



# How Herders Observe the Range Condition to Inform Decision Making

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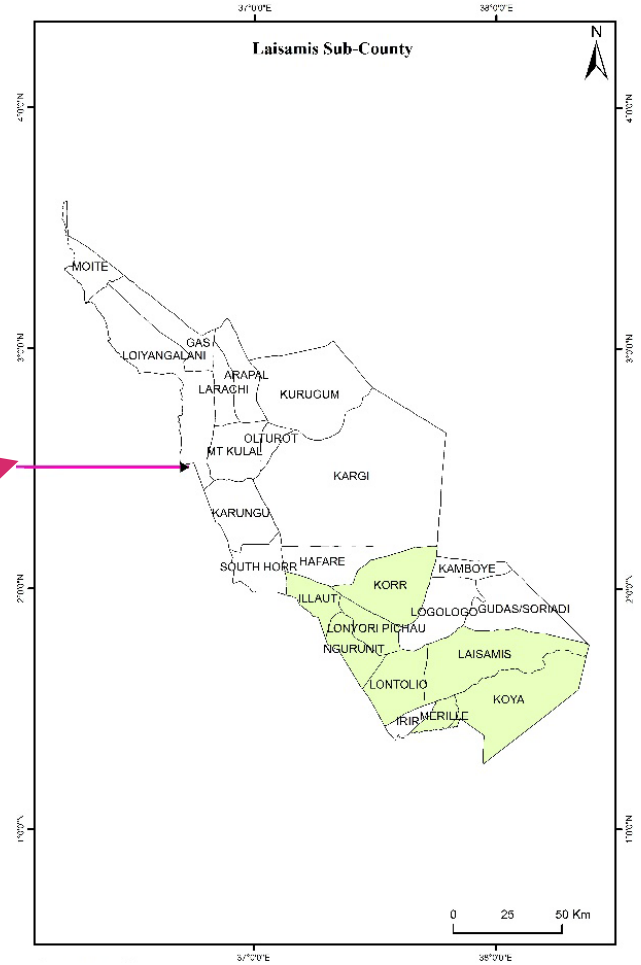
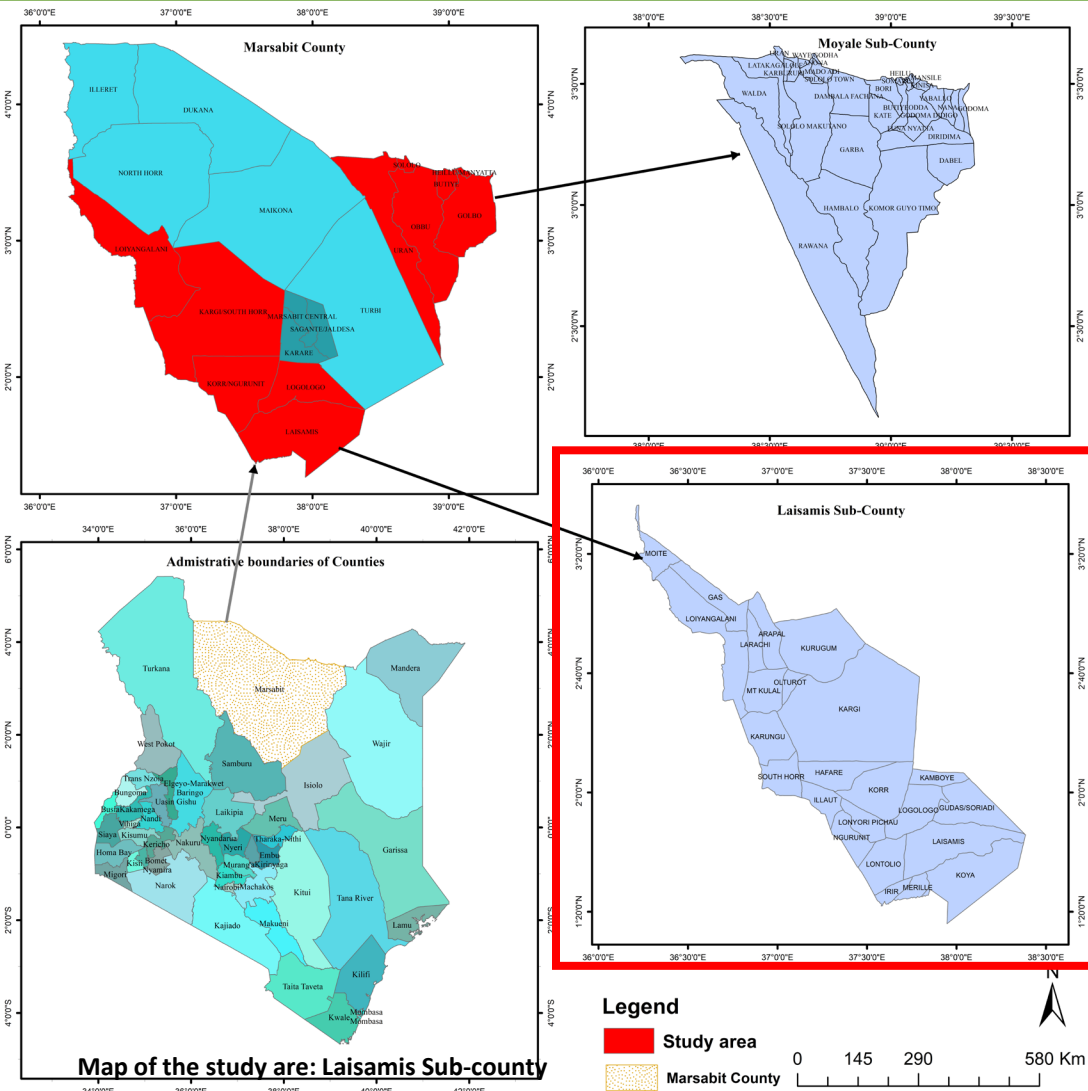
# Introduction

- Rangeland ecosystems **support the pastoralist livelihoods** by providing resources for livestock that **vary over time and space**.
- However, there are **observed changes** in these resources overtime and these necessitates robust monitoring
- A wide range of scientific methods and tools have been used to monitor the condition and **changes of these resources** including NDVI, NDWI.
- Recent studies have underscored the integration of indigenous ecological knowledge (IEK) in monitoring of range condition
- However, available studies use conventional tools to document IEK yet **participatory methods and tools though proven reliable**, are rarely used.
- This study explores the use of **participatory photography (PP)** to understand what pastoralist **observe** in the range condition to inform decision making



# Study area

- In Kenya, the research is being conducted in the Northern part, Marsabit County
- The major pastoral community are Borana and Rendille



# Materials and methods

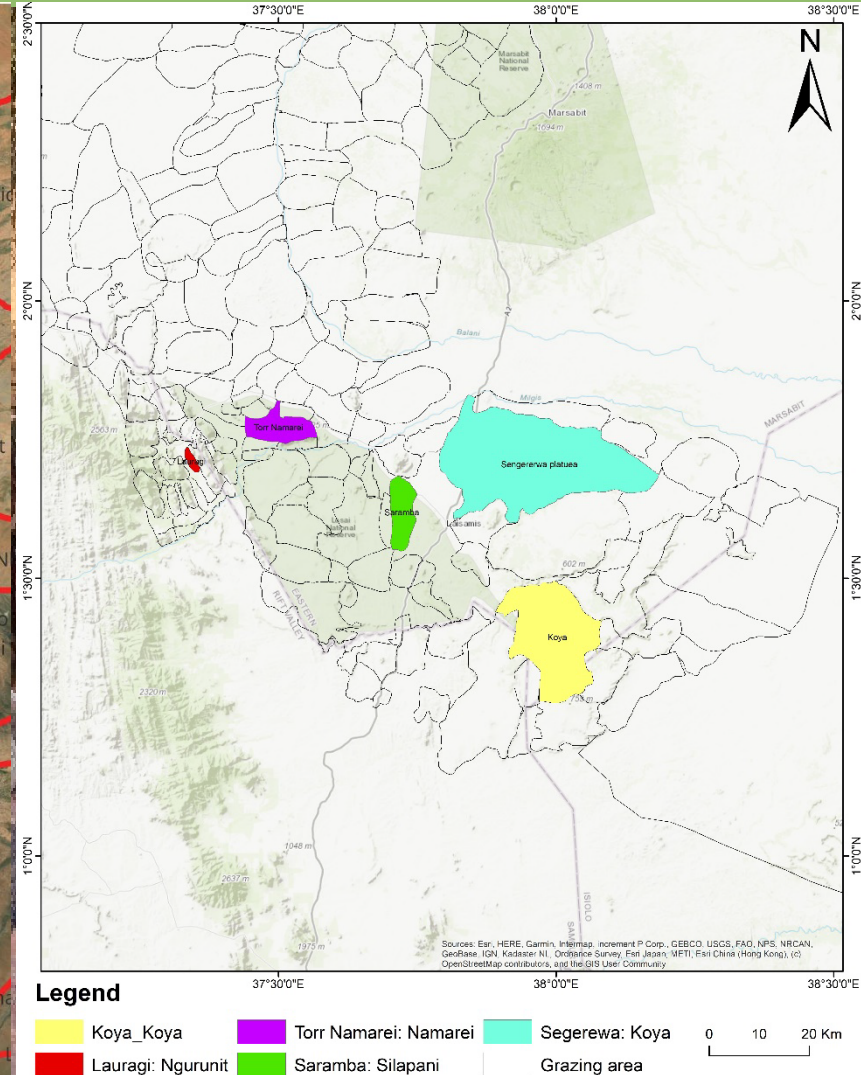
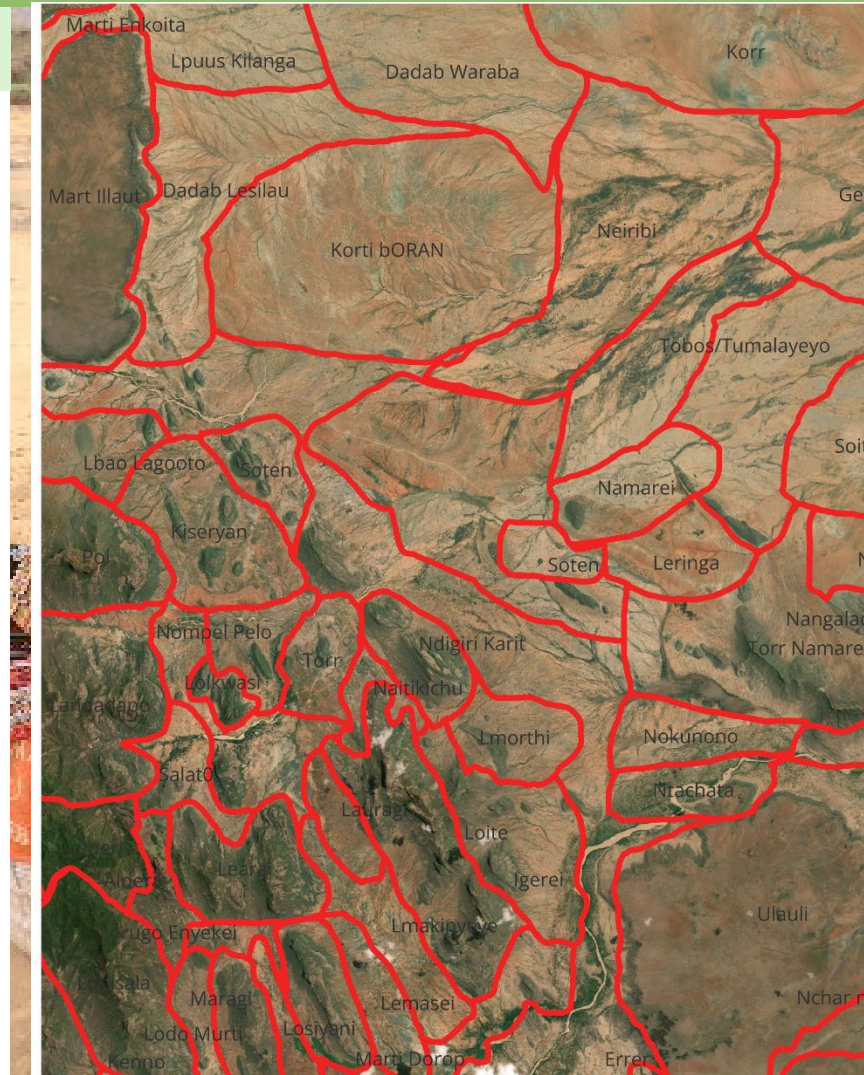
## Participatory mapping

### Participatory mapping of grazing areas(16 FGDs)

- A total of 196 units were mapped

We used pairwise ranking to prioritize the identified grazing units

- Most important and less important were identified



# Materials and methods

## Participatory photography

- PP to capture what pastoralists **observe in the range condition.**
- Focus on the most important grazing areas (n=18).
- 3 herders were selected by InfoRange committee in 6 sub location.
- **Trained, provided with phones** asked to take pictures of the condition (2-4 weeks).
- Photos were described by individual photographer.
- **Descriptions was recorded,** transcribed, content analyzed into themes and sub themes.



Training Herders on how to take Photos

# What they observe in range condition to inform decision making

- Type of grass

e.g Last longer (Perennial), Available in the wet season (Annual)



## Type of grass

- Growth of different grass species

How they describe the grass grouping them into:

### Perennial grass

- The grass has **strong roots** (Grass that lasts for year)
- They cannot be **uprooted** by cows when they graze on it
- Strong **stems** that can withstand wind

### Annual grass

- Grass with **weak roots** (Exist only on the wet season and disappear in the dry season).

NB: Pictures from PP by the Herders

# What they observe colour of the grass



**Green:** still young, not mature



**Mixed green and dry grass:** not grazed in the last season



**Black:** dead; no water content



**Green:** Increased height; It is soft, high-water content

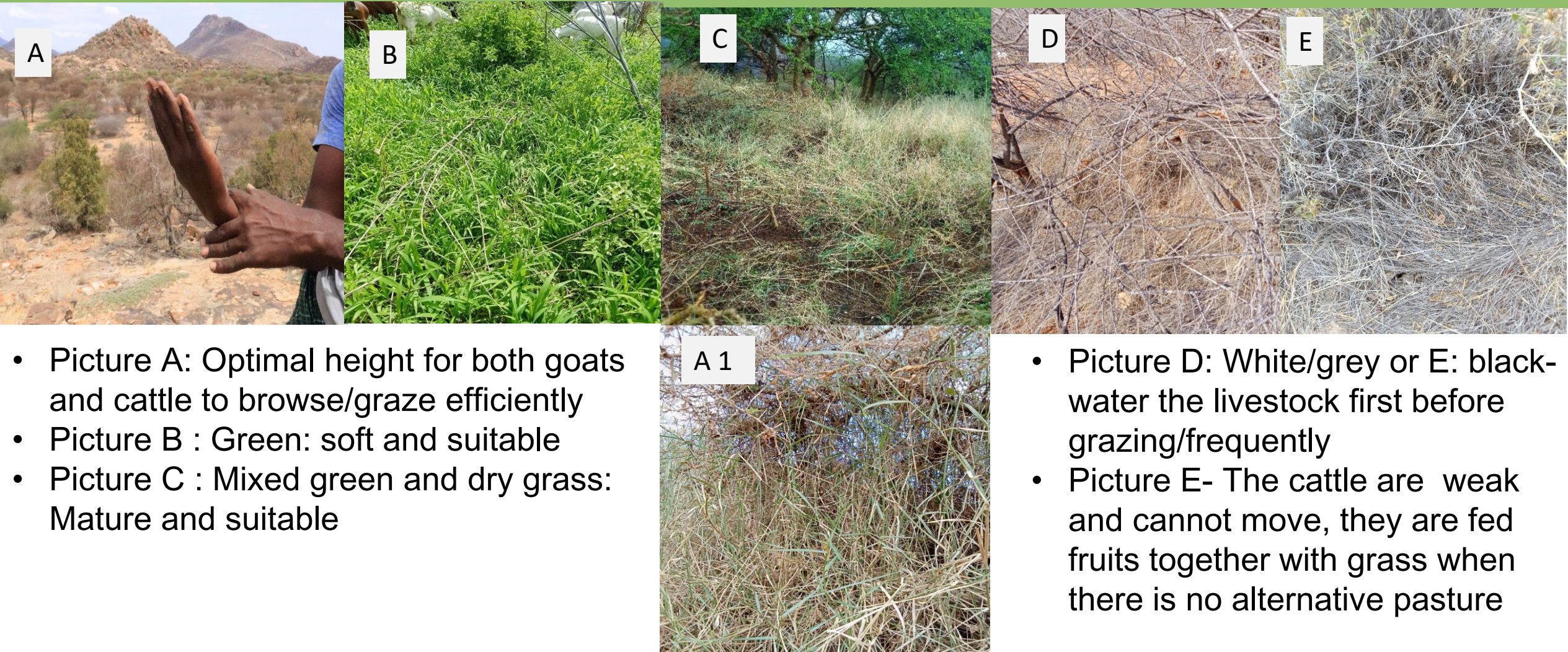


**Yellow:** mature; low water content



**Grey/white:** No water content, alive

# Decision they make from what they observe



- Picture A: Optimal height for both goats and cattle to browse/graze efficiently
- Picture B : Green: soft and suitable
- Picture C : Mixed green and dry grass: Mature and suitable

- Picture D: White/grey or E: black-water the livestock first before grazing/frequently
- Picture E- The cattle are weak and cannot move, they are fed fruits together with grass when there is no alternative pasture

# Conclusion

- PP allowed for the elicitation of detailed information about rangeland condition and the pastoralist decisions make on where to take the livestock for grazing
- PP was highly effective in identifying the key indicators that the pastoralist rely on to determine the best grazing areas for their livestock
- Many of these indicators observed by pastoralist are not detectable by conventional scientific methods, such as NDVI
- Participatory methods offer valuable insights into IEK that can be well triangulated with scientific tools
- Integrating this rich IEK with scientific tools enhances our understanding of these complex socio-ecosystems and enables us to co-develop resilient tools for pastoralist communities

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# THANK YOU FOR YOUR ATTENTION

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