Using Value Chain Approach to Reveal the Total Economic Value of Pastoral Livestock in Isiolo County, Kenya

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Why pastoralism?

• Make **efficient** use of areas less suitable for **crop** farming
• Animals represent **more than economic assets** - provide **social identity and security**
• Known (**not in official statistics**) to be important production system
  – It is most **suitable and efficient** use of drylands - productivity of pastoralism can be > other systems under the same conditions
• In Africa, its 2-10 times more productive per ha than ranching systems (Scoones, 1995)

≈ 88% of Kenya
• Over 30% of human population

**Figure 1: Pastoral areas of Kenya**

Red=Arid Counties: Yellow=Semi-arid Counties

Source: RoK (2010)
What is the Problem?

• Full appreciation of pastoralism is marred by:
  1. Scarce and poor quality data
  2. Aggregated (pastoral and non-pastoral contributions)
  3. Lack of time series data
  4. Different methodologies - aggregated regional or sectoral inequalities not evident
  5. Focus on direct values and final products only (e.g. number produced and trade)
  6. Informal markets and records not considered

• Results: Inadequate data on the comparative advantages of pastoralism over the competing land uses

Figure 2: Vicious cycle of under-valuation of pastoralism
Why Valuation?

- Valuation - important in decision making over the allocation of resources
- Allows prioritization and selection of the best means to satisfy human needs at minimum costs and at peak gains

- Gross Domestic Product (GDP) - used to determine national wealth
  - weaknesses → aggregation of economic variables
- “Summarizes in a single number value of economic activity in a given period of time- usually one calendar year”

- In Kenya, GDP is compiled using both the production and expenditure approaches
  - Production and income by industry
  - Consumption, private and public (government)
Why Total Economic Valuation (TEV)?

• Estimating economic contributions of pastoralism using “conventional” methods presents significant challenges at national levels.
• TEV recognizes:
  • multiple dimensions and;
  • differences between values;
• finally combine them into a single currency unit used to support decision making, e.g., in cost-benefit analysis.

Figure 3: Simplified schematic framework of TEV of pastoralism

Source: Hesse and McGregor (2006)
Photo credit: Roberts; Olpejeta conservancy; Oliver

Figure 3: Simplified schematic framework of TEV of pastoralism
Table 1: Conceptual framework for assessing the direct and indirect values of pastoralism

<table>
<thead>
<tr>
<th>Direct values</th>
<th>Indirect values</th>
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</thead>
<tbody>
<tr>
<td>Measured</td>
<td>Unmeasured</td>
</tr>
<tr>
<td>Livestock sales</td>
<td>Employment</td>
</tr>
<tr>
<td>Hides and skins</td>
<td>Social capital</td>
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<tr>
<td>Subsistence</td>
<td>Transport services</td>
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Source: Modified from Hesse and McGregor (2006)
What VCA does that GDP doesn’t reflect

- **Disaggregation** of data (e.g. Species, systems –ranching, pastoralism etc)
- Pre- and primary markets captured → *intermediate and by-products* are captured - value at every nod of the chain
- **Employment** along the chain captured (benefits to individual actors)
- **Non-market**/peripheral transactions can be traced
- **Fringe**/indirect benefits can be captured
- Linking the final the source and processes – *proper placement of value added*
Proposed study area - Why Isiolo town?

- In the arid northern Kenya (≈ 468mm per annum)
- Pastoralism - main source of livelihood (> 70%)

Why Isiolo town?

- Hub for livestock and livestock products trade-links the vast north and urban centres to the south – through to city of Nairobi
- ≈274km from Nairobi
- Fast growing and at the centre of government projects:
  1. The Lamu Port Southern Sudan-Ethiopia Transport (LAPSSET) Corridor project
  2. Proposed Resort City

- Need for evidence based information to the Counties guide- targeting the newly devolved County government
  1. Resource allocation
  2. Development interventions
  3. Land-use planning

Source: Elmi and Birch (2013)

Figure 4: Proposed study site
Two very small slices - to start with

Research questions:
1. Which are the marketing channels for pastoral meat and camel milk in Isiolo town?
2. What is number of people employed in the pastoral meat and camel milk value chain?
3. How many dependants are supported from the meat and camel trade?
4. How much revenue accrue to the County council from pastoral meat and camel milk trade?

- Changing policy makers’ perceptions of pastoralism is a complex and long-term process.
- Starting point: improving their understanding of its dynamics and economic rational, particularly the its direct economic contribution.
## Methodological approach

<table>
<thead>
<tr>
<th>Objective</th>
<th>Method/source of data</th>
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<tbody>
<tr>
<td>1. Characterization of marketing channels (actors, roles and interactions)</td>
<td>- Key informant interviews (KII) with sellers and buyers at the market and, slaughter slab operators, butchers, owners/managers of restaurants and eateries, and revenue, livestock &amp; public health and livestock marketing officers at the County</td>
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<td>- Focus group discussions (FGD) with traders (livestock &amp; meat)</td>
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<td>- Secondary data (county)</td>
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<td>- Semi-structured interviews (SSI) interviews with, livestock traders, meat wholesalers, butcheries, slaughter slabs, managers or owners of restaurants/eateries; employees dealing in pastoral meat</td>
</tr>
<tr>
<td>1. Quantify the number of people employed in the pastoral meat trade and their dependants</td>
<td>- Key informant interviews (KII) &amp; Secondary data with revenue, livestock &amp; public health and livestock marketing officers at the County</td>
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<td>- Semi-structured interviews (SSI) interviews with, livestock traders, meat wholesalers, butcheries, slaughter slabs, managers or owners of restaurants/eateries; employees dealing in pastoral meat</td>
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<td>1. Determine revenue (licences, cess, fees, meat inspection fees) to the County from pastoral meat trade</td>
<td>- Key informant interviews (KII) &amp; Secondary data with revenue, livestock &amp; public health and livestock marketing officers at the County</td>
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Economic contribution of pastoral meat to Isiolo Town

Figure 3: Hypothesized pastoral meat Marketing channel
Economic contribution of camel milk to Isiolo Town

Pastoralist producer

- Rural consumers
- Rural retailers
- Village assemblers
- Bulking & cooling agents
- Whole salers

Rancher

Other towns
Nairobi

Rural consumers → Urban consumers
Urban retailers → Whole salers
Bulking & cooling agents → Urban retailers
Urban consumers

Figure 3: Hypothesized pastoral meat Marketing channel
Expected Outputs

1. Market map
2. Number employed
3. Income and number of dependents of actors
4. Revenue to County
5. A policy brief highlighting the policy implications of the findings
Acknowledgements

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  2. University of Nairobi;
  3. Resource Advocacy Mobilization (Isiolo;
  4. ASAL secretariat (Planning and Devolution);
  5. IIED

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Economic contribution of Nyama choma (roast meat): Case of Arusha

- 601 Nyama Choma businesses
- Employ 5,600 people - 25,000 dependents
- Numerous jobs are supported
- 6.6% of the population of Arusha benefits in some way
- In 2005, over 31,000 cattle -slaughtered in Arusha mostly for Nyama Choma

If extrapolated for entire country:
- 2.2 million people obtain some of their income from pastoral meat trade
- 15,600 Nyama Choma businesses
- Annual turnover of USD 22 million.

Nyama choma case (Source: Letara (2006))