

Benefits and Barriers to Sustainable Land Management: Farmer Perceptions in Western Kenya

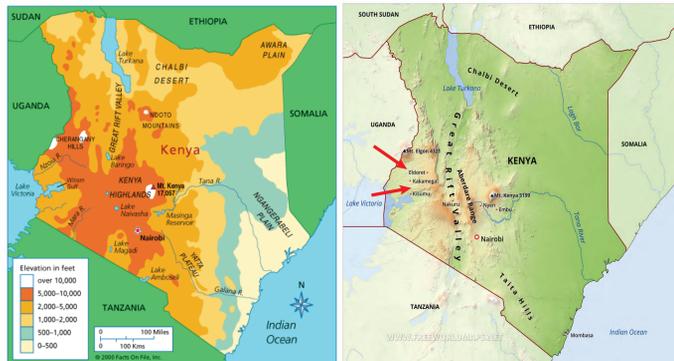
Anna Jackson

"If you plant well, you will get money and a good harvest, which I can use on the farm and hire laborers and I can buy food." – Female, 73

"Everyone stands on their own. One succeeds, one doesn't, and no one cares. That's not how it used to be." – Male, 54

Introduction & Background

"Subsistence maize farmers in western Kenya are facing challenges related to long-term viability of agricultural production. Over time, population booms, the loss of traditional farming practices, land fragmentation, and climate change have had catastrophic effects on food production. Currently, soil quality is seen as the biggest barrier for small-holder farmers in East Africa. Without the help of fertilizers, GMO seeds, pesticides and other costly and often inaccessible inputs, farmers are unable to grow enough food to sustain their households and communities. In order to mitigate depleting soil nutrition and to assist farmers in growing substantial yields, researchers have begun to look at sustainable land management practices. I used a mixed-methods framework in western Kenya to see how farmers make choices about their land and use sustainable land management techniques."



Methods

- I used the mixed-methods Evaluating Land Management Option (ELMO) framework to see how farmers make choices about their land and SLM techniques. ELMO involves:
- Socio-economic contextual framework that employs participatory methods
 - A mixture of focus group discussions and individual household exercises
 - Research "with," not "on" participants
 - Research designed for rural communities
 - Examining why farmers employ certain land management practices and not others
 - Gathering information that goes beyond conventional research methods



Results



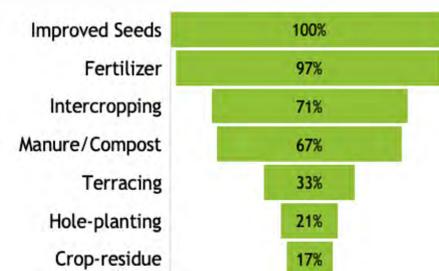
Mukuyu



Shikomoli

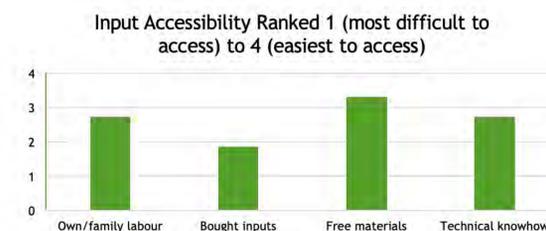
Soil degradation, climate change, and socio-economic factors all influenced the farmers in Shikomoli and Mukuyu villages and how they viewed their land. Notable findings include:

- GMO seeds, fertilizers, intercropping, manure/compost, terracing, hole-planting and using crop residue were the preferred SLM techniques.
- Major barriers to SLM practices were the difficulty of purchasing farm inputs such as improved seeds, fertilizers, and labor.
- Cows and other livestock are viewed as significant because they provide free material, such as manure and dairy.
- Women and men showed very little differences in how they used their land, although terracing, a physically difficult farm activity, was reported being utilized more by men.
- Common concerns include corrupted or adulterated seeds and fertilizers; theft from hired labor; a decrease in collective action; the need for more technical knowhow; dependence on livestock; and the difficulty of planning through the off season.



Awknowledgements

I want to thank the more than sixty farmers from Shikomoli Village and Mukuyu Village for their profound generosity and welcoming me into their communities. Without them, this research would have not be possible. Thank you to MDP, SGD, and GPSC.



References

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Recommendations

"There is a disconnect between the farmer, the land and the livestock. Zero grazing has created more need for crop residue for animal feed, but that creates less crop residue for putting nutrients back into the ground. We were told to farm a different way – to stop grazing our animals, to save the manure, but where does the animal feed come from? Now there is no crop residue to help put nutrients back into the ground." - Male, 68

Acquire government subsidies to provide rural villages with **public grazing land**. Farmers struggled with the need for extra grazing land because of agriculture intensification and to promote crop residue use for soil.

Creating a **certification program for laborers** through extension offices can help farmers find labor they trust and help find income generating opportunities outside their households.

Government extension officers and NGO's should invest in programs that promote **collective action**. Farmers expressed that activities that require technical knowhow and are physically strenuous, should be shared by the community. They that if there was more community engagement, the preparation, planting, and harvesting seasons would be easier.

