The charcoal value chain in Kenya

Actors, practices and trade flows in selected sites

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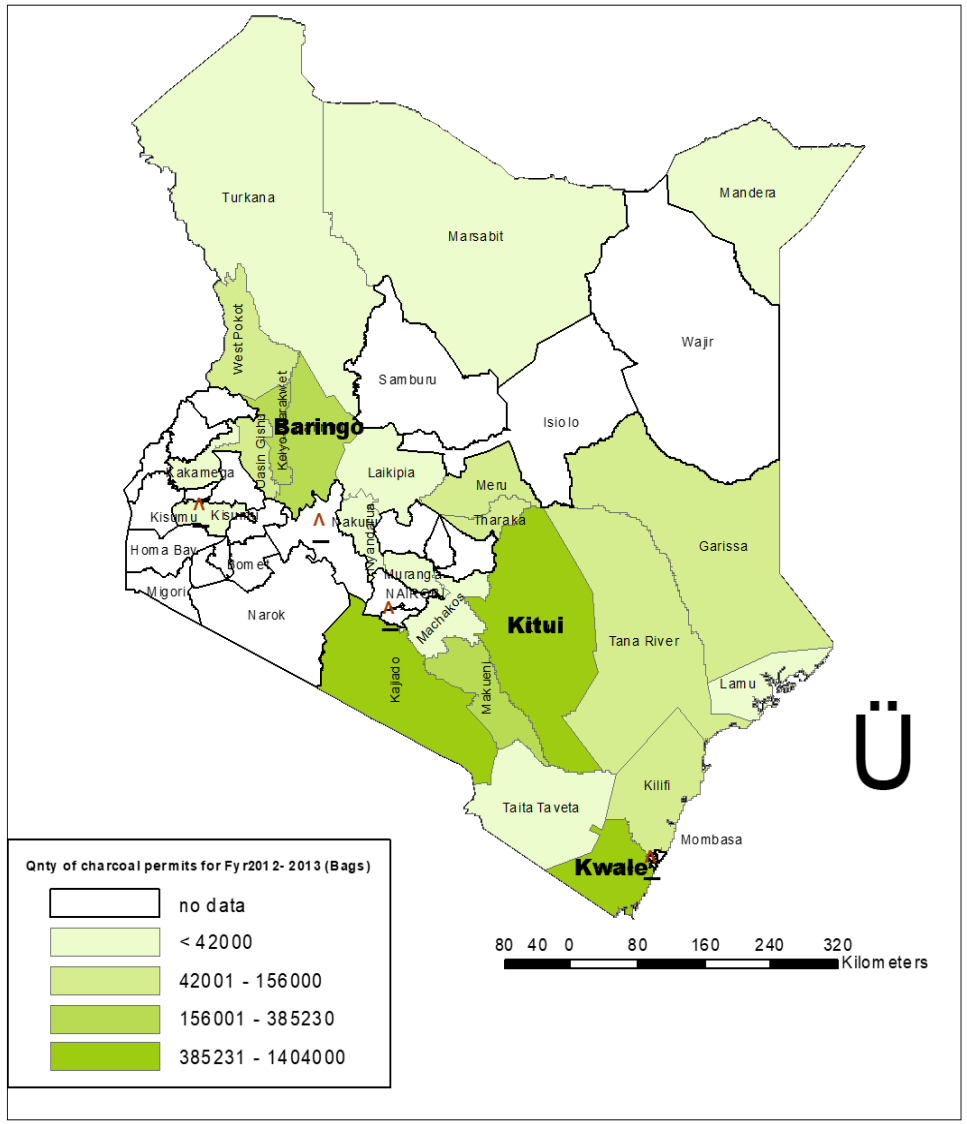
Kenya charcoal sector at a glance in 2013

	2000	2013	Growth (%)
Market value (Million USD)	427	1,600	150-321
People employed	500,000	640,000	25
Charcoal consumed (Million tons)	1.6	2.5	56%

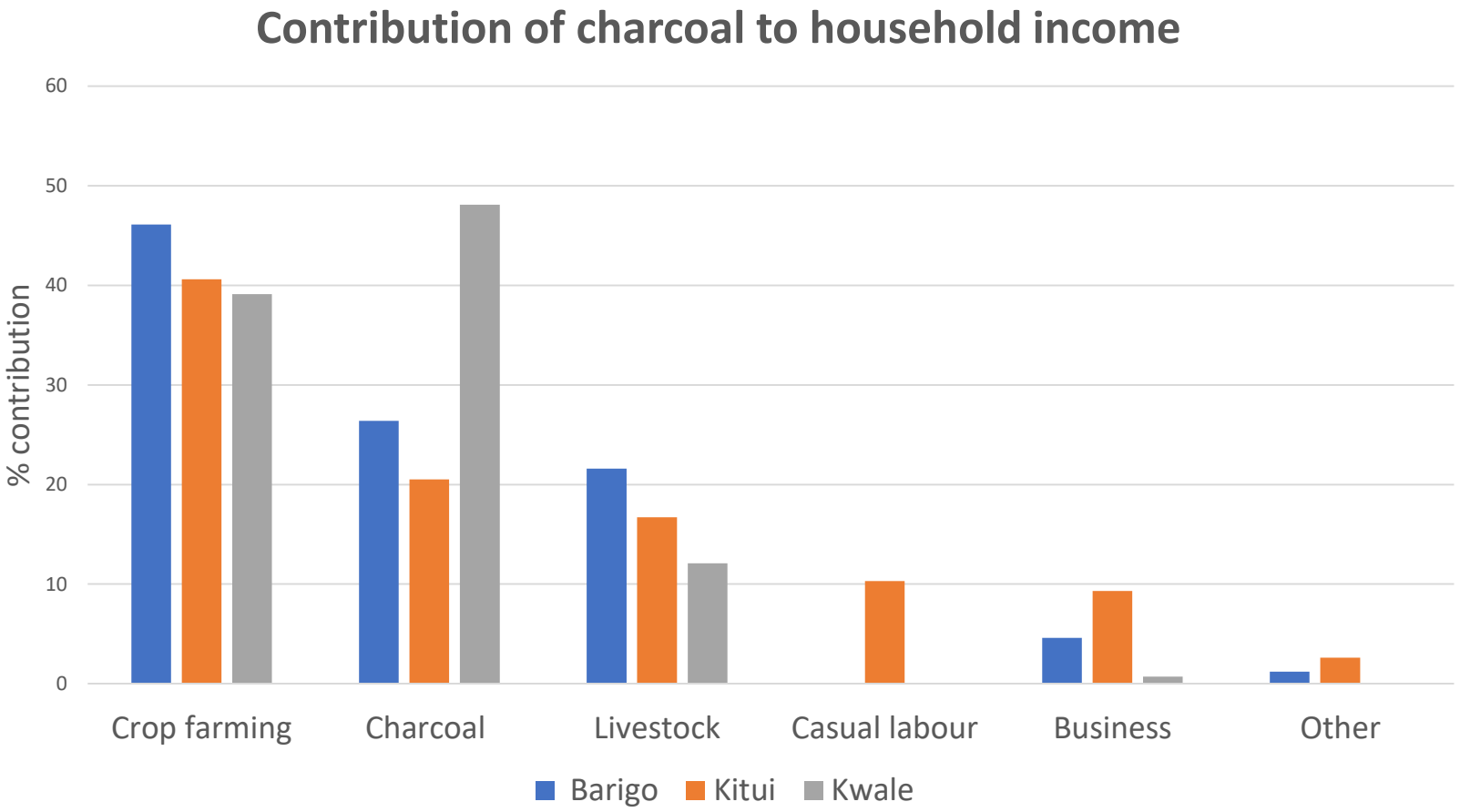
- 40-75% of the charcoal produced in the natural woodlands in drylands.
- 10% of charcoal is consumed in Nairobi.

Study sites



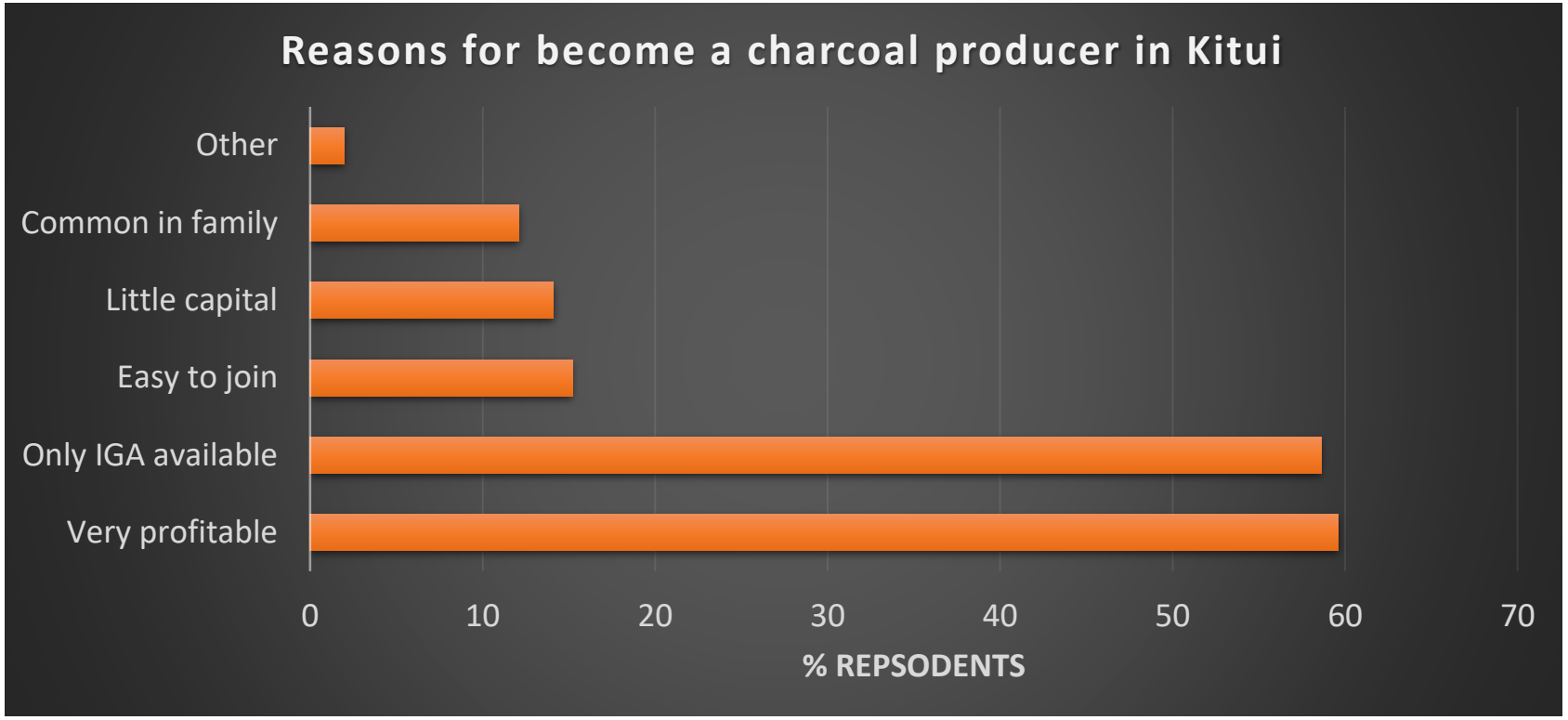
- **Tree and charcoal production study:** Kitui, Kwale and Baringo.
- Kitui and Kwale are charcoal “hotspots”
- Baringo produces charcoal from *Prosopis juliflora*-invasive species.
- **Charcoal markets study:** Nairobi and Mombasa.
- These are among the major charcoal consumption centers in the country.

Importance of charcoal for producers



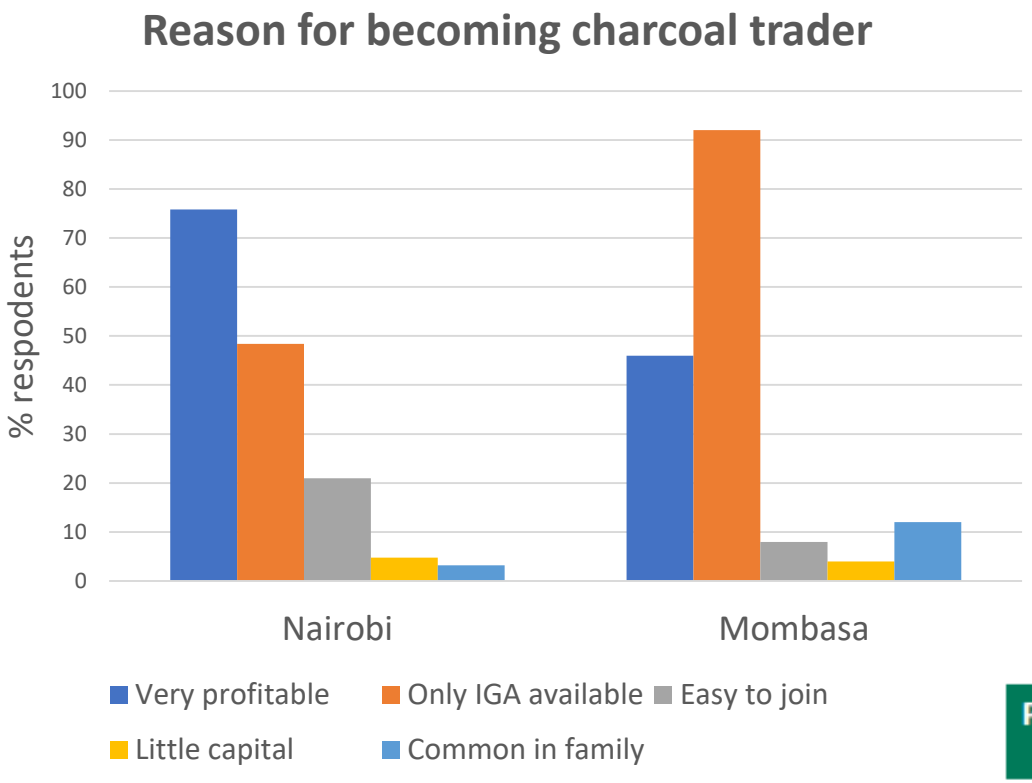
- Charcoal production is the next most important source of income after farming

Why do people produce charcoal?



- Production is profitable
- Is the only option for many people
- It is easy to join and requires minimal capital

Charcoal trade is profitable



- Charcoal may be the only IGA available for the traders, but it is also profitable

Charcoal buying and selling prices for different measures in Nairobi

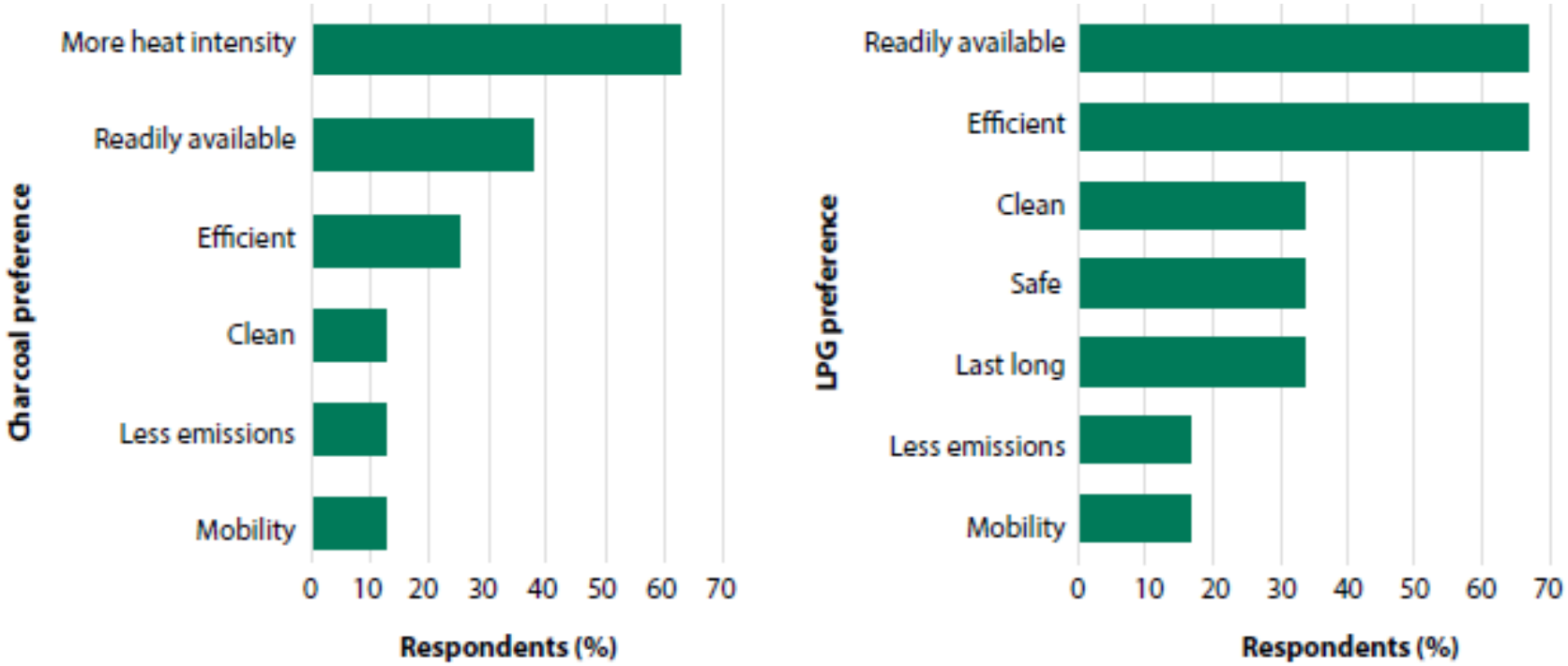
Package (Weight of charcoal)	Buying price	Buying price (KES) per kg	Selling price (KES)	Selling price (KES) per kg	Gross margin (%)
90-kg recycled bag (47 kg)	2100	45*	2314	49	4 (9%)
Bucket -10 kg cooking oil (4.5 kg)	203	45	250	56	11 (24%)
Bucket -17 kg cooking oil (7.0 kg)	315	45	400	57	12 (27%)
Tin (1.5 kg)	68	45	88	59	14 (31%)

*Based on 54 kg per bag and 12.5% charcoal fines per bag

Consumer cooking energy choices

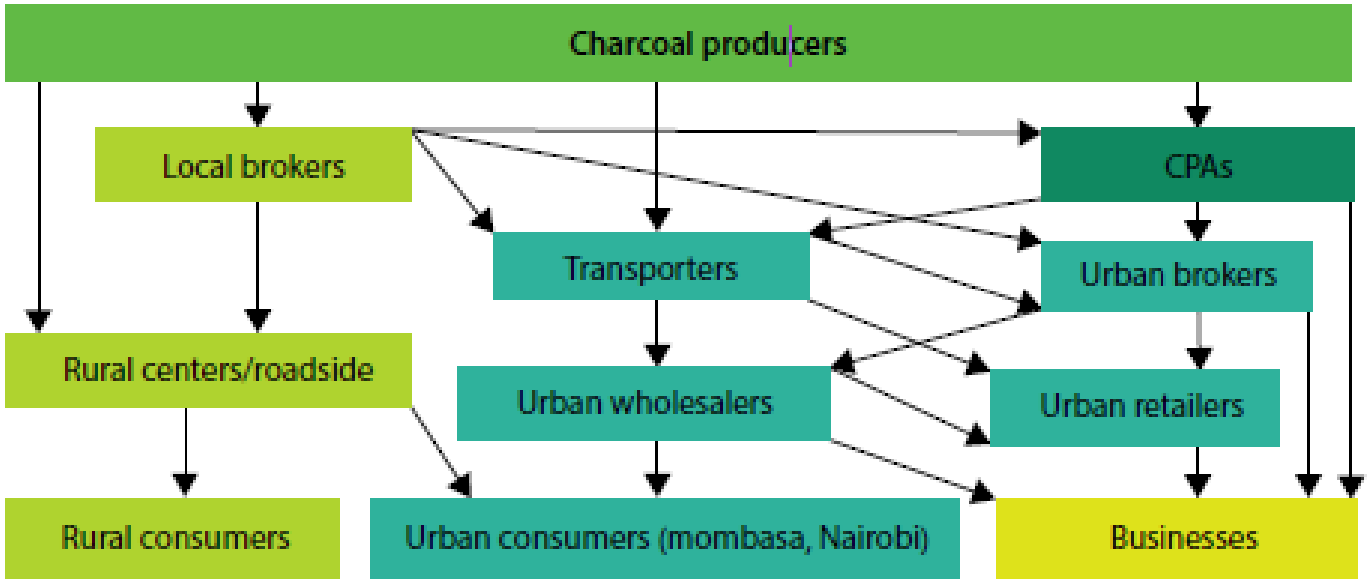
- 57% and 43% of consumers have charcoal and (LPG) as primary cooking energy, respectively.

- 43% had charcoal and LPG as secondary cooking energy respectively.



Reasons for using charcoal as a primary energy source (left) and LPG (right) by consumers in Nairobi

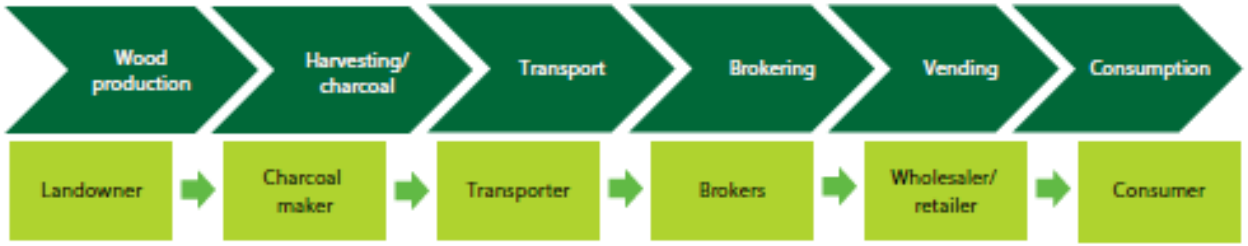
Market channels identified



- Producers → consumers via brokers or roadside display.
- Producers → consumers via brokers, transporters and vendors
- Producers → consumers via CPAs, transporters and vendors .

Distribution of revenues across VC

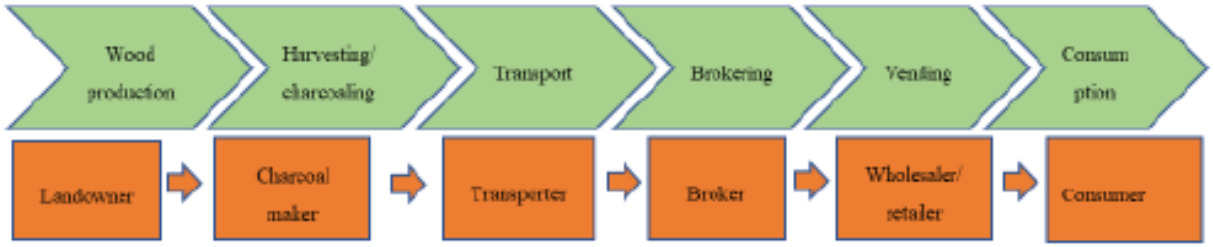
Baringo-Nairobi



Buying price (KES)	0	0	423	1500	2050	2300 (2773) *
Expenses (KES)	0	105	464	0	143(154)	
Gross margin (KES)	0	423	1077	550	250 (723)	
GM share percent	0	18% (15%)	47% (39%)	24% (20%)	11% (26%)	
Net income (KES)		0	318	613	550	107 (569)

*value when charcoal is sold in tins presented in brackets

Kitui-Nairobi



Buying price (KES)	0	100	459	1650	2050	2300 (2773) *
Expenses (KES)	0	120	481	0	143(154)	
Gross margin (KES)	100	359	1191	400	250 (723)	
GM share percent	4% (4%)	16% (13%)	52% (43%)	17% (14%)	11% (26%)	
Net income (KES)	100	*239*	*710*	*400*	*107 (569)*	

*value when charcoal is sold in tins presented in brackets

- Least share of revenue for trees growers
- Highest share of revenue with transporters

Conclusions and recommendation

- There is an insatiable demand for cooking and heating energy in both urban and peri-urban areas;
- Profitability and lack of alternative IGA the main motivation and driver for value chain actors respectively.
- Processes and technologies used are inefficient, leading to unnecessary tree cutting, and finally;
- Charcoal production and trade is a competitive business for all actors in the value chain.

- There is need to invest in making woodfuel value chains green, sustainable and competitive, as transition to cleaner cooking is still a long way.


Thank you