<tr>
<td>Yes</td>
<td>59</td>
<td>41.8</td>
</tr>
<tr>
<td>Yes + Lease</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>Lease Only</td>
<td>9</td>
<td>6.4</td>
</tr>
<tr>
<td>None</td>
<td>71</td>
<td>50.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>141</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td><strong>Missing Households</strong></td>
<td><strong>13</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>154</strong></td>
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</table>
Mobility in Amboseli Study Areas

Subdivided

Sedentary

Index:
- No. moves
- No. months away
Conditions linked to mobility and use of re-aggregation strategies:

<table>
<thead>
<tr>
<th></th>
<th>Climatic Conditions</th>
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<tbody>
<tr>
<td></td>
<td>Land Tenure/Degree of Sedentarization</td>
</tr>
<tr>
<td></td>
<td>Size of herd</td>
</tr>
<tr>
<td></td>
<td>Group Ranch</td>
</tr>
<tr>
<td></td>
<td>Parcel size</td>
</tr>
</tbody>
</table>

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
Pastoralists of Central and Southern Kajiado District
R. Boone- Imagery and NDVI analyses
GL-CRSP
ILRI: Ereto O Ereto
NSF
NSF
Compton Foundation
ISWP
Association of AUW

Ashe na ling...
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 3rd source of income